
University Museum of Cultural Heritage, University of Oslo

Håkon Ingvaldsen

COS – Coinage and Society

The chronology and function of a city-state coinage in the
Classical and Hellenistic period, *c.*390 – *c.*170 BC

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at the University of Oslo
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for
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vii. List of abbreviations

AAMI	<i>Annual of the Archaeological Museums in Istanbul</i>
ACNAC	<i>Ancient Coins in North American Collections</i> , Published by the American Numismatic Society, New York, NY
AJA	<i>American Journal of Archaeology</i>
AM	<i>Mitteilungen des Deutschen Archäologischen Instituts, Athenische Abteilung</i> (Athen 1876-1939; Berlin 1951-)
ANSMN	<i>American Numismatic Society, Museum Notes</i>
ANSNM	<i>American Numismatic Society, Numismatic Notes and Monographs</i>
ASAtene	<i>Annuario della Scuola Archeologica di Atene</i> (N.S. 3-5, Bergamo 1914-48)
BdA	<i>Bollettino d'arte</i>
BCH	<i>Bulletin de correspondance hellénique</i>
Berl.Abh.	<i>Abhandlungen der preuss. Akademie der Wissenschaften zu Berlin</i> , 1786-1907, NS 1908-
BICS	<i>Bulletin of the Institute of Classical Studies</i>
BMCCaria	<i>A catalogue of the Greek Coins in the British Museum</i> . Vol.3: Caria and islands. London 1897
BSA	<i>Annual of the British School at Athens</i>
BSAAlex	<i>Bulletin de la Société Archéologique d'Alexandrie</i> , 1898-1902, NS 1904-
BSG	<i>Bulletin des sciences géographiques</i>
BullCom	<i>Bullettino del Museo dell'Impero Romano (i Bullettino della Commissione Archeologica Comunale di Roma</i> 58-70. Roma 1930-42)
CAH	<i>Cambridge Ancient History</i>
CH	<i>Coin Hoards I-VIII</i> (1975-1994. Partly continuing as 'Hoard section' in <i>NC</i>)
Chiron	<i>Chiron</i> (München 1971-)
CIG	<i>Corpus Inscriptionum Graecarum</i> (eds. A. Boeckh, J. Franz et al.). 4 vols. Berlin 1825-77
Clara Rhodos	<i>Clara Rhodos. Studi e materiali pubblicati a cura dell'Istituto storico-archeologico di Rodi</i> . Rhodos 1928-41
CNR	<i>Classical Numismatic Review</i>
CPCActs	<i>Acts of the Copenhagen Polis Centre</i> . Det Kongelige Danske Videnskabernes Selskab, Historisk-filosofiske Meddelelser
CPCPapers	<i>Papers from the Copenhagen Polis Centre</i> . <i>Historia Einzelschriften</i>
Essays Carson/Jenkins	<i>Essays in honour of Robert Carson and Kenneth Jenkins</i> (eds. M. Price, A. Burnett, R. Bland). London 1993
Essays Kraay/Mørkholm	<i>Kraay – Mørkholm Essays. Numismatic Studies in Memory of C.M. Kraay and O. Mørkholm</i> (eds. G. Le Rider, K. Jenkins, N. Waggoner and U. Westermark). <i>Numismatica Lovaniensia</i> 10. Louvain-la-Neuve 1989
Essays Robinson	<i>Essays in Greek Coinage presented to Stanley Robinson</i> (eds. C.M. Kraay, G.K. Jenkins). Oxford 1968
Festschrift Langlotz	<i>Charites. Festschrift für Ernst Langlotz</i> . 1957
Festschrift Mildenberg	<i>Festschrift für Leo Mildenberg</i> (eds. A. Houghton et al.). Wetteren 1984
Hesperia	<i>Hesperia</i> (American School of Classical Studies, Athens 1932-)
HISTORIA	<i>Historia. Studi storici per l'antichità classica</i> . Milano 1927-35
HSCP	<i>Harvard Studies in Classical Philology</i>
ID	<i>Inscriptions de Délos</i> (Plassaert et al. eds.). Paris 1926-72
IG	<i>Inscriptiones graecae</i>
IGCH	<i>An inventory of Greek coin hoards</i> (eds. M. Thompson, O. Mørkholm, C.M. Kraay). New York 1973
IGRR	<i>Inscriptiones Graecae ad Res Romanas pertinentes</i> (eds. R. Cagnat, G. Lafaye et al.). Paris 1906-27
INCProceedings	<i>Proceedings of the International Numismatic Congress</i> . International numismatic commission
INJ	<i>Israel Numismatic Journal</i>
JCSKyoto	<i>The Journal of Classical Studies</i> . Kyoto
JIAN	<i>Journal international d'archéologie numismatique</i> 1-21. Athen 1898-1927
JNG	<i>Jahrbuch für Numismatik und Geldgeschichte</i>
JRS	<i>Journal of Roman Studies</i>

<i>JWCI</i>	<i>Journal of the Warburg and Courtauld Institutes</i>
<i>LGPN</i>	<i>A Lexicon of Greek Personal Names</i> (eds. P.M. Fraser, E. Matthews). Vol. 1. Oxford 1987
<i>LIMC</i>	<i>Lexicon iconographicum mythologiae classicae</i>
<i>NAPM</i>	Numismatique antique; problèmes et méthodes. Actes du colloque organisé à Nancy du 27 septembre au 2 octobre 1971. <i>Etudes d'archéologie classique IV</i> . Nancy/Louvain 1975
<i>NC</i>	<i>Numismatic Chronicle</i>
<i>N Circ</i>	<i>Numismatic Circular</i> . Spink
<i>NNÅ</i>	<i>Nordisk Numismatisk Årbok</i>
<i>Num.lovaniensia</i>	<i>Rythmes de la production monétaire, de l'antiquité à nos jours</i> (eds. G. Depeyrot, T. Hackens, G. Moucharte). <i>Numismatica Lovaniensia</i> 7. Publications d'histoire de l'art et d'archéologie de l'Université catholique de Louvain. Louvain-la-Neuve 1987
<i>NZ</i>	<i>Numismatische Zeitschrift</i>
<i>OGIS</i>	<i>Oriens Graeci inscriptiones selectae</i> (ed. W. Dittenberger). 2 vols. Leipzig 1903-5
<i>PP</i>	<i>Prosopographia Ptolemaica</i> (eds. W. Peremans, E. van 't Dack et al.) 1-9 (i <i>Studia Hellenistica</i> 6,8,11-13,17,20-21). Louvain 1950-81
<i>RBN</i>	<i>Revue belge de numismatique</i>
<i>Rend.Pont</i>	<i>Atti della Pontificia Accademia Romana di archeologia, Rendiconti</i> (3. s. I-). Roma 1923-
<i>RIN</i>	<i>Rivista italiana di numismatica</i>
<i>RivFil</i>	<i>Rivista di filologia</i> . Turin 1873-
<i>RN</i>	<i>Revue numismatique</i>
<i>RNS sp.publ.</i>	<i>Royal Numismatic Society, special publications series</i> . London
<i>RSN</i>	<i>Revue Suisse de numismatique</i>
<i>SCMB</i>	<i>Seaby Coin and Medal Bulletin</i>
<i>SEG</i>	<i>Supplementum epigraphicum Graecum</i> (eds. J.J.E. Hondius, A.G. Woodhead, H.W. Pleket, R.S. Stroud) 1-28. Leiden, Alphen, Amsterdam 1923-71, 1979-80, 1982
<i>SGDI</i>	<i>Sammlung der griechischen Dialekt-Inschriften</i> (eds. H. Collitz, F. Bechtel et al.) 4 vols. Göttingen 1884-1915
<i>SIG</i>	W. Dittenberger (ed.), <i>Sylloge inscriptionum Graecarum I-IV</i> (3. edn.). Leipzig 1915-24
<i>SM</i>	<i>Schweizer Münzblätter</i>
<i>SNG Cop</i>	<i>Sylloge Nummorum Graecorum, Copenhagen</i> . Caria and islands. København 1947
<i>SNR</i>	<i>Schweizerische Numismatische Rundschau</i>
<i>Studia Naster</i>	<i>Studia Paulo Naster oblata I: Numismatica antiqua</i> (ed. Simone Scheers). Louvain 1982
<i>Studies Buckler</i>	<i>Anatolian studies presented to William Hepburn Buckler</i> (eds. W.M. Calder, J. Keil). Manchester 1939
<i>Studies Grierson</i>	<i>Studies in numismatic method presented to Philip Grierson</i> (eds. C.N.L. Brooke, B.H.I.H. Stewart, J.G. Pollard, T.R. Volk). Cambridge 1983
<i>Studies Ramsay</i>	<i>Anatolian studies presented to Sir William Mitchell Ramsay</i> (eds. W.H. Buckler, W.M. Calder). Manchester 1923
<i>Studies Price</i>	<i>Studies in Greek Numismatics in memory of Martin Jessop Price</i> (eds. R. Ashton & S. Hurter). London 1998
<i>TestNum</i>	J.R. Melville Jones, <i>Testimonia numaria. Greek and latin texts concerning ancient Greek coinage</i> . Vol. 1. London 1993
<i>ZfN</i>	<i>Zeitschrift für Numismatik</i>
<i>ZPE</i>	<i>Zeitschrift für Papyrologie und Epigraphik</i>

ix. Acknowledgements

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During my travels I have been met with friendliness and support far beyond what could be expected. I am deeply grateful towards my colleagues at the collections of the Numismatic Museum, Athens; Ashmolean Museum, Oxford; Fitzwilliam Museum, Cambridge; British Museum, London; American Numismatic Society, New York; Kungl. Myntkabinettet, Stockholm; Cabinet des Médailles, Bibliothèque Nationale, Paris and Den kgl. Mønt- og Medaillesamling, Copenhagen. I am also indebted to all curators who have provided me with photos or casts from additional collections. Dr. Dimitrios Bosnakis of Kos Museum and Professor em. Christof Boehringer at Archäologisches Institut, Universität Göttingen deserves to be particularly mentioned due to their generosity in making material and/or information about such come to my knowledge, and their helpfulness and hospitality in general. The following persons have also contributed to this work in providing information related to Coan material: Dr. Kerstin Höghammar; Richard Ashton; Dr. Pierre Requier; Professor Christian Habicht; Professor Kristian Jeppesen; Silvia Hurter; Dr. Koray Konuk and Basil C. Demetriades.

The language has been revised in Part 2 and the catalogue by the professional aid of Mari Eggen, MariText, Oslo, and Nancy Child, UKM. I owe them both my warmest thanks. They are, of course, not to be blamed for remaining errors, and the present manuscript still waits for a final revision before print.

Most of the photographic work has been executed by me. However, the expert assistance of Lill-Ann Chepstow-Lusty, UKM proved invaluable in the initiating phase of the project. Scanning and editing of the plates has been carefully and professionally executed by Ann-Turi Ford of Ford Formgiving, Nesodden.

Finally, my greatest debt in every respect is to my wife and daughter.

xi. Preface

This study is now handed over for appraisal to the degree of Doctor philosophiae at the University of Oslo.

My work has benefited greatly from supervision by Professor Dr. philos. Kolbjørn Skaare, Numismatic collection, University Museum of Cultural Heritage, UiO. His unconditional belief in my project has been decisive to the final result. Dr. Vincent Gabrielsen at the Institute of History, Copenhagen University kindly accepted to be co-supervisor at a late stage of this work. I am the first to regret that time and resources avoided me to exploit his unusual range of knowledge and generosity towards colleagues to full. This is alone my fault. However, the parts he did read have profited substantially from his thorough comments. I am deeply grateful to them both. This study would never have been accomplished without the interest, encouragement and enthusiasm, inside and outside the field of research, of my fellow student and colleague Svein Harald Gullbekk during the last decade.

The majority of this work has been carried out during my period as research fellow, financed by the Norwegian Research Council and hosted by the University of Oslo. I have mostly followed the original plans for this project. However, some alterations have forced their way due to limitations of time and resources in order to complete the work within the present time schedule. Still I hope the expectations will be, at least partly, fulfilled.

University Museum of Cultural Heritage

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Introduction

The main purpose of this study is to establish new empirical data and present them to the community of scholars for future use. Furthermore, a discussion on certain aspects on Coan coinage is presented, hopefully with relevance to coinage as source material to the Greek *poleis* in a wider context. The coin material itself is studied and presented in the traditional form of Greek monographs on coinage in Greek city-states. The reason for this is three-fold: I was from the beginning fascinated by the possibility to carry out a work of basic research, not based on previously published and/or collected material. The generous time resource which, until recently, has been granted doctorates in the Norwegian educational system made this a realistic prospect.¹ Secondly, contact with other scholars working on topics related to Cos convinced me of the practical need of a compilation and established chronology of the Coan coinage. I wished to carry out a useful study - a practical contribution to scholars which might help them with problems they met in day to day work on different fields of research.² In this respect, the receiver first and foremost kept in mind during the writing process has been the Coan archaeologists. Thirdly, as an archaeologist and numismatist I considered the study to gain the most if I concentrated on confronting the objects from the beginning, involving the practical process as compilation, photography, drawing, classification and description, die-study etc. This kind of work does often not give the highest reward these days. However, the fashionable and often repeated mantra saying that hardly any new empirical data can be found with relevance to the classical studies, needs some correction. I hope the present study will prove to be a useful tool to some and a fundament for further research to others. This does not mean, of course, that my intention has been to establish *the* chronology and/or objective ‘truth’ of the Coan coinage. The numismatic material as well as the additional sources is often too scarce in order to establish certain conclusions. The nature of the sources of the period in question forces us, more often than not, to present a fundament of further discussion rather than a final solution. This is sometimes how it has to be, and in this situation it is particularly

¹ This work was started in February 1997, exactly five years before the thesis is submitted. One of these years was dedicated to other duties, mainly curatorial work, and the last six months as assistant keeper of the numismatic collection, University of Oslo. The study was from the beginning based on a preliminary catalogue of material down to c. 190 BC, see Ingvaldsen 1994.

important to clarify the premises of each conclusion presented. The material has been interpreted, even down to the basic principles of classification and description, in a context which is highly subjective and a consequence of external influences from many directions. In giving the material a traditional form of presentation, I hope the context, parameters and principles which have influenced my interpretation stands out clearly and can easily be judged by other scholars from all kinds of disciplines. The parts of the study which touches philological and/or historical problems, basically the chapters on ‘Synoecism and coinage’ and ‘Personal names and their function’, does not pretend to be a full scale treatment of these important topics seen from the eyes of philologists and historians. I have tried, however, to separate some contexts and different approaches to topics where the coin material plays an important part as source material, and furthermore to sketch a possible way to follow this approach on the basis of the numismatic sources available through this study. Numismatic sources are often either ignored or used in an uncritical manner by philologists, historians and even archaeologists. The way in which these sources have been presented must take much of the blame for this. I have aimed at presenting the numismatic sources in a way that can open for a critical use by scholars as well as in more practical contexts.

The character of the sources

Coins

The Coan coinage before c.390 falls in two separate periods. The first group of coins is Archaic and consists of four different denominations. It must be stressed, however, that the only reason to assign these coin issues to Cos is the obverse motif of a crab – the Coan *parasemon* in the Classical and Hellenistic period. We do not know when the crab was introduced as the city-badge, but considering its nature it might well have happened as early as towards the end of the sixth century.³ Recently, an objection to this attribution has been presented.⁴

² As stated in Sherwin-White 1978, 23: “Detailed analysis of the chronology and duration of the different [coin] series has not as yet been executed. The absence of a comprehensive and up to date study of Coan coins of the fourth to mid-second century limits their usefulness as historical evidence”.

³ See chapter on “motifs and style” in Part 2 below.

⁴ Sheedy 1998, 324-5. The author suggests that a single mint, possibly located in Lycia, was responsible for several issues with different motifs, among which is the statér with a crab. The reason behind this suggestion is an identified die-link between the reverses of two separate types (with two dolphins and a seated sphinx as

The Archaic coinage were issued as 1/96 stater in electrum and stater, trihemiobol and hemiobol of Aeginetan weight.⁵ The stater was thus made up by two drachms of c.6.50 gram. The electrum fraction and stater is very rare and so far only two coins of each have been recorded. The most common denomination is the trihemiobol with 13 coins preliminary listed. The pattern of the reverse incuse is similar on all but one group of coins. A unique trihemiobol in British Museum carries a characteristic star-formed pattern, clearly separating the coin from the other types with irregular patterns. This can possibly mean that the archaic coinage was executed over a longer period of time than the homogeneity of the other types might indicate. The following is a preliminary listing of the archaic coinage based on the major public collections, a few from auction catalogues and a few from hoards:

1. 1/96 stater. El

Obv. Crab with six legs

Rev. Irregular square incuse with diagonal division or cross-pattern

a) 0.13 London, *BMC Ionia* 29⁶ (fig. 1)

b) 0.13 Cambridge, *McClellan Collection* 8530⁷



2. Stater. AR

Obv. Crab with eight legs

Rev. Square incuse divided with irregular diagonal lines; small square incuse divided into four equal parts by regular lines

a) 12.25 London, *BMC Caria* 1

b) 12.11 Rosen Coll. 641; *SNG v.Aulock* 2745; Hess-Leu 27.3.1956, 313; Jameson Coll. 2307; Weber Coll. 6619

3. Trihemiobol. AR

Obv. Crab with eight legs

motifs). He furthermore points to the similarity in the shape of flans and stylistic homogeneity of this group of coins. However, striking similarities in shape of flans and fabric in Caria and Lycia in the Archaic and early Classical period is generally observed, and speaks against the identification of one single mint for the different coin types in question. Furthermore, we can not consider the staters in isolation. The crab-type obviously belongs to a more composite coinage, consisting of at least four different denominations. Until further evidence is established I remain with the conclusion that the crab-type is the sole product of one mint, and not merely a type among others from a Lycian mint.

⁵ The Aeginetan weight was widely adopted in Caria, e.g. by nearby Rhodes and Cnidus.

⁶ The coin is not catalogued under Cos, but under Ionia "Unattributed early electrum coins chiefly of the coast towns of western Asia Minor". The illustration in this work is a drawing made by the author.

⁷ Grose 1923-9, no 8530.

Rev. Irregular square incuse divided with irregular diagonal lines

- a) 1.62 London, *BMC Caria* 2
- b) 1.56 London, *BMC Caria* 3
- c) 1.42 London, *BMC Caria* 4
- d) 1.44 London, (not in *BMC*); ex *SNG v.Aulock* 2746
- e) - London, (not in *BMC*); ex Spink (Masey) 1927
- f) 1.67 Copenhagen, *SNG Copenhagen* 615
- g) 1.48 Copenhagen, *SNG Copenhagen* 616
- h) 1.64 Rosen Coll. 642
- i) 1.48 Rosen Coll. 643
- j) 1.41 Cambridge, *McClellan Collection* 8531; *IGCH* 6
- k) 1.76 Jerusalem, Israel Museum⁸
- l) 1.43 Naville (Genève)VII (1924), 1530
- m) 1.43 Bourgey, June 17/18 1959, 529

4. Trihemiobol. AR

Obv. Crab with eight legs

Rev. Square incuse; dot in centre from which rays spread out in a star pattern

- a) 1.58 London (not in *BMC*). Acquired in 1947

5. Hemiobol. AR

Obv. Crab with six legs

Rev. Irregular incuse pattern

- a) 0.61 New York (1944.100.48456)
- b) 0.49 New York (1944.100.48457)
- c) 0.62 New York (1957.168.3)
- d) 0.55 Hirsch, May 28-30, 1962, 165
- e) 0.69 London, *BMC Caria* 5; *IGCH* 1165 (ill.)

Some of the types are represented in hoards. No. 3k above was found during excavation in Jerusalem in 1979. The context is the area of the so-called 'shoulder of Hinnom', in layers

⁸ R. Barkay 1984-5, 1-5. I am grateful to Dr. Benjamin Sass for providing me with information about this coin.

dated to “6th century”.⁹ The context of the other hoards does not provide much information regarding the chronology of the Coan coins.¹⁰ *IGCH* 6 was discovered somewhere on the Cyclades around 1889. It comprised of about 145 silver coins from Paros, Aegina, Andros, Siphnos, Thera(?), Dardanus(?), Miletus(?), Chius and Cos. The context is described as ‘6th century’, and the Coan coin shows significantly sign of wear. A Coan coin was probably part of a hoard (*IGCH* 7) of 760 coins discovered in 1821 on Santorini (Thera). However, the Coan content of the hoard is insecure, and the coin(s) may have formed part of the hoard previously mentioned (*IGCH* 6). The hoard from Thera consisted of coins from Aegina, Andros, Naxos, Paros, Siphnos(?), Thera(?), Cyzicus, Dardanos and Miletus as well as of more than 100 coins of uncertain attribution. *IGCH* 1165 was unearthed just before 1893 and consisted of one electrum and 75 silver coins from Athens, Andros, Abydus, Lampsachus(?), Ephesus, Miletus, Phocaea, Teus, Chius, Cos and several uncertain coins. The burial date is estimated to c.500. The Coan coin of this hoard, 5e above, is the type that stands out from the other archaic coin types of Cos in having a star like pattern on the reverse. As mentioned it is impossible to establish a detailed chronology of the earliest Coan coinage. It appears, though, that the type 1-4 belongs to a period around the mid-sixth century, and the 5th type to a slightly later date, maybe the last two or three decades before 500.

The next group of coins from Cos has been published separately by J.P. Barron in 1968.¹¹ The coin type in question is easily recognizable from the characteristic obverse motif, which is also the reason why the widely used name *diskoboloi* is applied to coins of this type. The obverse motif is a *diskobolos* – a discus-thrower rendered as a naked athlete standing in full figure with arms raised, holding the discus, head in profile and a strong contraposto with the weight on the left leg. The figure is followed by a tripod, occasionally standing on a base, on the left side. The Coan ethnic is used throughout the series, and it appears in three different forms: ΚΟΣ, ΚΩΣ and ΚΩΙΟΝ. The reverse motif is a crab. Three different reverse types can be identified. The first is a curious mixture between a square incuse, diagonal pattern (as seen on the archaic Coan coins), a crab and a background pattern consisting of small, short lines. The second type has the crab positioned within a square incuse and border of dots, very similar to the reverse type of the

⁹ R. Barkay 1984-85, 1-5; G. Barkay 1986, 29, 34.

¹⁰ On the hoard material and chronology, see Wroth 1884, 269-80; Greenwell 1890, 1-19; Mørkholm 1971, 79-92; Kagan 1992, esp 22.

I. issue tetradrachms.¹² The third type has the crab placed inside an incuse circle with corresponding border of dots. The athlete and tripod has been considered in connection with the Triopic festival in the honour of Apollo. The games was arranged by the Dorian *hexapolis* (later *pentapolis*) and a misconduct by a contender from Halicarnassus was, according to Herodotus, the reason to the expulsion of Halicarnassus from the Dorian coalition of cities, which thus became the Dorian *pentapolis*. The tripod was the trophy of the festival, and the Victor was designated to donate the trophy back to the Temple of Apollo in Triopion after the victory was celebrated.¹³ The weight standard is a key point regarding the chronology of this Coan series. The average weight is 16.12 g and a weight table shows a cluster between 16.31 and 16.70 g.¹⁴ There can be no doubt that we are dealing with triple-sigloi on Persian weight standard. The *siglos* had a weight of *c.*5.55 g, and the triple-siglos is thus expected to weigh around 16.65 g. The Attic standard would give a tetradrachm weight of 17.2 g, which appears to be too heavy to match the average weight of the *discoboloi*. The absolute chronology of this series is not securely established. Scholars have suggested dates from 490-70¹⁵ to 450-20.¹⁶ Barron has rightly pointed out that the Persian weight provides a *t.p.q.* of 480. Many scholars have argued for a connection between the so-called Athenian coinage decree, previously dated to *c.*450-40, and the end of the coinages in the cities under Athenian control. If this was right, it would have established a lower date of *c.*450-40 also for the Coan coinage, supported by the find of a copy of this decree on Cos.¹⁷ However, it now appears to be general consensus among scholars that the ‘Athenian coinage decree’ rather belongs to the 420s. The decree no longer provides a useful chronological limit for the coinage in question.¹⁸ One *diskobolos* coin formed part of the important Asyut-hoard discovered in 1969. On the basis of a reconstruction of the hoard, Price and Waggoner conclude that the Coan coin belongs to the period *c.*480-75.¹⁹ The coin from Asyut was of Barron’s type A (i.e. the first type mentioned above) and when the additional two types are taken into consideration, we end

¹¹ Barron 1968.

¹² The shape of the flans, fabric, incuse made by square-ended die as well as the motif with a crab within a square incuse and border of dots are strikingly similar to the I. issue. Cf comments on ‘Minting technique etc.’ in Part 2 below.

¹³ Herodotus I, 144.

¹⁴ The weight figures include two specimens missing from Barron’s list: the coin from the Asyut-hoard (16.65) and one coin in the Civiche Raccolte Numismatiche, Milan (16.47).

¹⁵ Cahn 1970, 164.

¹⁶ Robinson 1949, 337.

¹⁷ Segré 1938.

¹⁸ See the discussion on the decree in the chapter on ‘Personal names etc.’ in Part 3 below.

¹⁹ Price&Waggoner 1975, 93 no. 693 and n 161.

up with a plausible date of c.480-460 for the whole series. But of course, a gap in time between the three types may have occurred, and a minting period into the last part of the fifth century must be considered until further evidence is established.²⁰

Almost 2.400 coins divided into 26 issues are included in this study. Approximately 6-700 coins, mostly with hoard provenance, have never before been published or recorded in sale catalogues etc. A few new issues have been identified, the most important being the I. and II. issue of tetradrachms and drachms.²¹

Inscriptions

Inscriptions from Cos have survived in abundance. The known material until 1891 was published by W.R. Paton and E.L. Hicks in *The Inscriptions of Cos*.²² The material is divided into separate categories: decrees, religious inscriptions, dedications and so forth.²³ A list of all coins with personal names known to the authors is included. But in spite of the usefulness even today, the compilation is of course far from complete. The authors themselves realised the shortcoming of their compilation: *“I spent much time, and some money, in trying to gain access to the fortress, which contains a good many inscribed stones, but in vain: the story of my endeavours is instructive, but is too old to tell.”*²⁴ Numerous scholars have succeeded better since then, but it is a well known fact that even today numerous inscriptions have remained unpublished. A few major additions have become available after Sherwin-White’s important work was completed in 1976. Nicholas F. Jones devotes a chapter on Cos in his study of public organization in Ancient Greece, in which a few corrections to Sherwin-White’s conclusions is presented.²⁵ The most up to date survey of Coan decrees is P.J. Rhodes work from 1997.²⁶ Mario Segré’s “notebooks” were published in 1993 and contributed with about 120 previously unpublished public inscriptions.²⁷ More and more material from Rudolph Herzog’s excavations is also

²⁰ Altogether five Coan coins formed part of the important ‘Decadrachm hoard’ with a closing date in the 460s. The coins have not been identified. See Fried 1987, 9 and Kagan 1987, esp. 24.

²¹ A limited issue of Alexander tetradrachms and Pseudo-Rhodian drachms were minted on Cos. They are not included in this study. The hoards of Coan Alexanders are mentioned in the hoard section. See Price 1991 on the Alexander coins, and Ashton 1988 and 1998 on the Pseudo-Rhodian coins. These drachms attests the chronology of a few Coan names belonging to the early second century BC.

²² Paton & Hicks 1891

²³ See “Works of reference” below.

²⁴ Paton & Hicks 1891, preface.

²⁵ Jones 1987, 236-42.

²⁶ Rhodes 1997, 232-8, 477, 490. The material from Segré 1993 is not included in Rhodes’ book.

²⁷ Segré 1993.

published, and over 30 decrees and a large group of *leges sacrae* has recently been made available. More than 1 500 inscriptions from the fourth century until the Julio-Claudian period have so far been recorded. Fourth century inscriptions are rare, especially from the period before the synoecism in 366. There are many reasons for this: less complexity in religious, political and commercial activity, a more wide spread use of wood as the base of inscriptions, a considerable re-use of ancient marble for building purposes in the Hellenistic and Roman period etc. The main reason, however, must be the foundation of the new capital in 366. This event probably implied a relocation of political, religious and administrative activity from Astypalaea or another city to Cos town. Archaeological excavations on Cos have mostly been concentrated on the Agora and other important remains of the new capital and the Asclepieion. Thus, the dominance of inscriptions from after the mid-fourth century and in particular the late third and second century is not unexpected. The Coan *onomastikon* has been enlarged during the last decades, with listings and additions in the works of Paton and Hicks, Sherwin-White, Kerstin Höghammar and, of course, the *Lexicon of Greek Personal Names*. A number of articles, in *Chiron* and elsewhere, have further contributed to the knowledge of personal names on Cos. A list of 144 names from the Coan coinage is presented in this study. The *corpus* of inscriptions is the most important source to religious and political matters on Cos in the Hellenistic period. Several separate projects will make further contributions to the knowledge of Coan society in antiquity when they are committed. Onomastikon from amphora stamps, unpublished Coan inscriptions in Oxford and Berlin, inscriptions from the excavations of Halasarna, by the University of Athens - and further works are in preparation at this moment. Due to the richness of the material, a full and up to date *corpus* of Coan inscriptions has since long been awaited by scholars working on Cos and related topics. A renewed initiative was established in 1993 within the frames of the *Inscriptiones Graecae*.²⁸

²⁸ In his paper on the symposium "The Hellenistic Polis of Kos – State, Economy and Culture" Uppsala University, 14-15 May 2000, Klaus Hallof expressed careful optimism on the prospects of publishing the *Corpus inscriptionum Coorum* in a not too distant future. New material from Cos has been published in numerous articles in *Chiron* from 1998 (issue 28) onwards, several of them under the heading "Aus der

Literary sources

The antique literary sources are helpful in many ways as they provide us with a context within which the Coan and their history and society can be interpreted. But they do not, by far, give us a complete picture.²⁹ It is quite obvious that Cos was of marginal interest to most of the ancient authors. The island and its inhabitants is only mentioned when events of particular interest is directly related to the island, or when the island is the object of shifting alliances. A few famous individuals from Cos are mentioned, but their acts and deeds are always a part of events of the major powers, not located or related to Cos. Anyhow, when the information from Herodotus, Polybius, Thucydides, Diodorus, Strabo and Tacitus are extracted and compared it provide us with important knowledge on the historical and political events on Cos, its allies and enemies and some aspects on internal affairs. We are first and foremost informed about the synoecism, the Asclepieion and the medical school of Cos.

Cos is first mentioned in the *Iliad* in which the early Dorian settlement on the island is described.³⁰ The early colonization is also described by Herodotus and Strabo.³¹ The consideration of Epidaurus as the offspring of the colonization is brought further by Pausanias.³² The size, shape and geographical characteristics of Cos are described by Strabo and Plinius. Strabo is also one of the important sources on the Coan synoecism and the plans of the new harbour. Literary sources on internal historical events and/or relations have hardly survived at all. We have knowledge of the author Macareus who wrote three books about Cos in the third century BC. Only one fragment that describes a cult of Hera has survived. Macareus is probably one of Plutarch's most important sources. Philip of Amphipolis is said to have conducted a major work on Coan history, but not a single fragment of this work has survived.

The Hippocratic works provide us with valuable knowledge of the Hellenistic conception of medicine, human physiology and pathology as well as treatment of somatic diseases. The corpus of books does not reflect the characteristics of Hippocrates' medical thought as described by Plato, and they are obviously the product of several authors during the late fifth and fourth century BC. The (anonymous) books were probably collected into

Arbeit der "Inscriptiones Graecae". The authors are Luis and Klaus Hallof, Kent J. Rigsby, Robert Parker, Dirk Obbink, Charles Crowter and Christian Habicht.

²⁹ See "Historical outline" below as far as the historical events are concerned.

³⁰ Homer, *Iliad* II, 645-80.

³¹ Herodotus VII, 99; Strabo XIV, 653.

one body in Alexandria, which was later on attributed to Hippocrates who was considered the greatest medical doctor of the Greeks as early as from the time of Plato onwards. The medical school of Hippocrates him self was later mentioned by Strabo and Plinius.³³ Herodas and Theocrit are two local Coan authors who lived on Cos for shorter or longer periods. Their works are interesting since they provide us with contemporary descriptions of day to day life in a Greek rural society. The *Thalysia* of Theocrit is among the most beautiful tales which has survived of idyllic life in the Mediterranean countryside in antiquity. He is also the author who tells us about the stay of Ptolemy I on Cos in the winter of 309-8. The beauty of the young Coan has been described by Horace and Meleager. Meleager was even granted Coan citizenship on his older days and wrote several epigrams on the beauty and idyll of the Coan countryside. Other authors associated with Cos are Philitas, Nikanor, Sisyphos, Socrates and Damoschares, but little or nothing of their work has survived.

A few special occasions and events related to Cos are told by different authors. Strabo and Plinius informs us that the famous painter Apelles spent his last days on Cos.³⁴ His most famous work, the Aphrodite Anadyomene, was supposedly in Coan possession. Aristotle has a passage on the silkworm and silk production on Cos.³⁵ Plinius write that the Coan ordered a sculpture of Aphrodite by the famous Praxiteles.³⁶ They chose a draped version of Aphrodite and rejected the naked statue they were first offered, and which later became the even more famous 'Cnidian Aphrodite'. Appian informs us about a *chlamys* which was kept in a sanctuary on Cos, and which was allegedly the possession of Alexander himself from the beginning. The *chlamys* was later brought to Rome by Pompey who wore it in a triumphal procession.³⁷

The usefulness and value of the literary sources are undisputable. Still we can only regret that most of the sources on Cos are in a fragmentary state. This makes it difficult to decide where the different authors has their information from, and on which ground their stories are told.

³² Pausanias III, 23, 4.

³³ Strabo 657; Plinius, *NH* XX, 264; XXIX, 4.

³⁴ Strabo 657; Plinius, *NH* XXXV, 92.

³⁵ Aristotle, *Historia Animalis* 19; se chapter on "motifs and style" below.

³⁶ Plinius, *NH* XXXV, 61.

Earlier research

The island of Cos has been the subject of many different works of a cultural historical nature during the centuries. It is plausible to suppose that the fame of Hippocrates is a major reason behind this focus on Cos. The earlier works on Cos from modern times are dealing with the island from different angles, but most of them are general in topic: K.O. Müller, *De rebus Coorum*; Zander, *Beiträge zu Kunde der Insel Kos* (Hamburg 1831); Küster, *De Co Insula* (Halle 1833); Ross, *Reisen nach Kos, Halikarnassos, [etc.]* (Halle 1852); Lauvergne, 'Description de l'Île de Cos', *Bulletin Sciences géographie* XI; Rayet, 'Mémoire sur l'Île de Kos', *Extractes des archives des missions scientifique* III 3 (1876); Panrélides, 'Sur la topographie de l'Île de Cos', *BullHell*; Dubois, *De Co insula* (Paris 1884).

The first and still valuable, in-depth study of Cos is Paton and Hicks' work from 1891.³⁸ Alongside its catalogue of inscriptions it also contains a thorough study of the earliest history of Cos. A variety of different cultural topics are treated in no less than ten *appendicis*, among them the Dorian calendar, the Dorian tribes, the relations to the neighbouring island of Calymna and a discussion on Theocrit, a poet connected with Cos. In the following decades several specialized studies, mainly excavation reports, were published (see below).

A general study was again published in 1978.³⁹ S.M. Sherwin-White's magnificent work *Ancient Cos* presented a revised edition of her doctoral thesis submitted five years earlier. She made a thorough study of all sources available at the time, and gathered the results in in-depth treatment of topics ranging from the Coan constitution and the economic life on Cos, to the pure historical events, an onomasticon and also chapters where the coin material was used in her argumentation. Sherwin-White's work is still the general reference on Cos from the archaic to the Imperial period. She starts her presentation with the «Dorian settlement» and ends her historical treatment with a chapter on «Cos in the Roman Empire». Her main emphasis is on the Hellenistic period. In the first half of her study she is presenting a historical outline following a traditional way of historical presentation. The second half is dedicated to different main themes as the social structure of the community, the constitution, the Coan School of medicine and Coan religion.

³⁷ Appian, *Mithradates*, 115.

³⁸ Paton & Hicks 1891.

³⁹ Sherwin-White 1978.

Particularly interesting is her treatment of the social structure and constitutional organisation on Cos. Sherwin-White's references to ancient sources and modern research are in general full, but she has not compiled a full bibliography.⁴⁰

More specialized in approach is a study by K. Höghammar published in 1993.⁴¹ Although basically a material study of inscribed statue bases, the work is still interesting in a broader sense since her aim is to interpret the inscribed bases in connection with contemporary historical events and developments in Coan society. She focuses on material from Hellenistic times to the Augustan period. The bases are divided into chronologically defined groups and they are analysed quantifiably after a defined set of criteria. The catalogue is full and detailed and includes several inscriptions previously unpublished. Among the data given are by whom the statue was erected and to who's honour, sculptor, their geographical affinity, social status and sex. She manages to point out a certain correspondence between contemporary events and the types of dedications on the statue bases. For example there is an increased number of prominent foreigners honoured during the turbulent years around c.200, and that there seems to be a negative proportionality between a rich society and commissioning of honorary statues by the *demos*. Höghammar presents a historical outline of the period with up to date references for the latest research on Cos. In appendix 1 she gives an interesting discussion on the incorporation of Calymna in the Coan *polis* in the end of the third century.

A substantial body of inscriptions from Cos are not yet published. References to this material are although often to be found, especially in the excavation reports. The above mentioned work of Paton and Hicks is therefore still among the main references when inscriptions are concerned. The material is divided into two main groups: inscriptions from the city of Cos and from the six demes, Phyxa, Haleis, Hippiia, Halasarna, Antimachia and Istmus. The inscriptions from the city of Cos are further classified in Coan decrees, foreign decrees, religious inscriptions and calendars, listings, dedications and inscriptions on sculptures, border and mile stones and funerary inscriptions. The personal names on the coin material are also included, and will be treated separately.

The main publications of inscriptions and epigraphic material succeeding Paton and Hicks are firstly Herzog, *Koische Forschungen und Funde*, from 1899 and secondly

⁴⁰ The part of the text where numismatic evidence plays a significant role in her argumentation, and discussions of social, historical and/or economic topics relevant for the numismatic material will be discussed in Part 2 and 3.

⁴¹ Höghammar 1993

Maiuri, *Nuova Silloge Epigraphica di Rodi e Cos* published in 1925.⁴² Several articles on epigraphical sources have seen the light, first and foremost by Herzog, Segre, Pugliese-Carratelli and also by Christian Habicht, Charles Crowter, Robert Parker, Klaus Hallof and other scholars who during the recent years have revitalized the important work on the Coan inscriptions.⁴³

The prosopographical material was collected in Sherwin-White's *onomastikon*, but is later replaced by the reference work *A Lexicon of Greek Personal Names (LGPN)*.⁴⁴

German and Italian archaeologists excavated vast areas of various remains on Cos after the turn of the century and again in the 1920- and 30s. Of natural reasons the city of Cos and the sanctuary of Asclepius situated not far from the city have been in focus of the excavations. Herzog and Schatzmann published the results of the excavations of the Asclepieion in 1932.⁴⁵ A preliminary, but detailed report of the excavations of Cos town was published by Morricone in an article in *BdA* 1950.⁴⁶ The sculptures from these excavations were published by Bieber, Laurenzi, and more recently have been the object of studies by Kabus-Preisshofen in 1989 and Höghammar, as mentioned above, in 1993.⁴⁷ The latest work mentioned is also the first in which the sculptures are studied in a wider context than the traditional art historical study.

Works of reference

The works mentioned below will have an emphasis on numismatic works of reference although a few exceptions are included.

In Mionnet's work *Description de médailles antiques, grecques et romaines* published during the years 1806-37 are listed 169 coins of Cos (Imperial issues not included).⁴⁸ The identification of the specimens in Mionnet's listings is obstructed by the

⁴² Herzog 1899; Maiuri 1925.

⁴³ Segre 1941; - 1944-5; Pugliese-Carratelli 1963-4; Habicht 1996, 1998 and 2000; Crowter 1999 etc. A number of smaller articles during the years have made important contributions, some of which are Gardner 1885; Patriarca 1932; Benedum 1977; Dubois 1983; Pantelides 1987; Höghammar 1996.

⁴⁴ See Abbreviations. Because of this excellent work of reference, no revised onomasticon is presented in this work. However, the listings of personal names on coins will contain some names which are not included in the *LGPN*. New names are also published in recent articles, cf e.g. Habicht 2000.

⁴⁵ Herzog/Schatzmann 1932.

⁴⁶ Morricone 1950.

⁴⁷ Bieber 1923; Laurenzi 1955-6; Kabus-Preisshofen 1989; Höghammar 1993.

⁴⁸ Mionnet is often, it seems, overshadowed by his colleagues Eckhel and Sestini. I presume this is mainly caused by his decision to include estimated value and degree of rarity of the coins. Sestini used the words *il*

similarity in motifs on the Coan coin series. We know, however, that several coins in his description are specimens of which he made copies in the Cabinet des médailles, Paris. Mionnet does not introduce any detailed chronological arrangement of the series. The types are mentioned in the following iconographical sequence: Discoboloi; bearded Heracles/crab, club; youthful Heracles/crab, gorytos; bearded Heracles/draped female head; youthful Heracles $\frac{3}{4}$ facing/crab, club. Altogether 26 personal names are listed⁴⁹, but several are incomplete or misreadings.⁵⁰ There are also some examples of misreading of the ethnic, usually ΚΩΙΩΝ for ΚΩΙΟΝ which is significant for the dating of the coin series.

Mionnet is referring to articles and descriptions from museum collections by Sestini (in the supplement). But in general Sestini's works contain little information on Coan coins. In his main work, classified under *insulae cariae*, are listed a few silver and bronze coins, with ethnic of the old and new spelling. The catalogue does not give us any personal names.⁵¹

Imhoof-Blumer was among the most competent scholars dealing with Asia Minor. Coan coins are treated in three of his works.⁵² In the earliest work he is mainly concentrating on the *discoboloi*. For the other series he is referring to his own catalogue from the Winterthur collection.⁵³ In the next work is only mentioned a later type from Cos. In the latest work Imhoof-Blumer is presenting a listing of 20 personal names not included in Paton and Hicks 1891.⁵⁴

Although the main subject in Paton and Hicks 1891 is the body of inscriptions of Cos, they also included a chapter on coinage. This was found natural to do because of the personal names found on most of the Coan coins. Paton and Hicks' treatment of the coins is mainly based on B.V. Head's work from 1887.⁵⁵ Paton and Hicks are separating the

gran tassatore when referring to Mionnet. Anyhow, for a long period of time the work of Mionnet was the largest description of Greek coins available outside the major museum collections. Cf. also Mørkholm 1979-80, 14

⁴⁹ ΑΝΑΞΑΝ; ΑΡΙΣΤΑΙΣ; ΑΡΙΣΤΙΩΝ; ΑΡΧΙΑΣ; ΒΙΤΩΝ; ΔΙΩΝ; ΕΜΠΡΕΠΩΝ; ΗΡΟΔΟΤΟΥ; ΠΙΠΟΛΟΧΟΣ; ΚΛΕΙΝΟΣ; ΛΑΕΡΤΑΣ; ΛΥΣΙΜΑΧΟΥ; ΜΕΝΩΝ; ΜΟΣΧΙΩΝ; ΝΙΚΑΓΟΡΑΣ; ΝΙΚΩΝ; ΝΑΞΑΝΔΡΟΣ; ΞΑΝΘΙΠΠΟΣ; ΠΟΛΥΑΡΧΟΣ; ΠΡΟΞΕΝΟΣ; ΠΥΘΥΩ; ΠΥΡΡΙ; ΤΙΜΟΛΥΚΟΣ.

⁵⁰ ΝΑΞΑΝΔΡΟΣ for ΑΝΑΞΑΝΔΡΟΣ; ΛΥΣΙΜΑΧΟΥ for ΛΥΣΙΜΑΧΟΣ; ΠΥΘΥΩ for ΠΥΘΙΩΝ etc.

⁵¹ Sestini 1821.

⁵² Imhoof-Blumer 1883, 318-20; - 1890, 154; - 1901-2, 165-6.

⁵³ Imhoof-Blumer 1871.

⁵⁴ ΑΘΑΝΙΩΝ; ΑΡΙΣΤΙΩΝ; ΚΛΕΙΤΑΝΩΡ; ΛΥΚΙΝΟΣ; ΦΙΛΟΔΑΜΟΣ; ΜΕΔΩΝ; ΠΥΘΙΩΝ; ΦΙΛΙΣΤΗΣ; ΘΕΥΔΩΡΟΣ; ΕΞΑΙΓΡΕΤΟΣ; ΛΕΟΝΤΙΣΚΟΣ; ΔΗΜΗΤΡΙΟΣ; ΣΤΕΦΑΝΟΣ; ΕΥΦΡΑΝΩΡ; ΒΑΤΙΩΝ; ΓΟΡΓΟΣ; ΙΣΙΔ---; ΕΥΑΓΟΡΑΣ; ΜΕΔΩΝ; ΚΑΛΥΜΝΙΟΣ.

⁵⁵ The treatment of Head's work in this study is based on the revised and enlarged version of *Historia Numorum* from 1911. However, the first edition came in 1887, just in time to be used by Paton and Hicks.

coinage previous to 200 into two main groups. In the introduction to the coin catalogue they operate with the periods «before 330» and «330-200». In the catalogue, however, we find a division between period I: 400-300 and period II: 300-200. The dating of the coins in period I is mainly based on a single hoard from Chius. The hoard contained a tetradrachm and drachm (Paton and Hicks nos. 4b and 15b) which were found together with coins of Mausolus and Pixodarus in fresh state⁵⁶. Two coin types are placed in period I: bearded Heracles/crab; club and bearded Heracles/draped female head. Of the first type, only tetradrachms are mentioned, while of the second type they identified didrachms and drachms. All other series minted on Chian (Rhodian) standard belong in period II, together with a small number of bronze coins with personal names corresponding with names on the silver series. Paton and Hicks' most important contribution from a numismatic point of view is the listing of personal names on the coin material. Their survey is, however, now in the need of being heavily revised and a new survey is presented in this study (Part 5).

In the historical introduction to B.V. Heads *Catalogue of Greek Coins in the British Museum, Caria, Cos, Rhodes, & c.*, London 1897 (*BMC, Caria*) is stated that «*The history, epigraphy, and numismatics of Cos have been so thoroughly investigated by Paton & Hicks, that it is hardly possible to add much in this catalogue to that which has been already fully discussed by them.*». The first edition of Heads *Historia Numorum* was available to Paton & Hicks, but, in spite of the high ambitions of the latter, it is Head's chronology which has been established as the standard in the catalogues to come. In the *BMC, Caria* all known main types of Cos are mentioned.⁵⁷ Additional works of reference on the Coan coinage are few. The publication of the Coan *diskoboloi* in 1968 falls outside the scope of this study, but must be mentioned anyway due to its importance for the understanding of the Coan coinage in general.⁵⁸ Pierre Requier published an important article on the large issue of Hellenistic tetradrachms (issue XIV in this study) in 1996. His arrangement turned out to be in general correspondence with the catalogue in *Utmyntningen på Kos, ca. 366 – 190 f.Kr.* from 1994.⁵⁹ This work presents an enlarged and partly revised treatment of this issue. John Kroll published the large and long lasting issue of Coan tetrobols in 1964. The issue is immediately following the last issues of silver coins

⁵⁶ See hoard 17 (*IGCH* 1217). The only publication about the hoard available for Paton & Hicks was Löbbecke 1887.

⁵⁷ We find, however, no tetradrachms of the type Bearded Heracles/Draped female head. Head was aware of their existence, saying «*The same veiled head is also, though very rarely, met with on tetradrachms*», and he referred to a specimen in the Weber Collection.

⁵⁸ Barron 1968.

⁵⁹ Requier 1996; Ingvaldsen 1994.

of this study (issues XXIII and XXIV) and is thus of interest. His chronology is, however, obsolete.⁶⁰ The last Coan issue which is published in full is the characteristic late Hellenistic tetradrachms of Attic weight, with Aphrodite and a standing Asclepius as motifs.⁶¹ This issue is also of relevance since it, as the previous, is immediately following the latest silver issue here presented.

It is obvious that this work has profited significantly from, and is partly dependent on the general works of the *Inventory of Greek Coin Hoards*, *Coin Hoards* and *Lexicon of Greek Personal Names*,⁶² as well as the numerous volumes of *Sylloge Nummorum Graecorum* and other published collections. I am forever grateful to the editors of these, and related, works.

⁶⁰ Kroll 1964.

⁶¹ Ingvaldsen 2001.

⁶² *IGCH, CH, LGPN*.

PART 1. THE SETTING

Socio-political outline

Social structure⁶³

An almost complete lack of sources for the social institutions before 366 forces us to focus on the Hellenistic times, and the Coan institutions attested in the late fourth to the second century. This is particularly regrettable since the connection between coinage and synoecism would profit heavily if one was able to compare the social institutions in the pre- and post-synoecised periods. The Coan citizen body consisted, after the synoecism, of the unified people of the previously independent cities, two or more in number. It seems like after the synoecism the only city to retain the status as *polis* was the main city⁶⁴. The criterion of citizenship followed the standard pattern of Greek *poleis*, namely citizen birth for three generations⁶⁵. The population was divided into five categories: 1) citizens with full rights, 2) citizens with limited rights, 3) foreigners with limited rights, 4) foreigners without rights and 5) slaves.⁶⁶ It is more difficult to render whether citizenship was dependent on tribal belonging or to mere geographical belonging, organised by demes. The main point was probably to make the basis for citizenship equal to all inhabitants, regardless of social positioning or economic status. Another question is whether the demes formed parts of the cities on Cos. And likewise whether the main city after 366 was independent of the deme system, or formed a part of it. Our information on the cities

⁶³ My survey is mainly based on Sherwin-White 1978, 153-174 and Herzog 1928, 42-5. Additional references are given in the notes below.

⁶⁴ Unlike on Rhodes, where one or two of them occasionally continued to use the term *polis*. See Gabrielsen 1997, 29 with references.

⁶⁵ Paton & Hicks 1891, no 367.

except for the main city of Cos, and especially in the time prior to the synoecism, is to scarce to draw any conclusions. The city of Cos it self was probably an independent unit on the side of the deme system, and was not subdivided into smaller demes within the city. The lack of city-demes, in contrast to what is found in larger *poleis* like Alexandria, is probably caused by the city's smallness. As a consequence of this it was only the citizens residing in the countryside who belonged to a deme. In any way it seems like the deme system had little significance on Cos regarding citizenship and the organization of the citizen body. As far as we know demotics were never used on Cos, only tribal epithets can occasionally be seen. But every citizen was a member of one of the three Dorian tribes, Hylleis, Dymanes and Pamphyloi. The tribes were subdivided into *triakades* and *pentekostyes*⁶⁷. Tribal membership was thus an obligatory feature of citizens, city dwellers or inhabitants in the *chora* alike. A few priesthoods of public cults were reserved for particular memberships in the different *triakades* and *pentekostyes*⁶⁸. There are no reasons to affiliate the *triakades* and *pentekostyes* to any geographical locations. At least two of the demes had their own local tribes existing independently of the Dorian tribes. This implies that the local *phylai* existed alongside with the state *phylai* – an unusual pattern of organization.⁶⁹ Since keeping a double system of geographical grouping must be regarded a pointless effort, we must consider the tribal system of the Dorian tribes as geographically independent. The *phylai* were regulated by *nomoi* and had separate treasuries. It seems like Isthmus and Halasarna held a superior position among the Coan demes. This is attested by allocation of sacred funds, *leges sacrae* were put on display there and on one occasion Isthmus is even attested as independent sponsor of *theoroi* to Delos.⁷⁰ *Triakades* and *pentekostyes* are known from other Greek cities as well, but the function is by no means evident. In Sparta they were military units, but the knowledge of the Coan military system is to scarce to make any conclusions whether this was also the case on Cos.⁷¹ The status and function of the Dorian tribes before 366 is uncertain. At least two of the three tribes existed, although on a smaller scale and with a more narrow local belonging. Evidence shows that gentilicial grouping was common on Kos in the archaic period. Individual names of citizen divisions are often found ending with *-idai* and *-adai*. This name practice follows the common pattern of most Greek states before the growth of democratic

⁶⁶ *SIG3* 398, 34; Paton & Hicks 1891, no. 10, 7 ff.

⁶⁷ Cf. *TitCal* 74, a citizenship decree ordering the new citizens to enroll into tribe, *triakas* and *pentekostys*.

⁶⁸ State cult of Zeus Polieus and Demeter Olympia is attested, Sherwin-White 1978, 158, note 19, 20.

⁶⁹ A similar organization is attested on Ceos, Rhodes and Mylasa, see Jones 1987, 239.

⁷⁰ *IG XI 2*, 287 (c.250). Ref. from Jones 1987, 239.

organisations and rule. The affiliation to a certain tribe seems to have had few political implications. Although some minor magistrates and officials may have been chosen from the Dorian tribes, it seems like the main political purpose of being a tribe member was to validate citizenship. The political influence was executed in the Assembly by individual members of the *damos*, not by tribal connections. The tribesmen were primarily engaged in the execution of and arrangements concerning cults. The Coans competed at the Coan Dionysia arranged after their tribes, the tribes provided sacrifices for the state festivals, they put up altars, and some of the members gained religious privileges. We have, however no indications that tribal membership had any significant influence on official duties which in any way can be connected to the administration of the Coan coinage system.⁷²

Constitution

Little is known of the origin of the Coan law code; although some interesting hypotheses have been put forward. The law code can be considered a successful one since other states adopted them in the fourth century (Teos, Lebedos). The original character of the constitution, and thus the reason behind its good reputation, is not known. Our knowledge is based on numerous documents from the Hellenistic period. Also the Coans were fortunate in being subject to an understanding kingdom which allowed them to keep their own laws in spite of subjugation to a superior power. I will here only deal with elements of the constitution which may be relevant to the organisation of the official institutions under which, hypothetically, coinage might have been a subject.⁷³

Third century inscriptions confirm that the Coan constitution was a democracy. The oath sworn by the Coan citizen body on the incorporation of Calymnus somewhere between 210 and 205,⁷⁴ gives testimony on citizen rights in the Hellenistic period. All citizens were in possession of unlimited political rights regardless of class. All citizens were expected to participate in jurisdiction and government through the assembly. Also the *damos* was the undisputed authority in all political matters. Both foreign policy, the acceptance of foreign ambassadors to the *damos* or *boula*, ratification of alliances,

⁷¹ Herodotus I, 65; Toynbee, *Some Problems of Greek History*. London, 391-2

⁷² The board of *agoranomoi* was probably elected out of the three Dorian tribes, but the more significant boards, especially the *prostatai*, were certainly elected from the whole citizen body, as were other officials.

⁷³ See Jones 1987, 236-42 and Sherwin-White 1978, 175-223 for a detailed account of the Coan constitution.

⁷⁴ Herzog 1942, 5-8; Sherwin-White 1978, 126 (with translation); Höghammar 1993, 89.

decisions on peace and warfare, regulation of state finances and the decision over the size and objects of expenditure, rejection of insufficient payments to *epidoseis* in war-time and ratification of citizenship fell under the jurisdiction of the *damos*. The assembly, council and popular juries were the institutions on which the Coan democratic constitution rested.

Sherwin-White describes that the Coan constitution opened for three different ways of making decrees: 1) Probouleutic decrees, which could be initiated by a citizen, moved through the *boula* and then are brought before the *damos*. Probouleusis was not obligatory but was the established common practice. 2) The chief magistrates, *prostatai*, exercised considerable initiative in proposing decrees. The *prostatai* could present proposals to the *damos*, either through the *boula* or directly in front of the *damos*.⁷⁵ 3) A citizen could propose decrees directly in front of the *damos*. In this case the decree was ratified directly by the assembly, omitting the *boula* from the decision process. The decree, when sanctioned, was then presented in the name of the proposer followed by the *damos*.⁷⁶ Recently, P.J. Rhodes have objected to this interpretation. He argues that when an individual is stated as proposer in the decree, the council is no matter represented by the enactment formula which is often missing due to the incompleteness of the text. The council is, according to Rhodes, always represented by the enactment when this has survived. Thus, a decree proposed by an individual directly to the assembly is not explicitly confirmed in the body of Coan decrees. It seems therefore that probouleusis was the common procedure of decrees, either proposed by individuals or the board of *prostatai*.⁷⁷ The decrees which granted citizenship tell us that the assemblies of the demes were subordinate to the authority of the assembly of the polis. The nomenclature used to imply this hierarchy is ὁ σύμπαξ δαμος.⁷⁸ Councils are not, in contrast to assemblies, attested in the Coan demes.⁷⁹ The *damos* on Kos also had judicial power. This is attested in the fourth century in connection with illegal use of timber from the sacred cypress grove by the Asclepieion.⁸⁰ The *dikasteria*, popular law court, on Kos is not attested directly. It

⁷⁵ The only known instance of this procedure, a ship-building decree, was initiated during war-time. We have thus no indication to whether this was a common practice on Cos, or, like in most other Greek cities, was an exception due to war-time circumstances. Also, the *boula* was probably mentioned in the enactment, see main text above.

⁷⁶ E.g. as seen in a decree from c.300-250 concerning the establishment of a treasury in the new temple of Asclepios, see Sherwin-White 1978, 178.

⁷⁷ Rhodes 1997, 237, 490.

⁷⁸ Identical nomenclature is found on Rhodes, cf. Gabrielsen 1997, 26, Stratonicea and Mylasa.

⁷⁹ Rhodes 1997, 238. This follows the common practice of Greek *poleis*. Rhodes appears to be an exception in that the three major cities all kept their councils, named *mastroi*, after the synoecism in 408/7, see Rhodes 1997, 477 and Gabrielsen 1997, 29.

⁸⁰ Herzog 1928, 11, 7ff.

is, however, mentioned in Aristoteles, *Politics* in connection with an oligarchic revolution which was forced through due to the demagogues of the lower class' use of the law courts to prosecute the wealthy and propertied class on the island.⁸¹ An oath sworn by the whole citizen body at the end of the third century clearly testifies that every citizen served as *dikast*, and thus that every citizen had the opportunity to be judge at the law court. Payments for officials are not attested on Cos. It is, however, reasonable to assume that the practice in this matter did follow the common pattern, seen for example on Rhodes,⁸² with official payments for participating in the assembly, the law court and the council.⁸³

We have no information regarding the size of the Council or to how its members were elected. The *boula* had a secretary, whose title is epigraphically attested. The function of the Council on Cos probably followed the common pattern found elsewhere in Greek cities, and all kinds of matters could be the subject of *probouleusis* on a direct initiative from a person or by the way of the *prostatai*.⁸⁴ The Council and its secretary, *boulas grammateus*, had particularly responsibility for business matters. The judicial power of the Council is not certain.⁸⁵

The Coan constitution consisted of institutions corresponding well to the typical Hellenistic democracy. Popular government was exercised through the *boula* and *damos*, and a board of magistrates administered much of the politics in practice. The evidence, although incomplete, tells us about a system of government that had grown independently with traces of Coan peculiarities as the *monarchos*. Other features can be attributed to mere geographical factors, in particular the influences from the neighbouring Rhodes, as well as elements that can be attributed to the Dorian heritage on Cos.

We must then leave the familiar governmental institutions and examine closer the officials, magistracies and sub-committees and -boards involved in administrating the affairs of the

⁸¹ Sherwin-White claims that Aristotles account (*Politics* 1304b, 25; 1317b, 27) is attesting that the lower class had the right to participate in the juries. This is anyhow evident indirectly through the democratic rule attested on Cos in the fourth century. Furthermore, Aristotle does not explicitly state that the poorer class was able to prosecute through the *dikasteria*, only that they in fact had managed to surpress the propertied class in general. The latter was obviously discontent by the democratic rule, not the practise of the law courts in particular. What we do not now is what happened with the *dikasteria* after the democracy was overthrown, and if there were official payments for participating in the juries (and for other official duties).

⁸² Gabrielsen 1997, 28.

⁸³ The payments could cover several areas of public life, for holding magistracies and for various religious, military and civic duties. The payment of such was in som instances considered an investment in stabilizing domestic affairs, and, more or less formally, to secure participation in court, council and assembly independently of wealth, class and property holdings.

⁸⁴ *Exagetai* and *strategoi* are attested as proposers on one occasion each, see Rhodes 1997, 237.

polis. Although extensive documentation is lacking we must assume that a large proportion of the Coan economic organisation and day-to-day functioning were dependent on these lesser attested board of magistrates and other units subordinate to the *boula* and *ekkleisia*. They therefore deserve a closer examination.

The *monarchos*, an exclusively attested institution on Cos, was the titular head of the state in Hellenistic times. We do not know for certain when it was instituted. Epigraphically attestation is only taking us back to approximately 325-300.⁸⁶ The eponym use of the *monarchos* is not traceable earlier than c. 300-250.⁸⁷ The lack of sources does not, of course, rule out the existence of the *monarchos* in earlier periods. A third indication for the earliest dating of the *monarchos* has been the personal name that occurs on the Coan coins. The coinage in question has traditionally been seen in connection with the synoecism, which, if correct, could have provided us with year 366 as the earliest known time for the occurrence of the *monarchos*: «Finally there is reason to believe that the *monarchos* was the eponym used on Coan coins dating to the mid-fourth century (and later), so that the eponymous *monarchos* may, therefore, be traced back to an earlier date than that afforded by the inscriptions.», «--, the use of the *monarchos* as eponym stems from a period close to the year 366, when the earliest fourth century Coan coins were minted, and also gives the earliest contemporary evidence of the existence of the *monarchos*.», «The *monarchia* may then have been used as state eponym as early as c. 366.».⁸⁸ But as we shall see later, there are two main reasons why the coin material can not be used to attest the earliest occurrence of the *monarchia*. Firstly, the use of the *monarchos* as eponym on coins was not institutionalised in the fourth century onwards.⁸⁹ Secondly, if the *monarchos* was represented on Coan coins, the first occurrence has to be moved back to c.380 to the introduction of the first coin series bearing personal names. But, the present evidence helps us no further than the attested use of the *monarchos* in inscriptions dating to the last quarter of the fourth century. But how far back in time is it reasonable to trace the *monarchia* when all factors are taken into consideration? Sherwin-White points out two main arguments in favour of the existence of the office prior to 366. The *monarchia* is attested in the *polis*, but also in one of the demes of Hellenistic Cos. The occurrence of the office in Isthmus can be explained as a survival of an earlier local office,

⁸⁵ This is due to the uncertainties surrounding a *lex sacra*, where the incomplete text is either describing the Assembly or the Council in a particular matter. Cf. Sherwin-White 1978, 186 n 69.

⁸⁶ Herzog 1928, 5 A, 6 (*lex sacra* of the last quarter of the fourth century).

⁸⁷ Herzog 1928, 14.

⁸⁸ Sherwin-White 1978, 188-189.

probably a priesthood, which can be traced to Astypalaia the predecessor of the site of Isthmus. The office was in Hellenistic times filled from the local tribes which existence, for different reasons, can be traced back to the archaic period.⁹⁰ Also, the choice of office to be made eponymous is significant. The post-synoecism office of *monarchia* was an annual office of a constitutional government, and it is only attested on Cos. Traditionally meaning «sole ruler» and in the tragedies used synonymously with *basileos*, but also meaning *tyrannos* in archaic times and gradually changing towards the meaning of ‘autocrat’ in the fifth and fourth centuries.⁹¹ Sherwin-Whites view that the introduction of an office named *monarchia* in the middle of the fourth century taken into consideration the meaning of the word at that time, is sensible and thus adopted here. The only likely explanation must be that the Coans instituted an office derived from the *monarchia* which had already been in existence in the archaic city of Astypalaia. The *monarchos*, unlike other Coan officials, held office for one calendar year. The method of election, either by vote or by lot, is not directly attested. The evidence tells us, not surprisingly, that the *monarchoi* were elected among a group of wealthy and prominent citizens. Although the identification of the persons is obscured by the names occurrence mainly without patronymics, it is clearly that the persons were among a citizen group active in tenure of other offices and priesthoods. As we shall see below a comparison between the personal names on coins and the preserved listings of *monarchoi* shows a lesser degree of correlation than previously believed, and the appealing suggestion that the names on the coinage are representing *monarchoi* must be ruled out. In spite of this the correlation we can witness is clearly attesting a high degree of circulation of offices among a limited group of citizens. The possibility that the *monarchos* actually was a priesthood is also ruled out.⁹² Even though the *monarchos* was obviously recruited from the wealthy upper classes of Kos we can not make any conclusions whether the *monarchia* was legally limited to members of a certain property class. What we do know is that the *monarchos* had several sacrificial duties spread over a number of cults. He also enjoyed the privilege of portions from sacrifices. Sherwin-White explains the *monarchos*’ role in the city’s religious life as: “---] the general supervision of the sacred life of the state [--]. [--] in a supra-priestly position, with duties over and above those of the individual priests.”. It is particularly

⁸⁹ Cf. Part 3 below.

⁹⁰ Sherwin-White 1978, 191; the suggestion was presented by Pugliese Carratelli, for reference see Sherwin-White, 190 n 91; 191 n 97.

⁹¹ See references in Sherwin-White 1978, 192, n 101,102.

⁹² Sherwin-White 1978, 196-7.

regrettable that the crossing lines between the political power, religious responsibility and ceremonial position in the state held by the *monarchos* is impossible to ascertain in any detail.

The magistrates named *prostatai* occur in several Greek, mainly Dorian, states like Iasus, Calymnus, Cnidus, Nisyros, Tegea and Corcyra. They were the main magistrates on Cos, resembling the nearby *prostatai* on Nisyros and the *prytaneis* on Rhodes. They deserve a closer examination here, because of their occurrence on the later Hellenistic tetrobols of Cos.⁹³ The board of *prostatai* consisted of five members, one of whom acted as chairman. The members were elected by vote not by lot, and were probably recruited from the whole *damos*. They served in one of the six months terms the Coan calendar year was divided into. We do not know for certain whether the Coans had restrictions limiting the number of times a person could be elected to this board of magistrates. The *prostatai* were most likely a much more mixed group in terms of social class and wealth than the *monarchoi*. The *prostatai* were responsible for much of the administration of the state - through the execution of the decisions of the *damos* as well as through other channels.⁹⁴ They enjoyed the privilege of presenting proposals both to the *boula* and *damos*. The magistrates acted officially as a unit, not individually, since constitutional authority was granted the board collectively and thus makes it unlikely that individual *prostatas* ever acted on his own.⁹⁵ The judicial capacity of the board is clearly witnessed in inscriptions telling about its responsibility of, among other things, recording evidence in connections with civil trials. The *prostatai* also applied laws and imposed fines in local jurisdiction concerning payments for priesthood, cult and sacrifices. The administrative capacity can be traced in the responsibility for allocation, by lot, to tribes to new citizens. They also appointed cult officials, drafted regulations for the sale of priesthood and public cults and provided and executed sacrifices at state festivals. The board of *prostatai* had particular responsibilities for financial matters, especially those in connection with temples and sanctuaries. They clearly had a controlling role on behalf of the *polis* towards the religious centres and activities. This control included the sacred moneys of the temples and sanctuaries. The temples each had their *thesauroi* (treasuries) in which were collected,

⁹³ On a few specimens of this type ΠΠΟΣ or ΠΠΟΣΤΑΤ is placed before the personal name. Kroll is adopting Paton & Hicks' view that the abbreviation is referring to the *prostatai* board of magistrates. He prefers, however, to restore the abbreviation into the plural sense, meaning the 'prostatai under so and so'. See Kroll 1964, 91-2.

⁹⁴ A wide range of responsibility is associated with the office of *prostatas* in other states: In Corcyra as head of *proboloi*, in Gela as head of *boule* and as leader of the *ekklesia* in Larissa, Tegea and Hypata, see Vatin 1961, 239.

during the year, monetary dedications and offerings, as well as the offering by the people which were prescribed by the state. The keys to the *thesauroi* were held jointly by the *prostatai* and the keeper of the priesthood. The magistrates had the responsibility to open the treasury in the presence of the priest, making inventory lists of the content and command the use of them in concordance with the decisions of the *damos*. The *prostatai* handled the money directly unlike in several other states where the actual handling and account-keeping was delegated to a financial board. The magistrates also handled directly the money paid out by the *tamiai* for sacrifices offered abroad by *theoroi*, and financed by state funds. As has been mentioned above the abbreviation on the later Hellenistic tetrobols is a strong indication on that the board of *prostatai* was involved in coinage in the middle of the second century. If this was the case even earlier is uncertain. It is, however, unwise to rule out this possibility without a closer examination of the sources.⁹⁶ This discussion is presented in Part 3 below.

The board of *stratagoi* is also epigraphically attested in the Hellenistic period on Cos. They were also five in number as were the *prostatai*. They are not, against what could be expected from their function in other states, attested in military context. Still it is epigraphically attested that one named *strategos* was involved as responsible for military actions and organisation during the wars 205-201. He was clearly granted wide military authorisation during these campaigns and defence of Cos. We have in general no reason to believe that the *stratagoi* of Cos held a different position compared to the general function of these officials.⁹⁷

Besides these major *archai*, a few subordinate officials deserves mentioning. It is difficult to sort out in great detail the exact responsibilities of the different *archai*. They were all permanent offices of the constitution. They had various responsibilities for particular aspects of the civic administration, such as finance, public records, religious duties and public works. The *poletai* were responsible for administrating public contracts and for the sale and lease of state property. The *karpologeuntes*, attested in the second century, are more difficult to describe. On Cos they are mentioned as obliged to make sacrifices at a Coan festival, but analogies to other states may indicate that they played a role in financial matters in some way. They could be collectors of taxes on agricultural

⁹⁵ Kroll 1964, 93

⁹⁶ Sherwin-White 1978, 205: «--] *the boula and prostatai somehow became involved in coining between c. 145-c.88.*», thus implying they were not involved on an earlier stage. The dating of the tetrobols to c.145 is doubtful, and a more plausible chronology is presented briefly below in the commentary on issue XXIII.

⁹⁷ See Sherwin-White 1978, 205-8.

products (*karpoi*), receiving and disbursing funds for fortification walls (attested in fourth century Kolophon) or, most probably, involved in naval activity, for example the collection of tithes from Kalymnos when the island became subject to Coan taxation. The *tamiai* are the potentially most interesting officials when it comes to the economic life of the state. Unfortunately their function and activity on Cos are rather obscure due to the fragmentary evidence which has survived. However, they certainly were the chief financial board. They had the custody of state money and administrated the necessary payments for various public purposes. They also administrated the *thesauros* of the Asclepieion. The number of *tamiai* is not attested nor the period of office, although they are likely to have followed the other officials in their six months duty. It is particularly regrettable that no evidence can shed light on the connection between the *tamiai* and other officials in the matter of providing the state with the necessary amount of money. This would, perhaps, give us some clues to how the monetary system worked on Cos, the essential questions being who initiated the minting of coins, who were in charge, who were responsible, which office were represented on the coins and how were the decision lines, from the *damos* and downwards concerning coinage. The role of the *tamiai* is unattested but they probably held a key position in these matters. From other sources we are told about the *tamiai* and their responsibility in the practical administration of receiving, keeping and disbursing state money. The organisation and financing of the navy and army involved a number of officials on different levels. A huge proportion of state money was canalized into keeping these forces operative. It will, however, be out of the scope here to examine this field more closely. The aspects relevant to this study in this matter will be treated in part 3.⁹⁸

Historical outline

The history of Cos has been subject to several studies during the last three decades. Standing out as a landmark is the thorough work of Susan M. Sherwin-White published in 1978.⁹⁹ This study makes up for the fundament for the historical survey presented here. Additional works have lately contributed on different aspects of Coan history. First and

⁹⁸ Other minor officials, as well as the organisation of the Coan army and navy are treated in Sherwin-White 1978, esp. 209-220.

foremost is a useful survey with up to date references on the research on the subject until 1993 in Kerstin Höghammar's doctorate, published in 1993. Furthermore, the events in the crucial years 205-0 have recently been treated separately by Patrick Baker in a work from 1998.¹⁰⁰ Kenneth Rigsby's general account of the institution of *asylia* from 1996 also contributes to certain aspects of Coan history, as does several articles on Coan inscriptions published in recent years. Other consulted works are referred to in the text.

Classical period to c.366

According to tradition Cos was colonized by Dorians from Epidaurus on Peloponnesus.¹⁰¹ Cos was evidently a part of the Dorian *Hexapolis*, together with Halicarnassus, Cnidus and the three Rhodian *poleis* of Camirus, Ialysus and Lindus.¹⁰² The political importance of this alliance of *poleis* is not known in detail, but it was probably more a kind of alliance founded on religious grounds with no far-reaching political significance. The alliance, later reduced to a *pentapolis*, gradually lost importance and eventually ended as a local religious festival on Cnidus.¹⁰³ The role of Cos itself as a mother-city of colonized states in the west and/or to Egypt is almost unknown. According to Strabo, a few Coans participated alongside with the Rhodians in establishing a small colony on the coast of Apulia in South-Italy.¹⁰⁴ Furthermore we have no information about any Coan *peraea* on the Carian coast line. We can not exclude the possibility of the existence of a Coan *peraea* due to what appears to be common practise among the islands of this area. The cities of Tenedus, Lesbos, Samos and Rhodes had such possessions, and we could expect Cos to follow suit. On the other side, the written sources on the subject is far from scarce, and the lack of information about Coan land side possessions can therefore be given substantial weight. One explanation on the apparent lack of Coan *pearea* can be the Coan dominance on the island of Calymna and Nisyros. Such dominance is attested from early times on, a Coan

⁹⁹ Cf. commentary on this work under «Works of reference» in the introduction above.

¹⁰⁰ Baker 1998.

¹⁰¹ Herodotus VII, 99 informs us about Artemisia of Halicarnassian heritage who had power over Halicarnassus, Cos, Nisyros and Calyndus, the first of which was colonized from Troizen and the rest of the cities from Epidaurus.

¹⁰² Herodotus I, 144, 3.

¹⁰³ Halicarnassus was excluded from the alliance, cf. Paton & Hicks 1891, xii; Ptolemaios II made efforts in order to maintain the festival as an arrangement between several states in the area, but had to give up the task, cf. Sherwin-White 1978, 30; Tarn 1910, 213-4.

¹⁰⁴ Strabo 654.

king is claimed as ruler of these islands in the *Iliad*, but we do not know the details surrounding the island possession of Cos in the fifth and fourth century.¹⁰⁵

Cos was subject for the shifting powers on the Carian coastline, and when the Persians in 546 gained control over areas previously dominated by Lydians, Cos was among the states subjected to Persian supremacy. During the first eastern invasion of mainland Greece, Cos was still under Persian control. It appears as the tyrant Scythus was in control of the island during the 490s. In c.490 his son Cadmus inherited the power, and Herodotus informs us that he of free will and without preceding conflicts transferred the power into the hands of the Coan people, whereafter he left for Sicily with a Samian contingent to build the city of Zancle (Messene).¹⁰⁶ Cos, together with the islands of Calymna and Nisyros, was under rule of the Persian Artemisia, the legendary daughter of Lygdamis of Halicarnassus, in 480. This means that the Coans acted on the Persian side in the battle of Salamis, although no detail of Coan participation or material and/or financial contribution is attested. Little is known of Coan relations between 480 and 451/0 when the island occurs among the contributing cities of the Delian League.¹⁰⁷ Two factors might be indicative of an earlier participation in the League by the Coans. Firstly, the minting of the so-called *diskoboloi* can be used both in attesting a long lasting Persian control after 480 (if they are considered as Persian triple *sigloi*) and in early Athenian control (if they are considered as minted on Attic weight standard and with an introductory date before 451/0). The Coans first appearance in the *ATL* IV does not, however, exclude the possibility of a membership prior to the year 451/0, but the sources are silent on the matter.¹⁰⁸ The Coans remained as Athenian allies until the end of the fifth century, with the possible exception of a revolt between the years 446/5 and 443/2.¹⁰⁹ Cos was still a paying member of the Delian League at the end of the Peloponnesian war in 432/1. Little is known of Cos during the next two decades. The island is again attested as an allied of Athens at the outburst of the Ionian war in 412. The Spartan general Astyochos caused severe damage on the island in 411. A Peloponnesian fleet was probably based on Cos for 80 days the same year.¹¹⁰ Alcibiades' attempt of turning the Coans against Athens in 410 was not met with enthusiasm, and the islanders suffered again from punishment from the Spartan side. We

¹⁰⁵ *Iliad* II, 676.

¹⁰⁶ Herodotus VII, 163-4. See *CAH* IV, 760.

¹⁰⁷ *ATL* IV; Barron 1968, 87.

¹⁰⁸ See comments in Buckley 1996, 205 on the reason why some member islands might not figure in the tribute list until 451/0 in spite of joining the League at an earlier date.

¹⁰⁹ Sherwin-White 1978, Appendix 1.

¹¹⁰ Thucydides VIII, 43.2-44; *CAH*, V, 471.

are told that Lysander visited Cos in 407 on his way from Rhodes to Ephesus.¹¹¹ It was the same year as Cos was once again victim of Alcibiades' hostility, a destiny also shared by Rhodes.¹¹² Cos probably came under Spartan control in 405, but Spartan dominance is not explicitly attested until 394.¹¹³ The joint efforts of the Athenian Conon and Persian Pharnabazus helped the Rhodians to expel the Spartans from Rhodes in 397/6. After the final battle by Cnidus in 394, where the Spartan fleet was finally destroyed, Cos followed Rhodes in the revolt against Spartan rule. The sources are silent of Cos between the battle of Cnidus and 366, the year of the Coan synoecism – with one possible exception. A war probably occurred between the Coans and the Persian satrap Hecatomnus somewhere during the years 390 and 377.¹¹⁴

The period c.366-285

The year 366/5 is probably the most important year in Coan history during the fifth to third century BC. The outbreak of *stasis* that year is attested by two antique sources.¹¹⁵ This short civil war, or revolt, was according to the classical writers the reason behind the foundation of a new capital on the north-east end of the island. However, the events and their implication on the Coan political and social life are far from fully established. The scholarly dispute has been centred on whether the foundation of a new capital actually involved movement of habitation to a new location, the obvious analogy being the synoecism of Rhodes in 407, or if the changes took place within an already established *polis*.¹¹⁶ Important questions on the number and location of settlements are still not possible to answer from the presently available evidence. Three cities are mentioned by name in the written sources: Kos Meropis, Astypalaea and the capital Cos. The written sources open for interpretation in different directions.¹¹⁷ The city of Kos Meropis is often referred to in ancient sources, but the name is also applied on the island in general.¹¹⁸ The

¹¹¹ Xenophon, *Hellenika* 1, IV, 1-4; *CAH* V, 489.

¹¹² Diodorus XIII, 69, 5.

¹¹³ Diodorus XIV, 84, 3-4; Sherwin-White 1978, 38.

¹¹⁴ Sherwin-White 1978, 41 and n 64-5.

¹¹⁵ Diodorus XV, 76; Strabo 657.

¹¹⁶ The most important sources are Diodorus XV, 76, 2; Strabo 657 and Thucydides VIII, 41, 2. For a closer discussion of the texts in question, see Sherwin-White 1978, 44. The synoecism on Cos is discussed in Part 3 below.

¹¹⁷ See Sherwin-White 1978, 45 ff and esp. n 95 on earlier scholarship and discussion on the matter.

¹¹⁸ E.g. Callimachos, *Hymn to Delos* 160.

most satisfactory explanation on this issue until now has been the one provided in Paton and Hicks' work from 1891.¹¹⁹ The most important city during the Fifth and early Fourth century was Astypalaea (gr: Κῶς ἢ Αστυπάλαια). A city of less importance was located on the north-east side of the island. This is the city named Kos Meropis that according to Thucydides was sacked by an earthquake in 412. The remains of this city were later incorporated into the new capital when it was established in 366/5. The new city was named Cos and thus the Coans followed the tradition from Rhodes, where the new capital was called Rhodes after the synoecism in 407. However, new evidence might change our conception of the habitations on Cos before 366/5, as the possible existence of one or more important cities not previously attested now appears to deserve serious consideration.¹²⁰ Whether Cos was a *bipolis*, *tripolis* or *tetrapolis* prior to the synoecism remains an open question. No matter the status and position of Astypalaea it seems to be certain that the population decreased after the foundation of the new capital. This is to be expected since the new city apparently became the only fortified *polis*, and the place of residence of the majority of the population.¹²¹ The island in general followed the ordinary pattern of division into demes, and inscriptions attest for the existence of a considerable population and activity also in the country demes during the centuries to come.

The Carian satrap Hecatomnus died in 377/6, and his son, Mausolus, became his successor.¹²² The great ambitions of this remarkable ruler were obvious from the very beginning of his reign. The Carian capital was soon relocated from the inland city of Mylasa to the more favourable coastal city of Halicarnassus. Mausolus' grand plan was probably to gather the Greek cities along the coast of Asia Minor and the adjacent islands into one, small empire. The Hecatomnid control was extended as far as to Erythrae in the north and Phaselis and Pisidia in the south, as well as including the islands of Chios, Cos and Rhodes.¹²³ Hecatomnid interference in the Greek states seems to have been followed by oligarchic rule.¹²⁴ However, the division between democratic and oligarchic rule in the political climate following the influence by the Carian satrapy might not be emphasized too hard. Pro-Mausolan decrees are known to also express a democratic flavour, assembly pay

¹¹⁹ Paton & Hicks 1891, xlix-lii, "Note on the phrase KOS HE MEROPIS [in Greek] and on the older city named Cos".

¹²⁰ Cf. 'Introduction' above.

¹²¹ Diodorus XV, 76, 2.

¹²² See Sherwin-White 1978, 68 and esp. note 200 on the satrapy of Mausolus. The standard work on Mausolus and the historical events related to the Hecatomnid dynasty during the year c.380 - c.350 is still Hornblower 1982. For a short up-to-date survey of the events with recent references, see Konuk 1998, 65-82.

¹²³ See CAH VI, 226-7 for the events and further references and sources.

¹²⁴ For Cos, Rhodes and Chios, see Demosthenes XV, 5.25.

continued under Hecatomnid control and a certain degree of diplomatic action is attested by cities subordinate to the Carian satrapy until the mid-fourth century.¹²⁵ Six of the eight Lelegian cities were included in Halicarnassus in the Hecatomnid synoecism, and an intense period of building activity and large scale building projects followed.¹²⁶ The year of the synoecism of Halicarnassus is not known. Diodorus provides us with a *t.a.q.* of 362.¹²⁷ The Hecatomnid influence on Cos is not attested until 357/6-355, and the knowledge of the cause and type of control the Carian satrapy possessed over the island in the following years is scarce. Cos found herself more or less occupied by the Hecatomnids at the end of the hostile actions in the area at the time. Previous scholars have considered (parts of) the large issue of tetradrachms with bearded Heracles (issue II) and tetradrachms, didrachms and drachms with a veiled female head (issues III, IV and V) as an indication of Hecatomnid dominance early in the 360s and a continuing dominance in the decade after 355.¹²⁸ And furthermore, the Coan synoecism has been interpreted as an act carried out by Mausollus in order to establish a “Carian front”. Fortification of the cities of Iasus, Myndus, Heracleia-ad-Latmum and Teangelae formed part of this attempt, and the cities of Nisurus, Cos and Telos are considered as parts of the plan as well by some scholars. Contact between Cos and the Hecatomnids are attested by the use of Coan marble for the Amazonomachia Frieze of the Mausoleion in Halicarnassus.¹²⁹ Furthermore, limestone used inside the Mausoleion also seems to come from Coan quarries.¹³⁰ Some has also seen a connection between the city-plan of Halicarnassus (evidently of Hippodamian origin) and Cos.¹³¹ The Coan plan is difficult to decide in any detail. We also know that the Hecatomnid capital and lay-out of religious and public buildings were formed on a Greek pattern, with cities of mainland Greece and Rhodes, and possibly Cos, as ideal. The contact between Cos and Halicarnassus attested by shipment of marble and limestone as well as general similarity in town planning can, however, not be used in attesting political influence either way. The use of the Coan coin issue to attest early Hecatomnid influence on Cos is rejected in this work, as well as the possibility of considering Mausollus as the person behind the initiative to establish a new capital on Cos and the full scale synoecism

¹²⁵ See *CAH* VI, 227-33 on the nature of Hecatomnid influence in Caria.

¹²⁶ Cf e.g. Vitruvius, *De architectura* II 8, 10-14.

¹²⁷ Diodorus XV 90, 3.

¹²⁸ See Hill 1923, and Sherwin-White 1978, 70-1 who is building her arguments on the theory launched by Hill.

¹²⁹ Stampolidis 1989, 48-9.

¹³⁰ Luttrell 1986, 203; Jeppesen 1958, 16-7

¹³¹ Pedersen 1989, 9 and note 1.

of the state.¹³² The sources are, however, silent on the matter and Mausollus can not be considered as an active force in the Coan synoecism until his role is explicitly confirmed by additional sources. What we do know, is that Cos under Hecatomnid pressure turned against Athens in 357/6 together with Byzantion and Rhodes, and Mausollus gained control over Rhodes and Cos after the victorious collaboration. The satrapal control on Rhodes ended in an oligarchic rule on the island, but we do not know if this was also the case on Cos. Demosthenes does not mention Cos among the states under oligarchic rule.¹³³ But the period in question may fit in with the events described by Aristotle, when the democracy on Cos was rejected for a limited period of time.¹³⁴ Little is known of the degree of Hecatomnid control and the impact it had on the Coan society in the period down to the conquest of Alexander's generals in 332. Attempts of revolt were made by some of the Carian *poleis* against the Hecatomnid dominance, e.g. by Rhodes and Heracleia-ad-Latum at the time of Artemisia's succession in 353/2.¹³⁵ Demosthenes attests Hecatomnid control on Cos in 346.¹³⁶ Furthermore, we are told that Cos, together with Rhodes and Chius, turned against Philip when Byzantion was threatened by the Macedonian king in 340.¹³⁷ But then again this event is not decisive in attesting the Coan relationship towards the Hecatomnids since both the Carian satrap as well as Athens was opponents to the Macedonian king at the time. Hecatomnid control is attested again in 333, now under the leadership of the successor of Pixodarus, Orontobathes.¹³⁸ Thus, the sources are silent on the situation on Cos during the years 346 to 333. It might be reasonable to consider the island as under continuous Hecatomnid control during these years, but we don't know that for certain.¹³⁹

Alexander began his conquest, or "liberation" of the cities in Asia Minor in 334. Eventually, Halicarnassus was conquered and a part of the remaining fleet escaped to Cos. Soon Orontobathes was defeated and Cos also came under Macedonian control in 333. Cos came under Persian control again for a short period during the following year, but eventually the Persian fleet suffered a final defeat in Caria and Cos, together with Chius

¹³² See Sherwin-White 1978, 70 note 212 on the discussion of a Carian front created by Mausolus.

¹³³ Demosthenes XV, 14-5.

¹³⁴ Aristotle, *Politics*, 1304, b5.

¹³⁵ See Fraser 1967, 123 on the Rhodian revolt.

¹³⁶ Demosthenes, *De pace*.

¹³⁷ Diodorus XVI, 77, 2-3.

¹³⁸ Arrianos, *Anabasis* II, 5, 7.

¹³⁹ As mentioned above, some of the first Coan coin issues have been interpreted as a sign of continuous Hecatomnid control during these years, but the chronology of the coin material presented in this work makes this interpretation impossible.

and Lesbos, became permanently objects of Macedonian supremacy.¹⁴⁰ Whether or not the Coan welcomed a Macedonian intervention at the time is not known. Indications towards a pro-Macedonian trend can be explained by a gradually increased dissatisfaction with the long lasting Hecatomnid supremacy on Cos. The Coan citizens were also certainly aware of the unfavourable fate suffered by opponents towards Macedonian power, among them neighbouring Halicarnassus. The Coans themselves were probably asking for Macedonian assistance to be able to expel the Persian forces which had re-conquered the island in 332.¹⁴¹

The impact of Macedonian dominance on Cos regarding the political organization and autonomy is not known in detail. We must rely on general considerations on Alexanders politic versus the conquered states of Asia Minor. Since the Coan themselves were probably asking for Macedonian support in the final struggle against Persian control, they were possibly granted their *autonomia* by Alexander. Caria remained a satrapy of its own, but Cos was, as far as we can tell, not part of this organization. The Macedonian kept garrisons on Rhodes and Chios in order to secure and maintain close control, but we have no sources telling about similar arrangements on Cos. The remaining traces of the ancient capital reveal no particular boost in population in the years after its foundation in 366. We must keep in mind, however, that large part of the capital and its surroundings remains unearthed and difficult to examine due to the location of the modern Kos town. The large harbour, the vitalized and much enlarged sanctuary of Asclepius (after c.300) and the gradually increased importance of the capital must have created a fundament for an increase in population. The distribution lists of grain from Cyrene reveals that Cos received 1/3 of the volume Rhodes got, and twice as much as cities like Astypalaea and Troizen. Aegina, Delphi, Aelis and Paros were granted the same volume of grain as Cos.¹⁴²

The period after Alexander's death became turbulent for Cos as elsewhere, and the alliances shifted from time to time, dependent on the dominating power in the area. Diodorus is again the main source on the event following the death of Alexander. The first year of interest is 314, when Seleucus followed by a Ptolemaic fleet landed on Cos.¹⁴³ A coalition between Seleucus, Ptolemy, Cassander and Lysimachus had joint efforts in a war

¹⁴⁰ On the events during the years 334-2, see Diodorus XVII, 18, 2; 22, 1-23, 4; 30, 1; and Arrianos, *Anabasis* I, 17, 1-20, 1-3; 23, 1-4; II, 1, 1; 5, 7; III, 2, 3-7 (ref. from Sherwin-White 1978, 77).

¹⁴¹ Arrianos, *Anabasis* III, 2, 6; Curtius III, I, 19.

¹⁴² Rhodes, 30 000 bushels of grain; Aegina, Delphi, Cos, Aelis and Paros, 10 000 bushels; Astypalaea, 5 000 and Troizen 6 000 bushels. The figures are from Sherwin-White 1978, see page 79 note 268-9 for her references.

¹⁴³ Diodorus XIX 68, 4.

against Antigonus. Seleucus and Ptolemy also included the mighty Carian satrap Asander on their side.¹⁴⁴ Asander had until then been on Antigonus' side in the conflicts, but turned against Antigonus probably due to his declared will to liberate the Greek cities in the area.¹⁴⁵ If this act was realized, Asander's power would increase significantly. However, as the situation turned out, Antigonus was in control of Caria in 313.¹⁴⁶ A few years later, in 309, Ptolemy decided to make an attempt to once again be in control of Caria and also Lycia. After having conquered Caunus and Xanthus he sailed to Cos. Much speaks for that Ptolemy was welcomed on Cos on his arrival.¹⁴⁷ Ptolemy remained on Cos for several months, until the spring of 308 together with his wife, Berenice. She gave birth to their son Ptolemy II Philadelphus during this winter on Cos. The exact time of the beginning of the alliance between the Coans and the Egyptian ruler is not known, but the year 309/8 is the most plausible.¹⁴⁸ Ptolemy returned to Egypt later in 308 after an unsuccessful attempt of invasion on Peloponnesus. The next time Cos is mentioned in the sources is in connection with Antigonus and his attempt to establish a marine supremacy in the Aegean. Furthermore, we have no indication of Coan participation among the contributing states which supplied ships to Demetrius in his war against Ptolemy by Cyprus in 306. The connection between Cos and Antigonus is confirmed by a letter from the king to Teus in 306-4. In the letter Antigonus grants Lebedus and Teus permission to use the Coan law code for a limited period of time.¹⁴⁹ The letter does also testify that Cos at the time was a democracy.¹⁵⁰ When and by whom democratic rule was established is not known. It might have happened during Macedonian rule, Ptolemaic alliance or by the Coans themselves without external initiative or influence.¹⁵¹ Antigonus was defeated by Lysimachus and Seleucus in the battle of Ipsus in 301. Cos apparently remained under Antigonid control, as Calymna, until the death of Demetrius in 286. During this last period of Macedonian supremacy it appears as if the Coans possessed a high degree of autonomy, at least on internal affairs. The Coans had reached a high reputation among the Dorian cities regarding their law code and democratic rule. The Coan support during a political crisis on

¹⁴⁴ Diodorus XIX 56, 1-3.

¹⁴⁵ Diodorus XIX 61, 3-4.

¹⁴⁶ Diodorus XIX 75, 3-5.

¹⁴⁷ See Sherwin-White 1978, 83 n 9 on the sources.

¹⁴⁸ An inscription from Iassus with a *t.a.g.* 305 (due to the omitment of the title *Basileus* of Ptolemy) informs us about an alliance which is most probably the one between Cos and Ptolemy. If so, the alliance was initiated in 309/8, see Sherwin-White 1978, 83 n 9 for the references.

¹⁴⁹ Because of the synoecism between Lebedus and Teus, and the need of a temporary law-code in this matter.

¹⁵⁰ See Serwin-White 1978, 85 for references to the letter in question.

¹⁵¹ Cf the chapter 'Social outline' above on the Coan social and political organization and institutions.

Telos is one occasion which attests for the favourable Coan position. Democratic rule was established on Telos due to the assistance of the Coans.¹⁵² A small group of coins of Telos might mirror these events. The crab, the Coan *parasemon*, is used as a reverse motif followed by the inscription *demokratia*.¹⁵³

The period c.285 – 210

A new Ptolemaic attempt to establish a *thalassokratia* in the eastern Aegean was committed after the fall of Demetrius in 286. Ptolemy Soter conquered Tyrus and Sidon and gained control over the Phoenician fleet. Delos was under Ptolemaic control, and Cos had a delegation of *theoriai* sent there soon after 286.¹⁵⁴ This contact initiated a renewed and strong connection between Cos and Egypt. This contact is further confirmed by a Naxian decree from c.280 in which we are told that Cos again acted favourable towards Ptolemaic interests.¹⁵⁵ A Ptolemaic hegemony was again established in the Aegean towards the end of the 270s. How the relationship between Cos and Egypt was carried out in practice is difficult to ascertain in detail. Ptolemy II probably kept a good eye on the Coans. He was born there himself, and his parents had obviously shared good will against Cos after using the island as a place of residence during 309-8. However, in spite of a relative abundance of inscriptions from the following period, a close Ptolemaic control on Cos remains unattested. Ptolemaic governors, military contributions or Egyptian taxation are not recorded on the island. The Ptolemaic calendar was not adopted and no geographical area or calendar month on Cos was named after Ptolemaic kings, a common practice elsewhere. We can not put too much emphasis on an argument *ex silencio*, but the absence of signs of Ptolemaic influence on politic and economic matters in the sources might be significant due to the richness of the survived number of inscriptions. It is also worth to notice that Cos apparently was not subject of Ptolemaic taxation. Other nearby cities paid such taxes, as Samos, Cnidus and Halicarnassus.¹⁵⁶ The Hellenistic author Herodas is also a source on the relative independence of Cos. The Coans pride of their

¹⁵² See Sherwin-White 1978, 88 n 41-2 on the references.

¹⁵³ See Imhoof-Blumer 1874, 151; Imhoof-Blumer 1890, 154; Head 1911, 642.

¹⁵⁴ Sherwin-White 1978, 91 note 50.

¹⁵⁵ Paton & Hicks 1891, 31 no. 16.

¹⁵⁶ See Sherwin-White 1978, 94 on Halicarnassus and Nordbø 1972, 245 on Cnidus.

autonomy is expressed in his satirical work *Pornoboskos* written shortly before 266.¹⁵⁷ Ptolemaic activity of a more general nature is abundantly attested. They supported festivals, employed Coan medical doctors and assisted on food supply.¹⁵⁸ The Coans themselves founded a posthumous cult of Arsinoe, Ptolemy II's sister and queen.¹⁵⁹ The Coans probably enjoyed a privileged position versus Egypt in this period compared to the other Carian cities and islands. Loyalty and friendly support towards a king and/or kingdom was often rewarded a long period of time after the actual incident. Cos received the Ptolemaic fleet with open arms in 309, in contrast to e.g. nearby Halicarnassus, and the island supplied the Ptolemaic kings with medical doctors on their campaigns. Most important, though, is probably the fact that Ptolemy I resided on Cos for a period, and that his son Ptolemy Philadelphus was born there. The fact that Cos enjoyed natural gifts in being a fertile island, with a quiet and well-functioning capital with luxuriant surroundings – as praised by Theocrit and Callimachus – might also be considered as contributing to the Egyptian good-will towards the island and its inhabitants.¹⁶⁰ All in all it seems as Cos experienced a rich and prosperous period during the alliance, in whatever form it may have been, with the Ptolemaic kings. Coan medical doctors sometimes reached significant positions in Alexandria, and Coan poets worked at the *Mouseion*. The capital of Cos itself, as well as the different demes, witnessed large building activities, the most significant being the Asclepieion just outside the new capital.¹⁶¹ The plans for the sanctuary were impressively large-scale from the very beginning, and it soon became an important attraction also for people outside Cos. The general activity on the island and in the capital with its new, large harbour, certainly received a boost during the third century because of the famous sanctuary. The Ptolemaic kings were probably contributing to the building and certainly to the different activities conducted in the Asclepieion.

Cos might have been under Macedonian rule for a short period of time between 265-60 in the aftermath of the Cremodian war between Egypt and Macedonia, Syria and Rhodes. The fleet of Ptolemy II was defeated by the forces of Antigonos Gonatas. The final battle took place near Hagios Phokas on the south-east coast of Cos. The sources

¹⁵⁷ Sherwin-White 1978, 94 with further reference to Headlam 1922. The chronology of the play depends on the use of the name Ake for Acre, which was again named Ptolemais after 261. This is also illustrated by numismatic material, cf. Head 1911, 793.

¹⁵⁸ It has been suggested that temple B on the middle terrace of the Asclepieion was a donation made by Ptolemy II, but epigraphical evidence for this is lacking. Cf. Höghammar 1993, 21 and n 3.

¹⁵⁹ The cult was established in 267 as a dynastic cult in Alexandria. Eventually it spread to Cyprus, Lesbos, Samos, Delos, Paros and Cos.

¹⁶⁰ E.g. Theocrit, *Idyll XVII*; Callimachus, *Hymn to Delos*.

¹⁶¹ See chapter on sources above.

reveal that Cos sent judges to Samos not long after the battle, when Samos was under Antigonid control. Also, the nearby island of Astypalaea is confirmed as being under Macedonian control shortly after 260.¹⁶²

Not until 242 is an alliance with Egypt once again attested.¹⁶³ This is also the year the Asclepieion was consecrated as well as the Pan-Hellenic status of the *Asklepiadai*. The recognition of the festival by kings and cities around the Greek world must have enhanced the importance and position of Cos significantly. The sanctuary was granted *asylia* by several states and rulers.¹⁶⁴ Few details of Coan history in the following two decades are known. We must, however, assume that the Carian campaign of Antigonos Doson in 227 also affected Cos.¹⁶⁵

The period c.210 - 170

The increased power of Rhodes in the last part of the third century certainly had its impact on Cos. In the following half century the Coan foreign policy followed closely that of the Rhodians. It was probably in Rhodian interest to keep a situation where two external powers remained in Caria. Times of instability and conflict between two major powers in the area would open for possibilities of Rhodian expansion. Independence for the Greek cities were only promoted as far as it served Rhodian interests, and the activity in the area should be interpreted in the light of this new ambition of Rhodes.¹⁶⁶ Rhodes had joined a successful campaign to Byzantion, and provided military assistance when Sinope was threatened by Mithradates II. As far as we know Cos was the only other *polis* which contributed in this conflict.¹⁶⁷ The Coan support towards Rhodes was not necessarily in conflict with the relation to Egypt. Ptolemy considered the Rhodian participation in the

¹⁶² See Sherwin-White 1978, 108-10.

¹⁶³ Welles 1934, 25.

¹⁶⁴ *Asylia* was granted by cities under Antigonid rule, as Amphipolis and Pella and under Ptolemaic control, as Ainos and Maronaea. Five royal letters of approval have survived, from Seleucid, Ptolemaic and Antigonid rulers as well as from minor kingdoms. Many *poleis* on the Greek mainland accepted the status, as Homolion, Megara, Sparta, Messene, Aelis as well as the Cretian cities of Istrus, Phaistus and Hierapytna. From the western Mediterranean came approval from Corcyra and Camarina on Sicily and Naples and Aelis in Italy. Delegations were sent to Cos from Sicily, Greece, Asia Minor, Egypt, Phoenicia and Babylonia. Altogether about 50 recognitions have been attested. Cf. Sherwin-White 1978, 94 and Rigsby 1996 for the institution of *asylia* in general.

¹⁶⁵ See Sherwin-White 1978, 115 note 167 on the chronology and sources of the Antigonid campaign.

¹⁶⁶ See Reger 1999, 77 on the general motives and ambition of Rhodes in this period. The article also gives a useful survey of the situation in Caria during the years c.242-167 BC.

¹⁶⁷ Herzog 1903, 198; Rostovtzeff 1941, 1485 note 92; Höghammar 1993, 21.

conflict of Byzantion with positive eyes.¹⁶⁸ Diodorus is our source on the events leading up to the first Cretian war in 205, and the Coan participation.¹⁶⁹ Cretan pirates, supported by Philip, had with increasing brutality pillaged trade ships in the eastern Aegean for a long time, and Rhodes decided to stop the piracy. When the following war ended is not exactly known. Numerous Coan inscriptions have survived from these crucial years and from the following conflict with the Macedonian king in the years 201-0.¹⁷⁰ The Coans felt severely threatened when Philip conquered the Cyclades and Samos in 201, and preparations were made to be able to withstand an invasion on Cos. Cos was considered among Philip's main opponents, together with Rhodes and the Pergamene king Attalus I. The Egyptians were heavily involved in the fifth Syrian war at the same time, and could not contribute on Rhodes, Cos and Pergamon's side against the Macedonian aggression. Rhodes suffered a defeat at Lade in 201, and Cos was attacked by Macedonian forces in the aftermath of this event.¹⁷¹ These attacks during the Second Macedonian war is the only occasion enemy troops probably plundered and ravaged the Coan countryside in the Hellenistic period.¹⁷² Philip withdraws from Caria in the spring time 200 and escaped a Rhodian-Pergamene blockade. At the same time the Romans were ready for an eastward expansion after the defeat of Carthage, and this is also one of the reasons behind the defensive attitude of Philip.¹⁷³ Calymna was incorporated among the Coan demes in 201/0, and the event was described as an *apokatastasis*, usually implying an element of restoration of a previous condition. The *homopoliteia* of Calymna and Cos was probably encouraged by Ptolemy V.¹⁷⁴ This major event in 201/0, in many respects a re-foundation of the Coan state, might be the situation which is reflected in the coin material by the change from the old to the new form of ethnic.

By the end of the Second Macedonian war in 197 Egypt lost the Aegean hegemony and thus its control over Cos. Ptolemaic garrisons are attested on Cos in this late period, but when they were withdrawn and under which circumstance is unknown.¹⁷⁵ Rhodes replaced much of the Ptolemaic influence on Cos, and this resulted in increasingly tighter political relations with Rome. Rome was constantly in negotiations with Antiochus during the years 197-2. The negotiations were without success and when the Pergamene king

¹⁶⁸ Polybius IV, 51.

¹⁶⁹ Diodorus XXVII, 3; XXVIII, 1.

¹⁷⁰ See Baker 1998 for a detailed account of the events from 205-0. Cf. also Migeotte 1992, esp. 149-51.

¹⁷¹ See Sherwin-White 1978, 122 for the chronology of the battle by Lade.

¹⁷² See Höghammar 1993, appendix 1 for a detailed account of the event.

¹⁷³ Polybius XVI, 24.

¹⁷⁴ Sherwin-White 1978, 127-8; Höghammar 1993, 87-93.

Eumenes II was threatened by Antiochus, Cos joined Rhodes and Rome in a campaign against him, and war was declared. Coan ships were involved in a sea battle by Samos in 191.¹⁷⁶ However, Cos remained an ‘independent’ *polis* during the later war against Antiochus and was therefore not greatly affected by the peace of Apamea in 188. The connection between Pergamon and Cos grew stronger after the peace. A festival named *Attaleia* was established on Cos, and the city was among those invited to celebrate the re-organization of the *Nikephoria* in Pergamon in 182/1. However, Rhodes was rewarded for its loyalty towards Rome during the war with Antiochus, and was granted control over Caria south of the Maeander. The strength of Rhodian control in Caria during the 180s and 170s is not known in detail. Evidence of garrisons on Cnidus does no longer hold support, and it is an open question whether the control was increasing or not.¹⁷⁷ Rhodian garrisons are not attested on Cos, but the degree and nature of sovereignty or autonomy is uncertain, although the Rhodian authority in general increased significantly in the years following the peace of Apamea in 188. The Romans withdraw from the area, and left the scene to Pergamum and Rhodes, and did not intervene actively in any conflicts in the area until 171. Rhodes and Cos remained neutral at the outbreak of the Third Macedonian war in 171. The increasing conflict between Rome, Pergamum and Lycia during the late 170s, and Rhodes’ neutral attitude to Perseus, the main opponent of Rome in the war, resulted in that Caria and Lycia were freed of Rhodian supremacy in 167 by the Roman senate, and Delos was declared a free port.

¹⁷⁵ Reger 1999, 88.

¹⁷⁶ Livius XXXVII, 11-2.

¹⁷⁷ Reger 1999, 90.

PART 2. NUMISMATIC ANALYSIS

Minting technique, fabric and weights

Flans and fabric

The flans of issue I are distinctively rudimentary in both shape and fabric compared to the later Coan coin issues. The irregularly shaped flans have a small diameter and corresponding thickness. A characteristic pointed part that juts out along the edge is occasionally observed among the coins of this issue. A similar feature is also seen among the earlier issue of fifth century *diskoboloi*.¹⁷⁸ The similarities between the earliest tetradrachm and the previous issue of triple-sigloi, both in the shape and fabric of the flans as well as the type of die used, strongly indicates, they were produced by the same mint using an identical production procedure¹⁷⁹. The irregular shape of the flans is not as obvious on the contemporary drachms of issue II, probably due to the coin's small size. The flans of issue III tetradrachms are larger in diameter and as a result thinner. The shape of the coin is more regular, with an almost circular appearance. Several of this issue's tetradrachms have small cracks along the edge of the flans.¹⁸⁰ The flans were probably heated before striking. The outer edge of the flans cooled more rapidly than the inner core. The result of this differential cooling was the formation of small cracks along the edge. This notable feature is only found on issue III. Why this procedure was only used on this issue and not preceding or later issues becomes a point of interest. A speculative explanation could be as follows: The flans of issue I (and the *diskoboloi* before them) were in nature solid and thick so that there was little danger of breaking them when they

¹⁷⁸ Barron 1968. Compare e.g. Barron no 16a (p. 80 and plate 9) with I, 2a and I, 13b.

¹⁷⁹ Although the characteristic irregular flan is also observed on additional coinages e.g. on Rhodes, cf Ashton 1993, 9, and on the so-called ΣYN-coinage (alliance coinage) of c. 405/4, cf. Karwiese 1980.

¹⁸⁰ For example III, 2, 5a; III, 2, 13b; III, 2, 17g.

were struck. When the production of dies for the new issue of tetradrachms was changed to produce thinner flans with a larger diameter, breakage may have been a concern. As a result the mint-workers pre-heated the flans to decrease the necessary force needed to create a satisfactory imprint. Over time the confidence in the flans increased, so that this procedure was abandoned. If this conjecture is to be accepted the appearance of cracks on issue III, and not on issue VI tetradrachms, may be an indication of the relative chronology between the two issues. Issue VI tetradrachms are very similar in shape and fabric to issue III. However a higher degree of regularity in the shape can be seen in the later part of the VI. issue. This tendency can also be observed on the contemporary didrachms and drachms of issue IV, V, VII and VIII. One significant exception to this pattern of regularity must be commented on: Two different types of dies (cf. the chapter on die-types below) were employed for the didrachms of issue VII. Due to the difference between these dies some of the flans appear to be of a larger diameter and generally more regular in shape. The discrepancy is probably caused by the die-type and not the original shape and/or production of the flans. Issues XI, XIV, and XV didrachms and tetradrachms of reduced weight introduce a new development in flans and fabric. The diameter is significantly enlarged, resulting in thinner flans, and a tendency to a scyphatic shape. This feature is generally observed on large silver coinage in the Hellenistic period. The drachms and hemidrachms of issues XII and XIII occasionally have a characteristic oval shaped flan, clearly separating them from drachms of earlier issues.¹⁸¹ The latest two issues of silver coins, the drachms of issue XXIII, and the hemidrachms of issue XXIV follow the pattern of preceding issues. However there is an observable tendency towards slightly thinner flans, marginally increased diameters and more sharply cut edges. The flans and fabric of the bronze issues are more uniform compared to the silver issues. This is mainly due to the later introduction of the bronze issues. The largest variation in fabric is noted on the earliest silver issues that do not have contemporary bronze issues. The first two issues IX and X, have rather thick flans with small diameter compared to later issues. The large issue XVI, displays the same oblong shaped flans of the issue XII and XIII, drachms and hemidrachms.¹⁸² This particular feature is absent from the later issues XVII and XVIII. There is a notable regularity in shape and thickness of the flans within these issues. The first part of issue XIX follows suit with regularity in shape and thickness of the flans, but gradually shifts to more carelessly executed flans that often demonstrate cracks and damaged surfaces. This

¹⁸¹ Cf. XII, 66a; XII, 75c; XII, 86b.

¹⁸² Cf. XVI, 4; XVI, 28; XVI, 45.

shift in quality gives the impression of intense mass production.¹⁸³ Despite a larger regularity in the shape of flans for the large bronzes of issue XXI, this shift in quality can also be demonstrated. The motifs are often struck partly off flan, and often with a large variation in the height of relief on each coin. The same impression of carelessly executed coins is present within issue XXV.

Die types and die-axis

The use of a square incuse on some issues of the Coan coinage is a notable difference in types of dies used. A square incuse can be created in two different ways. The first is by the use of a square-ended die, the incuse depression is moulded by the die itself, leaving part of the flan untouched. The surface of the flan outside the square depression will have an irregular shape and height. The second occurs with the use of a die that has the square incuse moulded into the die itself. With the use of this die, the edge surrounding the square depression is affected. It becomes part of the impression of the die-surface. With the use of this type of die the impression will appear to be more regular in fabric and production.

Both methods were used to produce a square incuse on the Coan coinage. The development was from creating an incuse depression by the use of a square-ended die, to mould the square incuse in the die itself (*fig. 2*). It is obvious that a square-ended die was used on the earliest tetradrachms of issue I, as occasional stretch marks created by the side of the die as it was pressed down into the flan have been observed.¹⁸⁴ A square-ended die was used for the following issues: I (tetradrachms), II (drachms), VI (tetradrachms), VII (didrachms) and VIII (drachms). Dies with a moulded square incuse were used for the following issues: XI, 1 (didrachms), XIV, 1 (tetradrachms), XXIII (drachms) and XXVI (bronze coins). A mixed use of both types within one issue is not recorded. This implies that the type of incuse is a more secure criterion of separating issues (and chronology) as compared to the square border of dots. The square border of dots is often used by scholars as a criterion to distinguish between issues, types or chronologically separate groups of coins. It is worth noting that coins with and without this characteristic are found within a single issue (drachms of issue XII, type 1 and 2). Issue XIII drachms are struck on a reduced weight flan compared to the drachms of issue VIII. The continued use of the easily recognizable square

¹⁸³ Cf. XIX, 2, 122; XIX, 2, 132; XIX, 2, 148; XIX, 2, 154-7; XIX, 2, 161.

¹⁸⁴ Cf. I, 7a.

border of dots is surprising since one would expect that efforts were made in order to separate the heavy and light drachmas from each other. The only visible difference between the heavy issue VIII and the reduced weight issue XII drachms is the lack of square incuse on the latter. This might tell us that this element, created by the shape and type of die, was an important distinguishing feature to the contemporary user of the coinage. The drachms of issue XXIII are often labelled 'plinthophoric' drachms after the *plinthos* (incuse) on the reverse.¹⁸⁵ A considerable number of plinthophoric drachmas were issued by different mints in Asia Minor during the first half of the second century. This type was named in contemporary sources after the square incuse (e.g. in the Delian inventories), but the die-type and fabric were already in use on the much earlier issues of XI and XIV.

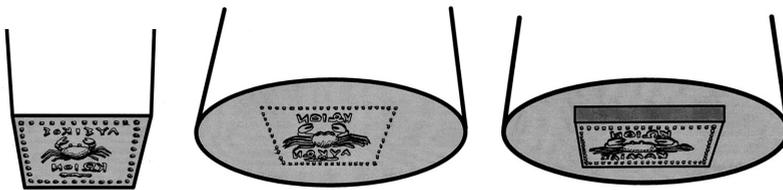


Fig. 2: Coan die-types

The die-axis on the Coan coinage is at first irregular, with no tendency towards a fixed concentration on certain positions on the issues I and II. The contemporary issues III, IV and V all have a regular 12 o'clock position with few exceptions. The succeeding silver issues VI, VII and VIII have regular 12 or 6 o'clock positions. The situation is almost the same on the (partly) contemporary issues XI, XII, XIII and XVI, but the 12 o'clock position is dominating. Regardless of the position used, the die-axis remains the same for all coins minted by the same name. For example all the coins minted in the name of Stephanos in issue XI have a 6 o'clock position, and coins of Emprepon are centred on the 12 o'clock position. The coins of Bation in issue XVI have irregular positions. Furthermore, the only issue XII coins with die-positions differing from 6 or 12 were the coins struck with the die-combination O23/R59 - all these have a 3 o'clock position. A few coins of issue XIII display partly irregular die-positions: 6, 10, 11 and 12 o'clock. All of these irregular coins were minted in the name of Praxagoras, Praxianax and Philitas, in succession. Issue XIV tetradrachms, partly contemporary with the issue XI didrachms, consist of two types. The first type has an irregular die-axis concentrated around 6 o'clock. Type 2 has a regular 12 o'clock position. The issues IX, XV, XVII, XIX, XXII,

¹⁸⁵ A discussion on the chronology and terminology of the *plinthophoroi* is found below in the commentaries on issue XXIII.

XXIII, XXIV, XXV and XXVI all have regular positions (on 12, 6 or 9 o'clock positions). Irregular positions are found on issues X and XX (however, concentrated around 3, 6, 9 and 12 o'clock positions). The overall picture is a development from irregular to a regular 12 o'clock position. But for the period considered here the variation and exception from the rule of regular die-positions are too numerous to make this a useful criteria of relative chronology. Obviously, from issue III onwards the dies were fixed in some way, but not always in the same position. A different pattern can therefore be observed on contemporary coins within the same issue. Not surprisingly it appears that the change of pattern and irregularities is often found in periods of intensive minting, as in parts of the issues XII and XIII, and the issue XVI of bronze coins. This is evidence against the use of a fixed die during the production process in this period, unless the use of a mechanical device (e.g. by a hinge) was too time-consuming that it would be obstructive and therefore omitted during periods of high activity of the mint. It seems unlikely though that a mechanical device slowing the production would be introduced at a time when there was a need for higher productivity to accommodate the growing need for coinage.¹⁸⁶ Chronologically speaking there is a change towards a fixed die-position in general. This reveals some kind of development in the process of production.¹⁸⁷ It is relevant to consider this change in connection with the relocation and development of the new capital of Cos in 366. The Coan mint of the fifth and early fourth century was probably relocated during the events around 366, and the products of the new mint show the adoption of new processing methods including a semi fixed die-position. This falls into line with the general trend of contemporary coinage in the region.¹⁸⁸

Weight standard¹⁸⁹

The weights of the Coan coin issues are similar to those found in issues of the Carian coast line. The main standard weight is the Rhodian with an occasional reduction in weight on smaller denominations. This pattern is seen on Cos first and foremost with didrachms and

¹⁸⁶ Cf. Mørkholm 1991, 15-6.

¹⁸⁷ This is supported by the irregular die-axis, similar to the I. issue, found on the *diskoboloi*. Cf. Barron 1968.

¹⁸⁸ The question of die-axis in general has recently been treated in Callataj 1996. For a discussion on the use of mechanical fixation of dies, cf. 92-3. A survey of the development of the use of fixed die-position is presented in Carte 5 and 6, p. 102-4.

drachms.¹⁹⁰ The main tendencies in the Coan material are the following:

- Issues I and probably II, are characterized by a large variation in weight, with no cluster around any specific weight interval.
- Didrachms of issues IV, VII, XI and XV are of a significantly reduced weight compared with the (partly) contemporary issues III, VI and XIV of tetradrachms.
- The weights are reduced even further on drachms and hemidrachms of issues XII and XIII as compared to contemporary didrachms.

The first Coan tetradrachms are surprisingly uneven in weight. Weights from 14.70-14.74 g are frequently represented, but numerous coins are in the intervals of 14.35 to 14.44 g and 15.15 to 15.24 g. The intended weight standard is thus difficult to ascertain, but it does not reach up to a full Chian standard. It appears as if the weight of the earliest Coan tetradrachms is significantly below the initiating weight of Rhodian tetradrachms, which would be around 15.2 g. This fluctuation of weights is also seen among the coinage of Hecatomnus.¹⁹¹ Another parallel between the Hecatomnus-tetradrachms and issue I on Cos is a characteristic irregularity in the shape of the flans. These common features might be an indication of some kind of relationship between these two coinages. It is likely that the tetradrachms of Hecatomnus and the earliest Coan tetradrachms, contemporary in time, were partly struck on flans of the same place of production or at least they were the products of an identical production process. This explanation is more probable than a bilateral agreement between the two states regarding a common weight standard in the coinage issues. The evidence that no overstrikes were detected fortifies the connection between the satrapal and Coan material with respect to production of flans. Overstrikes between the two groups of coinage would be highly recognizable because the deep square Coan incuse would not be completely erased by a Hecatomnid overstrike. Conversely

¹⁸⁹ Cf. the table of weights in Part 4 below, as well as the commentaries on the issues for discussion of weights within each issue.

¹⁹⁰ I am in general following Mørkholm 1991, 9-10 on the terminology on weight standards. Mørkholm gives the following figures: the Chian standard: 15.6 (tetradrachm), 7.8 (didrachm) and 3.9 (drachm); the Rhodian standard: 13.6-13.4 (tetradrachm), 6.8-6.7 (didrachm) and 3.4 (drachm) (after being gradually reduced from a tetradrachm weight of c. 15.2).

¹⁹¹ Cf. weight table in Konuk 1998, 52 which reveals identical fluctuation in weight in spite of a substantially higher number of weights recorded. In his commentaries Konuk concludes "*Weights were obviously not adjusted with the utmost care, and it is therefore difficult to estimate what the theoretical weight was.*", p 62-3.

given the relatively small die used by the Coan mint, traces of the older Hecatomnid pattern would remain visible on the outer edges of the flans.

The additional three issues of tetradrachms are of a higher weight and with much less variation within the issues. Clear clusters can be observed around intervals between *c.* 15.00 to *c.* 15.24 g, with a tendency towards a slightly lower weight within issue XIV, with a peak between 14.90-15.19 g. All three issues correspond to the early (or full) Rhodian standard. It is worth noting that the didrachms are minted on a reduced standard. Issue IV didrachms are clearly aiming at 6.95-7.00 g. The weight corresponds with Hecatomnid didrachms of Hidrieus and Pixodarus, labelled as reduced-weight issues by Konuk.¹⁹² It is interesting to note that a further reduction in weight occurs on the succeeding issues of didrachm, within issues VII, XI and XV, which have an upper cluster around 6.6-6.7 g. Issue VIII drachms, partly contemporary with issues VI and VII, correspond in weight with the reduced didrachms of issue IV. The weights are reduced even further on drachms and hemidrachms of issues XII and XIII as compared to contemporary didrachms (issues XI and XV). The latest silver issues, the so-called incuse drachms of issue XXIII and the contemporary issue XXIV hemidrachms are evidently minted on the same weight standard as issues XII and XIII (drachms *c.* 3.0-3.1 g, and hemidrachms *c.* 1.4-1.5 g). No further reductions in weight appear in the issues of this study. The general picture appears to be that the Coan issues from the issue VII didrachms onwards are corresponding with the contemporary Rhodian issues of the third and early second century.¹⁹³ However, the weight reduction and subsequent increase in drachm weight observed within the Rhodian material is not paralleled on Cos.¹⁹⁴

The bronze coinage occasionally appears as contemporary issues with corresponding unit weights. Although the chronology of issues XVI, XVII and XVIII is blurred, it appears as if the XVIII issue is half the weight as the XVI issue, with clusters around 1.0-1.4 g and 1.9-2.7 g respectively. Furthermore, the XIX, XXI and XXII issues may partly interrelate with weights between 1.5 (XXII), 3.0-3.8 (XIX) and 7.0-7.6 (XXI).¹⁹⁵

¹⁹² Konuk 1998, 159, 168, 174-5. Konuk believes that the Coan and Rhodian coinages on the reduced standard were inspired by the introduction of reduced-weight didrachms by Hidrieus: "The mints of Kos and Rhodes followed suit, though how soon is not clear." (p 174-5), and he rightly states that they were introduced before 341 as confirmed by hoard evidence. It is in my opinion far from certain that the Rhodian and Coan coinages were dictated by the satrapal coinages in the period, although the Hecatomnid dominance in the area makes it a plausible assumption.

¹⁹³ A weight survey of the Rhodian didrachms, cf. Ashton 1989; Ashton 1988; Leschorn 1986. Cf. also the major collections for a further survey of weights, e.g. *SNG Keckman I*, 445 ff; *SNG Copenhagen, Caria* and *BMC Caria*.

¹⁹⁴ Jenkins 1989, 101-2 for a survey of Rhodian weights.

¹⁹⁵ See Picard 1998 on the weights of bronze units in general.

Hoard

The Coan treasure hoards are not particularly rich in numbers. A few of the large hoards that have been recently restored and recorded are of great importance to the chronology of the fourth-century Coan coinage. Furthermore, a few rich hoards, some recorded for the first time here, give important evidence regarding the issues of the late third century. The single finds from Cos are a valuable contribution to the coinage in general, as well as increasing the degree of representation of the issues in circulation. The majority of coin hoards is from the island of Cos itself. The only exception being 174 silver coins from treasure hoards found outside the Coan borders. No silver coins and only four bronze coins are known from single finds outside Cos. About 60% of the Coan coins have provenance from hoards. The majority of these hoards is from single finds, making the number of single finds, and thus bronze coins from the island, relatively high. In the following list of hoards are included all hoards of Coan coins from the beginning of Coan coinage until c.170 BC.¹⁹⁶

List of hoards

1. **Mit Rahineh**, Egypt; 1869
 Date of deposit c.500. 30+ AR
 (Weights are given parenthetically)

Dicaea-by-Abera:	(9.97)
'Lete'	(10.22)
Aegina	(5.50)
Corinth	(8.90; 8.40; 2.44; 2.08)
Naxos	(6.92; 5.36)
Paros	(6.10)
Chius	(7.97)
Caria	(2.10; 1.40)
Salamis, Cyprus	(11.25)
Cyrene	(13.15; 13.80)
Thraco-Macedonian	(14.28)
Aegean island?	(10.16)
Lycia?	(3.97)
Uncertain	(8.58)
Ephesus?	(3.42)
Uncertain	(5.60)
Cos , diobol	(1.37)

¹⁹⁶ The information on Coan Alexander type coinage from hoards is from Price 1991.

- Alexandria Museum, Egypt(?); casts in British Museum. *IGCH* 1636; *CH* III, 2(ill).¹⁹⁷
2. **Jerusalem**, Israel; 1979
 Date of deposit 6th century. 1 AR
Cos: diobol (1.76)
 Israel Museum, Jerusalem. Barkay 1984-5, 1-5; Barkay 1986, 29, 34.
3. **Cyclades?** c. 1889
 Date of deposit c.500. 145+ AR
 Aegina: 114
 Andros (Ceos?): 4
 Paros: 2
 Siphnos: 4
 Thera(?): 11
 Dardanus(?): 1
 Miletus(?): 2
 Chius: 3
Cos: 4
 several unidentified coins of smaller denominations
 Boston (7 coins: Brett 1107-8, 1280, 1291, 1294, 1296, 2013); Montagu Coll. *IGCH* 6.¹⁹⁸
4. **Thera (Santorini)**. 1821
 Date of deposit c.500. 760 AR
 [see complete listing in *IGCH*]
 Aegina: 561
 Naxos: 15
 Thera(?): 23
 Miletus(?): 62
 several unidentified and stray coins from other mints
Cos, diobol¹⁹⁹
 London (some); Copenhagen. *IGCH* 7.²⁰⁰
5. **Asyut**, Egypt. 1969
 Date of deposit c.475. c.900 AR
 [complete listing in the publication]
Cos: 1 triple-siglos (16.65 g)
 Dispersed. Price/Waggoner 1975.²⁰¹
6. **Rhodes(?)**, Caria; before 1880
 Date of deposit c.475. 30+ AR
 [complete listing in *CH* VIII]

¹⁹⁷ Longperier 1861, 407-428, Cos: 424-425; Dressel 1900, 254; Regling in *RE*, col. 976; Schlumberger 1953, 10, no. 34; May 1965, 1-25

¹⁹⁸ Greenwell 1890, 13-19; Montagu 1892, 31 and pl. III, 1 (Carystus?).

¹⁹⁹ The Coan coin belongs either to this hoard or the previous one.

²⁰⁰ Wroth 1884, 269-280; Greenwell 1890, 13-19; *BMC Ionia*, xxxii ff; Holloway 1962, 6-7.

²⁰¹ Cahn 1977, 286.

Abdera; Dicaea; Thasos; «Lete»; Mende; Neapolis (Mac.); Stageira; Aegina; Tenos; Thera; Ialysos; Phaselis; Lycia; Cyrene; Barce; Barce/Teuchira; Euhesperides

Cos: 1 triple-siglos

Dispersed. *IGCH* 1185; *CH* VIII, 21.²⁰²

7. **Elmali**, Lycia; 1984 (the "decadrachm hoard")

Date of deposit *c.*465-60. 1900 AR

[cf. listings in *CH* VIII and Fried 1987, 9]

Bisaltae, Getas; Derrones; Litas; Orescii; Tunteni; Thasos; Abdera; Acanthus; Mende; Potidaea; Terone; Peparethos; Eretria; Athen; Aegina; Melos; Paros; Parium; Ephesus; Miletus; Chius; Samos; Cnidus; Mylasa; Carpathos; Camirus; Lindus; Lycia

Cos: 4 archaic incuse (staters?); 1 triple-sigloi

Dispersed.²⁰³ *CH* VIII, 48.²⁰⁴

8. **By Söke**, Caria; 1977 (the "Hecatomnus-hoard")

Date of deposit *c.*390-385. 100+ AR

Thasos: drachms (11)

Ephesus: tetradrachms (39); didrachms (6); hemidrachm (1); double sigloi/ΣΥΝ (5)

Colophon: tetradrachm (1)

Chius:

tetradrachm (1); didrachm (1) Samos: tetradrachms (29); hemidrachm (1)

Hecatomnus: tetradrachms (66)

Halicarnassus: drachms (4)

Idyma: drachms (1+)

Kaunos: staters (21); tetrobols (11)

Cnidus: tetradrachms (20); drachms (9); double sigloi/ΣΥΝ (4)

Rhodus: tetradrachms (7), hemidrachms (100+); double sigloi/ΣΥΝ (8+)

Cos: tetradrachms (ΘΕΟΚΛΗΣ; ΠΕΡΣΙΑΣ; ΦΙΛΕΩΝΙΔΑΣ; ΞΕΝΟΔΙΚΟΣ; ΛΥΣΙΧΟΣ; ΞΑΝΘΙΠΠΙΟΣ; ΑΘΑΝΙΩΝ, I)²⁰⁵

drachm (II, 1, 2a)

Dispersed. *CH* V, 17²⁰⁶; *CH* VIII, 96.²⁰⁷

²⁰² Naster 1959, 148; Kagan 1992, 1-24.

²⁰³ A few coins are returned to Turkey and are located in the Museum of Anatolian Civilizations, Ankara.

²⁰⁴ *Connoisseur*, July 1988, 75-83; Fried 1987; Kagan 1987.

²⁰⁵ A tetradrachm of Cos series III (Heracles/Draped female head) was included by the late Martin Price in the hoard list in *CH* VIII. Price later confirmed that a misunderstanding included the coin, and it should as such be excluded from the Hecatomnus-hoard. It may have formed part of the Pixodarus-hoard, but this has been impossible to confirm at the present stage.

²⁰⁶ S. Hurter, Leu Numismatik AG, has kindly informed me about the find spot as close to Mylas (letter of 16.7.93). According to her the hoard contained approximately 30 tetradrachms of type as *BMC Caria* pl. 30, 6.

²⁰⁷ A publication of the Hecatomnus hoard is under preparation for the forthcoming *CH* 9 by the joint efforts of R. Ashton, P. Kinns, K. Konuk and A. Meadows. Ashton and Meadows have generously shared their preliminary listings and comments on the hoard with me for which I am most thankful. Without the result from their investigations I would not have been able to present the full catalogue of content of the hoard and neither the complete listing of personal names represented in this hoard which is of crucial importance concerning the introduction of the earliest tetradrachms of Cos. See also Konuk 1998, 55-62.

- 9. Asia Minor**, western part; before 1856
 Date of deposit c.380-75. 4+ AR
 Samos: 1 tetradrachm+
 Hecatomnus/Miletus: 2 tetrobols (Konuk 9b; 74a)
Cos: 1 tetradrachm (ΠΕΡΣΙΑΣ, I, 1, 3)
 Paris 4. *IGCH* 1207.²⁰⁸
- 10. Caria**, «Pademlik»; before 1930
 Date of deposit c.350. 80 AR
 Colophon: 1 drachm
 Ephesus: 67 tetradrachms (“straight wings” type)
 Samos: 1 tetradrachm (c. 370-65)
 Cnidus: 2 tetradrachms, 1 didrachm, 2 drachms, 1 hemidrachm
 Mausolus: 4 didrachms (Konuk 83e, 139b, 181a, 214a)
Cos: 1 tetradrachm (ΜΟΣΧΙΩΝ I, 19a)
 Istanbul. *IGCH* 1218.²⁰⁹
- 11. Telmessus** (Fethiye), Lycia; 1928
 Date of deposit c.345. 67 AR
 Ephesus: 49 tetradrachms
 Mausolus: 12 tetradrachms
 Hidreius: 5 tetradrachms
Cos: 1 tetradrachm (not identified)
 London (38); Oxford (17); New York (1); Lisbon (1); in trade. *IGCH* 1266.²¹⁰
- 12. By Halicarnassus** (Bodrum), Caria (the “Pixodarus-hoard”); mid-1970s
 Date of deposit c.340. c.2.000+ AR
 Mausolus: tetradrachms
 Hidreius: tetradrachms
 Pixodarus: 12 tetradrachms, didrachms
 (altogether c. 615, (or maybe as many as 700) coins of the Hecatomnids)
 Ephesus: c. 600 tetradrachms
 Thasos: tetradrachms
 Cyzicus: tetradrachms
 Colophon: tetradrachms
 Miletus: tetradrachms
 Chius: tetradrachms
 Samos: tetradrachms
 Cnidus: tetradrachms
 Mylasa: tetradrachms
 Rhodes: tetradrachms
 altogether c. 480 coins from city states other than Ephesus and Cos
 Persian satraps:
 Memnon: tetradrachms

²⁰⁸ Konuk 1998, 45-6; Barron 1966, 117; Gardner 1882, 256; Waddington 1856, 61.

²⁰⁹ Schlumberger 1953, 8, no 9; Barron 1966, 117; Nordbø 1972, 263; Olcay 1966, 145-58, no 76; Konuk 1998, 108; Ashton 1999, 78.

²¹⁰ Hill 1930, 285, however the Coan coin is not mentioned. As pointed out by Konuk, the location of the coins given in *IGCH* is not accurate since, for one, the Coan tetradrachm is untracable in both Oxford and London. Cf. Konuk 1998, 109-10.

Pythagores: tetradrachm(?)
 Hecatomnid(?): tetradrachm(?)
Cos: 35 tetradrachms (ΑΓΗ; ΗΡ; ΑΘΑΜΑΣ; ΦΙΛΟΔΑΜΟΣ; ΒΙΤΩΝ.
 ΙΙΙ)
 44 didrachms (ΑΓΗ; ΗΡ; ΜΑ; ΦΙ/ΙΦ; ΦΙΛΟ; ΒΙΤΩΝ. ΙV)
 42 tetradrachms (ΑΡΙΣΤΙΩΝ; ΚΑΛΛΙΑΣ; ΛΑΚΩΝ; ΛΥΚΙΝΟΣ;
 ΘΕΟΔΟΤΟΣ; ΗΡΑΚΛΕΙΤΟΣ; ΝΕΣΤΟΡΙΔΑΣ; ΦΙΛΙΣΚΟΣ;
 ΑΛΚΙΜΑΧΟΣ. VI)
 Dispersed.²¹¹ Hurter 1998.

- 13. Mugla** (Pisye), Caria; 1950
 Date of deposit c.340. c.200 AR
 Ephesus: tetradrachms
 Miletus: tetradrachms
 Cnidus: didrachms, hemidrachms
 Mausolus: tetradrachms, drachms
 Hidreius: drachms, trihemiobols
 Rhodes: tetradrachms
 Euthenai(?), (under Rhodian control): drachm²¹²
Cos: 1 tetradrachm (VI, 29a. Lykinos), drachms
 Dispersed. *IGCH* 1215.²¹³
- 14. South of Izmir**, Turkey(?); 1974
 Date of deposit before 340-330(?). 28+ AR
 Rhodes: 2 tetradrachms, 20 didrachms
 Samos: 1 tetradrachm, (1 alliance statér)
 (Colophon: 1 tetradrachm)
Cos: 3 drachms (Heracles/crab)
 Dispersed. *CH* I, 28.²¹⁴

²¹¹The hoard originally came to my knowledge through S. Hurter (letter as in note above). The number of coins are estimates. A large part of the hoard is documented in Leu Numismatik, and I was kindly given access to this material. The hoard is given a summary treatment in Hurter 1998, 147-153. The find spot is given as "two villages to the west of Bodrum". A full publication of the hoard, based on the files compiled by the late Martin Price, is under preparation for *CH* IX. I am in great debt to A. Meadows as he generously shared his preliminary listings and notes of the Coan content with me. Koray Konuk has presented a plausible and very accurate closing date (341/0). Cf. Konuk 1998, 168.

²¹²The "solar disk" drachm is part of a Rhodian-type coinage on which are found the initials E-Y, M-E and N-I. The fabric and reduced weight compared to the ordinary Rhodian coinage excludes the possibility that they are the product of the Rhodian mint. On the basis of the initials attempts have been made to attribute these drachms to the *poleis* of Euthenai, Nisyros and Megista. Richard Ashton has pointed out several problems connected with this attribution. He presents, with a degree of hesitation, the suggestion that these drachms were in fact the products of the Hecatomnid mint in Caria, and even that they were possibly issued by Artemisia and/or Ada. The uniform fabric and style of the solar disk drachms are difficult to explain if the attribution on three different mints is to be maintained, but there are no strong evidence, or even indications (except for the appearance of initials on Hecatomnid coinage) speaking for an attribution to the Carian satrapy. Cf. Ashton 1990, esp. 35-37.

²¹³Konuk 1998, 112; Nordbø 1972, 263. Several coins from this hoard have been identified in the E. von Post Collection (*SNG* von Post 259, 260, 261 and 285 (the Coan tetradrachm)).

²¹⁴The alliance statér and the Colophon tetradrachm (Leu 13 (1975), 245, 133) belongs to much earlier periods and must be considered intrusive.

- 15. Leros; 1974**
 Date of deposit c.340. 16+ AR
 Rhodes: 1 didrachm
 Chius: 3 drachms
 Colophon: 2 drachms
Cos:
 1 didrachm (ΦΙΛΩΝ, VII, 8b)
 9 drachms (ΛΥΚΩΝ; ΙΑΤΡΟΚΛΗΣ; ΜΝΑΣΙΜΑΞΟΣ(2);
 ΑΜΦΙΔΑΜΑΣ(2); ΣΩΣΙΣΤΡΑΤΟΣ(3), VIII)
 Dispersed. *CHI*, 54 (illustrated).
- 16. Calymna, Caria; 1823**
 Date of deposit c.335. c.10.000(?) AR
 Cnidus: 1 tetradrachm, drachms
 Mausolus: tetradrachms, drachms
 Hidreius: didrachms, drachms
 Pixodarus: didrachms, drachms
 Calymna: didrachms, hemidrachms
 Rhodes: didrachms, drachms
 Persian satraps: tetradrachms
 Persia: several thousand sigloi
Cos: didrachms, drachms
 9/10 melted down, the rest is dispersed. *IGCH* 1216.²¹⁵
- 17. Pithyus on Chius, Ionia; c. 1885**
 Date of deposit c.335. 50 AR, 175 Æ
 (All coins were found together in a pot)
 Ephesus: 1 tetradrachm (Menesippos)
 Erythrae: 26 Æ
 Miletus: 2 tetradrachms, 11 drachms
 Chius: 15 drachms, 4 hemidrachms, 149 Æ
 Rhodes: 1 hemidrachm
 Mausolus: 1 tetradrachm, 11 drachms
 Pixodarus: 2 drachms
Cos: 1 tetradrachm (Dion VI, 15a), 1 drachm (Iph, V, 1a)
 Berlin (20). *IGCH* 1217.²¹⁶

²¹⁵No further description of the coins exists. H.P. Borrell (Borrell 1846/47, 165) informs us only "Of Rhodes and Cos, [...], .. mostly drachms and didrachms"" in "Unedited Greek Coins [etc.], *NC* 1846-47, s 165. In an article by J.P. Six (Six 1877, 86) is only mentioned "Puis la tête d'Hercule, qui se voit dans le champ de quelques pièces, est toute pareille à celle qui forme le type des monnaies de Cos depuis 366,[-]". Cf. also Schlumberger 1953, 6, no 4; Nordbø 1972, 263-264; Konuk 1998, 114; Ashton 1999, 77.

²¹⁶Illustrated in Löbbecke 1887, 149, pl VI. The occurrence of series V and VI in this hoard makes it plausible to suggest a certain affinity between the two series. The two Coan coins belonged to Löbbecke's collection, and were later transferred to the collection in Berlin. Cf. also Baldwin 1914, 48-52; Mavrogordato 1915, 397-399; Mavrogordato 1916, 281-282; Schlumberger 1953, 8, no 4; Boardman 1958/59, 306-307; Konuk 1998, 113. Only six drachms of Mausolus are listed in Konuk's survey of this hoard. He suggests a burial date c.335 due to the freshness of the Pixodarus-drachms which are not among the first series of this ruler. The suggested date is adopted here.

- 18. Iraq, unknown findspot; 1973**
 Date of deposit *c.*323. 300+ AR
 Macedonia, Alexander III:
 8 dekadrachms; 7 5-shekel; 11 2-shekel; 3 «Indian» 2-shekel
 Lion'stater: 106
 Hierapolis – Bambyce (?): 1
 Memphis: 2 (imitations of Athenian «owls»)
 Babylon: 138 (imitations of Athenian «owls»)
 Phoenicia: 21 tetradrachms (imitations of Athenian «owls»); 2 drachms
 Sardes: 1 siglos
 Macedonia, Philip II: 1
Cos: 1 tetradrachm (Dion, VI, 9b), and possibly an additional tetradrachm (VI, 10a)
 Dispersed (in commerce). *CH* I, 38; *CH* VIII, 188.²¹⁷
- 19. Cos (?), Caria; before 1912**
 Date of deposit *c.*280-230. 10 *Æ*
Cos: 10 *Æ* (ΠΠΠΑΡΧΟΣ; ΣΙΜΟΣ; ΦΙΛΙΣΤΗΣ; --)AMI[--, XVI)
 Oxford (and London?). *IGCH* 1310.²¹⁸
- 20. Asia Minor, western part (Ephesus-area?); 1991(?)**
 Date of deposit *c.*250. 750-900 AR²¹⁹
 Macedonia, Alexander III: Colophon
 Rhodes: didrachms; drachms
 Ephesus: tetradrachms
 Lysimachus: tetradrachm(s)
Cos: 6 tetradrachms (ΚΛΕΙΝΟΣ [m.fl.?), XIV,2)
 Dispersed. *CH* VIII, 295.²²⁰
- 21. Pyle on Cos, Caria; 1953**
 Date of deposit *c.*210-200. *c.*340 AR
Cos:
 19 drachms (ΒΑΤΙΩΝ; ΠΟΛΥΑΡΧΟΣ. XII, 1 and ΠΥΘΩΝ; ΠΥΘΙΩΝ;
 ΧΑΙΡΥΛΟΣ; ΛΑΕΡΤΑΣ; ΝΙΚΑΓΟΡΑΣ; ΦΙΛΙΝΟΣ; ΙΕΡΩΝ;
 ΚΑΛΛΙΠΠΙΔΑΣ; ΑΣΤΥΝΟΜΟΣ; ΧΡΗΣΤΙΔΑΣ; ΑΡΧΙΔΑΜΟΣ. XII, 2)
 190 hemidrachms (ΦΙΛΙΤΑΣ; ΚΛΕΙΤΟΣ; ΠΡΑΞΑΓΟΡΑΣ; ΠΡΑΞΙΑΝΑΞ;
 ΣΥΜΜΑΧΟΣ; ΠΥΘΩΝ; ΖΩΠΥΡ[των; --]ΙΠΠΟ[--; ΔΗΜΗΤΡΙΟΣ;
 ΣΤΕΦΑΝΟΣ; ΑΡΙΔΕΙ[κης; ΦΙΛΙΠΠ[--; ΘΕΥΓΕΝΗΣ; ΧΑΙΡΥΛΟΣ;
 ΕΛΛΑΝΙΚΟΣ; ΔΙΟΓΕΝΗΣ; ΑΡΙΣΤΟΤΕΛΗΣ; ΚΑΛΛΙΣΘΕΝΗΣ;
 ΕΠΙΝΙΚΟΣ. XIII)
 Athens (209). *IGCH* 1308.²²¹

²¹⁷ Dürr 1974, 33-35 (Cos not mentioned); May 1974, 94-95; Price 1991a, 63-72, pl 17 (ill.).

²¹⁸ The bronze coins in this hoard are all belonging to series XVI. This is indicating a burial date in the middle of the third century. Cf. Milne 1912, 19-20. Some of the coins have been identified in the Oxford collection, but not all of them. A few bronze coins of similar type, with the same personal name and corresponding weight have been recorded in the British Museum (they are all later additions compared to the *BMC*). These coins are given the provenance from this hoard with a question mark in my catalogue.

²¹⁹ The hoard has been registered in three separate lots (A,B,C). For a detailed listing, see *CH* VIII.

²²⁰ Requier 1996, 64; Ashton 1992, 3-4.

- 22. Unknown find spot, (Cos?); 1968(?)**
 Date of deposit *c.*210-200. *c.*33+AR
Cos:
 6 drachms
 (ΕΞΑΥΓ]ΡΕΤΟ[ς; ΑΝΑ]ΞΑΝΔ[ρος; ΚΑΛΛΙΠΠΗ[δας; ΠΥΘΩΝ;
 ΧΡΗΣΤΙΔΑΣ; ΦΙΛΙΝΟΣ, XII, 2)
 27 hemidrachms
 (ΑΡΙΣΤΟΤΕΛΗΣ; ΔΙΟΓΕΝΗΣ; ΕΠΙΝΙΚΟΣ; ΘΕΥΓΕΝΗΣ;
 ΚΑΛΛΙΣΘΕΝΗΣ; ΠΡΑΞΑΓΟΡΑΣ; ΠΡΑΞΙΑΝΑΞ; ΠΥΘΩΝ;
 ΦΙΛΙΤΑΣ; ΧΑΙΡΥΛΟΣ; -Ω--]ΙΩΝ. XIII)
 Private coll., casts in ANS, New York.
- 23. Cos?, Caria; before 1912**
 Date of deposit *c.*210-200. 21 AR
Cos:
 21 drachms
 (ΙΕΡΩΝ; ΚΑΛΛΙΠΠΙΔΑΣ; ΝΙΚΑΓΟΡΑΣ; ΦΙΛΙΝΟΣ;
 ΑΡΧΙΔΑΜΟΣ; ΑΡΑΤΙΔΑΣ, XII, 2)
 Oxford, New York, London. *IGCH* 1309.²²²
- 24. Cos, Caria**
 Date of deposit *c.*200. 14 AR
 Egypt: Ptolemaios IV, tetradrachms
 Ptolemaios V, tetradrachms
Cos: Museum. *CH* VI, 32.
- 25. Unknown find spot; 1980s (?)**
 Date of deposit *c.*200. «Many AE from Cos»
Cos: AE (ΠΑΡΜΕΝΙΣΚΟΣ; ΠΡΑΞΙΑΝΑΞ; ΠΡΑΤΑΓΟΡΑΣ, XIX, 1)
 Privat coll. Ashton 1996.²²³
- 26. Agora, Athen; 1990-93**
 Date of deposit *c.*200-190(?). 4 AE
Cos: AE (ΤΕΛΕΣΦΟΡΟΣ, XIX, 1)
 Numismatic Museum, Athen. Kroll 1993, no. 958, a-d.²²⁴

²²¹Cf. *BCH* 1954, 98; *BCH* 1955, 210. In addition to the coins of the Pyle-hoard the collection is also in possession of a huge number of plaster casts of coins possibly coming from the hoard. The dating of the hoard is significantly later than suggested in *IGCH*.

²²²Milne 1912, 14-19.

²²³This hoard was acquired by Richard Ashton from a British coin dealer in 1991. It is supposed to be part of a large hoard consisting of bronze coins of similar type. Ashton is dating the hoard *c.*150-100, and he is comparing it to the *IGCH* 1320 - a hoard with a wide time latitude. The bronzes known from the hoard are of the early type of issue XIX, which has the older form of the ethnic with an omikron instead of an omega in the last syllable. The motif, Heracles ¾ facing, is recognized on issue XV didrachms. The personal names represented on the bronze coins of this hoard are also found in the latest part of issue XIII hemidrachms. The bronze coins are apparently worn, but this is a difficult indication in estimating time of circulation of bronzes in general. In my opinion a burial date between 150 and 100 seems too late. Since, as far as we know, the type 2 of issue XIX (with the ethnic ΚΩΙΩΝ) is not represented in the hoard, a reasonable burial date must be within the years prior to *c.*200. If the second type of issue XIX turns out to be part of the hoard, this will open for a concealment date around 180. Ashton has later opened up for an earlier dating of *IGCH* 1320, cf. Ashton 1998, 227 (note 13).

- 27. Calymna, Caria; 1932-34**
 Date of deposit *c.*175. 92 AR, 54 Æ
 Calymna: 6 didrachms, 1 drachm
 Rhodes: 1 drachm, 3 hemidrachms, pseudo-Rhodian drachms
Cos: 71drachms (ΑΣΤΥΝΟΜΟΣ; ΖΩΠΥΡΙ; ΗΡΑΚΛΕΙΤΟΣ;
 ΚΑΛΛΙΠΠΙΔΑΣ; ΠΥΘΙΩΝ; ΦΙΛΙΝΟΣ; ΝΙΚΑΓΟΡΑΣ. XII and
 ΑΡΑΤΟΣ; ΑΡΙΣΤΑΙΟΣ; ΑΡΙΣΤΑΝΔΡΟΣ; ΠΑΤΡΟΚΛΗΣ; ΑΡΧΙΑΣ.
 XXIII)
 10 hemidrachms (ΑΡΙΣΤΑΙΟΣ; ΑΡΧΙΑΣ; ΘΡΑΣΥΑΝΔΡΟΣ;
 ΠΑΤΡΟΚΛΗΣ. XXIV)
 Æ (ΠΡΑΞΙΑΝΑΞ. XVII)
 Æ (XVIII)
 Æ (ΔΑΜΩΝ. XXVI)
 54 Æ (ΑΡΧΩΝ; ΛΑΜΠΙΑΣ; ΠΙΡΑΤΑΓΟΡΑΣ; [etc]. XIX)
 London and Oxford (parts of the hoard). *IGCH* 1320.²²⁵
- 28. Rhodes, Caria; 1931**
 Date of deposit *c.*180-170. 400+ AR
Cos: 1 drachm (ΑΡΙΣΤΑΝΔΡΟΣ. XXIII)
 1 hemidrachm (ΑΡΙΣΤΑΙΟΣ. XXIV)
 Rhodes: *c.* 400 plinthophoric drachms
 New York (24). *IGCH* 1321.²²⁶
- 29. Mektepini, Phrygia; 1956**
 Date of deposit after 190 (Price). 752+ AR
 [see complete listing in *IGCH*]
Cos: tetradrachm, Alexander-type (Price: 201/200)
 Istanbul 686; Paris «some». *IGCH* 1410.²²⁷
- 30. Asia Minor, central; 1924**
 Date of deposit *c.*190. 16+ AR
 [see complete listing in *IGCH*]
Cos: tetradrachm, Alexander-type
 New York (9). *IGCH* 1412.
- 31. Ayaz-In, Phaselis, Phrygia; 1953**
 Date of deposit after 191. 170+ AR
 [see complete listing in *IGCH*]
Cos: tetradrachm, Alexander-type (Price: 201/200)
 Paris 16, dispersed. *IGCH* 1413.²²⁸

²²⁴ The coins were found during the excavations conducted during the years 1931-1990. The find context of two of the coins, with secure readings of the ethnic ΚΩΙΩΝ, is indicating a dating prior to 190-166, see Kroll 1993 note 62. The other two coins might belong to the later type with ethnic ΚΩΙΩΝ.

²²⁵ Robinson 1936, 190-194; Kroll 1964, 83-84; Baldus 1989; Ashton 1996, 278.

²²⁶ The Coan content of this hoard is far from determined. Only the Rhodian coins are listed in *IGCH*. The Coan coins have been identified in the collection of ANS, New York.

²²⁷ Olçay/Seyrig 1965; Price 1991, 62-63, 315-316, no 2502. Cf. Price the latest coin is dated 192/1.

²²⁸ Seyrig 1973, no 8; Price 1991, 62-63, 315-316, no 2500. Cf. Price the latest coin is dated 192/1.

- 32. Pamphylia, Turkey; 1977**
Date of deposit *c.* 180-175 (Price). 740+ AR
[see complete listing in *CH*]
Cos: tetradrachm, Alexander-type (Price: 185-170)
Dispersed, except 14 in Copenhagen (among which is the Coan coin). *CH* V, 43;
CH VI, 34.²²⁹
- 33. Babylon, Babylonia; 1900**
Date of deposit *c.* 165-150 (Price). 100 AR
[see complete listing in *IGCH*]
Cos: tetradrachm, Alexander-type (Price: 201/200)
Cos: 2 tetradrachms (ΝΙΚΟΣΤΡΑΤΟΣ, later series)
Berlin. *IGCH* 1774.²³⁰

Cumulative hoards and stray finds

- 34. Cos, Caria; c.1980**
Found during excavations of a well at the Asclepieion. 59 Æ
Cos: 24 Æ (XIX)
35 Æ (XXI)
Kos Museum, Cos. Unpublished.
- 35. Cos, Caria; c.1950-present**
Stray finds from random excavations on the island. 5 AR, 221 Æ
Cos:
1 didrachm (ΦΙΛΩΝ, VII)
1 drachm (XII)
1 hemidrachm (XIII)
1 incuse drachm (XXIII)
1 drachm (later series, draped head/star)
2 Æ (X)
36 Æ (XVI)
23 Æ (XVII)
12 Æ (XVIII)
50 Æ (XIX)
4 Æ (XX)
80 Æ (XXI)
2 Æ (XXII)
5 Æ (XXVI)
3 Æ (uncertain)
Kos Museum, Cos. Unpublished.

²²⁹ Price 1991, 62-63, 315-316, no 2504.

²³⁰ Price 1991, 64, 315-316, no 2500.

36. Cos, Caria; 1920-1930

Area finds from the German excavations of the Asclepieion.²³¹ 14 AR, 421 Æ

Cos:

1 didrachm (ΑΡΙCTIΩΝ. VII)

1 drachm (ΜΝΑΣΙΜΑΧΟΣ. VIII)

3 didrachms (Δ)ΗΜΗΤΡΙΟΣ; ΚΛΕΙΝΟΣ; -. XI)

3 drachms (ΦΙΛΙΝΟΣ; -. XII)

3 hemidrachms (CΤΕΦΑΝΟΣ; ΕΠΙΝΙΚΟΣ. XIII)

1 incuse drachm (XXIII)

2 hemidrachms (XXIV)

6 Æ (I; K. IX)

5 Æ (X)

71 Æ (ΑΡΧΙΔΑΜΟΣ; ΦΙΛΟΚΛΗΣ; ΦΙΛΙΣΤΗΣ; ΞΑΝΘΙΠΠΟΣ; ΒΑΤΙΩΝ;

ΗΡΟΔΟΤΟΣ; ΑΡΧΕΠΟΛΙΣ; ΠΙΠΑΡΧΟΣ; ΣΙΜΟΣ; ΑΙΣΧΡΙΩΝ;

ΚΑΦΙΣΙΟΣ; ΕΛΛΑΝΙΚΟΣ; ΑΡΙΣΤΟΤΕΛΗΣ; ΤΕΙΣΙΑΣ;

ΠΑΡΜΕΝΙΣΚΟΣ; ΤΙΜΟΞΕΝΟΣ; ΑΡΑΤΟΣ; ΠΑΥΣΙΜΑΧΟΣ. XVI)

60 Æ (ΔΑΜΩΝ; ΓΟΡΓΙΑΣ; ΑΡΧΙΔΑ[μος; ΦΙΛΟΚΛΗΣ; ΣΩΣΙΣΤΡΑΤΟΣ;

ο]ΡΘΑΓΟΡΑΣ; ΦΙΛΙΣΤΟΣ; ε]ΚΑΤΟΔΟΡΟΣ; ΞΑΝΘΙΠΠΟΣ;

δα]ΜΟΞΕΝΟΣ; ΦΡΑΣΙΜΗ[δης; ΠΟΛΥΧ[—]. XVII)

41 Æ (ΣΥΜΜΑΧΟΣ; ΔΙΑΓΟΡΑΣ; ΜΟΣΧΙΩΝ; ΤΕΙΣΙΑΣ. XVIII)

133 Æ (ΦΙΛΙΝΟΣ; ΠΡΑΞΙΑΝΑΞ; ΑΡΧΩΝ; ΠΑΡΜΕΝΙΣΚΟΣ;

ΠΡΑΤΑΓΟΡΑΣ; ΘΕΥΔΟΤΟΣ; ΕΥΦΙΛΗΤΟΣ; ΛΑΜΠΙΑΣ;

ΔΙΟΜΕΔΩΝ; ΤΗΛΗΣΦΟΡΟΣ; ΕΥΚΡΑ[τιδης; ΑΓΛΑΟΣ;

ΑΓΗΣΙΑΣ. XIX)

32 Æ (ΣΩΣΙΣΤΡΑΤΟΣ; ΚΑΛΛΙΚΡΑΤΗΣ; ΘΕΥΓΝΗΤΟΣ; ΔΗΜΗΤΡΙΟΣ;

ΜΙΚΥΘΟΣ; ΔΙΔΥΜΑΡΧΟΣ; ΕΠΙΔΑΥΡΙΟΣ; ΗΡΟΔΟΤΟΣ;

ΞΑΝΘΙΠΠΟΣ. XX)

32 Æ (ΦΙΛΙΝΟΣ; ΠΟΛΥΧΑΡ[—; ΚΛΕΥΧΙ; ΠΑΡΜΕΝΙΣΚΟΣ;

ΣΑΤΥΡΟΣ; ΑΓΛΑΟΣ; ΔΙΟΦΑΝ; ΧΑΡΙΔΑ; ΚΛΕΥΜΑ. XXI)

19 Æ (ΗΡΑΓ[ορας; ΠΟΛΥΧΑΡ[—; ΑΓΛΑΟΣ; ΦΙΛΩΝ. XXII)

10 Æ (ΚΛΕΙ[-. XXV)

2 Æ (ΔΑΜΩΝ. XXVI)

Institut für Archäologie, Göttingen Universität, Göttingen. Unpublished.

37. Cos, Caria; 19?

Found during excavations of a Roman villa («Casa Romana») in Kos town. 2 Æ

1 Æ (ΠΡΑΞΙΑΝΑΞ. XIX)

2 Æ (ΑΓΛΑΟΣ. XXI)

Kos Museum, Cos. Unpublished.

²³¹ Herzog/Schatzmann 1932; Boehringer 1995, 191-192. The altogether c.700 coins are assumed to come from Herzog's excavations of the Asclepieion although this is not supported by additional documentation. The coins are all bearing the same patina, and the composition can hardly give room for other explanations. The coins formed part of the collection of the classical philologist Wilhelm Otto Croenert (1847-1942) and came after his death to the Universität Göttingen. All documents on the collection were destroyed during the Second World War. The coins might also be from the collection of W.R. Paton, but the correspondence with the publication Paton & Hicks 1891 is not convincing. Whatever the provenance is, the majority of these coins are certainly coming from the same find location which has to be the Asclepieion.

Single finds and cumulative finds

Single finds are defined here as single coins found in a context that proves or makes it plausible to assume that the coin was earthed as a single specimen. In general, single finds are the result of coincidental discovery, archaeological excavation or landscape/area survey (with or without metal detector). Coins that form part of so-called cumulative hoards (e.g. offerings from a well) will be included in this definition of single finds.²³²

The hoard material from Cos includes four groups of coins that fit into the definition of single finds (hoards 34-37). The provenance of two of the groups makes up for an unusual high proportion of single finds, and thus bronze coins, in the Coan material. The following figure will illustrate the proportion of silver and bronze coins divided on treasure finds and coins from single finds:

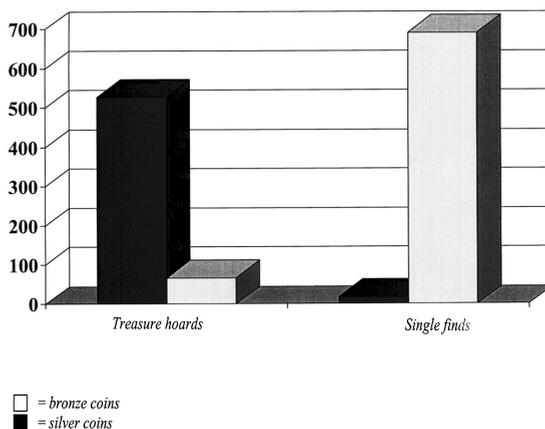


Fig. 3: Proportionate division of silver and bronze coins on treasure hoards and single finds

A total of 595 coins are from hoards (i.e. treasures) and 709 from single finds. Only 67 bronze coins have hoard provenance and only 19 silver coins are among the single finds. The four groups of coins that make up for this unusual high proportion of single finds/bronze coins are 59 bronze coins of issues XIX and XXI, discovered in a well at the Asclepieion; 226 coins of various issues (the earliest being a VII. issue didrachm) from random post-war excavations on the island; 435 coins of various issues (again, the earliest being a VII. issue didrachm) from the German excavation of the Asclepieion; two bronze coins of issues XIX and XXI, were found

²³² This wide definition of single finds, which excludes cumulative hoards as a separate category, was adopted on the latest large-scale symposium on the subject: "Enkeltfundne mønter", Nationalmuseet,

inside the Casa Romana in Cos town. The high number of single finds/bronze coins is caused by the coins from the major excavations of the Asclepieion and adjacent area. This material is interesting as it completes a pattern usually dominated by silver issues, and increases the diversity within the Coan *corpus* in general, and it opens the possibility of comparison between different types of hoard material regarding chronology, and distribution on issues etc.

The overall proportion of coins with hoard provenance at 57 % is high within the Coan *corpus*. The stock of coins without hoard provenance is slightly dominated by silver coins (53%), while the situation is the opposite for the coins coming from hoards (almost 60% are bronze coins). Coins that are from single finds (54%) slightly outnumber the coins from hoards (46%). A comparison between the total number of coins known from each issue and the number of coins with hoard provenance reveals a close numerical relationship. A few exceptions can be observed: of the total of 146 issue IV didrachms recorded, only 44 are from hoards; and issues VII and VIII are also under-represented in the hoard material. These issues have a common feature, a reduced weight as compared to the contemporary tetradrachms (i.e. issue III and VI). It could be conjectured that the heavier tetradrachms were put aside in treasure savings and/or buried of other reasons, while the lighter smaller denominations were kept in circulation. However, the most important hoard with issue IV didrachms also contains a very high number of issue III and VI tetradrachms (hoard 12). The following, and even more reduced in weight, issue VII and VIII didrachms and drachms are not known in hoard context together with the issue VI tetradrachm.

The next period of substantial minting of silver issues displays the opposite situation. The didrachms of issue XI and issue XIV tetradrachms are underrated to a high degree compared with other silver issues. Only 6 of the 143 recorded tetradrachms and 3 of the 90 recorded didrachms are known to be from hoards. A very high number of the partly contemporary issues XII and XIII of drachms and hemidrachms is from hoards. Denominations of reduced weight appear to be more frequently represented in hoards. The explanation must be found in the duration of the issues. Issues XII and XIII were longer lasting issues, they are recorded in hoards with a late burial date; long after the heavier denominations had vanished from circulation. The later coin issues (i.e. from the XVI. issue onwards) reveal a close correspondence between the total number of coins known and the number from hoards. The only exception being issue XXI, large bronze coins which appears to be slightly over represented in the hoard material. A comparison between

København in November 2001. A more detailed system of hoard classification can e.g. be found in Ingvaldsen 2000, 146-7.

all 26 issues based on three parameters; total number of coins; number of coins from hoards; number of obverse dies, reveals an interesting pattern:

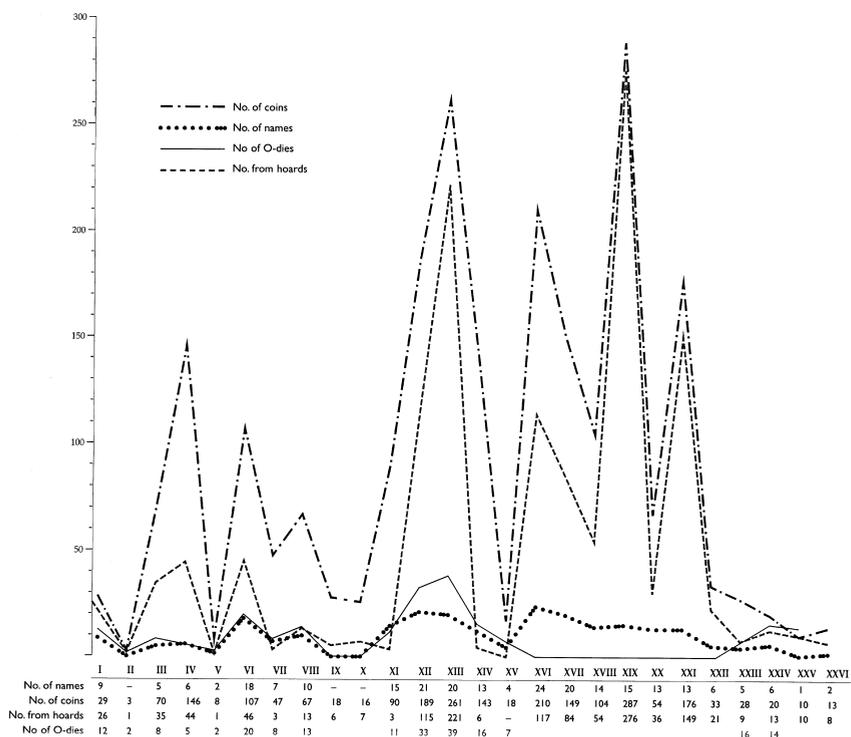


Fig. 4: The coinage of Cos: Relationship between the number of coins, number of coins from hoards, number of obverse-dies and number of personal names on the issues

Excluding the anomalies mentioned above, the figure reveals a close relationship between the three parameters. When the number of survived coins of a particular issue reaches very high figures, e.g. issues IV, XII and XIII, the number of dies will be proportionately smaller.²³³

The phenomenon of a supposed relationship between the original number of minted coins and the number of coins in hoards has been broadly discussed, most often with the so-called “Thordeman’s law” as a starting point.²³⁴ After a thorough study of more than 15 000 Swedish coins (the hoard comprised of c.18 000 coins) spanning almost 75 years and all deriving from a single hoard, and comparison with the corresponding mint figures for the respective years, he concludes that “the content of each coin-find stands in a certain ratio to the amount of

²³³ This is, of course, expected and favorable since it attest for a high survival rate and thus high degree of representation of the issues in question.

²³⁴ Thordeman 1948.

the coinage during the period covered by the find, and that according to the law of high numbers this proportion reaches increasing agreement the larger the find is numerically²³⁵. Several objections can be made both towards Thordeman's method and the value of applying this law in general.²³⁶ However, the overall principle has, in my opinion, a general validity which can defend the interpretation of the close correspondence between the total number of coins from Cos, the number of coins from hoards and the number of obverse dies for the silver coinage, as a strong indication towards considering the Coan *corpus* as representing a fairly proportionate selection of coins from the mint stock in circulation during the fourth to the second century on the island. The single finds stand out as being of great importance in order to obtain a general impression of a city state coinage. The single finds from Cos, and thus the majority of bronze coinage, derives from two major sources: the stray finds from the island in general and the coins found during the excavation of the Asclepieion. It is worth making a comparison between the two sources in order to investigate the nature of the material from the two different sources, and to detect any differences. The division on issues is shown in the figure below:

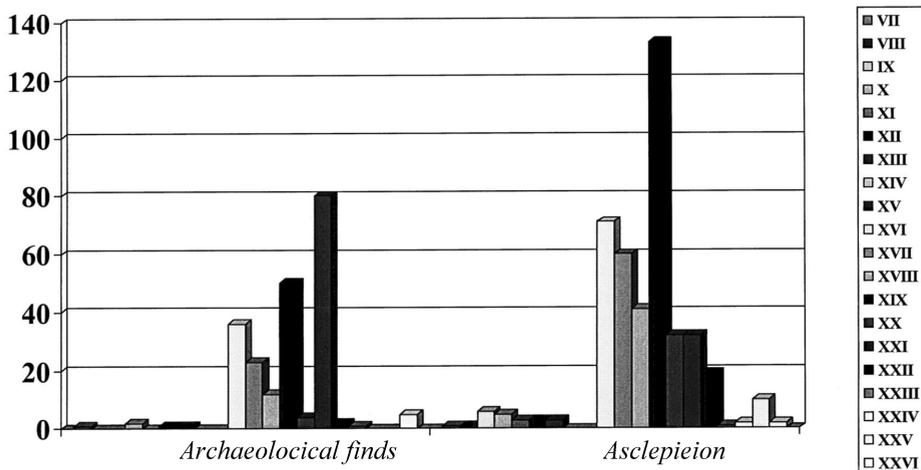


Fig. 5: Single finds from archaeological excavations on Cos compared to the single finds of the Asclepieion

²³⁵ Thordeman 1948, 201.

²³⁶ A more than thorough investigation into the principles and validity of Thordeman's study and "law" is presented in Volk 1987, with an additional valuable test on the Roman republican material for which this method of analysis is highly important. The main objection to Thordeman's study is the fact that his figures are not representing the actual number of coins in the hoard, but the amount of *mark* calculated for each year. The number of coins issued year by year is unknown, only the total amount of mark. The coins were of different denominations, 4-, 2- and 1-mark coins, and we can expect each denomination to have a different pattern of circulation. Although the differences might not be large, they have proved significant in other studies. Thordeman's main point is not severely weakened, and additional studies have later confirmed the mechanism described in his study. Cf. e.g. Ingvaldsen 1991, 178.

The correspondence between the two groups is surprisingly accurate. Two exceptions are of note: the differences displayed by issues XIX and XXI seem to be of significance. Issue XIX is represented to a slightly lesser degree than one would expect among the coins from random finds on the island in general, but the difference is too small to be of importance. It is a different matter with issue XXI from the Asclepieion. Only 32 coins of this issue were found within the *temenos* of the sanctuary. From the total number of recorded coins, as well as the figures from the stray finds elsewhere, significantly higher numbers would be expected. It is known for certain that the two issues circulated simultaneously, which among others the accumulation of coins from a well at the Asclepieion reveals clearly.²³⁷ We also know that issue XIX was minted before issue XXI.²³⁸ It is also evident that issue XXI continued to be minted after the striking of issue XIX coins had come to an end.

When we look into the issues and hoards in detail, a chronological pattern is revealed. The first half of issue XIX is clearly best represented among the coins from the Asclepieion. If we isolate the first half of issue XXI by the first half of the personal names represented, an identical situation appears – the early part of the XXI issue is clearly outnumbering the latter half of the issue in the hoard material from the sanctuary. It is difficult to find any other explanation to this fact other than that the coins circulation within the Asclepieion were proportionately reduced compared to the island in general in the latter half of the second century, and probably as early as from c.170 onwards. The XIX and XXI issue are atypical also in another manner. If we compare the number of personal names within each issue with the number of coins from hoards, a nice correlation is found: Issue XVI with 117 coins and 24 names; issue XVII with 84 coins and 20 names; issue XVIII with 54 coins and 14 names. Issues XIX and XXI stand out in contrast: Issue XIX with 276 coins and only 15 names and issue XXI with 149 coins and 13 names. The explanation for this divergence may be found in the time of circulation for each of the issues. The XIX issue is clearly standing out in this matter. The majority of coins from this issue are very worn and often damaged – clearly a sign of long circulation. It is also the only Coan issue where a number of the coins were countermarked (a feature not found in additional Coan issues). The picture is more blurred for the XXI issue, although we can see some indications pointing towards that this issue of heavy bronze coins continued in circulation after new issues of corresponding weight were introduced after the mid-second century. It is therefore both probable and possible that an unusual period of circulation can explain the high number of issue XIX and XXI coins among the single finds.

²³⁷ Hoard 34. A total of 24 coins of issue XIX and 35 of issue XXI were found together.

²³⁸ All the coins of issue XIX type 1 were issued before the introduction of issue XXI, cf. commentaries on the issues below.

Commentary on the issues

Motifs and style

The motifs used on the Coan coinage shows minor variations around established themes, the most important being Heracles, Demeter and Helios and the crab, club and *gorytos*. Asclepius, Apollo and a bare, bearded head are represented on one issue each, the first two followed by a *rhabdos* and *khitara* respectively. The following survey gives the combination of motifs and additional motifs and initials on the 26 issues:

<i>Issue</i>	<i>Obverse</i>	<i>Reverse</i>	<i>Add. symbol</i>	<i>Init</i>
I	Bearded Heracles	Crab; club; square border of dots		
II, 1	Bearded Heracles	Crab; club	Olive leaf (?)	
II, 2	(same)	Crab; club; square border of dots		
III	Bearded Heracles	Draped female head (Demeter)		
IV	Bearded Heracles	Draped female head (Demeter)		
V	Bearded Heracles	Draped female head (Demeter)		
VI	Bearded Heracles	Crab; club; square border of dots	Fish-hook Silk worm	B;Y
VII	Beardless Heracles	Crab; club; square border of dots	Silk worm	
VIII, 1	Bearded Heracles	Crab; club; square border of dots		
VIII, 2	(same)	Crab; square border of dots	Silk worm	
VIII, 3	(same)	Crab; club; square border of dots		Δ
VIII, 4	(same)	(same)		
IX	Beardless Heracles	Crab		I; K; A
X	Bearded head	Crab; club		
XI	Beardless Heracles	Crab; club; square border of dots		
XII, 1	Bearded Heracles	Crab; club; square border of dots		
XII, 2	(same)	Crab; club		
XIII	Beardless Heracles	Crab; club		
XIV	Beardless Heracles	Crab; <i>gorytos</i> (occ. replaced by club); square border of dots		
XV	Beardless Heracles $\frac{3}{4}$ en face	Crab; <i>gorytos</i> ; square border of dots		
XVI	Beardless Heracles	Crab; club		
XVII	Draped female head (Demeter)	Crab; club (occ. no club)		
XVIII	Beardless Heracles	Crab; club (occ. <i>gorytos</i> or no club)		
XIX	Beardless Heracles $\frac{3}{4}$ en face	Club; <i>gorytos</i>		

XX	Helios ¾ en face	Club; <i>gorytos</i>	
XXI	Asclepius	Rhabdos	
XXII	Beardless Heracles	<i>Gorytos</i>	
XXIII	Beardless Heracles	Crab; club	K; KE;Δ
XXIV	Apollo	Kithara	A
XXV	Beardless Heracles	Club; <i>gorytos</i>	
XXVI	Beardless Heracles	Crab	

Only the Olympian gods and traditional deities were worshipped in the public cult as described in the surviving parts of the Coan religious calendar a few decades after the synoecism, and both Heracles and Demeter formed part of the cults.²³⁹ The most important deity from a numismatic point of view is Heracles. Heracles was chosen as an obverse motif on the very first tetradrachm issue, and altogether 21 of the 26 recorded issues of Coan coinage prior to c.170 BC displays the image of this deity.

The connection between Heracles and Cos was known to Hesiod and the author of the *Iliad*. The connection between Cos and Heracles and Demeter has a common point of origin in the myth of Erysichthon. Erysichthon was punished with *boulimia* after he had felled trees in a grove sacred to Demeter. In order to acquire food he was forced to sell his daughter Mestra, who was later raped by Poseidon and gave birth to Eurypylus. The *Iliad* describes Cos as formerly ruled by the legendary king Eurypylus. After the king's two sons Chalcon and Antagoras were defeated by Heracles, the island was ruled by Thessalus, son of Heracles and the former king's daughter Chalciopé.²⁴⁰ The myth is partly described by Hesiod, in the *Iliad*, by Callimachus in *Hymn to Delos* and Theocrit in *Idyll VII* (supplied by the scoliast).²⁴¹

The ancient story tells us that Heracles landed on Cos after the Trojan Wars. Plutarch describes the landing place to be Cape Lacetor, near ancient Halasarna (modern Cardamina), where Heracles was driven ashore in a storm.²⁴² The cult described by Plutarch included ancient elements of transvestism among the priests of Heracles, and was obviously considered by the author as having roots in a distant past. The antique connection between Heracles and Cos in the myths is mirrored in the popularity and extent of the cult on the island in the fourth and third century.

²³⁹ Sherwin-White 1978, 293; Nilsson 1967, 153.

²⁴⁰ *Iliad* II, 676.

²⁴¹ For references, cf. Sherwin-White 1978, 306-7, n 148, 149, 153, 154.

²⁴² Plutarch, *QG* 58.

Heracles is attested as tutelary deity of the gymnasium together with Apollo. A regular festival, Herakleia, is documented, as is the existence of a Herakleion which was a religious centre of the Dorian tribe of the Hylleis. A public cult of Heracles as Kallinikos existed as well as local cults at Halasarna, Phyxa and Antimachia.

The cult of Demeter was also important on Cos. R. Herzog discovered a small, archaic sanctuary of Demeter and Core which is now one of the oldest attested cults on Cos. The sanctuary belongs to an early fourth century context and is attesting the cult of Demeter in a period before the synoecism.²⁴³ S.M. Sherwin-White gives a good account of the connection between Demeter and Cos at an early stage in Coan history.²⁴⁴ As described above, the link between Demeter and Cos is found in the myth of Erysichthon, who committed the sacrilege of felling threes in a sacred grove of Demeter in Thessaly. He was punished by an insatiable hunger set upon him by Demeter.

According to tradition Chalcon and Antagoras were the ones welcoming Demeter to Cos during her search for Core, and thus founded the cult of Demeter on the island. The cult of Demeter kept its strong position on Cos throughout the Hellenistic period with several local shrines located in the different demes, such as a small sanctuary at Kyparissi in the deme of the Halentioi and another in the deme of Hippias. Callimachus and Theocrit describe several festivals, and particular aspects of the ceremonial execution and tradition surrounding the cult are exclusively found on Cos. The impact of the cult of Demeter in connection with the tale of Erysichthon has even produced folk tales into the nineteenth century. Demeter had a strong position early in the fourth century, and is a likely candidate for a reverse motif, supplementing Heracles, on Coan coinage of the mid-fourth century.

The draped female head on the Coan coinage that appears on three contemporary, important silver issues (III, IV, V) as well as on a later issue of bronze coins (XVII) has no attributes or additional evidence to support the interpretation that it is a likeness of Demeter. The attribution is solely founded on the interpretations of the present evidence of the cult and religious life of Cos during the period in question. On these grounds Demeter is certainly the most plausible interpretation of the beautiful female heads found on the large silver coins of the III and IV issue and on the smaller coins of the V and XVII issue. I am convinced that the draped female head on the silver issues and the significantly later bronze issue must be interpreted as a common motif. To consider the head on some of the silver issues as Artemisia, some possibly as Ada and even later ones as Berenice seems to

²⁴³ Sherwin-White 1978, 53, 305; Herzog 1901, 134-6.

²⁴⁴ Sherwin-White 1978, 306-7.

be mere speculation, and more so since the iconography is reappearing in a much later period on bronze coins with no connection to the preceding silver issues (see below).

J. P. Six was the first to suggest a connection between the Mausolus and Artemisia and motifs on the Coan coinage.²⁴⁵ The theory was, possibly on independent grounds, elaborated on by G.F. Hill in 1923.²⁴⁶ Six, and later Hill, presented the suggestion that the Heracles seen on some of the early Coan tetradrachms was a portrait of the Carian satrap Mausolus disguised as a god. Likewise the features of Artemisia could be read into the draped female head on the tetradrachm and didrachm issue III and IV.²⁴⁷ The main reason for the speculation is a comparison between selected Coan tetradrachms and the so-called Mausolus portrait from the Mausoleion in Halicarnassus.²⁴⁸ Hill observes «*The head is quite different from that which appears on other coins of the period; the silky Oriental moustache, the treatment of the eye, the slight tinge of melancholy, all combine to recall the likeness of the satrap*». He further rightly points out the fact that Mausolus had a strong influence on Cos from 357 until his death in 353 and that the Carian rulers kept their control during the reigns of Artemisia and Hidrieus well into the 340s.

The picture is getting more blurred when Hill's suggestions are repeated and used to support a year by year dating of the first Coan tetradrachms. In Susan Sherwin-White's study of Coan history and culture she stretches the available evidence in the current matter a little too far. In adopting Hill's theory without reservations her further argumentation is based on uncertain evidence.²⁴⁹ The argument is repeated by Koray

²⁴⁵ Weber 1892, 206 (quoting Six on his suggestion that the features of Artemisia could possibly be read into the draped female head on the Coan tetradrachms); Six 1899, 82 (reading the features of Mausolus into the Heracles depiction on the early Coan tetradrachms).

²⁴⁶ Hill 1923, 208. Hill obviously knew Six' theory of a connection between the female head and Artemisia.

²⁴⁷ A coin type from Lycia is often used to strengthen the argument. The portrait of the dynast Kherei has been read into a depiction of Heracles on coins minted in Telemessos in the first part of the fourth century, cf. Mørkholm/Zahle 1976, 85. Konuk suggest that these Lycian issues "may have provided an inspiration for the Coan coins" (Konuk 1998, 138) mainly based on the shape of the reverse-die (square punch end providing a distinct square incuse and followed by a square border of dots). It is hardly necessary to look for parallels in Lycia for this particular fabric. The mid-fifth *diskoboloi* of Cos, significantly earlier in date compared to the Lycian coins in question, are almost identical in fabric as to the early tetradrachms with the bearded Heracles and crab introduced in c.390. The motif of Heracles is firmly rooted in the religious conception of the Coans in the period, and is again a motif not necessarily sought for in remote locations. Heracles certainly formed part of the religious iconographical sphere familiar to the Coans in the early fourth century.

²⁴⁸ For illustrations cf. Bieber 1955, 71-2; Richter 1965, 161-2.

²⁴⁹ «*Evidence of Mausolus' earlier influence in Cos is provided by Coan coins.*» [---]. «*The numismatic material shows that already by the end of the 360s Mausolus' close relationship with the Coans was established.*», Sherwin-White 1978, 70-71.

Konuk is his study of the Hecatomnid coinage from 1998.²⁵⁰ Konuk partly rejects the possibility of interpreting the features of Mausolus into the coin depiction of Heracles.²⁵¹ The theory depends on the likeness between the pseudo-Mausolus statue from Halicarnassus and a limited number of coins from the presumably earliest tetradrachm series of Cos. A number of arguments are against this theory²⁵², but two are decisive: 1) the statue from Halicarnassus can not be securely identified with Mausolus, and 2) since the satrap's physical appearance is unknown from other sources the identification of him on Coan coins is impossible.²⁵³ The peculiarities Hill pointed out on some of the Coan coins can be explained as a result of a single die-cutter's personal style. It is after all not surprising that a local die-cutter may have been inspired by stylistic trends in Caria, despite being identified as 'oriental' or in some way connected to the satrapy on the Carian coastline or not. Kristian Jeppesen, who has conducted the Danish excavations at Halicarnassus, is dealing with the identification of the statue groups of the Mausoleion in an unpublished paper from 1999. Many accept the interpretation of the two colossal statues as Artemisia and Mausolus, and also give them the key position in the quadriga on top of the Mausoleion. Jeppesen raises three objections against this interpretation: 1) they do not correspond in scale to the horses of that group, 2) in the chariot the sculptures would have been clearly visible from all angles, but the two in question both show a cursory treatment of their backs more in line with the treatment of most of the standing figures of the Mausoleion intended to be standing against a wall, 3) the stance of the two statues does not correspond convincingly with a position in a chariot. The female figure has her arms raised «in a gesture of adoration and subordination» this attitude does not correspond to the

²⁵⁰ Konuk 1998, 136-143, discussing the attribution of Heracles and Demeter with Mausolus and Artemisia, and furthermore the chronological considerations presented in Sherwin-White as a consequence of this interpretation.

²⁵¹ Konuk 1998, 137: "– the type that Hill and Six illustrated existed before the time of Maussollos". He is further discussing the possibility that the Heracles depiction might have evolved on a later stage into a personification of Heracles. But, apart from raising a few chronological objections, he does not make any decisive conclusion on this matter.

²⁵² For example that the use of portraits in this way is an unknown practise at such an early stage; that the visible signs of Mausoleian control on Chios and Rhodes are manifested on the coinage with obvious elements as the adoption of Halicarnassean coin types on Chios and a satrapal head as additional symbol on Rhodes - in contrast to a vague and hidden sign as a disguised Mausolus portrait; that only a few dies in the Coan issues in question have this 'oriental' features which would have made it practically impossible to separate them from the coins with "only" Heracles as motif.

²⁵³ The suggestion that the statue in fact is representing Mausolus has been rejected and restored on several occasions. Because of this, the sculpture is generally mentioned as 'pseudo-Mausolus' in the present literature. The publication of the Mausoleion clearly reveals the uncertainties surrounding the reconstruction and attribution of the sculptures in the round. Cf. Jeppesen 1989; Waywell 1989, esp. 28-29.

placement of her next to her co-ruler and equal in a chariot.²⁵⁴ Jeppesen describes the pseudo-Mausolus as «a person of great authority, and its facial features has an individualistic look, [with] a likeness copied from the individual, it was intended to represent». He also writes that this person may well be Mausolus as well as Hecatomnus. Jeppesen does share my view that there are no indications connecting the pseudo-Mausolus with the Heracles on Coan tetradrachms.²⁵⁵ Some of the obverse dies of the VI issue have some points of resemblance to the pseudo-Mausolus from Halicarnassus. The similarity is present on the last part of the issue, on the obverse die O12 to O20. It seems evident that the majority of coins of the last part of the issue were struck in a period of intensive minting. The combination of obverse dies and reverse dies displays a blurred picture compared to the first part of the issue, and several reverse dies were apparently in simultaneous use. The similarity in style and appearance of the obverse dies in this group is due to the few hands involved in executing the dies – several of them are most probably the product of one and the same die-cutter. The last part of the issue VI can not be considered in connection with the rule of Mausolus and Artemisia, but the issue probably came to an end before the Macedonian control over the island was finally established in 332. Issue VI was minted during the period of Carian control.²⁵⁶

Heracles is represented by two main types on the Coan coinage; one, as mentioned above, with a beard and strong facial features and one as a young hero with a smoother, beardless face. The latter image was introduced on the didrachms of issue VII and continued on this denomination until it ceased to be minted (with the introduction of the motif displayed in a $\frac{3}{4}$ view occurring on issue XV. being the only irregularity). The beardless Heracles is the most common obverse motif on the Coan issues, due to the popularity of the motif on the minor issues of bronze coins. The influence of the Lysippean Alexander-type Heracles is fully demonstrated on the tetradrachms of issue XIV, although the ‘Alexander-type’ Heracles was introduced on

²⁵⁴ Unpublished paper from the symposium ‘Image of Ancestors’, Aarhus University, August 1999. Dr. Jeppesen has kindly provided me with a copy of his paper and a permission to use citations thereof.

²⁵⁵ Expressed in a letter of July 15 2000. In Jeppesen’s paper referred to in note above is presented the hypothesis that the satrapal ancestors were represented in the Mausoleion. Fragments of several other statues on colossal scale have been identified, and Jeppesen’s conclusion is «*that images of ancestors were actually represented in the Mausolleion.*». He demonstrates that the eight intercolumnations on the north side, where several fragments were found, could be conveniently occupied by the Carian dynasty: Hecatomnus and his wife, their three sons and two daughters and Aphneis, the wife of Pixodarus.

²⁵⁶ Cf. Part I “Historical outline”.

the Coan coinage almost 50 years after Alexander himself launched his standardized coin type.²⁵⁷

The attribution of the draped female head as Artemisia brings us even further into the field of speculation. So far the only object of the discussion in this matter has been the silver issue III (tetradrachms) and IV (didrachms). The iconographic type also appears on the drachms of issue V., evidently contemporary with the didrachms, and the later bronze coins of issue XVII. As mentioned above I consider it meaningless to read separate interpretations into some or all of the issues in question. The draped female head was established as an iconographical type used from the mid-fourth century until the end of the second century, and the contemporary understanding of the motif must have been universal and rooted in the religious lives and conceptions of the inhabitants. As mentioned above, Six and Hill were able to read the features of Artemisia into the female head. According to Hill, the coins depicts “obviously a portrait” and he finds it difficult to reject Six’ suggestion to identify the head with that of Artemisia.²⁵⁸ A few objections have been raised against this interpretation, but the appeal of the theory appears to be so strong that it is hard to reject.²⁵⁹ In his study of 1998, Konuk largely rejects the identification of the Heracles depiction as Mausolus. The female head is a different matter. Konuk presents several arguments in support of this theory: He raises the fact that Demeter, especially draped, is rarely seen on Carian coinage of the period. He remarks upon the peculiarity of placing two gods on either side of a coin. He also pointedly refers to the motif as an iconographic interlude only, drawing attention again to the extraordinary choice of motif. Finally Konuk concludes that “the appearance of a draped woman c.350, of a type attested in Hecatomnid sculptural iconography, cannot be just a mere coincidence”, “[this makes] a strong case for regarding it as a depiction [--] of either Artemisia or Ada I.”, and furthermore “All in all, it would not be surprising if the city decided to honour a Carian female dynast on it’s coinage.”²⁶⁰

²⁵⁷ On the $\frac{3}{4}$ facing head motif in an art historian context, cf. Erhart 1978 (esp. p. 253 on Cos) and Baldwin 1909.

²⁵⁸ Hill 1923, 208.

²⁵⁹ Cf. Weber 1892, 206: “*And further, the ideal beauty of the head seems to me to belong rather to a deity than to the portrait of a human being*”. Svoronos 1904-8, 41-3 (or column 81-86 as given in Greek numerals in the work) observed some of the stylistic divergencies within the issue of coins with the female head, and he suggested, for stylistic reasons, an interpretation of the motif as the Egyptian Berenice. Hill solves this problem in separating the female head coins in two separate types; one identified as Artemisia and the other with “*a stiff and curiously Egyptian look*” as Berenice, see Hill 1923, 209. The absence of convincing arguments in Svoronos attribution is commented in Ashton 1986, 13 n 31, where rightly objections towards Svoronos stylistic analysis is presented.

²⁶⁰ Konuk 1998, 140.

Yet this is exactly what it would be: the unprecedented use of the features of a co-ruler disguised as a goddess in a city-state coinage of the classical period. And what is more, at least two or possibly more persons had supposedly been depicted in the same manner. The issues in question, especially III and IV, are evidently minted during a short period of time, and the two stylistically different types within the issues are minted almost simultaneously, one immediately after the other.²⁶¹ If one accepts the idea that one type is a personification of the goddess, one must also consider the second type in the same way. The inevitable consequence will be to identify the first as Artemisia and the second as Ada I. This interpretation and the arguments behind it are difficult to defend.

Rightly, the representations of the sister-wives of the Hecatomnid rulers were often draped in a manner close to the head on the Coan coinage.²⁶² Yet this iconography is by no means a feature found only among the Hecatomnid dynasts. In fact we do not have to look beyond the island of Cos itself to substantiate this point. An un-attributed marble statue of a draped woman was found in the Odeion on Cos.²⁶³ The statue's execution is of high quality, and displays a certain degree of likeness to the head on the type 1 of the III, and IV issue coins. The sharp profile, smooth and thin drapery and small, rounded curls of the hair are common features. Kabus-Preisshofen suggests a date for the statue in the late fourth century. Even more interesting is another Coan female statue head found on the Acropolis of Rhodes.²⁶⁴ The draped head is attributed to Demeter by Kabus-Preisshofen, partly due to a comparison with the 'Cnidian' Demeter.²⁶⁵ The draped Demeter-head is dated to c.300. Further a comparison of the full range of reverse dies with the draped female head motif reveals a large variation in style and features. This is also the case when dies within each main type of the issues III and IV are considered. Differences in facial features, in coiffure and in drapery are observed within type 1 as well as type 2. The identification of a single iconographical type is due to the examination of a group of dies produced by a single die-cutter. When all the dies are considered at the same time it becomes clear that there is no established portrait-type at all. So no matter how appealing the theory

²⁶¹ This is confirmed by the identical weight and fabric as well by hoard evidence, cf. the commentary of issue III and IV.

²⁶² Prag/Neave 1994, 102-3.

²⁶³ Kos Museum, 13 (Rhodes inventory 13579). Kabus-Preisshofen 1989, no. 51.

²⁶⁴ Rhodes, mag. no. 1985:G 92. According to Kabus-Preisshofen the Demeter-head was found together with a Heracles-head, cf. Kabus-Preisshofen 1989, 304.

²⁶⁵ Kabus-Preisshofen 1989, no. 98.

of portraiture is, and until further supported evidence is presented the inescapable conclusion must be the depictions are religious renderings of Heracles and Demeter and not a hidden display of Carian rulers.

Asclepius plays a surprisingly modest role in the numismatic iconography. The dominant position of Heracles was obviously hard to overcome when new issues were introduced. The origin and date of introduction of the cult of Asclepius is not known in detail. The cult was probably of an antique origin, but only by the establishment and grandiose planning of the Asclepieion in the last part of the fourth century is the cult firmly attested among the major official cults on Cos. The importance of the cult increased until it became the most prominent official cult on the island in the third and second century. The present evidence provided by the excavation of the Asclepieion does not support the cult's existence beyond the end of the fourth century. However, the cult may have continued to be practiced at a different location or at a minor, lost shrine on the present site.

In the mid-third century Herodas explicitly states that the cult was of a Thessalian origin.²⁶⁶ The later account of Pausanias on the subject is in direct contrast to Herodas as he describes the cult as an offspring of the Asclepius cult of Epidauros.²⁶⁷ The Thessalian cult in Tricca was generally considered to be the earlier of the two, and Pausanias attempt to make a connection between the Coan cult and the Asclepieia of Epidauros can be considered as an attempt to propagate this cult on the expense of the more antique Thessalian cult. The mid-third century statement of Herodas, probably coined on a Coan audience, clearly reveals in this period an Asclepius cult of Thessalian origin was practiced on the island. The three Asclepius cults of Tricca, Epidauros and Cos were later considered as the three main Asclepieia of the Greek world.²⁶⁸ Thus, the Coan cult of Asclepius was most probably a Thessalian offspring.

A few traces of the first healing cult on Cos can be found in connection with the sacred grove which was situated close by the site where the Asclepieion was later established. The grove was located on what would later become the uppermost of the three terraces of the Asclepieion. The area was first described as *hieron* and *temenos*.²⁶⁹ The grove was later shared to include the worship of Asclepius and Apollo Kyparissios. The worship of Apollo Pythios in the second half of the fifth century on the site later to

²⁶⁶ Herodas, *Mime* II.

²⁶⁷ Pausanias III, 23, 6.

²⁶⁸ Strabo 437.

become the Asclepieion is also evidence for religious activity on this site which antedate the official Asclepius cult. An annual festival of Asclepius is also referred to at an early date by a letter of Pseudo-Hippocrates to the people of Abdera.²⁷⁰ The early festival is closely connected to the *Asclepiadai*. The Coan doctors, *iatroi*, were organised in a guild, *koinon*, and were named *asclepiadas*. The terminology points to an archaic origin of this *asclepiadas* and implicitly for a very early date of the first festival in the honour of Asclepius.²⁷¹ However, the *asclepiadai* are not known to have played a professional role within the activity of cult of the Asclepieion.²⁷²

The impressive sanctuary of Asclepius was evidently established on a site already occupied by religious activity for a long period of time. The development of the site was obviously accelerated by the synoecism in 366 and the increased activity at the new capital, only 2-3 kilometres away in the following years. What appears to be important in this connection is the sheer size of the sanctuary as it was planned from the very beginning.²⁷³ The plan clearly reveals the idea and effort among the Coans aiming towards the establishment of a large-scale development of the sanctuary and cult (*fig. 6*). The projected buildings included from the start (shortly after *c.*300) a complex structure and layout of the sanctuary, porticos for accommodation and several other facilities revealing the expectation of a high number of visitors. Clearly the Asclepius cult was already a popular one at the initial phase of the building activities of the sanctuary.²⁷⁴ The Great Asclepieia was initiated in 242 and probably implies the existence of an earlier festival. This major religious event continued uninterrupted at least until 170.²⁷⁵ A cult of Asclepius at Isthmus is also mentioned in a religious calendar of the third century.²⁷⁶

²⁶⁹ Herzog 1928, II, 2, 6 (*leges sacrae*).

²⁷⁰ Sherwin-White 1978, 340.

²⁷¹ As pointed out by Sherwin-White the gentilicial termination *asclepiadas* attests for an archaic origin of the *koinon* of the Coan doctors, cf. Sherwin-White 1978, 61.

²⁷² The first Coan doctor who was also a priest of Asclepius and patron of the sanctuary is attested in the Imperial period, cf. Sherwin-White 1978, 283.

²⁷³ The excavations reveal that the full scale of the sanctuary, with its three terraces, was part of the plans from the beginning. Cf. Herzog/Schatzmann 1932, Sherwin-White 1978, 342-6; Kanzia 1989 (plan); Höghammar 1993, 49-53 (inscriptions).

²⁷⁴ A visitors striking account of the activities of the sanctuary is found in the fourth mime of Herodas.

²⁷⁵ Victory lists from altogether 13 Asclepieia from *c.*240 - *c.*170 have survived on two *stelai*, cf. Klee 1918, I A, 3.

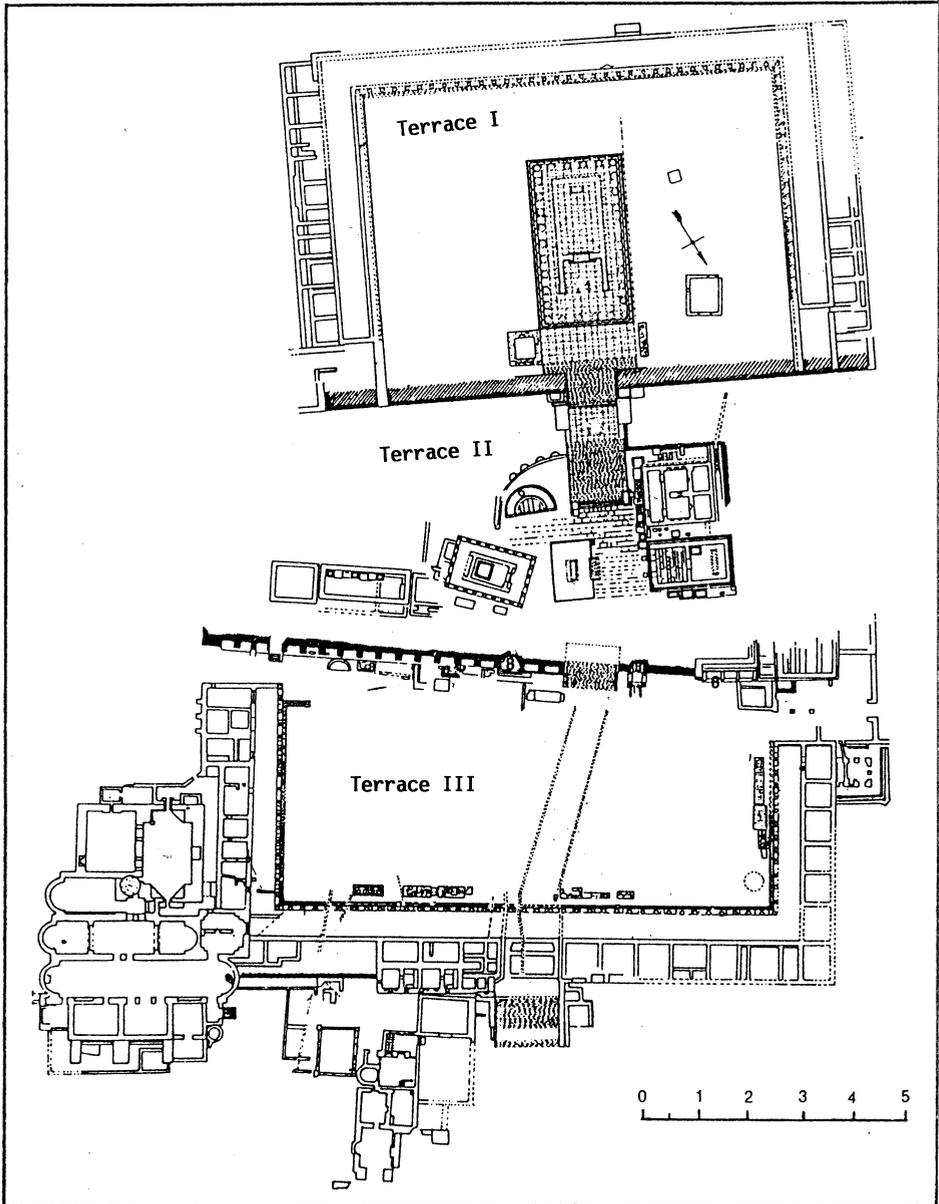


Fig. 6. Plan of the Asclepieion on Cos. Illustration from Ch. Kantzia, "The history of Cos", *Εγκυκλοπαίδεια Παπυρος – Λαρούς – Μπριτανικά 37* (Athens 1989), fig. 2

²⁷⁶ Paton/Hicks 1892, 401, 2-3, 7.

The importance of the cult of Asclepius is not reflected in the choice of motifs on the Coan coinage.²⁷⁷ The only issue within the scope of this study to display Asclepius as motif is the issue XXI of bronze coins. The suggested chronology of the issue presented in this study is significantly earlier compared to the customary dating in previously published catalogues.²⁷⁸ We can now safely consider issue XXI as being introduced during the 170s on the ground of the presently available evidence. The Asclepius head on these large bronze coins is vivid in style and expression, depicting the god much in the manner of the mightier Zeus, with long, wavy hair and full beard, but with a milder facial expression. The depiction is strongly reminiscent of the head observed on the possibly partly overlapping and later continuing issue of silver tetrobols and on a small issue of contemporary drachms.²⁷⁹ When first introduced, the Asclepius motif was fully exploited. The head on the obverse side is matched with a serpent staff, *rhabdos*, on the reverse. The staff was an important attribute of Asclepius, and played a key role in the liturgy of the deity.²⁸⁰ The staff is consequently described as a *rhabdos* in numismatic literature. However, the *rhabdos* is first and foremost associated with the Dionysiac iconography, and is usually shown with a cone in the end. A passage from the Hippocratic works describes Asclepius as equipped with a *rhabdos*.²⁸¹ This is undoubtedly the correct word for describing the staff of Asclepius, which on the coins is always surrounded by a snake. The Asclepius iconography gradually replaced the Heracles motif in the second century, and the coinage succeeding c.170 is dominated by Asclepius, both the head and in full figure, the *rhabdos* and the snake in different positions.

Apollo appears as a motif on a single occasion. The issue XXIV of delicately executed hemidrachms depicts a beautiful Apollo head on the obverse, followed by a *kithara* on the reverse. Apollo was evidently an important deity on Cos, and the cult extends back in time beyond the synoecism in 366. Apollo was worshipped in a variety of ways. Best documented is the cult of Apollo Dalios. The Coan had constantly attended the Delian festival of Apollo and this attests, together with the presence of the month Dalios in the Coan calendar, for the long tradition of this cult on Cos. Apollo Dalios had a cult at

²⁷⁷ See Penn 1994, esp. 25-43 on the use of Asclepius as motif on coinage in general.

²⁷⁸ "88-50" in *BMC Caria*, p. 210-11; "166-88" in *SNG Copenhagen* 680; "166-88" in Macdonald 1899-1905, no. 14 (where the introduction of the Asclepius motif is connected with the historical events of 168-166).

²⁷⁹ See the commentary on issue XXI below. For the very rare drachms with identical obverse and reverse motif as issue XXI, see illustration in *BMC Caria* pl. 32, 9.

²⁸⁰ The staff was important in the ritual of *analepsis* – the renewal of Asclepius' staff. Cf. Sherwin-White 1978, 356.

²⁸¹ "τῆς ῥάβδου ἀνάληψις", cf. Hippocrates, *Epistulae* II, 778.

Halasarna where the ruins of a temple of this deity are preserved. The cult of Apollo Pythios was also of great antiquity on Cos. His epithet is found on an altar plaque dating to the mid-fifth century, and a fourth century *lex sacrae* attests for the tradition of sending *theoriai* to Delphi.²⁸² As mentioned above a joint cult of Apollo Kyparission and Asclepius is attested in another *lex sacrae* now dated to the early third century.²⁸³ Apollo Karneios is mentioned in a late fourth century calendar,²⁸⁴ and a *lex sacrae* from the deme of Phyxia attests for a number of existing local cults of Apollo (Apollo Sminthios, Phyxios and Oromedon). A *temenos* of the healing deity of Apollo Oulios is found in the deme of Isthmus. The religious importance and position of Apollo is not reflected in the coin material. Only the limited issue of hemidrachms of issue XXIV belonging to the first part of the second century depicts this otherwise important deity as obverse motif followed by the apolline attribute of a *kithara* on the reverse.

We can hardly make a certain attribution of the bare male head on the X. issue of small bronze coins. The badly preserved small coins reveal few details of the motif, but it appears to be a head with short, curly hair and short, trimmed beard. No additional attribute is found. The motif is most likely to be considered as Heracles due to the reverse motif that is the Heracleian attribute of a club.²⁸⁵ Although Heracles is commonly depicted wearing the lion's scalp on Cos, bare-headed renderings are not difficult to find.²⁸⁶ However, as long as this interpretation is solely based on plausibility the motif is best described simply as a bare-headed bearded male head.

The crab is considered the *parasemon* of the Coans, largely based upon its presence on a large proportion of the coin issues.²⁸⁷ The motif was introduced on the very first Coan coin issues of the mid-sixth century.²⁸⁸ The crab continued in use now as reverse motif on the beautiful issue of *diskoboloi* of the mid-fifth century.²⁸⁹ It then appears for the first time within a square incuse and border of dots, what was later to become the standard reverse type of the first Coan tetradrachms. It has been customary to consider the crab in connection with the myth of Heracles. As B.V. Head writes in 1897: "*The precise*

²⁸² Herzog 1928, 5 B, 17.

²⁸³ Herzog 1928, 12 (dated to the 4. century).

²⁸⁴ Herzog 1928, 2, 10.

²⁸⁵ On rare occasions both Dionysus, Hermes and Priapus are depicted in a similar manner. However, they are not likely to be considered in connection with the Coan coinage of this period.

²⁸⁶ E.g. in Heraclea ad Latmum (*SNG Copenhagen*, Ionia 785), the Lydian city of Attalea (Lindgren/Kovacs 1985, no 714) and Aegaea in Cilicia (Lindgren/Kovacs 1985, no 1396).

²⁸⁷ On the symbolism of crabs in general, cf. Deonna 1954.

²⁸⁸ Ingvaldsen 1994, 18-21; cf. *BMC Ionia* 29 (1/96 electrum stater); *SNG v.Aulock* 2745 (AR stater); *SNG Copenhagen* 615 (diobol); *IGCH* 1165 (obol).

²⁸⁹ Ingvaldsen 1994, 21-5; Barron 1968.

*signification of the crab as the special emblem of Cos is very doubtful, but that it was a symbol intimately connected with the cult of Herakles seems quite certain from the fact that from the fourth century downwards it is constantly accompanied by the Heraklean Club, [- -].”*²⁹⁰ However, the crab was *not* accompanied by any Heracleian attribute on the sixth and fifth century coinage. True enough the sixth-century coin issues are attributed to Cos solely due to the use of a crab as motif. Archaic coins depicting a crab are present in a few hoards, mainly from the Cyclades, Thera, Egypt and Jerusalem – and do not explicitly connect the crab issues with Cos. Thus, objections towards this attribution can be raised. Concerning the *diskoboloi* the situation is different. The name of the Coans is present throughout the issue together with the crab, but with no association towards Heracleian motifs and/or attributes at all. The explanation for the use of the crab as a Coan motif is therefore not exclusively to be sought after in connection with the myth of the Dorian hero. The only instance a crab is associated with Heracles is not as his ally but as an opponent. In the battle with the Lernaean Hydra, a crab was crushed by Heracles. On this background we can hardly assume that the crab was from the beginning associated with the hero in a favourable way. An explanation of the use of a crab as motif is also difficult to find related to a general religious context. The crab appears as a coin motif for the first time on the sixth-century Coan coinage. Later it is occasionally found on coinages of different mints, mainly in the southern part of Italy.

The distinction between fresh water crabs and marine types is important when discussing the crab as symbol in general. The marine type is often associated with Poseidon and/or symbolizing the sea itself. A crab securely identified as a freshwater type opens up for additional interpretations. This is the case in Agragas, where Head has suggested that the crab is a representation of the homonymous river.²⁹¹ It is difficult to determine if the Coan crab is a marine or freshwater type. The types can be separated mainly on the basis of mouth-shape and the size and shape of the tail – both parts difficult to observe on the coin depictions. Another difficulty is the variation in style of the crab between the issues and different die-cutters. No details of the mouth or tail can be securely identified on the crabs of the sixth-century coinage. On the fourth to the second century coinage large variations in the shape of the mouth are observed, which again prevents us

²⁹⁰ BMC Caria xc.

²⁹¹ Head 1911, 120.

from identifying the crabs as either marine or freshwater crabs.²⁹² This fact is reducing the importance of the theory suggested by Carroccio, who has tried to establish a connection between Heracles and the crab as motif due to the Dorian hero's role as patron of freshwater areas.²⁹³ Clearly, the crab that was introduced as the Coan *parasemon* on coinage of the sixth century can not be safely identified as one of the above mentioned types, and further speculation on the symbolic content of the motif at the time of introduction is therefore impossible on this criteria. Also, considered the minor importance the crab plays in the heroic tales of Heracles we can certainly exclude the possibility that for the Coans the crab displayed alone was automatically and generally associated with Heracles. The several centuries' long combination of Heracleian and crab motifs on the coinage may, of course, have led to a particular Coan conception and/or association between the two motifs.²⁹⁴ It appears, then, from the beginning not to be any connection between Heracles and the crab. The use of the crab in the fourth century onwards must probably be explained as the continuity of a tradition of a familiar motif originally chosen out of the general conception of the island as a community with a strong maritime identity, and as such finding the crab a suitable motif without trace of any explicit religious association. The crabs were present in abundance on Cos as among others the work of Herondas is attesting.²⁹⁵

Only a few additional symbols are recorded on the Coan coinage. The earliest motif is what appears to be a single olive leaf, although it could also be a rude depiction of a grain of barley. The motif is found on one occasion, on the first type of the II. issue.²⁹⁶ This issue of drachms is contemporary with the very first issue of tetradrachms minted on Cos. The large denomination is without exception carrying personal names, and the additional symbol found on the smaller denomination can probably be explained as a replacement of

²⁹² Variations are clearly revealed by comparing the crabs on issue VI with issue XV, both relatively large coins of silver. On the earliest issue the crab's mouth is depicted merely as the end of two wavy lines beneath the eyes of the crab, in contrast to the large, protruding mouth as seen on issue XV. In general the shape of the shield and the smallness of the lowest pair of legs, as observed on the fourth and third century crabs on coins, points towards common marine crab types. I am thankful to MA Nancy Child of the University of Oslo for providing this information.

²⁹³ Carroccio 1996, 29-30 connecting the crab following the Lernaean Hydra to a freshwater type.

²⁹⁴ As observed by Sherwin-White by the example of an early Imperial coin on which Heracles is followed by a crab at his foot, cf. *BMC Caria*, p. 215, no 209, and Sherwin-White 1978, 319. More illustrating are the Alexander-coinage attributed to Cos. The coinage in question carries a crab and, sometimes held by the crab's claws, a club as additional symbols. Martin Price places the coinage in two separate periods of minting, the earliest around 200 and the latest c.170. The choice of additional symbols clearly reveals the strong position of both the crab and Heracleian attributes on Cos, but unfortunately the conception of the combination between the two is still impossible to ascertain in detail. Cf. Price 1991, plate LXIX, nos 2500-01 and 2504-05.

²⁹⁵ Cf. Sherwin-White 1978, 319 n 259, with ref. to Herondas IVth Mime and Crusius' comment on the work.

the name. The second additional symbol recorded, has previously been described as a “bone” or “astragalos”.²⁹⁷ This rare symbol is most probably a fish hook, as attested and described e.g. by Calciati.²⁹⁸ The fish hook appears only on the earliest part of the VI. issue of tetradrachms, an issue where a substantial part of the coins bears an additional symbol. One of the symbols is still un-identified. The shape is oblong, with a slightly thicker mid-section. Two smaller parts with rounded ends are meeting almost at the centre of the object.²⁹⁹ The fourth of these small symbols is the most interesting one. It is commonly described, with a question mark, as a snail. A few objections can be raised against this identification, and a more plausible interpretation can be established. The object in question is characterized by a typical S-shape, sometimes with a line in full length on the side or with a slightly thicker part at one end.³⁰⁰ To my knowledge the resemblance in shape and position to a snail is far from convincing. The typical S-shape and curly position gives a stronger association towards a worm, larva or caterpillar. We also know that Cos was famous for the domestication of a particular type of worm, the silk-worm used in the famous Coan silk production. Aristotle writes of this enterprise on Cos in the *Historia Animalis*.³⁰¹ He tells about a domesticated worm on Cos with horns that differ from usual larvae and it goes through transitional stages, finally ending up as a moth. Furthermore he relates that the threads of the cocoon were unwound, reeled up and then spun and woven. According to Aristotle it was the Coan Pamphile, daughter of Plates, who was the first to weave the silk-thread into fabric. The worm used in the silk-production in China, and by far the most common and important source of silk, was not imported to Europe until 550 AD. At which time eggs were smuggled out of China and brought to the Byzantine court – an event that revealed the “secret” of the Chinese silk-production to the Western world.³⁰² However, silk was produced on Western soil long before the event in 550 AD. People in the eastern Mediterranean, Dalmatia, India and Persia knew of several species of silk worms. The species described by Aristotle has not been identified with certainty.³⁰³ Some

²⁹⁶ II, 1, 1a.

²⁹⁷ E.g. VI, 4a.

²⁹⁸ Calciati 1990, 91 no 10.

²⁹⁹ VI, 13a.

³⁰⁰ VI, 8a and VIII, 1, 4a-f; VII, 8a.

³⁰¹ Aristotle, *Historia Animalis* V 19, 551b).

³⁰² The worm, *Bombyx mori* L., is characterised by a very smooth surface and its light color.

³⁰³ Two types are mentioned in Sherwin-White 1978, 378 n 3 (mainly citing Forbes 1930 and Pfister 1934): *Pachypasa Otus Drury* and *Saturnia Pyri*. The first have been rejected as a possible specie on Cos due to it's rarity. Another possible candidate is mentioned in Kelter 1913 (reprint 1963): *Lasiocampa otus*. This worm is characterised by a hairy surface (illustrated in Kelter) which probably eliminates the possibility of this being the specie depicted on the Coan coinage.

of the silk worm species are characterized by a horizontal line analogous with the line found on some of the additional symbols on the Coan coinage. Also, the S-shape is quite typical of the worm's pattern of movement, and is certainly closer in shape compared to snails in general. The identification and interpretation can hardly be verified, but in the search of plausible explanation the interpretation of the symbol as a silk worm is by far the most appealing. If silk-worms were actually used as a symbol on Coan coins of the mid-fourth century, the date of attested silk-production in Europe is moved back by two or three decades.³⁰⁴

The limited range of motifs on the Coan coinage is only confirming what we already know, that the intention of the motifs on the coinage in general was not to give a representative presentation of the major deities of the city. The considerations and ambitions behind the choice of motifs are unknown. There was apparently a strong disinclination towards changing established motifs. The Coans evidently decided to channel impressive efforts and resources in order to establish what would later become one of the three major sanctuaries in the name of Asclepius. Considered the island's strong reputation as a centre of medicine and a place of healing this comes as no surprise. The extensive nature of the original late fourth century plans of the Asclepieion reveals the very high ambitions of the Coans regarding this sanctuary and the popularity and position of the cult of Asclepius. However, the elevated position of Asclepius does not affect the coinage at all during the first century after the completion of the Asclepieion. Only after the turn of the second century are the motifs and attributes of Asclepius established as coin motifs, and from the beginning only on the bronze coinage. Not until the 170s onwards are the Heracles motifs replaced by an iconography related to the cult of Asclepius. One could try to explain this hesitation towards introducing the Asclepieian motifs with the deity's chthonian character, which is attested by the association with a snake and the rite of incubation, which played a prominent part of the healing ritual of the cult. However, by the mid-fourth century Asclepius was certainly considered among the celestial divinities. The deity's origin as hero can hardly explain his absence on coins since the dominant iconographic depiction throughout the Coan issues was connected to the hero cult of Heracles.

³⁰⁴ It is now generally accepted that the silk-production took place in full on Cos, not only as the result of import of cocoons making the only production related to the unwinding of silk threads and weaving of fabric. For references, cf. Sherwin-White 1978, 379.

Survey of dies

Only the silver issues are included.

Issue:	Coins:	O-dies:	Diecomb.:	Orig. no. O-dies:
I	29	12	20	17 (+/- 2.5)*
II	3	2	3	(not significant)
III	70	8	24	8 (+/- 0.5)
IV	146	5	43	5 (+/- 0.0)
V	8	2	2	2 (+/- 0.5)
VI	107	20	54	22 (+/- 1.0)
VII	47	8	22	9 (+/- 0.5)
VIII	67	13	26	14 (+/- 0.5)
XI	90	11	28	11 (+/- 0.5)
XII	189	33	92	36 (+/- 1.0)
XIII	261	39	118	41 (+/- 1.0)
XIV	143	16	73	16 (+/- 0.5)
XV	18	7	12	10 (+/- 2.0)*
XXIII	28	16	18	30 (+/- 6.0)*
XXIV	20	14	19	37 (+/- 12.0)*
Sum:	1.226	205	553	257

Figures with * have little or no statistical significance due to the limited representativity in the collected material. The calculation has limited interest when the ratio between the number of coins and number of dies falls beneath 3:1, and has no significance when the ratio reaches beneath 2:1.

I have chosen the obverse dies in the calculation of the original number of dies employed for the issues. Compared to the reverse dies, they are less likely to be rejected before they have been fully utilized. The personal names and occasionally initials or additional symbols on the reverse dies will in some instances certainly have caused them to be rejected before they reached their full technical potential.

The value of estimating the original number of dies employed for a coinage by statistical models has been discussed intensively during the last decades. One discussion has concentrated on the variety of statistical methods of calculation which can be used in order to obtain significant values.³⁰⁵ The other discussion, which has reached a much

³⁰⁵ Callataÿ 1995; Callataÿ 1988; Villaronga 1987; Esty 1986; Callataÿ 1984; Carter 1983; Carter 1981. Further references on pure statistical methodology is found in Esty 1986. A further eleven references are

higher temperature, has put a question mark on the relevance of such estimation in general.³⁰⁶ One of the major objections towards such estimations has been the observation that a surprisingly high number of obverse dies of coinages in general appear to be represented by one coin only. This seems to be the case even for coinages where the representativity (i.e. ratio between recorded coins and dies) is satisfied to a high degree.³⁰⁷ The only reason that can explain this general observation is the fact that a large number of dies were quickly dismissed from production. Clearly this observation will cause trouble in statistical calculations, being an unpredictable variable of an unknown size. The latest methods of calculation are aiming at eliminating this source of error. Lately two methods of calculation seem to be more or less accepted among scholars who admit the usefulness of such estimations: The so-called simplified method of Carter and the Esty/Carter method.³⁰⁸

In an article discussing the available methods and the value of these kinds of calculations in general, F. de Callataÿ draws the following conclusion: "*it seems fair to recognize that, when the sample presents a variation superior to three, the use of statistics [to estimate the original number of dies] is only a minor source of trouble*".³⁰⁹ Even among those with a highly critical bias towards the employment of statistical methods of calculating ancient coin production in general this method has gained a certain degree of acceptance.³¹⁰

The simplified method of Carter is employed in the present study. The above-mentioned Esty/Carter method has some advantages in calculations involving a coin versus die ratio below 3:1, but the issues displaying such a low ratio were expelled from the survey above (marked with an asterix). The ratio is generally satisfied for the Coan material, with a peak at 29.2 coins per obverse die in issue IV.³¹¹ I have chosen the simplified Carter-method since it appears to be the method preferred by an increasing

found in Carter 1983, but only two of them, Müller 1979 and Carter/Moore 1980, takes variable die lifetime into account which is now considered necessary in order to create sound methods of calculation.

³⁰⁶ Pro and cons in Callataÿ 1995; Buttrey 1994; Buttrey 1993; Howgego 1992; Callataÿ 1987.

³⁰⁷ Esty/Carter 1991/2, 186; Callataÿ 1988, 7-9; Callataÿ 1987, 88-92

³⁰⁸ Carter 1983 and Esty 1986.

³⁰⁹ Callataÿ 1995, 295.

³¹⁰ Cf. Buttrey 1994, 341: "[the] efforts of Good, Carter and Esty have produced formulae which generate estimates which are statistically sound and genuinely useful".

³¹¹ A ratio of 29.2 is extremely high. Callataÿ claims that the highest ratio found in any Greek coinage is 40.25, cf. Callataÿ 1995, note 36. The typical ratio in the Coan material is between *c.*5 and *c.*9, well above the lower limit for statistical calculation of 3:1.

number of scholars, and a direct comparison of results from different die-studies will benefit from statistical calculation based on a common method.³¹²

W.W. Esty discusses this method in his broad treatment of statistical methods concerning this field of study.³¹³ Even if the true number of dies will never be revealed, we will have established a relationship between the different coinages in a way which makes it easier to make a comparison of the size and volume of different issues and mints beyond the more or less coincidental number of survived coins and dies. The method of Carter is explained elsewhere, and I will only provide the equations here.³¹⁴ The standard numbers given in the equation (here: 1.069 and 0.843) will be subject to change if the ratio of coins versus dies falls between 3:1 and 2:1 (1.124 and 1.016) and below 2:1 (1.214 and 1.197). The standard deviation is rounded off to the closest 0.5 in the survey above.

Equation used for calculating the original number of dies:

$$\text{No. of original dies} = \frac{\text{No. of coins} \times \text{No. of dies}}{1.069 \times \text{No. of coins} - 0.843 \times \text{No. of dies}}$$

Standard deviation:

$$\frac{\text{No. of original dies} \times \sqrt{\text{No. of original dies}}}{\text{No. of coins} - 1}$$

As we can see from the survey above, there appears to be a correspondence between the recorded number of obverse dies and the number of dies we can expect to have been employed for each issue. A small discrepancy is seen in a few issues where the number of expected dies is above the number of recorded dies + the range of deviation: issue VI (20 recorded dies out of an expected 22 dies originally employed), issue XII (33 out of 36 expected dies) and issue XIII (39 out of 41 expected dies). A total of 155 obverse dies are

³¹² E.g. Konuk 1998, 29 n 35 and Tselekas 1996, 23.

³¹³ Esty 1986, 203-4. Esty raises criticism towards Carter's wrong use of standard deviation which may indicate that the confidence intervals presented in this study must be considered with great caution. The numbers in question are not a point in this study, and is rounded off in the table above.

³¹⁴ Carter 1983, 202.

recorded on the issues with a ratio above 3:1 of coins to dies. From the calculation we ought to expect 164 dies employed originally, but a total of 9 dies are theoretically affected by the standard deviation, so we may be very close to the original number of employed dies. No matter what the results are, the figures must be used with great caution. The primary function of statistical die calculation is to establish a generally accepted methodology that creates the possibility of comparing the relative size of coin issues (e.g. the IV issue and XIV issue with 146 and 143 recorded coins – where the latter was evidently a larger issue of longer duration with probably about three times as many dies employed) and between the coinages of other mints.

Commentary on issue I - XXVI

I. ISSUE

The first issue consists of 29 coins of a uniform type. The flans are more or less irregularly shaped, with a small diameter and correspondingly increased thickness. Most of them are carelessly executed, and the obverse and/or reverse motifs are often partly off flan. The die-axis is often irregular, and positions 1, 3, 5, 9 o'clock are recorded. The weight ranges from 13.66 to 15.32 g, and a rather uneven distribution is revealed in the weight table. The peak is at 14.70 g, but altogether eight specimens, almost 1/3 of the total, range between 15.10-15.30 g. We probably deal with tetradrachms on the Rhodian standard in spite of the relatively large variations in weight.³¹⁵

The obverse motif is a bearded Heracles with lion's scalp consistently facing left. The reverse motif is of a crab with a club below. Typical features of the obverse motif are a large nose, large eye and small mouth. The beard is small compared to the design on later issues, and a tendency towards an ornamental treatment of the hair (curls) is prevalent. In spite of pronounced similarities between the obverse dies it is hard to trace the hand of any individual die-cutter on more than one die. A development towards a more naturalistic rendering of facial features is seen on O10 and O11. We also observe changes in the lion's scalp as a foretaste of the design on later issues, chiefly through the enlargement of the snout and cheek of the lion's head and in the stronger emphasis on larger, claw-like and more individualistically shaped locks in mane. However, the last die, O12, shows a strong resemblance to earlier dies of this issue, so the variation in style is probably not of strong significance as to the duration of the issue. The crab on the reverse is relatively small, with an oblong and sometimes almost triangular shield. The legs are rendered in elaborate detail as well as being more stylized (for example as seen when comparing O3 and O13). The development clearly reveals a tendency towards a larger crab, with clear-cut details in claws, legs, eyes and shield. The latest name in the issue (Xanthippos) has both variations represented, as seen on dies R16 and R17. The same die-cutter is probably represented in at least the four last names (R11 (Theokles), R13 (Athanon), R15 (Moschion) and R16 (Xanthippos)). There are large variations in both the shape of letters and the position of the

³¹⁵ See chapter of weight standards above for a weight survey and discussion of weight standards and terminology.

ethnic and personal name. Already the second reverse die presents the position that is to become the standard pattern in later issues, with ethnic above and the personal name below the crab. However, this die shows anomalies too, with the ethnic placed upside down, as well as the last syllable being spelled with an omega instead of the omicron which is commonly used in this period. The general pattern on this issue is either the personal name above the crab and the ethnic below, or the ethnic between the crab and club and the personal name below the club (compare R1 and R3). R14 and R16 show the placing that is to become the standard in later issues, with ethnic above and personal name below the crab. On some dies representing long personal names it is customary to let the name run vertically down the right side of the square incuse. There are no tendencies towards abbreviation of names in spite of this obvious lack of space (cf. R4, R5 and R6 – all probably by the same die-cutter). The letter forms vary in size, but are relatively uniform in style. The old form of ksi is used with a vertical bar crossing the three horizontal bars in full length.³¹⁶ The reverse motif is framed by a square border of dots following the shape of the square incuse found on this issue.

A total of 9 names are represented in I. issue. Only two of them are represented in additional issues: Moschion in issues VIII, XIV and XVIII, and Xanthippos in VI, XIV, XVI, XVII and XX. These two names are commonly found on Cos in later periods, both from the third and second century. Only two names are recorded in additional sources in a fourth century context – Phileonidas and Xenodikos. Unfortunately they are not more precisely dated than “4. century” which excludes the possibility of a connection between the coinage and additional material.

The distribution of names on obverse dies is as follows:

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	O12
Persias (3)	•	•	•									
Phileonidas (3)			•	•	•							
Lysikos (2)					•							
Xenodikos (2)					•							
Theokles (2)						•	•					
Athanion (2)								•	•	•		
Moschion (1)											•	
Xanthippos (3)										•	•	•

³¹⁶ This provides us with an important distinction between issue I and VI, with the same type and name represented. In the first specimens in issue VI, also representing Xanthippos, the new type of ksi, without vertical bar, is used. Cf. R1 and R2 in issue VI.

20 die-combinations are found in I. issue. The estimation of the original number of obverse dies has little significance here due to the low ratio between the numbers of dies and coins (cf. the introductory table above). The calculation gives a possible range between 14 and 21 original dies, as compared to the 12 recorded in this study. Nine names and the 12 obverse dies relatively uniform in style and fabric indicate that the first Coan issue was of limited size and duration.

Of a total of 29 recorded coins, 21 or 22 come from the very important 'Hecatomnus-hoard' - hoard 8 in my list. Two additional coins have provenance from hoards, one of Persias (hoard 9) and one of Moschion (hoard 10). Hoard 9 was discovered before 1856 in the western part of Asia Minor – possibly near Halicarnassus in 1853. The hoard yielded an unknown number of coins of which only four have been recorded.³¹⁷ The four identified coins are two tetrobols of Hecatomnus, one tetradrachm of Samos and one tetradrachm of Cos.³¹⁸ The tetrobols of Hecatomnus can be dated c.390 – 380.³¹⁹ The Samian tetradrachm bears the name of *Epios* and is dated by Barron to c.380. The Coan tetradrachm bears the name of *Persias*, the opening name of issue I.

Hoard 10 is less useful due to a far wider time span. The hoard was unearthed in the western part of Asia Minor before 1930.³²⁰ Altogether 80 coins from this hoard are now in the archaeological museum in Istanbul, but it is not known if this constitutes the entirety of the hoard. Civic issues of Ephesus make up the majority of the hoard with 67 specimens, all belonging to the so-called 'straight wing' type. The rest is formed by Mausolus (4)³²¹, Cnidus (6), Colophon (1), Samos (1) and Cos (1). The Samian tetradrachm bears the name of *Moriades* and is associated with the period 370-65.³²² The Coan tetradrachm represents

³¹⁷ Waddington 1856, 61. The coins mentioned by Waddington were later acquired by Cabinet des Médailles, Paris. The hoard is also discussed in Gardner 1882, 256, Barron 1966, 117 and Konuk 1998, 46. Konuk suggests that hoard 9 (*IGCH* 1207), is identical with hoard *IGCH* 1205, the so-called "Gherelli-ward". The latter hoard was discovered in 1853 near Bodrum (anc. Halicarnassus) and supposedly contained civic coins of Miletus and satrapal coins of Hecatomnus minted at the same place. Waddington acquired four coins from what appears to be this hoard, coins which were later considered an individual hoard. See *IGCH* 1205; Newton 1865, 226; Regling 1917, 255, 257; Konuk 1998, 45.

³¹⁸ Konuk 1998, nos. 9b and 74a; Barron 1966, no 145; I,3a.

³¹⁹ Konuk 1998, 36. The two coins belong to the first and third of four classes of Hecatomnus issues of Milesian weight. Konuk puts the introduction of the fourth class to c.379 presupposing that the third class ended c.380.

³²⁰ The *IGCH* gives the find spot to "near Datca" (anc. Cnidus) without motivating this location. Konuk gives two possible explanations for the connection between the hoard name and find spot: 'Pademlik' can be explained as the village of Bademler, in the province of Izmir, or simply refers to the Turkish word for almond tree grove, Bademlik (as a local name of the find spot), see Konuk 1998, 108 and Ashton 1999, 78. The hoard was first published in Schlumberger 1953, 8, no 9 and Olcay 1966, 76 (ref. to the Coan coin).

³²¹ Konuk 1998, nos. 83e, 139b, 181a, 214a. Konuk suggests a closing date c.350.

³²² Barron 1966, 117.

the name *Moschion* and is without doubt included in the first issues of tetradrachms issued on Cos, although it is one of the latest names in use.³²³

The third, and by far the most important hoard is the so-called ‘Hecatomnus hoard’, a hoard of crucial importance for the chronology of the Ionian and Carian coinages in the late fifth and early fourth centuries. The hoard is still under reconstruction and is so far only partially published.³²⁴ It is said to have been discovered in 1977 near the town of Söke between Miletus and Ephesus. The entire hoard was dispersed on the market soon after its discovery and without being fully recorded. Single coins were introduced on the European market in February 1978. Preliminary, more or less complete and detailed lists of the hoard were made by collectors and dealers shortly after the time of discovery. The late Dr. Martin Price of the British Museum assembled this information in order to make the summary entries published in the *CH* 5 and 8.³²⁵ The effort to bring the reconstruction further is based on the following two circumstances: the occurrence of previously extremely rare issues, but numerous in the hoard, without provenance on the auction market from 1978 onwards, and, secondly, coins from issues known to have been represented in the hoard, with a particularly rough and flaky surface typical of coins with undisputable provenance from the hoard. Reconstructions of this kind will always include elements of doubt, and a few intrusive coins have already been excluded from the hoard. Analysis based on single specimens from the hoard must therefore be executed with care. As far as we can tell today, a reconstruction summary will be like this:

<i>Thasus</i>	drachms	(11)
<i>Ephesus</i>	tetradr./didr./hemidr.	(46)
	ΣΥΝ double sigloi	(5)
<i>Colophon</i>	tetradrachm	(1)
<i>Chius</i>	tetradr./didr.	(2)
<i>Samos</i>	tetradr./hemidr.	(30)
<i>Halicarnassus</i>	drachms	(4)
<i>Idyma</i>	drachms	(1+)
<i>Caunus</i>	staters/tetrobols	(32)

³²³ *Moschion* shares obverse die with *Athanion* and *Xanthippos*. These three persons are the latest represented on the earliest tetradrachm issue of Cos, in contrast to *Persias* who was represented in the previously mentioned hoard. On this background it would be tempting to associate the introduction of the Coan series with the reign of Hecatomnus, and the closing of the series with Mausolus, but this assumption is impossible when we consider the composition of the ‘Hecatomnus-hoard’; see below.

³²⁴ *CH* 5, 17; *CH* 8, 96; Konuk 1998, 55-59. A joint publication for *CH* 9 is under preparation by R. Ashton, K. Konuk and A. Meadows. I have received a rough draft of their manuscript (ultimo 1998) and a preliminary listing of the Coan part of the hoard (primo 2000). I have also gained access to the files of the Swiss dealer which distributed the majority of the hoard on the auction market. I have made several additions and corrections based on these files, the received listings and my own examination of the Coan material.

³²⁵ *CH* 5, 17; *CH* 8, 96.

<i>Cnidus</i>	tetradr./drachms	(29)
	ΣYN double sigloi	(4)
<i>Cos</i>	tetradrachms	(23?)
	drachm	(1)
<i>Rhodes</i>	tetradr./hemidr.	(107+)
	ΣYN double sigloi	(8+)
<i>Hecatomnus</i>	tetradrachms	(66)

Almost half of the total number of 369+ coins is from Rhodes and Hecatomnus. Another and more surprising element is the relatively high number of the otherwise rare alliance coinage of Ephesus, Cnidus and Rhodes (the so-called 'ΣYN-coinage', a joint coinage issued by seven cities which formed a pro-Spartan alliance after Lysander's defeat of the Athenians). The accepted date of the initiation of this peculiar coin type is now considered to be *c.*405/4.³²⁶ The identified specimens all show significant signs of wear suggesting a long period of circulation prior to concealment. The majority of the Ephesian coins is of the so-called 'curved wing' type.³²⁷ The staters of Caunus on Aeginetan standard have previously been dated to *c.*430-410, although Konuk later modifies the staters in the Hecatomnus hoard to his 'period 3', i.e. *c.*430-390.³²⁸ The coins of Idyma are traditionally dated to the late fifth century, as are the didrachms of Ephesus with the four-part incuse square on the reverse. The huge number of Rhodian hemidrachms is now dated *c.*400.³²⁹ The strongest indicator of a date of deposit is provided by the absence of coins of Mausolus. Considering the dominance of Hecatomnus coins in the hoard, 66 of the total of approximately 369 and by far the single most numerous type represented, we would have to expect Mausolean coins too if they were in circulation in the period prior of deposit. This leads us towards a *t.p.q.* of *c.* 377/6 (i.e. the first regnal year of Mausolus). Furthermore, Konuk points to the fact that Milesian weight issues of Hecatomnus (the 'lion-head' type) does not form part of the hoard. This absence is used as an argument for an even earlier closing date since the Milesian weight coins of Hecatomnus is continued under his successor Mausolus during the first years after his initiation.³³⁰ Konuk does unfortunately not draw any conclusions based on this observation. If one is to take the consequences of his suggestions, one must consider a closing date no later than *c.*385-380.

³²⁶ Karwiese 1980.

³²⁷ Koray Konuk's preliminary listings include only one tetradrachm and one didrachm of the 'straight wing' type.

³²⁸ Konuk 1998a.

³²⁹ Ashton 1993, 13, but see also Bérend 1972.

³³⁰ Obviously the hoard is not of a type which would exclude coins of non-Rhodian weight, as other weight standards are present.

In the forthcoming publication of this hoard (in *CH IX*) the authors presents a burial date of *c.*390-385. The reconstruction of the Coan content in the Hecatommus hoard is based on the notes of the late Martin Price. Ashton has additional information on six tetradrachms, and a collector has provided him with a listing of an additional 12 tetradrachms and one drachm from the hoard. This information was collected from the same dealer that gave Price his information 15 years earlier. Some mismatch between the listing of Price and that of the private collector is observed. Price himself believed that the hoard contained a total of 23 Coan tetradrachms. But the listing is still subject to discussion, and an analysis based on the occurrence of single coins and/or names should be executed with caution. The following list displays the most probable Coan content in the hoard:

tetradrachms:

1. ΠΕΡΣΙΑΣ	15.50	Private coll.
2. ΦΙΛΕΩΝΙΔΑΣ	14.77	Hirsch 191 (1996), 498
3. “	14.74	-
4. “	-	-
5. “	-	-
6. “	14.79	Hirsch 173 (1992), 411
7. ΛΥΣΙΧΟΣ	14.34	Lanz 16 (1979), 161 ³³¹
8. “	14.76	Private coll.
9. ΞΕΝΟΔΙΚΟΣ	14.97	-
10. “	-	- ³³²
11. ΘΕΟΚΛΗΣ	13.66	Oslo. Ingvaldsen, <i>thesis</i> , I. issue, 19
12. “	-	Only ΘΕ visible
13. ΑΘΑΝΙΩΝ	-	-
14. “	-	-
15. “	14.82	Doubtful reading of personal name
16. ΞΑΝΘΙΠΠΙΟΣ	14.53	-
17. “	-	-
18. [obliterated]	-	-
19. [obliterated]	-	-
20. [obliterated]	-	-
21. [obliterated]	-	-

drachm:

22. -	3.48	Private Coll. ³³³
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³³¹ Misread by Ashton as Lykinos, a name occurring in a significantly later issues of tetradrachms.

³³² Mentioned in the previous listings as Xenodokos, probably due to a misreading by Price.

³³³ The drachm in this hoard will be treated in detail under commentaries on the II. issue.

It appears that all the known names in issue I are represented in the Hecatommus hoard, except *Moschion* which is known from the unique specimen in hoard 10 (*IGCH* 1218) from western Asia Minor mentioned above. As far as I can tell no additional obverse dies have been recorded outside the Hecatommus-hoard. This leads us to the conclusion that the absolute majority, if not all, of issue I was in circulation at the time when the hoard was deposited. As far as the evidence can tell, a time of deposit around 385 must be considered the most probable, and thus we are provided with a very important *t.p.q.* for the first tetradrachms in the name of the Coans.

II. ISSUE

Only three coins of the issue II are recorded, and they represent two slightly different types. The flans are small in diameter and relatively thick. As in the I. issue the employed reverse dies are square and have created a deep square incuse. It is difficult to draw general conclusions about the II issue, but it seems as if the die-axis can be irregular, with the two known positions being 1 and 6 o'clock respectively. The three recorded weights are 3.48, 3.46 and 3.36 g, corresponding well with drachms of the Chian standard.

The obverse motif is identical with the previous issue, a bearded Heracles, but now facing right. The same iconographical features are found, like a small lion's scalp, hardly visible mane and large facial features. The treatment of the locks in mane and eye, eyebrow and forehead on O1 shows strong similarities to O8 in the I. issue, making it almost certain that the same die-cutter has been working with both issues. The reverse motif separates the two types in this issue: the first shows a crab with a club and ethnic beneath. Flanking the club is an additional symbol, probably an olive leaf. The second type has the same motif, except for the ethnic which is now moved above the crab. An additional element is introduced: the square dotted border, known from the I. issue as well as later issues. The ethnic is abbreviated ΚΩΙ, which is also the case on the earliest type of drachms in the VIII issue. No personal names are represented on these early drachms.

On the basis of three coins, two obverses and three reverse dies it is impossible to draw any conclusions concerning duration and volume for this issue. The limited number of coins known makes it plausible that this issue is limited, minted in small numbers and on a single occasion of short duration.

Fortunately we find issue II represented in one hoard, the previously mentioned ‘Hecatomnus-hoard’ (hoard 8). The hoard is described in detail in the commentary on the I. issue, and provides a *t.p.q.* of *c.*385 for both the issues I and II. The identification of the same die-cutter in both issues, as well as the occurrence in the same hoard, establishes a strong connection between these issues. The die-cutter was involved on the last part of the I. issue (die 8 out of twelve), and the II. issue can therefore be dated according to the close of the I. issue, *c.*390-385.

III. ISSUE

70 specimens of the issue III tetradrachms are recorded. They are divided into two types with only nine coins of the first type. The diameter is slightly larger and the flans significantly thinner compared to the tetradrachms of the I. issue. The size and shape of the flans are more regular in issue III. A regular 12 o’clock position die-axis appears to be a common feature, with only two exceptions.³³⁴ However, the die-axis is known for only 12 of the total of 70 coins of this issue.³³⁵ The weights vary from 13.64 to 15.35 g. The weight table shows a fairly even distribution on the interval between 14.60 to 15.29 g, with a peak at 15.15-15.19 g. About 60% are in the interval between 14.85 and 15.29 g, and corresponds therefore without doubt with the Rhodian standard.³³⁶

The obverse motif is, as in the previous issue of tetradrachms, a bearded Heracles, but now facing both left and right. On the reverse a new motif is introduced, a draped female head facing left. The female head is commonly interpreted as Demeter. The motif is repeated in issues IV and V as well as on bronze coins of issue XVII, but is then promoted to the obverse side. The two types of issue III are separated both stylistically and by the use of abbreviated personal names on type 1. Only three obverse and three reverse dies were employed for the first type. The limited number of dies makes it difficult to distinguish between stylistically significant features and peculiarities caused by the individual die-cutter(s). A single die-cutter has been identified on the obverse dies of type 1. The facial

³³⁴ Coins 13a and 20e with die-axis 2 and 11 respectively (20e is very worn and difficult to read with certainty).

³³⁵ The fixation of a regular die-axis was introduced by issue III and throughout issue VIII. The chronology and development are discussed in Part 2 under “Minting techniques [etc]”.

³³⁶ The “Rhodian standard” is used on the slightly reduced Chian standard (from *c.*15.60 to *c.*15.20 g) which dominated the Carian coast around the mid-fourth century. This standard was occasionally reduced for one or

features of Heracles, with a heavy bone structure in the forehead, the large, lumpy nose, treatment of the wavy locks in the mane and, first and foremost, the ornamental treatment of Heracles' ear make for a certain identification. Two die-cutters have produced the reverse dies of type 1. R2 and R3 come from the same hand. R1 with a large, staring eye with clearly marked pupil, sharp, straight profile and stylized and flat folds in the drapery is clearly made by a different person. R2 and R3 have smaller eye, narrow and sharp folds in the drapery and the small, horizontal hair locks above the ear. The identification of die-cutters is more difficult in type 2. O4, O5 and O7 are probably produced by the same person. The straight nose, claw-like locks in the beard and in the mane show strong similarities even though the innermost row of locks of the mane has been enlarged to a full third row on die O7. O5 stands out with the small lion's scalp, smaller beard and few locks in the mane. O8 most certainly comes from a different hand. The eye has a peculiar stiff expression, the locks in the beard are stylized and almost horizontal, and the locks of the mane are stiff and lifeless. The large eye with a clearly marked pupil shows resemblance to the eye of R1 and R3 of type 1, and it is tempting to ascribe these two reverse dies together with O8 to the same die-cutter. The 12 reverse dies in type 2 show large variations in style. R4 (of Athamas) and R8 (of Philodamas) are probably by the same hand, as are R6 and R10 (Athamas and Philodamas). R11, R12 and R15 (all of Biton) show strong similarities, as do R13 and R14 (both of Biton). Thus it seems that approximately nine different die-cutters have produced the 15 reverse dies of issue III. What separates the type 1 and type 2 stylistically can best be illustrated by a comparison between R1 (type 1) and R8 (type 2). The stiff and stylized facial features, combined with a flat and lifeless drapery of R1 are curiously different from the naturalistic rendering of R8. The delicately shaped face with beautifully executed eye and mouth, in combination with a drapery falling naturally down in realistic folds from the crown of head, stands out in strong contrast to R1 and the other two reverse dies of type 1. It is a possibility that O3 of the didrachms of issue IV was also used for the tetradrachms. The observation is published, but since I have not been able to identify the coin in question myself, and since some contradictions are observed in the publication of this die-combination, I have chosen not to include it in my study. The occurrence of identical obverse dies in both tetradrachm and didrachm-issues is not

several denominations in the different *poleis* including Cos (initiated by issue XI, XII and XIII). A survey of weight standards on Cos is presented in Part 2, chapter on "Weights".

unlikely, so the supposed die-identification can be plausible enough.³³⁷ The ethnic is spelled with an omicron in the last syllable, and a consistent use of letter types is observed. However, the letters are often seen in different size, e.g. by comparing R6 and R12. The dies of Biton are also found with the name in retrograde, and the letters are in general more uneven in size and position compared to the other reverses.

Only five names are represented in issue III, and two of them only by initials. HP and AΓH have several possible interpretations, and efforts towards a particular identification would only serve as speculations. Type 2 represents Athamas, Philodamos and Biton. HP, AΓH, Philodamos and Biton are also found in the corresponding didrachms of issue IV. Athamas and Philodamos are only known from the coin material, but Biton occurs in an inscription as contributor to epidosis c.200 – which is far too late to have any significance for Biton in this issue.

In spite of the large number of recorded coins of issue III, only eight obverse and 15 reverse dies have been identified. They can be found in a total of 24 die-combinations. A statistical calculation of the original number of obverse dies employed for this issue indicate that all dies have been recorded (with less than 50% possibility for an additional die). The combination of obverse dies and personal names is as follows:

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8
HP		•	•					
AΓH			•					
Athamas				•	•	•	•	
Philodamos					•	•	•	
Biton						•	•	•

The survey clearly reveals that the minting activity reached a peak during type 2, with Athamas, Philodamos and Biton sharing two obverse dies. The sequence of personal names is satisfactorily established by the development of die flaws. The main impression is that issue III, even though it represents two different types, has been issued quite intensively during a short period of time.

³³⁷ Cf. Hurter 1998, 151 and note 25. The tetradrachm in question is supposed to have the "magistrate's" name Athamas, but the plate referred to by Hurter (pl. 32, 27) clearly shows a coin of HP, similar to R3. The obverse on this plate caption is undoubtedly identical to O3 of the IV. issue in my catalogue, but a confirmation of the existence of this tetradrachm (of HP, not Athamas) must come before it can be included among the Coan issues. Theoretically this identification, which from the illustration is absolutely certain, can be due to a mix-up of plates or photographs in the hoard files.

Issue III appears in one hoard only. The spectacular “Pixodarus-hoard” (hoard 12) was unearthed in 1978 in or nearby Halicarnassus (Bodrum).³³⁸ The hoard consisted of c. 2000 coins, mostly tetradrachms and some didrachms, of Rhodian standard. As many as 700 coins can be attributed to Mausolus, Hidrieus and Pixodarus, and c. 600 from Ephesus. The earliest recorded coins are two didrachms of Ephesus from c. 410, and the latest are didrachms of Pixodarus. The Pixodarus coins provide a valuable *t.p.q.* of the hoard. As Konuk’s study of the coinage of the Hecatomnids has shown, only six out of the total of 63 obverse dies in the series of Pixodarus’ didrachms are represented in this hoard. This leads Konuk to conclude that “the Pixodarus hoard 1978 was deposited at the very beginning of Pixodarus’ reign, most probably during his first or second year (341/0)”. The hoard contained 35 issue III tetradrachms, together with 44 issue IV didrachms and 42 tetradrachms of issue VI. All names from the issues III and IV are represented in the hoard, but only nine out of 18 names from the succeeding issue VI. The coins of the different issues show a remarkably uniform degree of wear.³³⁹ The Pixodarus-hoard contains only tetradrachms and didrachms with little or no sign of wear, and together with a relatively long time span, this encourage an interpretation of the hoard as a saving hoard accumulated over time. The size of the hoard has led Konuk to interpret it as a public saving hoard. The total sum of approximately a talent and a sixth is considerable, but in my opinion not necessarily so extraordinary that we can exclude the possibility that the hoard is private savings.

Dating of issue III is problematic in terms of determining the relative chronology between the issue III and issue VI. The issues with draped female head (III, IV and V) are traditionally dated after the large series of tetradrachms with bearded Heracles and crab (issue VI). Now, this study has separated the previously considered homogenous group of Heracles/crab tetradrachms in two different issues, with a considerable chronological gap in between (issues I and VI). The presence of III, IV and VI issue coins in the Pixodarus-hoard is of little help. The uniform degree of wear makes it impossible to draw conclusions

³³⁸ I was informed that the find spot supposedly was “two villages to the west of Bodrum”. A more accurate description has been provided by Konuk 1998, 101: “near the ancient theatre of Halikarnassos”. My first documentation of the Coan content of the hoard was made by recording lists and photographs I was kindly given access to at Leu Numismatik AG. Furthermore A. Meadows generously shared with me a preliminary list of coins related to this hoard. The die-studies, identification of the single specimens and relative chronology are based on my own documentation and studies. The hoard is to be published in the forthcoming *CH* 9. A general survey of the hoard is presented in Hurter 1998 and in more detail in Konuk 1998, 100-5, 168-9.

³³⁹ A uniform degree of wear is also observed on the Hecatomnid content of the hoard, and thus the coins of Mausolus, Hidrieus and Pixodarus show almost identical sign of wear, cf. Konuk 1998, 103.

as to the sequence of the issues III and VI from the Pixodarus-hoard alone. However, issue VI is present in later hoards, which is not the case with the III and IV issue.³⁴⁰ As far as the hoard evidence is concerned it appears that the issue VI (with corresponding didrachms and drachms) continues at least into the 330's. The Pixodarus-hoard clearly shows that all names in the issues III and IV had been active well in advance of 341/0. As a consequence of this issue III tetradrachms must precede the issue VI tetradrachms. My impression is that issue III was minted in a very short period approximately two decades or so before the burial date of the Pixodarus-hoard. This conclusion is further strengthened by the fact that two of the three names represented in issue III are unknown from other sources on Cos. This is also the case with half of the names in issue I, but only 7 out of 18 names in issue VI. The number of inscriptions increases substantially towards c.300 (but will not reach its peak until c.220-200), and the higher correlation between the written sources and the issue VI further indicates that this issue succeed issue III. However, the number of names in issue III is certainly too low to make up conclusive evidence. Evidently the complete issue III and at least parts of issue VI belong to the period c.360s-340.³⁴¹

IV. ISSUE

Issue IV didrachms are strongly linked to the previous issue. The didrachms are also divided into two types. Of a total of 146 recorded coins, 70 are of type 1 and 76 of type 2. The distribution of types is thus more even compared to the issue III in which the second type strongly outnumbers the first. The flans are of regular production, showing small variations in size, diameter and/or thickness. The die-axis appears to be centred on a 12 o'clock position, with small variations towards 11 and 1 respectively. Exceptions are no. 14e (10) and 37b (6). There is no information on die-axis for a substantial number of coins. The weight variation is from 5.99 to 7.04 g. The weight table reveals a cluster around the interval from 6.60 to 7.09 g (85 out of a total of 118 recorded weights) with peaks at 6.70 g and 6.90-6.99 g. The weight apparently corresponds with didrachms compared with the Rhodian weight tetradrachms of issue III.

³⁴⁰ See commentaries on issue VI and the conclusion below. The burial dates are c.340 (hoard 13), c.335 (hoard 7) and 323 (hoard 18). The didrachms (issue VII) and drachms (issue VIII) partly corresponding with issue VI, also appear in later hoards (hoard 14, 15 and probably 16).

³⁴¹ The interpretation of the motif on issue III tetradrachms as Heracles/Mausolus and Demeter/Artemisia is discussed in this chapter above under "Motifs and style".

The obverse and reverse motifs are identical with the issue III - a bearded Heracles on the obverse and a draped female head on the reverse. In addition the distribution of types is the same as in the previous issue, with the identical use of initials on type 1 and full-length names on type 2. The only anomaly seems to be the occurrence of initial on the *left* side of the draped female head as seen on R1. Also the stylistic differences that separate the types are identical to what we find on the tetradrachms. Only five obverse dies were employed for issue IV. Identical die-cutters have evidently been working on both issues III and IV. O1 and O2 are made by the same hands that produced O1-O3 in issue III. O3, O4 and O5 were cut by the same individual that made O5 (and probably O4 and O7) in the previous issue. An identical pattern appears on the reverses: R1, R2 and R4 on issue IV are by the same die-cutter as III issue R2 and R3; R3, R5, R6, R7, R8; and issue IV R10 (and possibly R11 and R12) by the same die-cutter as issue III R1; issue IV R14 by the same as issue III R8; issue IV R16 and R27 by the same as issue III R13; issue IV R18 by the same as issue III R11. It seems like few, if any, new die-cutters were employed in order to produce the necessary dies for issue IV. On the latest specimens the name of Biton appears retrograde, which was also the case on issue III.

Six names and initials are represented in issue IV. The initials Φ I/ Φ and MA do not appear in the previous issue. Φ I can be interpreted as Philodamos who is found later on the didrachms and also on the tetradrachms. This initial is also found on issue V drachms.

Only five obverse dies have been identified on the 146 coins, and this was also the original number of dies if one is to believe the calculation based on statistics. The number of reverse dies is significantly higher: 28. The ratio between obverse and reverse dies, reaching almost 1:6, is unusual. The minting activity during at least the five first personal names must have been limited since three out of five obverse dies are employed by the latest person (Biton). The three persons behind the initials Φ I, MA and Λ GH share two obverse dies only. HP has only 1 reverse die, Φ I has 3, MA and Λ GH have 4 each, Philodamos has 1 and Biton has the surprisingly high number of 15 reverse dies. The combination of obverse dies and personal names/initials is as follows:

Personal name:	O1	O2	O3	O4	O5
HP	•				
ΦΙ/ΙΦ	•	•			
MA	•	•			
ΑΓΗ	•	•			
Philo[damos			•		
Biton			•	•	•

The survey reveals that the minting activity was at a maximum during the period when Biton was represented on the coinage considered the three obverse and 15 reverse dies used on the coinage in his name.

Issue IV appears in the same hoard as the tetradrachms of issue III (the Pixodarus-hoard, hoard 12). A total of 44 didrachms from this hoard is recorded. All six initials and names are represented in the hoard. The only dies missing from the hoard are R6, R19, R22, R23 and R27. The comments on hoard evidence and chronology of issue III must also apply to issue IV.

V. ISSUE

Issue V can almost be considered an appendix to the numerous tetradrachms of issue III and didrachms of issue IV. Only the parallel to type 1 in the previous issues is represented in issue V. The flans of the drachms are identical in shape and thickness to what we have seen on issues III and IV. The die-axis is a regular 12 o'clock position, with one exception (V, 1c: 1 o'clock). Weights from 3.22 to 3.60 g are recorded, and the table of weights shows that one half of the coins are in the interval between 3.25 and 3.34 g. The limited number of coins forces us to be cautious when we consider these figures, but we are most probably dealing with drachms that correspond in weight with the didrachms of the previous issue.

Issue V carry motifs and design identical to the preceding two issues: A bearded Heracles on the obverse and a draped female head on the reverse. Heracles is facing right, and the draped head is facing left on the drachms. The same exceptional positioning of the initial observed on issue IV is also seen on the drachms: R1 has the initial Iph positioned on the left side of the draped head, just in front of the neck. Only two obverse and two

reverse dies are recorded for the V. issue. The similarities between them are such that we must assume with certainty that the same individual produced all dies employed for the drachms. This die-cutter is also strongly represented on issues III and IV, and the following dies are most probably products of the same person: V issue O1 and O2; IV issue O1 and O2; III issue O1, O2 and O3, and for the reverses: V issue R1 and R2; IV issue R1, R2 and R4; III issue R2 and R3. The shape of letters and the form of the ethnic are similar to the previous issue and will not be repeated here.

Only the initials IΦ and HP are recorded on the drachms. These are the two earliest found on the didrachms, and IΦ is missing on the tetradrachms.

As mentioned above, only four dies, two obverses and two reverses, are recorded for the V. issue. No die-links and only two die-combinations are identified. The limited number of coins and dies of this issue makes statistical calculations worthless. Anyhow, a calculation of the original number of obverse dies indicates that the drachms were originally produced with the two recorded obverse dies only (with a small deviation of +/- less than 0.5). The uneven distribution of coins on each of the two pairs of dies (O1/R1: 7 coins; O2/R2: 1 coin) clearly confirms the problem of representativity in small-numbered issues. Additional specimens may provide us with new dies and/or die combinations.

The chronology of the V. issue depends heavily on the discussion of the Pixodarus-hoard (hoard 12) treated above for issues III and IV. The hoard contained only tetradrachms and didrachms, and issue V is therefore expected to be absent in this hoard. However, issue V is represented in another, slightly later hoard. A pot hoard was discovered at the eve of the 19th century in the village of Pityus on Chius. Among the 50 silver coins and 175 bronzes, one issue V drachm with the initial Iph (V, 1a) and one issue VI tetradrachm with the name Dion (VI, 15a) was found. As expected most of the coins were Chian (altogether 149 bronzes), but also Mausolus and Pixodarus coins were present. The two Pixodarus drachms in the hoard were in fresh condition, and since they are not of the earliest types of Pixodarus they provide us with a *t.p.q.* around 335 for the hoard. The Coan drachm appears to be more worn than the tetradrachm which is in very fresh condition. To compare the degree of wear on small and large denominations is difficult, but it appears as if the issue VI tetradrachm had been circulating for a shorter period of time when the hoard was concealed compared to the V. issue drachm. The identification of the identical die-cutter in issues III, IV and V, and the pattern seen in the shared obverse dies in issue IV, is strongly indicating that the tetradrachms, didrachms and drachms with a draped female head are closely connected and were produced in a short period of time.

Issue V is evidently contemporary with the first coins of issues III and IV, but the available evidence suggests that the drachms were produced in very limited numbers and only in the initiating phase of the draped female head-coinage at large.

VI. ISSUE

Issue VI is the first, large issue of tetradrachms on Cos. Altogether 107 coins are recorded. A significant development of style (and partly fabric) can be observed within issue VI. The earliest part of these tetradrachms carries an additional symbol which also appears on issues VII and VIII. No attempts have been made to classify issue VI into different types. The reason for this is that coins both with and without additional symbol appear with the same name (Dion) and on dies produced by the same die-cutter. A classification of types based on stylistic criteria alone can be hazardous, since the variation between contemporary die-cutters can be just as big as stylistic differences caused by chronological development. Furthermore, the first part of the issue is characterized by an unusual variation in style. The flans are of regular size, thickness and production, and no significant changes are observed when we compare them with tetradrachms of issue III. The die-axis is mostly regular (12 or 6 o'clock position), but with some exceptions (1a, 2a, 9a, 17a, 29a). The lowest weight recorded is 13.76 and the highest 15.35 g. The weight table shows a concentration in the interval between 14.70 and 15.29 g, with a peak at 15.15 g. 74 out of 100 recorded weights are between 14.80-15.24 g. The weight standard appears to be identical with the tetradrachms of issue III.

The obverse motif is, again, a bearded Heracles facing left (facing right on O7 and O9). The reverse motif continues the tradition from the I. issue, with a crab and a club beneath the crab. The square border of dots is a dominating feature on all reverse dies, but a clearly defined square incuse is only present on the first few reverse dies. The ethnic is without exception placed above, and the personal name beneath the crab. The variation in the position of the inscriptions as observed on the I. issue is no longer present. The first part of issue VI tends to be more varied in style, especially the coins in the name of Dion. The appearance of an additional symbol is another unusual feature on the earliest part of the issue. The reverse die of Philiskos (R3) has a fish hook as additional symbol. The identical symbol is found again on the first reverse die of Lykon, but the following dies all

have a silk worm as motif.³⁴² An identical additional symbol (the silk worm) is repeated on issues VII and VIII, and this excludes the possibility of attributing the earliest part of issue VI to the preceding issue I (see commentaries on letter types and chronology below). The first four obverse dies (on the coins of Xanthippos, Philiskos and Lykon) are almost identical, and probably the product of the same die-cutter. The same person also produced the later dies on the coins of Dion, both with and without the additional symbol on the reverse (O8, O10). Furthermore, there is strong resemblance on the obverse dies of Amphitimos, Phylotimos and Praxianax (O11, O12), where the reverses of the latter two carry an initial (B and Y (or possibly Γ)). Initials on Coan tetradrachms are only observed on these two reverse dies (R19, R21). Large variation in style is observed on the remaining dies of Dion. A particular style which has no parallel in other issues is seen on O5 and O6. The head itself is small, with large eye and nose. The lion's scalp forms a straight line from Heracles' ear to the forehead, and small locks of hair run like a border of dots along this line. The reverse has no trace of the square incuse found on the previous and some of the succeeding dies. The diameter of the flans is small and gives them an increased thickness compared to the rest of issue VI. Two of these coins have identical test marks, in the shape of two deep cuts in the flan. A more standardized Heracles-rendering is established from O12 onwards. The lion's scalp is slightly smaller with a straighter line at the back of the head, and the locks of the mane become more stylized and claw-shaped. The reverse dies show the same variation in style on the earliest coins of issue VI. At first sight it may look like the reverse dies of Xanthippos belong to a later stage in the issue, after the coins of Dion, Phylotimos, Amphitimos and Praxianax. The square incuse is almost absent on R1 and R2, and the square border of dots is similar to the one on the later coins. However, the coin of Philiskos (R3) is die-linked with the coins of Xanthippos, as well as having the same additional symbol (a fish-hook) as a reverse die of Lykon (R4). This die is furthermore linked with the Lykon-die with a silk worm as additional symbol (by O3). The R5, R6 and R7 appear to be "older" in style compared to the rest of the reverse dies in issue VI. They are characterized by a small, distinctive square incuse, a small and detailed crab and carefully made letters quite different in style from the additional reverse dies. However, the Xanthippos-coins are evidently linked with the Lykon and Philiskos-coins, and are as such in the very first part of issue VI. Several distinguished features are observed on the 11 dies that represent Dion. The reverse dies which continue to have the

³⁴² The identification and interpretation of motifs are discussed in the chapter below under "Motifs and style".

additional symbol from the Lykon-coins are placed first in the sequence. The initiating dies are, however, of a particular style (cf. also the comments on the flans and obverse style of these coins mentioned above). R8-R11 does not have the slightest trace of a square incuse and stands out from the additional reverse dies of the issue. The last part of the dies of Dion is strikingly similar. A large crab, with detailed and large eyes is typical of all the dies, as is the peculiar occurrence of a depression in the lower part of the crab shield, in which two dots are placed side by side. Evidently, both dies with and without an additional symbol are produced by the same die-cutter (cf. dies R11, R14 and R15). The following reverse die of Phylotimos (R19) is also somewhat peculiar in style. The crab's shield is unusually small and the letters of the ethnic and personal name as well as the claws and eyes of the crab have an ornamental touch. The initial B can clearly be seen on the right side of the crab's claw. The coin shares obverse die with the coin of Amplitimos (O11) on which the reverse die is also a bit odd, with a small crab with irregularly shaped legs and claws. The next coin is the one of Praxianax. On the right side of the crab's claw we once again find what appears to be an initial. The interpretation is not as clear as for R19, but it might be a Y (R21). The following three coins of Aristion are die-linked through O12, and the reverse dies from this name onwards display a much more uniform style and fabric. The R24 and R27 of Kallias and Lykinos have very fine-lined letters and they are certainly cut by the same hand. On R26 (Lakon) and R30 (Theodotos) have re-engraved personal names. The majority of the remaining dies is probably the product of one die-cutter. A typical feature is a small, angular depression on the crab shield, as seen on dies R38-R41 and R45-R48.

A total of 18 personal names are recorded on the issue VI tetradrachms. The name of Philiskos appears on two different occasions, which, according to the die-links, are quite far apart in time. Whether or not the name represents one or two persons is impossible to say, and relies on how one choose to interpret the duration of the different issues. In my opinion the minting period of each issue is concentrated to a relative short period of time, which opens for the possibility that the same individual is represented both at the beginning and at the end of an issue. Philisskos as seen on R41 must be a misspelling. Xanthippos is a common name on Coan coinage, it appears in issues I, VI, XIV, XVI, XVII and XX. Even though the name is frequently represented on the coinage, it has only six entries in the *LGPN*, but all of them are too late to be relevant for issue VI. Philiskos is also represented in issue XVIII and in third and second century contexts in *LGPN*. Philiskos is recorded as a mid-second century *monarchos* on Cos, far too late to be of

relevance here. Lykon is also found on issue VIII drachms, and is probably the same individual. None of the four entries of this name in the *LGN* are from a fourth century context. The name of Dion has 13 entries in *LGN*, but the earliest is dated to the beginning of the third century. Dion is also recorded as *monarchos* but not until c. 210-195. A substantial number of names only appear in issue VI: Phylotimos, Amphitimos, Kallias, Lakon, Lykinos, Theodotos, Nestoridas, Alkimachos and Kleitanor, the last three known only from coins, and Amphitimos and Lakon are also previously unrecorded names on Cos. Kallias appears in an inscription which can be attributed to the fourth century, but a later date is more plausible.³⁴³ Other names are found in several additional issues: Praxianax (XIII, XVII and XIX), Aristion (VII (probably the same individual), XIII and XX), Herakleitos (XII) and Archidamos (VII, VIII (probably the same individual), XII, XVI and XVII). None of these names are found in inscriptions or additional contexts linked to the fourth century.

Altogether 20 obverse and 48 reverse dies are recorded on the 107 tetradrachms of this issue. A total of 54 die-combinations is found. The statistical calculation gives 22 as the probable number of original obverse dies (+/- 1). The representativity of the collected material must be seen as satisfactory. The combination of obverse dies and personal names is as follows:

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	O12	O13	O14	O15	O16	O17	O18	O19	O20
Xanthippos	•	•																		
Philiskos		•																		
Lykon			•	•																
Dion					•	•	•	•	•	•	•									
Phylotimos												•								
Amphitimos												•								
Praxianax													•							
Aristion													•							
Kallias													•	•	•					
Lakon													•							
Lykinos													•	•						
Theodotos													•			•	•			
Herakleitos														•			•	•		
Nestoridas																	•		•	
Philis(s)kos																	•			
Archidamos																	•			
Alkimachos																	•		•	•
Kleitanor																				•

³⁴³ Paton & Hicks 1891, no 431.

Dion is evidently the person represented on the majority of the coins of issue VI, with six obverse dies and 11 reverse dies. The combination of dies and personal names corresponds well with the uniform style of the latter part of tetradrachms in this issue. Several obverse dies are shared by several names on the latest half of the issue. O13 was used by Kallias, Lakon, Lykinos and Theodotos, O14 was shared by Kallias, Lykinos and Herakleitos and O17 by Theodotos, Herakleitos, Nestoridas, Philis(s)kos, Archidamos and Alkimachos. The uniform style, the combination of obverse dies and names and the die-links indicate that the last half of issue VI was the product of a relatively intensive period of minting, and that the volume minted in each name was possibly smaller compared to the earliest part of the issue. The total number of dies (20 obverses, 48 reverses) and names (18) evidently speaks of an issue of tetradrachms which by far exceeds the previous issues (I and III) both in volume and duration.

Issue VI is represented in four hoards (hoard 12, 13, 17, 18). The large and important Pixodaros-hoard has been discussed in detail above in the commentaries of issue III. The issue VI tetradrachms from this hoard show, as was also the case for issues III and IV, very little sign of wear. Nine personal names are represented in the hoard; all of them belong to the latter half of issue VI, and their coins are probably minted during a short period of time. It is hard to explain why almost every name from the last part of issue VI is in this hoard, and none of the earliest names (all names and initials on the preceding issue III tetradrachms are present). One solution would be to put the tetradrachms with additional symbols at the end of issue VI. The explanation would then be that the latter part of the issue was not minted at the time of deposit (c.340). But the evidence from the corresponding issues of didrachms and drachms clearly reveals that the dies with additional symbols precede the later dies without symbols. This single hoard does not provide enough evidence to alter the sequence within issue VI, as this would be contradictory to the additional evidence (see commentaries below on issues VII and VIII). However, if the sequence of issue is maintained, this will implicate that the absolute majority of issue VI was already in circulation by c.340. Hoard 13, found near Pisye in Caria in 1950, contained one issue VI tetradrachm (VI, 29a). The coin shows slight signs of wear. Coins of Mausolus and Hidrieus formed part of the hoard, and the absence of Pixodarus-coins makes a burial date around c.340 the most plausible. The hoard was also said to contain Coan drachms of some type, but they have not been possible to track down. The above-mentioned Pithyus-hoard from Chius (hoard 17) contained a VI issue tetradrachm of Dion in addition to the issue V drachm (see commentaries on issue V for details). The

tetradrachm is in very fresh condition and the drachm appears to be somewhat more worn. The presence of Pixodarus-drachms provides a *t.p.q. c.*335 for the hoard.³⁴⁴ The last hoard, in which issue VI tetradrachms appear, is a rather atypical hoard from Babylon (hoard 18). Among the more than 300 silver coins was also at least one Coan tetradrachm in the name of Dion (VI, 9b). The hoard was dispersed on the market, but efforts have been made in order to make a reconstruction.³⁴⁵ The Coan coin has two deep test marks on the obverse, a common feature of several other coins in the hoard.³⁴⁶ It is very tempting to make an additional attribution to this hoard. A similar Coan tetradrachm of the same name (Dion), and even of the identical obverse die, appeared on the market in 1978, five years after the discovery of the hoard in question. This coin also bears similar test marks on the reverse (VI, 10a). Although it is impossible to verify, I strongly believe that this coin also formed part of hoard 18. Obviously the Coan coins in the Babylon-hoard had circulated for a long period prior to concealment in 323.

VII. ISSUE

Issue VII consists of 47 didrachms of one single type. In the early phase of this study attempts were made to divide this issue into two types, based on the distribution of coins with a square incuse and those without.³⁴⁷ It proved impossible to establish a satisfying sequence based on this criterion, and the arrangement presented below is, in the author's opinion, the most probable based on the evidence at present. As a consequence, the reverse dies with incuse are not labelled as a single type. A slight variation in the shape of the flans is noted. It is hard to decide whether this is caused by the pre-striking production of the flans, or simply by the use of two different types of reverse dies. The flat dies, without square incuse, will necessarily make the flan flatter and thus wider in diameter compared to those with a square punching end.³⁴⁸ The die-axis is a regular 12 or 6 o'clock position, with a few exceptions (VII, 18a, VII, 19a). The weight table reveals an unusual wide span, with no obvious cluster or peak. 12 coins are in the interval between 6.50 and 6.69 g, but four are between 6.95-6.99 g and 20 are below 6.39 g. The average weight is 6.46 g.

³⁴⁴ Konuk 1998, 113.

³⁴⁵ Price 1991a. The Coan coin is no. 300. Price provides a convincing burial date of *c.*323.

³⁴⁶ Cf. Price 1991a, plate 15, no. 27; plate 17, nos. 161, 276.

³⁴⁷ A commonly used parameter applied to chronological and/or typological divisions.

Anyhow; the weight table reveals a decrease in weight compared to the issue IV didrachms. $\frac{3}{4}$ of the issue IV coins weighs more than 6.60 g, but only $\frac{1}{3}$ of the VII issue didrachms weighs more. The difference is small, but in my opinion significant enough to attest a tendency towards the weights of didrachms that became the standard on Rhodes and Cos after c.300.

A new obverse motif is introduced with issue VII: a young and beardless Heracles, consistently facing right. The well-known motif from issue VI is used on the reverse: a crab with a club beneath and occasionally an additional symbol (silk worm). The position of the ethnic and personal name follows the general pattern established in the previous issue, but with a few exceptions: the ethnic and personal name has switched positions on R6, R7 and R8 (of Philistes, Telephos and Aristion). Some of the reverses have a more or less deep square incuse (especially R12 and R14), others are completely flat (R1 to R3). Coins with additional symbol are represented with both types of dies (compare for example R3 and R6). Some variation can be seen in the rendering of Heracles. O1 and O2 are certainly the products of the same die-cutter. A particular type of hair arrangement as well as the shape of the lion's scalps strongly points towards a shared die-cutter for O4, O5 and O6. Also O7, O8 and O9, with a specific pointed shape of the locks in the mane, are the products of the same individual. Identical variations are found on the reverse dies, but it is difficult to establish a general pattern of change. There is a tendency towards a less detailed cutting of the motif on the last dies (of Aristion), cf. for example R7 and R14. One detail is the occurrence of the identical specific element found on several dies in issue VI: The crab shield of R7 carries the same depression with two dots placed side by side which can also be seen on issue VI, R11, R14, R15 (of Dion). The letter forms are mostly identical throughout the issue, but the die of Menon (R3) stands out with slightly larger letters with thinner lines. Also the letters of the last dies (of Aristion) are sometimes smaller and more uneven compared to the rest, but this is mainly due to the die-engravers shortcomings when it comes to making the motif and inscription fit together. The ethnic is spelled ΚΩΙΟΝ throughout the issue.

Seven names are recorded on issue VII. Xenombrotos and Telephos are not found in other Coan coin series. Both are recorded on Cos in other contexts: Xenombrotos in a fourth century epigram and four later contexts, Telephos in three. Menon is also represented on issue VIII drachms, and the person in question is most likely the same

³⁴⁸ Compare for example R3 and R4. The different types of dies employed in the production of Coan coins

individual who appears on the didrachms. Philon is a common name on Cos (15 entries in *LGPN*), and is also represented on the issue XI didrachms and on the bronzes of issue XX. The chronological gap between issue VIII and issues XI and XX makes it unlikely that we are dealing with the same individual. Philistes is found again on the bronzes of issue XVI, and this may be the same person (see comments below). Aristion is represented on several issues: the (partly) contemporary issues VI and VIII, as well as on the succeeding XIII and XX issue. It must be safe to assume that the same person is represented on issues VI, VII and VIII. However, the name Aristion is spelled with a C (for sigma) on issue VII only. The last name, Archidamos, is found in abundance in Coan sources in general as well as on the coinage. The name is represented on the issues VI, VII, VIII (same individual), XII, XVI, XVII (possibly the same individual), as well as in 12 additional contexts on Cos. Three out of seven names are shared between issues VI, VII and VIII, which most certainly creates a link between these tetradrachms, didrachms (this issue) and drachms.

A total of nine obverse and 15 reverse dies, used in 22 combinations, was employed for issue VII. An estimation of the original number of obverse dies indicates that only one die is missing from the complete issue (+/- less than 0.5). The combination of obverse dies and names are as follows:

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8	O9
Xenombrotos	•	•							
Menon		•	•						
Philon				•	•				
Philistes				•					
Telephos						•			
Aristion						•	•	•	•
Archidamos								•	•

The coinage in the name of Aristion was obviously the most numerous with 4 obverse dies and 7 reverse dies. The first five obverse dies are found in combination with reverse dies with additional symbol. There are no recorded die-links between reverse dies with additional symbol and those without (O6-O9). Therefore it might be possible that there is a chronological gap between the coins with and without symbol. However, the particular type of reverse dies where the ethnic is positioned beneath, and the personal name above the crab is found together with obverse dies combined with a symbol on the reverse as well

are discussed in this part above, "Die types and die-axis".

as with Aristion, the major name in the latter part of the issue (O4 with symbol: 6a; O4 with ethnic beneath crab: 10a; coins of Aristion with ethnic beneath crab: 12a). Apparently the identical die-cutters have been employed for the earliest part of the issue (with symbol), for the mid-part (with ethnic beneath crab) and for the latest part. In spite of the variations seen on the reverse dies, the most plausible interpretation must therefore be that issue VII was minted more or less continuously without any significant chronological gaps.

Issue VII didrachms appear in only one hoard. The Leros-hoard (hoard 15) was discovered in 1974 and contained a Rhodian didrachm, three Chian drachms and two drachms of Colophon, besides Coan coins of issues VII and VIII. Clearly, the hoard belongs to a mid-fourth century context.³⁴⁹ The Chian drachms are of a type dated *c.*350, and none of the types open for a concealment date after *c.*340 (except the Rhodian, probably intrusive coin). The Coan didrachm (VII, 8b) is in the name of Philon, a name from the first half of this issue. Furthermore an issue VIII drachm in the name of Lykon formed part of the hoard.³⁵⁰ Lykon is also represented among the earliest names on issue VI tetradrachms (see also commentaries on issue VIII drachms below). A burial date around 340 is probably the most convincing, which provides us with a valuable chronological context for the fresh Coan issue VII didrachm.

VIII. ISSUE

Issue VIII consists of 68 drachms of four separate types. Only the third and fourth types are connected by die-links, but the metrological analysis, as well as the iconographical and typological affinities, speaks evidently of a unified issue. The flans are of uniform size and thickness throughout the issue. They are mostly regularly shaped, but minor variations are occasionally observed on a few individual coins (for example the oblong shape of 4f, 8a, 17b). The die-axis is a regular 12 or 6 o'clock position, with minor aberrations, which corresponds with the general pattern of issues VI and VII. Weights from 2.93 to 3.72 g are recorded. The weight table reveals a peak at 3.35 g, and approximately 2/3 of the coins are

³⁴⁹ The Rhodian didrachm is probably dated 340-30 and is the latest coin in the hoard. However, it is probably intrusive since the identical coin forms part of a hoard found near Marmaris in 1972 (recorded at the National Archaeological Museum in Athens). The Rhodian coin shows significant signs of wear, and its appearance in the Leros-hoard seems suspicious. Cf. Ashton 1989, 9 which is my source on the problems concerning the Rhodian coin.

³⁵⁰ Cf. the commentary on issue VIII below.

in the interval 3.20-3.49 g. The number of recorded weights of issue II and V drachms are too small to make a significant comparison possible. The main impression is that a common weight standard was employed for all of the three earliest issues of drachms.

Issue VIII shares motifs with the tetradrachms of issue VI. The obverse motif is thus a bearded Heracles always facing right. The common features of the reverse dies of all four types are a crab, a square border of dots and a personal name beneath and ethnic above the crab. Type 1 has a club and, as the only type, an abbreviated ethnic (ΚΩΙ). A silk worm replaces the club on type 2. The club is re-introduced on the third type, and a single letter is seen in addition to the personal name. The last type is identical, but without the single letter.³⁵¹ Significant variations in style can be observed both among the type groups and within the actual groups. The two obverse dies in type 1 are characterised by a small lion's scalp, and a high forehead of Heracles. It has some reminiscences to the second type-drachms in issue II. The older drachms also have an abbreviated ethnic identical to issue VIII, type 1. However, the type 1 reverse dies in general appear to have a closer stylistic affinity to the later reverses of issue VIII rather than to the preceding issue II. There are surprisingly few direct parallels in stylistic details between the tetradrachms of issue VI and issue VIII drachms. But then again the variation in style is generally large compared to the earlier issues in which a significantly smaller number of dies were employed for each issue. However, some similarities are found: O8 and O12 show a striking resemblance with O17 of issue VI, significant enough to consider the possibility of an identical die engraver. The odd looking O5 has its parallel in the O8 of issue III (!), but then again both dies are atypical and stand out within their respective issues.³⁵² R19 is almost identical with R46 in issue VI in style, and R20 is evidently the product of the same hand as R3 in issue VII. The peculiar claw shape, the rounded crab shield as well as the shape of the joints on the crab's legs are clear indications on the activity of one and the same die-cutter. Both dies are in the name of Menon, but issue VII didrachms are carrying an additional symbol as well. The form and shape of the letters follow the pattern from issues VI and VII, and the variation in size clearly correspond with the length of the name; long names have small letters, short names have large ones (as for example R8, Sosistratos

³⁵¹ One of the reverse dies of Idomeneus (R15) can easily be confused with type 3. The last letter in the name (s) is placed above the rest of the letters in order to avoid abbreviation. It thus appears as an isolated sigma, easily mistaken as an initial like the ones seen on type 3.

³⁵² The strange stiff and staring facial expression is of a character that may call forth a suspicion of a false coin. However, the reverse dies are linked to a substantial number of additional, "normal", coins, and both coins are known from hoards (hoard 12 and 15).

and R9, Lykon). The ethnic is spelled ΚΩΙΟΝ throughout the issue (with the exception of the above mentioned ΚΩΙ of the first type).

10 names are recorded on the drachms. Five of them are only represented on issue VIII: Amphidamas, Mnasimachos, Hippolochos, Iatrokles and Idomeneus. The last three of them are only known to us from the coin material. Amphidamas has three entries in the *LGPN*, but only in post-200 contexts and Mnasimachos appears in an uncertain fourth century context (as doctor?). Archidamos and Moschion are common names with numerous recordings from additional sources. Archidamos appears in issues VI, VII, VIII, XII, XVI and XVII and in 12 other contexts in *LGPN*. Moschion is represented in issues I, VIII, XIV and XVIII and in 16 additional contexts, among others as a *monarchos* of c.195-2. Sosistratos is also found on issue XX, and possibly in the XVII. The C-form of sigma appears on issue XX, but not on the drachms of this issue. Lykon is recorded on issues VI and VIII and Menon in issues VII and VIII. We are evidently speaking of the same person on the following occasions: Archidamos (VI, VII, and VIII), Lykon (VI, VIII) and Menon (VII, VIII). Thus several personal names, together with the additional evidence, link the tetradrachms, didrachms and drachms (issues VI, VII and VIII) in a single group of supplementary issues.

Altogether 13 obverse and 21 reverse dies in 26 die-combinations are recorded. The estimation of the original number of obverse dies reveals a highly satisfying representativity of this issue. The calculation shows that 14 dies were originally employed (with a less than +/- 0.5 deviations). The following table displays the combination between obverse dies and names:

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	O12	O13
Mnasimachos (1)	•	•											
Amphidamas			•	•									
Sosistratos			•	•	•								
Lykon						•	•	•					
Mnasimachos (2)							•	•					
Idomenevs							•	•					
Iatrokles								•	•				
Hippolochos										•	•		
Moschion												•	
Menon													•
Archidamos													•

It is not possible to decide whether Mnasimachos appearing in type 1 and 3 is the same individual or not. Considered the limited size and duration of this issue, and how seldom the name occurs in additional contexts (only on VIII issue coins and four entries in *LGPN*), I am inclined to believe that we are dealing with one person appearing on two occasions of issue VIII drachms. The die-links of issue VI indicate strongly that the coins with additional symbols, precedes those with initials. If this is right, it would be safe to make the same assumption concerning the drachms. Thus, letting the drachms of type 2 and 3 trade places - allowing the Mnasimachos of the latter type to immediately succeed the one in the first type - seems impossible. The latter part of issue VIII drachms is neatly connected through die-links (type 3 and 4). There was evidently a gradual development from the type with initials to the ones without additional symbols or initials, a type which was to be continued on the later, lighter drachms issue XII.

Coan drachms with bearded Heracles and crab are recorded in four different hoards. Information on the exact type and/or weights is missing for three of the hoards, and it is impossible to decide whether drachms of issues II, VIII or XII formed part of the hoards in question. The Mugla-hoard (hoard 13) contained a VI issue tetradrachm of Lykinos and an unknown number of drachms. Since the hoard was buried *c.*340 it most probably contained drachms of issue VIII. Three drachms are recorded as part of a hoard from the vicinity of Izmir discovered in 1974. The coins have not been identified and the hoard composition in general appears to be of a dubious character.³⁵³ Drachms of this type also formed part of the enormous Calymna-hoard (hoard 16), but again the exact type, names or weights are not recorded. The above mentioned Leros-hoard (hoard 15) is well-documented with six out of nine Coan drachms illustrated. Didrachms of issue VII also formed part of this hoard.³⁵⁴ The drachms are of types 2, 3 and 4. Type 2 is represented with 5 coins, two of Amphidamos and three of Sosistratos. Three coins with the names of Lykon and Mnasimachos are of type 3, and the fourth type is only represented by one coin of Iatrokles. Five out of the first six names of types 2-4 are represented in this hoard, but the last four are absent. This may indicate that the latter part of issue VIII was not yet in circulation by the time of concealment, but the limited number of coins in the hoard reduces the importance of this observation. However, the didrachm of Philon belongs to the first part of issue VII, and the name of Lykon is found on the earliest part of tetradrachms of issue VI. It is also worth mentioning that the same die-cutter probably is

³⁵³ A Colophon tetradrachm and an alliance statér of Samos are certainly intrusive.

³⁵⁴ Cf. commentaries on issue VII above.

represented on coins both in the Pixodarus-hoard (hoard 12) and on the VIII issue drachms. A close connection is found between tetradrachms of issue VI, didrachms of issue VII and drachms of issue VIII. Also, the occurrence of names may indicate that issue VIII was still in production at the time of burial of the hoard 15.³⁵⁵

IX. ISSUE

Only 18 coins are attributed to issue IX, all of one single type and with uniform flans and fabric throughout the issue. The only sign of irregularity is a tendency towards a bad centring of the dies in some cases (IX, 5; IX, 8; IX, 10; IX, 11; IX, 14). The die-axis is without exception a regular 6 o'clock position. The weight table reveals variations ranging between 1.18-1.90 g (with one damaged coin on 0.88 g excluded). 12 out of 16 recorded weights are between 1.40-1.89 g.

The obverse motif is a beardless, young Heracles facing left (right on some occasions). The reverse motif is simply a crab with a single-letter beneath. The rendering of Heracles has delicately shaped facial features; a small, pointed nose and small, naturalistically rendered eyes and mouth. The lion's scalp is relatively large, with short, pointed, stylized locks in the mane. The lion's paws are tied together beneath Heracles' chin. This particular iconographic feature can be an indication of a later dating of this issue. The didrachms of issues VII, XI and XV, the tetradrachms of issue XIV and the hemidrachms of issue XIII are all without tied paws. The bronze coins of issue XVI have paws, as well as the later issues XVIII, XIX, XXII, XXIII, XXV and XXVI. A few of the first coins of issue XVIII are without paws. The Heracles on the hemidrachms of issue XIII is stylistically closest to the bronzes of this issue, but, as we could see above, the paws of the lion's scalp are not parts of the motif on the hemidrachms. Issue IX does not appear in any known treasure hoard. The absence of personal names furthermore enhances the uncertainty concerning the chronology of the issue. The letters/initials recorded are I, K and A. The coins of this issue appear among the coin material which probably comes from the excavations of the Asclepieion (hoard 36). The earliest coins from this context are a VII issue didrachm and drachm of issue VIII. Also six issue IX bronzes and five issue X bronzes were found. Issues IX and X are absent from the stray find material at Kos

³⁵⁵ c.350-340, see commentaries on issue VII for the chronology.

Museum. The composition of coins from the stray finds (hoard 35) appears to express a slightly later chronological profile compared to the material from the Asclepieion (the earliest indeed being a didrachm of the VII. issue (Philon), but the numerous bronze coins are only of the XVI. issue onwards). This may be an indication that issue IX bronzes should be dated earlier than issue XVI, but the available evidence is too scarce to establish the bronzes of issue IX in a firm chronological context.³⁵⁶

X. ISSUE

The modest number of 16 bronze coins of one single type makes up issue X. Several variations in the position of the club and ethnic on the reverse are noted, but the characteristic obverse motif and the general similarities between the reverse dies speak of a uniform issue, and due to the limited number of coins no further attempts have been made to identify subordinate types. The flans are mostly small in diameter and relatively thick. The die-axis appears to be irregular, but the majority seems to be concentrated around 3, 6, 9 or 12 o'clock positions. The weights range between 0.84 and 1.92 g, with a peak at c.1.00 g, and eight of a total of 14 recorded weights are found in the interval 0.90-1.19 g. We can not put too much emphasis on the heaviest recorded weight of 1.92 g due to the uncertain attribution of a heavily corroded coin (X, 13).

The obverse motif only appears on the present issue on Cos. It is a male head with short, curly hair and a trimmed beard. The motif is described as “bare head of bearded Heracles” in the *BMC*.³⁵⁷ The identification is plausible in spite of the lack of any iconological attributes in connection with the obverse motif. The appearance of the Heracles attribute of a club as additional motif on the reverse gives us reason to believe that the anonymous head on the obverse is Heracles. The obverse head is occasionally described without beard. However, a short beard is evidently seen on all recorded specimens, although it can be difficult to identify on worn or corroded specimens.³⁵⁸ A circular border of dots appears on one single coin (X, 9). A crab is the main motif on the reverse. The majority of coins carries an abbreviated ethnic (ΚΩΙ). Occasionally a club is seen as an additional symbol. A variety of different positions is used for the club and

³⁵⁶ Cf. also the conclusion of this part below.

³⁵⁷ *BMC Caria*, p. 196, nos. 25-6 (my catalogue X, 1 and 4).

³⁵⁸ *BMC Caria*, p. 196, no. 26 (“head beardless”), cf. X, 1.

ethnic. The most common is the ethnic alone beneath the crab. A similar variety has added a club vertically between the crab's claws (X, 6 and 7). A third version carries a club horizontally beneath the crab and has the ethnic positioned between the claws (X, 8 and 9). Two specimens appear to be without club and ethnic (X, 10 and 11). A similar multitude of varieties is not paralleled in additional Coan issues, except for the numerous groups of bronzes of issue XVIII. Equally divergent is the style of both obverse and reverse dies. The depiction of the head is with delicately shaped facial features and details of hair, as well as roughly executed with hooked nose, large eye and unruly hair.³⁵⁹ Also the shape and rendering of the crab differs. A large, circular crab shield is observed on X, 1-3. A smaller shield and longer legs and claws are seen on X, 4-9. A large, irregularly shaped shield which narrows towards the end appears on X, 10 and 11. Stylistic parallels in other issues are hard to find. However, the shape of the crab shield on X, 11 bares some resemblance to the crab shield in the latter part of issue VI. Typical is a small indentation in the lower part of the shield which is also seen on X, 11.

Five issue X coins come from the excavations of the Asclepieion (hoard 36), and two more from random excavations on Cos (without find context). Unfortunately none of these finds help us any further in establishing a chronology of this peculiar X. issue. The stylistic features and the irregular die-axis indicate a relatively early dating of these bronzes, and they probably belong to a period prior to the large bronze issues which is to appear later (XVI, XVII, XVIII).

XI. ISSUE

Issue XI consists of 90 didrachms divided into two types - 42 coins of the first and 48 of the second type. A development towards thinner flans of larger diameter is clearly seen on the latest part of the issue. The shape of flans and fabric is of high quality throughout the issue, with regular shape of the flans, nicely centred dies and easily legible inscriptions. The die-axis is mostly a regular 12 or 6 o'clock position. It appears that one position was consequently used for each personal name, thus the position around 6 o'clock is found on coins of Demetrios and Stephanos, and 12 on the additional names (the only exception being Pythion where the position is 2). A few irregularities are seen: XI, 1c (2), XI, 8a (2)

³⁵⁹ Compare X, 1 and X, 10.

and XI, 19a (10). The weights are a crucial point to the chronology of issue XI. The weight table reveals that the majority of coins is found in the interval between 6.20 and 6.74 g (68 of a total of 81 recorded weights). Only two coins are heavier than 6.74 g. A comparison with issue IV didrachms reveals that a reduced didrachm weight is firmly established by issue XI. Issue IV has a clear cluster of weights between 6.85 and 7.04 g, but only two coins of issue XI reach similar weight. Only minor difference between the didrachms of issues VII and XI is observed, with a tendency towards a lower weight of the latter. Issues VII and XI clearly reveal a development towards decreasing weights compared to issue IV.³⁶⁰ Eight of 43 recorded weights of issue VII, almost 20%, are heavier than 6.75 g. Only two of 81 coins reach the same weight in issue XI. 50% of the issue VII coins and c.40% of issue XI are in the interval between 6.50-6.99 g. 28% of the VII issue coins and 18% of issue XI have weights above 6.65 g. 28% of the VII issue coins and 35% of issue XI have weights between 6.20-6.49 g. The average weights on the first three issues of didrachms are 6.70 (IV), c.6.50 (VII) and c.6.40 g (XI). A different tendency is, however, revealed by a comparison between the related drachms of issues VIII and XII respectively.³⁶¹

The motif on the didrachms of issue XI follows closely the pattern of issue VII. The two issues have not been separated earlier probably because of the similarities in motifs. A young, beardless Heracles is depicted on the obverse, and the reverse shows a crab, club, ethnic and personal name, all in a square border of dots and ditto incuse on the first type. The use of an additional symbol as found on issue VII is abandoned. Type one and two are separated by the fabric of the reverse, i.e. the square incuse is omitted on type 2. The last two names are represented by dies where the club is replaced by a *gorytos* as can also be seen on the tetradrachms of issue XIV. A certain stylistic affinity is observed between the early obverse dies of issue XI and some of the dies of issue VII (e.g. VII issue O2 and XI issue O1). A comparison between O2, O5, O8 and O11 reveals a tendency towards a larger head with more elaborate and ornamental treatment of the locks of the mane. Another developing feature is a fuller chin and cheek of Heracles. Some of the later dies are stylistically very close to dies of the tetradrachms of issue XIV. This indicates that some of the die-cutters were engaged in the production of both issues (see commentaries on issue XIV below). The square incuse separates the two types of issue XI. The two types are almost equal in terms of the number of survived coins, but the second type is represented

³⁶⁰ This is also an argument to consider issue VII (and thus also issue VI and VIII) as succeeding the issues III, IV and V; see commentaries on the relevant issues above and the conclusion of this part below.

³⁶¹ Cf. commentary on issue XII below.

by twice as many names as the first type which indicates a longer period of minting of the type without a square incuse. The incuse of issue XI stands out in contrast to the incuse of the preceding issue of didrachms. The incuse seems to have been made by a square-ended punch-die on issue VII, whilst it is moulded into the die itself on issue XI coins. The difference is obvious when we compare VII, 12b with XI, 2c. Some of the earliest reverse dies carry a distinctive feature. The lower part of the crab shield has a small depression clearly seen on R1, R3 and R4. A similar feature is also found on the drachms of issue VIII (R1, R2). The details of the crab tend to be more elaborately executed on the last dies of the issue. As previously mentioned the club is replaced by a *gorytos* on the last two reverse dies (R22, R23), a feature also found on issue XIV tetradrachms, but not, as we might have expected, on the succeeding didrachms of issue XV. The ethnic is spelled ΚΩΙΟΝ on every die, and regularly shaped letters and inscriptions are seen throughout the issue. The irregularity in the positioning of the ethnic and personal name found on issue VII didrachms is no longer present. C replaces sigma on the names of Demetrios and Stephanos. This is also the case on the hemidrachms of issue XIII with the same names. But the common form of sigma is used on the coins of Demetrios on issue XX and Stephanos on issue XVIII.

A total of 15 names are recorded on issue XI. Nikon and Kallistratos are only represented on this issue, but they frequently appear in other sources.³⁶² Kallistratos is found in a fourth century context,³⁶³ but it is impossible to establish a connection with the individual represented on the coins. This is also the case with Stephanos, the only other name of issue XI occurring in a fourth century context.³⁶⁴ A close connection between didrachms, drachms, hemidrachms and tetradrachms (issues XI, XII, XIII and XIV) is established by shared names appearing in one or all of the issues: Emprepon, Polyarchos, Demetrios, Stephanos, Pythion, Philistos, Kleinos and Anaxandros make up more than half of the total number of names. Shared names also indicate at least a partly chronological connection between issue XI and the bronze coinage of issues XVI, XVII, XVIII and maybe XX. Six names from the didrachms are found on these bronze issues. The name of Anaxandros is of paramount importance due to its limited representation in additional sources.³⁶⁵ Even though it is an unusual name on Cos it appears in issues XI, XII, XVI and XVII, which strongly indicates a connection between these issues. The name of Medon is

³⁶² Nikon with 10 and Kallistratos with 22 entries in *LGPN*.

³⁶³ Paton & Hicks 1891, 420.

³⁶⁴ Appearing in the inscription *IG II² 9143*.

exclusively known to us from coins, and the appearance on issues XI and XVIII also suggests a connection between these issues. The appearance of Zoilos on didrachms of issues XI and XV is also interesting due to the iconographical connection between issue XV and the above-mentioned bronze coins of issue XX. Only the three latest names of issue XI are found on bronze coins of issue XVI. Issues XVII and XVIII carries names from the earlier part of issue XI as well. Philistos is known as *monarchos* on Cos, but not until c.190-180. Philon and Simos are known as *architheoroi* in 251 and 282 respectively. This may well be the same individuals represented on the coins in question, but a definite connection is impossible to establish. Philon does also appear in issues VII and XXII, but we are evidently dealing with separate individuals. Philon from issue VII is firmly established in the earliest part of the issue, and issue XXII certainly belongs to a significantly later period, which, among other indications, the appearance of the new form of ethnic shows.

Altogether 11 obverse and 23 reverse dies in 28 die-combinations are found on the didrachms of issue XI. A statistical estimation of the original number of obverse dies employed for this issue is 11 (+/- less than 0.5). This indicates that all obverse dies are recorded in the presently available material. The relation between obverse dies and names is the following:

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11
Emprepon	•	•									
Polyarchos	•	•									
Demetrios			•	•							
Stephanos				•							
Pythion					•						
Zoilos						•	•				
Philistos							•				
Nikon							•	•			
Kleinos								•			
Medon								•			
Philon									•		
Kallistratos									•		
Anaxandros										•	
Simos											•
Charmippos											•

³⁶⁵ Only two entries in *LGNP* testify that the name was rather uncommon in use on Cos.

The first two names are joined closely together by the sharing of obverse dies. Also the coinage in the names of Demetrios and Stephanos, of Zoilos, Philistos, Nikon, Kleinos and Medon, of Philon and Kallistratos and, at last of Simos and Charmippos are connected with obverse dies. Emprepon, Polyarchos, Zolios, Nikon and Kleinos are represented with two or more reverse dies. Nikon appears to have had the largest output of coins with two obverse and four reverse dies employed in the production.

The didrachms of issue XI are not recorded with provenance from hoards. However, several hoards with related issues are of relevance to the chronology of issue XI. A XVI issue bronze coin in the name of Simos, a name also known from issue XI, forms part of hoard 19. Tetradrachms of issue XIV, one of them with the name of Kleinos, appear in hoard 20 with a burial date around 250. The larger hoards 21 and 22, containing drachms and didrachms of the partly contemporary issues XII and XIII, are important in order to establish the lower chronology of issue XI. The two hoards in question are probably buried during the period *c.*210-200. The hoards in question are discussed in greater detail in the commentaries of the respective issues below.

XII. ISSUE

A total of 189 drachms is recorded as part of issue XII. The issue is divided into two types, easily distinguished by the absence of the square border of dots on the second type. The first type has not previously been identified and isolated from the preceding drachms of issue VIII. The two issues can easily be confused because of the strong similarities in motif and iconography. The distinguishing features are the type of reverse die employed for the issues and the weights. Issue VIII drachms carry a square incuse on the reverse, made by using a square-ended die. The reverses on issue XII are mainly flat, without traces of an incuse. Evidently the use of square-ended dies has been omitted on this issue. However, this difference can often be difficult to observe especially on coins with flans of a relative small diameter since the edge outside the incuse has often nearly vanished. The connection between the two types of issue XII is firmly established by the continuous use of one obverse die (O3), as well as the identical personal name (Bation) shared between the types (XII, 10a-e and XII, 11a-d). With the exception of the square incuse, the flans are similarly shaped as in the previous issues of drachms. However, a tendency towards slightly thinner flans with larger diameter can be observed towards the last part of the issue. A particular

oblong shape of the flans is found on some of the later coins (e.g. XII, 66a, XII, 75c, XII, 86b), a feature also seen on the hemidrachms of issue XIII. The die-axis is mostly a regular 12 o'clock position with some exceptions (6 o'clock: XII, 68a-c, 69a, 82a-b, 84a, 89a, 90a; 3 o'clock: 85a-c), which correspond with the contemporary issues. The weight of the drachms of issue XII is of paramount importance in connection with the identification and chronology of the issue. This issue's drachms are evidently of a reduced weight compared to the drachms issues V and VIII. Drachms of issue XII have recorded weights between 2.40 and 3.38 g. The table of weights reveals a strong concentration around the interval from 2.80 to 3.19 g. with 151 of the total of 177 recorded weights, and more than 2/3 of the coins have weights between 2.85 and 3.09 g. A comparison with the preceding drachms reveals the difference since the proportional 2/3 of issue VIII falls between 3.20 and 3.49 g. It thus seems like the drachm weight has been reduced with approximately 0.40 g. from issue VIII to issue XII. The reduced weight is the same for type one and two of issue XII. This point is worth noting due to the iconographical similarities between issue VIII and the first type of issue XII. The weight reduction is evidently present on the drachms *with* a square border of dots although the majority of the reduced weight drachms are of the new type without this feature. The type one drachms weigh from 2.80 to 3.19 g, with a cluster between 2.95 and 3.09 g. About one half of the coins have weights below 2.99 g, and thus correspond exactly with the drachms of the second type.

The motif continues the tradition from issue VIII, with a bearded Heracles facing right on the obverse and a crab with a club beneath on the reverse. As mentioned above type one has a square border of dots, also seen on issue VIII, but this feature is omitted on type two, which is thus similar to the reverse type of the hemidrachms of issue XIII. The drachms of issue XII represent a considerable stylistic development. The earliest obverse and reverse dies continue the general stylistic appearance of issue VIII. A modest tendency towards the "ornamental" style from issue XI didrachms can be seen on a few dies (e.g. O4). An obvious deterioration of style occurs from the second half of the issue onwards. The facial features are more outlined, with few details and roughly executed lion's scalp and mane. The latest part of the reverse dies is equally carelessly performed executed. The crab's shield is often simply formed by four, large dots, the legs are straight and without details. All in all is the impression of a hastened work prevalent on most of the dies in the last half of issue XII (cf. for example O7, O11 and O19, and R20, R21, R25, R26, R45 etc.). The shape of the letters follows the general trend in stylistic development: first similar to the pattern on the drachms of issue VIII with evenly sized and regularly shaped

letters, then developing towards a large variation in size and shape (compare for example R15 and R25/R42). The lines of the letters tends to narrow gradually, and the use of dots in the crossing of lines are occasionally seen (e.g. R59). The ethnic is spelled ΚΩΙΟΝ throughout the issue and is always positioned above the crab, occasionally between the claws (as R49).

Altogether 21 names are recorded on issue XII. Six names are exclusively found on this issue: Laertas, Leontiskos, Chrestidon, Aratidas, Astynomos and Kallipidas. Approximately 50% of the names are shared between the issues XI, XII, XIII and XIV, and we are most probably speaking of the same individual. Four names are shared between the drachms and the XVI issue bronze coins, and another four connect the drachms with the bronzes of issues XVII and XVIII. We evidently deal with different individuals with identical names in the following instances: Archidamos (XII and VI, VII), Herakleitos (XII and VI), Philinos (XII and XIX, XXI) and Hieron (XII and XXIV). The majority of names occur in additional sources dated *c.*200 and later, and are thus not directly relevant. A few, more accurately dated exceptions are worth mentioning: Laertas is known from an inscription dated around 250.³⁶⁶ Philistos is recorded as *monarchos* *c.*190-180, but a doctor with the same name working around 250 is also known, as well as several earlier and later recordings. Astynomos is also recorded among Coan *monarchoi* with a suggested date *c.*190-175, which is too late to be directly associated with the person represented on these drachms. Zopyrion, however, was *monarchos* somewhere between *c.*210 and *c.*195, and due to his position as one of the latest names on the drachms he can theoretically be the same person. But the name is also known from other sources: an inscription dated *c.*269, and again in *c.*240.³⁶⁷ He is also attested as *architheoros* in the third century. Philinos is the second most common name on issue XII with 41 entries in the *LGPN*. In the third century the name is associated with an Olympic victor in 260, as doctor *c.*250-200 and as *monarchos* somewhere between 217 and 207. Philinos certainly belongs to the latest part of the XII issue drachms, and it is possible that the individual on the drachms is identical with the one appearing as *monarchos*. However, considered how common the name was makes identification between the two risky without the support of additional evidence. Herakleitos, with 43 entries, is recorded as *theoros* in 242. His position as the last in the sequence of names on the coins excludes the possibility that they are the same individual.

³⁶⁶ *IG* XI (2), 287B, 42

³⁶⁷ *IG* XI (2), 203B, 39 and Klee 1918, p. 4 IA, 15 (ref. from *LGPN*).

33 obverse dies and 74 reverse dies in 92 die-combinations are recorded on issue XII. The original number of obverse dies is calculated to 36 (+/- less than 1). The relation between obverse dies and names reveals a different pattern for some of the names:

Personal name: O1 O2 O3 O4 O5 O6 O7 O8 O9 O10

Polyarchos		•	•	•							
Emprepon		•	•	•							
Bation				•							
Pythion				•							
Anaxandros					•						
Exaigretos					•						
Laertas						•					
Philistos						•					
Leontiskos							•				
Chairylos							•				
Chrestidas								•			
Archidamos								•			
Nikagoras (cont.)									•	•	•
Aratidas (cont.)											•

Personal name: O11 O12 O13 O14 O15 O16 O17 O18 O19 O20 O21 O22 O23 O24 O25 O26

Nikagoras (cont.)		•	•													
Aratidas (cont.)		•	•	•												
Astynomos					•	•										
Philinos			•	•	•	•	•	•	•	•	•	•	•	•	•	
Kallippidas								•	•	•						
Hieron												•	•	•	•	•

Personal name: O27 O28 O29 O30 O31 O32 O33

Zopyri		•	•							
Python			•							
Herakleitos				•						
(obliterated names)					•	•	•	•		

The first two names Polyarchos and Emprepon are closely connected by sharing three obverse dies. The die O3 is used by all the three persons represented in the drachms of type one, and continues to be used on the coins of the second type of Bation (continued from type one) and Pythion. The following period of minting, which represents 10 names, reveals a regular pattern with only one obverse and one or two reverse dies employed for each name. Then follows a period of minting with several obverse dies employed for each

separate name as well as between the different names: Nikagoras (5 obv./5 rev.), Aratidas (3/4), Astynomos (2/4), Philinos (12/16), Kallippidas (3/6) and Hieron (5/8). It seems evident that several obverse dies were in use at the same time. The die-pattern is also very difficult to explain if coins in the name of several persons were not minted simultaneously. Philinos alone shares obverse dies with Nikagoras, Aratidas, Astynomos, Kallippidas and Hieron. The dies from this part of issue XII are also the most carelessly executed regarding style and fabric. The die pattern reveals a period of intense minting activity, influenced by some degree of haste in this mid period of the drachms of issue XII. The last three names follow the pattern from the first part, with one or two dies used succeeding in a regular pattern.

Four hoards contain drachms of issue XII (hoards 21, 22, 23, 27), and a few specimens also form part of the cumulative material from excavations on the island and from the Asclepieion in particular (hoards 35 and 36). The large “Pyle-ward”, discovered in 1953 at Pyle on Cos, contained a total of 340 silver coins. Details on approximately 210 coins are recorded at the Numismatic Museum in Athens, where the documentation and photographs for this study was collected. Only 10% of the recorded material includes drachms. The vast majority is hemidrachms of the succeeding issue XIII. Altogether 13 of 21 names are represented in the hoard in spite of the relatively small number of drachms. Both types of issue XII are present, and two of the three names of the first type are found. Only one name from the last half of the issue is missing, and thus the later part of issue XII appears to dominate the hoard.³⁶⁸ It seems evident that this hoard has been buried after the production of issue XII was completed. A likely date of concealment can thus be around 210-200. The hoard 22 is previously unrecorded. It belongs to a private collector, but casts of the coins are kept at the American Numismatic Society, New York. The hoard, probably discovered in the late 1960s, is supposed to be from Cos, but this information has not been possible to verify. However, the composition reveals a strong similarity to the Pyle-ward which evidently is from Cos, and we can probably consider this hoard as unearthed on the island too. The names on the drachms of issue XII are spread from the beginning of the second type onwards. The first type is not represented at all. The hemidrachms of this hoard are represented only with names of the last half of the issue. The striking similarity in composition reveals an almost contemporary burial date of the hoard 21 and 22.

³⁶⁸ At first impression the hemidrachms of issue XIII displays the same bias: almost 80% of the coins are representing the last half of the names on this issue. However, only six of the 39 obverse dies are employed on the first half of names which means that we should expect the last half to dominate.

However, the hoard 21 represents a slightly longer time span since the first type of the drachms of issue XII is also present in the hoard. Hoard 23 contains 21 drachms of issue XII, and reveals a more limited range of names compared to the previous two hoards. All the six names belong to the mid period of intensive minting of drachms, and the last three names are not present in the hoard. This may be an indication towards a concealment date before the issue was completed, and therefore some years earlier than hoard 21 and 22. The degree of wear of the obverse dies in this hoard is decisive for the sequence of names of issue XII.³⁶⁹ This issue of drachms is also represented in a hoard from Calymna discovered between 1932 and 1934.³⁷⁰ The diverse composition of this otherwise interesting hoard does not provide further help in the attempt to establish the chronology of issue XII. Besides coins of Calymna and Rhodes the hoard contained issue XII drachms and issue XXIII drachms (so-called “incuse-drachms”) and hemidrachms of issue XXIV, the latter two issues significantly later than the drachms of issue XII. In addition, bronze coins of issues XVII, XVIII, XIX and XXVI formed part of the hoard. A concealment date around 175-0 is suggested in this study, which gives the hoard a time span of more than 50 years.³⁷¹ Four XII. issue drachms also come from the cumulative coins hoards on Cos. One drachm was found during random excavation on the island.³⁷² Three additional specimens were found during the excavation of the Asclepieion (hoard 36), with the only legible name being Philinos – the most frequently used name on the drachms of this issue. The context and/or composition of this cumulative hoard do not help us to decide the chronology of issue XII. These drachms seem to be partly contemporary with issue XI didrachms. Several names reveal a close parallel between the issues. However, the XII. issue drachms were obviously continued well after the close of issue XI. The chronological relationship between issues XI, XII, XIII and XIV is discussed in the conclusion of the commentaries.

³⁶⁹ Cf. Milne 1912, where a comparison between the dies is presented.

³⁷⁰ Cf. in particular Robinson 1936, Kroll 1964; Ashton 1996 and Ashton 1998 (cf. note on the hoard 25 above).

³⁷¹ See commentaries on the later issues below for the burial date.

³⁷² The coin in Kos Museum has not been recorded in detail.

XIII. ISSUE

One of the most numerous issues of the Coan coinage is the hemidrachms of issue XIII. This is partly due to the 190 coins coming from one single hoard. Altogether 261 coins of one single type are recorded. The flans are mainly regularly shaped throughout the issue, but the tendency towards thinner flans with larger diameter observed on the previous issue of drachms is also found on the hemidrachms. This is also the case with the particular oblong-shaped flans occasionally seen in the latter part of the issue. The die-axis is mostly a regular 12 o'clock position, but some irregularities, again paralleled on issue XII, are observed. The coins in the name of Thevgenes and Aristoteles have sometimes die-axis 6 o'clock. The coins of Praxagoras, Praxianax and Philitas have a larger variation of die-axis, usually centred around 6, 10, 11 and 12 o'clock positions. Interestingly, the three names correspond in the sequence of the issue. The variation in weight is between 1.07 and 1.63 g, with a cluster of weights at 1.30-1.39 g. Almost 90% of the coins are in the weight range between 1.20-1.49 g. It is interesting to compare the weights with the weight table of the hemidrachms of issue XXIV. This comparison reveals no reduction in weight between the two issues of hemidrachms.³⁷³

The obverse motif is a beardless and young Heracles facing right. The reverse motif is identical to the previous issue of drachms: a crab with a club beneath; ethnic above and personal name beneath the crab either above or beneath the club. A considerable stylistic variety is also observed on this issue (as on the previous one), but the most deteriorated stylistic varieties from the drachms are absent from this issue. From the coins of Praxagoras onwards (the 14th out of 21 names) the reverse motif change character. Most prominent is the development of the crab which from now on has a shield consisting of four, five or six elevated "dots". The legs become more stylized, and the variety between the dies increases. A development towards more irregularly sized letters with thinner lines and occasional dots marking the crossing of lines are found on this issue as well as on the preceding drachms. The ethnic is spelled ΚΩΙΟΝ throughout the issue with one interesting

³⁷³ This fact can help us further in deciding the weight standard on which the later "incuse drachms" of issue XXIII were struck. The weights of the few recorded specimens are too wide-spread to decide the precise weight of the issue (cf. the table of weight). However, the contemporary hemidrachms of issue XXIV are, as we have seen, evidently of the same weight as issue XIII hemidrachms, and there is no reason to believe that the corresponding drachms would have been minted on a different standard. Thus the weights of issue XII drachms are probably the best guide when we consider the weight standard of issue XXIII drachms. Cf. Kroll 1964, 82 for the relevance to additional issues from Cos.

exception: on one of the latest dies, R75, we can read the new form of ethnic (ΚΩΙΩΝ) which is to become the standard from just after 200.

20 legible personal names are registered on the hemidrachms. Half of them are only represented on this issue of coins.³⁷⁴ Demetrios and Stephanos clearly connect the didrachms of issue XI with this issue of hemidrachms. The C-form of sigma is employed for both issues, but not for the Demetrios occurring in issue XX or Stephanos of issue XVIII. The hemidrachms are also closely linked by names to the drachms of issue XII in having the names of Chairylos, Zopyrion and Python as shared names. It is more difficult to establish a definite connection between the hemidrachms and related bronze issues. Identical names are used on bronzes of issues XVI, XVII, XVIII and XX. Aristoteles and Hellanikos are shared with issue XVI. Both of them are very rare on Cos with only 1 and 3 entries in the *LGN*, which can be considered an indication towards identifying them as the same individuals. Praxianax is recorded on issue XVII as well as on the earliest type of issue XIX. They can possibly be considered as being the same individual since the very beginning of issue XIX might have been overlapping, or at least immediately succeeding, the latest part of issue XIII, and we know that Praxianax is among the later half of names employed for the hemidrachms.³⁷⁵ Stephanos and Symmachos are shared with issue XVIII bronzes. However, the C-form of sigma is used on the silver coins only.³⁷⁶ Issue XIII has few names in common with other issues, except for the closely related issues of didrachms and drachms of issues XI and XII. Apart from the bronze coins mentioned above, only two names are shared with additional, and obviously earlier, issues.³⁷⁷ The names shared with the partly related bronze issues XVI, XVII, XVIII, XIX and XX must however be considered as a sign of a partly contemporaneity between the hemidrachms and some or all of these issues.³⁷⁸ Few of the names occur in additional chronological context of any assistance. Arideikes is recorded as *monarchos* some time during the years 175-150, too late to be of significance as to the person on this coin issue. The name occurs also in a context of the third or second century, i.e. to general to be of significance to the coin issue. Philippos is a very common name on Cos with 38 entries in the *LGN*. One or several persons with this name were active as doctor and *hierotamias* in the third and second century, and again as contributor to epidosis around the year 200. Another common name

³⁷⁴ Arideikes, Peisandros, Philippos, Thevgenes, Praxagoras, Philitas, Kleitos, Diogenes, Kallisthenes and Epinikos.

³⁷⁵ Cf. commentary on issue XIX below.

³⁷⁶ Cf. the chapter on "motifs and style" above for the parallel use of C and Σ in the same issue.

³⁷⁷ Aristion in issue VI and VII, and Praxianax in issue VI.

on Cos, Thevgenes, is attested as *hieropoios* in the same period. Philitas is also the name of the well-known poet and *grammaticus* of the late fourth and early third century, but a person of that name also contributed to epidosis around 200. Diogenes, Kallistratos and Epinikos are all attested as names in the third century or around c.200, the last two using the C-form of sigma. Aristion was a Victor of the Great Asclepieia in c.240; he is attested as contributing to epidosis around 200 and as *monarchos* in 195-2. Since Aristion represented on the coins belongs to the very first names on this issue, it can hardly be the same individual acting as *monarchos* in the 190s. Zopyrion is a common name on Cos, and appears in numerous additional contexts.³⁷⁹

A total of 39 obverse and 84 reverse dies in 118 combinations is employed for the XIII. issue. The original number of obverse dies is estimated to 41 (+/- less than 1). The relation between names and obverse dies is the following:

Personal name: O1 O2 O3 O4 O5 O6 O7 O8 O9 O10 O11 O12 O13 O14 O15 O16 O17 O18 O19 O20

Aristion	•																						
Demetrios		•	•																				
Stephanos			•	•																			
Arideikes					•																		
Peisandros						•																	
Symmachos							•																
Philippos								•															
--]xippos									•														
Chairylos										•													
Thevgenes								•	•	•	•	•											
Aristoteles											•	•	•										
Zopyri																	•	•					
Python																			•				
Praxagoras																				•			
Praxianax																				•	•	•	•

Personal name: O21 O22 O23 O24 O25 O26 O27 O28 O29

Philitas			•	•															
Kleitos				•	•														
Diogenes						•	•	•	•										
Hellanikos										•			•	•					

Personal name: O30 O31 O32 O33 O34 O35 O36 O37 O38 O39

Kallisthenes			•	•	•	•	•	•											
Epinikos			•	•		•	•	•	•	•	•	•	•	•	•	•			

³⁷⁸ Cf. comments in the conclusion of this part below.

³⁷⁹ Cf. commentary on issue XII above.

The obverse dies are more evenly distributed on the hemidrachms compared to the preceding issue of drachms. However, an increasing intensity in minting activity can be observed in the last half of the issue. Thevgenes and Aristoteles are each represented by five obverse dies, Diogenes with four dies, Hellanikos with three and the two last names, Kallisthenes and Epinikos, with six and nine obverse dies. The number of shared dies between Thevgenes and Aristoteles (O9 and O10) and Kallisthenes and Epinikos (O30, O31, O34, O35, O36) clearly reveals a close connection between the coinages of each name, and also indicates that several obverse dies and personal names were in use simultaneously. In contrast to the preceding issue of drachms, the most active period of minting of hemidrachms was at the very end of the issue, closing with the coins in the name of Epinikos represented by 9 obverse and 18 reverse dies.

Two hoards are of paramount importance regarding the chronology of issue XIII. Altogether 217 out of the total of 261 hemidrachms of this issue come from the hoards in question.³⁸⁰ The so-called Pyle-hoard, discussed in connection with issue XII above, contained 190 hemidrachms in addition to 19 drachms of issue XII. Only one name is absent from the hoard: Aristion – the very first name of the issue.³⁸¹ The hoard was evidently buried after the completion of issue XIII. Hoard 22 is also discussed above in the commentaries on issue XII. A total of 27 hemidrachms of issue XIII make up the majority of the hoard. The first seven names are not represented in the hoard, but only two among the last 13 names are absent. Thus the tendency observed for the preceding drachms is confirmed: the earlier part of the issues (which means the type one of the drachms) did not form part of this hoard, which, then, reveals a shorter time span compared to the hoard 21. The hoard 25 included bronze coins with the name of Praxianax, a name which is also found on the hemidrachms. One issue XIII hemidrachm was found, without recorded context, during random excavations on Cos. An additional three coins in the name of Stephanos and Epinikos were discovered during the excavation of the Asclepieion. The composition of the hoard 21 and 22 together with the occurrence of the new spelling of the ethnic on this issue can be seen as indications toward interpreting the hemidrachms as issued after the minting of drachms had come to an end. The minting period of the didrachms of issue XI was considerably shorter than the long lasting issue of drachms and hemidrachms. The three issues were, however, probably introduced almost contemporaneously.

³⁸⁰ Both hoards contained drachms of the preceding issue XII discussed in the relevant commentaries above.

³⁸¹ The name occurs only on an unique hemidrachm in the Glasgow collection.

XIV. ISSUE

The tetradrachms of issue XIV are the only Coan coin type within the scope of this study which has been subject to detailed study until now.³⁸² In this study the now 143 recorded coins are divided into two types, separated by the square incuse on the reverse of the type one. The size of the flans developed gradually during the issue. The diameter is between c.22-24 mm on the first type and the very first part of the second type, and then becomes increasingly longer until it reaches a typical 25-27 mm in the latest half of the issue. The latest tetradrachms have a certain “scyphatic” appearance, convex with the obverse facing. High quality engravings and regular fabric can be observed throughout the issue. An irregular die-axis is seen on the first type, mostly centred around a 6 o’clock position, but with variations at 1, 4 and 5 o’clock. A higher degree of regularity, now centred on a 12 o’clock position, is found on the second type. However, some exceptions are noted: XIV, 20a (7 o’clock), 28b (5 o’clock), 32a (10 o’clock), 42b (6 o’clock), 46a (5 o’clock) and 47 a-b (5 o’clock). The variation in weight is between 12.97 and 15.38 g.³⁸³ There is probably no significant difference in weight between the first and second type.³⁸⁴ A close comparison of weights between the tetradrachms of issues III and VI reveals only minor variations. The difference is such that we can hardly speak of a significant reduction in weight. The majority of coins in all three issues are found in the interval between 14.80 and 15.24 g: 60% of issue III, 74% of issue VI and 62% of issue XIV. The percentage of coins below 14.80 g is 35 on issue III, 21 on issue VI and 37 on issue XIV. The table of weights reveals a peak at 15.10-15.15 g on all three issues. Average weights are 14.87, 14.92 and 14.77 g on issues III, VI and XIV respectively. The weight reduction of issue XII drachms is c.0.35-0.40 g compared to the preceding drachms of issue VIII. A weight reduction of the same scale on the tetradrachms would imply a weight around c.13.50 g. Thus the deliberate reduction of weight of the drachms is not followed with a similar reduction of the tetradrachms.

The obverse motif is a beardless, young Heracles as observed on issues VII, XI and XIII. The Heracles motif is the most elaborate on this issue of tetradrachms. As previously

³⁸² Requier 1996. Altogether 119 of the presently recorded 143 coins are included in Requier’s study, and only one new obverse and one new reverse die are recorded as additions to his catalogue. The distinguished issue of *diskoboloi* and late hellenistic tetrobols have also been studied in detail, but both belong to earlier and later periods outside the scope of this study.

³⁸³ The unusual weight of 68a of 17.76 g. is most probably caused by a misprint.

mentioned the two reverse types are easily distinguished by the square incuse on the first type. The main motif is a crab followed by a *gorytos* with bow and ethnic above, and a personal name below the crab – all in a square border of dots. Some variation regarding style and minor details is noted. Requier, who published the Coan Hellenistic tetradrachms in 1996, has divided the issue into four groups, and the second group in two series.³⁸⁵ Requier's first group consists of the coins characterized by a square incuse and identified as type one in this study. His second group includes the coins of Klymenos to Timoxenos, in which the exceptional replacement of the *gorytos* with a club is used to further separate the group into two series. Requier's large third group consists of the coins of Kleinos, Leodamas and Xanthippos, and his final group four the coins of Aristomenes and Telesandros. I have few objections to the general sequence of Requier's arrangement.³⁸⁶ However, one major alteration is necessary in order to establish a satisfying sequence. The coins of Requier's group four are most probably among the earliest of the coins without square incuse. The reason for this is threefold: the diameter of the flans, the iconography of the lion's scalp and the position of the ethnic. Firstly, the diameter gets increasingly larger throughout issue XIV. The first type has a typical diameter of 23-24 mm; the last half of the second type 25-28 mm. Requier's group four corresponds with type 1 in diameter. Secondly, a particular iconographical element of the lion's scalp is observed on several dies. This element, a characteristic wavy line seen behind Heracles' ear, is absent on the first type of tetradrachms and also on Requier's fourth group. It occurs on all later dies of the issue. This particular line on the lion's scalp is also observed on additional issues. It occurs on the latest coins of issue XIII, and on the latest didrachms of issue XI. The particular edge is absent from type one as well as the earliest coins of type two of issue XI. Requier's fourth group also carries stylistic elements reminiscent of the earliest drachms of issue XII.³⁸⁷ Thirdly, the position of the ethnic is established, without a single exception, on the last part of the tetradrachms. The position of the letters is now between the crab's claws in contrast to the earliest part where the ethnic is placed well above the claws (with a few exceptions in the type 1). If Requier's fourth group was succeeding the large coinage of Kleinos, Leodamas and Xanthippos this would imply a significant break with the

³⁸⁴ The average weight is 14.60 g on type 1 and 14.81 g on type 2. However, only 37 weights are recorded on the first type, and the coins are generally more worn compared to the second type. It is therefore difficult to decide whether or not the divergence in average weight is caused by natural variation and wear.

³⁸⁵ Requier 1996, 59-63.

³⁸⁶ Which basically follows the sequence presented in Ingvaldsen 1994.

³⁸⁷ The shape of the irregular locks of hair and the long, smooth fold behind the ear of the lion's scalp. Cf. e.g. XII. issue O3.

development observed throughout the issue: a decrease of diameter and a re-introduction of older iconographical elements and position of the ethnic – and it would also be in contrast to the stylistic development observed on additional issues. I have chosen to maintain a division into two main types within the issue, easily distinguished by the square incuse. The variations observed on the second type must be considered as characteristics due to the various hands of die-engravers employed for the issue, and as such not qualifying as criteria for distinguishing the coins into groups or series. A certain stylistic development is observed from the obverse dies of the first to the second type, characterized by a stronger emphasis on the locks of hair and the locks of the mane. A tendency towards a more ornamental treatment of the motif can be observed on the large group of coins of Kleinos, Leodamas and Xanthippos. A stylistic comparison with other Coan issues reveals few obvious similarities. However, the majority of die-cutters employed for the second type of issue XI (where the club is replaced by a *gorytos* on the very latest dies) also produced dies for issue XIV. The O7 of issue XI and O10 of issue XIV is clearly the product of one hand, as are the O8 (XI) and O15 (XIV) and O10 (XI) and O6 (XIV). Obvious parallels between the hemidrachms of issue XIII and the tetradrachms are difficult to find. This is probably due to the difference in size of the flans. The large flans of the tetradrachms carries elaborately and carefully executed motifs, while the rendering on the small hemidrachms is much more superficially performed. The reverse motif on the type one is positioned within a square incuse. The incuse is evidently moulded in the die and not by a square-ended die which was employed for the earlier issues (except issue XI). The incuse is much more distinct compared to the incuse found on the preceding didrachms; although huge variation can be seen even between coins of the same personal name (e.g. compare R9 and R11 of Mikon). Again it seems obvious that several identical die-engravers were employed on the type 2 of issues XI and XIV. The ethnic is spelled ΚΩΙΟΝ throughout the issue. The letters gradually developed towards an increase in size and regularity. The letters of Gnosidikos are small and unevenly positioned. Mikon has a mix between small (R8) and large (R7) letters. The coins of Moschion to Timoxenos have slightly larger and more regular letters, and from Kleinos onwards a highly regular form of large letters is observed.

A total of 13 personal names are represented on the tetradrachms of issue XIV.³⁸⁸ 7 names are exclusively found on this issue (Gnosidikos, Timolykos, Klymenos, Nikarchos, Leodamas, Aristomenes and Telesandros). The name of Moschion (recorded in issues I,

³⁸⁸ The name of Nikagoras might possibly represent two different individuals.

VIII, XIV and XVIII) and Xanthippos (issues I, VI, XIV, XVI, XVII and XX) obviously represent different individuals on the Coan coin issues. Mikon is shared with the succeeding didrachms of issue XV, and must be considered as the same individual that appears on the tetradrachms.³⁸⁹ Nikagoras of the drachms of issue XII is also probably identical with the person behind the homonym on the tetradrachms, and Kleinos from issue XI didrachms is evidently that too, since the same die-cutter has produced the Kleinos-dies of both issues. Timoxenos and Xanthippos also appear on bronze coins of issue XVI, and it can possibly be the same persons as on the tetradrachms.³⁹⁰ This is also the case for Nikagoras, Moschion and Xanthippos from issue XVIII and issues XVII and XX respectively. Two names are recorded as *monarchoi* on Cos: Nikagoras of the year 198/7 and Moschion from the period 195-2. Both persons are, however, too late to be of significance to issue XIV. A few other names are recorded in chronological contexts: Timolykos as *prostatas* c.205-201, Nikagoras as *epimenios* in c.200, Nikarchos as *napoias* in 201/0 and mentioned in an inscription from c.242-205, Kleinos as Victor of the Great Asclepiadai c.224 and Xanthippos who was honoured as *dikastes* c.280. The additional contexts in which the names occur are only datable to the nearest century, and altogether 10 out of the total of 13 names are represented in third century contexts.

16 obverse and 58 reverse dies in 73 combinations have been recorded for issue XIV. The 16 obverse dies appear to be the original number of dies employed for the issue (+/- less than 0.5). The ratio between obverse and reverse dies is unusually high at more than 1:3.6, which implies that a limited number of coins were minted by several of the personal names, and thus the capacity of the reverse dies was not fully exploited. The O1 alone is combined with 11 reverse dies representing three different names. The relation between obverse dies and names is like this:

³⁸⁹ Cf. commentary on issue XV below.

³⁹⁰ Cf. commentary on the bronze coins below.

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	O12	O13	O14	O15	O16
Gnosidikos		•														
Timolykos		•														
Mikon		•	•	•	•											
Aristomenes					•											
Telesandros					•											
Klymenos						•										
Nikagoras(1)						•	•	•								
Moschion								•								
Nikagoras(2)									•	•						
Nikarchos										•	•					
Timoxenos										•						
Kleinos											•	•	•	•	•	•
Leodamas											•	•	•	•	•	•
Xanthippos											•	•	•	•	•	•

The overall impression is very much like the one observed on the hemidrachms of issue XIII.³⁹¹ The dies are evenly distributed until the last part of the issue, where there appears to be an increase in minting activity demonstrated by that numerous names share several obverse dies and thus are likely to have been issuing coins during one and the same period of time. It is also worth mentioning that the three names of type one share one and the same obverse die, and Nikagoras, Nikarchos and Timoxenos, all of them using reverse dies with a club instead of the commonly used *gorytos*, also share three obverse dies.

Only one hoard is known to include tetradrachms of issue XIV. The hoard was probably discovered in 1991 somewhere in the western part of Asia Minor, possibly in the Ephesus-area. The hoard contained perhaps as many as 900 silver coins, mostly Rhodian of the period around c.340-250. Some Ephesian tetradrachms, a Lysimachos drachm and early posthumous tetradrachm and six Coan tetradrachms of the second type of issue XIV are also said to have been part of the hoard.³⁹² From around 1992 onwards an increasing number of this issue of tetradrachms has appeared on the market, and the majority of these coins are probably from the same hoard.³⁹³ However, the unaccountable provenance excludes the possibility of identifying the individual coins from the hoard, and no such attempt has been made in the catalogue of this study.³⁹⁴ The huge range of Rhodian coins in the hoard provides a valuable indication on the likely date of concealment. The didrachm series with a rayed facing head of Helios on the obverse and letters or personal

³⁹¹ The hemidrachms of Kallisthenes and Epinikos share five obverse dies, Kallisthenes uses altogether six and Epinikos nine dies.

³⁹² Cf. Requier 1996; *CH* VIII, 295; Ashton 1992.

³⁹³ Cf. Requier 1996, 53.

names on the reverse are absent. Nearly every other series and varieties from c.340-250 are present in the hoard. The Coan coins (of Kleinos) are said to be of an excellent state, and thus we are provided with a likely date of the close of issue XIV around 250.³⁹⁵

XV. ISSUE

Issue XV is apparently a small and short-lived issue of didrachms. Only 18 coins are recorded and they are all closely related in one type. The flans and fabric are almost identical to the second type of XI issue didrachms. The die-axis is a regular 12 o'clock position, with one minor exception in XV, 4a (2 o'clock). The few recorded weights are between 5.90 and 6.77 g, and the table of weights reveals an identical pattern compared to didrachms of issue XI.

A new obverse motif is introduced on the coins of issue XV: A $\frac{3}{4}$ facing, beardless and young Heracles. The motif is also used on bronze coins of issue XIX. The reverse motif is identical with the XI issue didrachms. It is worth noticing that the crab is followed by a club throughout the issue, not a *gorytos* which replaced the club on the very latest issue XI didrachms and on the majority of tetradrachms of issue XIV. The letter form also follows the pattern from issue XI, and the ethnic is spelled KΩION without exception. The obverse dies seem to have been executed by three different hands. A well-rounded face and a relatively small and tidy lion's scalp are characteristic for the O1, O2, O4, O5 and O6. O3 reveals a smaller face, more irregular and leaner facial features and larger, more irregular locks of the mane. O7 is characterized by the same features, but the face is larger and some parts of the face are rendered in an exaggerated manner. The obverse dies show some resemblance to the earliest dies of the type one of issue XIX. Apparently, some of the die-cutters employed for issue XI produced dies also for the didrachms of issue XV. E.g. the R16 of Kleinos on issue XI certainly comes from the same hand as R6 of Damoxenos of issue XV, and furthermore the XI issue R19 of Philon is the product of the same person as XV issue R7 of Evdoros. The dies of Mikon from the tetradrachms of issue XIV are clearly made by a different engraver than the dies of Mikon of issue XV.

³⁹⁴ XIV, 33a is almost certainly from the hoard.

³⁹⁵ An observation from Ashton 1992, 4. If the majority of issue XIV tetradrachms that appeared on the market during the 1990s comes from this hoard, it would imply that coins of the first type also formed part of the hoard. As noted above, most of the first type coins are significantly more worn compared to the later part of the second type, and is thus following the pattern of the Rhodian content of the hoard.

Only four personal names are recorded on issue XV. Thevdoros is represented exclusively on this issue; Mikon is shared with tetradrachms of issue XIV, Zoilos with didrachms of issue XI and Damoxenos with bronze coins of issue XVII.³⁹⁶ Mikon appears on the latest coins of the first type of issue XIV tetradrachms. Considered the rarity of this name on Cos, it is tempting to identify them both as a single individual. However, the name is recorded twice in the third century in additional sources, so a definite conclusion is hard to reach. A *tamias* of the second or first century is also named Mikon. Zoilos occurs among the preceding didrachms of issue XI as the first name of the second type. The reverse dies of Zoilos in both issues are virtually identical, which is a strong indication towards considering them as one single individual. If so, this implies that issue XV immediately succeeds issue XI, with no significant gap in chronology at all. This also opens for the possibility that issue XV is partly contemporary with tetradrachms of issue XIV. The uncommon name of Damoxenos of issue XVII is probably also the same person as represented on the didrachms (cf. commentaries on issue XVII below). Thevdoros appears in a vast number of additional sources: a Victor at the Great Asclepieia possibly in the year 204, and two different persons as *monarchoi* in c.196-5 and c.190-80 respectively.

In spite of the modest number of coins of issue XV, a total of seven obverse and seven reverse dies in 12 combinations is recorded. The number of coins is far too small to make an estimation of obverse dies worthwhile. The number of original dies employed for the issue is most probably exceeding the number of presently recorded dies significantly. The ratio of obverse and reverse dies of 1:1 indicates that a small portion of the original number of coins of this issue has survived. The relation between obverse dies and personal names is the following:

Personal name:	O1	O2	O3	O4	O5	O6	O7
Mikon	•	•	•	•			
Zoilos	•						
Damoxenos	•		•		•	•	
Thevdoros							•

³⁹⁶ The name of Thevdoros is commonly used on Cos, with 46 entries in the *LGPV*. The name Evdoros listed in the *LGPV* must be rejected as erroneous. The only reference in the lexicon is to the coin XV, 13a, and a closer examination reveals the right part of a theta close to the edge of the coin. Thus the correct reading is Thevdoros, not Evdoros.

The survey of dies could easily be arranged in a much more tidy fashion, making all the obverse dies following each other in a regular pattern. However, the identification of flaws on the dies reveals that they are used in a more irregular sequence, most probably according to the survey above.³⁹⁷ Three out of four names share the first obverse die. This might indicate that the issue had intensive minting periods as we have occasionally observed in issues XI, XII, XIII and XIV as well. Mikon and Damoxenos are represented with four obverse dies each. This, in combination with the ratio of 1:1 between obverse and reverse dies, can probably be considered as an indication towards considering the issue as larger than the surviving number of coins and dies indicates. Thus, we can expect more dies and possibly names to appear in the future.

The didrachms of issue XV are not recorded with provenance from hoards. The similarities between the dies of issue XI and XV, and the occurrence of two out of four names in issues XI and XIV evidently speak of a degree of contemporaneity between these issues. The issue XV immediately replaced issue XI, and was probably partly contemporary with the tetradrachms of issue XIV. Obviously, the issues XII and XIII of drachms and hemidrachms continued to be struck well after the issues XI, XIV and XV had come to an end.

XVI. ISSUE

Issue XVI is among the largest bronze issues from Cos, only outnumbered by issue XIX. The total of 210 coins is all of one single type. The flans are mostly of a regular fabric with a diameter between 14 and 19 mm. The same tendency towards an oval shape of the flans as observed on issue XIII hemidrachms is clearly seen on this issue.³⁹⁸ Also, as seen on tetradrachms of issue XIV, a certain convex shape of the flans (when the obverse is facing) can be observed.³⁹⁹ The die-axis is mostly a regular 12 o'clock position, with minor variations: An irregular die-axis appears on the numerous coins of Bation, the coins of Teisias have mostly a die-axis at a 6 o'clock position and the coins of Mikythos and Xanthippos have without exception regular 6 o'clock position. The recorded weights of this issue are between 1.40 and 3.09 g. The table of weights reveals a cluster around the

³⁹⁷ The state of the relevant dies is noted in the catalogue.

³⁹⁸ E.g. XVI, 4; 28 and 45.

³⁹⁹ E.g. XVI, 44; 48.

interval between 1.90-2.14 g which gradually levels out towards 1.60 and 2.70 g, with only 13 coins being outside this range.

The obverse motif found on this issue of bronze coins is the young and beardless Heracles facing left with almost no exception.⁴⁰⁰ The reverse reveals the well-known composition of a crab with a club beneath, ethnic above the crab and a personal name between the crab and the club. A few dies have the name positioned below the club.⁴⁰¹ The obverse motif is shared with the bronze coins of issue IX, didrachms of issues VII and XI, hemidrachms of issue XIII and the tetradrachms of issue XIV. However, the particular iconographical element of the tied lion's paws beneath the chin of Heracles is present throughout the issue. This feature is only occasionally found on the additional issues with identical obverse motif, except for the bronzes of issue IX. Obvious stylistic similarities between issue XVI and the additional coin issues are hard to find. The dies of the silver coins appears to be much more elaborately executed, with more consistency and regularity in style and details. But the particular type of treatment of eyes and facial features observed on parts of the drachms of issue XII and issue XIII hemidrachms can also be observed on issue XVI. This stylistic pattern belongs to the later part of the silver coins, especially the drachms with the names of Arxidamos and Nikagoras onwards and the hemidrachms of Philitas, Kleitos and Epinikos. A comparison between the hemidrachms and the bronze coins of issue XVI in the name of Hellanikos, reveals that the same die-cutter was employed in the production of both issues.⁴⁰² The reverse dies of issue XVI are very similar in style to the reverse dies of the later part of the drachms of issue XII, and several die-cutters were probably shared between the issues. The ethnic is spelled ΚΩΙΟΝ throughout the issue, except for the very last coins with the only legible name being Pausimachos.⁴⁰³ Some variation in the shape of the letters is observed on the issue, but it is difficult to detect a chronological development in letter form. A tendency towards regularly positioned and evenly sized letters probably dominates on the earliest coins of the issue. Larger and more irregularly positioned letters are seen e.g. on the coins of Herodotus and Archepolis.

A total of 24 personal names are recorded on issue XVI. Five names are only recorded on this issue of Coan coins: Hipparchos, Aischrion, Kaphisios, Agorakrios and

⁴⁰⁰ E.g. XVI, 71.

⁴⁰¹ E.g. XVI, 95; 159.

⁴⁰² Compare e.g. O29 of the XIII. issue and XVI, 92 where a typical style is prevalent, characterized by a low and sloping forehead, large nose and slightly open mouth. It is worth mentioning that the dies in the name of Bation of issue XII and XVI are obviously the product of two different die-cutters.

Pausimachos. The name of Philistes is also recorded on didrachms of issue VII, but this must be a different individual due to the significant chronological gap between the two issues. This is also the case with the name of Aratos which is found in issues XXIII and XXIV - significantly later silver coins. Parmeniskos and Satyros are found on bronze coins of issues XIX and XXI. They can theoretically be identical persons, but are probably a generation younger. Archidamos and Xanthippos are the most commonly found names on the Coan issues in general, and we are certainly dealing with several separate individuals with identical names represented on the coinage in general. The Archidamos of issues XII, XVI and XVII is probably one person, as is Xanthippos of issues XIV, XVI, XVII and XX. The relation between the bronze coins of issue XVI and several silver issues is, supported by additional evidence, also established by the occurrence of identical names: Anaxan[-, Simos and Charmip[- on the XI. issue didrachms; Archidamos, Anaxan[-, Bation and Exaigretos on XII. issue drachms; Hellanikos and Aristoteles on XIII. issue hemidrachms and Xanthippos and Timoxenos of the XIV. issue tetradrachms. The number of identical names on the bronze issues XVI, XVII, XVIII and XX also suggests a close connection between them, but we can hardly expect all these bronze issues to be contemporary. The names shared between them are: Archidamos, Philokles, Anaxan[- and Xanthippos with the XVII. issue; Herodotus and Teisias with the XVIII. issue; Xanthippos, Herodotus, Archepolis and Mikythos with the XX. issue. All the names are known from additional sources with a third and/or second century context, except Exaigretos who is only attested on the coin material. Surprisingly many of the names, 10 out of 24, are known from additional sources dating to the mid-third century:⁴⁰⁴ Philokles c.240,⁴⁰⁵ Archepolis c.242,⁴⁰⁶ Hipparchos c.250,⁴⁰⁷ Simos c.265-226 and c.236,⁴⁰⁸ Aischrion c.225,⁴⁰⁹ Kaphisios c.242,⁴¹⁰ Agorakritos c.242,⁴¹¹ Teisias c.250,⁴¹² Parmeniskos c.260-250,⁴¹³ and Aratos

⁴⁰³ XVI, 126-128.

⁴⁰⁴ In addition, Pausimachos occurs in a context of c.277/6, but this has little relevance to the person of issue XVI. The coins of Pausimachos are evidently among the latest coins of the issue due to the regular use of the ethnic with the new spelling (ΚΩΙΩΝ). They are certainly not belonging to the first quarter of the third century, rather to the latest decades.

⁴⁰⁵ Klee 1918, p. 4, I A 15.

⁴⁰⁶ SEG XII 369, 5.

⁴⁰⁷ IG XI² 287 B, 45.

⁴⁰⁸ Klee 1918, p. 5, I B 11; p. 17.

⁴⁰⁹ SEG XI 414, 6.

⁴¹⁰ SEG XII 379, 13; 380.

⁴¹¹ SEG XII 381; 382, 3.

⁴¹² IG XI² 287 B, 35-6.

⁴¹³ BSAAlex 31 (1937), 287, no. Ib 12.

c.279 and 242.⁴¹⁴ Although a direct connection between the coinage and the additional source material is non-existent, the names can be seen as an indication towards connecting the coinage to the mid- or late third century. Some of the names can be associated with official duties or magistracies in this period. Several are recorded as contributor to epidosis. Archepolis is attested as *theoros* in c.242, Hipparchos as *architheoros* in the third century, Simos as doctor (of Seleucus II) in the mid-third century and as Victor at the Great Asclepieia in 236, Teisias as *architheoros* c.250, Timoxenos as *hieropoios* in the third or second century and Aratos as *architheoros* in the third century. A *monarchos* with the name of Parmeniskos occurs during the years c.175-150, and again after 150 – both of them obviously too late in time to be of relevance to issue XVI.

The considerable number of 24 names, together with the stylistic differences observed within issue XVI clearly indicates that we are dealing with a large and relatively long-lived issue of bronze coins. This issue must be considered in connection with the last half of issues XII and XIII of drachms and hemidrachms. The occurrence of the new type of ethnic is also significant in order to establish the chronology of this issue. One hoard is known to have contained issue XVI bronze coins. Hoard 19 is probably unearthed on Cos, and the year of discovery was certainly before 1912.⁴¹⁵ A total of 10 coins of issue XVI, representing the names of Hipparchos, Simos and Philistes, were found, all belonging to the first half of the issue. The only name paralleled in additional issues is Simos who appears on the didrachms of issue XI. This particular name connects issues XI and XIV of didrachms and tetradrachms closely. They appear again in a firmly dated hoard context around 250. Issue XVI was probably introduced not long before c.250, and certainly continued to be minted well into the last part of the century. 36 coins of issue XVI come from the random excavations on Cos and 71 from the excavations of the Asclepieion. Six of the 24 names are not found on the coins from the Asclepieion, but the missing names are evenly distributed in the early and late part of the issue.

XVII. ISSUE

The 149 bronze coins of issue XVII are divided into two types, the second type characterized by the lack of personal names. The flans are relatively uniform in shape and

⁴¹⁴ *SEG* XII 371, 23; 372a; 372b.

⁴¹⁵ Milne 1912; *IGCH* 1310.

thickness, the typical diameter being between 11 and 13 mm. The oval shape often seen on the previous issue is absent on this issue of bronze coins. The motif is often partly out of flan, which often causes problems when it comes to determine the form of ethnic and to decide whether or not a club and/or name is part of the reverse motif. The die-axis is a regular 12 o'clock position with a few exceptions in both type one and two.⁴¹⁶ The recorded weights are between 0.95 and 2.43 g, with only seven coins exceeding 1.80 g. The majority of coins are found in the interval 1.00 to 1.79 g, with a peak around the interval 1.40 to 1.69 g.

The obverse motif is known from the silver coins of issues III, IV and V: A draped female head, with a distinct and easily recognizable drapery and hair. A border of dots has been introduced as a new iconographical element on the bronze coins. The two types are separated by the omission of the border of dots and by the reverse motif.⁴¹⁷ The reverse motif of type one is made up by a crab, occasionally a club, personal name and ethnic. The identical crab is found on type two, permanently followed by a club and ethnic, but no personal name. Obviously, the draped head must be compared with the (earlier) silver issues with the same characteristic motif. However, few similarities are found. The particular stylistic features from the first type of issues III and IV are absent from issue XVII. General stylistic parallels are difficult to identify also between the second type of the silver coins and the bronze coins. The only traceable likeness is a particular type of hair arrangement with large, round locks of hair as observed on XVII, 76. In general, the draped female head on the bronze coins is evidently the product of much more hasty work, with stylistic drapery and rough, irregularly shaped facial features. A characteristic feature observed exclusively on the bronze coins is a particular arrangement of the drapery. The folds are excessively sharp, far from the naturalistic rendering displayed on the second type of issues III and IV.⁴¹⁸ The ethnic is spelled ΚΩΙΟΝ, ΚΩΙ and ΚΩΙΩΝ. The abbreviated form ΚΩΙ is consistently used on the second type. The new form of ethnic is found on one coin only, a coin in the name of Drakon.⁴¹⁹ The letters are mostly similar in size and with a regular position. However, the letters of the ethnic are often adapted to fit in between the crab's claws, especially when the ΚΩΙ form of ethnic is used. The tendency towards a

⁴¹⁶ XVII, 20, 21, 68, 79, 89, 137, 139.

⁴¹⁷ On some of the coins of the second type it may seem as if the female head has a knot of hair or drapery in the neck, cf. XVII, 135-141.

⁴¹⁸ E.g. XVII, 35.

⁴¹⁹ XVII, 54.

larger and more uneven size and shape of letters, as observed on the drachms and hemidrachms of issues XII and XIII, is not seen on issue XVII.

Altogether 20 names are recorded on issue XVII. The names of Phrasimedes, Evagoras, Pasiar, Orthagoras, Hekatomoros and Drakon have their only appearance on this issue. Archidamos, Xanthippos, Philiskos and Praxianax evidently represent more than one individual, each due to their representation in earlier issues.⁴²⁰ Six names are shared with partly related silver issues: Anaxandros and Philistos (issue XI didrachms and issue XII drachms), Archidamos (issue XII drachms), Praxianax (issue XIII hemidrachms), Xanthippos (issue XIV tetradrachms) and Damoxenos (issue XV didrachms). Seven of the names are also used on bronze coins of issues XVI, XVII, XVIII and XX: Archidamos, Anaxandros and Philokles (XVI), Gorgias and Heragoras (XVIII), Xanthippos (XVI and XX) and Diagoras (XVIII and XX). An additional three names possibly connect issue XVII with the succeeding bronze issues XIX (Praxianax), XXI (Polychares) and XXII (Polychares, Heragoras). Damon who also appears in the very latest issue (XXVI) must quite certainly be considered as a different individual. Seven names are linked to the mid-third century in additional sources: Gorgias c.250-200,⁴²¹ Philistos c.242-200,⁴²² Philokles c.240,⁴²³ Sosistratos c.242,⁴²⁴ Philiskos c.222/1,⁴²⁵ Pasiar mid-third century,⁴²⁶ Hekatomoros c.222/1.⁴²⁷ A few names can be connected with magistracies or other official duties: Philistos as doctor c.215-05 and as *monarchos* c.190-180, i.e. probably too late to be of relevance to the coins of issue XVII; Sosistratos c.242 as *theoros*; Philiskos interestingly enough as *monarchos* 222/1 and Hekatomoros as *hieropoios* in the late third or early second century, and as *monarchos* c.190-75.

The bronze coins of issue XVII are certainly connected to the preceding issues of silver coins (issues XI-XV) and bronze coins (issues XVI, XVIII and XX). Almost 1/3 of the names are shared with the silver issues mentioned above, and more than 1/3 with the bronze issues XVI, XVIII and XX. 15% of the names are shared with the later bronze issues XIX, XXI and XXII. However, this correlation is based on such a small number of names that we can hardly claim to have established a definite connection between the

⁴²⁰ Cf. commentaries on issue I, VI, VII and VIII above.

⁴²¹ Paton & Hicks 1891, 388, 8.

⁴²² *SEG* XXVII, 510.

⁴²³ Klee 1918, p. 4 I A, 15.

⁴²⁴ *SEG* XII, 379, 13; 380, 11. A certain doubt on the reading of this name must be noted.

⁴²⁵ Klee 1918, p. 6 I C, 15.

⁴²⁶ Herzog 1928, 8 A, 4.

⁴²⁷ Klee 1918, p. 6 I C, 15. Hekatomoros is the father of Philiskos who is mentioned in the same source as *monarchos* (cf. note above).

issues. Anyhow, this indication must be kept in mind since a higher percentage of the names on issue XVII is shared with the later issue XIX, XXI and XXII compared to the earlier issues. This can possibly be considered as an indication towards a slightly later date of issue XVII compared to issue XVI. The 20 names suggest that the issue was of considerable size. Only minor developments in style, fabric and appearance are observed, which probably tells of an issue minted during a limited period of time. The single appearance of the new form of ethnic must also be taken into consideration when the chronology of the issue is established. One single hoard reportedly contained a bronze coin of the first type of issue XVII and in the name of Praxianax.⁴²⁸ The hoard 27 was discovered at Calymna during the years 1932-4.⁴²⁹ A substantial number of late issue XII drachms formed part of the hoard together with so-called “incuse-drachms” of issue XXIII, hemidrachms of issue XXIV, two bronze coins of issue XVIII, one bronze coins of the issue XXVI and 54 bronze coins of issue XIX. The long time span of this hoard makes it less useful in dating the early issues present in the hoard. A burial date of c.175 is suggested in this study.⁴³⁰ XVII (and XVIII) seems to be stray coins and their presence in the hoard appears to be more or less coincidental (considered the completeness of the late silver issues and the huge number of issue XIX coins which formed part of the hoard). Issue XVII was probably not part of the major coin stock that was in circulation when the hoard was concealed. 23 coins form part of the material that comes from random excavations on Cos, and 60 are from the excavation of the Asclepieion. Thus, issue XVII outnumbers issue XVI, which indicates that a major part of issue XVII remained in circulation after issue XVI had vanished. Compared to the number of coins from the additional issues, this approximately makes up the percentage expected to be present in random hoards. The relation between issues XVI-XX of bronze coins will be discussed in the conclusion below.

XVIII. ISSUE

A group of 104 small bronze coins with a fairly uniform appearance is compiled in issue XVIII. They are divided into eight types, easily distinguished by the reverse motifs. The

⁴²⁸ XVII, 1, 17.

⁴²⁹ Cf. also the commentaries on issue XII above.

⁴³⁰ Cf. commentaries on issue XIX below.

shape of the flans is almost identical with the previous issue of bronze coins, but the average diameter is slightly decreased to approximately 10 mm. The die-axis is a regular 12 or 6 o'clock position throughout the issue, with a few exceptions.⁴³¹ Weights from 0.73 to 1.97 g are recorded. A strong cluster of coins falls in the interval between 1.00 and 1.50 g. The weights appear to be about 0.20 g below the average weights of the preceding issue of bronze coins and approximately ½ of the bronze coins of issue XVI.

Again the obverse motif is a young, beardless Heracles, now facing left or right. The reverse motif appears in eight different varieties, all of them based on the crab as the major element. The first type has a club and personal name beneath, and ethnic above the crab. The second type is similar, but the club is omitted. The third type is similar to the preceding, but with the ethnic abbreviated (ΚΩΙ). The fourth type follows the pattern of the third, but an unidentified additional symbol is placed between the crab's claws. The fifth type is like the third type, but without a personal name. The sixth type is like the fifth, but the position of the ethnic has changed to be below the crab. The personal name is omitted also on the seventh type, leaving the crab and club as the only motif. The last type is similar to the sixth, but the club is replaced by a *gorytos*. Type three is the most numerous with 18 recorded coins. Only three coins have been identified as being of the sixth type. The additional types are represented by between six and 13 coin each. The Heracles rendering is relatively similar throughout the issue. No characteristic features can distinguish the types further, and it can thus be difficult to decide the type on worn or corroded specimens. A certain likeness with the hemidrachms of issue XIII can be observed. However, one iconographical element is missing: the lion's paws are absent from the silver coins, but clearly present, tied beneath the chin throughout the bronze coin issue. Likewise, it is impossible to identify any characteristic stylistic features on the reverse. The crab is shown with a trapeze-like shape of the shield and stylized legs, but detailed claws, reminiscent of the bronze coins of issue XVII.⁴³² A crab with a round, small shield and very thin, straight and stylized legs, as observed on the bronze coins of Aratos of issue XVI, is also found on the coins of type 2 of issue XVIII with the name of Thevtimidas. In the type seven of issue XVIII is seen a crab with a large, oblong shield and thick, detailed legs with clearly marked joints, very similar to the crab on the coins of Bation of issue XVI. The letter types appear to be identical to the preceding issue XVII. As mentioned above, the ethnic is spelled ΚΩΙΟΝ or ΚΩΙ throughout the issue.

⁴³¹ XVIII, 2, 15 and 15a; XVIII, 3, 35.

Altogether 14 names are recorded on issue XVIII, but one should keep in mind that only a small proportion of the total amount of coins has legible names or names as part of the motif at all. Three names are only found on issue XVIII: Thevtimidas, Pyrgion and Thayminos.⁴³³ 5 of the 14 names are also used on the silver issues XI-XIV: Medon (XI), Stephanos (XI, XIII), Nikagoras (XII, XIV), Symmachos (XIII) and Moschion (XIV)⁴³⁴. Almost one half of the names, 6 out of 14, are shared with additional bronze issues: Teisias (XVI), Herodotus (XVI, XX), Gorgias (XVII), Diagoras (XVII, XX), Heragoras (XVII, XXII) and Klevchios (XXI). Most of the names are discussed under the previous issues. A few of the additional names are known from other sources as well. Thevtimidas is recorded as Victor of the Panatheneia in *c.*200/186.⁴³⁵ Klevchios, also found on issue XXI, is attested *c.*220,⁴³⁶ and again in a context from *c.*200-150. The majority of names are thus firmly placed in the second half of the third century (as well as later) in additional sources.

The duration of this issue, with 14 legible names, must be considered in the light of the omission of names on three out of eight types within the issue. Also, in spite of the lack of an obvious stylistic development within the issue, the possibility of a shorter or longer gap between the types must be taken into consideration. It is not evident that the eight types were issued continuously, immediately following each other in an uninterrupted sequence. Issue XVIII is part of one hoard. The “Calymna-hoard” (hoard 27) contained two bronze coins of issue XVIII together with a single issue XVII bronze coin, 54 issue XIX bronzes and several drachms of issues XII and XXIII and hemidrachms of issue XXIV.⁴³⁷ The suggested burial date is around 175, but the long time latitude of the hoard does not help us much in order to establish a closer chronology of issue XVIII. It seems that the two coins from the hoard are among the latest types of this issue.⁴³⁸ 12 coins of issue XVIII are among the stray finds from the island of Cos, and 41 from the excavation of the Asclepieion – an expected number of coins considered the total number which have survived. It is worth mentioning that XVIII. issue coins did not form part of the sacrificial deposit of a well in the Asclepieion (hoard 34). This indicates that issue XVIII were not in use during most of the period when issues XIX and XXI dominated the bronze coins in circulation.

⁴³² Compare e.g. the Symmachos coins of issue XVIII type one with XVII, 1, 20.

⁴³³ Only Thaymi[is legible on the coins. Thayminos has 5 entries in the *LGPN* and is therefore used as the preferred interpretation. It may as well be Thaymias with only one entry in *LGPN*.

⁴³⁴ Moschion of issue I and VIII are evidently different individuals.

⁴³⁵ *ASAA NS* 25-6 (1963), 197, XXVI B, VI, 26 (*c.* 200); *IG II²* 967 B, 15 (*c.* 186); Klee 1918, 28 (as Victor).

⁴³⁶ Klee 1918, p. 6 I C, 14; p. 7 D 21.

⁴³⁷ Cf. commentaries on issue XIX below.

XIX. ISSUE

Issue XIX is the bronze issue with the highest number of surviving coins. A total of 287 coins of two separate types have been recorded. The types are distinguished by the introduction of the new form of ethnic on the latest type (ΚΩΙΩΝ). 97 coins of the first and 75 of the second type can be identified with certainty. Ten names are recorded on the first and six on the second type, which, together with the total number of survived coins, indicates strongly that the first type was slightly larger in volume and had longer duration than the last type. The flans are of a regular size and fabric throughout the first type and the first part of the second type. The latest coins of the issue often have irregularly shaped flans, slightly oval and/or with deep cracks in the edge of the flan.⁴³⁹ The obverse motif is also partly off flan on a large proportion of the latest coins of the issue. The typical diameter is between 15-17 mm throughout the issue. A regular die-axis around 12 or 6 o'clock position is observed on the issue.⁴⁴⁰ Large variations in weights are recorded: from 2.18 to 5.15 g. The weight table displays a tendency towards two peaks: one around 2.80-3.00 g, and another around 3.20-3.60 g. A comparison of weights between the first and second type reveals that the second type tends to be of lower weights. 18 of 21 coins above 4.00 g are of the first type, and 56 of 75 coins below 3.20 g are of the second type. The coins of both types are, however, quite evenly distributed on the various intervals between 2.80 and 3.90 g (only 10% are below 2.80 and 8% above 3.90 g), so we can hardly speak of two different weight standards.

The obverse motif is a young and beardless Heracles $\frac{3}{4}$ facing, virtually identical with the didrachms of issue XV. A new combination of motifs is revealed on the reverse: A combination of the club and a *gorytos* with bow previously used only as an additional motif following the crab. Minor stylistic similarities with issue XV is observed on the very first obverse dies of the first type.⁴⁴¹ But soon a strong deterioration of style occurs, especially from the second type onwards. On the last part of the second type it can be difficult to recognise the motif. The lion's scalp lacks details and consists only of lines and the rude executed main parts of the scalp. The mane is totally absent, and no locks are seen at all. The eyes are reduced to mere dots, and the facial features are no more than a symbolic presentation of the Heracles motif. The club and *gorytos* are rendered with great

⁴³⁸ XVIII, 7, 66 and XVIII, 82 (uncertain type).

⁴³⁹ Cf. XIX, 2, 122; 132; 148; 154; 156-7; 161.

⁴⁴⁰ As usual with a few exceptions: XIX, 1, 24; XIX, 2, 123-4; 127; 152; 186.

detail on the earliest part of the issue, and even the rope on the *gorytos* is clearly visible – a feature only present on very few specimens of the otherwise splendid and elaborately detailed tetradrachms of issue XIV.⁴⁴² At the end of the issue the club is reduced sometimes to an oblong, elevated field, and sometimes to something more reminiscent of a stick surrounded by a bunch of grapes. A similar stylistic development is also apparent in letters and inscriptions. Apart from the stylistic difference mentioned above, the first type is distinguished by the ethnic form ΚΩΙΟΝ. ΚΩΙΩΝ is consistently used throughout type two. The letters are small and evenly sized on the first type. The letter form continues to be used on the very first specimens of the second type, on the coins of Evkratides. From then on we can observe a rapid development towards larger sized letters with very little space between, and also occasionally irregular position of the letters.⁴⁴³ The particular shape and size of the letters of the second type are closely paralleled on the bronze coins of issue XXI. A comparison of letter types used in identical names in issues XII and XIII reveals important similarities. A small omicron and a small and flat omega are found on the drachms of issue XII in the name of Philinos and the characteristic shape of these letters is repeated on the coins of issue XIX representing the same name.⁴⁴⁴ Small, evenly sized and regularly positioned letters are found on the hemidrachms of Praxianax and again on the XIX. issue coins of the same name.⁴⁴⁵ It is worth mentioning that the silver coins are among the latest half of their respective issues, and the bronze coins are among the earliest in their issue.

A total of 15 names are recorded on issue XIX, ten on the first and six on the second type.⁴⁴⁶ Surprisingly many of the names, eight altogether, are only found on issue XIX: Archon, Pratagoras, Thevdotos, Evphiletos, Lampias, Diomedon, Telesphoros and Evkrates. A few of the first names are shared with preceding issues: Philinos on the latest drachms of issue XII, Praxianax on the last half of hemidrachms of issue XIII and Parmeniskos on the latest part of the bronze coins of issue XVI.⁴⁴⁷ As I have demonstrated above, the names of the silver issues are also linked to issue XIX through the shape of the letters. Six names link issue XIX with the succeeding bronze coins of issue XXI and possibly issue XXII. Some doubt can be raised concerning the coins of Philinos and

⁴⁴¹ Compare e.g. the O1 of issue XV with XIX, 1,1.

⁴⁴² E.g. XIX, 1, 77.

⁴⁴³ E.g. XIX, 2, 152.

⁴⁴⁴ Compare XII, 2, 50a and XIX, 1, 3.

⁴⁴⁵ Compare R44 of issue XIII and XIX, 1, 17.

⁴⁴⁶ Diomedon is shared on both types.

⁴⁴⁷ Coins of Praxianax are also found in the evidently much earlier issue VI.

Parmeniskos, since they are evidently linked to the earlier issues of silver coins mentioned above, and since the names are followed by the ethnic of the old type on issue XIX (i.e. type one). Whether or not they can be considered identical individuals depends on the chronological gap between the beginning and the end of issue XIX. Both possibilities are open. However, the last four names of issue XIX doubtlessly connect this issue to issue XXI. Philinos and Parmeniskos appear in several additional sources associated with the last part of the third and the very beginning of the second century (*c.*250-200, *c.*240, *c.*217-207, *c.*200; *c.*195-175).⁴⁴⁸ The names shared with the XXI. issue are found in additional contexts mainly from *c.*200 to *c.*180: Aglaos *c.*201-200, and *monarchos c.*195-192,⁴⁴⁹ and Agesias and Sopatros *c.*200,⁴⁵⁰ However, several sources are not accurately dated, This means that we have no conclusive evidence which firmly places the names at the beginning of the second century. A few additional persons can be associated with official duties. Thevdotos is found in a context from *c.*230-220 and 188,⁴⁵¹ and again as a priest of Asclepius in 172.⁴⁵² Diomedon, the name linking the two types of issue XIX, is attested as *architheoros* (on Delos) between *c.*200-180.⁴⁵³ Finally we can find Evkrates as *hieropoios* somewhere in the period between *c.*250 and 200.⁴⁵⁴

The very beginning of issue XIX is connected to issues XII and XIII by two names: Philinos and Praxianax. Silver coins in the name of these two persons are found in the hoard 21 (Pyle-hoard), in hoard 22 and 23, all three hoards have a concealment date of *c.*210-200, the last one probably a few years earlier compared to the other two. A large hoard of XIX issue coins was apparently discovered in the 1980s. Seven coins were acquired by a private collector in 1991. All seven belong to the first type of the issue and the names of Praxianax, Parmeniskos and Pratagoras are represented. The hoard, to the extent that it could be reconstructed at the time, was published with a suggested burial date in the second half of the second century.⁴⁵⁵ Before the complete content of the hoard is known, it is not possible to suggest a plausible burial date. The seven recorded coins all belong to the first part of the earliest type with the old form of the ethnic. As demonstrated

⁴⁴⁸ Cf. references in the commentaries on issue XII and XVI.

⁴⁴⁹ Cf. Maier 1959 p. 175, no. 46, 43.

⁴⁵⁰ ASAA NS 25-6 (1963), p. 165 no. IX a, 16 and p. 193 no. XXVI B III, 74.

⁴⁵¹ *Rend.Pont.* 17 (1941), 29, 1; Klee 1918, p. 8 II B, 24.

⁴⁵² Klee 1918, p. 14 II C, 1.

⁴⁵³ *ID* 442 B, 109 (*c.* 180); Paton & Hicks 1891, d, 14 (*c.* 200).

⁴⁵⁴ Paton & Hicks 1891, 388, 9.

⁴⁵⁵ Ashton 1996, 278-9. The hoard is compared with the Calymna-hoard (hoard 27). Some of his conclusions are revised in a later publication, and he is thus opening for an earlier concealment date of this hoard. Cf. commentaries on issue XXIII below.

above, the name of Praxianax connects the early part of issue XIX to the late hemidrachms of issue XIII (and XII issue drachms) which appear in abundance in hoard contexts around 210-200. Thus a burial date long after *c.*200 is very unlikely if we consider the seven bronze coins isolated. However, the large hoard of bronze coins might just as well have contained several additional names and also possibly coins of the second type (with ΚΩΩΝ). The recorded seven coins are much worn and they have all been countermarked (with a crab) which indicates a long period of circulation, most probably into the time when the second type of the issue was minted. Thus a burial date into the 180s can be imagined. Seen in isolation, the seven coins point to a concealment date *c.*200. Four coins of issue XIX were found during the excavation of the Athenian agora. Only one legible name, Telesphoros, is attested, and only the early form of the ethnic is found. Two of the coins, evidently of the first type, were found in an archaeological context of *c.*210-200, which matches perfectly with the chronological indications mentioned above.⁴⁵⁶ The so-called Calymna-hoard (hoard 27) contained 50 bronze coins of issue XIX. The hoard was published in 1936, but only a small part of the bronze coins was examined. However, three names were recorded: Archon, Pratagoras and Lampias, all belonging to the first type. An additional 47 coins of this issue were supposedly part of the hoard, the majority of them carried the countermark of a crab. A selection was acquired by the British Museum, London and the Ashmolean Museum, Oxford. Several coins of the relevant issue have been identified in these collections, but they are not recorded with provenance from this hoard. *If* most of the British Museum coins acquired after the publication of the *BMC* come from this hoard as well as the majority of the coins of the Oxford collection, we can safely assume that both types of issue XIX formed part of the “Calymna-hoard”.⁴⁵⁷ The wide time latitude of the hoard and the lack of recorded details of the Coan bronze coins prevent us from using this hoard further in establishing a chronology of issue XIX. The chronology of the hoard in general is discussed in the commentaries of issue XXIII below. Numerous coins of issue XIX are among the material from the random excavations on Cos (hoard 35: 50 coins) and the finds from the Asclepieion (hoard 36: 133 coins). All names, apart from the last two, are represented on the coins from the Asclepieion. The two names missing can hardly be significant due to the presence of a large number of later issues found within the

⁴⁵⁶ Kroll 1993, note 62.

⁴⁵⁷ The following coins have been identified in British Museum and Ashmolean Museum: XIX, 1, 17 (Praxianax); XIX, 1, 31 (Archon); XIX, 1, 42 (Parmeniskos); XIX, 1, 45 and 50 (Pratagoras); XIX, 1, 53 and 55 (Thevdotos); XIX, 1, 73 (Lampias); XIX, 2, 114-5 and 130 (Aglaos); XIX, 2, 143 (Sopatros) and XIX, 2, 159 (illegible name).

same area. Two additional hoard contexts establish a close connection between the issues XIX and XXI. Three coins were found in the Casa Romana on Cos (hoard 37): Issue XIX in the name of Praxianax and two coins of issue XXI in the name of Aglaos. More important is the cumulative offering hoard from a well at the Asclepieion (hoard 34). 59 coins were found, 24 of issue XIX and 35 of issue XXI.⁴⁵⁸ The first type of issue XIX is evidently linked with the period c.210-200. It is difficult to establish a date for the introduction of the second type, and thus the new form of ethnic. The hoard material indicates clearly that the complete issue was in circulation by the 170s. The second type was, then, probably issued during the period c.200-180/175.

XX. ISSUE

54 coins of one single type make up the issue XX of bronze coins. The flans of this issue are uniform in size, shape and appearance. The irregularities observed on the last part of issue XIX, damaged and/or oval shaped flans, are absent from this issue. The motifs are generally well-centred on the flans. The average diameter of the flans is 11-12 mm, and the die-axis is at a 3, 6, 9 or 12 o'clock position. The weight table shows a peak at 1.40-1.49 g, and the majority of coins are equally distributed in the intervals between 1.30-1.70 g. Thus the weight seems to be slightly below the half of the preceding issue of bronze coins. It is worth mentioning that the weight of issue XX appears to be approximately the same as for issues XVII and XVIII of bronze coins.

The $\frac{3}{4}$ facing Helios as obverse motif is often confused with the $\frac{3}{4}$ facing Heracles of the preceding issue. However, the two different motifs can be easily recognized on fresh specimens, with the lack of the lion's scalp and the long, unruly hair flowing outwards from a central parting as a dominating feature on the coins with Helios. The reverse motif is shared with the preceding issue, with a club, *gorytos* and ethnic and personal name. A stylistic comparison reveals a development towards a less carefully executed obverse motif, as we could also see on the first type of issue XIX. The deteriorated style as observed on the last part on the second type of issue XIX is not repeated on issue XX. The elaborately worked *gorytos*, with a cross-pattern of lines that appears on the earliest coins of issue XX (e.g. the coins of Sosistratos) is also found on the early part of issue XIX (e.g.

⁴⁵⁸ The hoard has not been examined, thus the names represented are unknown.

coins of Philinos). The letters are even in size and regularly shaped throughout the issue. The ethnic is written ΚΩΙΟΝ or ΚΩΙ.

A total of 14 personal names is recorded on issue XX. Almost half of them are exclusively represented on this issue of bronze coins: Kallikrates, Thevgnetos, Didymarchos, Tharsynon and Epidavrios. The names of Sosistratos, Xanthippos and Aristion are obviously represented by different homonym individuals in previous issues (VIII/I, VI/VI, VII). Sosistratos is spelled with the C-form of sigma on issue XX alone. Three names are shared with silver issues: Demetrios with didrachms and hemidrachms of issues XI and XIII, Xanthippos on issue XIV tetradrachms and Aristion on the drachms of issue XII. Six names are shared with additional bronze issues: Diagoras with issue XVII and type one of issue XVIII; the rare name of Mikythos on issue XVI; Archepolis also on issue XVI; Herodotus on issue XVI and type four of issue XVIII; Xanthippos with issues XVI and XVII and finally Klevchios on issues XVIII and XXI. Altogether four similar names appear on issues XX and XVI, and thus seem to indicate a connection between these issues. Several names are attested in the late third and early second century. Sosistratos as *theoros* in c.242,⁴⁵⁹ Archepolis as *theoros* in 242,⁴⁶⁰ Kallikrates as *hieropoios* in the third or second century, as well as c.200,⁴⁶¹ Mikythos probably in 184,⁴⁶² Didymarchos as *architheoros* in 250 and again in c.200,⁴⁶³ Aristion as Victor in c.240 and *monarchos* in 195-2⁴⁶⁴ (cf. references in the commentaries on issue XIII) and Epidavrios as *architheoros* in c.242.⁴⁶⁵

It is worth noting that not one single name is shared between issue XX and issue XIX, and only one name with bronze coins of issue XXI. Issues XVI and XIX do not share any names at all, which implies that issue XX, in spite of being iconographically and metrologically connected with issue XIX, probably belongs to a slightly earlier period of minting. As mentioned above it appears to be a connection between the names of the bronze coins of issue XVI and issue XX. The large issue XVI seems to have been minted over a longer period of time compared to issue XX. The names shared between the issues are evenly distributed over the mid period of issue XVI. Apparently, issue XVI was minted until the last part of the third century, and if this suggestion is correct it would imply a

⁴⁵⁹ Herzog&Klaffenbach 1952, nos. 12, 13.

⁴⁶⁰ Cf. reference in the commentary of issue XVI above.

⁴⁶¹ Paton & Hicks 1891, 406, 10.

⁴⁶² Klee 1918, 8 II B, 4.

⁴⁶³ *IG XI* (2), 287 B, 43; *ASAA NS* 25-6 (1963), p. 196 no. XXVI B V, 58; p. 198 no. XXVI B VIII, 8.

⁴⁶⁴ Cf. reference in the commentary on issue XIII above.

⁴⁶⁵ *SEG XII* 378, 1, 3, 14; 379, 12; 380 (II)

possible time of production of issue XX to somewhere between c.240 to c.210, and it might therefore be partly contemporary with the first part of issue XIX. Only seven coins of issue XX, representing the names of Archepolis and Mikythos, have been found during the random excavations on Cos. A total of 32 coins were discovered during the excavation of the Asclepieion, and nine out of 13 names are represented.

XXI. ISSUE

Issue XXI is among the largest Coan bronze issues. The 176 coins are all of one single type. The average diameter of the flans is 21-23 mm. The shape is mostly regular, but a slightly oval shape is observed on some coins.⁴⁶⁶ The obverse and reverse motifs are occasionally struck off flan. The impression of a carelessly executed series of coins is prevalent throughout the issue. The die-axis is a regular 12 o'clock position with only a few minor divergences. Weights between 5.84 and 10.67 g are recorded, and the weight table peaks at 7.20 g. The majority of coins lie in the interval between 6.80 and 7.69 g. The weight of issue XXI is twice the weight of issue XIX.

New obverse and reverse motifs are introduced on this issue of bronze coins. The obverse motif consists of a laureate head of Asclepius with long, curly hair and trimmed beard facing right, the reverse motif is a *rhabdos* flanked by a personal name and the ethnic, all in a circular border of dots. A direct stylistic comparison with preceding issues is obscured by the introduction of new motifs on issue XXI. Obvious similarities in the treatment of the Asclepius motif are seen on the succeeding (or partly overlapping) issues of tetrobols with Asclepius as obverse motif.⁴⁶⁷ The same tendency towards a more carelessly and partly deteriorated style as observed on the last part of issue XIX is now a feature which dominates the majority of coins of issue XXI. Also, a characteristic shape of letters, with thicker lines which reduces the space between the letters, commonly appears on issue XXI. The ethnic is now permanently spelled ΚΩΙΩΝ (as on the second type of issue XIX).⁴⁶⁸

⁴⁶⁶ E.g. 87, 128.

⁴⁶⁷ Cf. Kroll 1964. The date of introduction of this issue is subject to revision, and Kroll's suggestion of the year 145 as the introductory year is obsolete. The tetrobols were probably introduced around 170, see conclusions below.

⁴⁶⁸ It seems evident that a silver issue which is not included in this study must be considered in connection with issue XXI of bronze coins. The connection between the issues, and the back-dating of issue XXI was not known at the time of compiling of the corpus of this study. Thus the silver coins, a very rare type with only a

Altogether 13 names have been recorded on this issue. Five names are not shared with any other issues: Charidamos, Kleymachos, Kleyphantos, Nikomedes and Patmo[-. Philinos on the drachms of issue XII is the only name shared between issue XXI and silver issues.⁴⁶⁹ Parmeniskos and Satyros are shared with the bronze coins of issue XVI, Polychares with issue XVII and Kleychios with issues XVIII and XX. The names shared between issues XVI, XVII and XVIII might theoretically represent the same individual, but can hardly be used as evidence of contemporaneity between issue XXI and the preceding issues of bronze coins. On the other hand, issues XIX and XXII appear to be closely connected to issue XXI. Issue XIX has six names in common with issue XXI. Some doubt can be raised concerning the identity of Philinos. A person with the name of Philinos is represented on the drachms of issue XII, on issue XIX and again on issue XXI. However, the XIX. issue coins of this name belong to the very first part of the first type (i.e. with the old form of ethnic). We are most probably dealing with two different persons with the name of Philinos: one represented on the drachms of issue XII and the early part of issue XIX, and another person represented on issue XXI. This is probably also the case with the name of Parmeniskos which is represented on issue XVI of bronze coins, the first type of issue XIX as well as on issue XXI. It is worth mentioning that the two names of Philinos and Parmeniskos are among the most common names on Cos, with 41 and 38 entries in the *LGPN* respectively. Conclusive evidence on this matter is not available at present. No matter the identity of Philinos and Parmeniskos, an additional four names from issue XIX anyhow connect the last part of the second type of issue XIX to issue XXI: Aglaos, Agesias, Sopatros and Diophantos. Two of the five names found on issue XXII are also represented on issue XXI (Polychares and Aglaos). Several names are found in additional sources with relatively accurate dating: Kleychios *c.*220,⁴⁷⁰ Satyros *c.*172,⁴⁷¹ Aglaos

few specimens known, are not included in this study. The connection between several, very limited silver issues from the period around 180-160 or later, and the major Coan coin issues of the period is still object to a closer study. At this point the connection between one silver issue and issue XXI can only be pointed out without further examination of the silver coins. The issue in question is represented in the British Museum by one coin only (*BMC* 177). The coin is probably a reduced weight drachm. The obverse motif is Asclepius with a strong stylistic similarity to the motif of issue XXI. Moreover, the two issues shares reverse motif: a *rhabdos* followed by a personal name and ethnic. The silver coin has an initial (K), and the recorded name, Agesias, is also used on issue XXI. An initial is also found on issue XXIII drachms as well as on the succeeding issue of tetrobols. Another similar parallel between silver and bronze issues is found at an even later stage: Silver coins known in a few specimens with the same obverse motif, but a coiled serpent on the reverse are corresponding with large bronze coins with the identical obverse and reverse motif, as well as the same personal name represented, cf. *BMC* 178 and *BMC* 195.

⁴⁶⁹ Possibly with the exception of Agesias, cf. the footnote above.

⁴⁷⁰ Klee 1918, p. 6 I C, 14; p. 7 D, 21.

⁴⁷¹ Klee 1918, p. 15 II C, 51.

c.201/0,⁴⁷² Agesias c.200,⁴⁷³ Kleymachos c.184⁴⁷⁴ and Nikomedes 200, c.188 and c.172.⁴⁷⁵ Three names are attested as *monarchoi* in the period: Philinos c.217-207 and c.195-175; Aglaos c.195-192 and Nikomedes c.202-201.⁴⁷⁶ A few names appears in other contexts as well: Satyros as Victor at the Great Asclepieia in 172, Agesias as *hieropoios* in the third century and as contributor to a library c.200, Kleymachos as priest of Asclepius in c.184 and priest of Apollo in the 170s, Nikomedes as *strategos* of Antiochos in 210 and victor of the Great Asclepieia in c.188 and c.172.

Issue XXI does not form part of any known closed hoard. The offering hoard from a well at the Asclepieion (hoard 34) contained 35 coins of this issue together with 24 of issue XIX. Although the names are not recorded in detail, this hoard reveals a close connection between the two bronze issues. Issue XXI is the issue with the most numerous representation among the coins from random excavations on Cos (80 coins) and is also abundantly represented in the material from the excavation of the Asclepieion (32 coins). A chronological connection between the issues XIX and XXI is evident. Apparently issue XIX type one was issued before the beginning of issue XXI since only the new form of ethnic is used on the latter. It also seems likely that issue XXI was continued after the final part of issue XIX had stopped.⁴⁷⁷ The cumulative hoards reveal that issue XIX, mainly countermarked with a crab, continued to be in circulation for a long time and mostly together with the issue XXI.

XXII. ISSUE

Issue XXII is a small issue of altogether 33 coins of one single type. The flans are of a regular shape and size, with an average diameter of 11-13 mm. A tendency towards an oblong shape of the flans is observed on a few specimens.⁴⁷⁸ The obverse and reverse motifs are often off-centre, partly outside the flan, which often makes the inscriptions illegible or difficult to interpret. The die-axis is mostly a regular 9 o'clock position, but 12 and 3 o'clock positions are occasionally observed. Weights between 0.91 and 2.04 g are

⁴⁷² Maier 1959, p. 175 no. 46, 43.

⁴⁷³ ASAA NS 25-6 (1963), p. 165 no. IX a, 16.

⁴⁷⁴ Klee 1918, p. 8 II B, 1.

⁴⁷⁵ Polybios X 28.6; 29.6; Klee 1918, p. 8 II B, 23; Klee 1918, p. 15 II C, 49.

⁴⁷⁶ Habicht 2000, 329.

⁴⁷⁷ Cf. chapter on single finds above. The coins from the random finds of the island and coins from the sanctuary reveals differences regarding composition which indicates that issue XXI remained in circulation at a later period compared with issue XIX.

⁴⁷⁸ E.g. XXII, 2, 9 and 23.

recorded, with a peak at 1.50 g. The majority of weights are in the interval between 1.30 and 1.69 g (18 of 28 recorded weights). The weight unit appears to be identical to the weight of the bronze coins of issue XX.

The obverse motif is a young and beardless Heracles. The reverse follows the pattern from issue XIX, with the exception of the club which is now omitted, leaving only a *gorytos* flanked by personal name and ethnic. The Heracles motif appears to have a strong resemblance to the Heracles of the succeeding issue XXIII drachms. The stylistic similarity is, however, difficult to describe in detail due to the badly positioned obverse motif, often off flan, and because the majority of coins is in a very worn and damaged state. But a stylistic relation between the two issues is clearly seen e.g. on the XXII, 4 compared with the early obverse dies of issue XXIII. The similarity is particularly due to the long neck and small lion's scalp. The simplicity of the reverse motif makes it difficult to identify stylistic parallels in other issues. The *gorytos* is simple in both shape and detail, without any trace of ornamentation on the quiver. In this respect it corresponds with the last part of bronze coins of issue XIX. The ethnic is spelled ΚΩΙΩΝ or ΚΩΙ throughout the issue. No characteristic features of the shape and/or positioning of the letters are observed.

At least six personal names are represented on issue XXII. One name is illegible – it begins with an A, but is evidently not the name of Aglaos or Archias. All five legible names are shared with additional issues. The name of Evr[- has five possible interpretations, all unusual names on Cos with only one entry each in the *LGNP*. The name of Evrylochos is used on the later, outstanding issue of tetradrachms on Attic weight which is now dated c.170-163 (and thus not included in the present study).⁴⁷⁹ The common name of Philon found also on didrachms of issues VII and XI obviously represents different individuals. Issue XVII of bronze coins shares the names of Polychares and Heragoras, the latter also represented on bronze coins of issue XVIII. Aglaos, quite certainly the same individual, is shared between issues XIX type two, XXI and XXII. Polychares appears also on issue XXI and Archias on the contemporary issues XXIII and XXIV of silver coins.⁴⁸⁰ The name of Heragoras is an unusual name on Cos with only two entries in the *LGNP*, and the only chronological indication in additional sources point to c.82. The other names are all associated with the years around c.200

⁴⁷⁹ Ingvaldsen 2001.

⁴⁸⁰ The name of Archias is recorded on one coin only. The specimen is worn and the reading of the name is connected with a certain doubt. However, additional indications safely links the issues together, making the interpretation of the name quite plausible.

or the beginning of the second century in additional sources. Aglaos is, as mentioned above, attested as *monarchos* on two occasions, in c.201-200 and c.195-192.⁴⁸¹

Issue XXII does not form part of any known closed hoard. The name of Archias is represented on the (at least partly) contemporary drachms of issue XXIII which is part of the Calymna-hoard (hoard 27). Only two coins of issue XXII have been found during random excavations on Cos. 19 coins form part of the finds from the Asclepieion, and altogether four out of six names are represented. Issue XXII is evidently contemporary with the last part of issue XIX, with parts of the long lasting issue XXI and with the silver coins of issues XXIII and XXIV.

XXIII. ISSUE

In spite of its limited size the drachms of issue XXIII are important in establishing the chronology of the latest issues included in this study. Only 28 coins of a single type are recorded, but the small number does not necessarily reflect the original size of the issue (cf. commentaries on the number of dies below). The flans are evenly sized and regularly shaped, and a tendency towards slightly thinner flans with larger diameter is observed when comparing them with the preceding issues of drachms. The average diameter is between 14-15 mm. The incuse on the reverse is obviously moulded in the die itself and not created by a square-end die. The die-axis is a regular 12 o'clock position with only one exception.⁴⁸² The few recorded weights reveal large variation. With the exception of two damaged specimens the weights are in the interval between 2.49 and 3.18 g. The majority of coins is in the weight range from 2.85 to 3.14 g (14 out of 24 undamaged specimens), with a peak around 3.10 g. The average weight is 2.88 g. In spite of the limited number of recorded weights there seems to be a close correspondence with the weight of the reduced drachms of issue XII. This is furthermore supported by the almost exact match in weight between the following issue XXIV of hemidrachms and their counterpart in issue XIII. The relation between issues XXIII and XXIV is so close that they must be considered almost completely contemporary (four out of the five names on issue XXIII are shared with issue XXIV), and we can thus safely assume that the two issues are struck on the same weight

⁴⁸¹ Cf. the commentaries on issue XIX above for reference.

⁴⁸² XXIII, 17a(b).

standard, identical with the preceding issues XII and XIII of drachms and hemidrachms.⁴⁸³ It is worth mentioning that the Coan plinthophoric drachms are significantly heavier compared to the earliest plinthophoric drachms of Rhodes.⁴⁸⁴ The Rhodian 'old-type' drachms were also apparently struck on a lighter weight compared to the contemporary Coan drachms.⁴⁸⁵

Issue XXIII shares obverse motif with several other Coan issues. However, the young and beardless Heracles of this issue stands out from the rest of the silver issues on stylistic grounds. The reverse motif is again a crab with a club beneath, and ethnic above and personal name below the crab. An additional initial (one or occasionally two letters) is present throughout the issue.⁴⁸⁶ The reverse motif is placed within a square incuse which is moulded in the die. The shape and fabric of the reverse connects this issue to the so-called 'plinthophoric' coinage which is introduced by several cities in Asia Minor at the beginning of the second century (cf. commentaries on chronology below). A comparison with other issues reveals a significant stylistic similarity between the drachms and the preceding issue XXII of bronze coins. The Heracles type is separated from the previous types by having a smaller lion's scalp, the mane is toned down as an iconographical element and the neck of Heracles is significantly longer. The unusual reverse has no direct parallels among the other issues. The ethnic is spelled ΚΩΩΝ throughout the issue. The shape of the letters diverges slightly from the letter forms as they appear on the bronze issues. The letters consist of thin lines with short transversely placed bars at the end of each line. A tendency towards this letter type is observed on some of the coins of issues XXI and XXII. Identical letters are found on the succeeding issue of hemidrachms.

⁴⁸³ This confirms a suggestion by Kroll in his study of the succeeding issue of tetrobols. The weight established by the large issues of drachms and hemidrachms (issue XII and XIII) was continued until the time the tetrobols were introduced. The tetrobols apparently corresponds also as hemidrachms of Attic weight. Alexander-type Attic tetradrachms were issued on Cos periodically *c.*200 –170, and a particular issue of Coan Attic tetradrachms were again minted during the years *c.*170-163. The tetrobols, dated by Kroll to *c.*145 onwards, were probably introduced partly contemporary or immediately succeeding the drachms of issue XXIII, i.e. *c.*170. Their absence from the Calymna-hoard (hoard 27) suggests that they were not issued until the issue XXIII and XXIV had ceased. On the other hand, the atypical denomination and the correspondence with Attic weight coinage can indicate that the tetrobols were not intended for circulation with the "ordinary" Rhodian standard coinage, but followed a different pattern of circulation. No hoards can confirm that the tetrobols were in circulation with additional Coan coinage, but then again the hoard material is very scarce. Cf. Jenkins 1989, 102 for a discussion on the atypical circulation pattern of the Rhodian plinthophori.

⁴⁸⁴ The majority of the Rhodian plinthophoric drachms has weights between *c.*2.85-2.95 g, a slight increase in weight compared to the preceding Rhodian drachms. Coan plinthophoric drachms are similar in weight to the preceding Coan drachms, with a concentration around *c.*2.95-3.05 g. Cf. Jenkins 1989, 115 and Arslan 1991 for the weights of the Rhodian coinage.

⁴⁸⁵ The Rhodian drachms have an average weight around 2.70 g, the majority of the Coan drachms is concentrated around 2.90-3.10 g. Cf. Jenkins 1989, 115.

Five names are recorded on issue XXIII. Aratos is also found on the bronze coins of issue XVI, but this is obviously a different individual. Archias is probably shared with issue XXII of bronze coins, but apart from these exceptions, the names are only represented on the drachms and hemidrachms of issues XXIII and XXIV. Aristandros appears only on the coins of issue XXIII. Aratos is attested in additional sources of *c.*242 and *c.*200, Archias and Aristandros in *c.*200 and Aristaios as *monarchos* in *c.*175-150.⁴⁸⁷ Patrokles is known from the coin material only.

16 obverse and 17 reverse dies are recorded on the plinthophoric drachms of this issue. The 1:1 ratio of obverse to reverse dies is unusual, and might indicate a low representativity of the issue. The number of survived coins compared to the number of dies is also very low, which again is a clear indication of the low survival rate of this issue. The number of recorded coins is too low to make any useful estimation of the original number of obverse dies employed for the issue. The connection between obverse dies and names is as follows:

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	O12	O13	O14	O15	O16
Aratos		•	•	•												
Archias				•	•	•	•	•								
Aristais									•							
Aristandros										•	•	•	•			
Patrokles														•	•	
--]ippo[-																•

The amount of obverse dies used on the coinage of some of the names reveals that the output of coins at least periodically during this issue was considerable. Five dies are employed exclusively on the coinage of Archias and four names on the coins in the name of Aristandros. The small number of names recorded on the issue may imply a short-lived issue. The lack of die-combination between the names makes the relative chronology of the issue uncertain, and the void of stylistic development through the issue makes the question of internal chronology even more difficult. Several die-cutters were employed for the issue. The first few obverse dies are probably the product of one and the same individual, but the identical characteristics (esp. in a particular treatment of the locks of the mane) are also observed on the later dies of the issue (e.g. O13).

⁴⁸⁶ On the introduction and possible implication of the initials on the Coan coinage, cf. the chapter on "motifs and style" above.

⁴⁸⁷ Habicht 2001, 328.

The lack of stylistic development, the few names involved in the issue and the similarities in the shape of letters all indicate an issue probably minted during a short period of time. The most important feature as to the chronology of the issue is the presence of the *plinthos* – the square incuse moulded in the reverse dies. A significant number of coinages characterized by this feature appear in Asia Minor during the first decades of the second century. Due to the dominant position of Rhodes in the area at the time, one has suggested, and generally accepted, that this particular type of *plinthophoroi* was introduced on Rhodes and followed by other nearby and/or related states. The plinthophoric coin type is mentioned in Delian inventories around 170 and later.⁴⁸⁸ Furthermore, a Miletian inscription dated to the mid-180s contains a formulation which indirectly attests for the existence of this new type of drachms.⁴⁸⁹ The evidence indicates an introduction of the plinthophoric coin type around 190 on Rhodes. An introductory date as early as in the 180s has been suggested for the Coan plinthophoric coinage.⁴⁹⁰ As we will see below, this date is probably a little too early. Two hoards containing issue XXIII drachms are recorded. The large, composite “Calymna-hoard” (hoard 27) has been mentioned above. The hoard was discovered on Calymna sometime between 1932 and 1934. The hoard is particularly interesting due to the mixed content of silver and bronze issues. As previously mentioned drachms of the latest part of issue XII were found, together with bronze coins of issues XVII, XVIII, XIX and XXVI. The latest coins in the hoard, apart from two pseudo-Rhodian coins which look intrusive, are Coan plinthophoric drachms and issue XXIV hemidrachms. All five names of issue XXIII are represented in the hoard. Only two names of the hemidrachms are missing (Aratos and Hieron), but Aratos is present in the hoard on the drachms. Obviously, the issues XXIII and XXIV were completed before the time of concealment of the Calymna-hoard. Several suggestions concerning the burial date of this hoard have previously been presented.⁴⁹¹ The suggested dates are mainly based on the division between the pre- and post-166 coinage of Cos (a division which no longer holds any support) and the presence of two pseudo-Rhodian coins which now

⁴⁸⁸ Robert 1951, 166.

⁴⁸⁹ The inscription, a treaty between Miletos and Heracleia (*SIG*³ 633, 97-8) was previously dated to the year 173/2, and thus the plinthophoric coinage is often mentioned with an introductory date *c.*173/2. In more recent studies the date *c.*177/6-174/3 has been suggested due to an inscription from the sanctuary of Apollo at Didyma of the year 177/6 (*Didyma*. II. *Die Inschriften*, no. 464, 11-13) in which no division between the old-type and plinthophoric drachms is found, cf. Melville-Jones 1979, 53-4 and Jenkins 1989, 101. However, the first inscription is now re-dated and is providing us with a new chronology for the introduction of the plinthophoric coinage, cf. Errington 1989, 286-7 and Ashton 1998, 227 suggesting that the “Rhodian plinthophoroi probably began around 190”.

⁴⁹⁰ Ashton 1998, 227.

⁴⁹¹ Robinson 1936, 190-4; Kroll 1964, 83-4; Ashton 1996, 278 and Ashton 1998, 227. The hoard is also mentioned in Jenkins 1989, 102.

apparently looks intrusive.⁴⁹² Thus the dating of the hoard must be considered in connection with the chronology of issues XXIII and XXIV, and in particular the dating of the Coan plinthophoric drachms. As noted above, the introduction of the plinthophoric coinage can with a substantial degree of certainty be attributed to Rhodes around the year 190. A comparison of style between the Coan and Rhodian *plinthophoroi* reveals minor differences between the earliest Rhodian and Coan coins. The Coan letter types, with small, transversely placed bars at the end of the main lines of the letters, apparently belong to a slightly later time period compared to the first Rhodian *plinthophoroi*, and the closest parallel is found in the Rhodian coins of the group B as identified by Jenkins.⁴⁹³ This group of Rhodian coins has several names and symbols shared with the first group of Rhodian *plinthophoroi*, but the difference in style and shape of letters (not mentioned by Jenkins) clearly separate the two groups. However, the gap between the Rhodian group A and B *plinthophoroi* can not be long, and most probably group B more or less immediately succeeded the first group. Also, group B of the Rhodian *plinthophoroi* was the first accompanied by hemidrachms. As we have seen, the Coan *plinthophoroi* are closely followed by contemporary hemidrachms from the beginning. The succeeding issue of Coan tetrobols with the Asclepius head on the obverse and a coiled snake on the reverse is absent from the Calymna-hoard, which strongly indicates that they were issued after the plinthophoric drachms had ceased to be minted. The introduction of the Coan tetrobols has previously been suggested to have happened in c.145. This suggestion is based on the assumption that the plinthophoric drachms belongs to a post-166 context.⁴⁹⁴ However, this chronological division holds no support considering the presently known evidence, and an introductory year around 170 is far more plausible. As a consequence, the Coan plinthophoric drachms must belong to the period between the early 180s and the late 170s. Due to the stylistic divergences with the earliest issue of Rhodian *plinthophoroi*, and the natural delay in transferring a newly introduced coin type to other states, a period of minting between the years c.180-175 now appears to be the most probable, and a likely concealment date of the Calymna-

⁴⁹² Ashton 1998, 227 n 13.

⁴⁹³ Jenkins 1989, 103 and plate XXX.

⁴⁹⁴ Kroll presents the following argument: The plinthophoric drachms were introduced c.166. Altogether 20 names or so are recorded on the drachms (this is due to a misinterpretation of names from coins listed in Paton & Hicks 1891; no more than five names are securely identified on the drachms in question). Each name is representing one year of duration and thus indicates a 20 year duration of the plinthophoric drachms. The tetrobols are immediately following the drachms, and this would then have happened around the year 145. Since the introduction of the plinthophoric drachms is significantly earlier, and since no evidence at all indicates a 20 year duration of the issue, the introductory year of 145 of the tetrobols no longer holds support. Ashton suggests that the Coan tetrobols may have been issued as early as the late 170s, a far more convincing suggestion to judge from the presently available evidence. Cf. Kroll 1964, 84; Ashton 1998, 227 and the conclusive commentaries below.

hoard thus seems to be *c.*175 or shortly after. Drachms of issue XXIII also formed part of another, until now unpublished hoard. Approximately 400 silver coins were discovered during road construction between Rhodes and Phinthus in 1931. In the brief survey in *IGCH* only Rhodian drachms are mentioned (as *BMC* 235 ff) of which 24 are located in the collection of New York.⁴⁹⁵ A closer examination reveals that three additional coins in this collection can be identified with provenance from this hoard. The three coins are Coan – one plinthophoric drachm of Aristandros and two issue XXIV hemidrachms in the name of Aristaios.⁴⁹⁶ The hoard is of little chronological significance until the Rhodian content of the hoard is studied in detail. Considered the difference in weight it is noteworthy that a Coan plinthophoric drachm, followed by contemporary hemidrachms, forms part of a hoard otherwise consisting of Rhodian plinthophoric drachms. Without knowing the Rhodian content in detail, comments on chronology of this hoard will be pure speculation. Judging from the Coan content a burial date similar to the preceding hoard is the most probable due to the absence of the succeeding tetrobols. The coin finds from random excavations on Cos and from the Asclepieion reveal one incuse-drachm each unfortunately without providing a closer chronological context.

XXIV. ISSUE

The limited issue of hemidrachms of issue XXIV is closely related to the preceding plinthophoric drachms. The 20 coins are all of one single type. The flans are of a regular shape and size, with a typical diameter of 11-13 mm. The die-axis is at a 12 o'clock position throughout the issue. The weight table reveals that the majority of coins are in the interval between 1.25 and 1.49 g. The weight is apparently identical with the weight of the preceding issue XIII of hemidrachms.⁴⁹⁷

New motifs are introduced on both the obverse and reverse of issue XXIV. A laureate profile head of Apollo is found on the obverse, always facing right. The Apollo attribute of a *kithara* is depicted on the reverse, followed by ethnic, personal name and initial. The only recorded initial is the letter A. However, the edge beneath the *kithara*, where the initial is located, is often off flan which makes an identification of initials impossible on a substantial number of dies. The obverse motif shows a certain degree of similarity to the slightly later

⁴⁹⁵ The hoard is only briefly mentioned in Jenkins 1989, 102 and the Rhodian coins are not included in the preliminary listings presented by the author.

⁴⁹⁶ XXIII, 10a and XXIV, 4b and 6a.

issue of Attic tetradrachms with Aphrodite as motif. The small, detailed eye, straight nose, delicately shaped chin and cheek and the curly locks of hair falling down the neck are features shared by the two issues. However, the tight cork-screw curls as seen on the O10, O11 and O13 are absent from the issue of tetradrachms.⁴⁹⁸ The ethnic is spelled ΚΩΙΩΝ throughout the issue. The shape and type of letters follow the preceding issue of drachms closely. Similar letters with small, transversely placed bars are found (e.g. R4) as well as letters with dots in the line crossings (e.g. R9). Identical letter forms are found also on the early part of the succeeding Attic tetradrachms.⁴⁹⁹ The name of Hieron has the omega turned upside-down.

Six names are attested on issue XXIV. The name of Archias, Aristaios, Patrokles, and Aratos are shared with the preceding issue of drachms. The name of Hieron is also found on drachms of issue XII, but most certainly represents a different individual. Some doubts are connected to the reading of the last name. The letters ΑΣΥΑ are clearly legible, but the additional letters are objects to several interpretations. On the basis of the legible letters the most probable interpretation is Thrasyandros, a name attested 10 times in additional sources mostly dated to c.200 and to the second and first century. The name only appears on this issue of hemidrachms. The names shared with the drachms of issue XXIII links the two issues closely together.

As far as the collected material can tell, a total of 14 obverse and 18 reverse dies was employed for issue XXIV. The ratio between obverse and reverse dies is close to 1:1 which indicates, as was also the case of the preceding drachms, that additional dies are expected to have been employed for the issue, i.e. the representativity of the survived specimens is insignificant. A calculation of the original number of obverse dies is omitted due to the small number of coins. The relation between obverse dies and names is the following:

Personal name:	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	O12	O13	O14
Archias		•												
Aristaios			•	•	•	•	•	•	•					
Patrokles										•	•			
Aratos												•		
Hieron													•	
Thrasyandros(?)														•
(obliterated name)														•

⁴⁹⁷ Cf. also the comments on weights of issue XXIII above.

⁴⁹⁸ The Attic tetradrachms were probably issued during the years 170-163, cf. Ingvaldsen 2001, 91.

⁴⁹⁹ Ingvaldsen 2001, nos. 2 and 4.

Obviously the majority of coins are in the name of Aristaios. A total of eight obverse dies, more than half of the total, was employed for the coinage of this person. Aristaios was represented with only one obverse die in the preceding issue of drachms. The only obverse die employed for two different individuals is the O11. The almost non-existent sharing of obverse dies between the different persons involved in the coinage is observed also on issue XXIII. This may be an indication of a limited volume of coinage in production, and that only one pair of dies, and thus one person, was employed and active at a time - the only possible exception being the hemidrachms of Aristaios. However, the reverse dies representing this name are used almost exclusively in combination with one obverse die only, R9 shared between O6 and O7 being a single exception. The die pattern and personal names mirror what appears to be a neatly arranged issue of limited size and duration, with all dies produced in advance and employed successively in a regular manner, one pair at a time.

Ten coins of issue XXIV formed part of the Calymna-hoard (hoard 27).⁵⁰⁰ All names except Aratos and Hieron (the last two names in the sequence) are represented in the hoard. The Calymna-hoard was most likely buried shortly after *c.*175 and the two late names on the hemidrachms *may* indicate that the issue was still in production at the time of concealment. However, we can not put too much emphasis on the missing two names considering the limited number of hemidrachms in the hoard. As mentioned above, the two issues of drachms and hemidrachms must be considered as contemporary, and thus both belong to the years between *c.*180-175.

XXV. ISSUE

Issue XXV consists of a very limited and rare issue of mono-typed bronze coins. The flans of the ten coins are regularly shaped with a typical diameter between 10 and 11 mm. Parts of the motifs are often off flan on the coins with the smallest diameter. Four out of five recorded die-axes are a regular 12 o'clock position, the last being at 3 o'clock. Only five weights, from 1.07 to 1.75 g are recorded. With the exception of the heaviest, the recorded weights are evenly distributed between 1.07 and 1.46 g.

The motifs of issue XXV are repeated from earlier issues, but the obverse and reverse combination is new. The obverse motif is once again a young and beardless Heracles, occasionally surrounded with a circular border of dots. The reverse motif

⁵⁰⁰ Cf. Commentary of issue XXIII for a detailed discussion of the hoard.

continues the pattern from issues XIX and XX with a club and *gorytos* which is, as on the obverse, sometimes encircled by a circular border of dots. The lion's scalp is tied beneath Heracles' chin. The stylistic pattern of the Heracles depiction which is shared between the issues XXII and XXIII, is absent from issue XXV. Furthermore, no obvious stylistic similarities can be traced between the Heracles as seen on issue XVIII or issue XXVI, and this issue. A circular border of dots appears occasionally on the obverse dies of the succeeding issue XXVI.⁵⁰¹ However, the limited number of coins of this issue, the much worn state of the surviving coins and the huge variation in style between the ten recorded specimens make a comparison between these issues almost impossible. A border of dots might also be used on issue XXV, but evidence hereof is not yet found. The reverse motif of issues XIX and XX does not provide further clues. The motif is evidently the result of a much more elaborate work on issue XX and the majority of issue XIX. Minor similarities can be found, however, between this issue and the last part of type 2 of issue XIX (i.e. coins in the name of Aglaos, Agesias and Sopatros) and also on issue XXII. The club is thick and without knobs, and the *gorytos* has a pointed and slightly bent shape and a smooth surface. No sign of a circular border of dots is found on issue XIX, but since this feature is introduced on the partly contemporary coins of issue XXI, it might be considered as being a firmly established iconographical element in the period in question. The ethnic, when legible, is abbreviated ΚΩΙ throughout the issue. It is difficult to establish a general impression of the type of letters employed on the issue. The visible letters appears to be quite large and of irregular size and position.

The only legible (part of a) personal name is Klei[-].⁵⁰² Both Kleinos and Kleitos were common names on Cos in the second century, and they appear on coins of issues XI, XIII and XIV. A different interpretation of the name is of course also possible.

All the coins of issue XXV have a common provenance since they are only known from the coins from the Asclepieion (hoard 36). The identical reverse motif makes it tempting to consider issue XXV as a complementary unit to the issues XIX and XX. However, the weights of issue XX and issue XXV are so similar that they must have been products of the same weight unit. This impression is supported by the lack of stylistic parallels between the issues. The circular border of dots, the style of the reverse motif and the large, irregularly shaped letters indicate a late chronology of issue XXV. Whether or not the period of production is before or after issues XXII, XXIII and XXIV is almost

⁵⁰¹ E.g. XXVI, 6.

impossible to decide from the presently available evidence. It is evidently a late issue, probably belonging to the first quarter of the second century, but a later date can not be excluded.

XXVI. ISSUE

The last issue of Coan coins prior to c.170 is also a small bronze issue. A total of 13 coins of one single type are recorded. They all have regularly shaped flans of a typical diameter between 8 and 10 mm. The die-axis is without exception a regular 12 o'clock position. The weights are between 0.79 and 1.40 g. The weight table shows a cluster between 0.90-1.20 g, and issue XXVI is, together with issue X issue, the lightest pre-170 bronze coins of Cos. The issues X and XXVI are apparently of an identical weight unit, with the majority of weights between 0.90 and 1.20 g.

The obverse motif is again a young and beardless Heracles. The reverse motif is similar to the drachms of issue XXIII, with a crab, ethnic and personal name, all within a moulded square incuse. The only diverging feature is that the club is omitted on the small bronze coins. Considerable stylistic similarities are observed between the bronze coins and the drachms of issue XXIII. Heracles is depicted with a particular treatment of the lock of hair above the forehead on both issues. A large, curved hair lock, almost like an *anastola*, is seen on e.g. XXVI, 6 and the O8, O12 and O13 of issue XXIII. Also, the strong facial features and aquiline profile are very similar, and it is tempting to consider the possibility that an identical die-cutter was employed for both issues. The two issues are also linked by similarities of the reverse motif. A crab with rounded shield and long claws bent strongly inwards at the end is observed on XXVI, 3 and the R3 of Aratos of issue XXIII. Also, a heart-shaped shield with a straight lower edge appears on both issues, as we can see on e.g. the XXVI, 6 and the R9 of Aristaios of the issue of drachms. On the other hand, a considerable stylistic variety is evidently expressed on the bronze coins which prevent us from being able to make certain conclusions on stylistic grounds alone. E.g. the obverse die of XXVI, 4 and 6, both representing coins in the name of Damon, each reveal a characteristic style which is different from the other and traceable in several additional issues. Certain chronological conclusions are also difficult to draw from the shape of letters of issue XXVI. This is mainly due to the small dies of this issue, which give very little

⁵⁰² XXV, 1 and possibly 3.

room for the inscriptions and thus particular forms of letter types. The ethnic is abbreviated ΚΩΙ on all the coins, and some of the names are apparently also abbreviated.

Only two names are partly or fully recorded on issue XXVI. Damon is without doubt the most commonly found name, as the name of Philis[- has one single appearance on the recorded coins. Damon is not widely attested on Cos with only four entries in the *LGPN*. The name is also found on a particular part of issue XVII. It is interesting to see that the coins in the name of Damon of issue XVII are the only coins of the issue which display a circular border of dots.⁵⁰³ The interpretation of the name of Philis[- is uncertain. It may be Philistos, Philistes or Philiskos all of them commonly found on Cos with between six and 22 entries in the *LGPN*, and represented on issues XI, XII, XVI and XVII. Issue XXVI appears in one closed hoard. The large Calymna hoard contained one coin in the name of Damon of this type.⁵⁰⁴ The majority of bronze coins of the hoard are the 54 issue XIX coins, but also one coin of issue XVII, in the name of Praxianax, and two issue XVIII coins are recorded. The additional issues XII, XXIII and XXIV of drachms and hemidrachms provide a possible burial date shortly after 175.⁵⁰⁵ The bronze coins of issue XXVI are in a relatively fresh condition and must be considered as one of the latest coins in the hoard. The five issue XXVI coins from the random excavations on Cos, and the two from the area find of the Asclepieion does not help us further in the chronology, except from attesting the issue in a late third, early second century context.

Stylistic comparison links issue XXVI to the drachms of issue XXIII. But a connection with issue XVII can also be argued. Both names represented in issue XXVI are probably shared with issue XVII. A circular border of dots is occasionally seen on issue XVII – the part of the issue which shares a name with issue XXVI. Both issues are represented in the Calymna-hoard which did not contain any coins of issue XXV. The weight unit of issue XXVI is complementary to issue XVII. Unfortunately, the evidence of chronology of the small bronze issues is too scarce to make any definite conclusions on this matter. It seems that the closest connection is found between the drachms of issue XXIII and issue XXVI, and the bronze coins are thus associated with the latest silver issues regarding chronology.

⁵⁰³ XVII, 44-50.

⁵⁰⁴ XXVI, 2.

⁵⁰⁵ Cf. commentaries on the XXIII. issue above.

Conclusion

The sequence and chronology of the 26 Coan coin issues depends on a wide range of premises. The overall arrangement of the issues depends mainly on hoard evidence. Additional parameters as style, epigraphy, shape of flans and die-types have in general most value when connecting issues without hoard provenance to the more securely dated issues. Historical events have been omitted as chronological pegs when a connection between events, written sources and coinage are explicitly stated, as is the case e.g. for the date of introduction of the first plinthophoric coinage (i.e. not necessarily the Coan issue). The given years for the beginning and end of the respective issue must therefore not be considered as an absolute date. Its function is to try to give an estimated period of time within which the majority (or most probably all) of the issue have been minted. Obviously, most issues are produced in a limited number of years, but this particular period is impossible to identify to any degree of certainty within the relatively large time-span given as date for each issue. The period of time given for each issue must therefore be considered more as a time period within which the issue belongs rather than an absolute chronology.⁵⁰⁶ Furthermore, the number each issue is given does not necessarily reflect a relative and linear chronological sequence. The chronology and development of issues are too unsystematic to be seen as a linear development. A survey of chronology of the issues might therefore be useful:

Issue:	Denomination:	Period:	Issue:	Denomination:	Period:
I	tetradrachm	395-85	XIV	tetradrachm	280-50
II	drachm	395-85	XV	didrachm	250-40
III	tetradrachm	365-55	XVI	Æ	260-10
IV	didrachm	365-55	XVII	Æ	250-200
V	drachm	365-55	XVIII	Æ	250-200
VI	tetradrachm	355-35	XIX	Æ	210-180
VII	didrachm	355-35	XX	Æ	220-190
VIII	drachm	355-35	XXI	Æ	190-70
IX	Æ	330-250(?)	XXII	Æ	190-70
X	Æ	330-250(?)	XXIII	drachm	180-70
XI	didrachm	280-50	XXIV	hemidrachm	180-70
XII	drachm	280-10	XXV	Æ	180-70(?)
XIII	hemidrachm	280-10	XXVI	Æ	180-70

The commentaries and the survey above clearly reveals that five main groups (group 1-5) of silver coinage were minted on Cos.⁵⁰⁷ Group 1, consisting of tetradrachms and drachms of issues I and II, can be given a rather certain date. Hoard material, fabric and weights indicate a separate chronological group of coins issued during a limited period of time, most probably limited to the years between 390s and 385.

Group 2 consists of three denominations (tetradrachm, didrachm and drachm) of issues III, IV and V. The two first issues are numerous represented in the Coan *corpus*, but the figures do probably not reflect the original size of the issues. The number of personal names represented as well as the number of obverse dies, imply short-lived issues minted during a limited range of years. The high number of surviving specimens is without doubt explained by and connected to the ‘Pixodarus-hoard’ (hoard 12) which provides us with a large proportion of the known coins of issues III and IV. The chronology of group 2 of silver coins must be studied with close reference to the succeeding group 3 of tetradrachms, didrachms and drachms (issues VI, VII and VIII). This group 3 of Coan silver coins have previously been studied with reference to the Coan synoecism in 366, and thus been seen as preceding group 2, the issues III-V. Both groups are represented in the “Pixodarus-hoard” with an established burial date of *c.*341. A complete range of dies and names from the group 2 are present in the hoard, but only about one half of issue VI tetradrachms of group 3. At first sight it thus appears that the hoard was buried before issue VI had come to an end. But the picture is not so clear. It is obviously the *latest* part of issue VI which is buried in *c.*341, so the initial explanation must be reconsidered. First, we must establish the sequence between the groups 2 and 3. Several arguments favour this sequence:

1) The didrachms of group 2 (issue IV) are heavier compared to the didrachms of group 3 (issue VII). Thus, group 2 corresponds with the didrachm weight used by Idrieus and Pixodarus *c.*351-336, and group 3 with the didrachm weight established on Rhodes from *c.*340 onwards, which also became standard weight on Cos in the following periods (didrachms of issues XI and XV). It is in my opinion highly unlikely that the Coan introduced light weight didrachms in the 360s, and then increased the weights in a short

⁵⁰⁶ Thus a chronology more in the tradition of other archaeological artefacts.

⁵⁰⁷ In order to give a better over-view of the discussion in this chapter (“conclusion”) the five groups are labelled group 1-5. This division will not be repeated in other parts of this work.

period in the 350s for then to reduce the weight to what later became standard weight for the century to come.

2) The coins of group 3 are represented in several later hoards with burial dates in the 330s and down to *c.*323. Issues VII and VIII are the earliest silver issues among the single finds of the Asclepieion. The coins of group 2 are not among the single finds.

3) The personal names recorded in group 2 (and group 1) are to a small extent represented in additional sources (i.e. inscriptions). The situation is different for names in group 3. The number of inscriptions increased significantly during the very last part of the fourth century, with a higher correlation between personal names on coins and inscriptions as a result. The vast majority of names from group 3 also appear in the written sources.

The conclusion must therefore be that the group 2 (silver coins with Heracles and a draped female head) precede group 3 (silver issues with Heracles, crab and square border of dots). One point of interest must be considered in relation to this. Were issues VII and VIII contemporary with issue VI? Or can we possibly separate an early part of issue VI which can be dated before the majority of coins in group 2? The question is relevant due to certain stylistic particularities observed on the very first part of issue VI. Some of the reverses appear stylistically to belong to an earlier period than the majority of the issue. But, the evidence speaks against making such a division. The “old-style” reverses are securely die-linked with the additional part of the issue. Also, identical die-cutters have been identified on the early part of issue VI and issue VIII. Additional symbols occurs on the early part of issues VI, VII and VIII, and not later, and three personal names are shared between all three issues. Issue VI appears in a hoard together with a drachm of issue VIII in the name of Lykon, one of the earliest names recorded on issue VI. The sum of indications creates an impression of a single, continuing issue which should not be further divided into separate parts.⁵⁰⁸ As we have seen above the majority of issue VI were in circulation before *c.*340. If we assume that group 2 of the Coan coins were introduced after the synoecism (plausible considered the movement of the capital and thus the mint, and the new fabric observed on the Coan coinage from group 2 onwards), this leaves a relative

⁵⁰⁸ The chronology of group 3 thus excludes the tempting possibility of connecting the reduced weight didrachms of issue VII to the Macedonian supremacy of the island from 332 onwards. The reduced weight was apparently in use about two decades before the Macedonians came in control of the island.

short time period for two major groups of Coan coinage. Anyway, the material leaves few options for additional interpretations, and a date of *c.*365-355 and *c.*355-335 is suggested for the coin issues of group 2 and 3.

Nothing much helps us in establishing the sequence and chronology of the bronze coins of issues IX and X. They have no personal names and do not form part of any recorded hoard. Basically, this leaves us to iconographic and stylistic speculations. Issue IX has initials replacing personal names. Initials are seldom observed on the Coan coinage in general, but are used on the drachms of issue VIII. Issue IX reveals a particular iconographic element of interest: The lion's scalp has paws tied together beneath Heracles' chin – a feature mainly characteristic of later issues.⁵⁰⁹ However, it appears also on coinages of earlier date. The depiction of Heracles has its closest parallel in the Heracles of issue XIII, but the differences are so obvious that a close connection between the two issues is unlikely. Issue IX forms part of the single finds from the Asclepieion, among which the earliest coins silver coins of issue VII and VIII, but with an emphasis on later issues. Issue IX is not among the stray finds from the island in general, in which bronze coins of issue XVI are the earliest. This may be an indication, although not a strong one, towards considering issue IX as preceding issue XVI. The situation is equally unclear for issue X. The crab's shield on the reverse shows some resemblance to the latest part of issue VI. An irregular die-axis furthermore points to an early date. On the other hand, issue X is represented both among the stray finds of the island as well as among the coins from the Asclepieion. An accurate chronology of these two issues is impossible to establish from the present grounds. They appear to be among the earliest bronze coins of Cos, but the suggested dates are indeed uncertain and must be used with great care. They probably belong to the earliest bronzes occurring in stray finds on Cos, and do as such belong to the turn of the fourth century +/- two or three decades. Issue IX can just as well be a minor, short-lived issue connected to issues late in the third century.

Group 4 consists of four denominations, tetradrachms, didrachms, drachms and hemidrachms of issues XI, XII, XIII, XIV and XV. In contrast to the previous groups, some of these five issues are (partly) considerably different in chronology. Several aspects attest the connection between the issues of this group, as well as separate them from previous issues. The division between issue VII and type 1 of issue XI, as well as between issue VIII and type 1 of issue XII has not previously been observed. As I have

⁵⁰⁹ XVI, XVIII, XIX, XXII, XXV, XXVI.

demonstrated above the division is clear since different types of reverse dies were employed for the coins of group 3 and group 4, and furthermore since the weight of issue XII drachms (group 4) is reduced.⁵¹⁰ The internal chronology of group 4 is more uncertain. Issues XI, XII, XIII and XIV were most probably introduced almost at the same time, and issue XV evidently much later. Issues XI, XII and XIV are each divided into two separate types, and the transition from the first to the second type probably happened almost simultaneously. Hoard material attests that issue XIV was completed by *c.* 250. Considered the size of the issues in question, a time of introduction in the 280s is plausible. The first types of issues XI, XII and XIV are evidently smaller compared to the later types, and the minting period can therefore be estimated to *c.* 280-70. This implies a minting period of *c.* 270-50 for the second type of issues XI and XIV. It is impossible to know for certain how the issue XV relates to issues XI and XIV. The two issues of didrachms share die-cutter, so we can assume that issue XV immediately succeeded issue XI. Furthermore, issue XV share name with issue XIV. However, it is impossible to say whether issue XI ended before issue XIV. This might therefore open for a short period of time with simultaneous minting of issues XIV and XV. Another possibility is that issues XI and XIV came to an end at the same time, and were immediately followed by a short period of minting of issue XV. I choose to consider issue XV as contemporary with the last part of issue XIV, which saw a very large and intensive minting period of the large denomination. When issue XIII started is difficult to determine with accuracy. The early part of the issue share names with the last part of issue XI, and also the C-form of sigma is used in both issues, which clearly attests an overlapping between the two. Furthermore, the names shared by issues XI and XIII belongs to the first part of the didrachms, and this force us to consider the introduction of issue XIII with the earliest part of issue XI, *i.e.* *c.* 280-70. Hoards, fabric and epigraphy clearly reveal that issues XII and XIII continued long after the other issues of group 4 had come to an end. Issues XII and XIII are the last silver issues with the old form of ethnic.⁵¹¹ As the bronze coinage clearly shows, the transition from ΚΩΙΟΝ to ΚΩΙΩΝ took place during a decade around *c.* 200, and thus provide us with a

⁵¹⁰ It is interesting to note that the introduction of reduced weight drachms was not followed by introduction of a new iconographical type. The square border of dots was continued in use on the first part of the reduced weight drachms, and was not omitted until the introduction of issue XII type 2. We can only speculate in the reason behind this observation. One possible explanation is that the issuing power did not want the reduced weight drachms to be easily distinguished from earlier drachms. Another possibility is that the older drachms were already out of circulation on the time of introduction of issue XII. The few stray coins of issue VIII (and VII) from single finds may or may not be taken as an indication on continued use of this coins at the time the reduced weight drachms were minted, and is not helping us in this matter.

⁵¹¹ ΚΩΙΩΝ is observed on the very latest die employed for issue XIII.

t.p.q. for the latest silver issue of group 4. Evidently, the period from *c.*250 to *c.*210 witnessed a large output of roughly executed drachms and hemidrachms of issues XII and XIII without company of larger denominations.

The bronze issues XVI, XVII, XVIII and XX must be considered as one group. The high number of shared personal names together with stylistic and/or iconographic similarities, reveal some sort of relationship between these issues. Issue XVI is the most numerous and heaviest issue, weighing almost twice as much as the other bronze coins in this group. Issue XVI is closely connected to the group 4 silver coins, since evidently one, and probably several other die-cutters worked on issues XVI, XII and XIII. Personal names also connect issue XVI to the issues XVII, XVIII and XX, but *not* with issue XIX or later issues. Several names are found in additional sources from the period *c.*250-220. The old form of ethnic is used throughout the issue, except for the last coin on which ΚΩΙΩΝ is introduced. The use of ethnic is thus an exact parallel to issue XIII. The shared die-cutters, stylistic similarities with group 4 silver coins and the appearance in a hoard context of *c.*250 indicate a period of minting of issue XVI from *c.*260-210. The lower chronology is basically due to the use of the new form of ethnic on the latest coins. The chronology of issues XVII and XVIII is more difficult to determine. Both issues are strongly associated with the latest part of group 4 silver coins. About one third of the personal names on the two bronze issues are shared with drachms and hemidrachms of issues XII and XIII. The form of ethnic does not offer any further clues: The earliest types of issues XVII and XVIII have the old form, but the later types show only the ethnic in an abbreviated form (ΚΩΙ), which, of course, excludes the possibility to determine whether the old or new form was used at the time of minting. Unlike issue XVI, it appears that some of the names of issues XVII and XVIII were shared with succeeding bronze issues (XIX, XXI, XXII), which can indicate a later period of minting. This view is supported by the occurrence of several names of issue XVII in inscriptions from the period *c.* 240-200, slightly later than the names from the issue XVI. The multitude of types of issues XVII and XVIII can be taken as a sign of several short periods of minting, which makes it difficult to establish a firm chronology without support of hoard evidence. The two issues were probably introduced after issue XVI, but they were also partly contemporary. A period of minting between *c.*250 and 200, and possibly slightly later, is the most plausible from the present evidence. It is very tempting to consider issue XX to be the smaller counterpart of issue XIX. The weights of the two issues complement each other, and they share the rare $\frac{3}{4}$ facing head motif. But several aspects indicate an earlier time of introduction for issue XX, and issue

XIX obviously continued long after issue XX had stopped. Similarities in style are observed in the early part of both issues, but the deterioration in style as observed on the last part of issue XIX is completely absent from issue XX. Furthermore, issue XX shares a high proportion of personal names with issue XVI, which again does not have one name in common with issue XIX. Issue XX also shares several names with issues XVII and XVIII and the group 4 silver coins.

Issues XIX, XXI and XXII constitute a group of bronze coins with corresponding weights. Issue XIX is introduced slightly before the other issues in this group. Personal names, epigraphy and hoards show that issue XIX was minted contemporary with the very last part of group 4 silver coins (i.e. the end of issues XII and XIII), which again indicates an introductory date *c.*210 for issue XIX type 1. Issue XIX type 2 is connected to issue XXI by personal names, epigraphy and hoards. The single finds of the Asclepieion and the island in general, reveal that issue XXI apparently circulated after issue XIX had vanished from the coin stock in use. Issue XIX witnessed the change from the old to the new form of ethnic. We do not know for sure when the change took place, but a plausible date must be in the years around 200. Issues XXI and XXII were introduced after the issue XIX type 1 came to an end, probably in the decade after 200. Obverse motifs of both issues show strong resemblance to later silver issues: Issue XXI with tetrobols probably introduced in the 170s, and issue XXII with incuse drachms of issue XXIII. Issues XIX type 2; XXI and XXII evidently belong to the period *c.*190 to the 170s. The chronology is also confirmed by the appearance of personal names of these issues in inscriptions dating to *c.*200-170.

The group 5 of silver coins consists of only two denominations, drachms and hemidrachms of issues XXIII and XXIV. The chronology of the two issues is fairly certain due to written sources in combination with the coin material supported by hoard evidence. The most probable minting period is from *c.*180 to *c.*175.

The last two Coan issues prior to *c.*170 are very limited bronze issues. Issue XXV is difficult to determine from a chronological point of view. The ethnic is abbreviated ΚΩΙ, the issue does not appear in closed hoards and no obvious stylistic parallels are observed. All recorded specimens of this issue come from the stray finds from the Asclepieion. The border of dots and abbreviated ethnic suggest a date after 200 or later, but a different chronology can also be argued. The last issue is connected to the group 5 of silver coins through stylistic similarities and fabric as well as by hoard evidence.

Personal names and number of O-dies appears to be more indicative with regards to the estimation of the original size of the issues than the number of recorded coins and/or number of coins from hoards (cf. *fig. 3*). The actual correspondence between the original number of coins issued and the number with which the respective issues are represented in the hoard material, can however be ascertained with regards to general tendencies.⁵¹² The number of personal names can most probably be considered an indication of the duration of the separate issues, but the exact value of information which can be extracted from the number of personal names regarding the question of chronology and duration is not known.⁵¹³

The histogram (*fig. 3*) reveals some general tendencies regarding the silver coinage. Group 1 appears to be a very short-lived and limited group. Group 2 is generally considered to have been much larger in volume and with a longer period of production - a far more important group of issues in terms of contemporary economic significance. If we shift focus from the number of coins which have survived (and hence the rich number of coins from hoards) to the actual number of obverse dies and recorded personal names, the picture is somewhat different: the tetradrachms of the I. issue appears to be a larger issue compared to issue III tetradrachms – in terms of volume and duration. Likewise, group 3 is apparently a considerably larger group of coins compared to group 2. Both groups are made up by three denominations, tetradrachms, didrachms and drachms. Altogether 15 obverse dies were employed for group 2 and a total of 41 obverse dies for group 3. Six different personal names/initials are represented on group 2 and 30 different names on group 3 coins. From these parameters alone we would expect group 3 to be between three and five times as large in volume and duration compared to group 2, although group 2 are far more numerous in the Coan *corpus* as well as in the hoard material. The evidence, then, reveals that the first issue of Coan tetradrachms was of a relatively considerable size compared to later issues. The group 2 silver coins were minted in limited numbers during a short period of time and the group 3 coins are the results of a production of considerable size and duration compared to the group 2. The issues of group 4 are divided into two groups: first tetradrachms and didrachms of comparable volume and duration as to the corresponding denominations of the previous group, and secondly the by far largest silver

⁵¹² Cf. the discussion in the chapter on "hoards" above with regards to the so-called 'Thordeman's law'.

⁵¹³ The question is discussed in detail in the chapter on "personal names and their function" below. The suggestion that names on Greek coinage in general each represents one year (or occasionally six months or two years) is not adopted for this study. Cf. Lorber 1990 and Wartenberg 1992 for an attempt of a year by year dating of a city-state coinage and objections against such an arrangement.

issues known from the period of this study. The group 5 of silver coins are evidently the smallest, both in regard to volume and duration.

A comparison between the chronology, volume and duration of the five groups of silver coins reveals the following pattern: Substantial minting of tetradrachms followed by a limited issue of drachms was minted during the 390s and 380s. The next group of silver coins was probably not introduced until after the foundation of the new capital on Cos. A short period of limited production of tetradrachms, didrachms and drachms followed probably in the first years after this event. This group was immediately followed by a substantially larger group of silver coins which was in production for a longer period of time. A considerable gap in the mint production then occurred, and it was not until well after the turn of the third century that the next group of silver coins came into production. Four denominations were struck from the beginning, but a shift of types occurred around 270, and the two largest denominations came to an end around 250. A period of large output of drachms and hemidrachms followed, and it probably lasted almost until the end of the third century. The limited group 5 of silver coins in the 170s is in comparison almost only an appendix, but was in number of coins and duration probably of the same size as the group 2 of silver coins. The bronze coins reveal a different pattern. Nothing much can be said about issues IX and X, except that they were limited issues that were probably minted in the decades around the turn of the third century. Issues XVI, XVII and XVIII constitutes a numerous and long lasting group of bronze coins minted in the second half of the third century. It thus complements group 4 of silver coins in what appears to be the most productive minting period on Cos. The next group of bronze coins, issues XIX, XX and XXI, are smaller issues minted over a shorter period of time – although they have survived in high numbers due to the rich hoard material. These issues obviously formed part of an intensive coin circulation in the first decades of the second century. The last group of bronze coins are only of minor importance, due to their limited size and duration.

PART 3. ASPECTS OF COINAGE IN THE GREEK *POLIS*

Synoecism and coinage

The coinage of the Greek *poleis* has been, and is still partly being, considered political symbols of recently founded *poleis*. Coinage as an institution has been compared with the modern flag in terms of symbolic value. The coinage is considered a civic emblem, first and foremost expressing autonomy and *eleutheria* and having no economic significance, or according to Moses Finley «---] it was essentially a political phenomenon «a piece of local vanity, patriotism or advertisement with no far-reaching importance»[ref. from Keynes 1930]. Hence the insistence,[--], on artistic coins, economically a nonsense.»⁵¹⁴. The term *synoecism* (gr. Συνοικισμός), literary meaning the joining together of several households, is commonly used to describe the establishment of a *polis*. The content is far from clear or self-evident, and problems occur when the descriptive terminology is subject to close examination. What was in fact established during the process we call synoecisms? Who made the decision and possessed the power necessary to undertake such an act? What was the motivation behind synoecisms? What is the difference between a non-synoecized and synoecized *polis*? The *Oxford Classical Dictionary* gives the following definition: “*Synoecismus* [--], the joining of several communities into one city-state”, and furthermore points to a division of synoecisms between those which are merely a political act and those in which the population is physically moved. The synoecism of a substantial number of

⁵¹⁴ Finley 1973, 166-7. Several other examples can be cited, e.g. in Austin/Vidal-Naquet 1977, 58: “--] in the history of the Greek cities coinage was always first and foremost a civic emblem. To strike coins with the badge of the city was to proclaim one’s political independence.”.

poleis is often used as a starting point of the coinage of the city. It seems, however, that this supposed connection is by far as unquestionable as we might wish it to be. Although important works on the different aspects of synoecism have been published during the last decade, the explicit connection between synoecism and coinage has been met with little interest. Since the starting point of the large Coan coin series of the fourth century onwards has been placed to the year of the synoecism, it is appropriate to discuss in some detail whether or not coinage can be seen as part of the elements involved in the process leading to a synoecized polis. The additional arguments concerning the chronology of the coin material itself (hoards, fabric, types, die-links etc.) were discussed in part 2 above.

The ancient and modern concept of *synoikismos*⁵¹⁵

Ancient authors use the term *synoecism* in various ways.⁵¹⁶ Traditionally it describes a single act, often executed by a single person, like Athens under Theseus. Aristotle describes the formation of a *polis* in a schematic way in the first book of *Politics*. The development, says Aristotle, goes from the *oikos*, through formation of the *kome* which again leads to a *polis* emerged by a synoecism of *komai*. This view is unparalleled in ancient sources.⁵¹⁷ In real life most synoecisms must be considered the result of a political process leading to a reorganisation of a society more or less within the boundaries of a *polis*.⁵¹⁸ The link between democracy and synoecism, for example seen by using the political forces leading to democracy as explanation also for the mechanism behind the synoecism, is often expressed in a self-explanatory way. In his discussion of the Halicarnassian synoecism, Hornblower presents the main division of synoecisms into political and geographical ones.⁵¹⁹ This division must, in his opinion, always be taken into consideration in the discussions on the synoecisms of different *poleis*. Furthermore he

⁵¹⁵ The discussion in the following two chapters does not, of course, purport to be a exhaustive treatment of the topic. The "Greek *polis*", "citizen-ship", "autonomy" and "state" are key-terms in several of the major discussions within the subjects of political theory, sociology and history, and are as such relevant to topics far from the scope of this examination, and little, if any, consensus as to standard definitions of the terminology has been reached. The references in these two chapters are mainly limited to the most recent empirical studies providing a fundament for the discussion of the institution of coinage.

⁵¹⁶ Herodotus VII.156; Pausanias VIII.27.1; Strabo VIII.3.20; Thucydides I.10.2; I.24.2.

⁵¹⁷ The discussion in Plato's third book of the *Laws* (680d-681a) is describing how the laws of the *oikos* is brought together with other laws from other *oikoi* when they gather in larger societies, and the way of organising the rule of the larger unit. The formation of a *polis* is thus described without the link of the *kome* which is particular for Aristotle's description of the creation of a *polis*.

⁵¹⁸ See Moggi 1976; Hornblower 1982, 78-106; *CAH* V, 27-28; Hansen 1995b.

makes a division between mainly political initiated synoecisms in Classical times, and ‘mass-synoecisms’ in Hellenistic times, which were mainly initiated by the need for a more effective exploitation of accumulated material resources. Hornblower also believes that a strong tension between democratic and oligarchic forces could lead to synoecisms. He investigates the political climate in the times of a few synoecisms. He claims that the synoecisms on Peloponnes have a democratic connection, but apart from them it is very difficult to draw a general picture. It is a fact that several synoecisms had their offspring under oligarchic rule, Halicarnassus being only one of them. Hornblower concludes that synoecisms in themselves had no political flavour. It could be used by democratic as well as by oligarchic or aristocratic movements. It could be a reaction to oligarchic rule, but also be initiated by oligarchs in order to destroy alliances often on the pretext of ‘liberating’ certain *poleis*. It has been customary to make a schematic classification of the different types of synoecisms - from purely geographical movements to mere political reorganisation. Synoecisms followed different patterns in different places and periods. In *CAH* J.K. Davis presents a listing of different types of synoecisms (based on Moggi 1976): 1) joint foundation of colonies, 2) forcible transfer of population, 3) imposed amalgamation, 4) creation of an urban centre, 5) creation of a political central place, 6) annexation. He further observes a tendency in the fifth century towards ‘amalgamating’ political units or ‘*towards unifying areas which had hitherto been little more than ethnic or geographical expressions and had no one political central place*’. Lately, however, strong attempts to remove the purely political synoecism from the map have been presented.⁵²⁰ Mogens Herman Hansen has recently forwarded strong arguments against the political synoecism as a historical significant element.⁵²¹ He mentions only two “true” political synoecisms which the ancient sources mention. The first is the mythical synoecism of Attica by Theseus.⁵²² However, the anachronistic element in the mythic tales of Theseus’ acts prevents us from putting too much emphasis into the use of the word “synoecism” in relation to the creation of a *polis* in this case. No constitution or formal articulation of criteria of citizenship or other forms of participation in the established organisation exists, and the changes involved in the supposed “political” synoecism does therefore not correspond with criteria we can identify as a precondition for the establishment of a *polis*

⁵¹⁹ Hornblower 1982, 78-106.

⁵²⁰ Demand 1990, 9-10; Hansen 1995b, 56 n 46, «purely political synoecisms are unattested, probably because they are pure fiction».

⁵²¹ Hansen 1995b, 55ff.

in historical periods.⁵²³ The second “true” political synoecism is an unsuccessful attempt in Ionia. According to Herodotus it was suggested by Thales of Miletus that the Ionians should create a *bouleuterion* in Teos common for all the Ionian *poleis*. They should remain urban centres, but their status would be altered from *poleis* to *demoi*.⁵²⁴ None of these two examples can in any way be used as arguments for the existence of political synoecisms in the archaic, neither for the classical period. Hansen concludes: «As far as we know the history of Greece, there is no example of a synoikism whereby a polis was set up through an agreement between a number of settlements by which each surrendered (some of) its self-government to a set of political institutions convened in one of the settlements but, in all other respects, was left as it was. All well attested examples of polis formation by synoikism seem to have involved a physical synoikism as well as a political one[--].».⁵²⁵ But the non-existence of a purely political synoecism does not, however, exclude political reasons, alongside others like wealth, power, trade and defence, as a major force behind a significant number of synoecisms. Hansen further identifies four main types of synoecisms.⁵²⁶

- a) a *polis* is created by merging a number of *komai* or *demoi*
- b) a *polis* is created by merging two or more *poleis*
- c) a *polis* is reinforced by absorbing one or more neighbouring *komai* or *demoi*
- d) a *polis* is reinforced by absorbing one or more neighbouring *poleis*

According to the division above, the Coan synoecism seems to be of the second type

The ancient and modern concept of *polis*

This leads to another essential question: how do we understand the term *polis*? The modern ideal conception of the creation of *poleis* is that the *synoikismos* created the *polis* of which the foremost idea was *autonomia*. Lately, however, large cracks have appeared in this neat pattern. It now seems more and more doubtful if the synoecisms in most cases

⁵²² Thucydides 2.15.2 where the transfer of the assembly and officials to Athens is described. Cf. also Isocrates 10.35 and Plutarch, *Theseus* 24-5.

⁵²³ See Manville 1990, 55-8 on the discussion and further references on the Athenian synoecism.

⁵²⁴ Herodotus 1.170.3.

⁵²⁵ Hansen 1995b, 56.

actually were the starting point of the *poleis* in general. The term ‘autonomous *polis*’ and thus the widely used ‘Greek autonomous coinage’ is fragmented into almost meaningless phrases. The overripe conception of the coinages of the Greek *poleis* as a sign either of a completed synoecism and/or on autonomy deserves a reconsideration.

If we can prove that a *polis* existed prior to the synoecism in which it took part on a later stage, we must also assume that the institutions which were a precondition for organising a coinage could exist before the synoecism was formally undertaken. If this is the case, there is no longer any reason for using the synoecism as a starting point for any given coinage if it is not explicitly supported by additional sources. In Mogens Herman Hansen’s discussion on *komai* contra *poleis* he investigates some cities and their political status prior to the synoecisms.⁵²⁷ Although based on rather few examples, the results seem indisputable. Several cities in the classical period were undoubtedly *poleis* in the political sense before they were synoecised. The subjects for this examination are Elis (synoecised 471), Mantinea (c. 464-59), Tegea (c. 460), Heraea (c. 490 or c. 370) and Olynthus (432). At Elis, where substantial epigraphic evidence exists, several decrees dated before the synoecism are given by the Eleians, and refer to a popular assembly, a council of five hundred and different boards of magistrates. There is even a probable mentioning of Elis as a *polis*. The results from the excavations of Elis matched with Pausanias also help us when it comes to the topographical definition of the city. It seems obvious that Elis was a *polis* both in the political as well as in the topographical sense prior to the synoecism in 471. Another example is found on Rhodes, the large neighbouring island of Cos. The three cities of Cameirus, Lindus and Ialysus are well attested as independent *poleis* before the synoecism in 408/7, evidently through the use of the city ethnic and the mentioning of the three cities individually as *poleis*, either in the urban sense or as political communities.⁵²⁸ Evidently, cities and/or political centres were often described as *poleis* before they formed part of a synoecism.

We must then, in short, generalize some of the parameters which decide whether a habitation could be called a *polis* by ancient authors or not. It seems as if the confusion between the term ‘city-state’ and ‘*polis*’ has created a mismatch between the ancient

⁵²⁶ Hansen 1995b, 58

⁵²⁷ Hansen 1995b, 58-9.

⁵²⁸ The use of ethnic is attested, cf. Meiggs-Lewis, *GHI* 7 (Ialysioi); Herodotus 7.153.1 (Lindioi); repeated use of the three ethnics in the Athenian tribute quota lists between 454-414. The three cities are described as *poleis* on several occasions, cf. Herodotus 1.144; 2.182, 3.47; Thucydides 8.44.2; Diodorus 13.70.2.

concept of a *polis* and modern scholars' use of the word.⁵²⁹ Some recent studies providing empirical data can be immensely helpful in this matter. In his doctoral thesis from 1996, Thomas Heine Nielsen investigates the concept of *polis* with an emphasis on Arcadia in the Archaic and Classical period.⁵³⁰ After his examination of the contexts in which *polis* occurs in Xenophon, he makes the conclusion that “*Xenophon uses the word polis only about communities that were centres of political communities, and in this respect he conforms to ordinary ancient usage, [---].*”, and points to the analogue use of the word by Hecataeus, Herodotus, Thucydides, Aeneias and Ps.-Scylax.⁵³¹ Thus it seems that in the ancient concept there is a strong connection between the urban and political aspects in the use of the term *polis*. A comparison between selected Archaic (written) sources, the early poets and the basic elements of Aristotle's concept of *polis* reveals five essential characteristics of the *polis* as political community:⁵³² 1) participation in meetings of the *ekklesia* and *boule*, 2) distinction between the *demos* and foreigners, 3) political acts by the adult male citizens, 4) expressed ideal that members of the *polis* would encounter justice and 5) common place of residence.⁵³³ We may consider these characteristics as the core of the ancient political concept of the *polis*, and thus valid in the Archaic through to the Classical period.⁵³⁴ The ancient concept, then, puts emphasis on both the political and the geographical aspect of the communities labelled as *poleis*, although they are not expressed simultaneously. We should therefore always keep in mind the nature of the work and the audience to the ancient source in order to determine in what meaning the word is used.

As for Cos herself, evidence speaks of at least two communities, mentioned by ancient authors as *poleis* prior to the synoecism. As we have seen above the ‘ancient capital’ of Cos, Astypalaea, was called a *polis* by Strabo. Furthermore, Thucydides gives us the name of another *polis*, Kos Meropis, in the following passage:

⁵²⁹ This confusion was made evident when the tribal community of Eutaia was rejected as being a *polis* by a modern historian (Roy 1972), in spite of being explicitly called a *polis* on three occasions by Xenophon (*Hell.* 6.5.12).

⁵³⁰ Nielsen 1996, esp. 13-16, 18-20.

⁵³¹ Thus referring to Hansen 1997; Hansen 1996; Hansen 1995; Flensted-Jensen 1995; Flensted-Jensen/Hansen 1996.

⁵³² Cf. Hansen 1998, appendix II “Aristotle's Definition of *Polis* at *Pol.* 1276b1-2”; Manville 1990, 53.

⁵³³ Cf. Aristotle, *Politics* 1260b-1261a: “To be fellow citizens is to be sharers of one *polis*, and to have one *polis* is to have one place of residence”. This does not exclude the population from cluster in several areas within the boundaries of one and the same *polis*. The creation of a *polis* by merging several habitations was particularly wide-spread on the island, Cos and Rhodes are only two of several examples.

⁵³⁴ See Anderson 1984 for a comparison and summary of the concept of *polis* of Aristoteles and Plato. His study emphasize the theoretical approach towards the “ideal” state in the moral sense expressed by the two antique authors.

“Arriving at Kos Meropis on his voyage, he [the Spartan admiral Astyochus] destroyed the city [polis] which was unwallied and in ruins caused by an earthquake [---].”⁵³⁵

As mentioned in the introduction above, there is also a strong possibility for the existence of one (or more) habitations on Cos around 400 which can be labelled *poleis*. The essential point is, however, to establish the existence of more than one *polis* on Cos prior to the synoecism in 366.

The connection between synoecism and coinage on Cos: Fact or fiction?

As we have seen the question whether the synoecisms in general was the starting point of the *poleis* is a crucial one. The answer has usually been yes, especially when it comes to the traditional connection between coinage and synoecism. Cos is far from being the only *polis* where the year of the synoecism is used, almost automatically, as a starting point for the city’s coinage.

But, as we shall see no explicit statements link the coinage to the synoecism – in fact it seems that the initiation of an elaborate coin system was introduced independent from the synoecism on Cos. We must therefore look closer into the structural differences in the pre- and post-synoecised society to see if any institutions or offices which can be connected to the coinage were affected by the synoecism. To investigate these matters further we need to examine the explicit connections between the Coan synoecism and the Coan coinage.

There are no doubts about the fact that coins were issued on Cos, in the name of the Coans, prior to the synoecism. Evidence showing that the regular Coan coin series - with ethnic, city-badge and struck on Rhodian weight standard - started a decade or two before the synoecism, will be presented below. The question is: what is left of the connection between the Coan coinage and the synoecism in 366/5? Sherwin-White points out that the *diskoboloi*, a fifth-century Coan coinage: «can [-] be regarded as evidence not of political union but of a monetary agreement, by which a common coinage was to be minted for the use of more than one independent community on the island» - this might be the general picture of the coinage in every *poleis*. How, then, can the supposed connection between

coinage and synoecism be explained at all? Does it make sense to speak of the coinage of a synoecised *polis* as ‘evidence of a political union’?

Identification of ‘pre-synoecism’ issues on Cos

So far no one has made serious attempts to question the link between the introduction of the Rhodian weight coinage on Cos and the synoecism in 366. The following arguments will show that this link must be rejected., Firstly through an analysis of the hoard evidence and secondly through the identification and re-dating of the first coin series on Rhodian standard issued on Cos.

Three coin hoards are significant in order to establish the chronology of the earliest tetradrachm series minted on Cos. The first hoard was discovered before 1856 in the western part of Asia Minor – possibly near Halicarnassus in 1853. The hoard yielded an unknown number of coins of which only four have been recorded.⁵³⁶ The four identified coins are two tetrobols of Hecatomnus, one tetradrachm of Samos and one tetradrachm of Cos.⁵³⁷ The tetrobols of Hecatomnus can be dated c.390 – 380.⁵³⁸ The Samian tetradrachm bears the name of *Epios* and is dated by Barron to c.380. The Coan tetradrachm bears the name of *Persias*, the name initiating the earliest Coan tetradrachms.

The second hoard of interest is less useful due to far wider time span. Hoard 10 (*IGCH* 1218), was unearthed in the western part of Asia Minor before 1930. Altogether 80 coins from this hoard are now in the archaeological museum in Istanbul, but it is not known if this constitutes the entire hoard. Civic issues of Ephesus make up the majority of the hoard with 67 specimens, all belonging to the so-called ‘straight wing’ type. The rest is formed by Mausollus (4)⁵³⁹, Cnidus (6), Colophon (1), Samos (1) and Cos (1). The Samian tetradrachm bears the name of *Moriades* and is associated with the period 370-65.⁵⁴⁰ The

⁵³⁵ Thucydides 8.41.2.

⁵³⁶ Waddington 1856, 61. The coins mentioned by Waddington were later acquired by Cabinet des Médailles, Paris. The hoard is also discussed in Konuk 1998, 45-6, Barron 1966, 117 and Gardner 1882, 256; see also *IGCH* 1205; Regling 1917, 255, 257; Newton 1865, 226.

⁵³⁷ See commentaries on issue I above for the references and chronology of these three hoards in general.

⁵³⁸ Konuk 1998, 36. The two coins belong to the first and third of altogether four classes of Hecatomnus issues of Milesian weight. Konuk puts the introduction of the fourth class to c. 379 presupposing that the third class ended c.380.

⁵³⁹ Konuk 1998, nos. 83e, 139b, 181a, 214a. Konuk suggests a closing date c.350.

⁵⁴⁰ Barron 1966, 117.

Coan tetradrachm represents the name *Moschion* and is undoubtedly included in the I. issue of tetradrachms issued on Cos. It is however one of the latest names in use.⁵⁴¹

The third, and by far the most important hoard, is the so-called ‘Hecatommus hoard’, a hoard of crucial importance for the chronology of the Ionian and Carian coinages in the late fifth and early fourth centuries. The hoard is still under reconstruction and is so far only partially published.⁵⁴² A detailed treatment of the hoard and its implication concerning the chronology of the earliest coinage of Cos is found in the commentary on the I. issue in Part 2 above. The examination of the three hoards mentioned above provides us with a most interesting conclusion: The large issue of Coan tetradrachms on Rhodian weight with the patron deity Heracles as obverse motif and the *parasemon*, a crab, on the reverse and issued in the name ‘of the Coan’ as a political unit, was minted several decades before the synoecism. The hitherto supposed connection between the synoecism and the beginning of the Coan coinage is therefore no longer valid.

Was there a synoecism in 366?

We must then examine the sources that inform us of the Coan synoecism: Was there a synoecism in 366 at all, and if there was, of what kind?

It is general consensus today that the Coan synoecism can be dated to the year 366/5. The events around 366 have been treated in detail by S.M. Sherwin-White in her impressive study from 1978⁵⁴³ and in more general terms in studies from 1982 and 1989.⁵⁴⁴ The ancient sources are few and scarce. In fact, the number of sources which explicitly deals with Coan domestic affairs in 366/5 are limited to two:

«While these things were going on, the Coans transferred their habitation to the city [πόλιν] they now inhabit and made it a notable place; for a large population was gathered into it, and costly walls and a considerable harbour were constructed. From this time on its public revenues and private wealth constantly

⁵⁴¹ Moschion shares obverse die with Athanion and Xanthippos. These three persons are the latest represented on the earliest tetradrachm issue of Cos as opposed to Persias who was represented in the previously mentioned hoard. On this background it would be tempting to associate the introduction of the Coan series with the reign of Hecatommus, and the closing of the series with Mausolus, but this assumption is impossible when we consider the composition of the ‘Hecatommus-hoard’, see below.

⁵⁴² Konuk 1998, 55-59; *CH* 8, 96; *CH* 5, 17. As mentioned above a joint publication for *CH* 9 is being prepared by R. Ashton, K. Konuk and A. Meadows.

⁵⁴³ Sherwin-White 1978, esp. 43-4, 187-192. A general historical outline is presented here, in Part 1.

⁵⁴⁴ Kabus-Preissshofen 1989, 19; Hornblower 1982, 103-4.

increased, so much so that it became in a word a rival of the leading cities of Greece.»

(Diodorus XV.76.1-2)

«The city [πόλις] of the Coans was in ancient times called Astypalaea; and its people lived on another site, which was likewise by the sea. And then, because of a riot [στάσις], they changed their settlement to the present city [πόλις], near Scandarium, and changed the name to Cos, homonymous with the island. Now the city is not large, [---].»

(Strabo 14.2.19/657)⁵⁴⁵

Neither Diodorus nor Strabo use the word *synoikismos* directly to describe the events in 366. A geographical relocation has obviously taken place in this year, but further investigation is necessary in order to reach conclusions on the political content and social implications created by these events.

Was there a political union prior to the synoecism?

Few traces of the Coan political constitution and/or social organisation have survived from the period prior to 366. However, three significant facts indicate the existence of a political union on Cos before 366. Firstly, the Coans were listed as *koioi* in the Quota list of the Delian confederacy of which Cos is an attested member state from 451/50 onwards.⁵⁴⁶ Secondly, the Coan's appearance as a single member of the Dorian Pentapolis in the fifth century may indicate a politically unified *polis*.⁵⁴⁷ Thirdly, the Coans issued wonderfully executed coin series in the mid-fifth century. The *diskoboloi*, named after the obverse motif, bears the name of the island and the Coans in general (ΚΟΣ, ΚΩΣ, ΚΩΙΟΝ). Unfortunately, none of these three indications are conclusive. The Athenians' description of non-synoecised islands in the Quota lists followed no general pattern. In some instances, the name of the island was given, while in other the individual cities were

⁵⁴⁵ Translations are based on the texts as they appear in the *Perseus Project*, section of Greek texts.

⁵⁴⁶ *QL* IV, 4, 15.

⁵⁴⁷ Herodotus I, 144, 3.

listed.⁵⁴⁸ Similarly, Herodotus does not follow a consequent way of describing islands, non-synoecised settlements or *poleis*. Obviously Cos had only one vote in the Dorian pentapolis, and was listed after the name of the island, in contrast to Rhodes where all three cities are listed as individual *poleis*. However, in other passages Herodotus use the term *polis* on the non-synoecised island of Rhodes.⁵⁴⁹ Thus, his statement of Cos as *polis* in connection with the Dorian pentapolis provide us with no decisive evidence. A useful investigation of the problems concerning how islands were mentioned in public context was recently presented by Gary Reger.⁵⁵⁰ He describes it as common for multi-polate islands to act as a unit towards external powers. This is why the Amorgioi, Keioi, Koioi, Lemnioi, Ikioi etc. are listed in the Quota lists by the name of the respective islands, and not by the contributing *poleis* within each island. It was obviously common practise to create *synteleiai* between the *poleis* on each island in order to co-ordinate the payment of tribute to Athens. Also, the Coan tribute is occasionally divided into two parts, maybe an indication on the existence of two contributing *poleis* on the island.⁵⁵¹ The coin series issued in the name of the Coans in the mid-fifth century can not be regarded as an indication on a synoecism prior to 366. Similar parallels of island issues minted prior to the respective synoecisms are numerous. These coin series must be considered island-wide issues to be used on islands with more than one *polis*.⁵⁵² The connection between coinage, the use of ethnic and synoecism is far from established, and it is at present too uncertain to be used as more than vague indications. However, the statements of Thukydid (8.41.2) implying that Kos Meropis was a *polis*; the occurrence of the so-called Athenian Coinage Decree at Kos Meropis⁵⁵³; Diodorus' (XV, 76, 2) and Strabos' (657) accounts for the synoecism in 366, and the old *polis* of Astypalaia tell us that Cos was at least *bipolis* prior to 366. A joint coinage between these *poleis*, with ethnic in common and the occurrence of an official (represented by personal name on the coins) acting on behalf of the Coans in

⁵⁴⁸ The cities of Rhodes and Carpathus were listed separately, while Ceus, Amorgos and, possibly, Cos were listed with the name of the islands.

⁵⁴⁹ Herodotus II 178, 2.

⁵⁵⁰ Reger 1997.

⁵⁵¹ Observed by Bean&Cook 1957, 125; cf. Reger 1997, 454.

⁵⁵² On Lesbos (ΛΕΣ), Amorgos (ΑΜΟ) and Mykonos (ΜΥΚΟ). If the chronology for the first Coan tetradrachms presented here gains acceptance, it will be an additional argument in this respect, either on the use of the ethnic in a non-synoecised community, or as an indication on a Coan synoecism prior to 366.

⁵⁵³ A fragment of the so-called "Athenian Coinage Decree" has been found in the area where Kos Meropis was situated. The decree was ordered by the Athenians to be displayed in every *polis* under their control, and has been interpreted as an Athenian injunction against coinage in the subordinate states. Cf. most recently Segré 1993, ED1.

general, strongly indicate the existence of some kind of political union before the synoecism.

The significance of a pre-synoecism coinage

So what implications concerning the political situation on Cos can be drawn from the fact that the coinage in the name of the Coans was introduced well in advance of the synoecism? Unfortunately, very little is known about the way coinage and monetary matters were regulated, administered and controlled in the Greek *poleis* in general. The written sources from Cos does not provide us with further clues. However, we do know that two or more *poleis* agreed on a joint coinage before 366. The coinage made interaction vital in both practical and political matters, for example in order to establish the necessary funds and/or contacts to provide silver; to hire and pay the workers involved (from the leader of the mint via the die cutters to the slaves); to build and organise the mint itself; to provide controlled accounts of the metal (volume and alloy), dies and amount of coins; to decide upon design and weight standards.⁵⁵⁴ Can any of these elements be traced in the sources? The written sources reveals nothing, but the coins themselves may give us some indication. Most important is the occurrence of personal names on the Coan coin series.⁵⁵⁵ The widely adopted theory today is that the names on the Coan coins are the eponym magistrates on Cos: the *monarchos*.⁵⁵⁶ This theory is rejected in this study mainly because of the lack of correlation between the reconstructed lists of *monarchoi* and the names recorded in the compiled *corpus* of Coan coins. This view has now gained acceptance and is included in recent studies presented on the subject.⁵⁵⁷ The bearer of the name on the Coan coinage has not yet been identified from the evidence available at present. However, the person must probably be considered an important, appointed or elected official with a

⁵⁵⁴ As we know, the bearded Heracles was chosen as obverse motif, and the city-badge, the crab, as reverse motif followed by a club. The Coans adopted the Rhodian weight standard, a slightly reduced Chian standard for their first series. This study will show that the regulation of weight standard on Cos was a matter of domestic decisions, and did not automatically follow its larger allies in development (cf. the weight reduction and chronology of issues VII, VIII, IX, XII and XIII).

⁵⁵⁵ Cf. the chapter on “Personal names” below, and Ingvaldsen 2001 (*fortc.*).

⁵⁵⁶ The *monarchos*, an exclusively attested institution on Cos, was the titular head of the state in Hellenistic times. Epigraphically attestation of this magistracy is traced back to approximately 325-300, and the use as eponym not earlier than c.300-250. The lack of sources does not, of course, rule out the existence of the *monarchos* in earlier periods. Cf. chapter on “social structure” in Part I for an account of the office of *monarchos*.

⁵⁵⁷ Cf. e.g. Habicht 2000, 323-25 who on independent ground has reached similar conclusions. Cf. also the following chapter on “Personal names”.

huge responsibility for one or several aspects of coining, like organizing the production, control of metal, accountability for the issues, distribution, guarantor of validity etc. The level of execution of such tasks is impossible to decide – it could be in the shape of a formal responsibility but might just as well include practical and day to day involvement in the production. The appearance of personal names on coinage in the name of the Coans several decades before the synoecism is evidence of an important co-operation on important matters including responsibility versus foreign states. In this matter it is interesting to notice that recent studies have presented arguments for a political synoecism, or at least a strong political union, on Rhodes preceding the synoecism in 408/7.⁵⁵⁸ The existence of a *boula* and a board of *prytaneis* acting on behalf of the Rhodians as a unity have been attested well before the synoecism. Gabrielsen's conclusion is that “*an early, and presumably looser union between the three Rhodian communities appears to have developed gradually into a formally defined political union characteristic of a federal state. Precisely how this process evolved and when [---] is impossible to tell.*”. As we have demonstrated above, the coinage of Cos may indicate a similar development before the synoecism in 366. Further signs of a gradually developing political union between the Coan *poleis* can also be found. As we have seen above, the Coans were listed as *koioi* in the Quota list of the Delian confederacy from 451/0, and they held a single membership in the Dorian pentapolis. Furthermore, the Coans are listed as *koioi* in an Athenian decree of the mid-fifth century. The decree honours the Eteocarpathians for providing cypress to Athens. Several allies are instructed to be of assistance to the Eteocarpathians, and the Coans, listed as *koioi*, are among them. The decree has previously been dated 394/3, but the accepted date is now c. 445-430.⁵⁵⁹

It seems to be a safe assumption that the name represented on the coins was the result of an official decision, probably under direction of the *boula*. The occurrence of a public official representing several *poleis* a couple of decades before the synoecism should serve as a strong indication of a political union involving at least a Council and board of magistrates, possibly the *prostatai*, acting on behalf of the Coans as a politically unified body. If this is the case, we must reconsider the political implications and the supposed establishment of political institutions which took place in 366. It may seem as if the synoecism in 366 had a more geographical nature than what has been previously assumed.

⁵⁵⁸ Gabrielsen 2000, 4-10.

⁵⁵⁹ IG XII.1 977; republished as IG I³ 1454 (*Tituli Attici extra Atticam reperti*, no. 2); cf. Lewis 1987, 58; Meiggs 1982, 201; Osborne 1982, 43-4.

To sum up, we have so far established:

- a) The existence of at least two *poleis* (i.e. political communities with Assembly, Council, citizenship and with the sovereignty to create laws regulating their relations to other states) on Cos prior to the synoecism in 366
- b) The existence of some kind of political union between these *poleis* prior to the synoecism
- c) The coinage in the name of the Coans must be considered independent of the synoecism, and thus not as a political sign of a formally unified Coan state.
- d) Both geographical and political elements were involved in the synoecism, although indications suggest that the geographical elements were the most prominent in the synoecism of Cos. The *poleis* that existed before the synoecism probably kept their status as *poleis* but had to give up their full sovereignty since they could no longer independently regulate affairs with foreign states.⁵⁶⁰

The evidence from this case study of the relationship between synoecism and coinage on Cos deserves attention in a wider context. It is evident that the Coan coinage was introduced with no relation to the synoecism. And furthermore, we can hardly trace any changes on the coinage which can be connected to the synoecism with certainty. The coin issues minted in the decades before the synoecism was evidently the products of one city fulfilling all necessary characteristics in order to be considered a *polis* both by ancient sources as well as by modern scholars. Still, it is very difficult to interpret the coinage in terms of political symbolism on behalf of the *polis* which organised and administrated the coinage. The coinage was in the name of the Coans as an ethnic group identified by the geographic limitation naturally provided by the island border, and *not* propagating or otherwise identifiable with the *polis* itself (possibly Astypalia). The supposed connection between synoecism and coinage is today decisive for the chronology of several important coinages in Asia Minor, two of which are the neighbouring *poleis* of Halicarnassus and

⁵⁶⁰ According to Mogens Herman Hansen's classification, they remained "dependent *poleis*", cf. Hansen 1997, 29-30.

Rhodes. The synoecism in Halicarnassus is still a matter of dispute, but it was evidently well established in 362, and was possibly one of the initiating projects of the ruler Mausolus who inherited the power in 377. In the recent and previously mentioned study of the coinage of the Hecatomnids, Koray Konuk presents the following conclusion concerning the introduction of Mausolus' coinage: "*It looks like a case of a ruler introducing a new coinage to mark the inauguration of a new capital.*"⁵⁶¹ A few years earlier a similar suggestion was presented for the earliest coinage of Rhodes: "*[they used] the Chian standard...since the beginning of federal coinage [i.e. with the Rhodian ethnic] in or shortly after the founding of the new state in 408/7.*"⁵⁶² It seems evident to me that this self-explanatory use of the synoecisms as starting points for the coinages of the Greek *poleis* deserves to be reconsidered.

Personal names and their function on coinage

The Coan coinage constitutes a major source for the prosopographical material from Cos. The personal names expressed on the Coan coinage are today generally considered to represent the eponym official on Cos, i.e. the *monarchos*. This suggestion was presented for the first time by E.L. Hicks in 1891⁵⁶³, and has later been repeated by the major scholars on the field.⁵⁶⁴ The following examination will show that the interpretation holds little or no support in the light of new evidence, and that this conclusion furthermore will influence our opinion on the political organisation and some historical events as well as for the chronology of the Coan coinage in general.⁵⁶⁵

Names are occurring on nearly every coin series from c.390 onwards. The few exceptions are the minor bronze issue which, as far as can be ascertained from the small and often much worn coins, did not have any representation of personal names on them.⁵⁶⁶

⁵⁶¹ Konuk 1998, 96.

⁵⁶² Ashton 1993, 9.

⁵⁶³ Paton & Hicks 1891, 348.

⁵⁶⁴ Herzog 1928, 46; Pugliese Carratelli 1957, 333; Sherwin-White 1978, 188.

⁵⁶⁵ Cf. also the chapter on "Synoecism and coinage" above for a discussion on the meaning and implication of attested names on the coinage before the synoecism, the "Historical outline" for arguments against the use of the Coan coinage and the names expressed by them in attesting an early Hecatomnid influence on Cos and furthermore the commentaries on the coin issues where a year-by-year dating of the issues based on the personal names is omitted.

⁵⁶⁶ Issue IX and X.

Two main reasons can explain this lack of names. Firstly, the series are limited and representing the smallest exchange in the monetary system. The sheer value of the coins in question may have been considered as so insignificant that the possible control function of the names on the larger coin series were found unnecessary to apply on the smallest series. Secondly, a more pragmatic reason may have displaced the names. The mere size of these bronze coins, with a diameter of approximately 4-6 mm, can have made it difficult to engrave the names on them (i.e. on the dies). However, the smallness in size is also found on issue XIII and XXIV of hemidrachms, and they all have names represented.⁵⁶⁷ Although only a speculation it is tempting to interpret the lack of names on the small bronze issues as a reflection of their minor importance in the monetary system.

As already mentioned, the suggestion that the *monarchos*, the Coan eponymous magistrate, is the person represented on the Coan coinage has until now reached general acceptance. Behind the suggestion was a comparison between personal names from coins with the known names of Coan *monarchoi* mainly from the third and second century as they occurred in inscriptions. At the time the Coan coin material was not compiled and thoroughly studied, and only a preliminary listing of the *monarchoi* existed. Obviously, a Coan coin *corpus* as well as a detailed study of the *monarchoi* from inscriptions had to be compiled before a safe comparison could be committed. The following comparison is between the names from the *corpus* presented in this study and the list of *monarchoi* from a recent study by Christian Habicht.⁵⁶⁸ The list of personal names from coins includes 144 different names. Altogether 83 persons with legible names are identified as *monarchoi*.⁵⁶⁹ The majority of names from the inscriptions falls in the period from c.250-c.150. To make sure the comparison is compatible all names on coins before c.250 as well as names from inscriptions later than c.150 must be excluded.⁵⁷⁰ This leaves us with 108 names from coins and 76 names of attested *monarchoi*. Altogether 17 names are attested from both sources.⁵⁷¹ If we take the chronology of the respective coin issues and names from

⁵⁶⁷ The longest names found in issue XIII are ΑΡΙΣΤΟΤΕΛΗΣ and ΚΑΛΛΙΣΘΕΝΗΣ

⁵⁶⁸ Cf. Habicht 2000 and Part 5 "index of personal names" below. A survey of the recent discussion on this topic related to Cos is also found in Habicht 2000.

⁵⁶⁹ The listing in Habicht 2000 includes a total of 90 individuals, but several of them bears identical names and is also identified from initials or partly obliterated names not possible to identify among the names listed from the coins.

⁵⁷⁰ This leaves the names of issue XI to XXVI from the coinage, with the exception of issue XIV which ended around 250.

⁵⁷¹ Aglaos, Arideikes, Aristion, Astynomos, Dion, Hekatodoros, Zopyrion, Thevdoros, Laertas, Moschion, Nikagoras, Nikomedes, Parmeniskos, Philinos, Philiskos, Philistos and Phylotimos.

inscriptions into consideration, it leaves us with the following names which can possibly be representing one and the same individual on coins and as *monarchos*:⁵⁷²

<u>Name:</u>	<u>Coin issue:</u>	<u>As <i>monarchos</i>:</u>
Aglaos	XIX, XXI, XXII	c.195-2
Aristion	XX	c.195-2
Hekatodoros	XVII	c.190-75
Zopyrion	XII, XIII	c.210-195
Laertas	XII	c.210-200
Moschion	XVIII	c.195-92
Nikagoras	XVIII	c.198/7
Nikomedes	XXI	c.202/1
Parmeniskos	XIX, XXI	c.175-50
Philinos(1)	XII	c.217-07
Philinos(2)	XIX, XXI	c.195-75
Philistos	XVII	c.190-80

A total of 12 possible matches between personal names on coins and *monarchoi* are revealed by this survey. The number must be considered as a maximum since at least four of them are most probably *not* identical persons (i.e. the names belonging to the XVII and XVIII issue, which are listed as *possible* matches with inscriptions dated in the 190s onwards). The low correlation between the names from the coins and the list of *monarchoi* demonstrated above clearly rejects the possibility of interpreting the name on the coinage as the Coan eponym official. Additional arguments supports this finding: *If* the eponym official was represented on the coinage, we should expect the name to be written in the genitive case (cf. below), and not the nominative which appears to be the standard on the coinage. Furthermore, during the period that witnessed the most intensive minting activity on Cos, particularly during the last part of issue XII and XIII, the die-links reveals that two or more names were in use simultaneously.⁵⁷³ The observation is not unexpected, and

⁵⁷² A +/- 10 year divergence is allowed when the correlation is judged. Thus Hekatodoros from issue XVII is probably *not* the same individual as the *monarchos* of c.190-75, but is still listed due to the preferred tolerance of chronological movement.

⁵⁷³ Cf. the die-pattern of issue XII and XIII discussed in Part 2, "commentary on the issues".

similar patterns are periodically observed e.g. on neighbouring Rhodes.⁵⁷⁴ To sum up in short: the *monarchos* is, in my opinion, not represented on the Coan coinage.

The *monarchos* is, of course, not the only magistracy represented by names found also on the coinage. A variety of individuals of different occupation, and representing a vast range of official duties and positions, is attested by the additional sources. The following survey reveals the positions attested by persons (i.e. identical names, the individual is not necessarily the same) who also appears on the coin material (parenthetical numbers in refers to the number of occasions the name is attested with each position): *epitropos* (1); *nepoiias* (1); *hierotamias* (1); *agoranomos* (1); *hieropoios* (9); *architheoros* (9); *theoros* (9); *strategos* (1); *prostatas* (2); *tamias* (1); *agonothetas* (2); *choregos* (1); *dikastes* (1); *lochagos* (1); *epimeletes* (1); doctor (8); victor (15). Not surprisingly, we find the most numerous representations among the chief religious positions, each attested on nine occasions among the names from the coin material. The additional functions are evenly scattered, appearing on one or two occasions only. Doctors and winners of the Asclepiadaï and Olympic games are also commonly found. The most numerous representations is, thus, by officials and persons we would expect to be frequently honoured, and no additional official stands out from the others in such numbers that we could expect the person of any particular duty to be the bearer of the name on the coinage.⁵⁷⁵

The theories

The function of the personal names, or the widely used term ‘magistrates’, has been treated and discussed more or less thoroughly in several publications during the last three decades. A survey of the most significant discussions and views will be presented in the following part. The survey will demonstrate two different aspects of the problem concerning the personal names: to survey the general use of personal names on Greek coinages, or in-depth examinations concentrating on one local coinage (or issue). Both

⁵⁷⁴ See Ashton 1986, 16 for the attestation of four ‘magistrates’ issuing coins simultaneously.

⁵⁷⁵ Cf. also Part 1 above for a discussion of the different attested *archai* on Cos, and the survey of offices mentioned in connection with coinage in general, and thus potential candidates as coin names, in this chapter below.

approaches demonstrate the difficulties and uncertainties surrounding this particular phenomenon.⁵⁷⁶

Among the latest is the publication on early Hellenistic coinage by O. Mørkholm from 1991: «*During the Hellenistic Period it became quite common to indicate the magistrates who were directly responsible for each separate issue. City magistrates (who were often elected annually) and royal officials placed their names or initials on the coinage which they controlled. [---]. Names are written in full more often on the civic coinages than on the royal issues [---]. The occurrence of names found on coins in epigraphical material from the same city is therefore [since they are recruited from the same social circles] to be expected. [---]. [On liturgy] With bronze coinages there is no need to assume such liturgies, as these brought a considerable profit to a city, but for some of the irregular silver issues of the smaller towns, where civic pride was probably a strong motivation factor, the idea of a liturgy seems quite an acceptable one. [---]. [On dating] Magistrate's names introduced by ΕΠΙ most probably refer to the eponymous official of the city and are placed on the coins for dating purposes rather than as marks of control. Consequently, a very large and continuous city coinage with names of magistrates should in theory be datable exactly to the year, [---]. It should be kept in mind that the study of die linkages has shown that in city mints two or more moneymen were not infrequently active at the same time.*⁵⁷⁷ The general statements expressed by Mørkholm are in no way in contradiction to the established view on this matter. But the brief discussion takes us no further, and viewpoints presented in earlier studies are not commented on, neither incorporated into this important work.

The dualism in function, between the eponym office and the personal responsible 'magistrate', was treated by Barron in his study on the coinage of Samos.⁵⁷⁸ He is interpreting the names in the first series to be the eponym official, and that the function of the names changed on the series from the mid-fourth century onwards: «*Since the names form an ordered sequence, and apparently do not occur in groups of contemporaries [---] it seems likely that they are those of annual eponymous magistrates of the state [---].*». «*It follows [---] that the later magistrates are not individually annual or eponymous.*». «[---]

⁵⁷⁶ The most thorough study of the phenomenon of personal names on coinage in general is Fütwangler 1982. However, his emphasis is on the royal issues of the Hellenistic period and a few coin groups which stands out from the majority of coinages. His discussion is highly important and useful, but of little help in understanding the classical and early hellenistic coinages of independent *poleis*, which again demonstrates the lack of sources on this subject.

⁵⁷⁷ Mørkholm 1991, 31-2.

⁵⁷⁸ Barron 1966, esp. 105, 112, 126, 133, 138-140.

we find that several men served at once; that they are some of the leading men in the state, active in proposing awards of honorary citizenship for men of other cities. Moreover, some seem to be related to one another as father and son.». «Our Samian magistrates' names may have had a similar significance [as the persons, often related, who's liturgy was commemorated on the Athenian new-style tetradrachms by placing their names on the coins]». «It is possible, however, that an actual magistracy is commemorated. The names occurring in the large group may be those of the members of the *synarchia* [---]. [---]. [---] it is tempting, chronologically, to see in the coins themselves a change from double to multiple magistracy, and connect [them] with the twin *demiourgoi*, [---], and the *synarchia*.». There is no indication, except from the names themselves, on the use of eponym officials on the earliest Samian coin series. This must be considered a suggestion which is not mirrored by additional sources. The nature of the eponym official on Samos is not attested; neither is the time of function. When Barron presupposes that the names are representing annual officials, and bases his dating of the coin series on this assumption, this must be methodically wrong.⁵⁷⁹ The suggestion that the names are shifting from representing first the *demiourgoi* and then the *synarchia* is also only an assumption not supported by the sources. No matter how alluring this may seem it is only speculations with no relevance to the discussion on the function of personal names in general.

In his major work from 1976, C.M. Kraay deals with the so called 'magistrates' in the following way: «These names [i.e. the personal names] are usually written out conspicuously, in full, and in the nominative case. From this it is clear that they are not merely the names of chief magistrates, which were included simply as dates without any formal responsibility for the coinage; [---].». [---]. «The citizens named [in nominative] are those who were responsible for the quality and the quantity of the particular issue of coins on which their individual names appear; the officials in question may have been responsible for coinage only, like the *tresviri* at Rome, but more usually he was probably a member of a board charged with a more general supervision of finance.». ⁵⁸⁰

Two years later Alföldi writes: «Die Bezeichnung «Beamtenname» ist unglücklich, verbindet man heute mit dem Wort «Beamter» die Vorstellung des im gleichen Aufgabenkreis hauptamtlich beschäftigten «Staatsdieners.» [---]. «Theoretisch übernimmt ein (finanziell wie sozial und im Range) Höherstehender den Prägeauftrag oder Teile

⁵⁷⁹ «The series therefore [since the names are representing one year each] lasted for at least twenty-five years. [---]; so it is reasonable to suppose that enough are missing to give the whole series a duration of thirty years or longer». Barron 1966, 112-113

desselben und signiert in geeigneter Form eine Serie. Diese Verantwortlichkeit kann die technische Durchführung beinhalten, muß es aber nicht.» [---]. «Die Staats- bzw. Verfassungsform des die Münze herausgebenden Gemeinwesens ist entscheidend für die Verwaltungspraxis.».⁵⁸¹ Alföldi is mainly giving examples from the regal Hellenistic coinages of Mithradates VI, Seleukos, Ptolemaios and Philip V. These coinages, in contrast to the coin series minted in the name of the different *poleis*, bears also a huge number of symbols and monograms, often two and three in numbers. The contrast to the coinages of the *poleis* is clear, and is most likely reflecting the increased complexity of the larger royal mints. It is, as Alföldi points out, probably possible to read a system of control into these complex renderings of different monograms and symbols. Clearly also the locality of the mint, the workshop and/or the director of the mint may have been represented in this way. The written sources support the existence of a certain ‘director of the mint’ («*Münzdirektor*») as well as a ‘technical chief’ («*technische Chef*»). N.F. Jones includes a discussion on the function of personal names in his study on the wreathed tetradrachms of Magnesia.⁵⁸² He points out three particularities of the late Hellenistic tetradrachms: 1) they were struck in paired emissions with bronze coins, 2) the striking was not an annually recurring event and 3) several of the persons represented on the coins were prominent in public affairs in general. Jones then rejects the possibility of the persons being annually elected magistrates who had as a part of their civic duty the supervision or/and control of the operation of the mint.⁵⁸³ The theory of the names representing officers of the mint is also rejected. Since they are not attested epigraphically for Magnesia, and since so little is known of their activities and function, Jones finds it ‘risky indeed’ to suppose their existence there. He is then promoting the interpretation of the names as persons responsible for a monetary liturgy.⁵⁸⁴ The persons involved would then have been ‘tapped by the state to contribute toward the production of the new silver and, in recognition of their contribution, have been honoured by the appearance of their names on the reverses’. Jones is aware of the weakness of the theory: «*But it also possesses a great weakness in that no one has yet succeeded in supporting the theory with any evidence other than that provided*

⁵⁸⁰ Kraay 1976, 253-254.

⁵⁸¹ Alföldi 1978, 125-6.

⁵⁸² Jones 1979, 81-90.

⁵⁸³ «*But this approach holds little promise in the present case since a relatively copious epigraphic record provides no example of an appropriate dual magistracy with which our paired emissions might be correlated.*». Jones 1979, 81.

⁵⁸⁴ Jones is referring to the discussion in Barron 1966, 139; Kroll 1964, 94-99; Thompson 1961, 593-599; Bellinger 1958, 23-24; Gerassimov 1958; Wallace 1950, 21-26; Milne 1941, 26-29 and Regling 1927, 156-168.

by the reverse signatures themselves. The «monetary liturgy» is, in other words, a wholly hypothetical construct; [---].».⁵⁸⁵

Jones is using a decree as testimony for the existence of liturgy, although this supposes a doubtful interpretation of the verb καθίστημι.⁵⁸⁶ The indication that finally persuades Jones in interpreting the names as persons involved in monetary liturgy is an inscription from Sestos dated c. 133-120. A person, Menas, is mentioned in the decree in connection with the striking of bronze coinage. Jones' conclusion is that regardless of what kind of activity Menas contributed with, service or donation, it must be considered as a liturgy. He argues that 'Liturgies were frequently constituted on an ad hoc basis and so provide a more suitable administrative basis than a permanent magistracy, within or outside the mint.'. His conclusion is «Until better evidence becomes available, therefore, the hypothesis of a monetary liturgy, supported by a nearly contemporary document from another Asian state, offers the most convincing explanation for the present numismatic record [i.e. the personal names on the coins].»⁵⁸⁷

Deppert-Lippitz based her discussion on the Milesian 'sogenannten Beamtennamen' partly on Jones study mentioned above, however with a more careful conclusion. In her opinion the lack of continuity of emissions, the huge variety in the number of names represented and the concentration of names within some of the emissions speaks against the existence of a continuous institution which mainly supervised minting or a specific office in charge of the coinage of the polis. She is flirting with the possibility of monetary liturgy, but does wisely enough not draw any firm conclusions. She further says that 'Deshalb wäre es auch möglich, hinter den Personennamen [---] Mitglieder einer für die Prägung verantwortlichen Kommission zu sehen. Die variierende Anzahl von Namen innerhalb der verschiedenen Emissionen muß nicht dagegen sprechen.'. Her conclusion is that no matter how the Milesians organized and administrated their coinage it involved a high degree of control and that this control had to be connected in some way to a personal responsibility.⁵⁸⁸ Ashton has proved that at Rhodes in the late third century it was issued coin series in which four different names were in use simultaneously.⁵⁸⁹ The issue is also treated in one of the most recent handbooks on coinage in the Classical world. Rebuffat presents a useful summary of the main elements in the discussion and the present state of

⁵⁸⁵ Jones 1979, 82.

⁵⁸⁶ The decree, *I. Magnesiae* 164, lines 10-14, is discussed below in this chapter.

⁵⁸⁷ Jones 1979, 90. The decree and Jones argumentation is discussed below in this chapter.

⁵⁸⁸ Deppert-Lippitz 1984, 20-21.

scholarship, and follows Robert and Kraay in his division between the chief magistrates used only as dating criteria, without formal responsibility of the coinage in question, and minor officials who were directly involved in coining: «---]; *nous savons toutefois que la responsabilité spécifique touchant à l'émission proprement dite de la monnaie reposait entre les mains d'un des principaux magistrats de la cité, surtout, semble-t-il, dans les villes dont l'activité monétaire n'était pas très importante et où l'on ne frappait pas systématiquement, chaque année, d'émissions nouvelles.*» [---]. «---]: *c'est l'évidence quand le nom propre qui apparaît sur la monnaie est explicitement accompagné par la mention d'une fonction très générale, celle, par exemple de stratège*:[---], ΕΠΙ ΣΤΡ, [---] ΕΠΙ ΑΡΧ.». ⁵⁹⁰ Thus Rebuffat gives a few examples where a specific prefix is providing us with the office represented on some coin series. Not surprisingly this includes the *strategoï*, *archontes* and *agonothetes*. It is appropriate here to add the *prostatai* attested on Cos on the tetrobols of the second century. He is further mentioning the possibility of the cities to keep officials with the specific function to control and supervise the coinage. The existence of such officials is in one instance documented. The so called 'new-style' tetradrachms of Athens, beginning in the early second century, contains no less than three personal names in addition to several bi-symbols and monograms. These series, however, are significantly different from the Coans as well as the other coinages of *poleis* in Asia Minor in the fifth to early second century. The sheer number of names, symbols and monograms on the Athenian series are reflecting a far greater complexity in the minting organisation compared to the smaller *poleis* in the previous periods. If the minor states had something close to the intricate Athenian organisation, it is not in any way attested. We can hardly find any reasons for a smaller *polis* to have such an advanced system to ensure the cash flow in the state. Most of the mints were operating in fits and starts, and to put down such huge efforts to ensure this elaborate way of organising a mint must for them be considered a waste of resources. Rebuffat is further citing two sources dealing with the responsibility for bronze coinage, one in Magnesia on Meander and the other in Sestos on the Thracian Chersonessus. Here we find clearly attested a certain Moschion with the responsibility of 'striking small coins of bronze'. As we have seen above it has also been suggested that the decree is attesting monetary liturgy. In Sestos we are given knowledge of two commissioners responsible for striking bronze coins. Attempts have also here been

⁵⁸⁹ «[---]: *the die-linking [---] is such that all four magistrates must have been striking at the same time*». Ashton 1986, 16

⁵⁹⁰ Rebuffat 1996, 100-1.

made to connect these two persons to liturgy of financing the coinage.⁵⁹¹ Rebuffat's attempt of classifying the different levels of organisation which the persons behind the names in a certain emission are representing is useful: «---] *nous avons été conduit à témoigner de la très grande diversité des fonctions ou des qualités qui pouvaient faire qu'un nom de personne apparaisse sur une monnaie.*» [---]. «---], *l'interprétation de ces indications complémentaires n'est jamais facile: la mention du nom d'un archonte ou d'un stratège peut simplement signifier que le magistrat en question, le plus élevé dans la hiérarchie de la cité, «signe» la monnaie comme le fait, mutatis mutandis, un souverain hellénistique ou un empereur romain avec sa titulature. Il faut cependant bien voir que deux autres facteurs interviennent: la magistrat concerné est le plus souvent éponyme, c'est-à-dire qu'il donne son nom à l'année en cours: on doit donc également considérer cette mention comme une datation portée sur la pièce. Enfin, et ce cas de figure concerne surtout les petites cités qui ne se connaissent pas de magistrat spécialisé dans le domaine de l'émission et de la frappe des monnaies, il est alors normal que le premier magistrat d'une cité appose son titre sur une série dont il est responsable.*»⁵⁹²

The written sources

Who among the Coan officials could, then, be possible bearers of the names on the coinage? As we have seen, altogether 143 names on 24 out of the 26 recorded Coan coin issues are attested. As have been mentioned in the cited discussions above, it is of some importance to decide the case of the names, nominative or genitive. In general one may expect a name in genitive to express chief officials who were, as Kraay puts it "included simply as dates without any formal responsibility for the coinage". Names in nominative is thus expected to be indicative of persons who shared a more direct responsibility for the coinage regarding weight, metal and account in general. The names of the Coan coinage appear to be in the nominative case, but the matter is slightly obscured by the occasional use of abbreviated names. On the very last issue the name of Damon is written in the full

⁵⁹¹ Rebuffat is referring to Thompson 1961, 584-588; (Kern) *I. Magnesiae* 164 [see note 28]; Robert 1967, 103-104; Robert 1973, 50 n 25. See also discussion in Jones 1979, 82-86. Both texts are discussed below.

⁵⁹² Rebuffat 1996, 195

genitive form (Damonos), but this appears to be an exception from the general use of the nominative case.⁵⁹³

We must then turn to the written sources in general in our search for the officials and/or the persons likely to be represented by the names on the coinages from the Fifth to the Second century BC. The following part does not pretend to be a complete survey of written sources, including inscriptions, on the matter. Such a compilation is outside the scope of this study, and deserves to be a work standing on its own grounds. My intention is to include the most important written sources and inscriptions available in published compilations, although several additions certainly will be found.

In his work on *Economics* Aristotle makes comments upon on the kings control over public administration:

«First let us examine the royal area [of administration]. This has power in every area, but in fact is used in four forms, those which concern money [νόμισμα], exports, imports and expenditures. / Taking the area of money, I mean the question of when and for what kind of goods high or low prices are to be fixed, of exports and of imports, the decision as to the best goods to receive from the satraps in his administration, and the best time for this, and of expenses, the question of which is to have priority and when, and whether the expenditures are to be made in money, or in things which can be bought with money.»⁵⁹⁴

The area of administrating coinage itself, or the control here over, is obviously not worth mentioning among the king's most important areas of control. This could be the consequence of the context in which he treats this matter in this particular text, or because the organisation of the coinage and the administration of the monetary system at this time were of a self-explanatory nature without the need of being explained in detail.

The important and much debated 'Athenian decree on coins, weights and measures', commonly called the 'Athenian coinage decree', probably dating to c.425 and the following decade, can also contribute to the knowledge of officials involved in coining.⁵⁹⁵ The decree has provoked different scholarly opinions regarding restoration,

⁵⁹³ Cf. XXVI, 2.

⁵⁹⁴ Aristotle, *Economics* II, i, 2-3 (1345b). Translation: *TestNum* 14.

⁵⁹⁵ The decree was ordered to be set up in the agora of each member city. One copy of the decree was found on Cos, and this particular fragment caused the discussion of chronology to raise again, see e.g. Lewis 1987, 54. The Coan copy has Attic lettering and three-barred sigmas. One scholarly opinion is that this sigma type

interpretation and chronology. The decree, though indubitable of Athenian origin, is concerning the administration and organisation of coinage in a number of minor *poleis*, and we must expect it to have been drafted in accordance with the way of organizing this matters in the different cities. Following this, the division in the decree between the «officials» and the «overseers» is significant (lines 4-6; 10; 13-14):

(4) [And if there] ar[e n]o Athenian governors, the official[s of each city] shall s[ee that all that is in the d]ecree [is carried out; and] if they do not act in accordance with wh[at has been decreed, there shall be a prosecution at Athens agains] these [officials, the penalty being [loss of citizen rights. (5). In t]he mint (=ἄργυροκόπιω) [after receiving] the sil[ver (=ἄργυρ...) they shall mint no l]ess than half and [.....] the cities; [the superintendents (of the mint) shall always] exa[ct a fee of three] drachmas per mi[na; they shall co]nvert [the other half within months] or [be] liab[le..... (6) Whatever is le]ft over the silve[r that has been exacted they shall mint and hand] over either to the gene[rals or to the.....]

(10) The o[fficial]s i[n the cities [are to set] up t[his] decree [after recording it on] a stone [ste]le in the agora of [each ci]ty and the superint[endents (=ἐπιστάτωρ) (are to do this) in front of] the mint; (---).

(13) [Anyone is to be allowed to hand ov]er the foreign money [which he possesses and convert it in the same way wh]enever he wishes; and the ci[ty] is to give him in exchange our own currency]; eac[h man shall bring h]is (money) [to Athens and deposit it at the mi]nt. (14) Th[e] superintend[ents (of the mint) are to re]cord [everything handed over by each person] and set [up a stone stele in front of the min]t for whoever wi[shes] to look at it; [and they are also to record the total of

was replaced by the four-barred sigma after 445. If true, this would move the dating of the decree back to before 445 – i.e. 15-30 years back compared to the generally accepted date. Lately, however, few will consider 445 as the absolute latest dating of three barred sigmas, and thus the decree might be several decades earlier in time. The context in which the decree is mentioned in Aristophanes, *Birds*, indicates that the decree was of current significance when the comedy was produced in 415/4. A supplementary decree commonly dated to the 420s (*IG I³ 90*) was probably following the 'Coinage decree' within few years, see Mattingly 1987, 70-1. The chronology of vase container types (regarding the measures imposed by the decree) is also important. Preliminary studies show that the measures mentioned in the decree were not in use during the 440-30s, see Mattingly 1981, 78-86. A plausible suggestion is therefore that the decree belongs to the period c.425-c.420. For a discussion on the significance of this decree in a general sense, see Martin 1985, 197-214; objections to his interpretation has been forwarded in Lewis 1987, 61-2. See also

the] foreign [currency, both the silver and the gold] separ[ately, and the total of ou]r silv[er....].⁵⁹⁶

This much debated inscription clearly attests the division between the archons and the subordinate, but personal responsible overseer of the mint. Obviously this text presupposes, and thus attests, the existence of a person working in the mint with the responsibility of several aspects of the monetary system. Among his tasks were to receive foreign and civic coins in silver and gold, to keep records of the amount of silver and gold coins, to organize and administrate the re-striking of foreign coins and to charge the expenses of exchange. He was subordinate to the archons and was also in direct contact with the *strategoï*. Obviously, in this case it was the *ekklesia*, either through the *boule* or not, which made the principal decisions concerning the coinage of the *polis*.

Several indications, of different nature, are to be found in the written sources. Aristophanes attest indirectly a decision about the coinage of Athens made through the *ekklesia* (or possibly, but unlikely by the *boule*):

«Citizen A: *Do you remember when we voted for those bronzes [χαλκούς]?*
Citizen B: *Yes, and that striking was a bad one for me. [---]. Then, [---], the herald bellowed that no one was to use bronze in the future; ‘For now we use silver.’*».⁵⁹⁷

More revealing is an inscribed law from Athens concerning imitations of Attic coinage in the year 375/4. In the opening of the text we are told that it is a resolution (ἔδοξε) of the *nomothetai* (board with responsibility to revise the laws). Further we are told that imitations of Athenian coins which contains lead or bronze beneath the silver surface shall be deposited with the *boule*. When it comes to collecting the fees for violating the decrees regulations the responsibility is with the ἄρχοντες. The payment to the *dokimastes* (‘Certifier’) shall come from ‘the same fund as payments to the mint workers’ (ἀργυροκόποις).⁵⁹⁸ A remarkable inscription from Delphi is dealing with the Amphictyonic coinage of 336. The decree is important in many ways and here shall only

Schönhammar 1993, 187-92 with an emphasis on a non-numismatic interpretation of the measures and weights directed by the decree.

⁵⁹⁶ *IG I³*, 1453, 4-6; 10; 13-14. The translation, from Dillon&Garland 1994, 9.12, is based on the altogether eight fragments known of the decree. See also Fornara 1977, 102.

⁵⁹⁷ Aristophanes, *Ecclesiazusae* 815-22. Translation: *TestNum* 88.

⁵⁹⁸ The decree is published in *Hesperia* 1974, 157-88. Translation: *TestNum* 91.

be mentioned the payment to the mint master (ἀργυροκόποι). Dexius the mint master is paid a significantly high sum of money (more than three talents) for organizing the coin series ordained by the decree. He is mentioned by name in the decree of the Amphictyones (the board consisting of members from the states represented in the sanctuary in Delphi), and also the amount of money he should be paid.⁵⁹⁹ Another inscription from Delphi is also mentioning a mint master (ἀργυροκόπιου). This is in the accounts of the year 321/0 where we can read: “*Chares, superintendent of the gymnasium and the mint at Delphi, payment for the month of Heraeus, a half mina*”.⁶⁰⁰ The function of the *argyrokopios* is not explained, neither if he was keeping an office in regards to his position of mint master or not.

An inscription from Cyme mentions the benefaction of a certain Archippe. A part of the text reads:

(51) «*Let Archippe pay the thousand staters of bronze [---] (53) to the men who are in charge of the payments of debts, (...ἔσομένοις ἐπὶ τῆς ἀποδόσεως τῶν δανείων ἀνδράσιν), and let them (54) record it and use this income with the other moneys accruing to them; (55-7) and when the thousand staters are given by Archippe, let the treasurer in charge of administration (ταμίαν τὸν ἐπὶ τῆς διοικήσεως) who is chosen each year pay automatically to the strategoi ten staters, and to the whole (58-9) Council forty staters in the month Thasius, and in the month Terpheius let him pay the same persons an equal amount of income.*»⁶⁰¹

Who are these ‘men in charge of the payments of debts’ and ‘the treasurer in charge of administration’? The first group was probably an ad-hoc commission. The latter was obviously not among the *strategoï*, but this is also the only certain statement we can find concerning the offices in charge of monetary matters.

A wellknown law text from Gortyn from the end of the third century BC gives us a little more information:

«*Gods. A decision of the assembly of the polis, in the presence of three hundred. (Bronze) coins [νομίσματι χρῆτθα], issued by the polis is to be used, and not the*

⁵⁹⁹ CID II, 75 (col. 1), lines 52-54. The text is reproduced in *TestNum* 212.

⁶⁰⁰ CID II, 110, lines 19-21. Translation: *TestNum* 221.

silver coins [ἀργυρίος]. If anyone uses silver coins or refuses to accept bronze coins or sells *in natura*, he shall pay five staters of silver. The charge is to be brought to the *neotas*, and the seven *neotai* allotted to supervise the marketplace are to give judgement after swearing an oath. The one who gets the majority of their votes, after they have swears, will be the winner, and when they have secured [the fine] from the loser, they are to give half to the winner and half to the polis.»⁶⁰²

Clearly we can see here, not surprisingly, that in the administration of the *polis* the regulation, not surprisingly, and the issuing of coins, both bronze and silver, are matters decided by the *ekklesia*. The function of the *neotai* is uncertain, but they obviously had a control function regarding the market. This council of youths must also be considered in the light of the *gerousia*, the council of elders.⁶⁰³ Nothing here, however, implies a connection between the *neotai* and the practical or administrative aspects of coinage.

In a treaty of c.400 between Mytilene and Phocaea, the subject is the organizing of the striking of gold (i.e. electrum) coins in the two cities:

«The one who mixes the gold is to be leagally responsible in both cities. As judges there are to be for the one who mixes at Mytilene, more than half of the officials [ἀρχαῖς] at Mytilene, and at Phocaea more than half of the officials at Phocaea, and an audit is to take place when a year has ended, within six months; and if anyone is convicted of mixing the gold too weakly willingly, he is to be punished with death, and if he is found not guilty of willingly [mixing the gold too weakly] let the court decide what is a fitting penalty for him to suffer or pay, and the city is to be guiltless and free from penalty. The Mytilenaeans drew by lot the right to strike first, [---].»⁶⁰⁴

The judicial aspects caused by the bilateral nature of this agreement will naturally not be a part of the mint organisation in an ordinary *polis*. The main purpose of the treaty is to grant each of the two *poleis* freedom of legal responsibility opposite to the other in case of minting coins with too little content of gold. The regulation transfers the responsibility

⁶⁰¹ SEG XXXIII, 1039, lines 51-59. Translation: *TestNum* 312.

⁶⁰² IC IV, 62. For the Greek text, see *TestNum* 334. A translation is also published in Arnaoutoglou 1998, no. 51.

⁶⁰³ Willetts 1954, 494-498.

⁶⁰⁴ IG XII 2, 1. Translation: *TestNum* 348; cf. also Healy 1957, 267-8 and Bodenstedt 1981, 29-30.

from the administration of the *polieis* to the persons involved in the coin making. Interestingly, the right to mint first is decided upon by lot. This might imply that the cities expected income generated from the administration of the coinage, but the argument can be turned to the opposite meaning as well.

A decree from Magnesia is honouring Moschion who has served in financial matters:

«---] and in addition becoming president of the festival, and becoming treasurer [ἀργυροταμίαν], also becoming president of the *epipegoi* for two years, and in addition being placed in charge of the striking of the light bronze [coinage].».⁶⁰⁵

It is worth mentioning here that the functions as *argyrotamiai* and leader of the *epipegoi* are represented by specific terminology, but to be in charge of striking bronze coins is written in an explanatory way, without the use of a specific function-describing term. This decree has been discussed by N.F. Jones in the above mentioned publication of the coinage of Magnesia. He claims that the verb *καθίστημι* (κατασταθείς in the decree) can be interpreted as a technical term for the appointment of a person to a liturgy. The word may also have been used in this way but the content of the term can be interpreted in a variety of ways. In my opinion the meaning of the word is too general to be specifically interpreted as meaning ‘placing someone into liturgy’ if this is not explicitly stated in the text. Thus the only certain conclusion to be drawn from the text is that it does not explicitly *exclude* the possibility of liturgy.⁶⁰⁶

A decree from Sestos between 133-120 BC has also been used in support of the theory about a liturgy attached to coining, but this interpretation is a much debated matter.⁶⁰⁷ The relevant text is:

«And the demos, having decided to use its own bronze coinage in order that the type of the city be recognized and the demos receive the profit which results from such income, and having elected men who would piously and justly maintain the trust placed in them, Menas, chosen along with his fellow-appointee, applied the appropriate diligence, as a result of which the demos, on account of the men’s

⁶⁰⁵ *I. Magnesiae* 164, lines 10-14. Translation: *TestNum* 518.

⁶⁰⁶ Cf. Berg 1885 (3. edn 1963).

⁶⁰⁷ von Fritze 1907, 1-3; Robert 1973, 49-52; Gauthier 1975, 165-79; Jones 1979, 84; Rebuffat 1998, 101.

*justice and zeal, uses its own coin. And in the other magistracies and liturgies [---],».*⁶⁰⁸

H. von Fritze interpreted the decree to describe Menas activity as “daß dem Menas und einem zweiten Beamten die Sorge für das Münzwesen als Kommissorium ohne Titel verliehen wurde und zwar augenscheinlich für längere Zeit”.⁶⁰⁹ von Fritze is arguing that Menas kept an official status connected to the coinage mentioned in the text. There have been objections to this interpretation. There is for example, as pointed out by Jones, no reason why one should interpret the word *epimeleia* in a technical sense. It is probably used in its conventional meaning of «diligence» or «care». The constitutional position associated to the *epimeletes* is widely attested in a number of *poleis*. His duty varied with time and space. He was sometimes involved in the caretaking of fountains, and in Athens, where several *epimeletai* are attested, some maintained the fountains, some supervised trade and others again had the responsibility for religious festivals.⁶¹⁰ Furthermore, in the standard phraseology of honorific inscriptions of the Hellenistic period, the word *epimeleia* is used mainly in a non-technical sense. However, there are no indications in the present text that suggests any connection between Menas involvement with the coinage and him keeping a public office in connection with his duty on this area. In Jones’ opinion such a connection can be established, although indirectly, through the last phrase in the text.⁶¹¹ The phrase presupposes an earlier mentioning of liturgy in the text, and the only possible explanation is to interpret the efforts of Menas and his colleague as officially designated liturgy.⁶¹² This is a sensible argument but still too weak to build final conclusions on since no other indications on monetary liturgy exists. However, Jones’ criticism of Robert is useful on the matter of cash involved in monetary liturgy.⁶¹³ Roberts’s argument is that since no cash assessment is mentioned in connection to Menas and his activity this fails to support that he was involved in liturgy. But, as Jones points out, the involvement of cash assessment is not a condition for a functional liturgy.⁶¹⁴ Jones’ conclusion, then, seems

⁶⁰⁸ *OGIS* 339 (p. 537-544). Translation from Jones 1979, 84.

⁶⁰⁹ von Fritze 1907, 3.

⁶¹⁰ Cf. Rhodes 1981, 516, 579, 627, 636. Ref. from Arnaoutoglou 1998.

⁶¹¹ ἐν τε ταῖς ἄλλαις ἀρχαῖς καὶ λειτουργίαις (“---], and in the other magistracies and liturgies [---]”).

⁶¹² Jones 1979, 85-6.

⁶¹³ «Dans l’inscription de Sestos, rien ne fait la plus lointaine allusion aux dépenses qu’auraient assumées de leur poche les deux monétaires, à leurs frais et à générosité. Ce ne sont pas des liturges que l’on pressure, ni de vaniteux donateurs. Ce sont des commissaires chargés d’une mission qui requiert exactitude et justice intégrée dans le maniement du métal et des ouvriers et entrepreneurs.», Robert 1973, 51-2.

⁶¹⁴ See discussion in Jones 1979, 86-7.

sensible: ‘Whatever the form that Menas’ activities took, services or donation or both, their identification as a *leitourgia* may be taken as assured.’ (p. 87). But again, the connection between the liturgy and the coinage is far from certain. Another problem Jones had to deal with is that Menas in fact is not attested on coins from Sestos. His explanation is that in some cities, like Magnesia, the liturgy could have been manifested as names on the coins and in other states, like Sestos, in inscriptions. We can hardly assume that the practise of placing names on coins could just as well be replaced by name listings in inscriptions. This presupposes that the use of names on coins had only as function to promote the wealthy citizens who were responsible for providing means and/or services necessary for maintaining the coinage of the *polis*. This is most likely not the case, which will be discussed below. Another fact to be explained is the presence of two names on the Magnesian coinage. Jones suggests that ‘*Perhaps nothing more was intended than to divide a burden too great to be borne by a single individual.*’ This is in the best case speculations. There are no indications of an arrangement of this kind, neither is the Magnesian coinage of such a large quantity that extraordinary precautions would be expected to manage the issuing of these limited coin series by the city of Magnesia. The use of two names must be explained within the frames of organisation and administration of the coinage, and probably with an element of control, and not with heavy financial burdens on individual citizens. However, Jones’ discussion is still among the most useful treatments of the subject of monetary liturgy.

Diogenes is providing us with a different setting thus he is said to have been involved in delinquency regarding a public bank in Sinope, and, because of this, to have been exiled together with his father:

*«Diocles says that the father of Diogenes kept the public bank, and that because he had counterfeited the currency, he was prosecuted. But Euboulides in his work on Diogenes says that Diogenes himself did this, and was exiled with his father. Furthermore, Diogenes says of himself in his Pordalus that he altered [or counterfeited] the currency. Some also say that after becoming an overseer [ἐπιμελητήν] he was urged by the workmen [to do this], [---]. Some, however, say that he took over the [administration of the] coinage [νόμισμα] from his father and then debased it[---]».*⁶¹⁵

⁶¹⁵ Diogenes Laertius VI, ii (Diogenes), 20-1. Translation: *TestNum* 524.

Can we here trace a connection between keeping the ‘public bank’ (δημοσίον [---] τράπεζον) and that Diogenes ‘took over the coinage’? Clearly the ‘overseer’ was in position to counterfeit or debase the coinage, and the keeper of the public bank could possibly also serve as ‘overseer’ and be in charge of the administration of the coinage in the *polis*. Punishment for violation against the monetary system was clearly, as expected, a matter for the whole *demos*. A record of convictions from Dyme in Achaia reveals the punishment for striking coins without legal right:

«---], the city [πολις] condemned the following to death because they committed sacrilege and struck bronze coinage: [---]». ⁶¹⁶

Summary

To sum up, it is difficult to draw any certain conclusions from the material retrieved above and from the way it has been interpreted by previous scholarship. Our sources provide us only with random glimpses of how the monetary system *could* be arranged, and they are not sufficiently representative to be used as a basis for a general understanding of the organisation of the coinage in the Greek *poleis* and the persons responsible. The previous scholarship tends to concentrate on four main theories:

1. Personal names are representing one of the main *archai* in the *polis*. This is certainly the case where the name is accompanied by the preposition ΕΠΙ (during the year of service of), and the name is given in the genitive case. The official represented might be a *strategos*, an *archon*, a *prostates* or a *prytanes*. In some cases the name stands for the eponymous official, thus giving an indication on yearly (or a longer/shorter period) issues, or at least indicating it was used for the purpose of dating during the time an issue was used as means of payment.
2. The names are representing wealthy individuals with the responsible for financing a specific emission through the system of liturgy. A few instances of this are believed to be attested in the written sources, but these instances concern only bronze

⁶¹⁶ *SIG*³ 530, line 4-7. Translation: *TestNum* 534.

coinage, of which a considerable profit could be expected, and their value as evidence is dubious.⁶¹⁷ The theory of monetary liturgy must be considered as highly hypothetical until further documentation is adduced.

3. The name is representing a minor official with the personal responsibility of the coinage. The office in question is not possible to identify in most cases, although we can find a certain ‘technical director’ or ‘minting director’ in the written sources. We must assume that a major element of control lies behind the use of names in this matter, i.e. over the amount of silver, weights, the total figures of the emission etc. We have no indications on how these officials were appointed or by whom they were subordinate.
4. The name might represent a lessee – a person who through payment of a sum of money had purchased the right to organize and administrate the coinage in a *polis*. This would include every aspect of the operation, from the provision of the necessary silver and/or bronze, to the production of dies and the payment of mint workers.

The first point above is attested in written sources as well as on the coins itself. It seems to be the correct reason when the name appears in a genitive case and/or is accompanied by the preposition *Epi*. However, it is not an universal explanation of the personal names on Greek coinage in general. The second point above is the most unlikely explanation. The theory of a monetary liturgy is appealing but unattested and it might be applied only when explicitly supported by additional sources. The person behind the names on the Coan coinage is therefore most likely to be sought after along the lines suggested in point three and/or four above.

Personal names – a possible pattern in the coinages of Asia Minor

At this stage it may be appropriate to bring another element into the discussion. As mentioned above, the phenomenon of placing personal names on the reverse of coin series

⁶¹⁷ Athens provide an exceptional example where strong arguments indicate that liturgy played a part in the administration of the coinage. See Thompson 1961, 584-99.

appears in large parts of the Greek world. This practise is particularly wide-spread and commonly used in Asia Minor, as the following survey of the coinages of the *poleis* in Ionia, Caria and Lydia shows:⁶¹⁸

IONIA:

Clazomenae	From c.390: names
Colophon	From c.390: names
Ephesus	From c.400: names
Erythrae	From 480: symbols; from late fourth century: names
Heraclea ad Latmum	From c.190: monograms
Larissa	No names (only bronze coinage, monograms from c.300)
Lebedus	266-203 (under the ptolemies): Ptolemaion; after c.200: names
Leuce	From c.350: names (uncertain)
Magnesia ad Maeandrum	From c.350: names
Metropolis	From the first century: names
Miletus	From c.350: names
Myus	No names (only bronze coinage)
Naulochus	No names (only bronze coinage)
Phocaea	From the third century: names (no names in archaic period or the fourth century)
Phygela	From c.400: symbols; from c.350: names
Priene	From c.320: names
Smyrna	From c.280: names (c.301-c.280 no names)
Teos	From c.400.: names (no names in archaic period)
Chios	From c.430: names (no names in archaic period)
Oenoe	No names (only bronze coinage)
Samos	From c.394: names (c.479-394 no names)

CARIA:

Alabanda	From c.197: names
Alinda	No names (only bronze coinage)
Antiochia ad Menander	From the second century: names

⁶¹⁸ The survey is mainly based upon *SNG Copenhagen: vol. 5: Ionia, Caria and Lydia; BMC, Caria; BMC Ionia; SNG Finnland, part 1: Karia; SNG Deutschland: Universität Tübingen, Mysien-Ionien; SNG von Aulock, Karien; SNG von Aulock, Ionien*. The survey is far from complete or accurate in details. The dating of several coin series is far from established. One example being the coinages which depend on the so-called 'Athenian coin decree' (on the assumption that coinages ceased to exist after c.440). The recent discussion on the dating of the decree (to the 420s), or whether these cities actually stopped coining because of it, is not incorporated in the list. Neither is the redating of the *symmachia*-series of several *poleis* (which has been moved back in time with a decade from 394). Furthermore, several of the cities which only issued bronze coins were dependencies at the time of minting and can thus not be expected to have issued silver coinage in the name of the city. I do not aim to make an accurate list of the fits and starts of the coinages in all of Ionia and Caria - this will be out of the scope of this study, if possible at all. The presentation of this survey can be defended as long as it illustrates a point in my discussion, and that it will not be used in further discussions.

Astyra	No names (only bronze coinage)
Caunus	From c.166: names (c.350-189: no names, only bronze coinage)
Ceramus	From second century: names
Cnidus	From c.387: names (before c.387: no names)
Evromus	No names (only bronze coinage)
Gordiuteichus	No names (only bronze coinage)
Halicarnasus	From c.360: names (before c.360 and on satrapal coinage: no names)
Harpasa	From the second century: names
Iasus	From c.250: names (c.394-390: no names)
Idyma	(No names from c.450-400)
Mylasa	No names (only bronze coinage)
Myndus	From the second century: names
Orthosia	No names (only bronze coinage)
Astypalaea	No names (only bronze coinage)
Calymna	No names (with the exception of two names in the year 201/0)
Cos	From c.390: names (before c.440: no names)
Rhodus	From c.408: symbols, monograms, initials; from c.304: names

A significant pattern revealed by this survey is the following:

- 1) The practice of placing names on the coinage was introduced around 400 BC or in the following decade.
- 2) Some cities used symbols or initials in the earliest period of minting, but converted into using names during the fourth century at the latest. Cities in which coinage was introduced at a later stage all used names from the very beginning.
- 3) The single exception from the practice of using names, namely Calymna, was at the beginning of its coinage under Coan rule (i.e. all citizens were Coan citizens).
- 4) Cities which issued both silver and bronze coinages used names also on the latter. Cities in which only bronze coins were issued omitted the use of personal names.

On the basis of this pattern it is tempting to argue that the use of personal names on coins must be interpreted as a phenomenon motivated by considerations of a wider significance than those strictly relating to the internal affairs of the issuing *polis* itself. This wider significance need not necessarily be connected to some sort of control or administration forced upon the cities, but rather to a general way of organizing each city's coinage in agreement with other cities to which it was attached, geographically or otherwise. Several factors indicate a quite self-explanatory practice, a practice rooted in a traditional way of organizing coinages in the various *poleis*. The question arises whether the explanation for the use of names should be sought after as an arrangement particular to each city, or in

terms of a general practise shared between several states. The most well-documented and frequently cited example of a specific arrangement particular to one city alone is the so-called ‘New-style’ tetradrachms of second-century Athens.⁶¹⁹ These coins contain no less than three personal names in addition to several symbols and monograms. The sheer number of names, symbols and monograms on the Athenian series reflects great complexity in the minting organisation compared to the smaller *poleis* in previous periods. If the minor states had a system that was fairly close to the intricate Athenian organisation, it is not documented in any way. We can hardly find any reasons why the average *polis* should have had such an advanced system to ensure cash flow in the state. Most of the mints operated by fits and starts, and huge efforts to ensure a similar elaborate way of organizing a mint must have been considered by them as a waste of resources.

In searching for a general explanation for the names, we drift into the realm of speculation. We have seen that the names came into use in Asia Minor around or shortly after 400 BC. Furthermore, only the cities which minted both silver and bronzes used names also on the bronze coinage, and it appears that names were largely used irrespective of political organisation or status (alliances, synoecisms etc.).⁶²⁰ In general, one is compelled to assume that the use of names could have either a positive or a negative function (besides the neutral one of being used for dating purposes). Positive functions can be to attest the persons responsible for liturgy, supply of metal or account of *euthyna*. As we have demonstrated above, the theory of liturgy and *euthyna* in connection with coining and/or the personal names on coins must be rejected from the evidence available at present. Information on metal suppliers does not appear in the sources at all, which excludes this option from being considered more closely. Negative functions related to the names on the coins are more easily defined: to control the silver content, weight and volume and to identify the person responsible if improprieties were detected. However, the sources do not mention these matters. The name can also be viewed from the perspectives of the *issuer* and the *receiver (user)*: The issuer was the *polis* (represented by the *boula*, board of magistrates, or officials). The issuer wanted to control the coinage and possibly he wanted to propagate the city/body of citizens. The receiver basically wanted a warranty to the value and validity of the coins. To obtain this, he had to be convinced that the coin was genuine, and that the issuer had the necessary means to control the production of coining as

⁶¹⁹ Thompson 1961.

⁶²⁰ Although it appears as if the cities that minted only bronze coins without names were mostly dependencies at the time of minting.

well as a possibility to trace the person, official and/or institution responsible for the coinage in question. From the perspective of issuer and receiver, the personal name must clearly be connected to the issue of control. These dichotomies related to the personal names on coins, negative – positive function; and issuer – receiver (user), reveals that the probable function of the name might be regarding control with the coinage and/or attesting validity.

Each city apparently had some responsibility for the coinage issued in the name of the *demos* of the *polis*. It is impossible to say whether this also included some kind of warranty. Anyhow, the ethnic placed on the coins must be interpreted as the prime official sign of approval of a coin(issue).⁶²¹ One possible explanation for the use of names might be the customary practice of *euthyna*.⁶²² Every citizen who had served as official had to render accounts for the matters he had been in charge of during his tenure. Besides an oral public hearing, the accounts were inscribed and publicly displayed. Could the name on the coins in fact be the equivalent of the accounts made by a person responsible for the minting of an issue? An examination of the use of *euthynaleuthynai* in literary texts does not support this assumption. This result is, however, not surprising given the absence of information in the sources that concern the practical organisation of coinage.⁶²³

The names can also be examined from another perspective: the relation between the *poleis* in Asia Minor and the multitude of coinages evolving in the fourth century and later. The Athenian hegemony in Asia Minor obviously had some influence, although we do not know to what extent, on the coinages in the different cities (cf. the so-called ‘Athenian

⁶²¹ If a person wanted to use coins of a certain type and they were rejected e.g. by a *dokimastes*, the owner would certainly bring his complaint to someone of an official position, and not the individual whose name was represented on the coins which might perfectly well have been issued several years earlier.

⁶²² The idea of exploring a possible connection between coinage and *euthyna* was suggested by Dr. Vincent Gabrielsen, Copenhagen University.

⁶²³ The following works have been consulted: Aeschines, *Speeches* 1.1-2; 168; 173-4; 2.80; 96; 178; 3.9; 10-12; 17; 20; 24; 26; 31; 203; 230; Aeschylus, *Prometheus Bound* 286-90; *Persians* 408-11; 773; Andocides, *Speeches* 1.73; 77-9; 90; Antiphon, *Speeches* 6.43; Aristophanes, *Birds* 1738-1741; *Knights* 825-27; *Peace* 1187; *Wasps* 568-73 (ambiguous form); Aristotle, *Athenian Constitution* 4; 8; 27; 31; 38; 39; 48; 54; 56; 59; *Politics* 1271a; 1274a; 1281b; 1282a; 1298a-b; 1317b; 1318b; *Rhetoric* 1411a-b; 1419a; Bacchylides, *Odes* 12.1-2; Demades, *On the Twelve Years* 1.35; Demosthenes, *Exordia* 53, 1; *Speeches* 1.28; 4.47; 18. 57-8; 110; 112-4; 117; 124-5; 245; 249-50; 19.2; 17; 69; 81-2; 103; 132; 182; 211; 223; 247; 255-56; 273; 334-335; 20.146-7; 22.38-9; 24.54; 112; 25.37; 46.9; 49.25-6; 58.14; Euripides, *Cyclops* 14-17; *Hecuba* 1-9; 35-41; *Helen* 1610-11; *Heracleidae* 726-8; *Hippolytus* 1226-33; *Suppliants* 417-18; Isocrates, *Speeches and Letters* 1.32; 15.129; Flavius Josephus, *Antiquitates Judaicae* 15.75-6; 16.27-8; Lysias, *Speeches* 9.10-11; 10.16; 27; 14.38; 24.26; 25.11; 29-30; 28.4-6; 30.3; 4-6; *New Testament*, Book of James 3.3-5; Old Oligarch, *Constitution of the Athenians* 3.2; Pindar, *Odes* N.6.27-30; O.13.24-31; P.1.42-6; P.4.148-54; Plato, *Laws* 774b; 881d-882a; 944e-945a; 945b; 945d-e; 946c-d; 946d-e; 947e-948a; *Statesman* 298e-299a; *Protagoras* 325d; 326c-e; *Minos* 320d; Plutarch, *Lives* 1.4-5; 4.3; 6.1-2; 10.7; 14.4; Sophocles, *Ajax* 541-42; *Antigone* 178-83; 1161-65; Thucydides, *The Peloponnesian War* 1.95.5; Xenophon, *Cyropaedia* 1.1.2; *Hellenica* 7.4.34; 36.

coinage decree' mentioned above). After the King's Peace in 386 all remaining restrictions on coining were removed.⁶²⁴ When the cities of Asia Minor explored the possibility of having their own coinage, they might have wished to demonstrate the validity of its coin issues.⁶²⁵ With several new currencies it could be difficult to keep them apart and to keep a survey of weight standards, new types contra old types etc. Maybe a uniform, and thus familiar, way of organising and controlling the different coinages was adopted to ensure the validity of each city's coinage outside its own borders? One way in which to demonstrate this was to convince users, and especially those in other cities, that minting was under strict control within the issuing *polis*. If one received a Coan tetradrachm outside (or, of course, inside) Cos, one would instantly recognise the ethnic and personal name, and thus know that this particular coin was the product of the Coan mint, a product of official recognition and (possibly) warranty, and the result of well known procedures, administration and control concerning the metal source, purity, weight and validity. The name of the official/person responsible for coining might have been used as a symbol and/or attestation of that control.

To conclude, this examination has revealed traces of a general pattern in the use of personal names on coins in Asia Minor. The use of personal names was introduced in the decade(s) after 400, and it was adopted by all the cities of Caria and Ionia in the centuries to come, whether they minted continuously from the Archaic to the Hellenistic period or introduced coinage as late as in the second century BC.

Conclusion

The brief examination of the concepts of *polis* and *synoikismos* and the relevant sources from Cos reveals several points of interest:

⁶²⁴ It seems that personal names occur on coinages after c.400, but the chronology is not firmly established for several of the coinages dated to the turn of that century. They *might* have been minted from 386 onwards, with a few exceptions. However, this assumption must be supported by detailed studies of the beginning of the fifth and fourth century coinages of Asia Minor before it carries argumentative weight.

⁶²⁵ A connection between the large city-state coinages after the King's Peace and Persian dominance has been suggested. The argument is that the flourishing Persian economy was a precondition for the large mint output of the *poleis* of Asia Minor. Cf. e.g. Mildenberg 1998, 280.

- 1) The existence of more than one *polis* (according both to ancient and modern conception of the word) is attested on Cos several decades before the synoecism in 366.
 - 2) It appears that we must put a strong emphasis on the geographical implications of synoecisms in general.
 - 3) The possibility of a political union between the different *poleis* on Cos in the decades before 366 must be considered. The use of personal names on the coinage before the synoecism on Cos attests official control and joint arrangements between two or more *poleis* prior to the synoecism.
 - 4) The coinage as an institution does not appear to be among the institutions and/or political organisations conditioned by the synoecism on Cos (although it was probably affected by it).
 - 5) The coinage was not a political symbol used in propagating the independence and “autonomy” of the synoecized *polis* in 366. The scholarly emphasis on the political function and symbolism of coinage in the Greek *poleis* deserves reconsideration.
 - 6) The eponym official, *monarchos*, is not the bearer of the name on the Coan coinage. As a result, the chronology of coins and historical events based upon this assumption must be reconsidered. It is impossible to identify the official/person on the Coan coins from the evidence available at present. The establishment of relative and/or absolute chronology based on the assumption that each personal name represents a one year (or six months/two year) period of minting must be rejected.
 - 7) Personal names on the coinages of the *poleis* in Asia Minor might be interpreted on a wide basis, as a phenomenon related to organisation, control and validation of the different coinages in the period after c.400.
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PART 4. THE COIN MATERIAL

Catalogue

Introduction

All Coan coins, of which I have documentation by photos or casts, are included in the catalogue. More Coan coins exist, but to include them only on the basis of catalogue texts will easily obscure the level of documentation this catalogue is based on.⁶²⁶ The only exception is the coins in Cos Museum. I have seen them very briefly myself, but no further documentation exists and they are therefore only listed with a number under the respective issues. The vast majority of these coins are of two major bronze issues, and no important conclusions on chronology, personal names etc. depends on this material. Plates include all the dies and die combinations in the catalogue, every personal name represented within each issue and most of the coins with provenance from unpublished collections. For the bronze issues I have tried to make a representative selection in order to illustrate the variation in style, epigraphy, size, flans etc.

Hoard numbers in the catalogue refers to the list of hoards of this publication. Coins with provenance from ‘Göttingen’ are all coming from the single finds grouped as Hoard 36. The coins with provenance ‘Kos’ or ‘Kos Museum’ belongs to the single finds of Hoard 35.

The material is divided into issue, type, dies and individual number (by letter). Die numbers are, of course, not reported on the bronze issues. Information about the number of issue, number of coins, denomination, obverse and reverse dies and weight is reported at

the beginning of each issue. Then follows a general description of the issue (and type), including information on the position of inscriptions, additional symbols, monograms and initials. The description of each die is relative and stands in relation to the forthgoing die-description (i.e. relative terms like 'larger', 'smaller' etc. are frequently used). Efforts have been made in order to make these descriptions accurate and consequent as far as the subjective nature of the work permits (i.e. that for example 'stylized legs of crab' means about the same on the first and the last issue). However, inconsistencies will certainly be found. Information regarding each individual coin (e.g. incisions, flaws, obliterated inscriptions etc.) is given after the provenance. Die-links are indicated by an arrow pointing downwards the first time, and upwards the last time the actual die is used (and both ways in between). The die number is left out when a die is too worn, corroded or damaged to be identified. Die-axis is always given clockwise.

⁶²⁶ This is why e.g. the coins listed in Paton & Hicks 1891 are excluded, unless they have been identified and documented later.

Catalogue

I. ISSUE	Period of minting: c.390-80 Tetradrachms No. of coins: 29	Obv. dies: 12 Rev. dies: 18 Weights: 13. 66-15.32
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Type *obv.* Bearded Heracles facing l.; large variations in style or/and facial features
rev. Crab; beneath, club; above or beneath crab; ethnikon (ΚΩΙΩΝ); beneath or above crab; personal name; all in square border of dots and deep incuse; large variations in design

ΠΕΡΣΙΑΣ

1. O1 High forehead; straight profile; large, curly locks of hair from forehead to temple; small locks in beard; small lion's scalp; hardly visible locks in mane
R1 Above crab, personal name; beneath club, ethnikon; rounded crab shield; short claws
a) 14.23 12 Lanz 28 (1984), 280; Kölner Münzkabinet 30 (1981), 66
2. O2 Shorter nose; very small locks of hair from forehead to temple; longer moustache
R2 Above crab, ethnikon (ΚΩΙΩΝ) placed upside-down; beneath club, personal name; small, slender club; large, triangular crab shield; slender claws
a) - - Ponterio 47 (1991), 1306; Kress 174 (1979), 448. Irregular flan (restriking of older coin?)
3. O3 Larger head; long nose; large eye; small mouth and moustache; irregular locks of hair from forehead to temple; wavy line in lion's scalp behind ear; very small, irregular locks in mane
R3 Between crab and club, ethnikon; beneath club, personal name; smaller crab shield; long, sharply bent legs; small claws; large dots in border
a) 15.15 6 Paris 1173. Ex hoard 9 (*IGCH* 1207); Waddington 2720; Babelon *Traité* II,II,174

ΦΙΛΕΩΝΙΔΑΣ

4. O3 ⚡
R4 Above crab, personal name (continuing vertically down on r. side); between crab and club, ethnikon; rounded crab shield; claws are stretched upwards; long, slender club; large dots in border
a) 15.26 1 London 10
b) 14.74 12 New York 197.2. Ex Leu 5.4.1978
5. O3 ⚡
R5 Similar, but claws bent towards each other
a) 14.40 6 Lanz 78 (1996), 294
b) 14.72 12 Hirsch 191 (1996), 498
6. O4 ⚡
R5 ⚡
a) 14.71 Superior 5. 1990, 6865; Superior 12.1989, 2692
7. O5 ⚡
R6 Similar, but ethnikon beneath club
a) 14.73 Hirsch 173 (1992), 411

ΛΥΣΙΧΟΣ

8. O5 ⚔
R7 Above crab, personal name; between crab and club, ethnikon; triangular shield on crab; long, slender, bent legs; slender claws; r. claw held slightly higher than l.
a) 14.34 10 Lanz 16 (1979), 161
9. O5 ⚔
R8 Similar, but shorter legs and claws on crab
a) 14.75 9 BA 9 (1992), 164; NAC Auction A (1991), 1450
b) 14.71 2 NFA 32 (1993), 79; Oldenburg 27 (1992), 67; Leu 53 (1991), 107; Superior 12.1987, 459; Lanz 30 (1984), 283; NFA 8 (1980), 293; ex Pipito Coll.
- 10.* O (as above)
R (as above)
a) 14.44 Sternberg XIX (1987), 198

ΞΕΝΟΔΙΚΟΣ

11. O5 ⚔
R9 Above crab, personal name; between crab and club, ethnikon; small, rounded crab shield; sharply bent legs; small club
a) 14.93 Elsen 51 (1997), 204
12. O5 ⚔
R10 Similar, but more triangular crab shield; thicker legs; l. claws slightly raised
a) 14.93 9 Lanz 36 (1986), 405
b) 14.88 Ponterio 91 (1997), 107; 84 (1996), 129; 78 (1995), 348

ΘΕΟΚΛΗΣ

13. O6 Similar, but longer locks in beard and differences in locks of hair along temple
R11 Between crab and club, ethnikon; beneath club, personal name; round crab shield; thin legs; slender, small claws; long, slender club
a) 14.53 Platt, liste 6.1979, 9
b) 15.10 Superior 6.1985, 2167
14. O7 Small eye; small, curly locks of hair along forehead; long beard; larger lion's scalp; long, irregular locks in mane
R12 Above crab, personal name; beneath club, ethnikon; large, oval crab shield; thin, curved legs; claws stretched upwards; personal name is partly between claws and is curved
a) 13.66 3 Oslo 1. Ex hoard 8

ΑΘΑΝΙΩΝ

15. O8 Large curls along temple; short beard; thick edge in lion's scalp behind ear; hardly visible locks in mane
R13 Between crab and club, ethnikon; beneath club, personal name; rounded crab shield; thin, curved legs; slender claws; long, slender club
a) 14.78 Rauch 40 (1988), 146
16. O9 Similar, but no locks of hair from forehead to temple
R13 ⚔
a) 14.37 Poindessault/Védrines 7.1994, 66

17. O10 Larger nose; small eye; longer beard; small, irregular locks of hair along forehead and temple; large fold in lion's scalp behind ear; long, stylized locks in mane
 R14 Above crab, ethnikon; beneath club, personal name; large crab; large, irregular crab shield; detailed rendering of shield; detailed mouth and eyes; large, long legs with joints clearly marked; slender claws
 a) 14.35 CNG (Triton 1, 1997), 543
 b) 15.18 9 Paris 1170 (Waddington 2718; Babelon 1746)
 c) 15.20 Oslo 2. Schlessinger 13 (1935), 1337 (ex Hermitage Coll.)
 d) 15.32 Boston (Brett 1955), 2018

ΜΟΞΙΩΝ

19. O10 ⚡
 R15 Similar to R13, but smaller club and less space between letters in ethnikon
 a) 15.16 Istanbul. Ex hoard 10 (*IGCH* 1218)

ΞΑΝΘΙΠΠΟΣ

20. O10 ⚡
 R16 Above crab, ethnikon; beneath club, personal name; smaller and less detailed crab; shorter legs; smaller mouth
 a) 14.70 GM 42 (1988), 336
21. O11 Similar, but smaller locks in beard; shorter, more claw-like locks in mane
 R17 Between crab and club, ethnikon; beneath club, personal name; smaller crab; triangular crab shield; thin, curved legs; slender claws; slender club
 a) 14.41 5 Sotheby's (Zurich), 10.1993, 706; Superior 5.1990, 6804; Superior 12.1989, 2693; Superior 12.1987, 460; GM 36 (1987), 240
22. O12 Similar to O8, but eyelid has different shape, curved edge beneath ear
 R18 Between crab and club, ethnikon; beneath club, personal name; small crab; oval shield; claws raised upwards; K in ethnikon is placed far to l.; thicker club
 a) 15.22 Boston (Brett 1955), 2017

II. ISSUE	Period of minting: c.390-80	Obv. dies: 2
	Drachms	Rev. dies: 3
	No. of coins: 3	Weights: 3.36 – 3.46

Type 1 *obv.* Bearded Heracles facing r.; small lion's scalp rounded in neck
rev. Crab; beneath, club; beneath club, KΩI; additional symbol; incuse from die

1. O1 Large nose; small beard; small lion's scalp; few, stylized locks in mane
R1 Rounded crab shield; thin, curved legs; on r. of club, olive leaf
a) 3.36 6 Berlin (Prokesh-Osten Coll.)
2. O1 ⚡
R2 Similar, but olive leaf is placed higher in relation to/ than club and legs of crab
a) 3.43 1 Private Coll.; ex hoard 8⁶²⁷

Type 2 *obv.* Bearded Heracles facing r.; small lion's scalp rounded off i neck
rev. Crab; beneath, club; above, initial(?); additional symbol(?); all in square border of dots and incuse from die

3. O2 Large ear and small, stylized locks in mane
R3 Irregular crab shield; shield tapers towards lower end; slender, stylized legs on crab; slender claws; between claws, I; on r. of r. claw, additional symbol(?)
a) 3.46 NFA, autumn 1990, 338; Wadell, Auct. II (1987), 241

⁶²⁷ A cast of this coin was kindly provided me by Pierre Requier. He also informed me about the provenance from the "Hecatommus hoard".

III. ISSUE	Period of minting: c.365-55	Obv. dies: 8
	Tetradrachms	Rev. dies: 15
	No. of coins: 70	Weights: 13.64-15.35

Type 1: *obv.* Bearded Heracles facing r.; large face; prominent facial features; small lion's scalp; two rows of locks in mane
rev. Draped female head facing l.; pointed nose; small chin; small, wavy locks in hair; stylized folds in drapery; drapery falls straight down from crown to shoulder

HP

1. O1 Similar, but more irregular locks in mane
R1 Small eye; numerous, thin folds in drapery
a) 15.03 NFA 10 (1981), 196
2. O2 Similar, but smaller nose and more curved edge in lion's scalp behind ear
R1 ↑
a) 14.78⁶²⁸ Hoard 12; NFSchulten, 04.1988, 151; NFSchulten, 04.1987, 176; Müller 56 (1987), 121; NFA 9 (1980), 271
b) 14.88 Hoard 12
3. O2 ↑
R2 Similar, but sharper, more stylized folds in drapery
a) 14.87 Hoard 12; Auctiones 16 (1986), 186; M&M 61 (1982), 148
b) 14.78 Hoard 12
c) 14.96 Kölner Münzkabinet 62 (1995), 77; GM 69 (1994), 372; Athena 2 (1988), 173; Athena, Liste 16, 50; Lanz 36 (1986), 407
d) 15.00 Hoard 12
e) - - BM photo file⁶²⁹

ΑΓΗ

4. O3 Aquiline nose; protruding forehead; small beard; ornamental ear; claw-like locks in mane
R3 Large eye; flat, broad folds in drapery
a) 15.18 *l* SNG Keckman 286

Type 2: *obv.* Bearded Heracles facing r.; small face compared to previous type; large lion's scalp; two or three rows of locks in mane
rev. Draped female head facing l.; more naturalistic rendered facial features and drapery; drapery is wrapped around head and meets in front of neck

ΑΘΑΜΑΣ

5. O4 Straight profile; small eye; tiny moustache; two rows of claw-like locks in mane; row of small lines along lower part of mane
R4 Well-rounded cheek and chin; undulating, horizontal locks in hair along forehead
a) 14.60 *l2* Lanz 68 (1994), 200; Hirsch 169 (1991), 435
6. O5 Larger eye; protruding forehead; small, claw-like locks in mane; mane is curved inwards at the neck
R4 ↑
a) 15.28 *l2* NFA 33 (1994), 240; 32 (1993), 80; 22 (1989), 322; 10 (1981), 197
b) 14.83 Hoard 12

⁶²⁸ The known weights are 14.70, 14.73 and 14.78 g. The last weight, recorded by Leu Numismatik and NFA, is preferred.

⁶²⁹ The information of this coins derives from the preliminary list of the Pixodarus hoard made by A. Meadows. The die identification relies on his comparison with the additional material. See further comments in the hoard catalogue.

7. O6 Long locks in beard; more numerous locks in mane; small locks gradually decreasing in size in lower part of mane at side of neck
R4 ⤴
a) 15.08 ¹² CNG 14 (1991), 169; Leu 45 (1988), 227
b) 14.88 Hoard 12. Cut in edge of flan
8. O6 ⤴
R5 Similar, but sharper chin
a) 14.90 Christie's 06.1993, 55 (McLendon Coll.)
b) 14.91 Hoard 12; NFA 9 (1980), 272
9. O6 ⤴
R6 Straight profile; large eye; row of claw-like locks of hair from forehead to temple; irregular folds in drapery
a) 15.06 ¹² CNA 15 (1991), 195; Lanz 54 (1990), 225; Hess/Leu 28 (1965), 246
b) 15.14 Hoard 12
10. O7
R5 Large beard; large mane; three rows of locks in mane
⤴
a) 14.99 Hirsch 175 (1992), 377; 170 (1991), 547
11. O7 ⤴
R6 ⤴
a) 15.00⁶³⁰ Müller 71 (1992), 248; Peus 330 (1991), 135; 328 (1990), 215
b) 15.31 Hoard 12
c) 15.17 Hoard 12
d) 15.22 ¹² Lanz 66 (1993), 275
e) 15.11⁶³¹ CNG 26 (1993), 339; Athena 1 (1987), 122; Athena, Liste 20, 94; Liste 17, 29
f) 15.16 Hoard 12; Leu 25 (1980), 155

ΦΙΛΟΔΑΜΟΣ

12. O5* ⤴
R7 Well-rounded chin and cheek; small eye; long, undulating locks of hair; broad, flat folds in drapery
a) 14.91 Hoard 12; Kovacs 12 (1995), 100
13. O6 ⤴
R8 Similar, but shorter locks of hair and more irregular folds in drapery
a) 13.73 2 London 17c (not in *BMC*). Ex Weber 6627. *Rev.* crack in die from corner of the mouth, across cheek to drapery
b) 15.08⁶³² Hoard 12; Leu 57 (1993), 113; Sternberg 10 (1980), 132
c) 14.79 Hoard 12
d) 15.18 Hoard 12
14. O6 ⤴
R9 Similar, but shorter, more claw-like locks of hair
a) 14.39 GM 30 (1984), 2426
b) 15.19 Hoard 12; Leu 53 (1991), 108; Superior 12.1987, 461
c) 15.08 Hoard 12

⁶³⁰ The most recent weight is used. The other weights given are 15.03 and 15.09 g.

⁶³¹ The weights given are 15.11, 15.14, 15.19 and 15.94 g. The most recent weight is used. The highest weight must be considered a misprint (the other weights from the same company are 15.14 and 15.19 g).

⁶³² The known weights are 15.60 and 15.08 g. The weight recorded by Leu Numismatik is used.

15. O6 ⚡
R10 Lean chin and cheek; large eye; long, claw-like locks of hair
a) 14.68 Hoard 12; NFA 06.1990, 6866; Superior 12.1989, 2695; NFA 14 (1984), 160
b) 15.21 Hoard 12
c) 14.78 Hoard 12
d) 15.17 Kölner Münzkabinett 30 (1981), 64
e) 15.00 Kovacs 12 (1995), 104
f) 14.94 NFA, Winter 1989, 597
16. O7 ⚡
R9 ⚡
a) 15.34 /2 London 17b (not in *BMC*). Ex Weber 6628
b) 14.62 GM 23 (1982), 87
17. O7 ⚡
R10 ⚡
a) 15.21 /2 New York 184.3
b) 15.16 Hoard 12
c) - - Hoard 12
d) 15.06 Peus 332 (1991), 209
e) 14.52 Baudey, Pesce, Gadoury, 10.1981,
f) 14.73 Hoard 12; NFA 05.1990, 6867; Superior 12.1989, 2694; NFA 11 (1982), 186
g) 13.64 Superior 06.1998, 6437

BITΩN

18. O6 ⚡
R11 Long nose; large eye; large, curly locks of hair; stylized, soft folds in drapery
a) 14.63 Hoard 12
b) 14.38 Superior 06.1998, 6438 (J.B. Parker Coll.)
c) 14.50 /2 SNG Keckman 288; Lanz 28 (1984), 281
d) 15.20 Hoard 12
e) 15.15 Hoard 12
19. O7 ⚡
R12 ⚡ Similar, but smaller nose and locks of hair
a) 14.47 GM 36 (1987), 241
b) 15.22 Hoard 12; Arethusa 4 (1996), 300; NFA 10 (1981), 197
c) 15.35 /2 Lanz 24 (1983), 348
d) 14.86 Hoard 12
e) 15.17 Oslo 3. Ex hoard 12; NAC 5 (1993), 155
f) 14.64 Stack's 11.1998, 70; 04.1998, 90
20. O7 ⚡
R13 ⚡ Similar, but personal name is retrograde
a) 15.08 CNG 47 (1998), 498
b) 14.73 /2 Hoard 12; Hirsch 215 (2001), 310; Hirsch 212 (2000), 297; Elsen 54 (1998), 281
c) 14.37 /2 Lanz 66 (1993), 276
d) 15.13 Hoard 12
e) 13.85 // Paris 1182. Worn and with secondary incisions
f) 14.39 Hirsch 169 (1991), 436
21. O7 ⚡
R14 ⚡ Similar, but not retrograde name
a) 14.95 Hoard 12

22. O7 û
R15 Similar, but larger and rounder curls in hair
a) 14.66 Vigne 04.1985, 48; GM 30 (1984), 2427; KM 26 (1984), 77
23. O8 Larger face; staring look; small, almost horizontal locks in beard; three rows of short, stylized locks in mane
R15 û
a) 15.04 Hoard 12

Personal name obliterated:

24. O7 û
R- (corroded)
a) 14.46 Hoard 12
25. O7 û
R- Secondary treatment(?)
a) 14.35 J. Hirsch 25 (1909), 2401 (Philipsen Coll.); J. Hirsch 13 (1905), 3965 (Rhosopoulos Coll.)

IV. ISSUE	Period of minting: c.365-55	Obv. dies: 5
	Didrachms	Rev. dies: 28
	No. of coins: 146	Weights: 5.99-7.10

Type 1: *obv.* Bearded Heracles facing r.; large face; aquiline nose; large, circular locks in beard; two rows of locks in mane
rev. Draped female head facing l.; stylized facial features; often large eye and small mouth; stylized drapery hanging straight down from crown to shoulder and in neck; beneath neck, ΚΩΙΟΝ; on l. (with one exception), initials

HP

- | | | |
|----|----|---|
| 1. | O1 | Long, almost straight nose; low, protruding forehead; row of circular locks in lower part of beard; one circular curl of hair above forehead; long, irregular locks in mane |
| | R1 | Irregular locks of hair; only the lowest part of ear visible: few, flat folds in drapery
a) 7.10 1 Hoard 12 ⁶³³ |

ΦΙ/ΙΦ

- | | | |
|----|----|---|
| 2. | O1 | ⚡ |
| | R2 | Similar, but (different) initials now on the r. side
a) 6.87 Hoard 12; NFA 20 (1988), 737; 8 (1980), 294
b) 6.79 Peus 366 (2000), 201 |
| 3. | O1 | ⚡ |
| | R3 | Similar, but smaller locks of hair above forehead and larger mouth
a) 6.43 Auctiones 6 (1976), 221
b) 6.64 GM 69 (1994), 373
c) 6.38 12 Paris 1185
d) 6.20 CNG 54 (2000), 705 |
| | O1 | ⚡ |
| | R4 | Smaller nose; faint smile; more regular and thicker locks of hair
a) 6.69 Peus 348 (1996), 172
b) - - Hoard 12
c) 6.68 ⁶³⁴ Hoard 12; Tkalec&Rauch, Auction 1986 (“2500 Jahre Münzprägerkunst”), 133
d) 6.19 12 London 19 |
| 5. | O2 | Aquiline nose; large eye; smaller locks in beard; larger ear on lion’s scalp; slightly shorter locks in mane |
| | R2 | ⚡
a) - 12 Lanz 36 (1986), 408
b) 6.67 12 Leu 18 (1977), 203 |
| 6. | O2 | ⚡ |
| | R3 | ⚡
a) - - Hoard 12
b) 6.21 12 Berlin 14 (Fox Coll.) |
| 7. | O2 | ⚡ |
| | R4 | ⚡
a) 6.67 12 Copenhagen 620
b) 6.46 12 Paris 1184 |

⁶³³ A cast of this coin was kindly provided me by Dr. Pierre Requier. The cast shows that the coin has been cleaned considerably since its documentation at Leu Numismatik. The coin, and especially the obverse die, is apparently in a very good state.

⁶³⁴ The lowest weight is preferred since the coin obviously (from the photographs) has been cleaned since the registration in Leu Numismatik.

MA

8. O1 ⚡
R5 Large eye; larger part of ear visible; thin, wavy locks of hair
a) - - Hoard 12
b) 6.78 GM 81 (1997), 347
9. O1 ⚡
R6 Similar, but different folds in drapery
a) 6.62 Rauch 29 (1982), 124
b) 6.45 J. Hirsch 13 (1905), 3966 (Rhusopoulos Coll.)
10. O1 ⚡
R7 Well-rounded chin and cheek; large eye; thin locks of hair
a) 6.46 12 Berlin 13 (Imhoof-Blumer Coll.)
b) 6.40 Hoard 12
c) 6.33 11 Budapest 14a.1913.9
d) - - Hoard 12
e) 6.31 Hirsch 166 (1990), 389
f) 6.34 Weber 6629
g) 6.60 12 New York 100.48463
- 10a. O2 ⚡
R6 ⚡
a) 6.69 Kölner Münzkabinett 62 (1995), 79; GM 69 (1994), 374
11. O2 ⚡
R8 Leaner chin and cheek; large eye
a) 6.84 11 Hoard 12; Leu 25 (1980), 156
b) 6.59 12 Copenhagen 619. Ex Schlessinger, 02.1935, 1338
c) 6.10 CNG 38 (1996), 338
d) - - Hoard 12
e) - - Hoard 12
f) 6.06 Grunow, liste 50 (1999), 3865; Ratto 04.1997, 2065
- AGH
12. O1 ⚡
R9 Pointed nose; lean chin; small eye
a) 6.66 Hirsch 205 (1999), 339; 202 (1998), 190; 199 (1998), 187
b) 6.90 Hoard 12; CNG 37 (1996), 547
c) 6.94 Hoard 12
d) 6.70 KM 42 (1992), 253; Hirsch 82 (1973), 153; 71 (1971), 217
13. O1 ⚡
R10 Larger eye
a) 6.74 12 Berlin 12 (Löbbeche Coll.)
b) 6.72 11 Paris 1183
c) 6.76 Hoard 12
d) 6.29 11 London 18
e) 6.43 12 GM 36 (1987), 239; SKA 3 (1985), 235; Sotheby's 03.1975, 46; Myers 12.1974, 146; Kastner 4 (1973), 140
f) 6.93 NAC 4 (1991), 150
g) - - Hoard 12
h) 6.63 Boston (Brett 1955), 2020
i) 6.23 Védrines 07.1983, 40
j) 6.94 Peus 333 (1992), 297; Leu 53 (1991), 109; Superior 06.1987 (Ebsen Coll.), 4138

- k) 6.80 Kricheldorf 35 (1981), 211; Auctiones 11 (1980), 165; Kricheldorf 30 (1976), 137
l) 6.93 Bourgey 03.1981, 72
14. O1 ⚡
R11 Steep forehead; less pointed nose; fewer folds in drapery
a) 6.69 Hoard 12
b) 6.86 NFA 10 (1981), 198
c) 6.90 SKA 1 (1983), 130
d) 6.76 Elsen 49 (1997), 294; Peus 332 (1991), 210
e) 6.90 10 Müller 65 (1990), 128; Lanz 50 (1989), 434; Schulten 04.1989, 124; 04.1988, 152; Müller 56 (1987), 122; Lanz 32 (1985), 251
f) 6.89 Peus 334 (1992), 448; Rauch 31 (1983), 312
g) 6.96 Hoard 12
h) - - Hoard 12
i) 6.71 12 SNG Keckman 287; GM 26 (1983), 1500; 23 (1982), 88
j) 6.97 Hoard 12; NFA 9 (1980), 270
k) 6.82 Hoard 12
15. O1 ⚡
R12 Similar, but more folds in drapery and differently shaped ear
a) 6.67 11 GM 40 (1988), 258; Superior 12.1988, 1966 (Moreira Coll.); Rauch 37 (1986), 158; Lanz 30 (1984), 282
b) - - Hoard 12
16. O2 ⚡
R9 ⚡
a) 6.59 CNA 12 (1990), 386
17. O2 ⚡
R10 ⚡
a) 6.86 Hoard 12; Stack's 04.1993, 317; Superior 05.1989, 6081 (Casterline Coll.)
b) 5.14 12 FALSE. Munich 13
18. O2 ⚡
R11 ⚡
a) 7.00 Auctiones 26 (1996), 238; Sternberg 13 (1983), 196
19. O2 ⚡
R12 ⚡
a) 7.00 Hoard 12
b) 6.73 Hoard 12; CNG 53 (2000), 517

Type 2: *obv.* Bearded Heracles facing r.; large facial features; lions scalp is rounded at neck; two or three rows of claw-like locks in mane
rev. Draped female head facing l. (occasionally r. on last specimens); naturalistic rendering of facial features and drapery; drapery is wrapped around head and brought together in front of neck

ΦΙΛΟ

20. O3 Slightly aquiline nose; protruding eyebrow and forehead; few, claw-like locks in mane; lion's scalp and mane are curved inwards in neck
R13 Smaller nose, mouth and eye; fuller chin and cheek; more well-rounded facial features; few, large curls of hair; less stylized folds in drapery; drapery is wrapped around head, following the curve at the back of head and neck
a) 6.95 Boston (Brett 1955), 2021
b) - - Hoard 12
c) 7.00 Stack's 11.1993, 87

- d) 6.03 Myers, list 02.1976, 27; A. Hess 02.1934, 462; Naville/Ars Classica 5 (1923), 2644 (doubles de BM); ex London 21
- e) 6.99 Athena 2 (1988), 175; SKA 7 (1987), 256
- f) 6.73 *11* London 20
- g) 6.70 *11* Lanz 26 (1983), 263; Kölner Münzkabinett 30 (1981), 65
- h) - - PMV, liste 6 (1983), 16
- i) 6.61 Pegasi 103 (1997), 104; 97, 112
- j) 6.22 Vigne, 02.1984, 42; TNA 1 (1982), 121; ex Jameson Coll. 1545
- k) 6.44 *12* Berlin 10 (Imhoof-Blumer Coll.)
- l) 6.94 Bourgey, 10.1981, 63

BITΩN

- 21. O3 ⚔
R14 Large mouth; well-rounded chin; irregular, straight locks of hair
 - a) 6.76 *12* New York 158.416
 - b) 6.96 Egger 46 (1914), 1337
 - c) 6.96 *12* Hess/Leu 36 (1968), 289; J. Hirsch 25 (1909), 2403 (Philipsen Coll.)⁶³⁵
 - d) 6.94 Hoard 12
 - e) 6.48 *12* New York 78.991
 - f) 6.97 Hoard 12; Superior 12.1991, 473; 09.1990, 38
 - g) 6.95 NAC 6 (1993), 172

- 22. O3 ⚔
R15 Similar, but smaller and curlier locks of hair; sharper folds in drapery
 - a) 6.94 Hoard 12; Sternberg 10 (1980), 133
 - b) - - Hoard 12
 - c) 6.99 BA 2 (1985), 103
 - d) 6.89 *12* Sotheby 04.1973, 596 (Ward Coll. of the Metropolitan Museum of Art)

- 23. O3 ⚔
R16 Straight profile; large eye; smaller, straight, symmetrical locks of hair; softer folds in drapery
 - a) 6.83 BA 4 (1987), 123
 - b) 6.49 *12* New York 170.240

- 24. O3 ⚔
R17 Similar, but slightly larger nose
 - a) 6.96 Kölner Münzkabinett 62 (1995), 78; Athena 1 (1987), 123
 - b) - - Künker 18 (1990), 7963

- 25. O3 ⚔
R18 Slightly larger face; large, U-formed locks of hair; sharp folds in drapery
 - a) - - Hoard 12

- 26. O3 ⚔
R19 Small face; small nose and mouth; lean chin and cheek; short, irregular locks of hair
 - a) 6.92 GM 29 (1984), 2614

- 27. O3 ⚔
R20 Larger nose; faint smile; two lines in lower eyelid; large, irregular, claw-like locks of hair
 - a) - - Hoard 12

- 28. O3 ⚔
R21 Smaller eye; smaller mouth; smaller curls in hair
 - a) - - Hoard 12

⁶³⁵ Possibly identical to the previous coin, but the plate in Egger is of too poor quality to make a certain identification possible.

29. O3 ⚡
R22 Long, straight nose; large eye; feeble/faint smile; long, wavy locks of hair
a) 6.71 Athena 3 (1990), 194
30. O3 ⚡
R23 Well-rounded chin and cheek; small mouth; stylized, wavy locks of hair; few folds in drapery
a) 6.47 12 Paris 1186
31. O3 ⚡
R24 Straight nose; large eye with large upper eyelid; large, U-shaped locks of hair; few, rounded folds in drapery
a) - - Athena, list 18, 30
32. O3 ⚡
R25 Protruding forehead; small mouth; small, well-rounded chin; small locks of hair; few folds in drapery
a) 6.72 Peus 324 (1989), 182
b) - - Hoard 12
c) 6.91 Spink, 71 (1989), 88; Sotheby, 05.1987, 40
d) 6.35 Hirsch 182 (1994), 296
33. O4
R25 Similar, but shorter moustache; more claw-like locks in beard; small, irregular locks in mane on top of head; small line (flaw?) on neck
⚡
a) - - Hoard 12
34. O4 ⚡
R15 ⚡
a) 6.26 12 London 17d (not in *BMC*). Ex *SNG* v. *Aulock* 2752
b) 6.94 Rauch 34 (1985), 139
c) - - Hoard 12
d) 5.99 12 Copenhagen 621
35. O4 ⚡
R16 ⚡
a) - - Hoard 12
b) 6.49 11 Oxford 7
c) 6.89 11 Hoard 12; Lanz 78 (1996), 293; 56 (1991), 187; 44 (1988), 221; 30 (1984), 281
d) 6.70 12 *SNG* Keckman 289; ex Lanz 32 (1985), 252
e) 7.00 GM 69 (1994), 376
f) 6.22 12 Oxford 6. *Rev.* countermark (bird?)
36. O4 ⚡
R17 ⚡
a) 7.01 M&M 90 (2000), 255
b) 6.96 Hoard 12; GM 96 (1999), 205; Leu, autumn-list 1998, 76
c) 6.89 12 M&M 4 (1999), 149; list 2 (1998), 55; Aucionones 26 (1996), 237; Spink 02.1977, 133; Hess/Leu 28 (1965), 247
d) 6.62 12 London 22
e) 7.01 Hoard 12; Platt 9 (1997), 36
f) 7.00 Hirsch 176 (1992), 303; 173 (1992), 412; 169 (1991), 437; 166 (1990), 388

37. O5 More irregular locks in beard; small ear; more irregular and smaller locks in mane
R17 ↑
a) 6.03 Künker 32 (1996), 2075
b) 6.88 6 Glendining 14 (1963), 336
c) 6.70 12 London 17e (not in *BMC*). Ex *SNG* v. Aulock 2751
38. O5 ↑
R18 ↑
a) 6.93 Hoard 12
39. O5 ↑
R24 ↑
a) - - Hoard 12
b) 6.96 Stockholm 101648. Ex BA 10.1988, 122
c) 6.67 GM 78 (1996), 221; 69 (1994), 375
d) 6.75 12 Dewing 2387
e) - - Toderi, list 1:1982, 38
40. O5 ↑
R26 Head facing r.; small face; small nose and mouth; small chin; U-shaped locks of hair
a) 6.85 NAC Auct. D (1994), 1495; 2 (1990), 201
b) 6.38 1 London 24
c) 7.02 12 Berlin 84/1922. Ex Naville/*Ars Classica* 1920 (Coll. Pozzi), 2651; J. Hirsch 31 (1908), 3213 (Weber Coll.)
d) 6.72 1 London 23
e) 6.80 Athena 2 (1988), 174
f) - - Pegasi 99 (1995), 100
41. O5 ↑
R27 Large face; long nose; large curls on hair; few, soft folds in drapery
a) 6.89 Superior 12.1997, 1477
42. O5 ↑
R28 Similar
a) - - Hoard 12
- Personal name obliterated:
43. O4 ↑
R- Small nose and mouth; small, regular locks of hair; flat folds in drapery
a) 6.59 Hirsch 184 (1994), 272
44. O4 ↑
R- Slightly aquiline nose; few folds in drapery
a) 6.54 12 Vienna 18.504
45. O-*
R-*
a) 6.71 Hoard 12
b) 6.65 Hoard 12

V. ISSUE	Period of minting: c.365-55	Obv. dies: 2
	Drachms	Rev. dies: 2
	No. of coins: 8	Weights: 3.22-3.60

Type 1 *obv.* Bearded Heracles facing r.; strong facial features; detailed ear; short curly beard; small lion's scalp compared to face; two rows of locks in mane
rev. Draped female head facing l.; small forehead; large nose; flat stylized locks in hair; drapery hangs straight down from crown to neck; stylized folds in drapery; beneath, ethnikon (ΚΩΙΟΝ); to r. or l., initials

IΦ

- | | | |
|----|----|--|
| 1. | O1 | Aquiline nose; marked line at corner of mouth; single row of locks in mane |
| | R1 | On r., initials; high forehead; small mouth; five sharp folds in drapery |
| | a) | 3.60 12 Berlin 15 (Löbbecke Coll.). Ex hoard 17 (<i>IGCH</i> 1217) |
| | b) | 3.22 12 Munich 16 (19866) |
| | c) | 3.43 1 London 24a (not in <i>BMC</i>) |
| | d) | 3.27 12 Copenhagen 622. Ex Egger 45 (1913), 594 |
| | e) | 3.33 J. Hirsch 21 (1908), 3214 (Weber Coll.) |
| | f) | 3.33 12 Cambridge, <i>SNG</i> Cambridge 8533 |
| | g) | 3.26 12 Leiden, inv.nr. 6207 |

HP

- | | | |
|----|----|---|
| 2. | O2 | Similar, but two rows of lock in mane; locks in mane are more stylized and claw-shaped |
| | R2 | On l., initials; slightly bigger mouth; larger eyelid; four flat, stylized folds in drapery |
| | a) | 3.54 - GM 95 (1999), 330 |

VI. ISSUE	Period of minting: c.355-35 Tetradrachms No. of coins: 107	Obv. dies: 20 Rev. dies: 48 Weights: 13.76-15.35
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Type *obv.* Head of bearded Heracles facing l. (occasionally r. is noted); large beard; locks in beard are large and long; large lion's scalp
rev. Detailed rendered crab; above, ethnikon; beneath, club; between crab and club, or beneath club, personal name; square border of dots; occasionally square incuse; additional symbol or initial

ΞΑΝΘΙΠΠΙΟΣ

1. O1 Protruding forehead and eyebrow; small eye; large beard; large, detailed lion's scalp; two rows of long, irregular locks in mane;
R1 Above crab, ethnikon; between crab and club, personal name; small, irregular crab shield; long, detailed legs; long, slender claws; very large club
a) 14.96 7 Paris 1172
2. O2 Similar, but sharp straight line between beard and lower locks in mane
R2 Similar, but more strongly curved legs
a) 14.47 6 New York 170.238

ΦΙΛΙΣΚΟΣ

3. O2 ⤴
R3 Personal name between crab and club; irregular and narrow crab shield; slightly curved, detailed legs; large, detailed claws; r. claw slightly risen; long, slender club with symmetrically placed dots; on l. of l. claw, additional symbol (fish hook?)
a) 14.90 Vinchon, 04.1985, 371; ex R.P. Pflieger Coll.

ΛΥΚΩΝ

4. O3 Large face; mane is cut off in a vertical line at the back of head; small lock turned upwards in beard just under lip; long locks in mane
R4 Large crab; irregular shield with two elevations between eyes; long club; l. of l. claw, fish hook; wide square incuse
a) 14.42 11 Gulbenkian Coll. 763. *Obv.* secondary incisions
5. O3 ⤴
R5 Smaller crab; more angular crab shield; l. of l. claw, silk worm(?); narrow square incuse
a) 15.23 12 Oxford 2. Ex M&M XXV, 468
6. O3 ⤴
R6 Similar, but more stylized legs on crab; club other way round
a) 14.82 11 Paris 1167; Babelon 1743
7. O4 Similar, but differences in locks of mane, particularly in the lower part of neck
R7 Similar, but ethnikon placed between claws of crab
a) 14.83 12 Berlin 4 (Löbbecke Coll.)

ΔΙΩΝ⁶³⁶

8. O5 Large and protruding forehead; large nose; small mouth; small beard with short locks; small lion's scalp with one short row of small, stylized locks
R8 Large crab shield; thick, detailed legs; claws raised; short club; between claws, silk worm: no incuse
a) 15.21 *I2* Paris, Luynes Coll. 2715; Babelon 1745
9. O6 Similar, but small, round locks of hair along temple, smaller head
R9 Small crab shield; short, sharply bent, stylized legs on crab; between claws, silk worm; no incuse
a) 15.23 *3* Oslo 4. Ex Oldenburg 26 (1991), 200
b) - - Hoard 18. *CH VIII*, 188
10. O6 ↑
O10 Similar, but longer legs on crab
a) 14.82 Hoard 18(?). Künker 59 (2000), 228; Auctiones 8 (1978), 279. *Rev. Two*, secondary, deep incisions in flan (test marks?).
11. O7 Heracles facing r.; protruding forehead; lumpy nose; larger, curly beard; larger lion's scalp; two rows of short, stylized locks in mane
R11 Large crab; large shield with two dots on lower part; small claws; r. claw raised; thick, large legs; large club; between claws, silk worm; no incuse visible; to small dots beneath lower l. and r. leg on crab
a) 15.10 *I* Berlin 1 (Imhoof-Blumer Coll.)
b) 14.90 MünzZentrum 80 (1994), 90
c) - - Ritter 36 (1994), 365; 32 (1991), 294
12. O8 Similar, but Heracles facing l.; more claw-like locks in mane
R12 Similar, but ethnikon placed further to l.; square incuse; two small dots beneath lower l. and r. leg on crab
a) 14.82 Naville/*Ars Classica IV* (1922), 900; Weber 6625
13. O8 ↑
R13 Similar, but longer, straighter crab legs; between claws, additional symbol (bone?)
a) 14.71 Rauch 49 (1992), 201
14. O8 ↑
R14 Similar, but personal name placed further to l.; no incuse visible
a) 14.25 Hirsch 181 (1994), 269; 178 (1993), 340
15. O8 ↑
R15 Larger crab; thick legs; large, curved lines beneath eyes of crab; r. claw slightly raised; no additional symbol
a) 14.84 *I2* Berlin 2 (Löbbecke Coll.). Ex hoard 17 (*IGCH 1217*)
b) 14.42 Vinchon, 04.1999, 201
*c) 15.02 *I2* Copenhagen 618
16. O8 ↑
R16 Similar, but ethnikon placed further to r.
a) 14.95 CNG 49 (1999), 609; 46 (1998), 446; GM 78 (1996), 220
b) 14.89 *I2* London 13

⁶³⁶ The coins of Dion show a high degree of variation in style and fabric. The head of Heracles is facing left and right, some of the reverses are with incuse, some without; the coins are both with and without additional symbol. The die links and the use of an additional symbol (also used by other persons in this issue) proves that the coins of Dion belongs together, and most probably in the context as seen above. Additional comments are given in the commentaries in Part 2 above.

17. O9 Heracles facing r.; curly locks in berad; two rows of stylized locks in mane
R15 ↑
a) 14.95 3 Paris 1166; Babelon 1748
b) 15.25 A.F. Cahn 60 (1928), 898
c) 14.37 12 Munich 12
18. O9 ↑
R17 Similar, but slightly narrower crab shield
a) 14.79 10 London 14
19. O10 Heracles facing l.; protruding eyebrow; large lower lip; small locks of hair in front of ear;
long locks in beard; two rows of long, irregular locks in mane
R18 Small crab; oval crab shield; curved legs; long claws; thin club; shallow square incuse
a) 14.71 Sotheby 02.1909 (Benson Coll.), 713

ΦΥΛΟΤΙΜΟΣ

20. O11 Similar, but shorter locks in beard and no locks of hair in front of ear
R19 Small crab; crab shield tapers towards lower part; thick legs; long, small claws; on r. of
r. claw, initial B; shallow square incuse
a) 15.17 Spink, *NumCirc* 895 (05.1981), 4479; NFA II (1976), 239

ΑΜΦΙΤΙΜΟΣ

21. O11 ↑
R20 Small crab; oval crab shield; thin legs; long, large claws; shallow incuse
a) 14.93 Oslo 5. Ex Hirsch 179 (1993), 457; 176 (1992), 302

ΠΙΡΑΞΙΑΝΑΞ

22. O12 Delicately rendered facial features; row of small locks in beard beneath cheek; two rows of
symmetrical locks in mane
R21 Similar to R36 but on r. of r. claw, initial Y(?)
a) 14.30 London 11 (Bank Coll.)

ΑΡΙΣΤΙΩΝ

23. O12 ↑
R22 Similar, but no initial
a) - - Hoard 12; CNR 02.1995, 125
b) 14.84 Vinchon 05.1995, 147
c) 14.63 11 New York 152.466; Naville/Ars Classica VII (1924), 1533 (Bement
Coll.); Weber Coll. 6622; Babelon 1750

ΚΑΛΛΙΑΣ

24. O13 Similar, but straighter profile from forehead to nose and more irregular locks in mane
R23 Oblong crab shield; long legs; slender claws
a) 14.78 12 Hoard 12
b) 14.42 Hirsch 169 (1991), 438
25. O14 Similar, but more stylized and claw-like locks in mane
R24 Similar, but club placed further to l.
a) 15.20⁶³⁷ 5 Athena 2 (1988), 172; Athena, list 15 (1980-90), 54; Lanz 36 (1986), 409

⁶³⁷ The weights given are 15.06, 15.20 and 15.24 g. I have chosen the weight from the most recent catalogue, which is also the mediate weight.

26. O14 ⚡
R25 Similar, but l. claw more sharply bent
a) 14.84 // New York 100.48459; *AJN* 48 (1914), 28; J. Hirsch 31 (1912), 471; 26, 545
27. O15 ⚡
R25 Similar, but larger lips and moustache
a) 14.75 6 Hoard 12

ΛΑΚΩΝ

28. O13 ⚡
R26 Similar, but claws are smaller and held closer together; straighter legs
*a) 15.15 5 Hoard 12
b) 15.12 5 Hoard 12
c) 15.06 5 Hoard 12
d) 14.83 6 Hoard 12; *Elsen* 54 (1998), 280
*e) 14.21 Pozzi 2650

ΛΥΚΙΝΟΣ

29. O13 ⚡
R27 Similar, but smaller claws and legs and thinner line in lettering
a) 12.30⁶³⁸ 9 Hoard 13 (*IGCH* 1215); Sotheby 10.1995, 153; *SNG* von Post 285
b) 15.10 5 Hoard 12; *M&M* 3 (1998), 108; *Sternberg* 33 (1997), 27; *NAC* 7 (1994), 248; *Christie's* 06.1993, 54
30. O14 ⚡
R28 Small nose and mouth; straight profile; two rows of stylized, claw-like locks in mane
Large crab shield; large claws
a) 15.02 5 Hoard 12; *TradArt* 11.1995, 90; *Sternberg* 9 (1979), 41
b) 14.85 5 *Vigne* 04.1985, 47; *Lanz* 30 (1984), 284
c) 14.85 5 *Weber* 6623; *Babelon* 1750; *NC* 1896, p 25, no 47

ΘΕΟΔΩΤΟΣ

31. O13 ⚡
R29 Similar, but more slender club
a) 15.13 // Hoard 12
b) 15.21 6 *Vinchon* 11.1986, 219 (*Trampitsch Coll.*); *Hess/Leu* 45 (1970), 291
c) 15.11 6 *Berlin* 3 (*Fox Coll.*)
32. O16* (Obliterated)
R29 ⚡
a) 15.18 // Hoard 12
33. O17 ⚡
R30 Row of claw-like locks in beard along lower part of cheek; large ear on lion's scalp; two rows of claw-like locks in mane
Claws held closer together; r. claw slightly rised; short club; personal name reengraved
a) 15.06 *GM* 48 (1990), 443
b) 14.98 // Hoard 12
c) 14.91 *Hirsch* 169 (1991), 439
d) 15.21 // *Leu* 42 (1987), 305; ex *SNG* v. *Aulock* 2747
e) 15.15 Hoard 12
f) 14.72 6 *Leiden* 6206
g) 15.17 Hoard 12
h) 15.15 *Boston* (*Brett* 1955), 2019

⁶³⁸ The low weight may be a misprint since the coin shows no signs of excessive wear or damage.

34. O17 ⚔
 R31 Crab shield is broader in lower part; slightly larger club; personal name reengraved
 a) 15.12 /2 Sternberg 35 (2000), 286; Lanz 22 (1982), 397
 b) - - Ponterio 15 (1984), 18
 c) 15.07⁶³⁹/2 Hoard 12; Kricheldorf 46 (1998), 37

ΗΠΑΚΛΕΙΤΟΣ

35. O14 ⚔
 R32 Smaller crab shield; thinner legs; slender club; large letters with thin line in personal name; etnikon is hardly visible (low relief or worn?)
 a) 15.09 5 Hoard 12
 b) 14.89 5 Hoard 12; Stack's 04.1993, 316; Sotheby's Sale 6147 (The Nelson Bunker Hunt Coll.) (1991), 395
 c) 15.16 Hoard 12
36. O17 ⚔
 R33 Crab shield is narrower in lower part; thicker lines beneath eyes of crab; slightly thicker club; thicker lines and smaller letters in personal name
 a) 15.28 Hoard 12
 b) 15.08 /2 Hoard 12
 *c) 14.89 // Hoard 12
37. O17 ⚔
 R34 Similar, but slightly larger shield and thicker legs on crab
 a) 15.19 Hoard 12; Apparuti/Sternberg 18 (1986), 171
38. O18
 R35 Similar, but small differences in locks of beard and mane
 a) 14.85 Hoard 12; NFA 9 (1980), 269
39. O18 ⚔
 R36 Smaller, more triangular crab shield; slender club
 a) 14.85 // Hoard 12
40. O18 ⚔
 R37 Broader crab shield; thicker, longer legs; small letters in personal name
 a) 15.20 Tkalec&Rauch 04.1989, 137. *rev.* damaged die by crab's r. legs

ΝΕΣΤΟΡΙΑΣ

41. O17 ⚔
 R38 Small, rounded crab shield; long, thin legs; long, slender claws; small letters in personal name; short club placed beneath name
 a) 14.92 5 Hoard 12. *rev.* double-struck
 b) 14.32 GM 33 (1986), 191; Schulten 04.1985, 162
42. O17 ⚔
 R39 Larger, more angular crab shield; square impression on crab shield; slightly thicker claws; long, slender club; club placed beneath name
 a) 14.00 Superior 06.1998, 6436; Berk 02.1984, 95
 b) 15.17⁶⁴⁰ Hoard 12. Ponterio 76 (1995), 288
 c) 14.88 Hoard 12; CNG 47 (1998), 497
 *d) 15.00 6 Hoard 12
 *e) 15.00 6 Hoard 12
 *f) - - Berk 06.1984, 100

⁶³⁹ 15.07 g is the weight from Leu Numismatik; Kricheldorf gives the weight 14.97 g.

⁶⁴⁰ The preferred weight is from Leu Numismatik; Ponterio gives the weight 15.20 g.

- g) 15.00 6 Hoard 12
h) 15.00 Gulbenkian Coll. 764; Naville/Ars Classica 7 (1924), 1532 (Bement Coll.); Weber 6624
i) 15.03 NFA 11 (1982), 185 (N. Davis Coll.)
43. O19 Similar, but shorter and smaller locks in beard
R39 ⚡
a) 15.17⁶⁴¹ SKA 2 (1984), 239; GM 25 (1983), 84
44. O19 ⚡
R40 Similar, but slightly different position of legs and claws
a) 15.07 6 Hoard 12; Hirsch 168 (1990), 290a
b) 15.27 NAC 4 (1991), 149; SNG v. Aulock 2748
c) 15.14 Hoard 12
- ΦΙΛΙΣΣΚΟΣ
45. O17 ⚡
R41 Large crab shield; thick legs; thick claws; slightly risen l. claw: personal name reengraved and misspelled?
a) 15.03 Hoard 12; Sternberg 10 (1980), 134
- αρχ]ΙΔΑΜΟ[ς
46. O17 ⚡
R42 Triangulared crab shield; long, thick legs; small letters in personal name
a) 14.05 6 New York 65.89.1984 (gift of J.P. Rosen 1983). *Rev.* heavily corroded
- ΑΛΚΙΜΑΧΟΣ
47. O17 ⚡
R43 Large crab shield; impression on crab shield; thick legs; slightly risen r. claw; slender club; reengraved personal name
a) - - Kricheldorf 28 (1974), 116.
48. O17 ⚡
R44 Similar, but claws are even and letters of ethnicon is closer together; reengraved personal name
a) 15.12 6 Hoard 12; Münzen&Medaillen 86 (1998), 35; 81 (1995), 89
b) 15.24 Hoard 12; Auctiones 17 (1988), 245
c) 15.26 6 FPL 9 (1997), 30; Pegasi II (1996), 110; FPL 7 (1995), 35; FPL 5 (1993), 372; Sternberg, list 5 (1993), 372; Sternberg 24 (1990), 108; Sotheby's 04.1970, 211; Naville/Ars Classica/Ars Classica 14 (1929), 383 (Spencer-Churcill Coll.)
49. O19 ⚡
R45 Similar, but slightly different position of claws and letters; personal name reengraved
a) 15.06 CNG 55 (2000), 576

⁶⁴¹ 15.12 in GM.

50. O20 Similar, but shorter beard and less claw-shaped locks in mane
R44 ⚔
a) 14.78 6 London 12
b) - - Dresden 1690. FALSE⁶⁴²
c) 15.08 6 Hoard 12; Auctiones 18 (1988), 776; Peus 323 (1988), 838; Lanz 24 (1983), 349
51. O20 ⚔
R45 ⚔
a) 15.35 Hoard 12
b) 15.18 Hoard 12
c) 15.04 Hoard 12
d) 13.76 Oxford 3
e) 15.00 NAC 18 (2000), 238
52. O20 ⚔
R46 Smaller crab shield; impression on crab shield; slender and small claws; slender club
a) 15.02 5 Hoard 12
b) 14.94 5 Hoard 12
c) 15.18 5 Paris 1169
53. O20 ⚔
R47
*d) 14.87 5 Hoard 12

KAEITANΩP

54. O20 ⚔
R48 Similar
a) 14.71 5 Paris 1171 (Waddington 2719)

⁶⁴² The coin is a copy of the coin in British Museum (London 12). Not only are the dies identical, but also what appears to be secondary damages in the surface is found on both specimens, i.e. a small cut in front of the forehead on the obverse, and a small line on the left side of the left claw on the reverse. A direct comparison, or at least comparison of casts, is necessary before a final conclusion can be reached.

VII. ISSUE	Period of minting: c.355-35	Obv. dies: 9
	Didrachms	Rev. dies: 15
	No. of coins: 47	Weights: 5.77-6.99

Type *obv.* Beardless Heracles facing r.; lean chin and cheek; two rows of locks in mane
rev. Crab; club; above (or beneath when noted) crab, ethnikon; beneath (or above when noted) crab, personal name; square border of dots and die-moulded incuse; occasionally additional symbol (silkworm)

ΞΕΝΟΜΒΠΟΤΟΣ

1. O1 Low forehead; small eye; slightly aquiline nose; full chin; few, stylized locks in mane
R1 Small crab; small, rounded crab shield; thick legs bent downwards; claws are raised and held close together; between claws, symbol (silkworm)
a) 6.13 12 Copenhagen 632
2. O2 Larger eye and nose
R2 Irregular crab shield; thin legs; small claws; between claws, symbol (silkworm)
a) 6.62 1 London 46
b) 6.52 12 Berlin 32 (Löbbecke Coll.)
c) 6.71 J. Hirsch 25 (1909), 2407 (Philipsen Coll.)
d) 6.63 Vinchon 04.1988, 516; Ratto 06.1929, 494; Naville/Ars Classica 12 (1926), 1873
e) 6.67 12 Paris 1204
f) 6.17 1 Oslo 6

ΜΕΝΩΝ

3. O2 ⤴
R3 Similar, but longer distance between claws; between claws, symbol (silkworm)
a) 6.55 12 Copenhagen 631
b) - - Kovacs, list 16 (1982), 22
c) 6.38 1 Paris 1199 (Waddington 2729)
4. O3 Facial features are rougher; large nose; small mouth; low forehead; a few thick, large locks in mane
R3 ⤴
a) 6.31 12 Glasgow 5. Perforated

ΦΙΛΩΝ

5. O4 Lean face; straight profile; small eye and mouth; small, claw-like locks in mane
R4 Irregular crab shield, long legs and claws; between claws, symbol (silkworm)
a) 6.38 5 Vienna 31.634
b) 6.10 6 New York 170.243
c) 6.53 6 Paris 1200 (Waddington 2730)
d) (5.77) Baiocchi 05.1954, 376 (Zogheb Coll.)
6. O4 ⤴
R5 Similar, but larger club; between claws, symbol (silkworm)
a) 6.67 6 Copenhagen 629
7. O5 Similar, but differences in locks in mane, especially on top of head
R4 ⤴
a) 5.90 Hirsch 12 (1957), 163
8. O5 ⤴
R5 ⤴
a) 6.76 Sternberg 13 (1983), 197
b) - - Hoard 15 (CH 1, 54)

9. O -
R -
a) - - Kos Museum

ΦΙΛΙΣΤΗΣ

10. O4 ⤴
R6 Rounded crab shield; long, thin legs and claws; above crab, personal name; beneath crab, ethnikon
a) 6.99 - London 16a (not in *BMC*). Ex Weber 6626; Hill 1920, 112

ΤΗΛΕΦΟΣ

11. O6 Similar, but locks in mane have a more pointed shape, slightly leaner chin
R7 Large crab shield; depression with two dots on lower part of shield; thick, sharply bent legs; short, thick claws; ethnikon placed to l. of centre
a) 6.97 5 Paris, Coll. Armand-Valton 447
b) 6.08 6 Berlin 28678/4
c) 6.62 6 Copenhagen 628

ΑΡΙΣΤΙΩΝ

12. O6 ⤴
R8 Smaller shield and claws on crab; thinner legs; above crab, personal name; beneath crab, ethnikon
a) 6.56 6 Paris 1195
b) 6.85 6 Berlin (Löbbecke Coll.)

13. O7 Large face; long nose; small ear; small lion's scalp; short, irregular locks in mane
R9 Large, irregular crab shield; thick legs; long, thick claws; short, thick club
a) 5.94 12 Berlin (Prokesch-Osten Coll.)

14. O8 Similar, but larger eye and more pointed locks in mane
R9 ⤴
a) - - Kovacs list 12 (1981), 19
b) 6.81 1 London 15

ΑΡΙΚΤΙΩΝ

15. O7 ⤴
R10 Similar, but slightly thinner club
a) 6.44 Hirsch 172 (1991), 268; 165 (1990), 410

16. O8 Similar, but slightly longer locks in mane
R11 narrower crab shield; larger club
a) 6.66 London 14a (not in *BMC*). Ex *SNG v. Aulock* 8171; Kricheldorf 11 (1962), 182; Ratto 10.1934, 210; Naville/*Ars Classica* 12 (1926), 1872; Helbing, April 1913, 615; J. Hirsch 21 (1908), 3216 (Weber Coll.)
b) 6.39 6 Copenhagen 623

17. O8 ⤴
R12 Small, rounded crab shield; curved, small claws; thick club
a) 6.23 12 Paris 1196 (Waddington 2726)
b) 6.46 1 London 16

18. O8 ⤴
R13 Thin, stylized legs; long claws; slender club
a) 6.54 5 New York 170.239; Glendining 03.1955, 503
b) 6.96 5 Göttingen 110.10

19. O8 ⚔
 R14 Similar, but thicker legs and shorter claws
 a) 6.37 9 Oxford 4 (ex “Smyrna hoard”?)
 b) 6.24 7 Berlin (Imhoof-Blumer Coll.)
 c) 6.56 - Peus 351 (1997), 227; Glendining 3 (1965), 262
 d) 6.15 7 Munich 17
20. O9 More pointed profile; short, sharp, stylized locks in mane
 R14 ⚔
 a) 6.97 9 Paris 1205
21. O9 ⚔
 R13 ⚔
 a) 6.12 - Auctiones 3 (1973), 181
 b) 6.87 - Glendining 02.1961, 2398; ex Lockett Coll. 2923

ΑΡΧΙΑΔΑΜΟΣ

22. O8 ⚔
 R15 Broad crab shield; small claws
 a) 6.31 6 Berlin (Fox Coll.)
23. O9 ⚔
 R15 ⚔
 a) 6.39 6 Berlin (Imhoof-Blumer Coll.)
 b) 6.25 6 London 17
 c) 6.16 12 Zurich ZB 884/24

VIII. ISSUE	Period of minting: c.355-35	Obv. dies: 13
	Drachms	Rev. dies: 21
	No. of coins: 68	Weights: 2.93-3.72

Type 1 *obv.* Bearded Heracles facing r.; small lion's scalp rounded at neck
rev. Crab; beneath, club; above, ethnikon ΚΩΙ; between crab and club, personal name; all in square border of dots and incuse from die

MΝΑΣΙΜΑΧΟΣ⁶⁴³

- | | | |
|----|----|---|
| 1. | O1 | Small eye; small, pointed locks in mane |
| | R1 | Rounded crab shield; short, small claws; thin, bent legs |
| | | a) 3.36 12 Berlin 48 (Imhoof-Blumer Coll.) |
| | | b) 3.21 12 New York 100.48462 |
| | | c) 3.22 12 Göttingen 110.9. <i>Obv.</i> partly damaged by corrosion, die identification is unsecure |
| 2. | O2 | Similar, but two large hair locks in forehead |
| | R2 | Similar, but rounder crab shield and claws are closer together |
| | | a) 3.36 7 London 17a (not in <i>BMC</i>). Ex <i>SNG</i> v. Aulock 2749 |

Type 2 *obv.* Bearded Heracles facing r.; strong facial features; detailed beard; two rows of regular locks in mane
rev. Crab; above, ethnikon; beneath, personal name; between claws or between crab and personal name, silk worm; square border of dots and occasionally incuse square

ΑΜΦΙΔΑΜΑΣ

- | | | |
|-----|----|--|
| 3. | O3 | High forehead; claw-like locks in mane |
| | R3 | Beneath crab, silkworm; crab shield tapers towards lower part; long, detailed legs with joints clearly marked; long, small claws |
| | | a) 3.28 6 Oxford 18 |
| 4. | O4 | Larger nose; small mouth; row of small locks along beard and cheek |
| | R3 | ↑ |
| | | a) 3.45 6 Berlin 40 (Fox Coll.) |
| | | b) - - Hoard 15; <i>CH</i> 1, 54, 10 |
| | | c) 3.36 6 Berlin 52 (Löbbecke Coll.) |
| | | d) 3.32 6 New York 60.170.249 |
| | | e) 3.42 NAC, auct. A (1991), 1451 |
| | | f) 3.49 Pozzi 2655 |
| 5. | O4 | ⚡ |
| | R4 | Similar, but slightly thinner legs; smaller claws; smaller letters in ethnikon; smaller silk worm |
| | | a) 3.16 6 Berlin 39 (Imhoof-Blumer Coll.) |
| | | b) 2.93 6 London 65 |
| 6.* | O | |
| | R | |
| | | a) - - Hoard 15; <i>CH</i> 1, 54 (not ill.) |
| | | b) - 6 Cambridge 4764 (Leake Coll.) |

⁶⁴³ Mnasimachos is represented here in type 1, and also in type 3 below. It might be the same individual, but this is impossible to say from the context in which the name appears in this issue. See commentaries in Part 2 above.

ΣΩΣΙΣΤΡΑΤΟΣ

7. O3 ⚡
R5 Between claws, silkworm; thick legs with joints clearly marked; longer, more curved legs
a) - - Hoard 15; *CH* 1, 54, 11
8. O4 ⚡
R5 ⚡
a) 3.13 ♂ Paris 1174 (Waddington 2734)
b) 3.06 ♂ Copenhagen 636
9. O4 ⚡
R6 Beneath crab, silkworm; smaller, less curved claws; letters of ethnikon is placed on the sides and between claws
a) 3.62 Pozzi 2656
10. O4 ⚡
R7 Similar, but smaller and straighter claws
a) 3.08 ♂ London 66
b) - - Weber 6636
c) 3.20 Elsen liste 45 (1982), 14; Naville/*Ars Classica* IV (1922), 902
d) 3.21 ♂ Göttingen 96.16
e) 3.64 J. Hirsch 13 (1905), 3973 (Rhusopoulos Coll.)
11. O5 Small face; short, pointed nose; straight, sharp locks in beard; numerous, small, claw-like locks in mane
R8 Beneath crab, silkworm; small crab; thin legs; small claws; l. claw slightly risen; uneven placing of letters in personal name
a) 3.45 Hoard 15; *CH* 1, 54, 12; M&M liste 372 (1975), 13
- 12.* O
R
a) - - Hoard 15; *CH* 1, 54 (not ill.)

Type 3 *obv.* like type 1

rev. Crab; above, ethnikon; beneath, club; beneath club, personal name; initial; all in square border of dots and incuse

ΑΥΚΩΝ

13. O6 Small face; small mouth; irregular locks in mane
R9 Crab shield tapers towards lower part; short, sharply bent legs; short club; small letters in ethnikon; l. of club, Δ
a) 3.13 ♂ Brussels II.67.678
b) - - Weber 6634
14. O7 Similar, but pointed locks in lower part of beard
R9 ⚡
a) 3.32 7 Oxford 16
b) 3.24 ♂ Leiden 6210
c) - - Pegasi 96 (199?), 115
d) 2.98 Spink 108 (1995), 47
15. O8 Large mouth; delicately rendered facial features; smaller locks in beard; smaller, more regular locks in mane
R9 ⚡
a) - - Hoard 15. *CH* 1, 54, 7

16. O8 ⚡
 R10 Longer claws; longer legs with joints clearly marked; to r. of personal name, Δ
 a) 3.47 6 London 61
 b) 3.40 6 Copenhagen 637

MΝΑΣΙΜΑΧΟΣ

17. O7 ⚡
 R11 Large, oval shield crab shield; small, short claws and legs; small letters in ethnikon and personal name; on l. of club, Δ
 a) 3.54 6 New York 33.6
 b) 3.38 6 Berlin 590/1875
 c) - - Hoard 15. CH 1, 54, 9
 d)* - Hoard 15. CH 1, 54 (not ill.)
18. O8 ⚡
 R12 Smaller crab shield; shield tapers towards lower part; short legs with joints clearly marked; to r. of club, Δ
 a) 3.60 6 Berlin 46 (Imhoof-Blumer Coll.)
 b) - - Kovacs, auct. IV (1983), 89
 c) 3.49 Auctiones 11 (1980), 166; M&M 54 (1978), 311; MB 8 (1937), 372; J. Hirsch 25 (1909), 2409 (Philipsen Coll.)

Type 4 *obv.* Like type 2
rev. Like type 2, but no initial

ΙΔΟΜΕΝΕΥΣ

19. O7 ⚡
 R13 Crab shield tapers towards lower part; long, curved claws; short, bent legs
 a) 3.16 6 New York 100.48461
 b) 3.15 1 London 59
 c) 3.12 Kovacs, liste 16 (1982), 23. Weber 6633
 d) 3.07 NF Schulten, auct. oct. 1990, 226
 e) 3.36 Hirsch 118 (1979), 592. *obv.* corroded
20. O8 ⚡
 R14 Similar, but thicker legs and more uprised claws
 a) 3.30 Egger 46 (1914), 1341
 b) 3.20 6 Lanz Graz 5 (1975), 225
 c) 3.31 6 Budapest 13a.1918.28
21. O8 ⚡
 R15 Similar, but sigma in personal name is placed on r. of club
 a) 3.48 6 Berlin 45 (Imhoof-Blumer)

ΙΑΤΡΟΚΛΗΣ

22. O8 ⚡
 R16 Crab has thick legs with joints clearly marked; r. claw slightly raised
 a) 3.42 L. Hamburger, 06.1930, 817
 b) 3.40 Auctiones 20 (1990), 432
 c) 3.38 6 New York 28.254. Corroded

23. O9 Protruding forehead; slightly aquiline nose; small locks in beard; one row of claw-like locks and one row of small, hardly visible locks in mane
 R17 Large crab shield tapers towards lower part; long, curved claws; short, thin, bent legs
 a) 3.26 12 London 58
 b) 3.36 12 Paris 2728 (SNG Delepierre)
 c) 3.15 1 Oxford 15
 d) - - Hoard 15 (CH I, 54, no. 8)

ΠΠΠΟΛΟΧΟΣ

24. O10 Similar, but longer, irregular locks in mane
 R18 Similar, but r. claw slightly longer and upraised compared to l. claw
 a) 3.37 7 London 60
 b) 3.45 7 Paris 1175
25. O11 Small nose; claw-like locks in beard
 R18 ↑
 a) 3.39 6 New York 170.247

ΜΟΣΧΙΩΝ

26. O12 Long, straight nose; small eye; large beard with small locks; small, claw-like locks in mane
 R19 Similar, but smaller claws
 a) 3.53 12 London 62
 b) 3.72 11 Leu 77 (2000), 323. Ex SNG v. Aulock 2750
 c) 3.53 12 Berlin 10683

ΜΕΝΩΝ

27. O13 Straight profile from forehead to nose; lion's scalp is flat on top; large fold in lion's scalp behind ear; long, irregular locks in mane
 R20 Straight, thin legs with joints hardly visible; club placed beneath personal name; less space between letters in ethnikon
 a) 3.22 6 Oxford 17
 b) 3.33 6 New York 100.48460

ΑΡΧΙΑΜΟΣ

28. O13 ↑
 R21 Similar, but larger claws
 a) 3.40 6 Paris 2727 (SNG Delepierre)
 b) 3.37 6 London 56

- | | | | |
|-----|---|---|-----------------------|
| 13. | O | Similar | |
| | R | Larger crab; large oval shield | |
| | | 1.51 6 | Göttingen 88.4 |
| 14. | O | (partly off flan) | |
| | R | Similar | |
| | | 1.43 7 | New York 48480 |
| 15. | O | Similar | |
| | R | Similar | |
| | | 1.65 7 | London 100 |
| 16. | O | Heracles facing l.; locks in mane seems to be small and sharply cut [corroded] | |
| | R | Large, irregular crab shield; shield is narrow in lower part; eyes wide apart; thick legs with joints clearly marked; long, slender, sharply bent claws | |
| | | 1.18 7 | New York 1970.142.503 |
| 17. | O | Similar | |
| | R | Similar | |
| | | 1.80 6 | Göttingen 84.15 |
| A | | | |
| 18. | O | (as above) | |
| | R | (as above) | |
| | | 0.88 6 | Stockholm 9 |

14.	O	[corroded]	
	R	[corroded]	
		0.84 12	Göttingen 92.5
15.	O	(as above)	
	R	(as above)	
		-	Kos
16.	O	(as above)	
	R	(as above)	
		-	Kos

XI. ISSUE	Period of minting: c.280-50	Obv. dies: 11
	Didrachms	Rev. dies: 23
	No. of coins: 90	Weights: (4.84/5.07/5.34) 5.50-6.80 (7.35)

Type 1 *obv.* Beardless Heracles facing r.; full chin and cheek; large, irregular locks of hair and locks in mane
rev. Crab; beneath, club; above, ethnikon; beneath club, personal name; square border of dots; shallow square incuse (in die)

ΕΜΠΙΠΕΠΩΝ

1. O1 Large nose; large curly locks of hair in forehead and along temple; small ear; large, irregular locks in mane
 R1 Irregular crab shield; shield tapers towards lower part; depression in shield; large eyes; sharply bent legs with joints clearly marked; long claws
 a) 6.72 / Paris 1202
 b) 6.52 Weber 6632
 c) 6.52 2 Oxford 13. [Same as previous?]
 d) 6.53 Naville/Ars Classica 4 (1922), 901. [Same as previous?]
 e) 6.43 Kölner Münzkabinett 54 (1991), 83
2. O1 ⚔
 R2 Similar, but short, thick legs and claws
 a) 6.55 Ball, list 39 (1937), 571
 b) 6.48 Kölner Münzkabinett 32 (1982), 160; Hirsch 06.1956, 211; Schlessinger 13 (1935), 1339 (ex Hermitage Coll.)
 c) 6.43 / Berlin 24 (Imhoof-Blumer Coll.)
3. O2 Similar, but smaller nose and eye
 R1 ⚔
 a) 6.58 /2 Glasgow 3
 b) - - Feuardent 06.1924, 128
 c) 6.68 /2 Berlin 25 (Löbbecke Coll.)
4. O2 ⚔
 R2 ⚔
 a) 6.53 /2 Vienna 28.239
 b) 6.48 / New York 170.244
 c) 6.40 Spink 108 (1995), 46; Buckland, Dix & Woods 15 (1995), 40; Ratto 04.1927, 2066
 d) - - Davis, list 1996 (summer), 68
 e) 6.42 Merzbacher 3114; Egger 46 (1914), 1340; Sotheby's 05.1908, 603 (ex Montagu and O'Hagan Colls.)
 f) 6.61 / London 45
 g) - - Oxford 5
 h) 6.71 L. Walcher de Moltheim Coll. 2454

ΠΟΛΥΑΡΧΟΣ

5. O1 ⚔
 R3 Similar, but slightly thinner legs and claws
 a) 5.95 / Berlin 33 (Fox Coll.). *rev.* Misspelled personal name: Πολυαρχος
 b) 6.29 Superior 06.1986, 1172; Helbing, April 1913, 614
6. O1 ⚔
 R4 Similar, but longer distance between claws
 a) 6.26 Naville/Ars Classica 5 (1923), 2645 (Duplicates from the British Museum)

7. O2 ⚔
R4 ⚔
a) 6.67 12 Berlin 34 (Löbbecke Coll.)
8. O2 ⚔
R5 Slightly smaller crab shield; thin, long legs; slender club
a) 5.93 2 Winterthur 3613
b) 6.50 A.E.Cahn 60 (1928), 899
c) 6.35 1 London 47
d) 6.72 12 Copenhagen 630
e) 6.50 Schlessinger 13 (1935), 1340 (ex Hemitage Coll.)
f) 6.60 Kress 90 (1951), 302

ΔΗΜΗΤΡΙΟΣ

9. O3 Large, aquiline nose; slightly leaner chin; more symmetrical, claw-like locks in mane
R6 Similar, but slightly longer and slender claws
a) - - Myers 3 (1972), 121
b) 6.20 7 Göttingen 96.17
c) 6.32 Pegasi 118 (2000), 111
d) 7.35 Münzhandlung Basel 4 (1935), 830
10. O4 Similar, but small differences in locks in mane
R6 ⚔
a) 6.62 6 Berlin 23 (Löbbecke Coll.)
b) 6.08 Baiocchi, 05.1954, 375 (M. de Zogheb Coll.)
c) 6.39 7 London 44
d) - - Glendining, 07.1974, 22 (Glamis Castle Coll.)
e) 6.10 Knobloch 26 (1965), 187 (Stanton Coll.)

ΚΤΕΦΑΝΟΣ

11. O4 ⚔
R7 Similar, but legs on r. side are held slightly higher compared to l. side
a) 6.68 6 Berlin 35 (Löbbecke Coll.)
b) 6.54 6 London 48

ΠΥΘΙΩΝ

12. O5 Slightly smaller face; small differences in locks in mane
R8 Similar, but legs more sharply bent
a) 6.33 2 Berlin 36 (Imhoof-Blumer Coll.)
b) 6.20 2 Oxford 14. Ex Pozzi 2552

Type 2 *obv.* Beardless Heracles facing r.; large face; often ornamental treatment of locks of hair and locks in mane; detailed rendering of facial features, especially eyes, and locks in mane; distinct treatment of locks in mane, either ornamental or irregular
rev. Crab; above, ethnikon; beneath, personal name; between crab and personal name, club (gorytos on latest specimen); all in square border of dots; flan is broad and completely flat on reverse

ΖΩΛΙΟΣ

13. O6 Large eye; aquiline nose; well-rounded cheek; large locks of hair at temple; small lion's
scalp; small, irregular locks in mane
R9 irregular crab shield; narrow lower part of shield; stylized legs; long claws; long,
slender club
a) 6.60 Christie's, 10.1986, 76

14. O7 Similar, but fuller chin, and differences in locks in mane
R9 ⤴
a) 6.41 *I2* Berlin 26 (Fox Coll.)
15. O7 ⤴
R10 Similar, but smaller square incuse and motif, esp. distance between crab, personal name and club
a) 6.30 *I2* Berlin 27 (Löbbecke Coll.)
b) 5.91 *I2* SNGDewing 2389
c) 6.57 *I2* Copenhagen 634
d) 6.58 *II* London 49
e) - - Feuarent, 06.1913, 305 (Burel Coll.)
f) 6.10 Naville/Ars Classica 15 (1930), 977

ΦΙΛΙΣΤΟΣ

16. O7 ⤴
R11 Crab has thin, stylized and sharply bent legs; long, slender claws; long, slender club
a) 6.64 *I* London 54
b) 6.40 Glendining, 03.1931, 1131

ΝΙΚΩΝ

17. O7 ⤴
R12 Similar, but slightly smaller crab
a) 6.45 *I2* New York 100.48468
b) 6.47 Auctiones 18 (1989), 777; J. Hirsch 21 (1908), 3218 (Weber Coll.)
c) 6.53 M&M 4 (1999), 150; Kricheldorf 5 (1958), 118
d) 6.80 *I2* London 53
e) 6.23 Glendining, 02.1961, 2399; ex Pozzi 2653
f) 6.23 *II* London 51a (not in *BMC*). Ex *SNG* v. Aulock 2754; Jameson 1547
g) 6.40 Schlessinger 13 (1935), 1341 (ex Hermitage Coll.); ex Pozzi 2654
h) 6.35 J. Hirsch 13 (1905), 3969 (Rhousopolous Coll.)
18. O7 ⤴
R13 Slightly larger crab shield; curved legs; slender, curved l. claw
a) 6.59 *I2* London 52
b) - - Kress [1958-69?], 334
c) 6.30 *I2* Copenhagen 635
19. O8 Straighter nose; more delicate facial features; ornamental locks of hair from forehead to temple; undulating line behind ear; one row of symmetrical, claw-like locks and one row of smaller, more irregular locks in mane; two uppermost locks in mane are turned upwards
R14 More oval crab shield; thin, stylized and sharply bent legs
a) 5.34 *I0* New York 57.115.1968
b) 6.68 *II* Paris 1203. Ex Boston (Brett 1955), 2024⁶⁴⁴
20. O8 ⤴
R15 More irregularly shaped shield with narrow lower part; longer l. claw
a) 6.62 *I2* Berlin 31 (Löbbecke Coll.)

⁶⁴⁴ The coins appears to be identical in spite of the discrepancy between the weight given in the Brett catalogue (6.20 g) and the measured weight of the Paris specimen.

ΚΑΕΙΝΟΣ

21. O8 ⚔
R16 Five elevations on shield; curved, stylized legs on crab; long, slender club
a) 6.34 *I2* New York 100.48467
b) 6.65 *I2* Glasgow 4
c) 6.24 *II* Paris 1201
d) 6.57 Hess 253 (1983), 239; Naville/Ars Classica/Ars Classica 7 (1924), 1536;
J. Hirsch 21 (1908), 3217 (Weber Coll.)
e) 6.25 *I2* Berlin 29 (Imhoof-Blumer Coll.)
f) 6.28 *I2* Copenhagen 633. Uncertain obv. die
22. O8 ⚔
R17 Similar, but legs of crab more curved
a) - - Knobloch, list 34 (1968), 1189
b) 6.39 *II* London 51
23. O- [corroded]
R17* ⚔
a) (5.70) *I2* Göttingen 110.4
24. O
R
a) - *I2* Cambridge 4763 (Leak Coll.)

ΜΕΔΩΝ

25. O8 ⚔
R18 Similar, but large r. claw on crab
a) 6.61 *I2* Berlin 30 (Löbbecke Coll.)
b) 6.42 *I2* Paris 1198 (Waddington 2728)
c) 5.50 *I2* New York 100.48469
d) 5.07 *I2* New York 98.10; Stack's 1951, [x]

ΦΙΛΩΝ

26. O9 Similar, but more numerous locks in mane; three uppermost locks in mane are turned upwards
R19 Small, rectangular crab shield; long, straight, stylized legs; long, slender, small claws; long, slender club
a) 6.68 *I* London 55

ΚΑΛΛΙΣΤΡΑΤΟΣ

27. O9 ⚔
R20 Similar, but slightly larger and more irregular crab shield
a) 6.34 *I* London 50
b) 6.72 Schulman 239 (1965), 1448
c) 6.55 Ball, list 39 (1937), 572
d) 6.72 *I2* Paris 1197 (Waddington 2727)
e) 6.47 *I2* Berlin 28 (Löbbecke Coll.)
*f) (4.84) *I2* Göttingen 96.13
28. O
R
a) 6.71 *I* Stockholm 1

ΑΝΑΞΑΝΔΡΟΣ

29. O10 Large eye; well-rounded chin and cheek; undulating line behind ear; small lion's scalp; irregular locks in mane
R21 Larger crab shield; five elevations on shield; short, thin legs with joints clearly marked; small claws
a) 6.23 I2 Berlin 22 (Imhoof-Blumer Coll.)

ΣΙΜΟΣ

30. O11 Large face; large eye and mouth; well-rounded facial features; long, wavy locks of hair in forehead and at temple; small lion's scalp; irregular locks in mane
R22 Similar, but *gorytos*(?)⁶⁴⁵
a) 6.68 J. Hirsch 29 (1910), 770

ΧΑΡΜΙΠΠΙΟΣ

31. O11 †
R23 Similar, but thicker and more sharply bent legs; *gorytos*
a) 6.74 I2 Berlin 38 (Prokesh-Osten)

⁶⁴⁵ The motif can be interpreted as an unusual club, a crescent or an unusual slender *gorytos*, cf. the succeeding reverse die.

XII. ISSUE	Period of minting: c.280-10 Drachms (reduced weight) No. of coins: 189	Obv. dies: 33 Rev. dies: 74 Weights: (2.31) 2.40-3.38
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Type 1 *obv.* Bearded Heracles facing r.; large beard; large locks in hair, beard and lion's scalp
rev. Crab; crab shield tapers towards lower part; large eyes on crab; detailed legs and claws;
above crab, ethnikon; beneath crab, club; beneath club, personal name; all in square border of dots

ΠΟΛΥΑΡΧΟΣ

- | | | |
|-----|--------|--|
| 1. | O1 | Large, slightly aquiline nose; large, curly locks of hair along forehead; long, irregular locks in mane |
| | R1 | Oblong indentation in lower part of shield; small, thin claws; large, sharply bent legs
a) 2.91 <i>l</i> London 64
b) - - Weber 6635
c) 2.96 <i>l</i> SNG Dewing 2386 |
| 2. | O1 | ↑ |
| | R2 | Similar, but thicker claws
a) 3.06 <i>l</i> New York 100.48470 |
| 3. | O2 | Smaller nose; long moustache; straight locks of hair in forehead; slightly more claw-like locks in mane |
| | R2 | ↑
a) 2.91 <i>l</i> New York 100.48471 |
| 4. | O3 | Smaller locks in beard; long, undulating locks of hair in forehead and temple; irregular locks in mane |
| | R2 | ↑
a) 3.02 <i>l2</i> Copenhagen 639
b) 3.05 J. Hirsch 31 (1912), 472
c) 3.03 <i>l2</i> New York ("Robinson bequest 1960")
d) 3.00 NAC, auct. H (1998), 1386
e) 2.81 <i>l</i> Winterthur 3616
f) - - Merzbacher [auct.?], 3115
g) 2.97 <i>l</i> Athen 2. Ex hoard 21 (<i>IGCH</i> 1308)
h) 3.05 <i>l2</i> Paris 1176
i) 3.03 <i>l2</i> Munich 21212
j) 3.09 <i>l2</i> Glasgow 7
k) 3.06 <i>l</i> London 63 |
| 5.* | O
R | a) 3.00 <i>l2</i> Cambridge 8534 (McClellan Coll.)
b) 2.83 <i>l</i> Cambridge 8535 (McClellan Coll.) |

ΕΜΠΙΡΕΠΩΝ

- | | | |
|----|----|--|
| 6. | O1 | ↑ |
| | R3 | Similar, but slightly smaller claws and thicker legs
a) 2.98 <i>2</i> New York 170.246
b) 3.03 <i>l1</i> Munich 19 |
| 7. | O2 | ↑ |
| | R3 | ↑
a) 2.80 Kölner Münzkabinett 65 (1996), 131; Kricheldorf 19 (1968), 281
b) 2.83 Weber 6632
c) 3.05 <i>l</i> Berlin 43 (Löbbecke Coll.) |

8. O3 ⚔
 R4 Similar, but larger shield and shorter claws
 a) 2.96 *I2* Copenhagen 638

9. O3 ⚔
 R5 Long, slender claws; long club
 a) 3.01 *I* London 57

BATIΩN

10. O3 ⚔
 R6 Small, thin claws turned upwards; thin, straight legs; small, slender club
 a) 2.85 *I* Paris 1179 (Waddington 2732)
 b) 3.13 *I* SNG Dewing 2385
 c) 2.88 *I* Athen 3. Ex hoard 21 (*IGCH* 1308)
 d) 3.10 *I* Berlin 42 (Löbbecke Coll.)
 e) 2.83 *2* New York 170.283. *Obv.* corroded

Type 2 *obv.* Bearded Heracles facing r.; large variation in style (first specimens are die linked with type 1)
rev. Crab; above, ethnikon; beneath crab, club; beneath club, personal name; large variation in style

BATIΩN (cont.)

11. O3 ⚔
 R7 Crab shield tapers towards lower part; oblong indentation in lower part of shield; curved legs; short club
 a) 3.05 *I* London 78
 b) 2.97⁶⁴⁶ Auctiones 16 (1986), 187; Naville/*Ars Classica* 12 (1926), 1874
 c) 3.04 *I2* Leiden 2709
 d) - - Weber 6641

ΠΥΘΙΩN

12. O3 ⚔
 R8 Similar, but slightly thicker legs and longer club
 a) 3.01 *2* Oxford 42. Ex hoard 27 (*IGCH* 1320)(?)
 b) 3.02 *2* New York 27.44
 c) 2.88 *2* New York 100.48485. Ex Feuarent 10 (1923), 8e
 d) 3.12 Künker 113 (1995), 105; M&M 79 (1994), 369; M&M liste 204 (1960), 3
 e) - - Buckland, Dix & Woods 2 (1993), 65
 f) 3.08 London 82
 g) 3.13 *I* Berlin 50 (Löbbecke Coll.)
 h) 3.01 *I* Paris 1181 (Waddington 2736)
 i) 2.95 *I* Athen 16. Ex hoard 21 (*IGCH* 1308)
 j) 2.98 *I2* Athen 11. Ex hoard 21 (*IGCH* 1308)
 k) 2.87 GM 44 (1989), 402
 l) 3.02 Ratto 04.1927, 2069

ΑΝΑΞΑΝΔΡΟΣ

13. O4 Protruding eyebrow; straight nose; wavy locks of hair in forehead and temple; irregular locks in mane
 R9 Irregular crab shield; large eyes; straight, thick legs with joints clearly marked; long club with large knobs
 a) 3.35 *I2* Paris 1177 (Waddington 2731)
 b) 3.22 *I2* London 76
 c) 3.37 Glasgow 9

⁶⁴⁶ According to the Naville/*Ars Classica* catalogue the weight is 2.79 g. Here is used the more recent weight from the Auctiones catalogue.

- d) 3.16 Naville/Ars Classica 5 (1923), 2648 (Doubles de BM)
 e) 3.11 12 Berlin 41 (Fox Coll.)
 f) - - Weber 6640
 g) - - Emporium 44 (2000), 136. *Rev.* 1. claw is almost obliterated by damage

14. * O
R

- a) 3.18 London 77 (not present on tray)
 b) 2.80 Schlessinger 13 (1935), 1342 (Hermitage Coll.)

ΕΞΑΙΓΡΕΤΟΣ

15. O4 ⤴
R10

- Similar, but legs more bent
 a) 3.15 1 Paris 2734 (*SNG* Delepierre)
 b) 3.01 London 80
 c) 3.30 12 Oxford 41. Ex Baldwin (Luzerne) 09.1923, 2649
 d) 3.16 12 Berlin 44 (Löbbecke Coll.)
 e) 3.00 Schlessinger 13 (1935), 1343 (Hermitage Coll.)
 f) 3.38 Naville/Ars Classica 5 (1923), 2649 (Doubles de BM)
 g) 3.07 12 Paris 1178 (Waddington 2733)

ΛΑΕΡΤΑΣ

16. O5 Larger mouth; lumpy nose; straight locks of hair at temple; small, claw-like locks in mane;
 lower part of lion's scalp is marked with a line
 R11 Irregular crab shield; slightly curved legs; large claws partly turned upwards;
 ethnikon is curved well above claws
 a) 3.04 12 London 79
 b) 3.01 12 Leiden 2710

17. O5 ⤴
R12

- Smaller crab shield; stylized legs; small, slender club; ethnikon is placed between claws
 a) 3.06 12 New York 60.170.284
 b) 3.09 12 Athen 6. Ex hoard 21 (*IGCH* 1308)
 c) 3.07 *SNG* v. Aulock 2756
 d) 2.85 Hirsch 125 (1981), 3212

ΦΙΛΙΣΤΟΣ

18. O5 ⤴
R13

- Large, irregular crab shield; thin, short, slightly curved legs; small claws; thick club;
 ethnikon is placed between claws
 a) 2.99 12 Cambridge 8544 (McCleary)
 b) 3.09 Egger 46 (1914), 1344

ΛΕΟΝΤΙΣΚΟΣ

19. O6 Small eyebrow and eye; large mouth; claw-like locks of hair in temple; large locks in beard;
 small, irregular locks in mane; lowest lock in mane is long and straight, forming a straight
 line from lion's scalp to back of neck
 R14 Rounded shield with narrower lower part; long, detailed claws; long, slightly bent legs;
 long club with small, distinct knobs
 a) 3.17 Glendinning 02.1961, 2401; Naville/Ars Classica 5 (1923), 2647 (Doubled
 de BM)
 b) 3.05 Baiocchi (Kairo) 05.1954, 378 (M. de Zogheb Coll.)

20. O6 ⚡
R15 Irregular crab shield; thin, bent legs; slightly risen legs on r. side; large, thick club with small, distinct knobs
a) 3.13 12 Paris 1180 (Waddington 2735)

ΧΑΙΡΥΛΟΣ

21. O6 ⚡
R16 Irregular crab shield; large eyes with curved lines underneath; two small lines marks crab's mouth; thick, bent legs with joints clearly marked; slender club with large knobs
a) 3.06 11 New York 60.170.248
b) 3.03 12 Athen 210. Probably belonging to hoard 21 (*IGCH* 1308)
22. O6 ⚡
R17 Similar, but larger crab shield
a) 3.02 12 Winterthur 3617
23. O6 ⚡
R18 Irregular crab shield; small eyes marked with dots; thin legs; slender club
a) 3.15 12 *SNG* Dewing 2391

Personal name obliterated:

- 23a. O6 ⚡
R17a Similar to R17, but slightly different position of l. claw, and probably different personal name
a) 3.16 1 Oxford 40. Ex hoard 23 (*IGCH* 1309, 19)

ΧΡΗΣΤΙΑ

24. O7
R19 Low forehead; large, slightly aquiline nose; small eye; small mouth; large, irregular locks in beard; small, irregular, hardly visible locks in mane
Large, irregular crab shield; thin, bent and slightly curved legs; small eyes; slender club
a) 3.16 12 Athen 5. Ex hoard 21 (*IGCH* 1308)
- 25.* O
R
a) 2.88 12 Cambridge 8545 (McClean Coll.)

ΑΡΧΙΔΑΜΟΣ

26. O7 ⚡
R20 Similar, but longer club
a) 2.40 11 Athen 1. Ex hoard 21 (*IGCH* 1308)
27. O7 ⚡
R21 Similar, but claws held closer together
a) 2.69 Superior 12.1972, 198
b) - - Knobloch liste 34 (1968), 1191
c) 2.68 5 Oxford 45. Ex hoard 23 (*IGCH* 1309, 20)

ΝΙΚΑΓΟΡΑΣ

28. O8
R22 Small nose; small eye marked with dot; small, irregular locks in beard; hardly visible, irregular locks in mane
Small, rounded crab shield; long, slightly curved legs on crab; small claws; large, long club
a) 2.85 1 London 79b (not in *BMC*). Ex hoard 23 (*IGCH* 1309, 9)

29. O9 Similar, but slightly larger eye and two straight locks of hair at temple
R23 Large, irregular crab shield; long, slightly curved, stylized legs; large, long club
a) 2.91 12 Paris 2733 (*SNG Delepierre*)
30. O9 ↑
R24 Large angular crab shield; thin, bent legs; very small eyes; small, curved claws;
small, slender club
a) 3.08 12 London 79a (not in *BMC*). Ex hoard 23 (*IGCH* 1309, 8)
31. O10 Similar, but larger eye and differences in locks in mane
R23 ↑
a) 3.05 1 New York 170.279
32. O10 ↑
R24 ↑
a) 2.88 12 Winterthur 3615
b) 3.00 12 Athen 13. Ex hoard 21 (*IGCH* 1308)
33. O11 Low forehead; small nose; small eye; small lion's scalp; small locks in mane
R25 Angular crab shield; thin, long, stylized claws; straight, stylized legs; letters are
unevenly placed and of irregular size
a) 3.03 11 New York 158.418
b) 3.05 11 Athen 14. Ex hoard 21 (*IGCH* 1308)
34. O11 ↑
R26 Small, irregular crab shield; long, small claws; long, straight legs; long, slender club
a) 2.93 1 Oxford 41. Ex hoard 23 (*IGCH* 1309, 6)
b) 2.94 12 Hoard 23 (*IGCH* 1309, 7)
35. O12 Similar, but longer nose and larger mouth
R26 ↑
a) 2.95 12 Hoard 23 (*IGCH* 1309, 5)
- 36.* O
R
a) 3.02 12 Cambridge 8542 (McClean)
b) (2.31)12 Göttingen 110.11. Corroded
c) - - Kos

ΑΡΑΤΙΑΔΑΣ

37. O10 ↑
R27 Small, irregular crab shield; mouth is marked with two lines; large, long claws;
long, straight legs; long, slender club
a) 2.86 Peus 320 (1987), 1122
38. O11 ↑
R27 ↑
a) 3.03 12 Leiden 2711
b) 2.94 Egger 41 (1912), 578
c) 2.60 12 Oxford 35. Ex hoard 23 (*IGCH* 1309, 21)
39. O11* ↑
R28 Similar, but r. claw slightly rised
a) 2.96 12 Paris 2730 (*SNG Delepierre*)
40. O12 Similar, but small differences in locks in mane
R28 ↑
a) 2.98 12 Winterthur 3614

41. O13 Similar, but differences in mane and distinct curved line beneath neck
R29 Small, triangular crab shield; thin, long, curved claws; slender, straight, stylized legs; very long and slender club
a) - - Blanson liste 11 (1992), 148
42. O*
R30 Large, rounded crab shield; short, sharply bent claws; stylized, slightly bent legs; large club
a) 2.71 12 New York 170.278
- 43.* O
R
a) 2.88 12 Cambridge 8539 (McClellan)

Personal name obliterated:

- 43a. O11 ⚡
R28a Similar to R28 (same die cutter), but slightly different position of ethnicon and claws; probably different personal name
a) 2.91 12 New York 170.285
- 43b. O13 ⚡
R28a ⚡
a) 2.99 Hirsch 177 (1993), 365

ΑΣΤΥΝΟΜΟΣ

44. O14 Protruding eyebrow; straight nose; wavy hair locks at temple; one curly hair lock above forehead; large eye; large, claw-like locks in beard; irregular locks in mane
R31 Irregular crab shield; curved claws; slightly bent, slender, stylized legs
a) 2.92 Sotheby's 12.1924, 178
45. O14 ⚡
R32 Similar, but crab shield is broader in upper part and l. legs slope upwards
a) 3.05 11 Athen 9. Ex *IGCH* 1308
46. O14 ⚡
R33 Slightly broader crab shield; larger distance between claws
a) 2.98 Vinchon 04.1999, 202; Egger 41 (1912), 579
b) 2.82 12 Athen 10. Ex hoard 21 (*IGCH* 1308)
c) 2.74 12 New York 170.280
d) 2.96 11 New York 158.417
47. O15 Similar, but slightly smiling expression and differences in locks in mane
R33 ⚡
a) 3.06 12 London 77a (not in *BMC*). Ex hoard 27 (*IGCH* 1320)(?)
48. O15 ⚡
R34 Similar, but larger, more curved claws
a) 2.89 12 Oxford 36. Ex Sotheby's 07.1922, 211

ΦΙΛΙΝΟΣ

49. O15 ⚡
R35 Small, angular crab shield; sharply curved claws; thin, stylized legs
a) 3.00 Kricheldorf 11 (1962), 183
50. O15 ⚡
R36 Small, irregular shield which tapers towards lower part; small, curved claws; long, thin, stylized legs
a) 2.88 11 Oxford 44. Ex hoard 23 (*IGCH* 1309, 15)

51. O14 ⚔
R36 ⚔
a) 2.68 11 Oxford 43. Ex hoard 23 (*IGCH* 1309, 16)
- 51a. O14 ⚔
R36a Large shield consisting of five elevated parts; long, straight, thick legs; small claws; long, slender club
a) 2.97 12 *SNG* Keckman 293; ex *Numismatica* 21 (1987), 536
52. O14 ⚔
R37 Larger shield; large claws; thick, straight legs with joints clearly marked
a) 3.04 Superior 12.1987, 462 (Pipito Coll.)
53. O14* ⚔
R38 Angular crab shield; short claws; straight, stylized legs
a) 2.73 Müller 72 (1992), 105; MünzZentrum 71 (1991), 308
54. O16 Straight profile; large eye; wavy locks of hair at temple; one curly hair lock above forehead; claw-like locks in mane
R38 ⚔
a) 2.90 NAC auct. F (1996), 1272; Empire 54 (1990), 55; NAAC 4 (1986), 122; ex *SNG* Berry 1117
b) 2.94 12 Athen 15. Ex hoard 21 (*IGCH* 1308)
55. O16 ⚔
R36 ⚔
a) 2.87 *SNG* v. Aulock 2757
56. O16 ⚔
R39 Small, rounded crab shield, claws are sharply bent towards each other; long, thin, stylized legs
a) 2.48 12 Hoard 23 (*IGCH* 1309, 18)
57. O17 Long, straight nose; small eye marked with dot; large ear; small beard; small lion's scalp; small, irregular locks in mane
R40 Large crab; irregular crab shield; r. claw is bent downwards; thin, sharply bent legs with joints clearly marked; thicker club
a) 3.08 Wadell 58 (1993), 63
58. O12 ⚔
R41 Small, angular crab shield; l. claw is sharply bent inwards; long, slender, slightly bent legs
a) 3.13 12 Hoard 23 (*IGCH* 1309, 14)
b) 2.98 12 Hoard 23 (*IGCH* 1309, 13)
59. O12 ⚔
R42 Small, rounded crab shield; thin, bent claws; long, thin, slightly curved, stylized legs
a) - - W.C. Philips 229 (1998), 20⁶⁴⁷
60. O13 ⚔
R43 Large, almost square crab shield; sharply bent claws; short, straight, stylized legs
a) 2.90 12 New York 170.272

⁶⁴⁷ Information about this coin was kindly provided by B. Demetriades.

61. O18 Slightly curved nose; small eye marked with dot; small locks of hair at temple and in front of ear; small lion's scalp; small locks in mane marked only with lines
R43 Small, irregular crab shield; long, thin, curved claws; long, thin, slightly curved legs; very thin club
a) 2.85 11 Budapest 47a.1917.11
b) 3.01 Bourgey 11.1983, 80
c) 2.81 12 Hoard 23 (*IGCH* 1309, 12)
d) - - Buckland, Dix & Wood 10.1993, 66
62. O18 ⚡
R44 Similar, but claws are wider apart and legs are more stylized and irregularly placed
a) 2.97 12 New York 100.48484. Baldwin 4 (1925); Ex hoard 23 (*IGCH* 1309, 11)
b) 2.89 12 Hoard 23 (*IGCH* 1309, 10)
c) 2.94 12 Athen 12. Ex hoard 21 (*IGCH* 1308)
63. O19 Protruding eyebrow; large, aquiline nose; locks of hair in forehead and along temple; claw-like locks in beard; irregular locks in mane
R42 ⚡
a) 2.93 Stack's 11.1993, 88
64. O19 ⚡
R44 ⚡
a) 2.92 Glendining 02.1961, 2402; Naville/*Ars Classica* 5 (1923), 2646 (Doublés de BM)
65. O19 ⚡
R45 Irregular crab shield; shield is broader in lower part; long, thin, bent claws; straight, stylized legs
a) 3.01 12 New York 170.274
b) 2.48 11 Göttingen 96.20. *Obv.* corroded
66. O20 Similar, but longer and straight nose
R45 ⚡
a) 2.90 Ratto 04.1927, 2070
67. O21 Straight locks of hair above forehead and at temple; small, partially claw-like locks in mane
R46 Irregular crab shield; shield tapers towards lower part; large claws; long, bent legs
a) 2.87 12 Leiden 6212
68. O22 Straight profile; curly lock of hair above forehead; small locks in beard; small lion's scalp; very small locks in mane
R47 Irregular crab shield; short claws; almost straight legs sloping upwards; long club
a) 2.79 6 Hoard 23 (*IGCH* 1309, 17)
b) 2.91 7 New York 170.273
c) 3.02 6 *SNG* Dewing 2390. *Obv.* corroded
69. O22 ⚡
R48 Irregular crab shield; shield tapers towards lower part; long, thin claws; long, thin, curved legs
a) 2.84 6 London 83
70. O23 Protruding eyebrow; slightly curved locks of hair above forehead; upper part of ear is covered with hair locks; long, thin, irregular locks in mane
R49 Irregular crab shield; long, thin claws; long, thin, slightly bent legs with joints clearly marked; ethnicon is placed between crab's claws
a) 3.06 12 New York 158.419

- 71.* O
R
a) 3.07 12 Cambridge 8543 (McClellan Coll.)
- ΚΑΛΛΙΠΠΙΑ
72. O18 ⚔
R50 Angular crab shield; long, curved claws; stylized, slightly curved legs
a) 2.72 11 Paris 2733 (SNG Delepierre)
73. O18 ⚔
R51 Similar, but longer club
a) 2.86 11 Oxford 39. Ex hoard 23 (IGCH 1309, 4)
74. O18 ⚔
R52 Similar, but more strongly curved claws and rounded crab shield
a) 2.93 CNA 12 (1990), 387
75. O19 ⚔
R52 ⚔
a) 3.02 12 London 78d (not in BMC). Ex hoard 27 (IGCH 1320)(?)
b) 2.95 12 New York 170.281
c) 2.82 12 SNG Manchester 1265
76. O19 ⚔
R53 Similar, but straighter legs and r. claw stretched slightly to r.
a) 2.97 12 Athen 18. Ex hoard 21 (IGCH 1308)
77. O19 ⚔
R54 Almost circular crab shield; eyes are very close together; long, curved claws are wide apart; thin, slightly curved legs
a) 3.17 12 Copenhagen 652
78. O19 ⚔
R55 Similar, but smaller crab shield and slightly thicker legs
a) 3.08 NFA 8 (1980), 295
79. O19 ⚔
R*
a) 2.99 12 Athen 19. Ex hoard 21 (IGCH 1308)
80. O20 ⚔
R55 ⚔
a) 3.05 12 Athen 17. Ex hoard 21 (IGCH 1308)
- 81.* O
R
a) 2.97 12 Cambridge 8541 (McClellan Coll.)
- ΙΕΡΩΝ
82. O22 ⚔
R56 Large crab; irregular shield; shield tapers towards lower part; long, thick legs with joints clearly marked
a) 3.14 5 Oxford 38. Ex hoard 23 (IGCH 1309, 1)
b) 2.82 6 New York 100.48483
83. O22 ⚔
R57 Similar, but narrower crab shield and slightly thinner legs
a) 2.65 12 New York 100.48486

84. O23 ⚭
R58 Irregular crab shield; shield tapers towards lower end; large claws; thin, bent legs with joints marked with dots
a) 3.02 7 New York 170.285
85. O23 ⚭
R59 Similar, but more irregular composition and ethnikon placed between claws
a) 2.75 4 Oxford 37. Ex hoard 23 (*IGCH* 1309, 2)
b) 2.95 3 New York 170.277
c) 2.95 3 Copenhagen 653
86. O23 ⚭
R60 Similar, but ethnikon above claws and claws are kept closer together
a) 2.96 12 Athen 7. Ex hoard 21 (*IGCH* 1308)
b) 2.88 1 New York 100.48487
87. O24 Long, slightly curved nose; protruding lips; small locks in beard; small lion's scalp; small, claw-like locks in mane
R61 Similar, but differences in position of legs, claws and lettering
a) 2.77 6 London 78c (not in *BMC*). Ex hoard 23 (*IGCH* 1309, 3)
b) 2.97 6 Athen 8. Ex hoard 21 (*IGCH* 1308)
88. O25 Protruding forehead; large, slightly lumpy nose; large eye; large locks of hair above forehead; upper part of ear covered with locks of hair; claw-like locks in beard; straight, irregular locks in mane
R62 Irregular crab shield; crab shield tapers towards lower part; slightly bent legs; legs on l. side slope upwards
a) 3.05 12 New York 170.275
b) 2.96 1 Paris 2731 (*SNG* Delepierre)
89. O26 Short, straight nose; lock of hair above forehead; large, irregular locks in mane
R63 Small, angular crab shield; small claws; long, almost straight legs
a) 2.83 7 New York 170.276
- 90.* O
R
a) 3.08 6 Cambridge 8540 (McClean)
- ZΩΤΥΠΙ
91. O27 Large, slightly lumpy nose; two curly locks of hair above forehead; three large hair locks along temple; small, claw-like locks in beard; irregular, claw-like locks in mane
R64 Small, angular crab shield; long, large claws; slightly curved legs
a) 2.52 12 New York 170.282
92. O27 ⚭
R65 Irregular crab shield; shield tapers towards lower part; long, curved claws; thin legs; legs on l. side are bent; short club
a) - - Kress [cat. 1958-69?], 335
b) 3.01 London 81
93. O28 Similar, but only two locks of hair in temple and differences in locks in mane
R65 ⚭
a) 2.76 11 Paris 2735 (*SNG* Delepierre)
- 94.* O
R
a) 2.90 12 London 78a (not in *BMC*). Ex hoard 27 (*IGCH* 1320)(?)

ΠΥΘΩΝ

95. O28 ὐ
R66 Similar, but different position of legs on l. side
a) 2.96 12 Berlin 51 (Löbbecke Coll.)
b) 2.79 12 Athen 4. Ex hoard 21 (*IGCH* 1308)

ΗΡΑΚΛΕΙΤΟΣ

96. O29 Small eye and nose; small locks in beard; small lion's scalp; numerous small, claw-like locks in mane
R67 Large, angular crab shield; short, thin, small claws; thin, bent legs
a) 2.79 12 London 78b (not in *BMC*). Ex hoard 27 (*IGCH* 1320)(?)

Personal name obliterated:

97. O30 Low forehead; lumpy nose; large locks of hair above forehead and along temple; large beard with large locks; small lion's scalp; numerous irregular locks in mane
R68 Large, almost square crab shield; long, straight, thin legs; ethnikon between claws
a) 3.12 J. Schulman 265 (1976), 184
98. O31 Similar, but smaller beard
R69 Similar, but r. claw stretched out to r. and ethnikon above claws
a) 3.13 Spink 46 (1985), 112
99. O32 Higher forehead; straighter nose; large eye; larger lion's scalp; few, curved locks in mane
R70 Almost square crab shield; long, large claws; the claws themselves are rendered as to lines; thin, long, stylized and slightly bent legs
a) 2.77 Baiocchi (Kairo) 05.1954, 377
- 100.* O33 Straight profile; large eye; small moustache; row of hair locks along temple(?)
R71 Almost square crab shield; shorter, curved claws; slightly thicker and bent legs
a) - - Winkel 11 (1979), 1518

XIII. ISSUE	Period of minting: c.280-10 Hemidrachms No. of coins: 261	Obv. dies: 39 Rev. dies: 84 Weights: 1.07-1.63 (2.00)
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Type *obv.* Beardless Heracles facing r.; large variation in style and details
rev. Crab; beneath, club; beneath club or between crab and club, personal name; above crab, ethnikon (ΚΩΙΩΝ on few of the latest dies)

ΑΡΙΣΤΙΩΝ

- | | | |
|----|----|---|
| 1. | O1 | Protruding forehead; well-rounded facial features; detailed lion's scalp; two rows of claw-like locks in mane |
| | R1 | Irregular crab shield; large eyes; mouth marked with two small lines; large claws bent inwards; thick, detailed legs with joints clearly marked |
| | | a) 1.44 <i>I2</i> Glasgow 8 |

ΔΗΜΗΤΡΙΟΣ

- | | | |
|-----|----|--|
| 2. | O2 | Slightly aquiline nose; small chin; small lion's scalp; large, claw-like locks in mane |
| | R2 | Irregular crab shield; long claws; slightly bent legs with marked joints; thick club |
| | | a) 1.48 Kress 146 (1969), 229 |
| | | b) 1.50 Athen 38. Ex hoard 21 (<i>IGCH</i> 1308) |
| 3. | O3 | Similar, but more numerous and smaller locks in mane |
| | R3 | Small, irregular crab shield; small claws; slightly curved legs; no visible club |
| | | a) 1.54 <i>I</i> London 67 |
| | | b) 1.45 <i>I</i> Berlin 55 (Löbbecke Coll.) |
| | | c) 1.33 <i>I2</i> Athen 39. Ex hoard 21 (<i>IGCH</i> 1308) |
| 4. | O3 | ⚡ |
| | R4 | Similar, but clearly visible club with knobs |
| | | a) 1.48 <i>I</i> Berlin 54 (Imhoof-Blumer Coll.) |
| | | b) 1.36 Naville/Ars Classica 7 (1924), 1537 (Bement Coll.) |
| | | c)*1.35 <i>I</i> Paris 2737 (<i>SNG</i> Delepierre) |
| | | d)*1.13 <i>I</i> Athen 84. Ex hoard 21 (<i>IGCH</i> 1308) |
| | | e)*1.31 <i>I</i> Athen 83. Ex hoard 21 (<i>IGCH</i> 1308) |
| | | f)*1.35 <i>I2</i> Athen 33. Ex hoard 21 (<i>IGCH</i> 1308) |
| | | g)*1.20 <i>I</i> Athen 85. Ex hoard 21 (<i>IGCH</i> 1308) |
| | | h)*1.28 <i>I</i> Athen 134. Ex hoard 21 (<i>IGCH</i> 1308) |
| 5. | O3 | ⚡ |
| | R5 | Narrow, irregular crab shield; small claws; slender, small legs |
| | | a) 1.47 <i>I2</i> Copenhagen 640 |
| | | b) 1.29 <i>I2</i> Athen 132. Ex hoard 21 (<i>IGCH</i> 1308) |
| | | c) 1.32 <i>I2</i> Athen 88. Ex hoard 21 (<i>IGCH</i> 1308) |
| 6.* | O | |
| | R | |
| | | a) 1.33 <i>I</i> Cambridge 8536 (McClellan Coll.) |

ΣΤΕΦΑΝΟΣ

- | | | |
|----|----|---|
| 7. | O3 | ⚡ |
| | R6 | Irregular crab shield; large eyes; slender claws turned upwards; large, detailed legs with joints clearly marked; ethnikon placed between claws |
| | | a) 1.36 <i>I</i> London 68 |
| | | b) 1.57 <i>I2</i> Göttingen 110.6 |
| | | c) 1.52 Poindessault, autumn 1986/7, 99; Védrières 07.1985, 94 |

8. O3 ⚡
R7 Similar, but bent legs
a) 1.51 12 Copenhagen 641
b) 1.43 1 London 68b (not in *BMC*)
c) 1.33 Ratto 02.1928, 688. Ex Pozzi 2658
d) 1.45 1 Paris 2738 (*SNG Delepierre*)
9. O3 ⚡
R8 Small crab shield; large claws turned upwards; thick legs with few details; legs on l. side slope upwards
a) 1.32 12 Athen 135. Ex hoard 21 (*IGCH 1308*)
10. O4 Large, protruding forehead; large eye; small chin; lion's scalp almost covers ear of Heracles; large, claw-like locks in mane
R8 ⚡
a) 1.41 2 New York 100.48472

ΑΡΙΑΕΙ

11. O5 Lean facial features; straight, pointed nose; small lion's scalp; claw-like locks in mane
R9
a) 1.31 12 Athen 20. Ex hoard 21 (*IGCH 1308*)

ΠΕΙΣΑΝ

12. O5 ⚡
R10
a) 1.26 11 Athen 22. Ex hoard 21 (*IGCH 1308*)

ΣΥΜΜΑΧΟΣ

13. O6 High forehead; straight nose; well-rounded chin; folds in lion's scalp on top of head; small, claw-like locks in mane
R11 Large, irregular crab shield; long claws; slightly bent legs; ethnikon placed between claws
a) 1.37 12 Athen 37. Ex hoard 21 (*IGCH 1308*)
b) 1.27 12 Athen 32. Ex hoard 21 (*IGCH 1308*)

ΦΙΛΙΠΠΙ

14. O6 ⚡
R12 Broad, irregular crab shield; large claws; thin, bent legs; small club
a) 1.18 12 Athen 21. Ex hoard 21 (*IGCH 1308*)
b) 1.07 12 Berlin 56 (Imhoof-Blumer Coll.)
c) 1.26 12 Athen 29. Ex hoard 21 (*IGCH 1308*)
d) 1.27 11 Athen 28. Ex hoard 21 (*IGCH 1308*)

-] ΞΙΠΠΟΣ

15. O7 Protruding eyebrow and forehead; small nose; lean cheek and chin; some straight and some claw-like locks in mane
R13 Almost square crab shield; small claws; thin, long, slightly curved legs; slender club
a) 1.37 12 Athen 30. Ex hoard 21 (*IGCH 1308*)
b) 1.34 11 New York 170.266

ΧΑΙΡΥΛΟΣ

16. O7 ⚔
R14 Similar, but slightly broader shield
a) 1.33 11 Athen 181. Ex hoard 21 (*IGCH* 1308)
b) 1.31 11 Athen 182. Ex hoard 21 (*IGCH* 1308)
c) 1.26 11 Athen 183. Ex hoard 21 (*IGCH* 1308)
d) 1.26 12 Athen 185. Ex hoard 21 (*IGCH* 1308)
17. O7 ⚔
R15 Small shield almost divided into two parts; small claws kept close together; straight, stylized legs; large, thick club
a) 1.21 11 Athen 184. Ex hoard 21 (*IGCH* 1308)
b) 1.28 12 Athen 180. Ex hoard 21 (*IGCH* 1308)

ΘΕΥΤΕΝΗΣ

18. O7 ⚔
R16 Small, almost square crab shield; small claws turned upwards; straight, stylized legs; long, slender club
a) 1.30 12 Athen 31. Ex hoard 21 (*IGCH* 1308)
b) 1.20 11 Athen 162. Ex hoard 21 (*IGCH* 1308)
19. O8 Similar, but smaller nose and thinner locks in mane
R17 Rounded, irregular crab shield; small claws; very thin, curved legs; curved placing of letters in ethnikon and personal name; club is placed beneath personal name
a) 1.43 6 Athen 154. Ex hoard 21 (*IGCH* 1308)
20. O9 Similar, but small differences in locks in mane; the lowest locks points forward
R17 ⚔
a) 1.44 7 Athen 157. Ex hoard 21 (*IGCH* 1308)
21. O9 ⚔
R18 Similar, but slightly larger crab shield, letters in ethnikon and personal name are on a straight line
a) 1.36 11 Athen 159. Ex hoard 21 (*IGCH* 1308)
22. O9 ⚔
R19 Similar, but crab shield is slightly broader in lower part
a) 1.45 12 Athen 160. Ex hoard 21 (*IGCH* 1308)
23. O10 Similar, but small differences in locks in mane
R19 ⚔
a) 1.33 12 New York 170.261
24. O10 ⚔
R20 Similar, but claws kept closer together and legs are slightly more curved
a) 1.42 1 New York 170.259
25. O10 ⚔
R21 Similar, but legs are straighter and club longer
a) - - Ritter 40 (1995), 335; 36 (1994), 366; 32 (1991), 295
b) 1.55 12 New York 170.260
c) 1.33 6 Athen 155. Ex hoard 21 (*IGCH* 1308)
26. O10 ⚔
R22 Similar, but smaller crab shield, smaller club and legs are curved more downwards
a) 1.24 12 Athen 156. Ex hoard 21 (*IGCH* 1308)
b) 1.49 12 SNG Dewing 2393

27. O11 Similar, but curved fold in lion's scalp from temple to behind the ear
R22 ⚡
a) 1.29 12 Athen 158. Ex hoard 21 (*IGCH* 1308)
28. O11 ⚡
R23 Irregular crab shield; upper part of shield is divided into two parts; thin, stylized, slightly bent legs; club is placed beneath personal name
a) 1.34 1 Athen 153. Ex hoard 21 (*IGCH* 1308)

ΑΡΙΣΤΟΤΕΛΗΣ

29. O10 ⚡
R24 Angular, broad crab shield; large claws; thin, stylized, slightly curved legs; thick club with knobs placed beneath personal name
a) 1.45 12 Athen 123. Ex hoard 21 (*IGCH* 1308)
b) 1.42 11 Athen 47. Ex hoard 21 (*IGCH* 1308)
30. O10 ⚡
R25 Similar, but different placing of letters in personal name
a) 1.36 1 Athen 114. Ex hoard 21 (*IGCH* 1308)
b) 1.50 1 Athen 117. Ex hoard 21 (*IGCH* 1308)
c) 1.35 1 Athen 119. Ex hoard 21 (*IGCH* 1308)
d) 1.29 12 New York 170.253. *Obv.* corroded
31. O10 ⚡
R26 Small, heart-shaped crab shield; long, curved claws; thin, small, stylized legs; small club with knobs placed beneath personal name
a) 1.47 12 Athen 125. Ex hoard 21 (*IGCH* 1308)
b) 1.26 12 Athen 120. Ex hoard 21 (*IGCH* 1308)
c) 1.44 11 Athen 115. Ex hoard 21 (*IGCH* 1308)
32. O10 ⚡
R27 Irregular, broad crab shield; small claws; stylized, slightly curved legs; club placed beneath personal name; large letters in personal name
a) 1.44 12 New York 170.254
33. O9 ⚡
R26 ⚡
a) 1.27 12 Athen 129. Ex hoard 21 (*IGCH* 1308)
b) 1.49 12 Athen 122. Ex hoard 21 (*IGCH* 1308)
c) 1.44 1 Athen 116. Ex hoard 21 (*IGCH* 1308)
d) 1.31 12 Athen 128. Ex hoard 21 (*IGCH* 1308)
34. O9 ⚡
R27 ⚡
a) 1.42 12 Athen 121. Ex hoard 21 (*IGCH* 1308)
b) 1.34 12 New York 170.255
35. O9 ⚡
R28 Similar to R26, but claws slightly farther apart
a) 1.43 7 New York 57.116
36. O9 ⚡
R29 Similar to R27, but slightly narrower crab shield
a) 1.34 12 New York 170.250
b) 1.43 12 Athen 130. Ex hoard 21 (*IGCH* 1308)
37. O12 Similar, but small differences in mane and lion's scalp
R26 ⚡
a) 1.33 12 Athen 118. Ex hoard 21 (*IGCH* 1308)

38. O12 ⤴
R27 ⤴
a) 1.32 12 Athen 127. Ex hoard 21 (*IGCH* 1308)
b) 1.38 12 Athen 126. Ex hoard 21 (*IGCH* 1308)
39. O13 Similar, but small differences in mane and lion's scalp
R26 ⤴
a) 1.28 12 New York 170.251
40. O13 ⤴
R30 Similar to R27, but legs are slightly more curved
a) 1.27 12 New York 170.252
41. O14 Similar to O11 (same die?)
R31 Oblong crab shield; small claws; slightly curved, thin, stylized legs; club placed beneath personal name
a) 1.40 12 Athen 124. Ex hoard 21 (*IGCH* 1308)
- 42.* O
R
a) - - Kos Museum

ΖΩΠΥΠΙ

43. O15 Protruding forehead; straight nose; lean chin; claw-like locks in mane
R32 Irregular crab shield; large claws; stylized, straight legs; long, slender club
a) 1.28 12 Athen 41. Ex hoard 21 (*IGCH* 1308)
44. O16 Similar, but more protruding forehead
R32 ⤴
a) 1.28 11 Athen 27. Ex hoard 21 (*IGCH* 1308)
b) 1.21 12 Munich 74143
c) 1.28 12 Athen 26. Ex hoard 21 (*IGCH* 1308)
45. O16 ⤴
R33 Similar, but claws slightly more bent and closer together
a) 1.35 11 Athen 161. Ex hoard 21 (*IGCH* 1308)
b) 1.30 12 Athen 40. Ex hoard 21 (*IGCH* 1308)

ΠΥΘΩΝ

46. O16 ⤴
R34 Irregular crab shield; shield tapers towards lower part; slightly thicker legs with joints clearly marked; long club with knobs
a) 1.31 12 Athen 36. Ex hoard 21 (*IGCH* 1308)
b) 1.26 12 Athen 34. Ex hoard 21 (*IGCH* 1308)
c) 1.22 12 New York 170.270
d) 1.14 11 New York 170.271
47. O16 ⤴
R35 Similar, but longer claws
a) 1.33 11 Athen 35. Ex hoard 21 (*IGCH* 1308)
b) 1.11 12 Athen 81. Ex hoard 21 (*IGCH* 1308)

ΠΡΑΞΑΓΟΡΑΣ

48. O17 Lean facial features; straight nose; mouth has a slightly smiling expression ; small lion's scalp; small, irregular, claw-shaped locks in mane
R36 Irregular shield consisting of five elevated parts; small, claws; stylized, slightly curved legs; club is thicker in one end
a) 1.13 11 Athen 176. Ex hoard 21 (*IGCH* 1308)
b) 1.29 11 Athen 177. Ex hoard 21 (*IGCH* 1308)
c) 1.38 11 Athen 178. Ex hoard 21 (*IGCH* 1308)
d) 1.35 11 Oxford 19
49. O17 ⚡
R37 Larger crab shield; shield consists of four elevated parts; large claws; thick legs with joints clearly marked; slender club
a) 1.12 11 Athen 80. Ex hoard 21 (*IGCH* 1308)
b) 1.41 12 Athen 179. Ex hoard 21 (*IGCH* 1308)
50. O17 ⚡
R38 Broader crab shield consisting of six elevated parts; large claws; large legs with joints clearly marked; legs on l. side slopes downwards
a) 1.34 12 Athen 175. Ex hoard 21 (*IGCH* 1308)
51. O17 ⚡
R39 Crab shield is narrower and consists of five elevated parts, one is in the middle of shield; large claws; slender legs with joints marked; slender club
a) 1.39 11 New York 170.265
52. O17 ⚡
R40 Large, angular crab shield; large claws; slender legs with joints marked; club is thicker in one end
a) 1.38 10 London 66b. Ex *SNG* v.Aulock 2759

ΠΡΑΞΙΑΝΑΞ

53. O17 ⚡
R41 Two large elevations on crab shield; shield tapers towards lower part; large claws; thin legs with joints clearly marked; small, slender club
a) 1.41 6 Athen 173. Ex hoard 21 (*IGCH* 1308)
54. O17 ⚡
R42 Almost heart-shaped crab shield made by three elevations; long, slender claws; thin, stylized legs slopes downwards
a) 1.41 12 Athen 174. Ex hoard 21 (*IGCH* 1308)
55. O17 ⚡
R43 Angular crab shield with two elevated fields in upper part of shield; slightly smaller claws; thin, stylized, sharply bent legs; thick, large club with knobs
a) (2.00) Baiocchi (Kairo) 05.1954, 380 (M. de Zogheb Coll.)
b) 1.39 11 New York 170.262
56. O17 ⚡
R*
a) 1.28 10 Athen 24. Ex hoard 21 (*IGCH* 1308)
57. O18
R44 Similar, but longer nose, locks of hair in forehead and differences in locks in mane
Large shield consisting of four elevated parts; large claws; large legs with joints clearly marked; slender club
a) 1.38 10 Athen 25. Ex hoard 21 (*IGCH* 1308)

58. O19 Similar, but smaller nose and one row of small, stylized locks in mane
 R44 ⚡
 a) 1.38 11 Stockholm 485 (Forbat Coll.)
- 58a. O19 ⚡
 R44a Similar, but r. claw is more open
 a) 1.36 Superior 10.1977, 986
59. O20 Protruding forehead; large nose; small lion's scalp; small, stylized locks in mane
 R*
 a) 1.36 11 Athen 23. Ex hoard 21 (IGCH 1308)

ΦΙΛΙΤΑΣ

60. O21 Small nose; wrinkle at root of nose; large eye with eyebrow market with line; small cheek
 and chin; small, stylized, claw-like locks in mane
 R45 Irregular crab shield consisting of four elevated parts; long claws; long, curved
 legs; small club
 a) 1.47 12 Athen 149. Ex hoard 21 (IGCH 1308)
 b) 1.37 6 Athen 142. Ex hoard 21 (IGCH 1308)
 c) 1.31 12 Athen 146. Ex hoard 21 (IGCH 1308)
 d) 1.43 12 Athen 150. Ex hoard 21 (IGCH 1308)
 e) 1.44 6 Athen 147. Ex hoard 21 (IGCH 1308)
61. O22 ⚡
 R46 Smaller crab shield; shield tapers towards lower part; long, small claws; long, thin,
 stylized legs; slender club
 a) 1.38 11 Athen 148. Ex hoard 21 (IGCH 1308)
62. O22 ⚡
 R47 Similar, but slightly more curved legs
 a) 1.34 12 Athen 151. Ex hoard 21 (IGCH 1308)
 b) 1.31 11 Athen 152. Ex hoard 21 (IGCH 1308)
 c) 1.42 11 New York 170.268

ΚΑΕΙΤΟΣ

63. O22 ⚡
 R48 Similar
 a) 1.48 11 Athen 139. Ex hoard 21 (IGCH 1308)
 b) 1.19 11 New York 170.264
64. O22 ⚡
 R49 Very small, angular crab shield; long, thin claws; thin, stylized, bent legs; long,
 slender club with knobs
 a) 1.42 Myers/Adams 6 (1973), 197
65. O22 ⚡
 R50 Angular shield consisting of four elevated parts; long, small claws; stylized, bent,
 slender legs; small club
 a) 1.47 12 Athen 145. Ex hoard 21 (IGCH 1308)
 b) 1.39 6 Athen 137. Ex hoard 21 (IGCH 1308)
 c) 1.32 6 Athen 138. Ex hoard 21 (IGCH 1308)
 d) 1.32 12 Athen 141. Ex hoard 21 (IGCH 1308)
 e) 1.37 12 Athen 144. Ex hoard 21 (IGCH 1308)
 f) 1.42 6 Athen 143. Ex hoard 21 (IGCH 1308)
66. O23 Similar, but different shape in lion's scalp beneath Heracles' ear
 R50 ⚡
 a) 1.20 12 Copenhagen 642

67. O23 ⚡
R51 Small, irregular crab shield; shield tapers towards lower part; small, curved claws; long, thin, slightly bent legs; slender club
a) 1.32 10 Athen 140. Ex hoard 21 (*IGCH* 1308)
- ΔΙΟΓΕΝΗΣ
68. O24 Small face; high forehead; pointed nose; lean facial features; small locks of hair along temple; long, pointed locks in mane
R52 Broad crab shield; indentation in lower part of shield; large, long claws; stylized, slightly bent legs; long club placed beneath personal name
a) 1.32 12 Athen 111. Ex hoard 21 (*IGCH* 1308). *Obv.* double struck
b) 1.39 12 New York 170.256
c) 1.35 12 Athen 112. Ex hoard 21 (*IGCH* 1308)
69. O25 Slightly protruding forehead; long, straight nose; wavy locks of hair above forehead and along temple; curved line in lion's scalp from top of head to back of ear; small, claw-like locks in mane
R53 Irregular crab shield; small part of shield is stretched over l. legs (damaged die?); stylized, straight legs slopes slightly downwards on l. side; club placed beneath personal name
a) 1.39 12 Athen 166. Ex hoard 21 (*IGCH* 1308)
b) 1.22 12 Athen 108. Ex hoard 21 (*IGCH* 1308)
70. O25 ⚡
R54 Irregular crab shield; upper part of shield is divided into three elevated parts; large, long claws; thin, stylized, bent legs; club placed beneath personal name
a) 1.23 12 Athen 170. Ex hoard 21 (*IGCH* 1308)
b) 1.25 12 Athen 110. Ex hoard 21 (*IGCH* 1308)
71. O26 Small face; pointed nose; small eye; folds in lion's scalp on top of head; small, pointed locks in mane
R52 ⚡
a) 1.41 12 Athen 163. Ex hoard 21 (*IGCH* 1308)
b) 1.38 12 Athen 164. Ex hoard 21 (*IGCH* 1308)
c) 1.35 J. Schulman 265 (1976), 185
d) 1.29 12 Athen 169. Ex hoard 21 (*IGCH* 1308)
72. O26 ⚡
R53 ⚡
a) 1.36 12 Athen 172. Ex hoard 21 (*IGCH* 1308)
73. O26 ⚡
R54 ⚡
a) 1.11 12 Athen 168. Ex hoard 21 (*IGCH* 1308)
74. O27 Similar, but differences in locks in mane
R52 ⚡
a) - - Kovacs 4 (1983), 90
b) 1.42 Walker liste 11 (1986), 13; Ponterio 20 (1985), 246
75. O27 ⚡
R53 ⚡
a) 1.41 10 Athen 107. Ex hoard 21 (*IGCH* 1308)
76. O27 ⚡
R54 ⚡
a) 1.22 12 Athen 113. Ex hoard 21 (*IGCH* 1308)

77. O27 ⚭
R55 Irregular crab shield; small claws; thin, stylized, slightly bent legs; thick club placed beneath personal name
a) 1.37 12 Athen 109. Ex hoard 21 (*IGCH* 1308)
b) 1.35 12 Athen 167. Ex hoard 21 (*IGCH* 1308)
78. O27 ⚭
R56 Similar, but claws are turned more sharply upwards
a) 1.37 12 Athen 171. Ex hoard 21 (*IGCH* 1308)
b) 1.37 12 Athen 165. Ex hoard 21 (*IGCH* 1308)
79. O-
R53 ⚭
a) 1.40 12 New York 170.257. *obv.* corroded
- 80.* O
R
a) 1.35 Tasmania B17

ΕΛΛΑΝΙΚΟΣ

81. O26 ⚭
R57 Small, broad crab shield; thick legs; legs on l. side slope downwards; curved placing of personal name; small club is placed beneath personal name
a) 1.33 12 Athen 191. Ex hoard 21 (*IGCH* 1308)
82. O28 ⚭
R57 Small face; pointed nose; small, claw-like locks in mane
a) 1.36 12 Athen 189. Ex hoard 21 (*IGCH* 1308)
b) 1.26 12 Athen 187. Ex hoard 21 (*IGCH* 1308)
83. O28 ⚭
R58 Crab shield consists of four elevated parts; long, small claws; straight legs; legs on l. side slopes slightly upwards; slender club with knobs placed beneath personal name
a) 1.41 12 Athen 188. Ex hoard 21 (*IGCH* 1308)
84. O29 ⚭
R58 Larger face; slightly protruding eyebrow; aquiline nose; larger mouth; lean chin; small, wavy locks of hair above forehead; innermost row of locks in mane are small and claw-like
a) 1.31 12 Athen 190. Ex hoard 21 (*IGCH* 1308)
b) 1.34 Auctiones 18 (1989), 778
85. O-
R58 ⚭
a) 1.33 1 London 69. *Obv.* corroded
b) 1.33 12 New York 170.263

ΚΑΛΛΙΣΘΕΝΗΣ⁶⁴⁸

86. O30 ⚭
R59 Slightly protruding eyebrow; straight nose; small chin; wavy locks of hair above forehead and at temple; small ear; small, claw-like locks in mane; the lowest lock in mane points forward
Irregular crab shield; small distance between eyes of crab; long, slender claws; long, thin, slightly curved legs; slender club with knobs; ethnikon is slightly curved
a) 1.44 12 Athen 50. Ex hoard 21 (*IGCH* 1308)
b) 1.33 12 Athen 192, Ex hoard 21 (*IGCH* 1308)

⁶⁴⁸ Both forms of sigma are used: Σ and C.

87. O30 ⚡
R60 Similar
a) 1.37 12 Athen 205. Ex hoard 21 (*IGCH* 1308)
b) 1.37 11 Athen 79. Ex hoard 21 (*IGCH* 1308)
c) 1.33 11 New York 170.267
88. O31 Similar, but undulating edge behind Heracles' ear and differences in locks in mane
R59 ⚡
a) 1.37 12 Athen 195. Ex hoard 21 (*IGCH* 1308)
b) 1.39 12 Athen 208. Ex hoard 21 (*IGCH* 13089)
89. O31 ⚡
R60 ⚡
a) 1.37 11 Athen 57. Ex hoard 21 (*IGCH* 1308)
90. O31 ⚡
R61 Similar, but less curved ethnikon
a) 1.28 12 Athen 131. Ex hoard 21 (*IGCH* 1308)
91. O31 ⚡
R62 Heart-shaped crab shield; long, slender claws; long, thin, stylized, slightly curved legs; personal name is misspelled (Kallsithenes)
a) 1.15 12 Athen 203. Ex hoard 21 (*IGCH* 1308)
b) 1.41 12 Athen 200. Ex hoard 21 (*IGCH* 1308)
92. O32 Similar, but differences in locks in mane
R62 ⚡
a) 1.47 12 Athen 201. Ex hoard 21 (*IGCH* 1308)
93. O32 ⚡
R63 Small, angular crab shield; short claws; stylized, thin, bent legs; thick club
a) 1.33 12 Athen 194. Ex hoard 21 (*IGCH* 1308)
94. O33 Similar, but more strongly protruding forehead and eyebrow and differences in mane
R62 ⚡
a) 1.44 12 Athen 59. Ex hoard 21 (*IGCH* 1308)
b) 1.34 12 Athen 53. Ex hoard 21 (*IGCH* 1308)
95. O33 ⚡
R63 ⚡
a) 1.41 12 Athen 52. Ex hoard 21 (*IGCH* 1308)
b) 1.17 12 Athen 56. Ex hoard 21 (*IGCH* 1308)
c) 1.40 12 Athen 196. Ex hoard 21 (*IGCH* 1308)
d) 1.29 1 Athen 60. Ex hoard 21 (*IGCH* 13089)
96. O34 Similar, but differences in locks of hair and mane
R62 ⚡
a) 1.30 12 Athen 49. Ex hoard 21 (*IGCH* 1308)
b) 1.09 12 Athen 206. Ex hoard 21 (*IGCH* 1308)
c) 1.35 12 Athen 199. Ex hoard 21 (*IGCH* 1308)
97. O34 ⚡
R63 ⚡
a) 1.30 12 Athen 204. Ex hoard 21 (*IGCH* 1308)
b) 1.44 12 Athen 202. Ex hoard 21 (*IGCH* 1308)

98. O35 Similar, but differences in locks of hair and mane
R63 ⚡
a) 1.51 1 Athen 209. Ex hoard 21 (*IGCH* 1308)
b) 1.49 12 Athen 55. Ex hoard 21 (*IGCH* 1308)
c) 1.42 12 Athen 54. Ex hoard 21 (*IGCH* 1308)
d) 1.64 12 Athen 51. Ex hoard 21 (*IGCH* 1308)
99. O-
R63 ⚡
a) 1.18 12 Athen 197. Ex hoard 21 (*IGCH* 1308)
100. O35 ⚡
R64 Similar, but shorter distance between claws
a) 1.35 12 Athen 198. Ex hoard 21 (*IGCH* 1308)
b) 1.44 12 Athen 207. Ex hoard 21 (*IGCH* 1308)
101. O35 ⚡
R65 Similar, but thicker club
a) 1.44 12 Athen 193. Ex hoard 21 (*IGCH* 1308)
a) 1.44 12 Athen 58. Ex hoard 21 (*IGCH* 1308)
102. O-
R65 ⚡
a) 1.22 12 Athen 48. Ex hoard 21 (*IGCH* 1308)
103. O35 ⚡
R*
a) 1.31 12 Athen 46. Ex hoard 21 (*IGCH* 1308)
- ΕΠΙΝΙΚΟΣ⁶⁴⁹
104. O30 ⚡
R66 Rounded crab shield; lines beneath eyes; long, slender claws; long, thin, slightly curved legs; ethnikon is slightly curved
a) 1.39 11 Athen 105. Ex hoard 21 (*IGCH* 1308)
b) 1.37 11 Athen 97. Ex hoard 21 (*IGCH* 1308)
105. O30 ⚡
R67 Similar, but slightly different position of claws
a) 1.42 12 *SNG* Dewing 2392
b) 1.28 11 Athen 72. Ex hoard 21 (*IGCH* 1308)
106. O30 ⚡
R68 Similar, but slightly different position of claws and legs
a) 1.33 11 Athen 95. Ex hoard 21 (*IGCH* 1308)
107. O30 ⚡
R69 Similar, but thicker and shorter claws
a) 1.26 11 Athen 99. Ex hoard 21 (*IGCH* 1308)
108. O30 ⚡
R70 Smaller crab shield; shield tapers towards lower part; small, thick club placed beneath personal name; ethnicon placed in a curve
a) 1.38 11 New York 64.185
b) 1.30 Auctiones 18 (1989), 779
c) 1.21 Malter 1 (1973), 144

⁶⁴⁹ Both forms of sigma are used: Σ and C.

109. O31 ⚔
R70 ⚔
a) 1.39 11 Athen 71. Ex hoard 21 (*IGCH* 1308)
b) 1.42 11 Athen 74. Ex hoard 21 (*IGCH* 1308)
110. O31 ⚔
O*
a) 1.40 11 Athen 70. Ex hoard 21 (*IGCH* 1308)
b) 1.34 12 Athen 68. Ex hoard 21 (*IGCH* 1308)
c) 1.30 11 Athen 65. Ex hoard 21 (*IGCH* 1308)
111. O35 ⚔
R70 ⚔
a) 1.10 11 Göttingen 110.7
112. O35 ⚔
R71 Small, rounded crab shield; thin, stylized, slightly bent legs; thick club
a) 1.33 12 Athen 93. Ex hoard 21 (*IGCH* 1308)
b) 1.45 12 Athen 90. Ex hoard 21 (*IGCH* 1308)
c) 1.40 1 Athen 92. Ex hoard 21 (*IGCH* 1308)
113. O35 ⚔
R72 Similar, but smaller claws
a) 1.32 12 Athen 75. Ex hoard 21 (*IGCH* 1308)
114. O33 ⚔
R72 ⚔
a) 1.28 12 Athen 96. Ex hoard 21 (*IGCH* 1308)
b) 1.26 12 Athen 64. Ex hoard 21 (*IGCH* 1308)
c) 1.34 12 Athen 76. Ex hoard 21 (*IGCH* 1308)
d) 1.35 12 Athen 101. Ex hoard 21 (*IGCH* 1308)
115. O33 ⚔
R73 Similar, but longer distance between claws and longer club
a) - - Rauch 12 (1973), 55
b) - - KM 6 (1974), 75
116. O33 ⚔
R74 Rounded crab shield; indentation in upper part of shield; small, thin claws; long distance between claws; thin, stylized, slightly bent legs
a) 1.42 12 Athen 77. Ex hoard 21 (*IGCH* 1308)
b) 1.30 1 Athen 63. Ex hoard 21 (*IGCH* 1308)
c) 1.45 12 Athen 100. Ex hoard 21 (*IGCH* 1308)
d) 1.43 12 Athen 94. Ex hoard 21 (*IGCH* 1308)
117. O33 ⚔
R75 Similar, but more sharply bent legs and large dot in r. end of club; ethnikon, ΚΩΙΩΝ
a) 1.38 12 Athen 62. Ex hoard 21 (*IGCH* 1308)
118. O33 ⚔
R76 Almost square crab shield; short distance between eyes; thin, long claws; slightly curved legs
a) 1.42 12 New York 170.258
119. O33 ⚔
R*
a) 1.39 12 Athen 45. Ex hoard 21 (*IGCH* 1308)
b) 1.33 12 Athen 44. Ex hoard 21 (*IGCH* 1308)

120. O34 ⚔
R72 ⚔
a) 1.28 11 Athen 104. Ex hoard 21 (*IGCH* 1308)
121. O34 ⚔
R75 ⚔
a) 1.39 Kölner Münzkabinett 58 (1993), 66
122. O34 ⚔
R76 ⚔
a) 1.46 12 Athen 98. Ex hoard 21 (*IGCH* 1308)
123. O34 ⚔
R77 Similar to R76, but slightly longer club
a) 1.33 Spink 119 (1997), 391 (Douglas Coll.)
124. O34 ⚔
R*
a) 1.36 12 Athen 69. Ex hoard 21 (*IGCH* 1308)
125. O36 Similar, but differences in locks of hair and mane
R78 Small, almost round crab shield; short distance between eyes; long, thin, curved claws;
thin, slightly curved legs
a) 1.38 11 Athen 61. Ex hoard 21 (*IGCH* 1308)
126. O37 Similar, but slightly different shape of locks in mane
R79 Similar, but more angular crab shield
a) 1.44 12 Athen 102. Ex hoard 21 (*IGCH* 1308)
127. O37 ⚔
R80 Irregular crab shield; small, open claws; stylized, slightly bent legs
a) 1.34 12 Athen 89. Ex hoard 21 (*IGCH* 1308)
b) 1.39 12 Athen 78. Ex hoard 21 (*IGCH* 1308)
c) 1.37 12 Athen 42. Ex hoard 21 (*IGCH* 1308)
d) 1.44 11 Athen 106. Ex hoard 21 (*IGCH* 1308)
128. O37 ⚔
R81 Similar, but thinner, longer claws and longer club
a) 1.23 1 Athen 103. Ex hoard 21 (*IGCH* 1308)
129. O37 ⚔
R*
a) 1.42 12 Athen 66. Ex hoard 21 (*IGCH* 1308)
b) 1.29 12 Athen 67. Ex hoard 21 (*IGCH* 1308)
c) 1.11 12 Athen 43. Ex hoard 21 (*IGCH* 1308)
130. O38 Smaller nose; more rounded facial features; claw-like locks in mane
R82 Almost round crab shield; short distance between eyes; thin, small, curved claws; long,
thin, curved legs
a) 1.42 Oslo Mynthandel 8 (1982), 6
b) 1.07 1 London 70. *Obv.* corroded and partly off flan
131. O39 Similar, but differences in locks of hair and mane
R83 Similar, but smaller distance between claws
a) 1.34 11 London 66a (not in *BMC*). Ex *SNG* v. Aulock 2758
132. O
R
a) 1.15 12 Oslo 7. Corroded

Personal name obliterated:

133. O
R

- | | | |
|---------|----|--|
| a) 1.34 | 12 | Göttingen 96.15 |
| b) 1.31 | 1 | Athen 86. Ex hoard 21 (<i>IGCH</i> 1308) |
| c) 1.32 | 11 | New York 170.269 |
| d) 1.24 | 7 | Athen 87. Ex hoard 21 (<i>IGCH</i> 1308) |
| e) 1.63 | | GM 38 (1987), 186 |
| f) 1.29 | 1 | Athen 133. Ex hoard 21 (<i>IGCH</i> 1308) |
| g) 1.23 | 12 | Athen 136. Ex hoard 21 (<i>IGCH</i> 1308) |
| h) 1.20 | 1 | Athen 82. Ex hoard 21 (<i>IGCH</i> 1308) |
| i) 1.43 | | Bourgey 06.1959, 529 (ex Weber Coll.) |

XIV. ISSUE	Period of minting: c.280-50 Tetradrachms No. of coins: 142	Obv. dies: 16 Rev. dies: 58 Weights: 12.97-15.38 (17.76)
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Type 1 *obv.* Beardless Heracles facing r.; large face; obvious division between forehead and nose; forehead is low; well-rounded mouth, chin and cheek; hair locks are clearly marked along forehead and temple; two or three rows of long naturalistically shaped locks in mane
rev. Crab; irregular elevations on crab shield; large legs with joint clearly marked; ethnikon is sometimes placed between claws and sometimes above claws; *gorytos*; ethnikon; beneath, personal name; square border of dots and square incuse

ΓΝΩΣΙΑΙΚΟΣ

1. O1 Large face; well-rounded chin; irregular locks in mane; claw like locks of hair in forehead and at temple; flaw in corner of mouth
R1 Ethnikon is placed above claws; thick, bent legs; large claws bent towards each other; large mouth on crab; small *gorytos* ornamented with border of dots
a) 14.34 5 Oslo 8. Ex Hirsch 179 (1993), 460
b) 14.82 4 Requier 1a (in trade)
c) 14.91 Elsen 54 (1998), 282
d) 14.97 NFA 4 (1977), 306
2. O1 ⚡
R2 Ethnikon is placed between claws; shorter legs with no visible joints; larger *gorytos*; smaller incuse
a) 14.21 5 London 41a (not in *BMC*)
b) 15.08 6 Berlin (Fox Coll.)
c) 14.47 6 Berlin (Imhoof-Blumer Coll.)
d) 14.33 Boston (Brett 1955), 2022
3. O1 ⚡
R3 Ethnikon is placed between claws; narrower crab shield; short, thick, sharply bent legs and large claws; long, slender *gorytos*; sharply defined incuse
a) 14.05 Hirsch 177 (1993), 368
4. O1 ⚡
R4 Similar, but broader *gorytos* and bow
a) 13.76 1 New York 1944.100.48466
b) 14.72 1 Lanz 30 (1984), 285. Ex Leu 7 (1973), 238; Gaetens 16 (1961), 40; M&M 19 (1959), 498; Naville/*Ars Classica*/*Ars Classica* 16 (1933), 1410 and 15 (1930), 976; *SNG* v.Aulock 8172

ΤΙΜΟΛΥΚΟΣ

5. O1 ⚡
R5 Ethnikon is placed between claws; thick, bent legs on crab; large letters; more shallow incuse
a) 14.39 5 London 42
b) 14.22 5 New York 1960.170.242. Ex. Jameson 1546; Hess/Leu 1957, 276
c) 14.70 CNG 24 (1992), 299
d) 15.12 4 Hirsch 183 (1994), 526
6. O1 ⚡
R6 Smaller crab; shorter and more stylized legs; sharply defined incuse
a) 14.10 Naville/*Ars Classica* 7 (1925), 1534 (Bement Coll.); Egger 39 (1912), 322; J. Hirsch 25 (1909), 2405 (Philipsen Coll.); J. Hirsch 18 (1907), 2481

ΜΙΚΩΝ

7. O1 ⚔
R7 Ethnikon is placed between claws; large crab shield; thick legs and claws; large letters in personal name
a) 14.84 5 Cambridge, *SNG* Cambridge 4762. Ex Sotheby's 3.2.1909 (Benson Coll.), 714
b) 14.92 4 Poinson 38 (1994), 631
c) 14.81 Rauch 49 (1992), 200
8. O1 ⚔
R8 Ethnikon is placed above claws; claws are bent towards each other; small letters in personal name
a) 15.09 1 Requier 8a (in trade)
9. O1 ⚔
R9 Ethnikon is placed between claws; crab has short legs and claws; large *gorytos*; sharply defined and small inquse square
a) 14.40 Hirsch 21 (1908), 3215 (Weber Coll.)
b) 15.08 5 Berlin (Löbbeche)
c) 14.31 *Ars Classica* 14 (1929), 384; *Naville/Ars Classica* 10 (1925), 712
d) 13.04 MB 4 (1935), 829
e) 13.45 L. Hamburger, Auction 1929, 382
10. O1 ⚔
R10 Ethnikon is placed above claws; narrower shield; depressions on the lower part of shield; thin, curved legs
a) 14.21 5 Oslo 9. Ex Hirsch 179 (1993), 458
b) 15.01 GM 81 (1997), 348; Rauch 56 (1996), 165; *MünzZentrum* 82 (1995), 173
c) 15.10 Ponterio 61 (1993), 238
11. O1 ⚔
R11 Ethnikon is placed above claws; thicker legs and claws; large mouth on crab
a) 15.00 NFA I (1975), 175
12. O2 Lower forehead; more well-rounded cheek and chin; longer distance between nose and back of head
R10 ⚔
a) 14.34 5 Oslo 10. Ex Hirsch 179 (1993), 462
13. O2 ⚔
R11 ⚔
a) 15.14 5 Berlin (992/1872)
b) 15.10 CNG 53 (2000), 518; Stack's 11.1995, 322
14. O2 ⚔
R12 Ethnikon is placed above claws; claws are wide apart; depression on the lower part of shield; thin and stylized legs on crab; *gorytos* ornamented with border of dots
a) 15.04 5 Hess/Leu, 28 (1965), 248
b) 14.97 5 Requier 13a (in trade)
c) 15.19 Wadell 65 (1995), 44; Wadell 63 (1994), 107
15. O3 Small, claw like locks in mane; smaller locks of hair in forehead and at temple
R12 ⚔
a) 14.07 Peus 323 (1988), 839
16. O4 Larger nose; high forehead; few locks of hair on temple; long, straight locks in mane hangs down almost vertically
R7 ⚔
a) 14.92 4 Requier 14a (in trade)

Type 2 *obv.* Beardless Heracles facing r.; protruding eyebrow and forehead; detailed eye and pupil; large ornamental hair locks from forehead to temple; developing tendency towards stylized and ornamental depiction of facial features, mane and locks of hair; well-rounded facial features
rev. Crab; *gorytos* (club); above, *ethnikon*; *ethnikon* is sometimes placed between claws and sometimes above claws; beneath, personal name; all in square border of dots

ΑΡΙΣΤΟΜΕΝΗΣ

17. O5 Small head; lean facial features; small eye; protruding forehead; aquiline nose; well-rounded chin; hardly visible locks of hair in forehead and along temple; fold in lion's scalp behind ear; one row of irregular locks in mane
 R13 *Ethnikon* placed above crab; small, triangular crab shield; stylized, irregularly shaped legs; long, slender claws on crab; l. claw larger than r. claw; large, stylized eyes on crab; small letters in *ethnikon* and personal name
 a) 15.17 *I2* Requier 68a (in trade)
 b) 14.95 *I2* Requier 68b (in trade)
 c) 14.88 GM 76 (1996), 218; GM 64 (1993), 175
 d) 15.10 *I2* GM 67 (1994), 281; GM 60 (1992), 218
 e) 14.94 *I2* GM 69 (1994), 377
 f) 15.38 Platt 12.1994, 101
 g) 14.94 GM 84 (1997), 538
 h) 14.86 GM 96 (1999), 206
 i) 14.37 *I2* Oslo 11. Ex Hirsch 179 (1993), 465. *Obv.* damaged die; large flaw from nose to mouth

ΤΕΛΕΣΑΝΔΡΟΣ

18. O5 †
 R14 Similar, but crab has rounder shield and shorter legs
 a) 14.40 Hirsch 179 (1993), 464
 b) 14.60 Hirsch 178 (1993), 344
 c) - *I2* Spink's (stock 1994)

ΚΛΥΜΕΝΟΣ

19. O6 Large head; aquiline nose; thick neck; irregular locks in mane
 R15 *Ethnikon* placed above claws; large elevations on crab shield; large mouth and eyes
 a) 14.34 *I2* Berlin (Löbbecke Coll.)
 b) 15.07 *I2* Spink's (stock 1994)

ΝΙΚΑΓΟΡΑΣ

20. O6 †
 R16 Similar
 a) 14.97 7 Requier 16a (in trade)
21. O7 Strong facial features; large forehead; lumpy nose; large chin and cheek; short, symmetrical locks of hair from forehead to temple; wavy line behind ear; two rows of symmetrical locks in mane
 R17 *Ethnikon* placed above claws; small crab; oval shield; short, stylized legs; long, slender *gorytos*
 a) 14.65 *I2* Glasgow 2
22. O8 Smaller face; straight nose; lean chin and cheek; curly locks of hair along temple; two rows of short locks in mane
 R18 Similar, but legs are more sharply bent
 a) 15.00 Hirsch 183 (1994), 527

23. O8 ⚔
R19 Similar, but slightly larger claws
a) 14.77 *I2* Elsen 44 (1996), 188
b) 15.08 *I2* Baldwin (stock 1994)
c) 14.96 *II* Requier 19a (in trade)

ΜΟΣΧΙΩΝ

24. O8 ⚔
R20 Ethnikon placed above claws; short, stylized legs
a) 14.97 *I* London 43
b) 14.98 CNG 32 (1994), 185
c) 15.16 *I2* Baldwin (stock 1994)

ΝΙΚΑΓΟΡΑΣ (2)⁶⁵⁰

25. O9 Similar to O6, but different shape on the wavy edge behind ear, and fewer locks in the second row of locks in the mane
R21 Ethnikon placed above claws; large elevations on crab shield; clearly marked joints on legs; beneath personal name, club
a) 14.95 NFA II (1976), 240
26. O10 Similar, but larger nose, more irregular locks in mane, more curly locks of hair along temple and smoother line behind ear
R21 ⚔
a) 15.12 *II* Requier 22a (private collection)
27. O10 ⚔
R22 Similar, but thicker legs on crab; club
a) 15.07 *II* Requier 23a (in trade)

ΝΙΚΑΡΧΟΣ

28. O10 ⚔
R23 Similar, but legs are more bent on l. side of crab; club
a) 15.02 *I2* New York 1960.170.241
b) 14.67 *5* Requier 24b (private Coll.)

ΤΙΜΟΞΕΝΟΣ

29. O10 ⚔
R24 Similar, but more slender legs on crab; club
a) 14.94 Elsen 30 (1993), 103; 32 (1995), 98

⁶⁵⁰ The *gorytos* is replaced by a club on two dies in the name of Nikagoras. A possible explanation would be that two persons with this name were involved in the coinage at approximately the same time. The club was used as additional motif by one of them to distinguish between the coins with identical name representing two different persons. However, the *gorytos* is replaced by a club also on the dies of Nikarchos and Timoxenos, which means that the change of additional symbol within this issue lacks a satisfactory explanation.

KAEINOS

30. O11 Higher forehead; fold in lion's scalp behind ear; irregular locks in mane
R25 Ethnikon is placed between claws; thin, straight legs with joints marked with dots
a) 15.15 *II* Requier 26a (in trade)
31. O12 Larger, stylized locks of hair from forehead to temple; short, claw-like locks in mane
R26 Ethnikon placed between claws; sharply bent legs on crab; large, thick claws; short gorytos
a) 15.07 *II* Requier 27a (in trade)
b) 15.02 *II* Requier 27b (in trade)
32. O12 ⚡
R27 Ethnikon placed between claws; four, large elevations on crab shield; thin, stylized, sharply bent legs; long, large, thick claws; *gorytos* ornamented with border of dots
a) 15.04 *IO* SNG Dewing 2388
b) 15.10 *II* Leu 36 (1985), 166
33. O13 Similar, but slightly smaller locks of hair from forehead to temple
R28 Similar, but smaller claws and slightly thicker legs on crab
a) 15.05 NAC 5 (1992), 156. Ex. hoard 20
b) 15.14 *II* Requier 29a (private collection)
34. O13 ⚡
R29 Ethnikon placed between claws; large, irregular elevations on crab shield; long claws; straight, thin legs with joints marked with dots
a) 13.15 Hirsch 177 (1993), 367
b) -- BA 45 (1992), 1226
35. O13 ⚡
R30 Similar, but slightly less stylized legs on crab
a) 14.69 GM 64 (1993), 174
36. O13 ⚡
R31 Ethnikon placed between claws; angular crab shield; claws raised upwards; thin, stylized legs
a) 14.58 *II* Künker 34 (1996), 120; 25 (1993), 136
b) 15.00 *II* Spink (stock 1994)
37. O14 Similar, but longer and more irregular locks in mane
R32 Similar to R28, but slightly different placing of legs of crab and letters
a) 14.95 Elsen 57 (1999), 1379
38. O14 ⚡
R33 Ethnikon placed between claws; broader crab shield; thicker legs; claws bent more inwards; large *gorytos*
a) 15.12 *I* Crédit de la Bourse 19.4.1995, 1247
39. O14 ⚡
R34 Similar to R28, but slightly different placing of legs of crab and letters
a) 14.70 SNG v. Aulock 2753
40. O15 Similar, but shorter locks in mane; two S-shaped locks of hair above ear
R26 ⚡
a) 14.63 *II* Paris 1187
b) 14.96 *II* Baldwin (stock 1994)
41. O15 ⚡
R27 ⚡
a) 15.10 *II* Requier 36a (in trade)

42. O15 ⚡
R35 Ethnikon is placed between claws; large elevations on crab shield; slender, stylized legs; long claws
a) 14.44 *I2* Oslo 12. Ex Hirsch 179 (1993), 463. *Obv.* Small damage in die beneath neck
b) 14.27 *6* Glasgow 1
c) 15.00 Hess/Leu 31 (1961), 464
d) 15.00 Egger 46 (1914), 1339. Ex T. Prowe Coll. (Moscow)
43. O16 Similar, but differences in shape of locks in mane
R25 ⚡
a) 14.95 GM 69 (1994), 378
b) 15.05 *I2* Requier 38a (in trade)
44. O16 ⚡
R36 Ethnikon is placed between claws; broad crab shield with elevations; thicker, less stylized legs; shorter claws
a) 14.65 GM 79 (1996), 229[?]; GM 67 (1994), 282; CNG 26 (1993), 340
b) 14.90 GM 73 (1995), 179
c) 14.96 *II* Vinchon 22.5.1995, 146; Richelieu Numismatique 11 (1994), 24
d) 14.86 CNG 30 (1994), 173
- ΑΕΩΔΑΜΑΣ
45. O11 ⚡
R37 Ethnikon is placed between claws; narrow crab shield; five elevations on crab shield; slender, stylized crab legs ; long, slender claws stretched upwards
a) 14.41 *I2* Oslo 13. Ex Hirsch 179 (1993), 459
46. O12 ⚡
R38 Ethnikon is placed between claws; crab shield is slightly broader in upper part; large mouth; short, stylized legs; small gorytos
a) 14.97 *5* Requier 41a (in trade)
47. O12 ⚡
R39 Ethnikon is placed between claws; broad shield with five elevations; thin, stylized, sharply bent legs; large, thick claws bent sharply towards each other at the top
a) 14.70 *5* Paris, *SNG* Delepierre 2729. Ex Bourse 8.11.1933, 1688 (Page Coll.)
b) 15.23 *5* Requier 42b (in trade)
48. O13 ⚡
R40 Similar, but straighter legs with joints clearly marked and longer *gorytos*
a) 15.10 *II* Requier 43a (in trade)
b) 15.07 *II* Requier 43b (in trade)
c) - - Spink (stock 1994)
49. O13 ⚡
R41 Similar, but straighter, thicker legs and smaller claws
a) 14.83 *I2* Requier 44a (private collection)
50. O13 ⚡
R42 Ethnikon is placed between claws; narrow crab shield; large mouth; straight, thin legs with clearly marked joints; slender claws
a) 14.37 Hirsch 176 (1992), 301
b) 12.97 Copenhagen 627. Ex. J. Hirsch 13 (1905), 3967 (Rhusopoulos Coll.)

52. O14 ⚔
R43 Similar, but omega in ethnikon is placed higher compared to the iota
a) 13.66 Hirsch 179 (1993), 461
b) 14.78 GM 71 (1995), 343; GM 60 (1992), 219
c) 14.81 GM 90 (1998), 376
53. O15 ⚔
R39 ⚔
a) 14.09 12 Paris 1189 (Waddington 2721)
54. O15 ⚔
R41 ⚔
a) 15.23 12 Baldwin (stock 1994)
b) 15.10 Tkalec 23.10.1992, 133
55. O15 ⚔
R44 Similar, but thinner, more curved crab legs
a) 15.03 11 Requier 49a (in trade)
b) 14.68 GM 92 (1998), 234
56. O15 ⚔
R45 Similar to R41, but more slender *gorytos* and smaller omega in ethnikon
a) 14.54 M&M 81 (1995), 90; NAAC 4 (1987), 121; NFA 18, 19, 205; SNG Berry 1116
b) 14.94 CNG 54 (2000), 706
57. O16 ⚔
R46 Similar, but slightly larger crab shield and shorter legs
a) 14.25 NAC auct. F (1996), 1271; Auctiones 8 (1978), 280

ΞΑΝΘΙΠΠΙΟΣ

58. O11 ⚔
R47 Ethnikon placed between claws; irregular crab shield with elevations of different shape and size; stylized legs with clearly marked joints; long, slender claws; small, slender *gorytos*
a) 13.55 12 Berlin (Imhoof-Blumer Coll.)
b) 14.80 12 Gulbenkian 1005. Ex Naville/Ars Classica 7 (1925), 1535 (Bement Coll.); Weber 6630
c) 15.15 Elsen 57 (1999), 957
59. O12 ⚔
R48 Ethnikon is placed between claws; irregular crab shield; large eyes; thin, stylized, sharply bent crab legs; long, thick claws; short *gorytos*; small letters in ethnikon and personal name
a) 14.86 GM 69 (1994), 379
60. O13 ⚔
R49 Ethnikon is placed between claws; smaller crab shield; long, slender legs with joints clearly marked; larger letters in ethnikon and personal name; longer *gorytos*
a) 15.20 11 Requier 54a (in trade)
61. O14 ⚔
R50 Ethnikon is placed between claws; crab shield is broader in upper part; straight, stylized crab legs; thick claws
a) 15.16 11 Requier 55a (in trade)

62. O14 ⚡
R47 ⚡
a) 15.06 /2 Requier 56a (in trade)
b) 15.14 /2 Requier 56b (in trade)
63. O14 ⚡
R50 ⚡
a) 14.33 / Lanz 62 (1992), 359
64. O14 ⚡
R51 ⚡
Similar, but more unevenly placed letters in personal name
a) 15.14 / Requier 58a (in trade)
65. O14 ⚡
R52 ⚡
Similar, but more clearly marked joints on legs and longer claws
a) 15.12 /2 Requier 59a (in trade)
66. O14 ⚡
R53 ⚡
Similar, but shorter legs on crab
a) 14.22 /2 Berlin 22 (1993). Ex Hirsch 177 (1993), 369
b) 14.95 /2 Baldwin (stock 1994)
67. O14 ⚡
R54 ⚡
Ethnikon is placed between claws; irregular crab shield; large eyes; long, thin, stylized, slightly curved legs with joints marked with dots; long claws
a) 14.30 Hirsch 178 (1993), 343
68. O14 ⚡
R55 ⚡
Similar, but straighter and slightly thicker crab legs
a) (17.76)⁶⁵¹ Hirsch 178 (1993), 342. *Rev.* damaged by corrosion
b) 14.67 GM 76 (1996), 217
c) 14.93 /2 GM 95 (1999), 329; CNG 46 (1998), 447; Elsen 48 (1997), 185⁶⁵²
69. O14 ⚡
R56 ⚡
Ethnikon placed between claws; crab shield is broader in upper part; shorter, more stylized legs
a) 14.12 /2 Paris 1188
b) 15.19 /2 Boston, suppl. 1950-63, 195
70. O15 ⚡
R48 ⚡
a) 15.00 /2 Requier 64a (in trade)
71. O15 ⚡
R52 ⚡
a) 14.92 Hirsch 181 (1994), 271; ex NAC 6 (1993), 173. *Obv.* Small damage in die beneath neck
b) 14.91 Poindessault-Védrines 15.12.1993, 54

⁶⁵¹ The weight according to the catalogue is 17.76 g. The unexpected high weight is probably due to a misprint, and 14.76 g can be considered a more realistic weight. This is, however, not confirmed, and the weight is therefore excluded from the metrological analysis in the present work.

⁶⁵² The weight according to the CNG catalogue is supposed to be 14.62 g. The two previous catalogues gives 14.93 and 14.95 g respectively. Thus it seems most likely that the weight is around 14.90 g, and the lowest of them is used in this catalogue.

72. O16 Similar, but curlier hair locks along temple; longer, more assymmetric locks in mane
R57 Similar to R54, but smaller claws and larger omega in ethnikon
a) 14.70 Hirsch 178 (1993), 341
b) 15.06 12 Requier 66b (in trade)
c) 15.03 11 Requier 66a (in trade)
73. O16 $\hat{\uparrow}$
R58 Ethnikon placed between claws; slender, stylized legs with joints marked by dots; claws curved inwards
a) 14.90 Hirsch 186 (1995), 379; Hirsch 184 (1994), 273
b) 15.13 Tkalec/Rauch, 2.2000, 153

XV. ISSUE	Period of minting: c.250-40	Obv. dies: 7
	Didrachms	Rev. dies: 7
	No. of coins: 18	Weights: (5.75) 5.90-6.77

Type *obv.* Beardless Heracles with lion's scalp $\frac{3}{4}$ facing
rev. Crab; club; ethnikon (ΚΩΙΟΝ); personal name; all in square border of dots

ΜΙΚΩΝ

1. O1¹ Well-rounded facial features; large chin and cheek; large, wide open eyes; protruding eyebrow and forehead; dotted edge on lion's scalp behind and beneath ear of Heracles; clearly rendered teeth and fangs on lion's scalp; long, irregular locks in mane
R1¹ Detailed crab; several elevations on shield; large eyes and mouth on crab; clearly marked joints on legs; long club with large knobs
a) 6.68 - Glendining, 02.1961, 2400. Ex Naville/Ars Classica/Ars Classica 13 (1928), 889
b) 6.59⁶⁵³- Kricheldorf 19 (1968), 282; Naville/Ars Classica/Ars Classica 4 (1922), 903
2. O1¹
R2 Similar, but smaller letters in ethnikon; smaller club; crab mouth is hardly visible
a) 6.61 12 Oxford 34. Ex Spink, 25.4.1890
3. O1² Small crack on nose; die is clearly worn esp. on r. side of lion's scalp
R2
a) 6.57 12 Spink (London), 02.1977, 134; Hess-Leu 36 (1968), 290; Naville/Ars Classica/Ars Classica 7 (Bement Coll., 1924), 1538; Sotheby's 1909 (Benson Coll.), 715; Sotheby's 1897 (Montague Coll.), 279; Sotheby's 1894 (Carfrae Coll.), 270
- 3a. O1² ↑
R1² Small flaw on r. side of K in ethnikon
a) 6.65 J. Hirsch 21 (1908), 3221 (Weber Coll.)
4. O2 Smaller cheek; fewer teeth on lion's scalp
R1² Flaw on r. side of K in ethnikon; flaw beneath left part of crab shield
a) 6.46 2 New York 48481
5. O3 Smaller head; teeth and fangs is hardly visible; longer, more irregular locks in mane; large part of lion's scalp visible on r. side
R1²
a) 6.64 - London 74
6. O1²
R3 Five elevations surrounded by an edge on crab shield; long legs with joints clearly marked; small claws; small letters in ethnikon and personal name; slender club
a) 6.71 12 Vienna 31.382
7. O4 Row of teeth separated by a dot(?); r. part of lion's scalp is clearly visible
R3
a) 5.90 - London 75

⁶⁵³ The weight according to the catalogue is 3.59 g. This is wrong, and a plausible suggestion can be 6.59 g which is given in the present catalogue. The weight is, however, not confirmed.

ΖΩΙΑΟΣ

8. O1²
R4 Five elevations surrounded by an edge on crab shield; smaller legs; claws are more outstretched; slender club
a) 6.40 - London 73
b) 6.58 Boston (Brett 1955), 2026

ΔΑΜΟΞΕΝΟΣ

9. O1²
R5 Similar, but longer club
a) 6.68 *I2* Vienna 18.495
10. O5
R5 Similar to O4, but small differences in mane, and continuous row of teeth on lion's scalp
a) 6.72 - Glendining 14 (1963), 337. Ex Jameson Coll. 1548
11. O3
R6 Crab has thicker legs and shorter claws, large eyes and mouth
a) 6.77 - London 71
12. O6
R6 No edge on lion's scalp behind Heracles' ear; differences in mane
a) 6.53 *I2* New York 48482
b) 6.48 - Ratto 26.4.1909, 4145. *Obv.* uncertain die identification

ΕΥΔΩΡΟΣ

13. O7 Slightly smiling expression; less detailed lion's scalp; more stylized locks in mane; protruding eyebrow, forehead and chin
R7 Smaller crab shield; shield has six elevations; long claws; thin legs; long club
a) 6.49 - London 72

Personal name obliterated:

14. O [corroded]
R [corroded]
a) (5.75) *I2* Athen 587

BATIΩN

12.	O	Protruding eyebrow and forehead; smaller lion's scalp; lion's scalp is fastened under chin		
	R	Larger crab; crab shield tapers toward lower end: thick, large claws; long club with knobs		
		2.78	3	Paris 1262a (Waddington 2747)
13.	O	Similar		
	R	Similar		
		2.71	3	Göttingen 90.5
14.	O	Similar		
	R	Similar		
		2.54	12	Göttingen 92.16. Slightly damaged edge of flan
15.	O	Similar [corroded]		
	R	Similar		
		2.70	6	London 85b (not in <i>BMC</i>)
16.	O	Similar		
	R	Similar [corroded]		
		2.51	9	Göttingen 95.7
17.	O	[corroded]		
	R	Similar		
		2.54	1	Vienna 18.512
18.	O	[corroded]		
	R	Similar		
		1.93	6	Munich 3
19.	O	Similar		
	R	Similar		
		2.15	9	Göttingen 89.6
19a.	O	Similar		
	R	Similar		
		2.37		Lindgren Coll. 675
20.	O	Similar		
	R	Similar		
		2.10	9	Göttingen 95.13
21.	O	Similar		
	R	Similar		
		2.78	7	New York 48473
22.	O	Similar		
	R	Crab has smaller claws		
		2.91	6	Berlin 83 (Löbbecke Coll.)
23.	O	(as above)		
	R	(as above)		
		-		Kos
24.	O	(as above)		
	R	(as above)		
		-		Kos

25. O (as above)
 R (as above)
 - Kos

εξ]ΑΙΓΡΕΤΟΣ

26. O Large face; large nose; protruding eyebrow and forehead
 R Oval crab shield; thin, stylized legs
 2.19 12 London 96

27. O Smaller eyebrow and nose
 R Similar
 1.93 12 Copenhagen 644

ΗΡΟΔΟΤΟΣ

28. O Well-rounded face; two rows of stylized locks in mane
 R Irregular crab shield; shield tapers towards lower end; thin, stylized legs; large claws; club with knobs; large letters
 2.22 12 Vienna 33.376

29. O Larger, lumpy nose
 R Similar
 1.40 12 Göttingen 91.8

30. O Similar
 R Similar
 2.12 12 London 91

31. O [corroded]
 R Similar
 1.71 12 Oxford 20

32. O Similar
 R Similar
 1.74 12 Athen 28

33. O Similar [corroded]
 R Similar, but claws are closer together
 2.43 12 London 91a (not in *BMC*)

34. O Similar
 R Smaller and round crab shield; thin, long, stylized legs
 2.24 12 Göttingen 92.3

35. O Large face; straighter nose
 R Larger crab shield; shield is divided into two parts; thick claws
 1.86 12 Munich 2

36. O Similar to 32
 R Smaller shield; shield tapers towards lower end; claws are wide apart
 1.67 12 Berlin (Löbbecke Coll.)

37. O Similar
 R Similar
 2.26 12 Göttingen 95.19

38. O [partly of flan]
 R Similar
 2.15 6 Göttingen 92.4

39. O [corroded]
 R Small shield; long, thin, stylized legs [corroded]
 1.95 - London 92

40. O Large face [corroded]
 R Similar to 38
 3.21 12 Göttingen 92.2

41. O Similar
 R Similar [corroded]
 2.07 12 Göttingen 89.14

42. O (as above)
 R (as above)
 - Kos

43. O (as above)
 R (as above)
 - Kos

ΑΡΧΕΠΙΟΛΙΣ

44. O Well-rounded face; large, lumpy nose; small eye and mouth
 R Large angular crab shield; stylized legs; thick claws bent sharply towards each other
 2.42 12 Berlin 82 (Löbbeche Coll.)

45. O Similar; countermark: club
 R Similar
 2.00 12 Göttingen 95.15

46. O [corroded]; countermark: club
 R Smaller crab shield; claws wide apart
 1.90 12 Athen 5667e; deep crack in flan

47. O Similar to 45
 R Claws kept closer together
 1.75 12 Athen 5667f

48. O Similar
 R Similar
 1.79 12 Berlin 81 (Prokesh-Osten Coll.)

49. O Similar
 R Claws held wide apart
 2.00 12 London 89

50. O Similar
 R Similar
 1.88 12 Upper edge on flan is damaged

51. O Similar(?); countermark: club
 R Similar
 1.81 12 Paris 1267

52. O [corroded]
 R Similar
 2.10 1 Vienna 38.642

53.	O	[corroded]		
	R	Oblong crab shield; short, stylized legs		
		1.96 12	Göttingen	95.14
54.	O	[corroded]		
	R	[corroded]; crab shield divided into two parts		
		2.22 -	Göttingen	95.10
55.	O	[corroded]		
	R	[corroded]; oblong crab shield		
		(1.34) 12	Göttingen	95.11
56.	O	(as above)		
	R	(as above)		
		-	Kos	
ΠΠΙΑΡΧΟΣ				
57.	O	High forehead; large well-rounded chin; small, stylized locks in mane; short edge on lion's scalp in neck beneath ear		
	R	Large, irregular crab shield; small club with knobs		
		2.45 12	Paris, Delepiere	14 (not in <i>SNG</i>)
58.	O	Similar, but no edge on lion's scalp beneath ear; part of lion's scalp almost covers ear		
	R	Smaller, irregular crab shield; longer, plain club		
		1.99 12	London	93
59.	O	Similar		
	R	Similar		
		(1.01) 12	Göttingen	91.6
60.	O	Similar		
	R	Similar		
		2.47 12	London 93a (not in <i>BMC</i>). Ex hoard 19 (<i>IGCH</i> 1310)(?)	
61.	O	Similar		
	R	Similar		
		2.14 12	Oxford 21. Ex hoard 19 (<i>IGCH</i> 1310)	
62.	O	Similar		
	R	Similar		
		1.75 1	Oxford 22. Ex hoard 19 (<i>IGCH</i> 1310)	
63.	O	Similar		
	R	Slightly more oblong crab shield		
		1.95 12	New York	48476
64.	O	Similar		
	R	Similar to 62		
		1.98 12	Göttingen	91.1
65.	O	Similar(?)		
	R	Similar		
		1.95 10	Göttingen	91.5
66.	O	[corroded]		
	R	[corroded]		
		2.38 12	Göttingen	90.19

ΣΙΜΟΣ

- | | | |
|------|---|---|
| 67. | O | Large face; protruding forehead; lumpy nose; protruding chin; lion's scalp is fastened under chin; long locks in mane |
| | R | Small crab with long claws |
| | | 2.77 12 Oxford 25. Ex hoard 19 (IGCH 1310) |
| 68. | O | Similar |
| | R | Similar |
| | | 2.69 12 Oxford 24. Ex hoard 19 (IGCH 1310) |
| 69. | O | Similar |
| | R | Similar; slender club |
| | | 2.55 1 London 97b. Ex hoard 19 (IGCH 1310)(?) |
| 69a. | O | Similar |
| | R | Similar (same die) |
| | | 1.55 7 SNG Forbat 486 |
| 70. | O | Smaller chin; straighter nose |
| | R | Similar |
| | | 1.90 12 Göttingen 95.8 |
| 71. | O | (partly out of flan); Heracles facing r.; horizontal line at the back of neck |
| | R | Larger crab shield; short, thick club; small claws |
| | | 1.57 - Vienna 37.183 |
| 72. | O | (as above) |
| | R | (as above) |
| | | - Kos |
| 73. | O | (as above) |
| | R | (as above) |
| | | - Kos |

ΑΙΣΧΡΙΩΝ

- | | | |
|-----|---|--|
| 74. | O | Large face; small lion's scalp; large, flat cheek; thin, irregular locks of mane hangs down at the back of neck; lion's scalp is fastened under chin |
| | R | Large crab; large, irregular shield; stylized claws and legs; long, slender club with knobs |
| | | 1.99 12 Munich Λ(?) |
| 75. | O | Similar (partly off flan) |
| | R | Similar |
| | | 1.84 12 Athen 5667b |
| 76. | O | Similar |
| | R | Similar |
| | | 2.00 12 Berlin 456/1901 |
| 77. | O | [corroded and partly off flan] |
| | R | Similar |
| | | 1.91 6 Göttingen 84.2 |
| 78. | O | Similar |
| | R | Similar |
| | | 1.80 12 London 86 |

ΚΑΦΙΣΙΟΣ

79. O Smaller head; more regular facial features; two folds in lion's scalp behind ear
R Angular crab shield; small claws; small, slender club
1.97 12 New York 56.28.255
80. O Similar
R Similar
2.41 12 Copenhagen 645
81. O Similar, but no folds in lion's scalp behind ear
R Similar, but claws are closer together
2.05 12 London 94
82. O Similar
R Similar
2.05 12 Göttingen 95.18
83. O Similar
R Similar
1.92 12 Göttingen 91.3
84. O Similar to 79
R Similar
2.26 12 Oxford 23
85. O Similar
R Similar
1.90 12 Berlin 86 (Dannenberg 1863)
86. O Similar
R Smaller crab shield
2.63 12 Göttingen 88.1. Oblong flan
87. O (as above)
R (as above)
- Kos

ΕΛΛΑΝΙΚΟΣ

88. O Retracted chin; large eye and eyebrow; lion's scalp fastened under chin
R Large shield divided into six parts; short, stylized legs
2.12 12 London 90; rev.: small crack in flan
89. O Similar
R Similar; long, slender club with knobs
2.14 12 Athen 5667"
90. O Similar [corroded]
R Similar
1.74 12 New York 1944.100.48475
91. O Similar
R Similar
1.93 12 Göttingen 90.20
92. O Similar
R Similar
2.13 12 Göttingen 89.12

93. O Similar; countermark, club
R Similar
2.54 12 Göttingen 5667'
94. O Similar
R Similar
2.21 12 Copenhagen 643
95. O Similar(?)
R Smaller crab shield; shorter club with thicker upper end
2.63 12 Berlin 84 (v.Rauch)
96. O Similar
R Similar
1.93 12 Göttingen 89.20
97. O Similar
R Rounder crab shield
2.10 12 Göttingen 90.17

ΑΡΙΣΤΟΤΕΛΗΣ

98. O Lumpy nose; large, protruding chin; irregular locks in mane
R Crab shield tapers towards lower part; claws are strongly bent and held close together;
large club with knobs
2.35 12 Berlin 80 (Fox Coll.)
99. O Similar
R Similar
2.15 12 Vienna 28.672 (v.Lennep 188)
100. O (partly out of flan)
R 2.15 12 Göttingen 89.11

ΑΓΟΡΑΚΡΙΤΟΣ

101. O Small chin; large eye; long, undulating locks in mane
R Small crab; round crab shield; long, slender club with knobs
2.86 12 Athen 5667a
102. O Similar
R Similar
2.26 12 New York 51.116.53
103. O Similar(?)
R Similar
2.34 12 Oxford 30
104. O (as above)
R (as above)
- Kos

ΤΕΙΣΙΑΣ

105. O Small face; well-rounded facial features; lion's scalp fastened under chin
R Large, detailed crab; irregular crab shield; crab has distinctly rendered eyes; long
club with knobs
2.46 6 Berlin 92 (Fox Coll.)

106. O Similar
R Similar
2.61 6 London 98
107. O Similar (partly out of flan)
R Similar
2.14 6 Paris 1262b; Waddington 2748
108. O [corroded]
R [corroded]; τε]ΣΙ[αζ; smaller crab shield; straight, thin legs
2.48 11 Göttingen 109.1

ΜΙΚΥΘΟΣ

109. O Small face; small, detailed eye; two rows of stylized locks in mane; part of lion's scalp over ear is shaped like an ivy-leaf
R Small crab; crab shield tapers towards lower end; detailed claws; slender club with large knobs
2.16 6 London 95
110. O Similar
R Similar
2.46 6 Berlin 87 (Imhoof-Blumer Coll.)
111. O Similar
R Similar
1.92 7 New York 74.26.1059

ΠΑΡΜΕΝΙΣΚΟΣ

112. O Large nose; large eye; small mouth; large, protruding chin
R Oval shield tapers towards lower part; large, long claws
2.22 5 Berlin 88 (v.Rauch)
113. O Similar [corroded]
R Similar
1.48 12 Oxford 19
114. O Similar
R Similar
2.08 11 Göttingen 90.18
115. O [corroded]
R More narrow crab shield
1.92 11 Göttingen 97.16
116. O Less protruding chin(?)
R Similar; very slender club
2.18 11 Göttingen 92.7
117. O Smaller face
R Similar, but l. claw raised higher
2.01 12 Göttingen 100.11
118. O Larger face; high forehead; diagonal line over eye
R Irregular crab shield; long, thin, stylized legs; long, slender club with knobs
3.09 12 Berlin 89 (Imhoof-Blumer Coll.)

ΤΙΜΟΞΕΝΟΣ

119. O Similar, but three lines on side of neck
R Similar, but smaller club
2.47 11 Göttingen 95.6

ΧΑΡΜΠΠ[-

120. O Two thick folds in lion's scalp on side of head
R Larger crab shield; irregular shield tapering at lower part
1.96 11 Oxford 27

ΑΠΑΤΟΣ

121. O Smaller face; small mouth; large eyebrow; lion's scalp fastened under chin; large locks of mane
R Similar, but smaller claws
2.49 10 London 88
122. O Similar
R Similar
2.27 10 Paris 1260
123. O Similar
R Rounder crab shield; large claws; short legs
2.59 11 Göttingen 99.14
- 123a. O Larger face; aquiline nose; long, irregular locks in mane
R Irregular crab shield; straight, thin legs; long slender claws
1.95 - CNG 37 (1996), 548

ΣΑΤΥΡΟΣ

124. O Small head; two rows with detailed locks in mane; countermark, club
R Larger crab shield; legs are bent
1.62 1 London 97a (not in BMC)
125. O [face out of flan]; Longer, irregular locks in mane
R Angular crab shield
2.56 5 Athen 5660

ΠΑΥΣΙΜΑΧΟΣ

126. O Large face; straight profile; small chin; small lion's scalp; long, irregular locks in mane; horizontal line on back of neck
R ΚΩΙΩΝ; small crab; small shield with several small elevations; long claws; small club with knobs
2.17 12 Berlin 447/1882. Obv.: crack in flan
127. O Similar(?) [corroded]
R ΚΩΙΩΝ; similar(?)
1.64 11 Göttingen 102.20
128. O [corroded]
R ΚΩΙΩΝ; similar
2.64 1 London 97

Personal name obliterated/ΚΩΙΩΝ:

129. O (as above)
R --]ΑΝΙΚΟΣ; (as above)
- 12 Cambridge (McClellan Coll. 8548)
130. O Small face; regular features
R Large, oval crab shield; claws are bent together; short legs
2.11 9 Göttingen 91.10
131. O Large locks of hair along forehead and temple
R Large, angular crab shield; thick legs; long claws are bent together
1.95 12 Göttingen 91.4
132. O [corroded]
R Small crab; claws are wide apart
2.37 12 New York 1953.171.842
133. O Small face and chin; lion's scalp is fastened under chin; countermark: club
R Claws are closer together
1.90 12 New York 1944.100.48474
134. O Similar; two rows of small, stylized locks in mane
R Triangular crab shield; long, thin legs; slender club with knobs
2.16 11 Paris (Delepierre 15, not in SNG)
135. O Small head; small lion's scalp
R [corroded]
1.98 11 Göttingen 95.16
136. O Large chin [corroded]
R Irregular crab shield; short legs; long claws held wide apart
1.71 12 New York 70.142.502
137. O Well-rounded cheek; small chin; countermark: club
R Long, stylized legs on crab
1.98 12 New York 53.171.838
138. O Small face; small mouth
R Crab shield tapers towards lower part; long claws
2.45 3 Göttingen 95.17

Personal name obliterated/ΚΩΙΩΝ:

139. O Large eyebrow; straight nose; countermark: club
R Triangular crab shield; short, thick legs
1.75 12 New York 53.171.839
140. O Large, irregular locks in mane; countermark: club
R Oval crab shield; short, thick and bent legs
2.18 12 New York 1953.171.840

Personal name and ethnicon obliterated:

141. O [corroded]; countermark: club
R Large, angular crab shield; short, thin legs; large, thick claws
2.10 - Göttingen 89.16

142. O [corroded]; countermark: club
R Small, irregular crab shield; thin claws; short club
1.73 12 Göttingen 95.20
143. O [corroded]; row of small locks of hair along forehead(?); countermark: club
R irregular crab shield; crab has visible eyes; short, thick legs
2.11 11 New York 1953.171.841
144. O [corroded]
R [---YN--]; triangular crab shield; small claws; small, slender club
1.95 11 Göttingen 102.16
145. O [corroded]; straight nose
R Angular crab shield; thin legs; small club
2.10 12 Göttingen 102.1
146. O Small face; locks of hair along forehead and temple(?); edge of lion's scalp beneath ear
R [---pχω--]; oval crab shield; long, thin, straight legs; thicker club with knobs
1.86 12 Göttingen 104.16
147. O Similar
R [---ω--]; irregular crab shield; long, thin, straight legs on crab
1.79 12 Göttingen 104.10
148. O Similar; short, stylized locks in mane
R Triangular crab shield; short legs; long, thin claws
2.26 12 Berlin 93 (Fox Coll.)
149. O More stylized facial features; small nose; large, protruding chin
R Angular crab shield; bent legs; long, thin claws
2.00 11 Göttingen 102.17
150. O [partly corroded]; protruding eyebrow; edge on lion's scalp from forehead to ear
R Crab shield tapers towards lower end; short legs; long claws
2.20 6 Oxford 28. Ex hoard 19 (*IGCH* 1310)
151. O [corroded]; lion's scalp is fastened under chin
R Oval crab shield; long, slender claws
2.78 2 Oxford 29
152. O Protruding forehead; large, straight nose; irregular locks in mane
R --μ]A[---; crab shield tapers towards lower end; straight legs; small club(?)
1.73 12 Berlin 9897
153. O [corroded]
R Similar, but long club
2.23 12 Göttingen 89.1
154. O [corroded]; small nose
R ---]Y[---; similar
3.05 12 Göttingen 101.10
155. O [corroded]; small chin; well-rounded cheek
R [---v1---]; large crab; shield is divided into two parts; short, strong claws; short club
2.16 12 Göttingen 91.2
156. O [corroded]
R Smaller, irregular crab shield; bent legs; thin claws
1.99 12 Göttingen 93.10

157. O [corroded]; small chin(?)
R ---]ΩP[--; similar
2.56 12 Göttingen 98.14
158. O [corroded]
R Small crab; small, irregular crab shield; thin claws; long, slender club
2.06 12 Göttingen 111.11
159. O [corroded]; small chin(?)
R Larger, angular crab shield; thin legs; short club, significantly thicker in upper end
1.92 12 Göttingen 89.15
160. O Small mouth nose and chin; lion's scalp(?) fastened under chin
R Similar to 158
2.03 12 Göttingen 91.9
161. O [corroded]; large face
R [---λ---]; angular crab shield; small claws; long, large club
1.32 12 Göttingen 109.3
162. O [corroded]
R Small crab; oval crab shield; straight, thin, stylized legs; small claws
2.00 11 Göttingen 92.1
163. O [corroded]; small chin
R Large, angular crab shield; short legs; small club
1.67 11 Göttingen 98.15
164. O [corroded]
R Oval crab shield; short legs
1.93 7 Munich [x]
165. O Heracles facing r.[corroded]
R Similar
2.26 - Göttingen 109.9
166. O Heracles facing r.; large lion's scalp [corroded]
R Irregular crab shield; slender club
2.12 12 Göttingen 86.10
167. O Small face; small nose; well-rounded cheek
R Irregular crab shield; long, slender claws
1.79 12 Göttingen 95.1
168. O [corroded]
R Oval crab shield; large claws; slender club
1.65 10 Göttingen 84.16
169. O [corroded]
R Small crab with small circular shield; straight, thin legs; short club
1.52 - Göttingen 111.6
170. O Large face; protruding eyebrow
R Oval crab shield; slender club
2.11 12 Vienna 18.511
171. O (as above); countermark, club
R XA[---; (as above)
- Ashton Coll.

172.	O	(as above)	
	R	(as above)	
		-	Kos
173.	O	(as above)	
	R	(as above)	
		-	Kos
174.	O	(as above)	
	R	(as above)	
		-	Kos
175.	O	(as above)	
	R	(as above)	
		-	Kos
176.	O	(as above)	
	R	(as above)	
		-	Kos
177.	O	(as above)	
	R	(as above)	
		-	Kos
178.	O	(as above)	
	R	(as above)	
		-	Kos
179.	O	(as above)	
	R	(as above)	
		-	Kos
180.	O	(as above)	
	R	(as above)	
		-	Kos
181.	O	(as above)	
	R	(as above)	
		-	Kos
182.	O	(as above)	
	R	(as above)	
		-	Kos
183.	O	(as above)	
	R	(as above)	
		-	Kos
184.	O	(as above)	
	R	(as above)	
		-	Kos
185.	O	(as above)	
	R	(as above)	
		-	Kos
186.	O	(as above)	
	R	(as above)	
		-	Kos
187.	O	(as above)	
	R	(as above)	
		-	Kos
188.	O	(as above)	
	R	(as above)	
		-	Kos
189.	O	(as above)	
	R	(as above)	
		-	Kos
190.	O	(as above)	
	R	(as above)	
		-	Kos

191.	O	(as above)	
	R	(as above)	
		-	Kos
192.	O	(as above)	
	R	(as above)	
		-	Kos
193.	O	(as above)	
	R	(as above)	
		-	Kos
194.	O	(as above)	
	R	(as above)	
		-	Kos
195.	O	(as above)	
	R	(as above)	
		-	Kos
196.	O	(as above)	
	R	(as above)	
		-	Kos
197.	O	(as above)	
	R	(as above)	
		-	Kos
198.	O	(as above)	
	R	(as above)	
		-	Kos
199.	O	(as above)	
	R	(as above)	
		-	Kos
200.	O	(as above)	
	R	(as above)	
		-	Kos
201.	O	(as above)	
	R	(as above)	
		-	Kos
202.	O	(as above)	
	R	(as above)	
		-	Kos
203.	O	(as above)	
	R	(as above)	
		-	Kos
204.	O	(as above)	
	R	(as above)	
		-	Kos
205.	O	(as above)	
	R	(as above)	
		-	Kos
206.	O	(as above)	
	R	(as above)	
		-	Kos
207.	O	(as above)	
	R	(as above)	
		-	Kos

XVII. ISSUE Period of minting: c.250-200
 Æ

No. of coins: 149
 Weights: 0.95 – 2.43

Type 1 *obv.* Draped female head

rev. Crab; club/no club; personal name; ΚΩΙΟΝ/ΚΩΙ (ΚΩΙΩΝ on latest coin)

ΓΟΡΓΙΑΣ

- | | | |
|----|---|--|
| 1. | O | Sharp folds in drapery; part of drapery is pulled to the front of neck |
| | R | Crab has small shield and long, thin, straight legs |
| | | 1.67 11 Göttingen 87.14 |
| 2. | O | Similar |
| | R | Claws turned more upwards |
| | | 1.75 12 Copenhagen 625 |

ΔΙΑΓΟΡΑΣ

- | | | |
|----|---|----------------------------------|
| 3. | O | Fewer folds in drapery |
| | R | Similar |
| | | 1.45 12 New York 100.48464 |
| 4. | O | Similar |
| | R | Similar |
| | | 1.62 11 London 30 |

ΑΡΧΙΑΔΑ

- | | | |
|----|---|---|
| 5. | O | Similar to 3 |
| | R | Crab has straighter legs and claws turned inwards |
| | | 1.65 12 Göttingen 88.2 |

ΑΝΑΞΑΝΔ

- | | | |
|-----|---|------------------------------|
| 6. | O | Similar |
| | R | Claws turned more upwards |
| | | 1.75 12 Copenhagen 624 |
| 7. | O | Similar |
| | R | Similar |
| | | 1.60 1 London 27 |
| 8. | O | Similar |
| | R | Similar |
| | | 2.01 12 Paris 1269 |
| 9. | O | Similar |
| | R | Similar |
| | | 1.63 12 Athen 5667c |
| 10. | O | Similar |
| | R | Claws turned more inwards |
| | | 1.72 12 London 28 |
| 11. | O | Similar |
| | R | Similar |
| | | 1.82 11 Athen 5667d |

ΦΙΛΙΣΤΟΣ

- | | | | | |
|-----|---|-------------------------|------|--------------------|
| 12. | O | Similar | | |
| | R | Crab has broader shield | 1.60 | 12 Göttingen 94.16 |
| 13. | O | (as above) | | |
| | R | (as above) | | |
| | | - | | Kos |
| 14. | O | (as above) | | |
| | R | (as above) | | |
| | | - | | Kos |
| 15. | O | (as above) | | |
| | R | (as above) | | |
| | | - | | Kos |

Ξ]ΑΝΘΠ[πος

- | | | | | |
|-----|---|-------------------------------------|------|--------------------|
| 16. | O | Smaller face | | |
| | R | Crab has smaller and rounder shield | 1.62 | 12 Göttingen 94.18 |

ΠΡΑΞΙΑ[v

- | | | | | |
|-----|---|--|------|---|
| 17. | O | Larger face with delicate nose and mouth; more numerous folds in drapery | | |
| | R | Larger crab shield | 1.16 | 12 London 35a (not in <i>BMC</i>). Ex hoard 27 (<i>IGCH</i> 1320) |

ΦΙΛΟΚΛΗ[ς

- | | | | | |
|-----|---|-------------------------|------|-------------------|
| 18. | O | Similar | | |
| | R | Crab has smaller shield | 1.49 | 12 Göttingen 90.1 |

σωσ]ΙΣΤ[ρα]Τ[ος

- | | | | | |
|-----|---|-------------------------|------|--------------------|
| 19. | O | Similar | | |
| | R | Crab has broader shield | 1.61 | 12 Göttingen 92.15 |

ΦΙΛΙΣΚΟΣ

- | | | | | |
|-----|---|--|------|--------------|
| 20. | O | Larger, stylized folds in drapery; hair locks along temple and forehead are rendered as a border of dots | | |
| | R | Similar | 1.82 | 6 London 36 |
| 21. | O | Smaller head; thin neck | | |
| | R | Similar | 1.71 | 6 London 37 |
| 22. | O | Thicker neck | | |
| | R | Similar | 1.58 | 12 Oxford 12 |

φ]ΡΑΣΙΜΗ

- | | | | | |
|-----|---|---------------------------|------|--------------------|
| 23. | O | Similar | | |
| | R | Similar | 1.54 | 12 London 38 |
| 24. | O | Similar (corroded) | | |
| | R | Claws turned more inwards | 1.32 | 12 Göttingen 94.14 |
| 25. | O | (corroded) | | |
| | R | Similar | 1.34 | 12 Göttingen 95.2 |
| 26. | O | Thinner folds in drapery | | |
| | R | Similar | 1.04 | 12 Göttingen 95.3 |
| 27. | O | Similar | | |
| | R | Similar | 1.03 | 12 Athen 5664c |
| 28. | O | (as above) | | |
| | R | (as above) | - | Kos |

δα]ΜΟΞΕΝΟΣ

- | | | | | |
|-----|---|---|------|-----------------------|
| 29. | O | More stylized drapery hangs straight down to shoulder | | |
| | R | Similar | 1.48 | 12 New York 999.20797 |
| 30. | O | Similar | | |
| | R | Crab has smaller shield | 1.47 | 12 Göttingen 94.19 |
| 31. | O | Similar | | |
| | R | Similar | 1.49 | 12 Vienna 18.510 |

ε]ΥΑΓΟΡΑ[ς

- | | | | | |
|-----|---|--|------|-------------------|
| 32. | O | Smaller head; less stylized drapery; more visible hair in forehead | | |
| | R | Crab has rounder shield | 1.21 | 12 Copenhagen 626 |

π]ΑΣΙΑΣ

- | | | | | |
|-----|---|----------------------------|------|------------------------------------|
| 33. | O | Similar | | |
| | R | More irregular crab shield | 1.70 | 12 Berlin (Löbbecke) |
| 34. | O | Similar | | |
| | R | Similar | 1.87 | 12 London 31a (not in <i>BMC</i>) |

ΟΡΘΑΓΩΡΑΣ

35. O Very sharp folds in drapery
R Similar; no club
1.14 - MünzZentrum 96 (1998), 150
36. O Similar
R Similar
1.68 12 Göttingen 94.1
37. O Smaller hair locks in forehead
R Club
1.09 11 London 33
38. O Similar
R Club
1.08 12 Berlin 1552/1905
39. O Similar
R Similar (club out of flan?)
1.36 12 Paris 1280; Waddington 2745
40. O (as above)
R (as above)
- Kos
41. O (as above)
R (as above)
- Kos

ε]ΚΑΤΟΔΩΡ

42. O Larger face; drapery hangs straight down to shoulder
R Crab has small shield; no club
1.57 12 London 31
43. O Similar
R Similar
1.61 11 Göttingen 94.17

ΔΑΜΩΝ

44. O Part of drapery is pulled to the front of neck
R Larger shield consisting of two separate parts; club
1.52 12 Göttingen 87.10
45. O Similar
R Smaller, round shield; club
0.95 11 Göttingen 87.15
46. O Drapery not visible around neck; border of dots
R Similar
1.40 12 Göttingen 89.9
47. O Large folds in drapery; border of dots
R Larger shield consisting of two separate parts; club
1.57 12 New York 100.48.465

48. O Similar (same die?)
 R Similar (same die?)
 1.27 1 London 29
49. O Similar
 R Similar
 1.08 12 Berlin (Imhoof-Blumer)
50. O Similar
 R Similar
 1.82 12 Berlin 9894

ΠΟΑΥΧ

51. O Smaller head; knot of drapery in neck
 R Crab's legs are more curved
 1.06 12 London 35
52. O Similar
 R Similar
 1.62 12 Göttingen 94.3

ΗΠΑΓ

53. O Drapery hangs straight down to shoulder
 R Crab has more curved legs
 1.63 12 London 32

δ]ΠΑΚΩΝ

54. O Numerous, detailed folds in drapery
 R Crab has round shield and claws turned upwards; no club; ΚΩΙΩΝ
 1.88 12 Berlin (Fox Coll.)
55. O Similar
 R Crab has oval shield and claws turned inwards; no club
 1.67 11 Athen 5667cel[?] (main Coll. 29)

Personal name obliterated:

56. O Knot of drapery in neck
 R --]ΝΕΟΣ; crab has large, round shield; club
 1.22 12 Göttingen 94.15
- 56a. O Similar
 R Crab shield divided into two parts; sharply bent, large legs
 1.50 Lindgren Coll. 674
57. O Similar, but without knot in drapery
 R --]ΠΑΣ; similar, but no visible club
 1.48 12 Göttingen 94.4
58. O Curly hair locks in forehead
 R π]ΑΥ[σ]ΑΝ; small crab with round shield
 1.04 12 London 34
59. O [corroded]
 R ΑΝ[θ]Ε]Σ; crab has larger, more irregular shield; club
 1.43 12 Göttingen 88.8

- 59a. O Similar
R Similar
1.66 1 Oxford 9
60. O Larger head with flat folds in drapery
R --]XIAA; claws turned inwards; no visible club
2.05 12 Göttingen 84.20
61. O Similar
R [δστ—]; crab has more angular shield
2.28 12 Göttingen 92.18
62. O Similar
R [λ-υσ—]; similar
1.47 12 Göttingen 87.6
63. O Similar
R --]AΩN; similar to 58
1.28 12 London 39
64. O [corroded]
R --κε]OΣ; similar
1.01 12 Berlin (Priene-hoard [sjekk!])
65. O Sharper folds in drapery
R [—τᾱ—]; similar
1.12 12 Göttingen 89.2
66. O Similar
R [--α—ι]; crab has broader shield divided into two parts
1.75 12 Göttingen 87.5
67. O Similar
R --]PA[--; similar
1.69 12 Berlin (Fox Coll.)
68. O (as above)
R --σ]AIF[—]T; (as above)
1.61 7 Cambridge (General Coll., C.M. 166/1964)
69. O Similar
R [---λ--]; similar
1.31 12 Vienna 18508
70. O Similar
R [-α—τ-]; crab has smaller shield; no club
2.43 12 Göttingen 86.8
71. O Drapery hangs straight down to shoulder
R [--α--]; crab has smaller, more circular shield; no club
1.33 12 Göttingen 94.2
72. O Drapery pulled to the front of neck
R ---τ]K[--; similar
1.43 6 Göttingen 88.5
73. O Similar
R [—ω—]; crab has more oval shield; no club
1.55 12 Göttingen 94.7

74. O Drapery hangs straight down to shoulder
R $\pi\text{I}\Sigma[\text{t}--]$; club
0.97 1 Paris 1278 (Waddington 2746)
75. O [corroded]
R $\delta\lambda\text{E}\text{I}\Omega[-]$; crab has heart-shaped shield; no club
1.69 12 Athen 5667h
76. O Numerous folds in drapery; large, circular hair locks in forehead
R $\delta\text{t}\text{I}\text{M}\text{H}[-]$; large crab with square shield and large claws; no club
- - Dresden 3978
77. O Similar
R $[\theta\upsilon--\text{t}\mu\alpha-]$; similar
1.64 12 Göttingen 84.19
78. O Similar
R $[\text{o}-\rho\text{t}--\sigma-]$; similar
- - KM 28 (1985), 63
79. O Similar
R $[-\sigma\tau--]$; crab has broader shield
1.29 6 Göttingen 89.3
80. O Drapery hangs straight down to shoulder
R $[-\text{v}-\sigma\text{o}-]$; smaller crab with more circular shield
1.94 12 Göttingen 94.6
81. O Similar
R $[-\text{t}\varepsilon--]$; larger shield; club
1.63 12 Göttingen 87.9
82. O Smaller head and delicate facial features
R $[-\text{t}\sigma--]$; crab has smaller shield; no club
1.37 12 Göttingen 95.4
83. O Larger head; numerous folds in drapery
R $--\text{I}\text{P}\text{A}[-]$; crab has a more angular shield
1.70 12 Berlin 9895
84. O Smaller head with fewer folds in drapery
R Crab has irregular shield; club
1.20 12 Göttingen 94.8
85. O Similar; border of dots
R Crab has rounder shield; large claws
1.58 12 Göttingen 94.9
86. O Similar; no border of dots
R Similar; club
1.16 12 Göttingen 94.12
87. O Large eye
R Smaller claws
0.98 12 Göttingen 84.5
88. O Similar
R Similar; club
1.17 12 Göttingen 90.9

89. O Larger hair locks in forehead
R Similar
0.98 6 Göttingen 88.10
90. O Few, roughly cut folds in drapery
R Similar
1.21 12 London 41
91. O Shallow folds in drapery
R Smaller crab; no club
1.51 12 Leiden 6208
92. O Similar
R Crab has straight legs
1.52 12 London 40
93. O Similar
R Crab has bent legs
1.31 12 Berlin (Ross Coll.)
94. O Few and flat folds in drapery
R Similar; club
1.29 12 Göttingen 89.8
95. O Similar; border of dots
R Similar; club
1.30 12 Göttingen 87.13
96. O Similar
R Similar; club
1.21 12 Berlin (v. Rauch 1853)
97. O Larger face
R Crab has broader shield; club
0.97 12 Göttingen 87.16
98. O Smaller face; drapery tied in knot at the neck(?)
R Crab has rounder shield; club
1.41 12 Göttingen 84.9
99. O Similar
R Similar
1.38 12 Göttingen 84.14
100. O Similar
R Crab has larger shield; club
1.97 12 Göttingen 92.20
101. O [corroded]
R Crab has rounder shield; club
1.19 12 Göttingen 86.18
102. O Small head; drapery tied in knot at the neck(?)
R Angular shield; club
1.37 12 Berlin (Imhoof-Blumer Coll.)
103. O [corroded]
R Large crab with broader shield; no club
1.26 12 Göttingen 87.1

104.	O	Stylized folds in drapery; large, round hair locks in forehead		
	R	Small crab; no club		
		2.06	I2	Göttingen 92.17
105.	O	Small head; no visible hair locks in forehead		
	R	Larger crab; club		
		1.57	I2	Göttingen 92.19
106.	O	Flat folds in drapery; naturalistic hair locks in forehead and at temple		
	R	Similar		
		1.70	I	Oxford 10
107.	O	Small face		
	R	Smaller crab; no club		
		1.60	I	Zurich AG 911/39
108.	O	Larger head with drapery hanging straight down to shoulder		
	R	Crab has round shield; no club		
		1.03	I2	Göttingen 88.6
109.	O	Drapery is pulled to front of neck; border of dots		
	R	Crab has broader, angular shield; club		
		1.49	I2	Berlin (Löbbecke Coll.)
110.	O	Flat folds in drapery; no visible hair locks		
	R	Similar		
		1.54	I2	Göttingen 87.8
111.	O	Large, round hair locks in forehead		
	R	Crab has small, irregular shield		
		1.43	I2	Göttingen 88.12
112.	O	Similar		
	R	Similar		
		0.99	I2	Göttingen 90.12
113.	O	Similar		
	R	Similar [corroded]		
		1.66	I2	Göttingen 94.13
114.	O	[corroded]		
	R	Crab has larger and broader shield and clearly marked eyes		
		1.50	I2	Göttingen 82.20
115.	O	Similar to 111		
	R	Similar		
		1.66	I2	Berlin (Löbbecke Coll.)
116.	O	(as above)		
	R	(as above)		
		-		Kos
117.	O	(as above)		
	R	(as above)		
		-		Kos
118.	O	(as above)		
	R	(as above)		
		-		Kos
119.	O	(as above)		
	R	(as above)		
		-		Kos

120.	O	(as above)	
	R	(as above)	
		-	Kos
121.	O	(as above)	
	R	(as above)	
		-	Kos
122.	O	(as above)	
	R	(as above)	
		-	Kos
123.	O	(as above)	
	R	(as above)	
		-	Kos
124.	O	(as above)	
	R	(as above)	
		-	Kos
125.	O	(as above)	
	R	(as above)	
		-	Kos
126.	O	(as above)	
	R	(as above)	
		-	Kos
127.	O	(as above)	
	R	(as above)	
		-	Kos
128.	O	(as above)	
	R	(as above)	
		-	Kos
129.	O	(as above)	
	R	(as above)	
		-	Kos
130.	O	(as above)	
	R	(as above)	
		-	Kos
131.	O	(as above)	
	R	(as above)	
		-	Kos
132.	O	(as above)	
	R	(as above)	
		-	Kos
133.	O	(as above)	
	R	(as above)	
		-	Kos
134.	O	(as above)	
	R	(as above)	
		-	Kos

Type 2 *obv.* Draped female head
rev. Crab; club; ΚΩΙ

135.	O	Flat fold in drapery; drapery is stretched backwards from the ear to the back of the shoulder; knot in neck	
	R	crab is small with circular shield and claws stretched upwards; club	
		1.00 12	Berlin (Imhoof-Blumer Coll.)
136.	O	Similar	
	R	Similar	
		1.31 12	Paris 1268

- | | | | |
|------|---|---|--------------------|
| 137. | O | Similar | |
| | R | Crab has broader shield and claws turned more inwards | |
| | | 1.05 | 6 Göttingen 91.16 |
| 138. | O | Similar | |
| | R | Similar | |
| | | 1.44 | 12 Göttingen 84.18 |
| 139. | O | [corroded] | |
| | R | Crab has rounder shield | |
| | | 0.98 | 6 Göttingen 98.19 |
| 140. | O | Drapery is pulled to front of neck; knot is higher up at back of head | |
| | R | Similar | |
| | | 1.48 | 12 Berlin 508/1898 |
| 141. | O | Similar, but knot at the neck(?) | |
| | R | Crab has oval shield; club | |
| | | 1.08 | 12 Göttingen 94.10 |
| 142. | O | Similar | |
| | R | Crab has smaller shield | |
| | | 1.25 | 12 Göttingen 88.11 |
| 143. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |
| 144. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |
| 145. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |
| 146. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |
| 147. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |

XVIII. ISSUE Period of minting: c.250-00
Æ

No. of coins: 104
Weights: 0.73 – 1.97

Type 1 *obv.* Beardless Heracles facing l. or r.

rev. Crab; beneath, club; above crab, ΚΩΙΟΝ; beneath club, personal name

συ]ΜΜΑΧΟΣ

1. O Heracles facing r.; small nose and mouth; protruding eyebrow; well-rounded cheek; two rows of short, claw-like locks in mane
R Large, irregular crab shield; detailed claws; slender club with knobs
1.30 11 Göttingen 96.18

ΗΡΑΓΟ

2. O [corroded]
R Smaller, oval crab shield; bent legs; small club
1.05 12 Athen 38

ΔΙΑΓ

3. O Heracles facing r.; small face; well-rounded cheek; small lion's scalp
R Small, almost circular crab shield; small club with knobs
1.08 12 Göttingen 91.20
4. O Similar, but slightly uneven placing of eye
R Similar
0.86 6 Göttingen 86.14

ΓΟΠ[τ

5. O Heracles facing l.; Small face; lion's scalp is fastened under chin; irregular locks in mane
R Small, circular crab shield; small claws; thick club with knobs
1.22 6 Berlin 98 (Imhoof-Blumer Coll.)

Personal name obliterated:

6. O Heracles facing r.; small face; single row of irregular locks in mane
R Small crab shield; thin legs; small claws; small club
1.11 7 Paris, Delepierre 16 (not in SNG)
7. O Similar, but larger lion's scalp
R Crab has larger shield which tapers towards lower part; short legs; large claws; club with knobs
1.29 1 Paris 1264
8. O Heracles facing r. [corroded]
R EY[---; similar
1.20 7 Oxford 31. Ex Sotheby's 17.6.08, 470
9. O Heracles facing l.; larger face(?) [corroded]
R Similar
1.42 5 Göttingen 84.10
10. O Heracles facing r.; two rows of stylized locks in mane
R --]NO[--; similar, but long, slender club with knobs
1.51 1 Brussels [no.]

11. O Heracles facing l.; small head; large lion's scalp
 R ---]Σ[--; oval crab shield; shorter club
 1.00 12 Athen 37
12. O Heracles facing l.; small nose and mouth
 R Round, small crab shield; slender club; thin claws
 1.08 6 SNG Keckman 292
- 12a. O [damaged by corrosion]
 R Heart-shaped crab shield; small club
 1.75 - SNG Keckman 291

Type 2 *obv.* As type 1
rev. As type 1, but without club

μ]ΟΣΧΙΩ[v

13. O Small face; protruding chin; irregular locks in mane
 R Small crab with relatively large claws
 0.93 12 Göttingen 82.16
14. O (as above)
 R (as above)
 - Kos

ΤΕΙΣΙΑΣ

15. O Heracles facing l.
 R Small crab; claws bent towards each other
 0.98 10 Göttingen 91.13

σ]ΤΕΦΑΝΟ[ς

- 15a. O Heracles facing l.; pointed nose; small chin; claw-like locks in mane
 R Large crab; large eyes; thick legs with joints clearly marked; small claws
 1.07 10 SNG Keckman 290

ΝΙΚΑΓΟΡΑΣ

16. O Heracles facing r.; lion's scalp fastened under chin; stylized locks in mane
 R Small crab; almost circular shield; eyes of crab is distinctly rendered
 0.99 1 Munich 19523
17. O Similar
 R Larger crab; irregular shield, long claws
 1.05 7 Munich [no.?)

ΘΕΥΤΙΜΙΔΑ[ς

18. O Heracles facing r.; straight profile; two rows of stylized locks in mane
 R Angular crab shield; long, slender, straight legs; claws held upright
 0.85 - H.J. Knopek 17 (1981), 178
19. O Similar
 R Similar
 1.07 12 Berlin 28778

-]PXIΩ[-

20. O (as above)
R (as above)
- Kos

Personal name obliterated:

21. O Heracles facing r. [corroded]
R Small crab; thin legs; small claws
1.13 12 Göttingen 87.19
22. O Heracles facing r. [corroded]
R Larger, irregular crab shield; small claws
0.81 6 Göttingen 87.4

Type 3 *obv.* As type 2
rev. As type 2, but with ethnikon ΚΩΙ

MEΔΩN

23. O Heracles facing r.; small nose and mouth
R Small claws
1.11 6 Berlin 99 (Imhoof-Blumer Coll.)
24. O Similar
R Triangular crab shield; long legs
0.73 7 Oxford 32. Ex Peckitt Coll. 219
25. O Similar, but smaller lion's scalp(?)
R Similar to 1
1.31 6 Copenhagen 648

ΘE[-

26. O Heracles facing r.; lion's scalp fastened under chin; irregular locks in mane
R Angular crab shield; long legs with clearly marked joints
1.12 6 Oslo 14. Ex MünzZentrum 96 (1998), 151

KAEYXI

27. O Heracles facing r.; large nose; stylized locks in mane; lion's scalp fastened under chin
R Large, oval crab shield; thin claws
- Ritter 32 (1991), 296
28. O Similar
R Similar
1.25 - MünzZentrum 96 (1998), 152
29. O Heracles facing r.; smaller face and nose; lion's scalp fastened under chin
R Smaller, irregular crab shield; claws held upright and close together
1.31 6 Copenhagen 646
30. O Similar
R Similar
1.39 6 Copenhagen 647
31. O Similar
R Similar
1.09 6 Berlin 63 (5646/1954)

32. O Similar
 R Similar, but larger, angular crab shield
 1.13 6 Paris 1279 (Waddington 2744)

ΠΥΠΙ

33. O Similar
 R Similar
 0.94 1 New York 117.425
- 33a. O Similar
 R Similar, but more oval crab shield
 1.03 12 SNG Leipzig 1238
- 33b. O Similar
 R Similar
 1.49 SNG v. Aulock 2755

Personal name obliterated:

34. O Similar
 R -o]MP[--; similar
 1.02 11 Göttingen 82.9
35. O Similar, but longer nose(?)
 R X[α[--; larger crab shield; shorter, more bent legs ; larger distance between claws
 1.14 9 Leiden 6211
36. O Heracles facing l.; well-rounded cheek
 R ---]ΠΠ[--; oval crab shield; thick legs
 1.69 6 Göttingen 79.14
37. O Heracles facing l.; smaller face(?)
 R Similar
 1.07 - Müller 31 (1981), 108
38. O Similar
 R Similar
 1.24 7 New York 1984.66.296

Type 4 *obv.* As type 3, but Heracles only facing r.
rev. As type 3, but unidentified additional symbol between claws

ΘAYMI

39. O Small mouth; small, stylized locks in mane; lion's scalp fastened under chin
 R Almost circular crab shield; detailed legs with joints marked; long, slender claws
 1.25 6 Leiden (v.Redde 2712)
40. O Similar
 R Similar
 1.25 6 New York 48478. Ex Newell (WR sale) 26.11.1934, 159
41. O Similar
 R Similar
 1.51 6 London 102

42. O Similar
R Similar
1.55 6 Vienna 18.507
43. O Similar
R [name partly obliterated]; similar
1.17 7 New York 48477

HPOΔ

44. O Leaner facial features(?)
R Larger, irregular crab shield; shorter legs
1.21 7 Paris 1265

Personal name obliterated:

45. O Larger face
R Smaller shield o crab; straight, stylized, slender legs
1.35 6 Göttingen 91.19
46. O Similar to 5(?)
R Similar to 5(?)
1.44 6 Göttingen 91.12
47. O Similar
R Similar
1.49 7 Oslo 15

Type 5 *obv.* As type 4, but Heracles facing l. and r.
rev. As type 4, but without additional symbol and personal name

48. O Heracles facing r. [corroded]
R Large, irregular crab shield
1.41 12 Göttingen 84.17
49. O Similar [corroded]
R Similar
1.74 12 Göttingen 84.4
50. O Heracles facing r.; small nose and low forehead; small lion's scalp
R Similar, but shorter club
1.36 - NF Schulten, 10.1995, 106
51. O Similar
R Similar, but longer, more slender club
1.07 1 Oxford 33
52. O Heracles facing r.; smaller face; slightly smiling mouth
R Similar, but slightly smaller club
1.24 12 Göttingen 92.6
53. O Heracles facing r.; smaller face
R Similar, but shorter and thicker club
1.33 6 Göttingen 86.15
54. O Similar [corroded]
R Similar, but longer, more slender club with knobs
1.07 12 Göttingen 86.9

55. O Similar
R Similar
1.54 11 Göttingen 87.17
56. O Heracles facing r.; larger face; longer, straight nose
R Similar
1.14 7 Athen 42
57. O Heracles facing r.; smaller face(?) [corroded]
R Similar, but ethnikon above claws(?)
1.04 12 Göttingen 79.17
58. O Similar(?)
R Similar(?)
1.18 6 Göttingen 91.18
59. O Heracles facing l.; large head
R Large, irregular crab shield; bent legs; large claws
1.84 6 Göttingen 92.8
60. O Similar; short, very small locks in mane
R Similar
1.40 5 Göttingen 80.16

Type 6 *obv.* As type 5

rev. As type 5, but ethnikon (ΚΩΙ/ΚΩΙΟΝ) beneath crab

61. O Heracles facing l.; lean face with long nose and small chin; lion's scalp fastened under chin
R ΚΩΙ; triangular crab shield; legs bent downwards
1.26 12 Berlin 103 (455/1901)
62. O Similar
R Similar, but larger crab shield
1.71 11 Göttingen 85.10
63. O Heracles facing r.; large face; locks of hair along forehead and temple
R ΚΩΙΟΝ; small, irregular crab shield; long, straight legs
- Göttingen 108.4

Type 7 *obv.* As type 6

rev. As type 6, but no ethnikon

64. O Heracles facing l.; Small mouth; protruding eyebrow/forehead; stylized, sharp locks in mane; lion's scalp fastened under chin
R Large crab; detailed legs and claws; large club with knobs
1.38 7 Vienna 33.377
65. O Similar
R Similar, but smaller club
1.56 12 Göttingen 90.2
66. O Similar
R Smaller, triangular crab shield; larger club with knobs
1.19 6 London 99a (not in *BMC*). Ex hoard 27 (*IGCH* 1320)
67. O Similar
R Similar [corroded]
1.10 6 Göttingen 91.14

68. O Heracles facing l.(?); [corroded]
R Larger crab shield
1.67 6 Göttingen 91.17
69. O Similar to 4
R Similar
1.23 6 Göttingen 92.11
70. O Heracles facing l.; long nose; fold in lion's scalp(?) at side and front of neck
R Large crab; irregular shield tapering towards lower part; small, slender club
1.33 6 Göttingen 80.4
71. O Heracles facing l.; lion's scalp fastened under chin
R Similar
1.44 5 Göttingen 86.1
72. O Heracles facing l.; small face with delicate facial features; few, short locks in mane;
lion's scalp fastened under chin
R Large, irregular crab shield; small club; long claws
1.40 - Stockholm
73. O [corroded]
R Similar
1.25 6 Göttingen 93.20
74. O Heracles facing r.; small face and head
R Small crab; long, thin, stylized legs
0.97 6 Göttingen 94.11

Type 8 *obv.* As type 7, but only facing l.

rev. As type 6, but *gorytos* instead of club

75. O Long nose; straight profile; small chin; symmetrical locks in mane; lion's scalp fastened
underchin
R Large crab; detailed crab shield; long legs bent downwards; small, short club
1.59 - SNG v.Aulock 8173
76. O Similar
R Smaller and rounder crab shield; shorter legs
1.35 7 Berlin 101 (7480)
77. O Similar, but shorter nose
R Similar (ethnikon obliterated)
- Künker, list 105 (1993), 77
78. O [corroded]
R Similar (ethnikon obliterated)
1.97 7 New York 48479
79. O Similar to 3
R Similar (ethnikon obliterated)
1.63 6 Göttingen 85.16
80. O Similar [corroded]
R Smaller crab; shorter, sharply bent legs; ΚΩΙ
1.57 12 Göttingen 82.19

Type ? *obv.* Beardless Heracles facing l. or r.

rev. Crab; additional symbols and/or inscriptions are non-existent or obliterated

- | | | | |
|-----|---|---|--|
| 81. | O | Heracles facing l.; large, irregular locks in mane | |
| | R | Small crab; small claws | |
| | | 1.26 | 12 Oxford 8 |
| 82. | O | Heracles facing r.; small, straight nose; well-rounded chin; lion's scalp fastened under chin | |
| | R | Irregular crab shield; shield tapers towards lower part; detailed legs and claws with joints clearly marked; long claws | |
| | | 1.32 | 12 London 100a (not in <i>BMC</i>). Ex hoard 27 (<i>IGCH</i> 1320) |
| 83. | O | Heracles facing l. [corroded] | |
| | R | Large, round crab shield; short legs bent downwards | |
| | | 1.59 | - Göttingen 90.10 |
| 84. | O | Heracles facing r.; small face; small, stylized locks in mane | |
| | R | Long claws; large eyes on crab [corroded] | |
| | | 1.48 | 12 Göttingen 90.8 |
| 85. | O | Similar | |
| | R | Large crab shield(?) [corroded] | |
| | | 1.33 | 6 Göttingen 91.15 |
| 86. | O | Heracles facing r. [corroded] | |
| | R | Small crab shield; legs bent downwards | |
| | | 1.65 | 6 Göttingen 94.5 |
| 87. | O | [corroded] | |
| | R | Round crab shield; straight legs; small claws | |
| | | 1.40 | 12 Göttingen 88.3 |
| 88. | O | Heracles facing r.; small face | |
| | R | Small crab; small round shield; small, thin legs; upright claws; large eyes | |
| | | 1.14 | 6 Göttingen 88.7 |
| 89. | O | Heracles facing r.; lion's scalp fastened under chin [corroded] | |
| | R | Larger crab shield; larger and longer claws | |
| | | 1.07 | 6 Göttingen 85.18 |
| 90. | O | Heracles facing l.; large head; straight profile; small, sharp locks in mane | |
| | R | Round crab shield [corroded] | |
| | | 1.60 | 6 Berlin 94 (9898) |
| 91. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |
| 92. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |
| 93. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |
| 94. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |
| 95. | O | (as above) | |
| | R | (as above) | |
| | | - | Kos |

96.	O	(as above)	
	R	(as above)	
		-	Kos
97.	O	(as above)	
	R	(as above)	
		-	Kos
98.	O	(as above)	
	R	(as above)	
		-	Kos
99.	O	(as above)	
	R	(as above)	
		-	Kos
100.	O	(as above)	
	R	(as above)	
		-	Kos

XIX. ISSUE Period of minting: c.210-180
 Æ

No. of coins: 287
 Weights: (1.35/2.02) 2.18-5.15

Type 1 *obv.* Beardless Heracles $\frac{3}{4}$ facing; detailed mouding; realistic well-proportioned facial features
rev. *Gorytos*; club; ΚΩΙΟΝ; personal name

ΦΙΛΙΝΟΣ

- | | | |
|-----|---|---|
| 1. | O | Well-rounded face with small mouth; head is turned slightly upwards; lion's scalp is fastened under chin |
| | R | Large club with clearly rendered knobs; end of bow is bent backwards to make almost a circle; linear pattern on <i>gorytos</i>
3.26 6 Winterthur 3618 |
| 2. | O | Similar |
| | R | Similar
3.84 12 Göttingen 97.6 |
| 3. | O | Similar |
| | R | Similar
2.68 12 London 110 |
| 4. | O | Similar |
| | R | Smaller club; no visible pattern on <i>gorytos</i>
3.79 12 Göttingen 98.4 |
| 5. | O | Similar |
| | R | Smaller <i>gorytos</i>
3.40 1 London 109 |
| 6. | O | Similar |
| | R | Similar
3.20 6 Oslo 16 |
| 7. | O | Similar |
| | R | [corroded]; countermark: crab
3.44 12 Göttingen 99.4 |
| 8. | O | [corroded] |
| | R | Similar
3.07 1 Oslo 17 |
| 9. | O | [corroded] |
| | R | [corroded]; countermark: crab
3.40 12 Göttingen 101.14 |
| 10. | O | Similar to 6 |
| | R | Similar to 6; countermark(?)
4.88 12 Göttingen 107.9 |
| 11. | O | Similar |
| | R | Similar; countermark: crab
3.19 12 Oxford 50 |
| 12. | O | Similar |
| | R | Larger club with clearly rendered knobs
4.67 11 Göttingen 106.15 |

13. O (as above)
R (as above)
- Kos

ΤΗΛΗΣΦΟΡΟ[ς

14. O Small face; assymetric position of r. eye
R Triangular *gorytos* with a horisontal line on top; thick club
3.68 12 Göttingen 101.4
15. O Similar
R Similar
- - Athen. Ex hoard 25
16. O Similar
R End of *gorytos* is rounded; thinner club with knobs; countermark: crab
4.02 12 Göttingen 102.2

ΠΡΑΞΙΑΝΑΞ

17. O Well-rounded face with small mouth; lion's scalp has a stylized edge from top to chin; eye-brows are drawn together creating a 'worried' expression
R Large club with distinctly rendered knobs
4.16 12 London 108a (not in *BMC*)
18. O Similar, but no visible edge on lion's scalp
R Similar, but no visible knobs on club
3.70 12 Göttingen 105.3
19. O Lion's scalp is pulled further back from temple and ear
R Similar to 14
3.80 12 Copenhagen 655
20. O Similar
R Similar
4.14 12 Göttingen 106.11
21. O Similar
R *Gorytos* is slender
3.40 12 Göttingen 108.1
22. O Similar [corroded]
R Similar; countermark: crab
3.36 12 Göttingen 105.9
23. O (as above)
R (as above)
3.69 12 Ashton Coll. Ex hoard 25 (*NC* 1996, hoard 91)
24. O (as above)
R (as above)
3.78 3 Ashton Coll. Ex hoard 25 (*NC* 1996, hoard 91)
25. O (as above)
R (as above)
3.77 Ashton Coll. Ex hoard 25 (*NC* 1996, hoard 91)
26. O (as above)
R (as above)
3.94 Ashton Coll. Ex hoard 25 (*NC* 1996, hoard 91)

27. O (as above)
R (as above)
- Kos
28. O (as above)
R (as above)
- Kos; ex hoard 34

ΑΡΧΩΝ

29. O [corroded]
R Long, slender club; broad section near top of *gorytos*; few details on bow
2.52 - Göttingen 107.15
30. O Small face with thinner chin and cheek; small mouth; lion's scalp is close to temple and forehead
R Similar
3.51 7 Göttingen 98.1
31. O Similar
R Similar; countermark: crab
3.56 6 Oxford 46
32. O Similar
R Smaller and slender *gorytos*; no broad section near top of *gorytos*
3.58 7 Göttingen 103.4
33. O Similar
R Similar
4.26 7 London 103
34. O Similar
R Thicker club with knobs; large letters
2.77 7 Göttingen 104.9
35. O Similar
R Club is slender without knobs; more triangular *gorytos*
4.22 6 Göttingen 109.6
36. O Similar
R Similar
2.83 6 Göttingen 101.1

ΠΑΡΜΕΝΙΣΚΟΣ

37. O Stylized facial features, with protruding eyebrows, large nose and small mouth; small lion's scalp
R Triangular *gorytos*; club with knobs; small letters
3.56 1 London 108
38. O Similar
R Similar; countermark: crab
2.61 12 Göttingen 103.8
39. O Similar
R Similar
3.02 12 Göttingen 99.15

40. O Similar [corroded]
R Similar; countermark: crab
2.68 12 Göttingen 99.18
41. O Less stylized facial features; well-proportioned eye-brows, nose, chin and cheek; line in lion's scalp in forehead
R *Gorytos* is more oval; club with knobs
3.60 12 Göttingen 104.5
42. O Similar
R Similar
4.96 12 Oxford 49
43. O (as above)
R (as above)
2.76 - Ashton Coll. Ex hoard 25 (NC 1996, hoard 91)
44. O (as above)
R (as above)
4.16 - Ashton Coll. Ex hoard 25 (NC 1996, hoard 91)

ΠΡΑΤΑΓΟΡΑΣ

45. O Head is turned more to r.; lion's scalp is fastened under chin
R Triangular *gorytos*; club with knobs
3.98 1 London 108b (not in *BMC*)
46. O Similar
R Similar
2.88 12 Göttingen 100.19
47. O Small distance between eyes; row of dots beneath lion's scalp in forehead (lion's teeth?)
R Similar
3.36 12 Göttingen 106.9
48. O Similar, but fuller cheek
R Similar
3.67 12 Göttingen 101.9
49. O Similar, but lion's scalp is clearly visible on r. side of head
R Similar
3.98 - Athen 149
50. O Similar
R Border of dots along upper edge of *gorytos*
3.82 12 Oxford 51
51. O (as above)
R (as above); countermark: crab
3.08 - Ashton Coll. Ex hoard 25 (NC 1996, hoard 91)
52. O (as above)
R (as above)
- Kos

ΘΕΥΔΟΤΟΣ

53. O Head almost en face; row of dots beneath lion's scalp in forehead (lion's teeth?)
R Triangular *gorytos*; club with knobs; countermark: crab
3.94 1 London 103b (not in *BMC*)

54. O Similar, but no visible dots in forehead
R Similar
2.85 11 London 104
55. O Similar
R Similar; countermark: crab
3.71 12 London 103a (not in *BMC*)
56. O Head turned more to r.; lion's scalp is fastened under chin
R Similar
3.22 12 Göttingen 99.8
57. O Similar
R Similar; countermark: *gorytos*
3.40 - Athen 5667
58. O Similar
R Similar, but no visible knobs on club; countermark: crab
2.72 12 Göttingen 99.3
59. O Smaller face; thinner cheek and chin; eyes are marked with dots which creates a staring
look; lion's scalp on top of head is shaped almost like an anastola
R Tip of *gorytos* is bent upwards; countermark: crab
4.14 12 Göttingen 99.2
60. O Similar
R Similar
- Göttingen 97.14
61. O Well-rounded facial features; faint smile
R Similar to 53
2.83 12 Göttingen 99.1

ΕΥΦΙΛΗΤΟΣ

62. O Thin cheek; lion's scalp is visible on r. side of head
R Large *gorytos*; club with knobs
3.66 11 Göttingen 97.7
63. O Similar
R Smaller *gorytos*; longer club
3.33 6 London 106
64. O Similar
R Similar; countermark: crab
3.82 5 Göttingen 98.10
65. O Similar [corroded]
R Larger triangular *gorytos*; club with knobs
2.72 11 Göttingen 82.4
66. O Head turned more to r.; U-shaped edge on lion's scalp beneath ear
R Similar
3.50 - Athen 5667
67. O Similar [corroded]
R [corroded]; countermark: crab
3.32 - Göttingen 97.1

68. O Smaller face; small mouth; eyes, nose and mouth are close together; large lion's scalp;
wavy locks in mane on r. side of head
R Similar
4.17 I London 105
69. O Large face; uneven placing of eyes; row of dots in forehead beneath lion's scalp (teeth?);
one row of symmetrical locks in mane on r. side of head
R Slightly curved *gorytos*; long club
4.16 - Athen 5667

ΛΑΜΠΙΑΣ

70. O Well-rounded facial features; small forehead; lion's scalp is fastened under chin
R Slender *gorytos*; long and slender club without knobs
4.44 7 Stockholm
71. O Similar [corroded]
R Shorter club
3.32 7 Göttingen 97.5
72. O Similar
R More slender bow
2.26 II London 107
73. O Similar
R Slightly curved *gorytos* ornamented with linear pattern
3.23 6 Oxford 48

ΔΙΟΜΕΔΩΝ

74. O Head is turned far r.; row of symmetrical locks in mane
R Slender club; broad *gorytos* with two lines marking the top end; bow is angular;
countermark: crab
5.15 I Athen 56670
75. O Smaller face
R Similar
4.45 I Göttingen 97.8
76. O Similar
R Similar; countermark: crab
4.40 I Athen 5667

Personal name obliterated:

77. O Well-rounded cheek and chin; lion's scalp is fastened under chin
R [--ΑΩ--]; club with knobs; slightly curved *gorytos* ornamented with linear pattern
3.50 I2 Munich 28785
78. O [corroded]
R [δ̄ι---]; triangular *gorytos*; countermark: crab
3.95 I2 Göttingen 97.2
79. O [corroded]
R Similar; countermark: crab
3.20 I2 Göttingen 99.7
80. O Large nose and mouth; curved line beneath chin
R Large club with angular top; countermark: crab
3.59 I2 Göttingen 99.10

81. O Similar
R Smaller club; countermark: crab
3.94 12 Göttingen 99.9
82. O [corroded]
R Large *gorytos* ornamented with linear pattern
3.51 7 Göttingen 101.8
83. O [corroded]
R [corroded]; countermark: crab
2.95 6 Göttingen 100.8
84. O Large face; part of lion's scalp is stretched almost to l. eye
R --]XΩ[--; small *gorytos*; countermark: crab
3.37 6 Göttingen 102.19
85. O Locks on mane on lion's scalp on r. side of head
R Larger *gorytos* [corroded]
3.60 12 Göttingen 105.1
86. O [corroded]
R ---]NOΣ; slender *gorytos*; countermark: crab
3.30 12 Göttingen 102.4
87. O [corroded]; head almost en face
R --]NTI[--; small, triangula *gorytos*; slender club
3.27 6 Göttingen 93.17
88. O [corroded]
R Slender club and *gorytos*; countermark: crab
3.80 12 Göttingen 99.6
89. O [corroded]
R Similar
4.21 12 Göttingen 109.2
90. O [corroded]
R Larger club with knobs; countermark: club
4.31 6 Göttingen 101.12
91. O Small face; lion's scalp is fastened under chin
R -]ΑΠΑΣ[-; similar
2.99 1 Athen 5666
92. O Similar
R [--εϋ--]; large slightly curved *gorytos*; bow has almost angular top
3.66 6 Leiden 6213
93. O Similar
R Similar; countermark: crab
4.38 6 Göttingen 105.17
94. O Similar
R Smaller *gorytos*; countermark: crab
4.39 12 Göttingen 101.19
95. O [corroded]
R Slender *gorytos*; countermark: crab
3.38 12 Göttingen 105.19

96. O Curved line beneath chin
 R Similar; countermark: crab
 3.65 12 Göttingen 103.3
97. O [corroded]
 R Larger club; countermark: club
 3.69 12 Göttingen 111.14

Type 2 *obv.* Beardless Heracles $\frac{3}{4}$ facing; developing towards a crude stylistic rendering of facial features and lion's scalp
rev. *Gorytos*; club; personal name; ΚΩΙΩΝ

ΔΙΟΜΕΔΩΝ (cont.)

98. O Few details in rendering of eyes, nose and mouth; Two curved lines in lion's scalp on the side of head and beneath chin
 R Thick *gorytos* and club; club with knobs; angular top of bow
 - London 159
99. O Curved line in lion's scalp continues to the top on head and down on the r. side of head
 R Similar
 3.00 12 Göttingen 81.11
100. O [corroded]; similar, but partly out of flan
 R Similar, but top of bow is curved with crossing lines
 2.20 6 Göttingen 81.19
101. O [corroded]
 R Club is placed above *gorytos*; *gorytos* ornamented with line pattern(?)
 3.09 12 Milan B287G
102. O (as above)
 R (as above)
 - Ashton Coll.
103. O (as above)
 R (as above)
 - Kos

EYKPA

104. O Broad nose; short, claw-like, symmetrical locks in mane; detailed and delicately shaped eyes and eyebrows
 R Club and *gorytos* are almost identically shaped
 3.06 6 Göttingen 81.3
105. O Similar
 R Similar
 2.55 12 Göttingen 85.11
106. O Similar
 R Similar
 - London 161
107. O Similar
 R Similar
 - London 162

108.	O	(as above)	
	R	(as above)	
	-		Kos
109.	O	(as above)	
	R	(as above)	
	-		Kos; ex hoard 34
110.	O	(as above)	
	R	(as above)	
	-		Kos; ex hoard 34
111.	O	(as above)	
	R	(as above)	
	-		Kos; ex hoard 34
ΑΓΛΑΟΣ			
112.	O	Flat nose; small gap between nose and mouth; protruding eyebrows and forehead; distinctly rendered teeth and snout on lion's scalp	
	R	Club with knobs; triangular end of bow	
		3.37 12	Göttingen 81.2
113.	O	Similar	
	R	Similar	
	-		London 158
114.	O	Similar	
	R	Squarer end of bow	
		3.81 1	London 102a (not in <i>BMC</i>)
115.	O	Similar [corroded]	
	R	Rounded end of bow	
		2.93 7	Oxford 78
116.	O	Lion's scalp forms almost an anastola on top of head; scalp is fastened under chin	
	R	Large club with knobs; triangular <i>gorytos</i>	
		3.63 12	Göttingen 84.11
117.	O	Similar	
	R	Similar	
		3.15 12	Göttingen 83.10
118.	O	Similar	
	R	Similar	
		2.20	Lindgren Coll. 677
119.	O	Similar	
	R	Larger club and <i>gorytos</i>	
		3.07 12	Göttingen 82.8
120.	O	Little space between nose and mouth; two curved lines on lion's scalp from top of head down to cheek	
	R	Smaller <i>gorytos</i> and club; club with knobs	
	-		London 156
121.	O	Similar	
	R	Slender <i>gorytos</i>	
		3.11 5	Milan B2872

122.	O	Similar		
	R	Small triangular <i>gorytos</i>		
		-	Hirsch 106 (1977), 3035	
123.	O	Similar [corroded]		
	R	Slender <i>gorytos</i> ; large club with knobs and angular top		
		3.41 3	Milan C1050	
124.	O	Similar		
	R	Similar		
		3.29 9	Munich 5	
125.	O	Similar		
	R	Slender club and <i>gorytos</i>		
		3.28 12	Göttingen 83.2	
126.	O	Similar		
	R	Triangular <i>gorytos</i> ; slender club		
		3.33 1	Oxford 76. Ex Johnston sale, 47	
127.	O	Similar		
	R	Longer <i>gorytos</i> and club; club with knobs		
		2.40 9	Munich 8	
128.	O	Larger eyes; lion's scalp is fastened under chin		
	R	Small and slender <i>gorytos</i> and club		
		-	London 157	
129.	O	Larger locks in mane; smaller eyes		
	R	Long club and <i>gorytos</i>		
		3.59 1	Göttingen 85.4	
130.	O	Smaller face; lion's scalp is fastened under chin; large part of mane is visible to r. of head		
	R	Similar, but top of bow is more angular		
		3.52 7	Oxford 77	
131.	O	Larger face		
	R	Similar		
		2.97 12	Oslo 18	
132.	O	Curved line of lion's scalp is visible on r. side of head		
	R	Curved inclining lines on top of bow		
		3.70 12	Göttingen 81.13	
133.	O	(as above)		
	R	(as above)		
		3.64	MünzZentrum, Lagerkat. II (1995), 88	
134.	O	(as above)		
	R	(as above)		
		-	Kos	
135.	O	(as above)		
	R	(as above)		
		-	Kos	
136.	O	(as above)		
	R	(as above)		
		-	Kos	
137.	O	(as above)		
	R	(as above)		
		-	Kos; ex hoard 34	

138. O (as above)
R (as above)
- Kos; ex hoard 34

ΑΓΗΣΙΑΣ

139. O Protruding eye-brows; large nose; lion's scalp is visible on r. side of head
R Triangular *gorytos*; little space between *gorytos* and club
2.95 12 Göttingen 83.11

140. O Similar
R Similar, but personal name is above club and *gorytos*
3.08 12 Göttingen 83.12

141. O (as above)
R (as above)
- Kos

ΣΩΠΙΑΤΡΟΣ

142. O Lean face with small chin; assymetrical locks in mane surround head; lion's scalp is fastened under chin
R Club with knobs; broad top on bow
2.48 6 Zurich, Landesmuseum ZB 661

143. O Similar
R Similar
2.97 1 London 108c (not in *BMC*)

144. O Similar
R Personal beneath *gorytos* and club; *gorytos* is placed above club; pattern of crossing lines and dots on *gorytos*
- London 163

145. O (as above)
R (as above)
- Kos; ex hoard 34

146. O (as above)
R (as above)
- Kos; ex hoard 34

147. O (as above)
R (as above)
- Kos; ex hoard 34

ΔΙΟΦΑΝ

148. O Large eyebrows; small chin; lion's scalp is visible on r. side of head; lion's scalp is fastened under chin
R Small, irregular *gorytos*
- London 160

149. O (as above)
R (as above)
- Kos

150. O (as above)
R (as above)
- Kos

151. O (as above)
 R (as above)
 - Kos

Personal name obliterated:

152. O Long face; large nose; shape of l. eye creates a 'sad' facial expression; hollow r. cheek;
 hair locks or lion's scalp forms an anostola on top of head
 R Small and slender club and *gorytos*; broad top of bow
 3.31 9 Munich 61478
153. O Similar
 R Large club with knobs; *gorytos* is ornamented with pattern of dots
 3.92 6 Milan B2873
154. O Well-rounded face; small mouth; small distance between nose and mouth; two curved lines
 on lion's scalp, one of which continues beneath chin
 R Triangular *gorytos* with line at top end
 2.97 12 Göttingen 89.19
155. O Similar
 R Similar
 3.46 12 Göttingen 82.3
156. O Similar
 R Small club with large knobs; slender *gorytos* widening at top end; *gorytos* is ornamented
 with pattern of dots
 2.27 5 Milan B2875
157. O Similar
 R Broad top of bow [corroded]
 3.52 6 Leiden 6214
158. O Similar
 R Similar to 149
 2.94 12 Göttingen 81.12
159. O Similar
 R Angular top of bow; club with knobs
 2.80 12 Oxford 47
160. O Similar [corroded]
 R [corroded]
 3.90 6 Göttingen 102.18
161. O Facial features are more compressed with small nose and mouth; very short distance
 between nose and mouth; one curved line in lion's scalp on side of head; behind the line,
 row of symmetrical locks in mane; mane is visible on r. side of head
 R Triangular *gorytos*; club with knobs
 - London 164
162. O Similar
 R Similar, but club and bow point to opposite sides compared to previous coin
 2.62 12 Göttingen 93.13
163. O Similar
 R Similar
 2.96 12 Göttingen 86.6

164. O Similar
R Similar, but club is placed above *gorytos*
3.07 12 Munich 11
165. O Similar
R Larger club and *gorytos*; club with knobs
2.77 12 Göttingen 82.2
166. O Similar
R Similar
3.46 12 Göttingen 81.8
167. O Small face; small distance between eyes; small mouth; lion's scalp visible on r. side of head
R Small, smooth club; large *gorytos*
2.37 12 Göttingen 81.20
168. O Similar
R Similar
3.64 1 Göttingen 79.6
169. O [corroded]
R Small *gorytos*; large club with knobs
3.56 6 Leiden 6215
170. O Larger face; curved line on lion's scalp at side of head; stylized, rough locks in mane;
lion's scalp is fastened under chin
R Club with knobs
2.82 6 Göttingen 81.7
171. O Similar
R Similar
2.67 12 Göttingen 81.6
172. O Stylistically moulded face; dots mark eyes; curved line marks eyebrows and forehead
R Club with knobs
2.65 1 Athen 5667

Personal name and ethnic obliterated (can be ΚΩΙΟΝ or ΚΩΙΩΝ):

[Most of the specimens in this group are too corroded and/or damaged to make detailed descriptions possible. Distinguished features will as far as possible be noted]

173. O Small nose
R Short distance between club and *gorytos*; club with knobs
2.99 7 Göttingen 98.5
174. O Similar
R Similar
3.16 12 Oslo 19
175. O Larger nose; short distance between nose and mouth
R Triangular *gorytos*
4.03 1 Göttingen 101.5
176. O Similar
R More slender *gorytos*
2.49 11 Göttingen 84.12
177. O Curved line on lion's scalp above forehead and temple
R Angular *gorytos* and club
(1.35) 12 Göttingen 81.16

178. O Hair or lion's scalp forms an anastola on top of head
R Similar
3.08 12 Göttingen 81.10
179. O [corroded]
R Smaller club and *gorytos*
2.35 12(?) Göttingen 78.18
180. O Short nose; small eye
R Slightly curved *gorytos*
2.22 12 Göttingen 73.13
181. O Larger head
R Long club
3.93 12 Göttingen 83.14
182. O Small face; tiny nose; small eyes
R Long and slender club; large, slightly curved *gorytos*
3.54 12 Göttingen 106.20
183. O Similar
R Similar
3.02 11 Göttingen 98.3
184. O Larger face; eyes wide apart
R Small, triangular *gorytos*; very short distance between club and *gorytos*
3.04 12 Göttingen 98.6
185. O Similar
R Similar, but *gorytos* and club is farther apart
2.89 6 Göttingen 102.6
186. O Marked, curved edge from forehead to temple on lion's scalp
R Long club
2.89 3 Milan C1048
187. O Large face; protruding eyebrows and forehead
R [corroded]
2.56 12 Göttingen 83.15
188. O [corroded]
R Small, triangular *gorytos*
2.49 12 Göttingen 85.3
189. O [corroded]
R Triangular *gorytos*; angular club
3.85 12 Göttingen 99.11
190. O Broad nose; short distance between nose and mouth
R Thick end on club
3.07 12 Göttingen 86.16
191. O Protruding eye-brows
R [corroded]
2.56 12 Göttingen 89.18
192. O Similar
R Thick end on club
2.53 9 Göttingen 89.17

193.	O	Similar			
	R	Similar			
		-	-	Athen. Ex hoard 25	
194.	O	Similar			
	R	Similar			
		-	-	Athen. Ex hoard 25	
195.	O	Similar			
	R	Similar			
		-	-	Athen. Ex. hoard 25	
196.	O	Smaller face; lion's scalp is fastened under chin; large snout on lion's scalp on top of head			
	R	[corroded]			
		2.80	-	Göttingen 101.18	
197.	O	[corroded]			
	R	Long, slender club; countermark: crab			
		3.55	12	Göttingen 104.11	
198.	O	Large face; full cheek; small mouth			
	R	[corroded]; countermark: crab			
		3.77	12	Göttingen 104.12	
199.	O	Similar			
	R	Slender club; countermark: crab			
		2.94	6	Göttingen 105.5	
200.	O	[corroded]			
	R	[corroded]; countermark: crab			
		(2.02)	11	Göttingen 100.5	
201.	O	[corroded]			
	R	[corroded]; countermark: crab			
		3.00	-	Göttingen 100.2	
202.	O	Large face			
	R	Slender club and <i>gorytos</i> ; countermark: crab			
		3.49	12	Göttingen 105.18	
203.	O	Smaller face; lion's scalp is fastened under chin			
	R	Long and slender club with knobs; countermark: crab			
		3.33	-	Athen (main Coll. 46)	
204.	O	[corroded]			
	R	[corroded]; countermark: crab			
		3.80	-	Göttingen 100.3	
205.	O	[corroded]			
	R	[corroded]; countermark: crab			
		3.83	-	Göttingen 106.16	
206.	O	Smaller face with short distance between eyes			
	R	Small <i>gorytos</i> ; countermark: crab			
		3.65	12	Göttingen 101.20	
207.	O	Similar			
	R	Similar; countermark: crab			
		2.84	12	Göttingen 104.15	

208. O [corroded]
R [corroded]; countermark: crab
2.94 12 Göttingen 97.3
209. O [corroded]
R Slender club; triangular *gorytos*; countermark: crab
3.41 12 Göttingen 97.4
210. O [corroded]
R Slender club; large and broad *gorytos*; countermark: crab
3.98 2 Göttingen 106.13
211. O [corroded]
R [corroded]; countermark: crab
3.07 5 Oslo 20
212. O [corroded]
R Slender club; countermark: crab
3.26 12 Göttingen 105.13
213. O [corroded]
R Small club and *gorytos*; short distance between club and *gorytos*; countermark: crab
3.28 - Göttingen 100.6
214. O [corroded]
R Longer club; countermark: crab
3.48 12 Göttingen 100.1
215. O [corroded]
R Slender *gorytos*; countermark: crab
3.10 12 Göttingen 109.7
216. O [corroded]
R [corroded]; countermark: *gorytos*
3.78 - Göttingen 101.2
217. O [corroded]
R [corroded]; countermark: crab
3.31 12 Göttingen 99.17
218. O [corroded]
R [corroded]; countermark: crab
3.59 12 Göttingen 99.13
219. O Small eyes, nose and mouth; well-rounded cheek and chin
R [corroded]; countermark: crab
3.23 12 Göttingen 98.16
220. O Similar
R [corroded]; countermark: crab
3.73 - Athen (main Coll. 41)
221. O [corroded]
R [corroded]; countermark: crab
3.10 6 Göttingen 100.4
222. O [corroded]
R [corroded]; countermark: crab
3.30 6 Göttingen 101.17

223.	O	[corroded]		
	R	[corroded]; countermark: crab. Overstrike(?)		
		3.70 2	Göttingen	79.13
224.	O	Small eyes, nose and mouth; head slightly turned upwards		
	R	Countermark: crab		
		2.18 6	Göttingen	102.3
225.	O	[corroded]		
	R	[corroded]; countermark: crab		
		3.54 12	Göttingen	100.20
226.	O	[corroded]		
	R	Long and slender club; slender <i>gorytos</i> ; countermark: crab		
		3.39 6	Göttingen	107.11
227.	O	Small face and lion's scalp		
	R	Short club; broad <i>gorytos</i> ; countermark: crab		
		2.83 -	Göttingen	100.17
228.	O	[corroded]		
	R	Thick club; countermark: crab		
		3.69 12	Göttingen	100.18
229.	O	Larger face		
	R	Thick club; countermark: crab		
		3.08 12	Göttingen	99.5
230.	O	[corroded]		
	R	Countermark: crab		
		4.65 12	Göttingen	105.10
231.	O	[corroded]		
	R	Triangular <i>gorytos</i> ; countermark: crab		
		3.82 12	Göttingen	100.7
232.	O	[corroded]		
	R	Similar; countermark: crab		
		2.98 12	Göttingen	106.10
233.	O	Large face; broad nose; lion's scalp is fastened under chin		
	R	Thick club; countermark: crab		
		3.01 1	Göttingen	107.10
234.	O	[corroded]		
	R	Long, slender club; countermark: crab		
		3.75 12	Göttingen	103.2
235.	O	[corroded]		
	R	[corroded]; countermark: crab		
		3.22 12	Oslo	21
236.	O	(as above)		
	R	(as above)		
		-	Kos	
237.	O	(as above)		
	R	(as above)		
		-	Kos	

238.	O	(as above)	
	R	(as above)	
		-	Kos
239.	O	(as above)	
	R	(as above)	
		-	Kos
240.	O	(as above)	
	R	(as above)	
		-	Kos
241.	O	(as above)	
	R	(as above)	
		-	Kos
242.	O	(as above)	
	R	(as above)	
		-	Kos
243.	O	(as above)	
	R	(as above)	
		-	Kos
244.	O	(as above)	
	R	(as above)	
		-	Kos
245.	O	(as above)	
	R	(as above)	
		-	Kos
246.	O	(as above)	
	R	(as above)	
		-	Kos
247.	O	(as above)	
	R	(as above)	
		-	Kos
248.	O	(as above)	
	R	(as above)	
		-	Kos
249.	O	(as above)	
	R	(as above)	
		-	Kos
250.	O	(as above)	
	R	(as above)	
		-	Kos
251.	O	(as above)	
	R	(as above)	
		-	Kos
252.	O	(as above)	
	R	(as above)	
		-	Kos
253.	O	(as above)	
	R	(as above)	
		-	Kos
254.	O	(as above)	
	R	(as above)	
		-	Kos
255.	O	(as above)	
	R	(as above)	
		-	Kos
256.	O	(as above)	
	R	(as above)	
		-	Kos

257.	O	(as above)	
	R	(as above)	
		-	Kos
258.	O	(as above)	
	R	(as above)	
		-	Kos
259.	O	(as above)	
	R	(as above)	
		-	Kos
260.	O	(as above)	
	R	(as above)	
		-	Kos
261.	O	(as above)	
	R	(as above)	
		-	Kos
262.	O	(as above)	
	R	(as above)	
		-	Kos
263.	O	(as above)	
	R	(as above)	
		-	Kos
264.	O	(as above)	
	R	(as above)	
		-	Kos
265.	O	(as above)	
	R	(as above)	
		-	Kos
266.	O	(as above)	
	R	(as above)	
		-	Kos
267.	O	(as above)	
	R	(as above)	
		-	Kos
268.	O	(as above)	
	R	(as above)	
		-	Kos
269.	O	(as above)	
	R	(as above)	
		-	Kos
270.	O	(as above)	
	R	(as above)	
		-	Kos
271.	O	(as above)	
	R	(as above)	
		-	Kos
272.	O	(as above)	
	R	(as above)	
		-	Kos
273.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
274.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
275.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
276.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34

277.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
278.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
279.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
280.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
281.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
282.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
283.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
284.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
285.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
286.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
287.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34

12. O Similar, but shorter locks of hair(?)
 R Club with knobs; thick *gorytos*
 1.66 12 Göttingen 68.19

MIKYΘOΣ

13. O Longer face; smoother hair
 R Smaller *gorytos*
 1.26 7 Göttingen 79.15
14. O Similar
 R Larger *gorytos*; club with knobs
 1.55 3 Göttingen 79.6
15. O Longer, wavier locks of hair
 R Slender club with knobs; slender *gorytos* ornamented with linear pattern
 1.43 3 New York 48489
16. O Similar
 R Similar
 1.93 6 London 113
- 16a. O Similar
 R Similar
 1.49 Lindgren Coll. 676a
17. O (as above)
 R (as above)
 - Kos

δ]ΔΥΜΑΡΧ[ος

18. O Broader face; shorter, more irregular locks of hair
 R Slender club with knobs; slender *gorytos* with one line across
 1.59 12 Göttingen 78.7
19. O Similar
 R Similar
 (1.08) 6 Göttingen 78.20
20. O Similar
 R Plain *gorytos*
 1.82 12 New York 48488

ΑΡΧΕΠΙΟΛ

21. O (as above)
 R (as above)
 - Kos
22. O (as above)
 R (as above)
 - Kos

ΘΑΡΣΥΝΩΝ

23. O Larger face; broad nose; smoother hair
 R Club with knobs; slender *gorytos*
 1.35 9 Winterthur 3619

ε]ΠΙΔΑΥΡΙΟΣ

24. O Smaller head; uneven placing of eyes; curved line beneath chin
 R Very slender club; small *gorytos* slightly curved in lower end
 1.46 7 London 112
25. O Similar
 R Similar
 1.43 9 Göttingen 68.11

ΗΡΟΔΟΤΟΣ

26. O Small face; more symmetrical features; hair covers more of forehead
 R Small *gorytos*; thick, short club; large letters
 1.23 12 Göttingen 78.8

ΞΑΝΘΙΠΠΟΣ

27. O Small head almost en face
 R Small *gorytos*
 1.53 12 Göttingen 38.9
28. O Larger head; longer and wavier locks of hair
 R Triangular *gorytos* with line pattern on top
 1.48 3 London 114
29. O Similar
 R Thicker club with knobs
 1.35 3 Göttingen 79.4

ΑΡΙΣΤΙΩΝ

30. O Small face; large eyebrows placed near eyes creates an 'angry' expression
 R Small club with knobs; small *gorytos*
 1.32 12 London 111

ΚΑΕΥΧΙΟ[-

31. O Large face; well rounded cheek; long locks of hair
 R Long, large club with knobs; detailed *gorytos* with linear pattern
 2.95 - CNG, Triton V (2002), 491

Personal name obliterated:

31. O Similar to 24
 R --εϋ]ΔΑ[--; slender club; small *gorytos*
 1.41 6 Göttingen 71.1
32. O Long wavy locks of hair on l. top of head; lean face
 R Small, triangular *gorytos*
 1.49 12 Göttingen 71.2
33. O Similar
 R Larger *gorytos*
 1.64 5 Göttingen 79.13
34. O Similar
 R Similar
 1.28 9 Göttingen 78.10

- | | | | | |
|-----|---|---|-----------|------------------|
| 35. | O | Similar | | |
| | R | Similar | 1.26 12 | Göttingen 71.4 |
| 36. | O | Broader, well-rounded face | | |
| | R | Larger, triangular <i>gorytos</i> | 1.46 7 | Göttingen 79.17 |
| 37. | O | Similar | | |
| | R | Similar | 1.44 6 | Göttingen 78.16 |
| 38. | O | Similar | | |
| | R | [corroded] | 1.85 12 | Göttingen 39.9 |
| 39. | O | Lean face; longer, wavy locks of hair | | |
| | R | Slender club and <i>gorytos</i> | 1.36 11 | New York 48491 |
| 40. | O | Well-rounded face; shorter locks of hair(?) | | |
| | R | Small, slender club | 1.70 12 | Göttingen 78.2 |
| 41. | O | Similar | | |
| | R | Less space between <i>gorytos</i> and club | (1.07) 8 | Göttingen 79.1 |
| 42. | O | Similar | | |
| | R | Similar | 1.37 3 | Göttingen 79.16 |
| 43. | O | Stylized facial features; large eyebrows and forehead; broad nose | | |
| | R | [corroded] | 1.46 9(?) | Göttingen 77.15 |
| 44. | O | Nose, mouth and eyes are closer together | | |
| | R | Large <i>gorytos</i> | 1.54 9 | Göttingen 79.5 |
| 45. | O | Smaller head; irregular locks of hair | | |
| | R | Smaller, triangular <i>gorytos</i> | 1.35 12 | Göttingen 68.18 |
| 46. | O | Similar(?) | | |
| | R | Smaller <i>gorytos</i> slightly curved in lower end | 1.34 12 | Göttingen 79.19 |
| 47. | O | [corroded] | | |
| | R | [corroded] | 1.32 - | Göttingen 89.10 |
| 48. | O | [corroded] | | |
| | R | [corroded] | (0.68) - | Göttingen 86.19 |
| 49. | O | [corroded] | | |
| | R | [corroded] | 1.74 12 | Göttingen 111.16 |

50.	O	(as above)	
	R	(as above)	
		-	Kos
51.	O	(as above)	
	R	(as above)	
		-	Kos
52.	O	(as above)	
	R	(as above)	
		-	Kos
53.	O	(as above)	
	R	(as above)	
		-	Kos

15.	O	Similar		
	R	Similar		
		-	-	London 188
16.	O	(as above)		
	R	(as above)		
		-		Kos
17.	O	(as above)		
	R	(as above)		
		-		Kos; ex hoard 34
KAEYXI				
18.	O	Similar		
	R	Thin serpent		
		7.19	12	Göttingen 79.9
19.	O	(as above)		
	R	(as above)		
		-		Kos
ΠΑΡΜΕΝ[ισκος				
20.	O	Similar		
	R	Thicker serpent		
		8.76	12	Göttingen 77.9
21.	O	Similar		
	R	Similar		
		7.55		Lindgren Coll. 680
22.	O	(as above)		
	R	(as above)		
		-		Kos; ex hoard 34
ΣΑΤΥΡΟΣ				
23.	O	Similar		
	R	Thicker serpent		
		7.30	12	Göttingen 81.17
24.	O	Similar		
	R	Similar		
		7.67	12	Göttingen 81.4
25.	O	Similar		
	R	Similar		
		-	-	London 189
ΑΓΛΑΟΣ				
26.	O	Large eye		
	R	Slender staff; thin serpent		
		6.46	11	Göttingen 71.11
27.	O	Similar		
	R	Similar		
		6.12	12	Göttingen 76.1

28.	O	Similar		
	R	Similar	8.15 12	Göttingen 95.5
29.	O	Similar		
	R	Similar	6.58 12	Oxford 91
30.	O	Similar		
	R	Thicker serpent	6.90 12	Göttingen 79.18
31.	O	Similar		
	R	Similar	- -	London 179
32.	O	Similar		
	R	Similar	- -	London 180
33.	O	Similar		
	R	Similar	- -	London 181
34.	O	Similar		
	R	Similar	7.19 12	Göttingen 42.15
35.	O	Similar		
	R	Similar	7.48 12	Göttingen 70.10
36.	O	Similar		
	R	Similar	9.53 12	Göttingen 79.1
37.	O	Similar		
	R	Similar	5.84 12	Göttingen 86.7
38.	O	Smaller eye		
	R	Similar	6.28 12	Göttingen 71.5
39.	O	(as above)		
	R	(as above)	-	Kos. Ex hoard 37
40.	O	(as above)		
	R	(as above)	-	Kos. Ex hoard 37
41.	O	(as above)		
	R	(as above)	-	Kos
42.	O	(as above)		
	R	(as above)	-	Kos
43.	O	(as above)		
	R	(as above)	-	Kos

44.	O	(as above)	
	R	(as above)	
		-	Kos
45.	O	(as above)	
	R	(as above)	
		-	Kos
46.	O	(as above)	
	R	(as above)	
		-	Kos
47.	O	(as above)	
	R	(as above)	
		-	Kos
48.	O	(as above)	
	R	(as above)	
		-	Kos
49.	O	(as above)	
	R	(as above)	
		-	Kos
50.	O	(as above)	
	R	(as above)	
		-	Kos
51.	O	(as above)	
	R	(as above)	
		-	Kos
52.	O	(as above)	
	R	(as above)	
		-	Kos
53.	O	(as above)	
	R	(as above)	
		-	Kos
54.	O	(as above)	
	R	(as above)	
		-	Kos
55.	O	(as above)	
	R	(as above)	
		-	Kos
56.	O	(as above)	
	R	(as above)	
		-	Kos
57.	O	(as above)	
	R	(as above)	
		-	Kos
58.	O	(as above)	
	R	(as above)	
		-	Kos
59.	O	(as above)	
	R	(as above)	
		-	Kos
60.	O	(as above)	
	R	(as above)	
		-	Kos
61.	O	(as above)	
	R	(as above)	
		-	Kos
62.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
63.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34

64.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
65.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
66.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
67.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
68.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
69.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
70.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34

ΑΓΗΣΙΑΣ

71.	O	Longer, wavy locks in beard	
	R	Similar	
		7.33 1	Oxford 90
72.	O	(as above)	
	R	Ethnikon and personal name on opposite sides of <i>rhabdos</i>	
		-	Kos; ex hoard 34
73.	O	Similar	
	R	Similar	
		- -	London 178

ΣΩΠΑΤΡΟΣ

74.	O	(as above)	
	R	(as above)	
		-	Kos
75.	O	(as above)	
	R	(as above)	
		-	Kos
76.	O	(as above)	
	R	(as above)	
		-	Kos
77.	O	(as above)	
	R	(as above)	
		-	Kos

ΔΙΟΦΑΝ

78.	O	Large hair lock above forehead	
	R	Similar	
		8.38 12	Oxford 92
79.	O	Similar	
	R	Similar	
		7.60 12	Göttingen 81.14

80.	O	Similar		
	R	Similar		
		-	-	London 183
81.	O	Similar		
	R	Similar		
		-	-	London 184
82.	O	Similar		
	R	Similar		
		7.09	12	Milan 1049
83.	O	Similar		
	R	Thicker serpent		
		7.75	2	Oxford 93
84.	O	(as above)		
	R	(as above)		
		-		Kos
85.	O	(as above)		
	R	(as above)		
		-		Kos
86.	O	(as above)		
	R	(as above)		
		-		Kos
87.	O	(as above)		
	R	(as above)		
		-		Kos
88.	O	(as above)		
	R	(as above)		
		-		Kos
89.	O	(as above)		
	R	(as above)		
		-		Kos
90.	O	(as above)		
	R	(as above)		
		-		Kos
91.	O	(as above)		
	R	(as above)		
		-		Kos
92.	O	(as above)		
	R	(as above)		
		-		Kos
93.	O	(as above)		
	R	(as above)		
		-		Kos
94.	O	(as above)		
	R	(as above)		
		-		Kos; ex hoard 34
95.	O	(as above)		
	R	(as above)		
		-		Kos; ex hoard 34
96.	O	(as above)		
	R	(as above)		
		-		Kos; ex hoard 34

XAPIΔA

97.	O	High forehead; large hair lock above forehead		
	R	Sylindrical handle on staff		
		- -		Winterthur G3623
98.	O	Similar		
	R	Similar		
		- -		London 191
99.	O	Similar		
	R	Similar		
		6.87 6		Göttingen 84.6
100.	O	Similar		
	R	Round knob on staff		
		6.15 12		Göttingen 81.1
101.	O	Similar		
	R	Similar		
		10.67 12		Oxford 95
102.	O	Smaller face		
	R	Similar		
		5.95 12		Göttingen 81.9
103.	O	Similar		
	R	Thick serpent		
		8.64 12		Göttingen 85.2
104.	O	(as above)		
	R	(as above)		
		-		Kos
105.	O	(as above)		
	R	(as above)		
		-		Kos
106.	O	(as above)		
	R	(as above)		
		-		Kos
107.	O	(as above)		
	R	(as above)		
		-		Kos
108.	O	(as above)		
	R	(as above)		
		-		Kos
109.	O	(as above)		
	R	(as above)		
		-		Kos
110.	O	(as above)		
	R	(as above)		
		-		Kos
111.	O	(as above)		
	R	(as above)		
		-		Kos
112.	O	(as above)		
	R	(as above)		
		-		Kos
113.	O	(as above)		
	R	(as above)		
		-		Kos

114.	O	(as above)	
	R	(as above)	
		-	Kos
115.	O	(as above)	
	R	(as above)	
		-	Kos
116.	O	(as above)	
	R	(as above)	
		-	Kos
117.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
118.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
119.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
120.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
121.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
122.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34

KAEYMA

123.	O	High forehead; large hair lock above forehead	
	R	Large letters	
		8.46 12	Göttingen 81.15
124.	O	Similar	
	R	Smaller letters	
		7.24 -	MünzZentrum 72 (1991), 620
125.	O	Similar	
	R	Similar	
		- -	London 185
126.	O	(as above)	
	R	(as above)	
		-	Kos
127.	O	(as above)	
	R	(as above)	
		-	Kos
128.	O	(as above)	
	R	(as above)	
		-	Kos
129.	O	(as above)	
	R	(as above)	
		-	Kos
130.	O	(as above)	
	R	(as above)	
		-	Kos
131.	O	(as above)	
	R	(as above)	
		-	Kos

132.	O	(as above)	
	R	(as above)	
		-	Kos
133.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
134.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
135.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
136.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34

ΚΛΕΥΦΑ

137.	O	(as above)	
	R	(as above)	
		-	Kos
138.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
139.	O	(as above)	
	R	(as above, but misspelled name: Κληφον)	
		-	Kos; ex hoard 34

ΝΙΚΟΜΗ

140.	O	Smaller eye and nose; more regular locks in beard	
	R	Round knob on staff	
		6.93 12	Munich 9
141.	O	Similar	
	R	Similar	
		- -	London 186
142.	O	(as above)	
	R	(as above)	
		-	Kos
143.	O	(as above)	
	R	(as above)	
		-	Kos
144.	O	(as above)	
	R	(as above)	
		-	Kos
145.	O	(as above)	
	R	(as above)	
		-	Kos
146.	O	(as above)	
	R	(as above)	
		-	Kos
147.	O	(as above)	
	R	(as above)	
		-	Kos

148.	O	(as above)	
	R	(as above)	
		-	Kos
149.	O	(as above)	
	R	(as above)	
		-	Kos
150.	O	(as above)	
	R	(as above)	
		-	Kos
151.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
152.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
153.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
154.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34
155.	O	(as above)	
	R	(as above)	
		-	Kos; ex hoard 34

ΠΑΤΜ[o

156.	O	(as above)	
	R	(as above)	
		-	Kos

Personal name obliterated:

157.	O	Large eye	
	R	Thin serpent and staff	
		6.43 12	Göttingen 82.5
158.	O	Similar	
	R	Similar	
		7.30 12	Göttingen 86.12
159.	O	Similar	
	R	Thicker serpent	
		(5.30) 12	Göttingen 84.1
160.	O	Similar	
	R	Similar	
		- -	London 182
161.	O	Similar	
	R	Similar	
		9.29 12	Göttingen 75.5
162.	O	Similar	
	R	Similar	
		7.28 12	Göttingen 46.19
163.	O	Similar	
	R	Similar	
		6.57 12	SNG Leipzig 1240

164.	O	Similar		
	R	Similar, but NB! ΚΩΙΟΝ		
		7.41	12	Göttingen 79.10
165.	O	Similar		
	R	Similar		
		6.83	12	Göttingen 86.13
166.	O	Smaller eye; more delicate facial features		
	R	Similar		
		(3.98)	12	Göttingen 86.5
167.	O	Similar		
	R	Similar		
		7.82	12	Göttingen 82.7
168.	O	Similar		
	R	Similar		
		9.10	12	Göttingen 85.7
169.	O	(as above)		
	R	(as above)		
		-		Kos; ex hoard 34
170.	O	(as above)		
	R	(as above)		
		-		Kos
171.	O	(as above)		
	R	(as above)		
		-		Kos
172.	O	(as above)		
	R	(as above)		
		-		Kos
173.	O	(as above)		
	R	(as above)		
		-		Kos
174.	O	(as above)		
	R	(as above)		
		-		Kos
175.	O	(as above)		
	R	(as above)		
		-		Kos
176.	O	(as above)		
	R	(as above)		
		-		Kos

AN[o]Σ[- (?)]

10. O Large head; face partly out of flan
R Above *gorytos*, ΚΩΙΩΝ; large *gorytos* with only a small tip of bow visible
1.87 9 Göttingen 79.18

Personal name obliterated:

11. O Large head; well-rounded chin and cheek
R Above *gorytos*, ΚΩΙΩΝ; slender *gorytos*
1.50 9 Göttingen 82.11
12. O Long, straight nose; few details in lion's scalp
R Above *gorytos*, ΚΩΙΩΝ; slightly curved *gorytos*
1.37 9 Göttingen 82.14
13. O Similar
R Similar, but more slender *gorytos*
1.44 12 Leiden 2713 (v.Rede)
14. O Similar
R Above *gorytos*, ΚΩΙΩΝ; broad *gorytos*
1.97 9 Athen 40/48
15. O Long neck; lion's scalp hangs down at the back of neck
R Above *gorytos*, ΚΩΙ; slightly curved *gorytos*
2.00 9 Göttingen 90.11
16. O [corroded]
R [corroded]; narrow lower end of *gorytos*
1.45 9 Göttingen 91.11
17. O [corroded]
R Above *gorytos*, ΚΩΙ
1.37 9 Göttingen 87.12
18. O Similar to 12
R Above *gorytos*, ΚΩΙ; large part of bow visible
1.63 9 Göttingen 82.17
19. O Smaller face
R Beneath *gorytos*, ΚΩΙ; narrow lower end of *gorytos*
1.36 9 Göttingen 89.5
20. O Larger head and facial features
R Above *gorytos*, ΚΩΙ
1.52 9 Göttingen 82.13
21. O [corroded]
R Above *gorytos*, ΚΩΙΩΝ; narrow lower end of *gorytos*
2.04 9 Vienna 37.185
22. O Larger face; long, straight nose
R [corroded]
1.62 9 Göttingen 90.7
23. O Similar
R Above *gorytos*, ΚΩΙΩΝ
1.54 3 Athen 45/191

24.	O	Similar	
	R	Above <i>gorytos</i> , K[---; larger, unevenly shaped <i>gorytos</i>	
		1.15 9	Göttingen 85.19
25.	O	Similar	
	R	[corroded]	
		1.08 9	Göttingen 91.7
26.	O	Similar	
	R	[corroded]	
		0.91 9	Göttingen 86.13
27.	O	[corroded]	
	R	[corroded]	
		1.54 9	Göttingen 90.16
28.	O	[corroded]; Heracles facing l.	
	R	[corroded]; ΚΩΙ[-	
		1.52 9	Göttingen 85.20
29.	O	(as above)	
	R	(as above)	
		-	Kos
30.	O	(as above)	
	R	(as above)	
		-	Kos
31.	O	(as above)	
	R	(as above)	
		-	Kos
32.	O	(as above)	
	R	(as above)	
		-	Kos

XXIII. ISSUE	Period of minting: c.180-70	Obv. dies: 16
	Drachms	Rev. dies: 17
	No. of coins: 28	Weights: (1.82/1.94) 2.49 – 3.18

Type *obv.* Beardless Heracles with lion's scalp facing r.
rev. Crab; beneath, club; ethnikon (ΚΩΙΩΝ); personal name; initial(s); all in moulded square incuse

APATOS

1. O1 Short nose; large eye; protruding forehead; irregular locks in mane mostly hanging down
R1 On l. of claw, K (Δ?); oval crab shield with three elevations; large eyes; clearly marked joints on legs; short, slender club placed slightly to l. of centre; marked dots on letters
a) 3.14 I2 Oxford 53
2. O2 Higher forehead; smaller eye and nose; stylized, claw-like locks in mane; lion's scalp fastened under chin
R2 On r. of claw, K; similar, but more stylized legs on crab; longer club
a) 2.67 - London 118a (not in *BMC*). Ex hoard 27 (*IGCH* 1320)
3. O3 Similar, but more numerous locks in mane
R3 [no initial?]; more oblong crab shield; small legs; long claws; long and thick club
a) - - Paris

APXIAS

4. O4 Well-proportioned facial features; small nose and mouth; well-rounded cheek and chin; irregular locks in mane; lion's scalp is fastened under chin
R4 On l. of claw, Δ; oval shield divided into three parts on crab; long, thin legs with joints clearly marked; slender claws
a) 2.87 - London 117
5. O5 Longer nose; leaner cheek and chin; edge in lion's scalp above ear; small, claw-like, irregular locks in mane
R5 [no initials]; six elevations on crab shield; stylized legs with clearly marked joints; large claws; large eyes on crab; thick club with numerous, large knobs
a) 2.49 I2 New York 60.170.287
6. O6 Small nose; long forehead; slightly smiling expression; small locks of hair in forehead; small, irregular locks of hair in mane
R6 On r. of claw, K; irregular crab shield; thin legs; small claws; slender club
a) 2.99 - London 118
7. O7 Crude facial features; aquiline nose; protruding forehead/eyebrow; long locks of hair smoothed away from forehead; claw-like locks in mane; vertical line on side of neck
R7 On l. of claw, K; on r. of claw, E; crab shield tapers towards lower part; slender claws and legs
a) 3.13 I2 Oxford 57. Ex hoard 27 (*IGCH* 1320)
8. O8 Lean face; aquiline nose; small chin; large locks of hair above forehead; three claw-like locks in mane at side of neck
R8 On l. of claw, K; on r. of claw, E(?); angular crab shield; short, stylized, straight legs; small claws; row of dots along top of shield
a) 2.66 I2 Athen 106 (5658aa)

ΑΡΙΣΤΑΙΣ

9. O9 Aquiline nose; protruding forehead; large locks of hair in forehead and along temple; distinctly marked folds in lion's scalp; two rows of locks in mane, one with small, stylized locks, and one with four large, claw-like locks
- R9 On l. of claw, K; on r. of claw, E(?); crab shield tapers towards lower end; slender legs with marked joints; slender claws and club
- a) 2.78 I Oxford 54. Ex Benson sale 715a (Milne 1924) [er dette Sotheby's 1909, Benson sale? nr. 715 er en 2d, H3/4 en face)
- b)- - Dresden 1297
- c) 2.51 I2 Munich 21211
- d) 2.62 I2 Leiden 6217
- e) 3.03 - London 118b (not in *BMC*). Ex hoard 27 (*IGCH* 1320)
- f) 2.49 I2 New York 20798
- g) 2.65 - Kress 107 (1958), 92

ΑΡΙΣΤΑΝΔΡΟΣ

10. O10 Smaller nose; well-rounded chin; large locks of hair in forehead and along temple; two rows of locks in mane, one with small, stylized locks, and one with five large, claw-like locks; lion's scalp is fastened under chin
- R10 Similar, but longer legs on crab; club is placed slightly to the l. of centre
- a) 2.89 I2 New York 48492. Ex hoard 28 (*IGCH* 1321)
- b) 2.89 - Naville/*Ars Classica* XVII (1934), 571; ex Warren Coll. 1194
11. O10* ⚡
- R11 Similar, but legs on crab is curved more downwards; initial K is placed lower; shorter club
- a) 3.14 I Oxford 55. Ex hoard 27 (*IGCH* 1320)
- 11a. O10 ⚡
- R12 On r. of claw, E; slightly heart-shaped crab shield; short, stylized and slightly bent legs; small claws bent sharply towards each other
- a) 2.92 Boston (Brett 1955), 2027
12. O11 Irregular locks in mane; edge in lion's scalp at the lower part of the back of neck
- R12 ⚡
- a) 2.67 I2 Oxford 56
13. O12 Long, aquiline nose; small chin; large eyebrow creates an angry facial expression; large locks of hair in forehead; irregular, sometimes long locks in mane; lion's scalp is fastened under chin
- R13 On l. of claw, K; on r. of claw, E; slightly smaller, rounded crab shield; thin, stylized legs; shorter, slender claws
- a) 3.13 - Numismatic Auction 3 (1985), 134; MünzZentrum 54 (1985), 242; Kölner Münzkabinett 16 (1975), 134
14. O13 Aquiline nose; small chin; irregular locks in mane; lion's scalp is fastened under chin
- R14 On l. of claw, K; on r. of claw, E; similar, but longer club slightly to l. of centre
- a) 3.12 I2 London 118c (not in *BMC*). Ex hoard 27 (*IGCH* 1320)

ΠΑΤΡΟΚΛΗΣ

15. O14 Small forehead; slightly smiling facial expression; irregular locks in mane; lion's scalp is fastened under chin
- R15 On l. of claw, Δ; small, oval crab shield; thin legs with joints clearly marked; large claws; long club
- a) 3.05 - London 118e (not in *BMC*). Ex hoard 27 (*IGCH* 1320)

16. O15 Longer face; small locks of hair in forehead; irregular, almost horizontal locks in mane; lion's scalp is fastened under chin
 R16 On r. of claw, Δ; irregular crab shield; clearly marked joints on legs; large claws; long club placed slightly to the l. of centre
 a) 3.18 - London 118d (not in *BMC*). Ex hoard 27 (*IGCH* 1320)

Personal name obliterated:

17. O16 Lean face; long, straight nose; upright locks of hair above forehead; irregular locks in mane
 R17 συκ]ΙΠΠΟΥ; Heart-shaped crab shield; long, slender legs; small, slender, unevenly placed claws; slender club
 a) 3.03 6 Budapest 51a.1913.36
 b) 3.03 J. Hirsch 25 (1909), 2413⁶⁵⁴
18. O* [corroded]; large eye; claw-like locks in mane
 R* [corroded]; similar to R17(?)
 a) (1.82)12 Göttingen 110.8
19. O* [corroded]
 R* [corroded]
 a) (1.94)12 Brussels; partly damaged flan

⁶⁵⁴ Possibly the same coin as the Budapest specimen. The quality of the plates in the Hirsch catalogue makes a certain identification impossible.

XXIV. ISSUE	Period of minting: c.180-70	Obv. dies: 14
	Hemidrachms	Rev. dies: 18
	No. of coins: 20	Weights: (1.06) 1.08 – 1.57

Type *obv.* Laureate head of Apollo facing r.
rev. Kithara; ethnikon (ΚΩΙΩΝ); personal name; initial

ΑΡΧΙΑΣ

1. O1 Slightly aquiline nose; hair falls in irregular locks down the neck; one long lock of hair above ear
 R1 Beneath kithara, A; body of kithara has two pointed ends bent towards each other
 a) 1.42 - London 168a (not in *BMC*). Ex hoard 27 (*IGCH* 1320)

ΑΡΙΣΤΑΙΟΣ

2. O2 Straight nose; large, regular locks of hair along temple; hair falls in thin, irregular locks down the neck
 R2 Beneath kithara, A; similar to R1
 a) 1.48 I2 Winterthur 3622
3. O2 ⤴
 R3 Detailed, symmetrical kithara
 a) 1.56 SNG v. Aulock 2763
4. O3 Small nose and mouth; two corkscrew curls down the neck, one thicker than the other
 R4 Beneath kithara, A; two long lines continues from the lower part of kithara; large tuning pegs; letters in personal name follows the contour of the kithara
 a) (1.06)I2 Oxford 80. Ex Sotheby's 11.12.1924, 68; Weber 6505. Flan is partly damaged
 b) 1.40 I2 New York 48493. Ex hoard 28 (*IGCH* 1321)
5. O4 Similar, but more protruding chin(?)
 R5 Beneath kithara, A; body of kithara has four pointed ends bent towards each other; elevated section on body; letters in personal name are unevenly positioned
 a) 1.25 I2 Oxford 81
6. O5 Straight nose; well-rounded chin and cheek; small, irregular locks of hair hangs down the neck; two claw-like flaws(?) in front of neck
 R6 Beneath kithara, A; body of kithara has four pointed ends bent towards each other; line divides body in two; large tuning pegs
 a) 1.50 I2 New York 48494. Ex hoard 28 (*IGCH* 1321)
7. O5 ⤴
 R7 Beneath kithara, A; similar, but broader section on body; differences in the positioning of letters
 a) 1.31 I2 London 167a (not in *BMC*). Ex hoard 27 (*IGCH* 1320)
8. O6 [corroded]; smaller locks of hair(?)
 R8 [initial off flan]; elevated section on body of kithara
 a) 1.26 - London 166
9. O7 Long nose; large locks of hair on head; small, irregular locks of hair hangs down the neck; lower eye/upper cheek is slightly damaged
 R8 ⤴
 a) 1.43 I2 New York 1940.206.4. Ex Hirsch 3650c(?)

10. O7 ⤴
R9 [initial off flan]; thick line on body of kithara; short neck ; dots on the letters
a) 1.49 I2 New York 60.170.289
11. O8 [corroded], low forehead; straight nose
R10 [initial obliterated]; broad kithara with short neck
a) 1.34 - London 165
12. O9 Short nose; small mouth; small locks of hair along temple and forehead
R11 Beneath kithara, A; broad body
a) 1.56 - London 167

ΠΑΤΡΟΚΛΗΣ

13. O10 Small face; large, regular locks of hair along temple and above ear; hair hangs down the neck in two corkscrew locks
R12 Beneath kithara, A; few details on kithara; thick line on body
a) 1.45 - London 168c (not in *BMC*). Ex hoard 27 (*IGCH* 1320)
14. O11 Similar, but straighter locks in neck; flaw(?) in front of neck
R13 [initial off flan]; thick line on body; few details on upper part of kithara
a) 1.32 - London 168d (not in *BMC*). Ex hoard 27 (*IGCH* 1320)

ΑΠΑΤΟΣ

15. O11 ⤴
R14 [initial off flan?]; similar, but smaller line on body; large tuning pegs
a) 1.30 I2 New York 60.170.288

ΙΕΡΩΝ

16. O12 Long, straight profile; small locks of hair at side of head; hardly visible locks of hair hanging down at the neck
R15 [no initial]; body of kithara has two pointed ends bent towards each other; oval elevation on body; curved line in the lowest part of kithara
a) 1.08 - London 169

Θρ]ΑΣΥΑ[νδρος

17. O13 Small, pointed nose; small, irregular locks of hair along temple and forehead; two corkscrew locks hang down the neck
R16 [initial of flan?]; thick arms on kithara; thick line on body
a) 1.57 - London 168b (not in *BMC*). Ex hoard 27 (*IGCH* 1320)

Personal name obliterated:

18. O14 Longer face; small locks of hair along temple; thin, irregular locks hang down the neck; small flaw(?) in front of neck
R17 Beneath kithara, A; long, slender kithara; elevated section on body
a) 1.24 - London 168(?)
19. O14 ⤴
R18 [no initial?]; long, slender kithara; elevated section on body
a) 1.38 I2 Munich 15 (30968)

XXVI. ISSUE Period of minting: c.180-70
Æ

No. of coins: 13
Weights: 0.79 – 1.40

Type *obv.* Beardless Heracles with lion's scalp facing r.
rev. Crab; above, ΚΩΙ; beneath, personal name; all in moulded square incuse

ΔΑΜΩΝ

- | | | | | |
|----|---|-------------------------------|------|--|
| 1. | O | Detailed facial features | | |
| | R | Small, round crab shield | 0.96 | 12 Göttingen 85.9 |
| 2. | O | Similar | | |
| | R | Similar | 0.94 | 12 London 101a (not in <i>BMC</i>). Ex hoard 27 (<i>IGCH</i> 1320) |
| 3. | O | [worn and partly out of flan] | | |
| | R | Similar | 1.32 | 12 Paris 1266 |
| 4. | O | Similar to 2 | | |
| | R | Similar | 1.02 | 12 Berlin 97 (7718) |
| 5. | O | Similar | | |
| | R | Larger crab shield | 1.15 | 12 New York 1958.206.68 |
| 6. | O | Similar | | |
| | R | Similar | 0.99 | 12 London 101 |

ΦΙΛΙΣ[τος

- | | | | | |
|----|---|-------------------------------------|------|-------------------|
| 7. | O | Smaller lion's scalp | | |
| | R | Small shield divided into two parts | 0.79 | 12 Copenhagen 650 |

Personal name obliterated:

- | | | | | |
|-----|---|---------------------------------------|------|-----------------------|
| 8. | O | Similar to 6 | | |
| | R | Small crab shield | 1.40 | 12 Berlin 100 (28778) |
| 9. | O | Similar | | |
| | R | Crab shield is divided into two parts | 1.29 | 12 Athen 39/130 |
| 10. | O | Similar | | |
| | R | [corroded] | 0.84 | 12 Göttingen 92.10 |
| 11. | O | (as above) | | |
| | R | (as above) | | |
| | | - | | Kos |
| 12. | O | (as above) | | |
| | R | (as above) | | |
| | | - | | Kos |

13. O (as above)
 R (as above)
 - Kos
-

Frequency tables of weights

I. ISSUE, tetradrachms

>	•	(13.66)
14.20	•	
14.25		
14.30	•	
14.35	••	
14.40	•••	
14.45		
14.50	•	
14.55		
14.60		
14.65		
14.70	•••••	
14.75	••	
14.80		
14.85	•	
14.90	••	
14.95		
15.00		
15.05		
15.10	•	
15.15	•••	
15.20	••	
15.25	•	
15.30	•	

II. ISSUE, drachms

3.35	•
3.40	•
3.45	•
3.50	

III. ISSUE, tetradrachms

>	●●● (13.64/13.73/13.85)
14.35	●●●●
14.40	
14.45	●●
14.50	●●
14.55	
14.60	●●●●
14.65	●●
14.70	●●
14.75	●●●●
14.80	●
14.85	●●●●
14.90	●●●●
14.95	●●●
15.00	●●●●●
15.05	●●●●●●
15.10	●●●
15.15	●●●●●●●●
15.20	●●●●●
15.25	●
15.30	●●
15.35	●

IV. ISSUE, didrachms

>	●●●●● (5.99/6.03/6.06/6.10/6.19)
6.20	●●●●●
6.25	●●
6.30	●●●
6.35	●●●
6.40	●●●●
6.45	●●●●●●
6.50	●
6.55	●●●
6.60	●●●●●●
6.65	●●●●●●●●
6.70	●●●●●●●●●●
6.75	●●●●●●
6.80	●●●●●
6.85	●●●●●●●●
6.90	●●●●●●●●●●
6.95	●●●●●●●●●●
7.00	●●●●●●●●
7.05	
7.10	●

V. ISSUE, drachms

3.20	•
3.25	••
3.30	••
3.35	
3.40	•
3.45	
3.50	•
3.55	
3.60	•

VI. ISSUE, tetradrachms

>	••••• (13.76/14.00/14.05/14.21/14.25)
14.30	••
14.35	•
14.40	•••
14.45	•
14.50	
14.55	
14.60	•
14.65	
14.70	••••
14.75	••••
14.80	••••••••
14.85	••••••••
14.90	••••••
14.95	••••
15.00	••••••••••
15.05	••••••••
15.10	••••••••
15.15	••••••••••
15.20	••••••••
15.25	••••
15.30	
15.35	•

VII. ISSUE, didrachms

>	••• (5.77/5.90/5.94)
6.05	•
6.10	•••
6.15	•••
6.20	••
6.25	•
6.30	••
6.35	•••••
6.40	•
6.45	•
6.50	•••
6.55	•••
6.60	•••
6.65	•••
6.70	•
6.75	•
6.80	•
6.85	••
6.90	
6.95	••••

VIII. ISSUE, drachms

>	•• (2.93/2.98)
3.05	•••
3.10	•••
3.15	••••
3.20	•••••••
3.25	••
3.30	•••••
3.35	••••••••••
3.40	•••••
3.45	•••••••
3.50	•••
3.55	
3.60	•••
3.65	
3.70	•

IX. ISSUE, bronze

>	•• (0.88/1.18)
1.30	•
1.40	••••
1.50	•
1.60	••
1.70	•••
1.80	••
1.90	•

X. ISSUE, bronze

>	• (0.84)
0.90	•••
1.00	•••
1.10	••
1.20	•
1.30	
1.40	••
1.50	
1.60	
1.70	
1.80	•
1.90	•

XI. ISSUE, didrachms

>	••• (4.84/5.07/5.34)
5.50	•
5.55	
5.60	
5.65	
5.70	•
5.75	
5.80	
5.85	
5.90	••
5.95	•
6.00	
6.05	•
6.10	••
6.15	
6.20	••••••
6.25	••••
6.30	••••••
6.35	••••
6.40	••••••••
6.45	•••••
6.50	••••••••
6.55	••••••
6.60	••••••
6.65	••••••
6.70	••••••
6.75	
6.80	•
<	• (7.35)

XIV. ISSUE, tetradrachms

>	•••••••• (12.97/13.00/13.04/13.15/13.45/13.55/13.66/13.76)
14.05	•••
14.10	••
14.15	
14.20	••••
14.25	••
14.30	••••••••
14.35	•••
14.40	••••
14.45	•
14.50	•
14.55	•
14.60	••
14.65	••••••
14.70	•••••
14.75	••
14.80	••••••
14.85	••••
14.90	••••••••••
14.95	••••••••••••
15.00	••••••••••••
15.05	••••••••••
15.10	••••••••••••••
15.15	•••••••
15.20	•••
15.25	
15.30	
15.35	•
<	• (17.76)

XV. ISSUE, didrachms

>	•• (5.75/5.90)
6.40	•
6.45	•••
6.50	•
6.55	••
6.60	••
6.65	••••
6.70	••
6.75	•

XIX. ISSUE, bronze

>	●●●●● (2.18/2.20/2.20/2.22/2.26/2.27)
2.30	●●
2.40	●●●
2.50	●●●●
2.60	●●●●●
2.70	●●●●
2.80	●●●●●●●●
2.90	●●●●●●●●●
3.00	●●●●●●●●●●
3.10	●●●●●
3.20	●●●●●●●●
3.30	●●●●●●●●●
3.40	●●●●●●●●
3.50	●●●●●●●●●●
3.60	●●●●●●●●●
3.70	●●●●●●●●
3.80	●●●●●●●●
3.90	●●●●●●●●
4.00	●●
4.10	●●●●
4.20	●●●
4.30	●●●
4.40	●●●
4.50	
4.60	●●
<	●●● (4.88/4.96/5.15)

XX. ISSUE, bronze

>	●●● (0.68/1.07/1.08)
1.20	●●●●
1.30	●●●●●●●
1.40	●●●●●●●●
1.50	●●●●●●
1.60	●●●
1.70	●●●●●●
1.80	●●
1.90	●
<	● (2.95)

XXI. ISSUE, bronze

>	●●●● (5.30/5.84/5.95/6.12/6.15)
6.20	●
6.40	●●
6.60	●
6.80	●●●
7.00	●●●
7.20	●●●●●
7.40	●●
7.60	●●
7.80	●●
8.00	●
8.20	●
8.40	●
8.60	●●
8.80	
9.00	●●
9.20	●
9.40	●
9.60	
<	●● (10.47/10.67)

XXII. ISSUE, bronze

>	●●● (0.91/1.08/1.15)
1.20	●
1.30	●●●●
1.40	●●
1.50	●●●●●●
1.60	●●
1.70	
1.80	●●
1.90	●
2.00	●●

XXIII. ISSUE, drachms

>	●● (1.82/1.94)
2.45	●●
2.50	●
2.55	
2.60	●
2.65	●●●
2.70	
2.75	●
2.80	
2.85	●●
2.90	●
2.95	●
3.00	●●
3.05	●
3.10	●●●●
3.15	●
3.20	

XXIV. ISSUE, hemidrachms

1.05	••
1.10	
1.15	
1.20	•
1.25	••
1.30	••••
1.35	•
1.40	•••
1.45	•••
1.50	•
1.55	•••

XXV. ISSUE, bronze

1.00	•
1.10	•
1.20	
1.30	•
1.40	•
1.50	
1.60	
1.70	•

XXVI. ISSUE, bronze

0.70	•
0.80	•
0.90	•••
1.00	•
1.10	•
1.20	•
1.30	•
1.40	•

PART 5. REFERENCES AND INDEX

Literature

Ancient literature

- Appian, *Mithradates*, (115)
 Aristoteles, *Historia Animalis* (V 17,6; V 19,551b)
 - *Politics* (1304,6,5)
 Arrianos, *Anabasis* (I, 17,1-20, 1-3; 23,1-4; II, 1,1; 5,7; III, 2,3-7; 2,6)
 Cato d.e. [about Coan wine mixed with sea water]
 Curtius, III (I,19)
 Damoscharis [associated with Coan poetry]
 Demosthenes, XV (14-15, 19, 27)
 Diodoros Siculus, (XIII, 69,5; XIV, 84,3-4; XV, 76; 90,3; XVI, 77,2-3; XVII, 18,2; 22,1; 23,4; XIX, 56,1-3; 61,3-4; 68,4; 75,3-5; XXVII, 3; XXVIII,1)
 (Philip of Amphipolis [the author of a major work on Coan history, now lost])
 Herodas, *Pornoboskos* I, 26-35
 Herodotus, (I 144; III 95; VII 98; 99; 163-4; VIII 87)
 «Hippocrates», *Hippocratic writings*
 Homer, *Iliaden* (II 645-80; 676 ff)
 Horats [about the beautifulness of young Coans]
 Kallimachos, *Hymne to Delos*, (160)
 Livius, XXXVII (11-12)
 Lucan, BC X, (141)
 Makareos [three books on Cos, possibly a source for Plutarchos. One fragment concerning the cult of Hera is known to day]
 Meleager, *Epigrammes*
 Nikanor [komments on Philitas]
 Pausanias, III (23,4)
 Philitas [fragmentary elegies and epigrammes cf. Nikanor]
 Platon [comments on Hippokrates]
 Plinius, *Naturalis historia* (XX 264; XXIX 4; XXXV 91,27; 91,30; 92,31; 161; XL 22-3)
 Plutark [cf. Makareos as source]
 Polybios, IV, 51 ff
 (Sisyfos, [name associated with Coan poetry])
 (Sokrates, [name associated with Coan poetry])
 Strabon, XIV (653; 654; 657)
 Tacitus, [treats Cos sporadically]
 Theokrit, *Idyll* (XVII, 31)
 - *Thalysia*
 Thukydid, VIII (41,2)
 Vitruvius, *De architectura* (II 8,10-14)
 Xenofon, *Hellenika* (1, V,1)

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Coan personal names on coins

Name:	Issue(s):	Comments: ⁶⁵⁵
ΑΓΗΣΙΑΣ	XIX, XXI	15 entries in <i>LGNP</i> ; attested c.200 as contributor to epidosis (two different persons); c.200, contributor to library; 3. cent. <i>hieropoios</i> and contributor to epidosis (3. cent.); and in several occasions in the period c.200, or 2. cent.
ΑΓΛΑΟΣ	XIX, XXI, XXII	8 entries in <i>LGNP</i> ; attested c.201-200; as <i>monarchos</i> c. 195-92; c.180; as <i>strategos</i> 158-150
ΑΓΟΡΑΚΡΙΤΟΣ	XVI	3 entries in <i>LGNP</i> ; attested 242; c.200
ΑΘΑΜΑΣ	III	1 entry in <i>LGNP</i> (III. issue tetradrachm)
ΑΘΑΝΙΩΝ	I	1 entry in <i>LGNP</i> (I. issue tetradrachm)
ΑΙΣΧΡΙΩΝ	XVI	3 entries in <i>LGNP</i> ; attested c.225; early 2. cent.
ΑΛΚΙΜΑΧΟΣ	VI	1 entry in <i>LGNP</i> (VI. issue tetradrachm)
ΑΜΦΙΔΑΜΑΣ	VIII	3 entries in <i>LGNP</i> ; attested c.200
ΑΜΦΙΤΙΜΟΣ	VI	(previously unknown on Cos)
ΑΝΑΞΑΝ[δριδαζ/ ΑΝΑΞΑΝΔΡΟΣ	XI, XII, XVI, XVII	2 entries in <i>LGNP</i> ; attested 3. cent.; c.200
ΑΡΑΤΙΔΑΣ	XII	6 entries in <i>LGNP</i> ; attested c.200; c.185-4 as doctor
ΑΡΑΤΟΣ	XVI, XXIII, XXIV	7 entries in <i>LGNP</i> ; <i>architheoros</i> 3. cent.; attested 279; 242; contributor to epidosis c.200
ΑΡΙΔΕΙ[κης	XIII	4 entries in <i>LGNP</i> ; attested 3. cent.; 3.-2. cent. as contributor to epidosis; c.200; c.175-150 as <i>monarchos</i>
ΑΡΙΣΤΑΙ[οζ/σ	XXIII, XXIV	1 entry in <i>LGNP</i> ; c.175-150 as <i>monarchos</i> (Arista[-]); attested c.166-45
ΑΡΙΣΤΑΝΔΡΟΣ XXIII		7 entries in <i>LGNP</i> ; attested c.321-300; c.200 as contributor to epidosis
ΑΡΙΣΤΙΩΝ (C)	VI, VII, XIII, XX	C-form on VII only. 19 entries in <i>LGNP</i> ; c.240 victor at the Great Asclepieia; c.200 as contributor to epidosis; c.195-92 as <i>monarchos</i>
ΑΡΙΣΤΟΜΕΝΗΣ	XIV	3 entries in <i>LGNP</i> ; c.200 as contributor to epidosis (two separate individuals)
ΑΡΙΣΤΟΤΕΛΗΣ	XIII, XVI	1 entry in <i>LGNP</i> ; 3. cent.
ΑΡΧΕΠΟΛ[ις	XVI, XX	5 entries in <i>LGNP</i> ; 242 as <i>theoros</i> ; c.200
ΑΡΧΙΑΣ	XXII, XXIII, XXIV	5 entries in <i>LGNP</i> ; 3.-2. cent.; c.200
ΑΡΧΙΑΔΑΜΟΣ	VI, VII, VIII, XII, XVI, XVII	12 entries in <i>LGNP</i> ; c.200 as contributor to epidosis; several attestations c.200; 2. cent.

⁶⁵⁵ Based on *LGNP*; Sherwin-White 1978 (onomastikon) and Habicht 2000, 327-30 (index of *monarchoi*). References to coins in the mentioned works are excluded from the commentaries in this list.

ΑΡΧΩΝ	XIX	3 entries in <i>LGPN</i> ; c.200 as contributor to epidosis
ΑΣΤΥΝΟΜΟΣ	XII	4 entries in <i>LGPN</i> ; c.200; c.190-175 as <i>monarchos</i>
ΒΑΤΙΩΝ	XII, XVI	3 entries in <i>LGPN</i> ; 2. cent.
ΒΙΤΩΝ	III, IV	3 entries in <i>LGPN</i> ; c.200 as contributor to epidosis
ΓΝΩΣΙΑΔΙΚΟΣ	XIV	5 entries in <i>LGPN</i> ; c.200
ΓΟΡΓΙΑΣ	XVII, XVIII	5 entries in <i>LGPN</i> ; c.250-200; c.200 as contributor to epidosis
ΔΑΜΟΞΕΝΟΣ (C)	XV, XVII	3 entries in <i>LGPN</i> ; c.200
ΔΑΜΩΝ	XVII, XXVI	4 entries in <i>LGPN</i> ; 4.-3. cent.; 2.-1. cent.
ΔΗΜΗΤΡΙΟΣ (C)	XI, XIII, XX	C-form in XI and XIII only. 22 entries in <i>LGPN</i> ; c.200; 2. cent.; 2.-1. cent. (several imperial)
ΔΙΑΓΟΡΑΣ	XVII, XVIII, XX	9 entries in <i>LGPN</i> ; late 4.-3. cent.; c.301-286; 3. cent.; c.200 as contributor to epidosis; c.200
ΔΙΔΥΜΑΡΧΟΣ	XX	6 entries in <i>LGPN</i> ; 4. cent.; 250; c.200
ΔΙΟΓΕΝΗΣ	XIII	25 entries in <i>LGPN</i> ; 3. cent.; c.200 as contributor to epidosis; c.200; (several 1. cent. and later)
ΔΙΟΜΕΔΩΝ	XIX	12 entries in <i>LGPN</i> ; c.325-300 involved in foundation of family cult; c.200 as <i>architheoros</i> ; c.200 as contributor to epidosis; c.200; 2.-1. cent.
ΔΙΟΦΑΝ[τος]	XIX, XXI	10 entries in <i>LGPN</i> ; 3. cent.; 3.-2. cent as contributor to epidosis
ΔΙΩΝ	VI	13 entries in <i>LGPN</i> ; early 3. cent. hon. by Plataseis; 3.-2. cent. as <i>epimeletas</i> of the Dionysia; 242 as <i>theoros</i> ; c.200 as contributors to epidosis (two separate individuals); c.200; c.210-195 as <i>monarchos</i>
ΔΡΑΚΩΝ	XVII	10 entries in <i>LGPN</i> ; 5.-4. cent.; c.306-300 as officer of Antigonos I; c.350-300; 3.-2. cent. as contributor to epidosis; c.200 hon. inscr.; 2.-1. cent.
ΕΚΑΤΟΔΩ[ρος]	XVII	39 entries in <i>LGPN</i> ; 3.-2. cent. as <i>monarchos</i> at Isthmus (same as the more accurately dated listing as <i>monarchos</i> below?); 3.-2. cent. as <i>hieropoios</i> ; c.220; c.200 as contributors to epidosis (at least five separate individuals; c.200 (several); c.190-175 as <i>monarchos</i> ; c.185; c.172; c.168 as <i>agonothetas</i>
ΕΛΛΑΝΙΚΟΣ	XIII, XVI	3 entries in <i>LGPN</i> ; 2. cent.; 1. cent.-1. cent AD
ΕΜΠΙΡΕΠΩΝ	XI, XII	1. entry in <i>LGPN</i> ; 2.-1. cent. as member of the guild of Osiriasae

ΕΞΑΙΓΡΕΤΟΣ ⁶⁵⁶	XII, XVI	1 entry in <i>LGPN</i> (XVI. issue bronze coin)
ΕΠΙΔΑΥΡΙΟΣ	XX	2 entries in the <i>LGPN</i> ; 242 as <i>architheoros</i>
ΕΠΙΝΙΚΟΣ (C)	XIII	7 entries in <i>LGPN</i> ; 3.-2. cent.; c.200 as contributor to epidosis and in hon. inscr.; 1. cent.
ε]ΥΑΓΟΡΑ[ς	XVII	2 entries in <i>LGPN</i> ; c.200
ΕΥΚΡΑΤ[ης	XIX	5 entries in <i>LGPN</i> ; c.250-200 as <i>hieropoios</i> ; c.200
ΕΥΡ[—	XXII	Hevresis, Evripides, Evryanax, Evrylochos and Evrypylos are all represented by 1 entry each in <i>LGPN</i> . Evrylochos appears on the succeeding issue of Athenian weight tetradrachms with Aphrodite/Asclepius as motif and dated to c.170-163 ⁶⁵⁷
ΕΥΦΙΛΗΤΟΣ	XIX	8 entries in <i>LGPN</i> ; c.200 as contributor to epidosis; c.200; 1. cent.-1. cent. AD
ΖΩΙΛΟΣ	XI, XV	13 entries in <i>LGPN</i> ; 3.-2. cent.; c.200 as contributor to epidosis; c.200 (several); 2.-1. cent.
ΖΩΠΥΡΙ[ων	XII, XIII	13 entries in <i>LGPN</i> ; 3. cent. as <i>architheoros</i> ; 3.-2. cent.; 269; c.240; c.210-195 as <i>monarchos</i> ; c.200 as contributor to epidosis; c.200; c.180 as <i>agonothetas</i> ; 2.-1. cent.
ΗΡΑΓ[ορας ΗΡΑΚΛΕΙΤΟΣ	XVII, XVIII, XXII VI, XII	2 entries in <i>LGPN</i> ; c.82 43 entries in <i>LGPN</i> ; 3. cent.; 3.-2. cent.; 242 as <i>theoros</i> ; c.204 as victor at the Great Asclepieia; c.200 as contributor to epidosis (at least four separate individuals); c.200 as <i>hieropoios</i> ; c.201-200; c.200; after c.150 as <i>monarchos</i> ; 1. cent.-1. cent AD
ΗΡΟΔΟΤΟΣ	XVI, XVIII, XX	6 entries in <i>LGPN</i> ; c.300-250; c.200
ΘΑΡΣΥΝΩΝ	XX	1 entry in <i>LGPN</i> ; c.200
ΘΑΥΜΙ [νος	XVIII	5 entries in <i>LGPN</i> ; c.200 as contributor to epidosis. Can also be Thymias with 1 entry in <i>LGPN</i> ; c.200
ΘΕΟΔΟΤΟΣ	VI	2 entries in <i>LGPN</i> ; 2.-1. cent.
θε]ΟΚΛΗΣ	I	2 entries in <i>LGPN</i> ; 3. cent.; 2.-1. cent.
ΘΕΥΓΕΝΗΣ	XIII	20 entries in <i>LGPN</i> ; c.200 as <i>hieropoios</i> and contributor to epidosis; c.200 (several); 1. cent.
ΘΕΥΓΝΗΤ[—	XX	1 entry in <i>LGPN</i> (XX.issue bronze coins)

⁶⁵⁶ -]xaiqretos is a certain reading. On XII.issue drachms only one die, R10, represents this name. On some of the specimens a letter is clearly present preceeding the ksi, probably an E.

⁶⁵⁷ Cf. Ingvaldsen 2001.

ΘΕΥΔΟΡΟΣ	XV	46 entries in <i>LGPN</i> ; 3. cent.; c.204(?) as victor at the Great Asclepieia; c.200 as contributor to epidosis; c.196-5 (as <i>monarchos</i>); c.190-80 (as <i>monarchos</i>); c.184(?); 181; 2.-1. cent.
ΘΕΥΔΟΤΟΣ	XIX	31 entries in <i>LGPN</i> ; 3.-2. cent.; c.230-220; c.200 as contributor to epidosis; c.200 hon. inscription; c.188; c.172 priest of Asclepius; 2.-1. cent.
ΘΕΥΤΙΜΙΔΑΣ	XVIII	10 entries in <i>LGPN</i> ; c.200/186 victor at the Panatheneia; c.200
ΙΑΤΡΟΚΛΗΣ	VIII	1 entry in <i>LGPN</i> (VIII. issue coin)
ΙΔΟΜΕΝΕΥΣ	VIII	1 entry in <i>LGPN</i> (VIII. issue coin)
ΙΕΡΩΝ	XII, XXIV	17 entries in <i>LGPN</i> ; c.200 as contributor to epidosis; c.200; late 2. cent.
ΙΠΠΑΡΧΟΣ	XVI	3 entries in <i>LGPN</i> ; 3. cent. as <i>architheoros</i> ; c.250; 3.-2. cent.; 2. cent.(?).
ΙΠΠΟΛΟΧΟΣ	VIII	2 entries in <i>LGPN</i> (as ancestor of Hippocrates and VIII. issue coin)
ΚΑΛΛΙΑΣ	VI	3 entries in <i>LGPN</i> ; 4.-3. cent.; 2.-1. cent.
ΚΑΛΛΙΚ[ρατης]	XX	13 entries in <i>LGPN</i> ; 3.-2. cent. as <i>hieropoios</i> ; c.200 as contributor to epidosis; c.200; 2.-1. cent. member of the guild of Osiriastai
ΚΑΛΛΙΠΠΙΔ[ας]	XII	14 entries in <i>LGPN</i> ; c.200 as contributor to epidosis; c.200
ΚΑΛΛΙΣΘΕΝΗΣ (C)	XIII	5 entries in <i>LGPN</i> ; c.200
ΚΑΛΛΙΣΤΡΑΤΟΣ	XI	21 entries in <i>LGPN</i> ; 4. cent; c.200; 2.-1. cent.
ΚΑΦΙΣΙΟΣ	XVI	4 entries in <i>LGPN</i> ; c.274; c.242; 2.-1. cent. as member of the guild of Osiriastai
ΚΛΕΙΝΟΣ	XI, XIV	11 entries in <i>LGPN</i> ; c.224 victor at the Great Asclepieia; c.200 as contributor to epidosis; c.200; c.200-150; 2.-1. cent.
ΚΛΕΙΤΑΝΩΡ	VI	1 entry in <i>LGPN</i> (VI. issue coin)
ΚΛΕΙΤΟΣ	XIII	7 entries in <i>LGPN</i> ; c.200
ΚΛΕΥΜΑ[χος]	XXI	7 entries in <i>LGPN</i> ; c.321-300; c.200 as contributor to epidosis; c.184 priest of Asclepius; 170s as priest of Apollo at Halasarna; 197-159. Can also be Cleumachis with 1 entry in <i>LGPN</i> ; 2. cent.
ΚΛΕΥΦΑΝ[τος]	XXI	Occasionally misspelled Klefan[-]. 7 entries in <i>LGPN</i> ; c.301-286; c.200; 1. cent.-1. cent. AD. Can also be Cleuphon with 1 entry in <i>LGPN</i> ; (8 BC?)
ΚΛΕΥΧΙ[ος]	XVIII, XX, XXI	6 entries in <i>LGPN</i> ; late 4.-3. cent.; 3. cent.; c.220; c.200-150
ΚΛΥΜΕΝΟΣ	XIV	1 entry in <i>LGPN</i> ; 3.-2. cent. as <i>choregos</i>

ΛΑΕΡΤΑΣ	XII	4 entries in <i>LGPN</i> ; c.250; c.210-200 as <i>monarchos</i> ; c.200
ΛΑΚΩΝ	VI	(previously unknown on Cos)
ΛΑΜΠΙΑΣ	XIX	14 entries in <i>LGPN</i> ; c.200 as contributor to epidosis (two separate individuals); c.200; 2. cent.; 2.-1. cent.
ΛΕΟΝΤΙΣΚΟΣ	XII	2 entries in <i>LGPN</i> ; c.200 as contributor to epidosis
ΛΕΩΔΑΜΑΣ	XIV	4 entries in <i>LGPN</i> ; mid 3. cent.; c.201-200; 2.-1. cent.
ΛΥΚΙΝΟΣ	VI	2 entries in <i>LGPN</i> ; c.250
ΛΥΚΩΝ	VI, VIII	4 entries in <i>LGPN</i> ; c.205-200 as <i>prostatas</i> ; c.200 as contributor to epidosis; c.200
ΛΥΣΙΚΟΣ	I	(previously unknown on Cos)
ΜΕΔΩΝ	XI, XVIII	1 entry in <i>LGPN</i> (XI. issue coin)
ΜΕΝΩΝ	VII, VIII	4 entries in <i>LGPN</i> ; 3.-2. cent.; 1. cent.-1. cent. AD
ΜΙΚΥΘΟΣ	XVI, XX	2 entries in <i>LGPN</i> ; 184(?)
ΜΙΚΩΝ	XIV, XV	8 entries in <i>LGPN</i> ; 3. cent.; 3.-2. cent.; c.200; 2.-1. cent. as <i>tamias</i> ; 150s as priest of Apollo at Halasarna
ΜΝΑΣΙΜΑΧΟΣ	VIII	4 entries in <i>LGPN</i> ; 4. cent.; c.200; 2.-1. cent.; 1. cent.
ΜΟΣΧΙΟΝ	I, VIII, XIV, XVIII	16 entries in <i>LGPN</i> ; 3.-2. cent.; c.200 as contributor to epidosis (two separate individuals); c.200; c.195-192 as <i>monarchos</i>
ΝΕΣΤΟΡΙΔΑΣ	VI	1 entry in <i>LGPN</i> (VI. issue coin)
ΝΙΚΑΓΟΡΑΣ	XII, XIV, XVIII	35 entries in <i>LGPN</i> ; 3.-2. cent. as <i>lochagos</i> ; c.200 as <i>epimenios</i> , contributor to epidosis and <i>architheoros</i> ; c.200; c.198/7 as <i>monarchos</i> ; after 150 as <i>monarchos</i> ; 2.-1. cent.; late 1. cent. (several); early 1. cent. AD (several)
ΝΙΚΑΡΧΟΣ	XIV	32 entries in <i>LGPN</i> ; 4. cent.; c.242-205; c.201-200 <i>napoias</i> at Halasarna; c.200 as contributor to epidosis (two separate individuals); c.200; 184(?) victor at the Great Asclepieia; c.200-150; 2.-1. cent.
ΝΙΚΟΜΗ[δης]	XXI	24 entries in <i>LGPN</i> ; c.321-300 officer of Antigonos I; 3. cent.; 3.-2. cent.; 210 general of Antiochos; c.202-201 as <i>monarchos</i> ; 188(?) victor at the Great Asclepieia; 172(?) victor at the Great Asclepieia
ΝΙΚΩΝ	XI	10 entries in <i>LGPN</i> ; 3.-2. cent.; c.200; 2.-1. cent.; 1. cent.-1. cent. AD (several)
ΞΑΝΘΙΠΠΟΣ	I, VI, XIV, XVI, XVII, XX	6 entries in <i>LGPN</i> ; 3.-2. cent.; c.280 honored as <i>dikastes</i> ; 2.-1. cent.

ΞΕΝΟΔΙΚΟΣ	I	7 entries in <i>LGN</i> ; 5. cent.; 5.-4. cent. Olympic victor; 3.-2. cent.; 204(?); c.200
ΞΕΝΟΜΒΡΟΤΟΣ	VII	5 entries in <i>LGN</i> ; 4. cent. Olympic victor; c.200
ΟΡΘΑΓΟΡΑΣ	XVII	4 entries in <i>LGN</i> ; c.200; 1. cent. as contributor to epidosis; 1. cent.-1. cent. AD
ΠΑΡΜΕΝΙΣΚΟΣ	XVI, XIX, XXI	38 entries in <i>LGN</i> ; 3.-2. cent.; 260s; c.200 as contributor to epidosis at least five separate individuals; c.200; 2. cent. priest of Rhea; 2.-1. cent. leader of <i>thiasos</i> ; c.175-150 as <i>monarchos</i> ; c.168(?); after 150 as <i>monarchos</i>
π]ΑΣΙΑΣ	XVII	9 entries in <i>LGN</i> ; 4. cent.; mid-3. cent. as contributor to epidosis; 3. cent.; 3.-2. cent.; c.200; 2.-1. cent.
ΠΑΤΡΟΚΛΗΣ	XXIII, XXIV	1 entry in <i>LGN</i> (XXIII and XXIV. issue)
ΠΑΥΣΙΜΑΧΟΣ	XVI	6 entries in <i>LGN</i> ; c.301-286; 277/6(?); 172(?); 2. cent.
ΠΕΙΣΑΝ[δρος	XIII	2 entries in <i>LGN</i> ; c.200
ΠΕΡΣΙΑΣ	I	1 entry in <i>LGN</i> ; c.50 AD
ΠΟΛΥΑΡΧΟΣ	XI, XII	7 entries in <i>LGN</i> ; 3. cent.; 3.-2. cent.; c.200 as contributor to epidosis; 2. cent.; 2.-1. cent.
ΠΟΛΥΧΑ[ρης	XVII, XXI, XXII	5 entries in <i>LGN</i> ; c.200; 2. cent.; late 1. cent.
ΠΡΑΞΑΓΟΡΑΣ	XIII	4 entries in <i>LGN</i> ; 4. cent.; late 4.-early 3. cent.; mid-3. cent. as contributor to epidosis; 242-205 in honorary inscr.
ΠΡΑΞΙΑΝΑΞ	VI, XIII, XVII, XIX	4 entries in <i>LGN</i> ; c.200
ΠΡΑΤΑΓΟΡ[ας	XIX	2 entries in <i>LGN</i> ; c.200
ΠΥΘΙΩΝ	XI, XII	12 entries in <i>LGN</i> ; 3.-2. cent.; c.200 in honorary inscr.; 2. cent. as founder of family cult; c.150; 2.-1. cent.
ΠΥΘΩΝ	XII, XIII	5 entries in <i>LGN</i> ; c.200; 2.-1. cent.
ΠΥΡΓΙΩ[ν	XVIII	(previously unknown on Cos)
ΣΑΤΥΡΟΣ	XVI, XXI	11 entries in <i>LGN</i> ; 3. cent.; c.200 as contributor to epidosis; c.200; 172(?) victor at the Great Asclepieia; 1. cent.-1. cent. AD
ΣΙΜΟΣ	XI, XVI	16 entries in <i>LGN</i> ; 3.-2. cent.; 282 as <i>architheoros</i> ; c.265-226 doctor of Seleucus II; 236(?) victor at the Great Asclepieia; 204(?); c.200 as contributor to epidosis; early 2. cent.; 2.-1. cent.; c.124-116
ΣΤΕΦΑΝΟΣ (C)	XI, XIII, XVIII	C-form in XI and XIII. issue only. 2 entries in <i>LGN</i> ; 4. cent.
ΣΥΜΜΑΧΟΣ	XIII, XVIII	6 entries in <i>LGN</i> ; 3.-2. cent.; c.240; c.200 as contributor to epidosis; c.200; 2.-1. cent.
ΣΩΠΑΤΡΟΣ	XIX, XXI	3 entries in <i>LGN</i> ; c.200

ΣΩΣΙΣΤΡΑΤΟΣ (C)	VIII, (XVII), XX	8 entries in <i>LGNP</i> ; C-form in XX. issue only. 242 as <i>theoros</i> ; c.200 as contributor to <i>epidosis</i> ; c.200
ΤΕΙΣΙΑΣ	XVI, XVIII	8 entries in <i>LGNP</i> ; 301-286 as <i>epitropos</i> ; 250 as <i>architheoros</i> ; c.200
ΤΕΛΕΣΑΝΔΡΟΣ	XIV	2 entries in <i>LGNP</i> ; c.200 as contributor to <i>epidosis</i>
ΤΕΛΕΣΦΟΡ[ος]	XIX	2 entries in <i>LGNP</i> ; c.200
ΤΗΛΕΦΟΣ	VII	3 entries in <i>LGNP</i> ; 4. cent.; 2. cent.
ΤΙΜΟΛΥΚΟΣ	XIV	6 entries in <i>LGNP</i> ; 3.-2. cent.; c.205-201 as <i>prostatas</i> ; c.200
ΤΙΜΟΞΕΝΟΣ	XIV, XVI	18 entries in <i>LGNP</i> ; late 3. cent.; 3.-2. cent. as <i>hieropoios</i> ; 3.-2. cent.; c.200 as contributor to <i>epidosis</i> (two separate individuals); 1. cent.-1. cent. AD
ΦΙΛΕΩΝΙΔΑΣ	I	2 entries in <i>LGNP</i> ; 4. cent.
ΦΙΛΙΝΟΣ	XII, XIX, XXI	41 entries in <i>LGNP</i> ; 3. cent.; 3.-2. cent.; c.301-286 as advocate; 264 as Olympic victor; 260 as Olympic victor; c.250-200 as doctor; c.240; 217-207 as <i>monarchos</i> ; c.200 as contributor to <i>epidosis</i> (two separate individuals); c.200 as <i>hieropoios</i> ; c.200; c.195-175 as <i>monarchos</i> ; c.200-150; 1. cent.-1. cent. AD; 1. cent. AD; uncert. date, as <i>agoranomos</i>
ΦΙΛΙΠΠ[ος]	XIII	38 entries in <i>LGNP</i> ; 3.-2. cent. as doctor; 3.-2. cent. as <i>hierotamias</i> ; 240 as doctor; 220(?) victor at the Great Asclepieia; c.200 as contributor to <i>epidosis</i> ; c.200; 157/6 as guarantor; 1. cent.-1. cent. AD; 1. cent. AD
ΦΙΛΙΣΚΟΣ	VI, XVII	16 entries in <i>LGNP</i> ; 3.-2. cent.; 222/1 as <i>monarchos</i> ; c.200; 2. cent.; c.200-150; after 150 as <i>monarchos</i>
ΦΙΛΙΣΤΗΣ	VII, XVI	6 entries in <i>LGNP</i> ; 3.-2. cent.; c.200 as contributor to <i>epidosis</i> ; c.200; early 2. cent.
ΦΙΛΙΣΤΟΣ	XI, XII, XVII	22 entries in <i>LGNP</i> ; mid-3. cent.; 3. cent.; c.215-205 as doctor; c.200 as contributor to <i>epidosis</i> ; c.200 as <i>hieropoios</i> ; c.242-200 as doctor; c.190-180 as <i>monarchos</i> ; 2.-1. cent.; 1. cent.-1. cent. AD
ΦΙΛΙΤΑΣ	XIII	3 entries in <i>LGNP</i> ; late 4.-early 3. cent. poet and grammaticus; c.200 as contributor to <i>epidosis</i>
ΦΙΛΟΔΑΜ[ος] ⁶⁵⁸	III, IV	1 entry in <i>LGNP</i> (III. issue tetradrachm)
ΦΙΛΟΚΛΗΣ	XVI, XVII	10 entries in <i>LGNP</i> ; c.240; c.200 in honorary incr.; c.200 as contributor to <i>epidosis</i> ; 1. cent.-1. cent. AD; 1. cent. AD

⁶⁵⁸ The only legible die is III.issue, R9 where Filodamo[-] is easily seen.

ΦΙΛΩΝ	VII, XI, XXII	15 entries in <i>LGPN</i> ; 3.-2. cent.; mid-3. cent.; c.251 as <i>architheoros</i> ; c.200; 2. cent.; 2.-1. cent.
ΦΡΑΣΙΜΗ[δης]	XVII	2 entries in <i>LGPN</i> ; c.200
ΦΥΛΟΤΙΜΟΣ	VI	3 entries in <i>LGPN</i> ; c.300-250 as doctor; 3. cent. as <i>monarchos</i> ; c.200 as contributor to epidosis
ΧΑΙΡΥΛΟΣ	XII, XIII	9 entries in <i>LGPN</i> ; c.220(?); c.200; 2.-1. cent as prize-winning kitharist; 1. cent.-1. cent. AD
ΧΑΡΙΔΑ[μους]	XXI	5 entries in <i>LGPN</i> ; c.200. Can also be Charidas with 1 entry in <i>LGPN</i> ; 2.-1-cent.
ΧΑΡΜΙΠ[πος]	XI, XVI	17 entries in <i>LGPN</i> ; 3.-2. cent.; c.201-200; c. 200 as contributor to epidosis (two separate individuals); c.200
ΧΡΗΣΤΙ[ων]	XII	3 entries in <i>LGPN</i> ; c.200; after 150 as <i>monarchos</i>

Public collections

Athen	<i>Nomismatikon Mouseion, Athen</i>
Berlin	<i>Münzkabinett, Staatliche Museen, Berlin</i>
Boston	<i>Museum of Fine Arts, Boston, US</i>
Brussels	<i>Cabinet des Médailles, Bibliothèque Royale Albert 1^{er}, Brussels</i>
Budapest	<i>Magyar Nemzeti Múzeum, Budapest</i>
Cambridge	<i>Department of Coins and Medals, Fitzwilliam Museum, Cambridge</i>
Copenhagen	<i>Den kgl. Mønt- og Medaillesamling, Nationalmuseet, Copenhagen</i>
Dresden	<i>Münzkabinett, Staatliche Kunstsammlungen, Dresden</i>
Glasgow	<i>The Hunterian Museum, Glasgow</i>
Göttingen	<i>Institut für Archäologie, Universität Göttingen</i>
Gulbenkian	<i>The Calouste Gulbenkian Museum, Lisbon</i>
Hermitage Coll.	<i>Hermitage, National coin cabinet, St. Petersburg</i>
Istanbul	<i>Arkeoloji Müzeleri, Istanbul</i>
Kos	<i>Kos Museum, Kos</i>
Leiden	<i>Het Koninklijk Penningkabinett, Rijksmuseum, Leiden</i>
Leipzig	
London	<i>Department of Coins and Medals, British Museum, London</i>
Manchester	<i>Manchester University Museum</i>
Milan	<i>Raccolte Archaeologiche e Numismatiche, Castello Sforzesco</i>
Munich	<i>Staatliche Münzsammlung, Munich</i>
New York	<i>The American Numismatic Society, New York, NY</i>
Oslo	<i>Universitetets Myntkabinett, Universitetets Kulturhistoriske Museer, Oslo</i>
Oxford	<i>Heberden Coin Room, Ashmolean Museum, Oxford</i>
Paris	<i>Cabinet des Médailles, Bibliothèque Nationale, Paris</i>
Stockholm	<i>Kungl. Myntkabinettet, National Museum of Monetary History</i>
Tasmania	<i>John Elliot Classics Museum, University of Tasmania, Hobart</i>
Vienna	<i>Kunsthistorisches Múzeum</i>
Winterthur	<i>Münzkabinett des Stadt Winterthur</i>
Zurich	<i>Landesmuseum</i>

Private collections

Private collections which are today included in large museum collections are omitted from this survey. The most important of these collections are Prokesch-Osten, Löbbecke, Fox, Ross and Imhoof-Blumer in Berlin; Delepierre, Armand-Valton and Luynes in Paris; Fred Forbat collection in Stockholm; the Bank collection in London and the Leak and McClean collections in Cambridge.

- Ashton Coll. (The collection of R.H. Ashton, parts of which is published in *NC*)
 von Aulock Coll. (*SNG von Aulock*)
 Bement Coll. (Neville 7 (1924))
 Benson Coll. (Sotheby's 02.1909)
 Berry Coll. (*SNG Berry*, The Burton Y. Berry Coll. part 2, American Numismatic Society, New York)
 Burel Coll. (Feuardent 06.1913)
 Carfrae Coll. (Sotheby's 1894)
 Casterline Coll. (Superior 05.1989)
 N. Davis Coll. (NFA 11 (1982))
 Dewing Coll. (*ACNAC* 6)
 Douglas Coll. (Spink's 119 (1997))
 Ebsen Coll. (Superior 06.1987)
 Glamis Castle Coll. (Glendining 07.1974)
 Nelson Bunker Hunt Coll. (Sotheby's 6147 (1991))
 Jameson Coll. (ref. Jameson 1913-32)
 Keckman (Skopbank, Helsinki, *SNG Finland*, 1)
 Lindgren Coll. (Lindgren/Kovacs 1985)
 McLendon Coll. (Christie's 06.1993)
 L.W. de Moltheim Coll. (Walcher de Moltheim 1895)
 Montague Coll. (Sotheby's 05.1908)
 Moreira Coll. (Superior 06.1987)
 O'Hagan Coll. (Sotheby's 05.1908)
 Page Coll. (Bourse 11.1933)
 J.B. Parker Coll. (Superior 06.1998)

Pfheiger Coll. (Vinchon 04.1985)
Philipsen Coll. (Hirsch 25 (1909))
Pipito Coll. (Superior 12.1987)
von Post (*SNG Sweden* 1:2)
Pozzi (Neville 1920)
Prowe Coll. (Egger 46 (1914))
Rhusopoulos Coll. (Hirsch 13 (1905))
Spencer-Churchill Coll. (Neville/*Ars Classica* 14 (1929))
Stanton Coll. (Knobloch 26 (1965))
Trampitsch Coll. (Vinchon 11.1986)
Ward Coll. (Sotheby's 04.1973)
Warren Coll. (Neville 17 (1934))
H. Weber Coll. (London)
Weber Coll. (Hirsch 31 (1908))
Zogheb Coll. (Baiocchi 05.1954)

Sale catalogues

Ahlström	<i>Bjarne Ahlström Mynthandel, Stockholm</i>
Apparuti/Sternberg	<i>Georgio Apparuti & Frank Sternberg, Zurich</i>
Arethusa	<i>Numismatica Arethusa SA, Lugano</i>
Athena	<i>Athena, Münzen der Antike, Munich</i>
Auctiones	<i>Auctiones AG, Basel</i>
Baiocchi	<i>Baiocchi, Cairo</i>
Baldwin	<i>Baldwin & Sons, London</i>
Ball	<i>Robert Ball, Berlin</i>
BA	<i>Bankhaus Aufhäuser, Munich</i>
Baudey, Pesce & Gadoury	<i>Baudey, Pesce and Gadoury, Mulhouse</i>
Berk	<i>Harlan J. Berk, Chicago, IL</i>
Blancon	<i>Gilles Blancon, Hannover</i>
Bourgey	<i>Emile Bourgey, Paris</i>
Buckland, Dix & Woods	<i>Buckland, Dix and Woods, London</i>
A.E. Cahn	<i>Adolph E. Cahn, Frankfurt a.M</i>
Christie's	<i>Christie's, London</i>
CNA	<i>Classical Numismatic Auction, (Victor England), Denver, CO/Quarryville, PA</i>
CNG	<i>Classical Numismatic Group, (Victor England), Quarryville, PA</i>
Crédit de la Bourse	<i>Crédit de la Bourse SA, Paris</i>
Davis	<i>Kirk Davis, Claremont, CA</i>
Egger	<i>Brüder Egger, Vienna</i>
Elsen	<i>Jean Elsen SA, Brussels</i>
Empire	<i>Empire Coins, Ormond Beach, FLA/New York, NY</i>
Emporium	<i>Emporium, Hamburg</i>
Feuardent	<i>Feuardent Frères, Paris</i>
Gaettens	<i>R. Gaettens, Heidelberg/Lübeck</i>
Glendining	<i>Glendining & Co., London</i>
GM	<i>Giessener Münzhandlung GmbH, Munich</i>
Grunow	<i>Dieter Grunow, Berlin</i>
L. Hamburger	<i>Leo Hamburger, Frankfurt a.M</i>

Helbing	<i>Otto Helbing, Munich</i>
Hess	<i>Adolph Hess AG, Lucerne</i>
Hess/Leu	<i>Adolph Hess & Bank Leu AG, Lucerne/Zurich</i>
Hirsch	<i>Gerhard Hirsch, Munich</i>
J. Hirsch	<i>Jacob Hirsch, Munich</i>
Kastner	<i>Gitta Kastner, Munich</i>
KM	<i>Kurpfälzische Münzhandlung, Mannheim</i>
Knobloch	<i>Frederick S. Knobloch, New York, NY</i>
H.J. Knopek	<i>Hans Jürgen Knopek, Cologne</i>
Kölner Münzkabinett	<i>Kölner Münzkabinett, Tyll Kroha, Cologne</i>
Kovacs	<i>Frank L. Kovacs, San Francisco, CA</i>
Kress	<i>Münchener Münzhandlung, Karl Kress, Munich</i>
Kricheldorf	<i>H.H. Kricheldorf Nachf., Stuttgart</i>
Künker	<i>Fritz Rudolf Künker Münzhandlung, Osnabrück</i>
Lanz	<i>Numismatik Lanz, Munich</i>
Lanz Graz	<i>Lanz Numismatik, Graz</i>
Leu	<i>Leu Numismatik AG (Bank Leu until 1992), Zurich</i>
Malter	<i>Joël L. Malter, Encino, CA</i>
MB	<i>Münzhandlung Basel, Basel</i>
Merzbacher	<i>Dr. Eugen Merzbacher Nachf., Munich</i>
M&M	<i>Münzen und Medaillen AG, Basel (from 1997 also M&M Deutschland, Lörrach)</i>
Müller	<i>Heinz W. Müller, Solingen</i>
MünzZentrum,	<i>Münz Zentrum, Cologne</i>
Myers	<i>Robert J. Myers, New York, NY (Myers/Adams first 7 auctions)</i>
NAAC	<i>Numismatic Art and Ancient Coins, Zurich</i>
NAC	<i>Numismatica Ars Classica, Zurich</i>
Naville/Ars Classica	<i>Lucien Naville&Ars Classica, Lucerne</i>
NFA	<i>Numismatic Fine Arts, Los Angeles, CA</i>
Numismatica	<i>Numismatica Wien, Vienna</i>
Numismatic Auction	<i>The Numismatic Auctions, New York, NY</i>
Oldenburg	<i>H.G. Oldenburg, Kiel</i>
Oslo Mynthandel	<i>Oslo Mynthandel AS, Oslo</i>

Pegasi	<i>Pegasi Coins, Ann Arbor, MI</i>
Peus	<i>Dr. Busso Peus Nachf., Frankfurt a.M</i>
W.C. Phillips	<i>W.C. Phillips, Phillips Ranch/Diamond Bar, CA</i>
Platt	<i>Clément Platt, Paris</i>
PMV	<i>PMV, Daytona Beach, FLA</i>
Poindessault	<i>Bernard Poindessault, Paris</i>
Poindessault/Védrines	<i>Bernard Poindessault & Josiane Védrines, Paris</i>
Poinsignon	<i>A. Poinsignon, Strasbourg</i>
Ponterio	<i>Ponterio & Assc., San Diego, CA</i>
Ratto	<i>Rodolfo Ratto, Lugano (before 1934); Mario Ratto, (Paris) Milano (after 1934)</i>
Rauch	<i>Auktionshaus H. D. Rauch GmbH, Vienna</i>
Richelieu Numismatique	<i>Richelieu Numismatique, Paris</i>
Ritter	<i>Münzhandlung Ritter GmbH, Düsseldorf</i>
Schlessinger	<i>Félix Schlessinger, Amsterdam/Berlin</i>
H. Schulman	<i>Hans M.F. Schulman, NY (1950-1975)</i>
J. Schulman	<i>Jacques Schulman BV, Amerfoort/Amsterdam (1894-)</i>
Schulten	<i>NF Schulten, Frankfurt a.M</i>
SKA	<i>Schweizerische Kreditanstalt, Bern</i>
Sotheby's	<i>Sotheby & Co., London</i>
Spink's	<i>Spink & Son Ltd, London</i>
Stack's	<i>Stack's, New York, NY</i>
Sternberg	<i>Frank Sternberg, Zurich</i>
Superior	<i>Superior Galleries Inc., Los Angeles, CA</i>
Tkalec	<i>Tkalec AG, Zurich/Vienna</i>
Tkalec&Rauch	<i>Tkalec & H.D. Rauch Münzauktion, Vienna</i>
Toderi	<i>Guiseppe Toderi, Florence</i>
TradArt	<i>Trad'Art, Zurich/Geneve/Brussels</i>
Védrines	<i>Josiane Védrines, Paris</i>
Vigne	<i>Jean-Bruno Vigne, Paris</i>
Vinchon	<i>Jean Vinchon, Paris</i>
Waddell	<i>Edward J. Waddell Ltd, Bethesda/Gaithersburg, MD</i>
Walker	<i>Thomas D. Walker, San Antonio, TE</i>
Winkel	<i>W.Winkel, Bielefeld</i>

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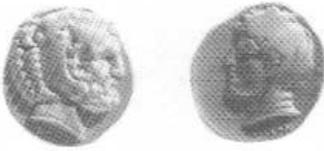
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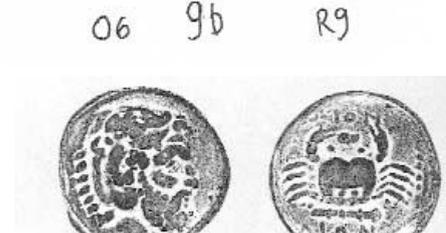
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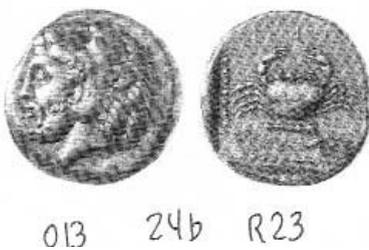
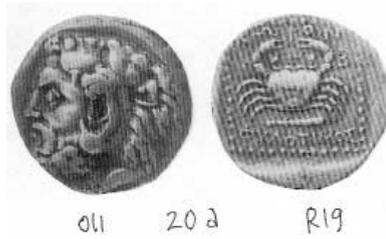


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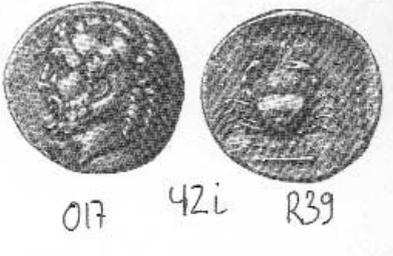


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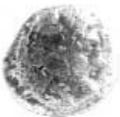
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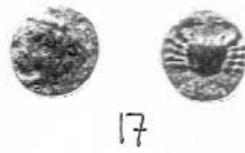
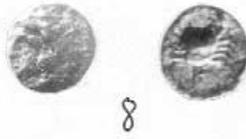


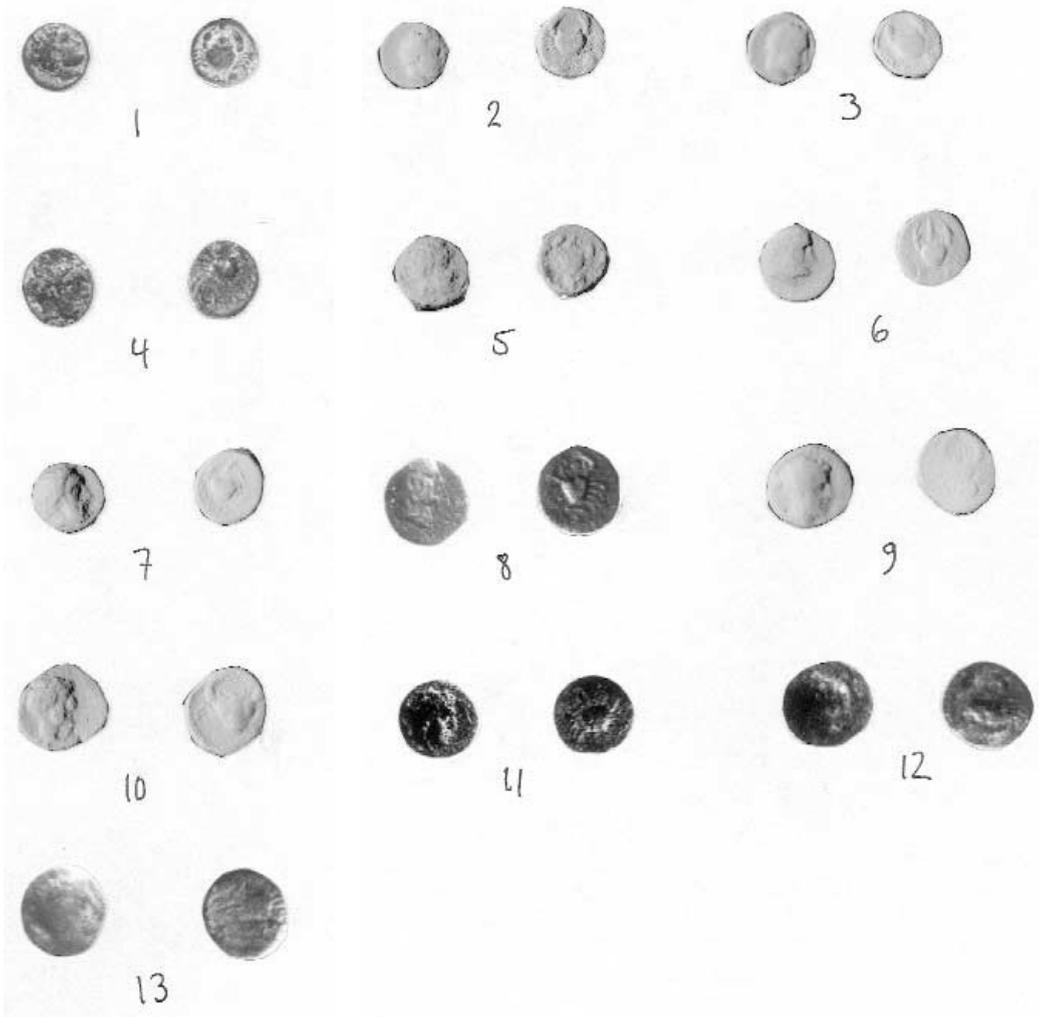
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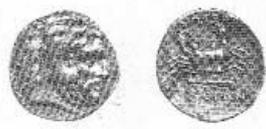
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03 12g R8



03 12h R8



03 12i R8



03 12j R8



04 13a R9



04 13d R9



04 15a R10



04 15d R10



04 15g R10



05 16a R11



05 16b R11



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06 23a R18



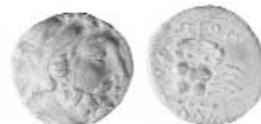
06 23A,a RAa



07 24a R19



07 26a R20



07 27c R21

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08 28a R22



09 29a R23



09 30a R24



010 31a R23



010 32b R24



011 33b R25



011 34a R26



012 35a R26



- 36b -



010 37a R27



011 38a R27



011* 39a R28



012 40a R28



013 41a R29



0- 42a R30



011 43a, a R28a



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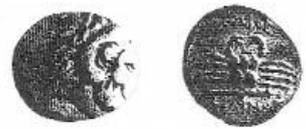
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014 51a R36



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016 54b R38



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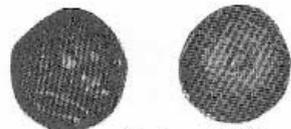
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013 60a R43



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018 61d R43



018 62c R44



019 63a R42



019 64a R44



019 65a R45



020 66a R45



021 67a R46

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022 68b R47



022 69a R48



023 70a R49



018 72a R50



018 73a R51



018 74a R52



019 75a R52



019 76a R53



019 77a R54



019 78a R55



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022 82a R56



022 83a R57



023 84a R58



023 85b R59



023 86b R60



024 87b R61



025 88b R62



026 89a R63



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027 92b R65



028 93a R65



028 95a R66



028 95b R66



029 96a R67



030 97a R68



031 98a R69



032 99a R70



033* 100a R71*

XIII. ISSUE



01 1a R1



02 2b R2



03 3a R3



03 4a R4



03 5a R5



03 7a R6



03 8b R7



03 9a R8



04 10a R8



06 13a R11



06 14b R12



07 15b R13



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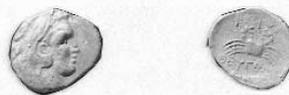
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010 25b - R21



010 26a R22



011 27a R22



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027 75a R53



027 76a R54



027 77a R55



027 78a R56



0- 79a R53



026 81a R57



028 82a R57



028 83a R58



029 84b R58



0- 85a R58



030 86a R59



030 87b R60



031 88a R59



031 89a R60



031 90a R61



031 91a R62



032 92a R62



032 93a R63



033 94b R62



033 95a R63

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034 96a R62



034 97b R63



035 98d R63



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035 100b R64



035 101b R65



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030 104b R66



030 105b R67



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035 113a R72



033 114a R72



033 115a R73



033 116a R74



033 117a R75



033 118a R76



034 120a R72



034 121a R75



034 122a R76





034 123a R77



036 125a R78



037 126a R79



037 127c R80



037 128a R81



038 130a R82



039 131a R83



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R1



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2c



R2



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R3



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4b



R4



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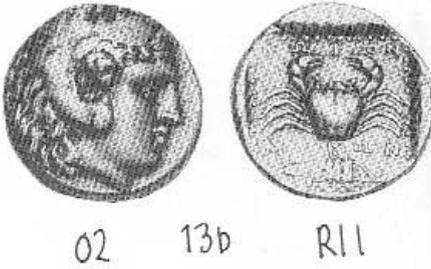
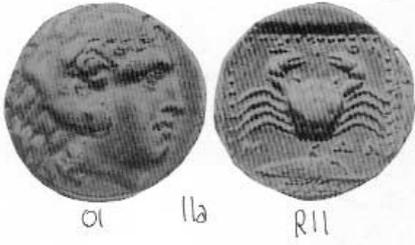


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07 21a



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08 22a



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08 23c



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08 24a



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09 25a



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010 26a



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010 27a



R22



010 28b



R23



010 29a



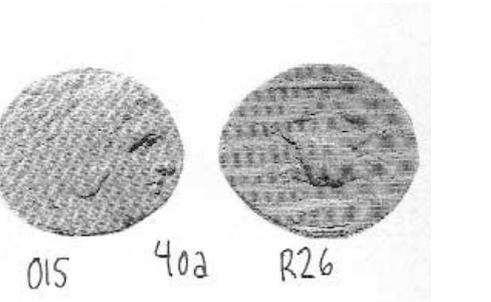
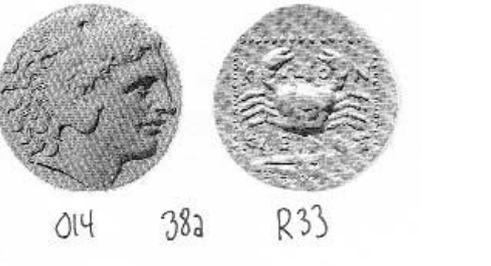
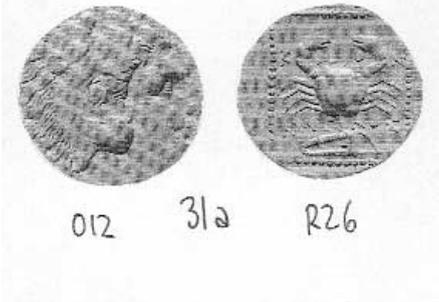
R24



011 30a



R25





015 41a



R27



015 42a



R35



016 43b



R25



016 44c



R36



011 45a



R37



012 46a



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012 47b



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013 48c



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013 49a



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013 50a



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014 52b



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015 53a



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015 54b



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015 55b



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015 56a



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016 57a



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011 58b



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012 59a



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013 60a



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014 61a



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014 62b



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014 63a



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014 64a



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014 65a



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014 66a



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014 67a



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014 68c



R55



014 69a



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015 70a



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015 71a



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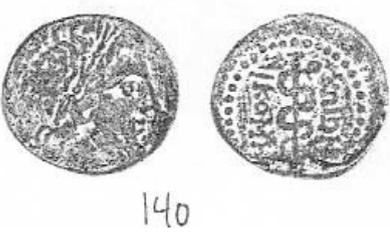
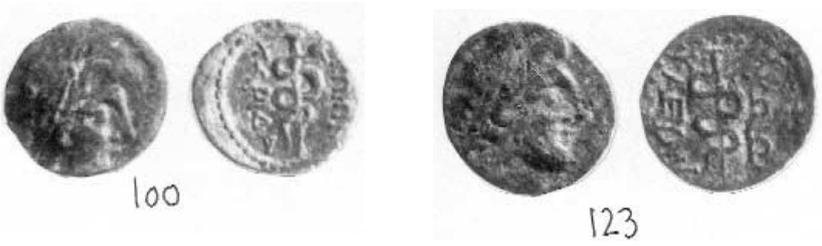
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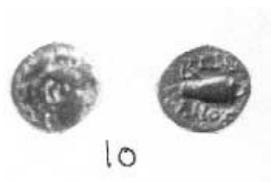


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01 1a



R1



02 2a



R2



03 3a



R3



04 4a



R4



05 5a



R5



06 6a



R6



07 7a



R7



08 8a



R8



09 9a



R9



010 10a



R10



010b 11a



R11



010c 11Aa



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011 12a



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012 13a



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013 14a



R14



014 15a



R15



015 16a



R16



016 17a



R17



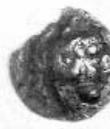
016b 17b



R17



018a



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01 1a R1



02 2a R2



02 3a R3



03 4a R4



03 4b R4



04 5a R5



05 6a R6



05 7a R7



06 8a R8



07 9a R8



07 10a R9



08 11a R10



09 12a R11



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012 16a R15



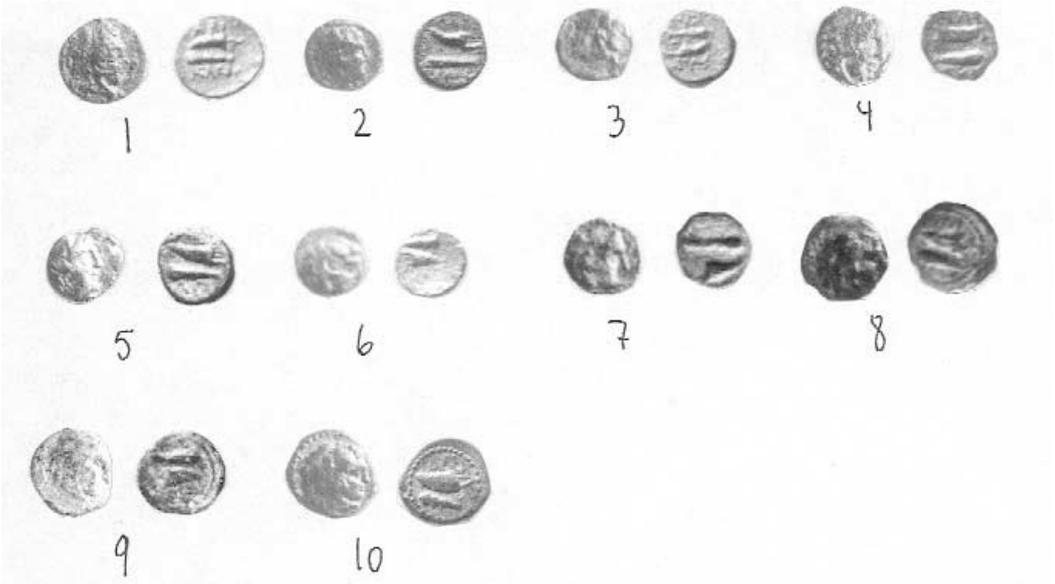
013 17a R16



014 18a R17



014 19a R18



XXVI. ISSUE

