

Abstract

The ubiquitous Viking warship is perhaps the most high-profile symbol of early medieval Scandinavians. The impressive craftsmanship and gracefully curved lines of surviving examples express in a powerful way the centrality of these vessels to Viking Age Scandinavian society. From ship archeology and other sources, it is known that medieval Scandinavians were closely tied to the waterways for both peaceful and bellicose pursuits.

Perhaps less well-known is how other Europeans in the North Sea region used the seas, rivers, and lakes in warfare. The common narrative of the Viking Age is the struggle of Christian empires of Northern Europe desperately resisting marauding Scandinavians who raided and plundered in their untouchably nimble ships. The reality is that ship forces of impressive size were able to be raised by the Carolingian Franks on the European continent as well as the Anglo-Saxons in Britain. At various times, these forces were used to great effect in offensive operations of their own.

The great advantages of the ship were speed and mobility. Even a sizeable force of ships could slip undetected onto a land's vast coastline and attack a target unexpectedly. If an overly-strong force were encountered on land, the crew could withdraw to their ships and make a speedy escape, or else sail around to attack the enemy's rear or flanks. The naval warrior of the Viking Age saw his vessel as a floating, highly-mobile base encampment from where operations began and ended.

The capability of these three regions in profile to raise effective ship forces was not equal, however. Scandinavian society, which for centuries had cultivated a heavily maritime-oriented culture, was able to produce more skilled crews more consistently than the Franks or Anglo-Saxons.

Although the Christian lands commanded arguably more developed systems of military recruitment in their territories, the prohibitive factor for recruiting seamen was knowledge of seas, tides, and currents. If one did not have the skills to survive the many perils of the North Sea region's disparate waterways, one could not hope to wage effective warfare. These skills were tied irrevocably to one's profession, dictated by the regional economy. Though Britain and Francia were not without a significant number of fishermen and traders, the strong-men of these regions ultimately could not draw on a sea-wise population equal to that of Scandinavia.

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Introduction

For many cultures around the world and in many time periods in history, the exploitation of waterways has played an inestimably great role. Even in modern times, the seas and rivers serve as important sources of nourishment as well as routes of transportation. In the Viking Age, much of life in Northern Europe (and by extension military activity) was defined by the use of these waterways. Cultures and economies in this region were shaped by seas, rivers, and lakes. Indeed, many in this period were familiar with the maritime world because they depended upon it for their communities to thrive. It is no surprise, then, that vessels would be used extensively for warfare as well as in transport and sustenance.

In many ways, the use of waterways in warfare was the hallmark of conflict in the Viking Age. The popular image of Norsemen in their ships striking Christian lands in daring surprise attacks is very much preserved in the modern consciousness. Perhaps less known is how ships were employed by men from these Christian lands, namely in Francia and Britain. The military forces of Anglo-Saxon Britain and Carolingian Francia are known to have been primarily land-based although, as this work will explain, significant naval forces were able to be raised and employed effectively in certain situations in these areas as well.

The description of this project has at times been met with surprise or puzzlement, even to those reasonably familiar with the period. The term ‘naval warfare’ tends to evoke thoughts of war at sea as it was known in the days of the Napoleonic Wars or during the struggles for naval supremacy that played out in various conflicts in the twentieth century. Since the Viking Age predates the existence of nationally-sponsored fleets or indeed nations, it is neither possible nor productive to attempt to erect a theory of naval warfare according to modern sensibilities and assumptions. Instead, it is only appropriate to reach conclusions based on contemporary sources while avoiding anachronistic conceptions of warfare in general.

Primary sources and secondary literature

The sparseness of primary sources regarding the use of ships in warfare makes a dedicated study anything but a low-hanging fruit. Perhaps for this reason, a comprehensive work on maritime conflict in the Viking Age has not yet been attempted. Instead, writers have mostly

concentrated on more specific aspects of naval warfare. In the case of Viking Age Scandinavia, much of what is claimed to be known is derived from later medieval Icelandic sources such as *Heimskringla* and saga literature. In *The Viking Art of War* for example, Paddy Griffith makes extensive use of these post-Viking Age accounts to construct a theory of warfare among Viking Age Scandinavians, including tactics related to the use of ships.¹ This is an anachronistic and obviously problematic approach. Much could have changed from the end of the Viking Age to when the Icelandic sagas were written down and any details regarding the use of ships in warfare is more likely to reflect a thirteenth century reality than a Viking Age one. Therefore, this work will mostly avoid referring to the Icelandic literature corpus, as tempting as might be.

For Scandinavian material, resources are largely limited to skaldic poetry, archeology, and runic inscriptions. These sources, as valuable as they are to any understanding of the Viking Age, require some level of expertise to correctly synthesize. For this reason, this work will rely on qualified commentators, using secondary literature such as Judith Jesch's *Ships and Men in the Late Viking Age*, especially in the realm of interpreting skaldic poetry and runic inscriptions.

However, there is no shortage of written evidence left behind by those the Scandinavians came into contact with, namely the Franks and Anglo-Saxons. For this reason, sources such as *The Anglo-Saxon Chronicle*, *The Royal Frankish Annals*, and *The Annals of St. Bertin*, though far from unbiased, will be the most drawn-upon materials for this thesis. Other useful ecclesiastical works are the ninth century *Annals of Fulda*, the tenth century *Annals of Flodoard of Reims*, Einhard's *Life of Charlemagne*, Rimbart's *Life of Ansgar (Vita Anskarii)*, and Adam of Bremen's *Deeds of the Bishops of Hamburg (Gesta Hammaburgensis ecclesiae pontificum)*.

For this thesis, many disparate works will be referenced for literature. They will be evaluated according to their relevance and synthesized into the project's narrative. Since all of the secondary sources used in this thesis have as their focus only a part of this work's subject, a general survey of the best available literature (rather than a strictly chronological narrative) is the best approach here.

Many, chiefly archeologists, have used as a starting point the ships themselves. The graceful lines of Norse vessels, first uncovered by excavations in the nineteenth century, have long inspired a fascination with how they were employed as well as their possible symbolic and

¹ Paddy Griffith, *The Viking Art of War*, (London: Greenhill Books, 1995).

ritual significance. Some scholars have built upon these archeological analyses to investigate how these vessels may have been used for both warfare and peaceful pursuits.

Norwegian archeologists Anton Brøgger and Haakon Shetelig, commonly associated with the Oseberg ship and other Norwegian ship finds, were long some of the most respected commentators on Viking Age vessels. Their culminating work, *The Viking Ships: Their Ancestry and Evolution* (*Vikingskipene: Deres forgjengere og etterfølgere*) was deferred to until recent decades, providing much of the relevant data and analysis for Norwegian ship finds such as the Gokstad, Oseberg, and Tune ships. Parts of Brøgger and Shetelig's narrative, however, strike the modern reader as dated and at times overly whimsical. Apart from taking saga literature at near face value in their analysis, many sweeping conclusions are often reached on somewhat shaky evidence. Shetelig, for example, compares the semi-mythological *Long Serpent* with battleships of the twentieth century. He presumes (uncritically) that the events of *Óláfs saga Tryggvasonar* are evidence for the existence of a kind of enormous flagship used by great chieftains that was capable of turning the tides of sea battles alone.² For this reason, only Brøgger and Shetelig's technical analysis of ship finds will be relevant for this work.

Between the 1950s and recent decades, there were few that took on the subject of Viking Age seafaring. Since playing a central role in the 1962 excavations of the eleventh century Skuldelev ships from Roskilde fjord, Crumlin-Pedersen was undoubtedly the foremost researcher on Viking Age ships (especially in Denmark) and was involved in much insightful commentary on various maritime matters in the period, to include trade, harbors, and regional trends in ship design over time. From then until recent decades, Ole-Crumlin Pedersen released some of the most authoritative material on Viking Age ships from an archeological point of view. Crumlin-Pedersen's work filled in much-needed data to the picture of Scandinavian shipbuilding, doing detailed analyses on southern Scandinavian finds such as at Skuldelev and Hedeby (in Schleswig, Germany).

Crumlin-Pedersen was notable for his analysis of construction techniques, tracing their development over time. From this, he hypothesized the possible functions of various ship types, putting forth that ships became more specialized toward the end of the Viking Age. He also connected various features of ships with ethnic groups from all around Northern Europe. For

² A.W. Brøgger and Haakon Shetelig, *The Viking Ships: Their Ancestry and Evolution*, (Oslo: Dreyers Forlag, 1951), 144.

this, Crumlin-Pedersen seems to have built somewhat on the extensive work of Detlev Ellmers, among the foremost archeologists in Germany, founder of the German Shipping Museum, and a leading analyst of Continental ship finds.

Ship archeology in the Viking period is especially poor on the Continent and in Britain and the few important finds have received much less attention than those in Scandinavia. In his 1972 work *Frühmittelalterliche Handelsschifffahrt in Mittel- und Nordeuropa*, Ellmers gave an expansive account of waterborne traffic in the North Sea region, using archeological finds of ships and harbor sites with a focus on central and northern Europe. From this, Ellmers theorized likely trade routes, cargoes, and frequency of travel, and outlined the complex relationships between land-based trade and trade across seas and river systems. He came to the conclusion that as trade routes became more regulated and stratified on the Continent, water bound trade in the North Sea, linked to land by sea-oriented trading centers, rose in prominence. Much of the useful insight used for this work into the scarce Continental and Anglo-Saxon ship finds is derived from Ellmers' commentary and analysis.

Although an understanding of ship finds and their context is essential to understanding maritime warfare in the Viking Age, other factors need to be accounted for in order to construct a complete theoretical framework. As stated, most writers commenting on naval warfare in this period have chosen more specific aspects to focus on rather than casting a wider net, as this work does. From the beginning of the nineties to the present, there have been several works published on the subject of medieval conflict. However, few have undertaken analyses of maritime warfare in the Middle Ages, though few share the same geographical or temporal parameters as this thesis.

Susan Rose is among the few writers that has taken on the subject of pre-modern naval warfare. Her 2001 book *Medieval Naval Warfare: 1000-1500* is mostly oriented toward more complex, centrally-organized maritime forces in the North Sea and Mediterranean. Accordingly, Rose directs most of her attention toward post-Viking Age material which gives stronger evidence for centrally organized fleets. The analysis, while only thinly covering the period in question, provides useful albeit very general insights into broad realities of using wooden rowing and sailing ships in the medieval period.

The same year, *Early Carolingian Warfare: Prelude to Empire* was released by Bernard S. Bachrach. This work covers the recruitment, training, and conduct of warfare in the early

Carolingian realm. Here, Bachrach makes a case for Frankish continuity from Roman times, citing the complexity and effectiveness of Carolingian military organization. Included in this book is an appendix examining naval assets that the Carolingians may have employed in the period directly before the rule of Charlemagne. Though this slightly predates the time period of this thesis, it is nonetheless valuable in an investigation recruitment methods may have been used to gather ship forces in the late eighth and early ninth centuries.

War at Sea in the Middle Ages and the Renaissance, a collection of articles published in 2003 and edited by historians John Hattendorf and Richard Unger, is another work that takes the high and late medieval period as the main focus. As a result of its focus on later periods, only the introductory piece written by Hattendorf is worthy of mention here. Here, Hattendorf evaluates the potential application of the nineteenth century American naval theorist A.T. Mahan to study of medieval maritime warfare. He explains that although Mahan had many accurate conclusions about naval power in his own time, his concepts were geopolitical and tailored to navies of modern nations with, among other things, advanced systems of taxation, command, and supply. Therefore, they are not particularly applicable to study of pre-modern maritime forces. It is mainly for this reason that the theories of Mahan will not be brought up in this thesis.

There are a few works published in recent years that come closer to the subject, time period, and aims of this work. In his 1991 book *Dark Age Naval Power: A re-assessment of Frankish and Anglo-Saxon Seafaring Activity*, John Haywood hypothesizes that the sail was available to Germanic peoples as early as the dawn of the first millennium and that the Viking Age was simply a part of a long-running cycle of raids, invasions, and settlements. He examined closely the naval capabilities of Charlemagne and Louis the Pious including their efforts at defense, coming to the conclusion that these were largely successful in warding off Viking attacks in the late eighth and early ninth centuries.

In 1998, naval historian N.A.M. Rodger, a prominent writer on the British navy, contributed among the most expansive works on the subject. In *Safeguard of the Sea: A Naval History of Britain*, Rodger uses as a starting point the naval forces of the seventh century Anglo-Saxons and gives a thorough account of maritime military history through to the seventeenth century. In the first two chapters of his narrative, he creates a picture of Anglo-Saxon Britain (with the kingdom of Wessex as its central point of power) that was forced to erect ever more potent and expansive naval administration to stem the tide of foreign invasion.

Among the most helpful literature used in this thesis has been Judith Jesch's *Ships and Men in the Late Viking Age: The Vocabulary of Runic Inscriptions and Skaldic Verse* (published in 2001). As mentioned, Jesch provides an in-depth analysis of two of our most estimable Scandinavian sources from the Viking Age. She synthesizes the skaldic corpus and the evidence of runic inscriptions, giving insight into seafaring as contemporary Scandinavians knew it. This evidence also gives an impression of a Scandinavian society that was largely shaped by the sea and indeed depended upon it for travel, warfare, and trade.

Of note to this thesis, archeologist Gunilla Larsson has contributed to the discussion of maritime warfare in her 2007 thesis *Ship and Society: Maritime Ideology in Late Iron Age Sweden*. Here, Larsson hypothesizes that society in eastern Scandinavia revolved around ships and their symbolic and ritual value as an organizing principle. She argues for an Iron Age establishment of highly developed organization and administration (including an early creation of the much-discussed naval levy, the *leiðangr*) and that this old-style of land division only began to disappear in the High Middle Ages. A second pillar of Larsson's narrative is the symbolic and religious aspect of vessels in Scandinavia that served to mold this society and bind it together. She maintains the now highly disputed view that pre-Christian Scandinavian society was largely democratic and that all free men were armed and empowered to take their grievances to the *Ting*.

Larsson's evidence is derived largely from archeological material, mainly the remains of vessels. "In this work," she explains, "I will focus on the possibilities in the archeological material to find traces of social, religious, political and other aspects of a reality in the past, though with a theoretical awareness of possible biases. The past is within reach, even though we have to formulate patterns and structures we observe with our own language."³

This method is prone to problems. Chief among them is the tendency for 'wishful thinking' to creep into the scholar's narrative, where preconceived notions of the reality of the past cause the writer to reach conclusions that may not be strongly supported by the evidence. In one example, Larsson uses five lengthy chapters in an analysis of boat types (based in part on finds from well outside the time period of study) in order to establish that ships played a significant role in economy and transportation in late Iron Age Sweden. This is a fairly

³Gunilla Larsson, *Ship and Society: Maritime Ideology in Late Iron Age Sweden*, (Uppsala: Uppsala Universitet, 2007), 21.

established fact among most scholars. Larsson utilizes this evidence as a large portion her narrative, but it does little to prove her argument for a pre-Viking Age dating for a central societal/ military administration.⁴

This stands in contrast to Niels Lund, who has contributed much to the discussion of the *leiðangr* in recent decades. In his 1996 work *Lið, leding, og landværn: Hær og samfund i Danmark i ældre middelalder*, Lund argues that since the first written evidence for the *leiðangr* appears well after the Viking Age, it cannot be traced back to the late Iron Age, as Larsson contends. Even if a proto-national “levy” existed in this time period, it is highly unlikely that it did not undergo significant changes in the several centuries between the late Iron Age and the High Middle Ages. This work tends to lean more to the side of Lund, though it will not enter into an in-depth discussion of the dating of the *leiðangr*.

In 2010, historian Ryan Lavelle published *Alfred's Wars: Sources and Interpretations of Anglo-Saxon Warfare in the Viking Age*. This work gives a comprehensive, multi-disciplinary approach to many disparate facets of warfare in Anglo-Saxon Britain, including psychology, morale, ideology, and organization. Most relevant to this thesis is a significant chapter on naval organization. Here, Lavelle discusses the evidence for the raising of maritime forces in Britain, roughly from the ninth century reign of Alfred to the reign of Edward the Confessor in the eleventh. His work appears very much to build on the narratives of Hooper⁵ and Rodger, analyzing the various ways in which ship forces were recruited in Viking Age Britain. Lavelle, however, hypothesizes that land defenses likely played a greater role in coastal defense than once thought.

Objectives

This work is not the first to examine the role of ships in warfare in the Viking Age, although, as was explained earlier, its geographic and temporal scope is wider. The intention is to

⁴ There are many merits to Larsson's work, however. Another main facet of *Ship and Society* is a detailed discussion of the role of ship in symbolism and cult. Here, her interpretation of archeological remains is generally more reasonable and more often backed by diverse sources.

⁵ Nicholas Hooper, "Some Observations on the Navy in Late Anglo-Saxon England," *Alfred's Wars: Sources and Interpretations of Anglo-Saxon Warfare in the Viking Age*, ed. Ryan Lavelle (Woodbridge: The Boydell Press, 2010).

bring three regions into discussion: Scandinavia, Britain, and Francia, and to evaluate the conduct of naval warfare in these areas. For the purposes of this thesis, these areas will be known collectively as the North Sea region. Although parts of eastern Scandinavia can be said to be closer to the Baltic Sea than the North Sea, its importance as a part of the Scandinavian cultural region gives cause for its inclusion here. The case is the same with the inland river systems of these regions (for although they are not technically on the North Sea, they are still connected to this water body and can be considered roughly adjacent.)

This thesis will seek to achieve a few main objectives:

- 1.) The first among these is to examine how environmental and possibly cultural factors influenced (and were influenced by) the way ships were used in the pursuit of warfare.
- 2.) Another goal is to look at what role societal organization may have had in the gathering and organization of maritime forces.
- 3.) Just as important as how ships and crews were assembled is how they behaved in warfare. This work will seek to evaluate the ways in which ship forces were most commonly employed and discuss their relative effectiveness.
- 4.) A final and perhaps tertiary goal of this work is to re-examine previous conceptions of the ship-to-ship battle. For this, the corpus of skaldic poetry will be heavily drawn upon, consciously omitting saga literature. Some have come to believe (and, perhaps not interested in the gritty details of organized violence in the middle ages) battles at sea to have been arranged to be as much like land battles as possible. Although this thesis will not attempt to radically revise the common consensus of scholars, there are some aspects of battles afloat that deserve a second look.

Method

This work is a comparative analysis of three main regions. Scandinavia, Francia, and Britain will be investigated and compared. Simultaneously, it is interdisciplinary in approach. As much as possible, contemporary sources will be used to illustrate the points of this thesis. However, a variety of disciplines are required to achieve its sometimes disparate and wide-reaching aims. As explained, the historian is not necessarily equipped to give insight into Viking Age ship technology and pre-modern navigation. For this, works of archeologists will be

deferred to. Although some works such as the *Old English Orosius* can be digested and read critically for facts about early medieval seafaring, the specialist insight of maritime scholars is invaluable to the understanding of the land-bound researcher.

Much of the basis for research in the second and third chapters of this work shall be ecclesiastical records, namely the *Anglo-Saxon Chronicle*, *Royal Frankish Annals*, and the *Annals of St. Bertin*. As mentioned, sources requiring a high degree of specialization in linguistics and philology, to include skaldic poetry and runology, will be taken from qualified works such as Jesch's and others'. These, along with an independently analyzed commentary from the body of secondary literature (the major works have been described above), shall form the main source of argument.

In the narrative of this project, several terms will be used whose precise meaning are not necessarily apparent. Since the use of modern military jargon can lead to confusion or imply false comparisons, terms for leaders or commanders of ships or groups of ships should be established. Perhaps an obvious starting point in a definition of terms for this thesis should be a contemplation of the expression *naval warfare*. Central to this is the distinction between land-based warfare and conflict taking place mainly at sea. This, however, is too complex to outline here. Instead, it will be discussed in-depth in the third chapter.

Prominent among terms used here will be *steersman*. This word is chosen because it is more contemporary to the time period of study and one that seems to have been used in both Britain and Scandinavia. "To take the helm was to take command," N.A.M. Rodger comments, "for in all the northern countries the steersman was the captain of the ship."⁶ Present in the Viking Age Old Norse corpus is the term *stýrimaðr*, which likely implies the owner of a ship with strong connotations of prestigious social rank.⁷ For this project, *steersman* should be taken to mean an individual in overall command of a ship.

In the course of this thesis, there will be discussion of *military leaders* and their role in making decisions on the tactical and strategic level. This is intended to be a very general term, meaning an individual or individuals involved in planning or direction of any military actions. This begs the need for clarifying other terminology such as *strategy* and *tactics*. *Strategy* can be

⁶ N.A.M. Rodger, *The Safeguard of the Sea: A Naval History of Britain*, (London: W.W. Norton & Company, 1998), 29, 20.

⁷ Judith Jesch, *Ships and Men in the Late Viking Age: The Vocabulary of Runic Inscriptions and Skaldic Verse*, (Woodbridge: The Boydell Press, 2001), 181.

defined as, “the skill of making or carrying out plans to achieve a goal.”⁸ In the context of military actions, strategy should be considered more or less long term. Conversely, *tactics* are a set of standard techniques, perhaps derived from long term experience, that are repeatedly employed to achieve more short term objectives.

Summary of Chapters

In any maritime society, people were obliged to overcome and master their environment in order for their communities to flourish. The first chapter of this thesis will demonstrate how waterways, though at times a threatening and risky option for travel, could be traversed by contemporary mariners. It will look at how general seafaring may have been conducted and, by extension, could have been conducted in a military context (as will be discussed, the line between ‘military’ and ‘non-military’ was to a great extent blurred). An important facet of this mastering of the environment was the development of technologies, in this case ship design, to best negotiate the North Sea area. It will be demonstrated that people of various regions managed to improve these designs over the period and tailor them to their specific needs.

Another main objective of this project (and the subject of chapter 2) is to examine the raising of ship-bound military forces. For these three selected areas of the North Sea region, environmental and social factors will be traced in an attempt to see their impact on how ships and crews were gathered for the persecution of warfare. Certain past research has given attention only to what may be called centrally-organized maritime military formations. Some of these works lean on post-Viking Age materials as evidence for this type of organization. This project will seek instead to evaluate mustering and naval formations exclusively as they appear in contemporary sources.

The third and culminating chapter of this thesis will be analysis of how people employed ships in battle. It will evaluate strategies, tactics, and discuss their relative success and effectiveness. Focus will be drawn mainly to battle strategy on the small- to medium-scale rather than commenting on campaign strategies of the scale of, for example, the ninth century invasion of Britain by the Great Heathen Army. An exception to this might be made in this project’s evaluation of Charlemagne’s eighth century campaigns. Though they could be considered major

⁸ Merriam-Webster, "Strategy." Accessed May 2, 2014. <http://www.merriam-webster.com/dictionary/strategy>.

in the context of the Early Middle Ages, the exact numbers of men and ships used in these is not revealed by contemporary sources and is no small matter of debate. In any case, this thesis will focus on the role of ship forces in these engagements.

Although the Viking Age can be described as an era of increasing trade and, perhaps, the formation proto-states, it is remembered largely as a time of great violence. As shall be seen, the maritime world of the North Sea area was very often utilized as a battlespace. No other medium of travel, even the horse, was capable of moving armed men with the same speed and surprise as the ship.

Chapter 1: Navigating Northern European Waters

As discussed, natural conditions of specific regions in the North Sea region were central to molding cultural and technological developments that were central to the use of ships in warfare. Specifically, it will look at how contemporary mariners may have negotiated waterways and how they overcame the substantial risks involved in oversea travel to reap its numerous advantages. It will then examine what types of vessels that steersmen had at their disposal and what these vessels were likely capable of in the Northern European waterways they commonly plied.

Natural Conditions of the Area of Study

When undertaking an analysis of military activities at sea in the Viking Age, it is important to examine certain physical characteristics within the geographical, or more importantly hydrographical parameters of this study. There exist many different water regions in Northern Europe and each have a potentially great influence on the way ships were utilized there. Though this project is not focused on early medieval conceptions of geography and navigation, there should nevertheless be erected an historical “area of operations” for steersmen who wished to utilize ships to achieve their aims.

In much of Northern Europe, the sea played an inestimably major role in the lives of both common people and rulers, as it still does today. A maritime culture can be defined by three criteria: “easy access to the sea by river or over the coast, dependence on the transport of goods and people by boat,” and “dependence on fishing and hunting aquatic animals.” In the chosen region of this study, many people lived in close proximity to major waterways and qualify at least one of these categories. Whether one lived by the open sea, a glacial fjord, a lake, or a navigable river, water represented a vital part of people’s lives, not only for subsistence and nutrition but for transportation, trade, and warfare. As N.A.M Rodger explained of the North Sea region, “the three seas which united the three worlds were the natural channels of war as well as trade; it was by sea that the representatives of the three worlds came to confront one another.”¹

¹ Rodger, *Safeguard of the Seas*, 2.

This maritime culture can be justified with a comparison of the region known today as Norway to other lands, even adjacent areas such as modern Sweden or Denmark. One does not need to examine a topographic map of Norway for long to appreciate the rugged and mountainous terrain that defines this region apart from the flatter Sweden. Waterways play an especially central role on Norway's western coast, where craggy ridges and mountains crowd close to deep-cutting glacial fjords making for small, precious terraces of arable land. In such an environment, the sea is vital to supporting the population's needs with caught fish and other marine life. "All the old dwelling sites of the most remote Norwegian antiquity lie by the sea," commented Brøgger and Shetelig, "from which it follows that all early settlement of our country presupposes the boat, as does its coast-wise economic life, thousands of years old."²

The three main sea regions in Northern Europe (referred to by Rodger) are distinct with varied characteristics: the Baltic (brackish and practically non-tidal), the North Sea (stormy and strongly influenced by tides), and the northern Atlantic (subject to strong winds and swells). Within these sea regions, Crumlin-Pedersen also discusses seven coastal regions, but only the most relevant of both will be listed here.

The "Central Gateway between East and West" is the straight separating modern Denmark from Sweden and Norway. The region encompasses the Danish archipelago as well as the straits of the Kattegat and Skagerrak. It is the main sea passageway from the Baltic and Eastern Europe to the North Sea, the Atlantic, and Western Europe. In the eleventh century, Adam of Bremen described the passage between Sjælland and the island of Fyn as "naturally tempestuous" and infested with pirates.³ This region has long been of great import as it serves as a natural chokepoint, allowing some measure of control of trade and transport.⁴

The "Northern Way" is the western Atlantic coastline of Norway, which is composed of mostly rocky, fjord-cut landscape with little or no shore. "The name Norway," Crumlin-Pedersen mentions, "is a striking demonstration of the fact that in the past, practically all settlements here were oriented towards the sea with maritime transport as a prerequisite for contact and

² Brøgger and Shetelig, *The Viking Ships*, 9.

³ *History of the Archbishops of Hamburg-Bremen*, trans. Francis J Tschan (New York: Columbia University Press: 1959), 189.

⁴ Ole Crumlin-Pedersen, *Archaeology and the Sea in Scandinavia and Britain*. (Roskilde: Roskilde Viking Ship Museum, 2010), 17.

communication, internally as well as externally.”⁵ This rugged landscape was also the main reason that most of economic, political, and military life was oriented toward the sea.⁶

In Western Europe, Crumlin-Pedersen mentions three different coastal regions. “The Gateway to Western Central Europe” represents the coastline of Frisia, the Netherlands, and Belgium and is the outlet of many important river systems that reach deep into central-western Europe.⁷ In the sources documenting naval warfare in this period, Frisians in particular are prominently and frequently mentioned as shipbuilders and mariners, which comes as little surprise considering the fact that the economy of the Northern and Netherlands Germany are to this day oriented toward oversea trade and fishing. As the rivers of this region (namely the Rhine, Weser, and Elbe) penetrate deep into the Continent, they served as the focal point of many of Charlemagne’s efforts at naval defense. Conversely, these waterways became battlegrounds after the Emperor’s death, both between his successors in Frankish civil wars and also between Franks and marauding Scandinavians.

“The English Channel Region” encompasses the coasts of southern and western Britain as well as northern France (Normandy and Brittany) and is characterized by outlets of major rivers (such as the Thames, Humber, and Severn) and many bays which can offer shelter to ships. For most of the year, water flows into the Channel from the Atlantic Ocean, though this flow may be reversed by strong easterly winds from the North Sea. Perhaps its most defining and potential dangerous characteristic is its propensity to extremely rapid and seemingly unpredictable changes in current at all times of the year.⁸

The strength and speed of these currents sometimes was a major factor in the outcome of battles at sea, as in 897 when the ships of Alfred the Great fought with Scandinavian raiders in southern England between the Isle of Wight and Devon. Shifting tides grounded some of the Anglo-Saxons’ ships, allowing the Danes to inflict great losses on them. The fortunes of the battle changed as the Scandinavian raiders attempted to flee the area. The Danes were severely wounded in the fight and were driven ashore, captured, and eventually hanged.⁹ It is perhaps safe

⁵ Crumlin-Pedersen, *Archaeology and the Sea*, 17.

⁶ Axel Christopherson, “Ports and Trade in Norway During the Transition to Historical Time,” in *Aspects of Maritime Scandinavia AD 200 – 1200: Proceedings of the Nordic Seminar on Maritime Aspects of Archaeology, Roskilde, 13th-15th March, 1989*, ed. Ole Crumlin-Pedersen (Roskilde Viking Ship Museum: Roskilde, 1991), 159.

⁷ Crumlin-Pedersen, *Archaeology and the Sea*, 17.

⁸ Rhodes W. Fairbridge, *The Encyclopedia of Oceanography*, (New York: Reinhold Publishing, 1966), 260.

⁹ *The Anglo-Saxon Chronicle*, trans. G. N. Garmonsway (London: Dent, 1953), 91.

to assume that Scandinavian raiders, despite being accomplished seafarers, were at a distinct disadvantage when traversing these treacherous tidal areas. It would seem that only locals with long experience sailing and rowing these waters could be familiar with their idiosyncrasies.

Crumlin-Pedersen defined the region “the Western-most Outposts,” i.e. Scotland and the islands of Ireland, Shetland, Orkney, the Hebrides, and the Faeroes. This area is in general very exposed to the sea and has little foreshore.¹⁰ Since this is the case, there are only a few choice areas to ground ships, making harbors and ports especially important for sea travel in these areas. Situated in the midst of the North Sea, this region is particularly vulnerable to its weather conditions. Storms, most frequent in winter, generally pass from the western part of the North Sea to the eastern part. All year round, a westerly wind prevails in the North Sea, but is significantly stronger in winter.¹¹

Anyone familiar with seafaring surely knew of these weather patterns in the Viking Age and planned their voyages accordingly. In the spring of 800 (at some time before Easter), Charlemagne made the decision to set out coastal guards and defensive fleets a year after the first recorded Viking attack on Frankish soil.¹² That Charlemagne did this in early spring is of note. It seems that he was keen to have these defenses in place before summer, the season when most seafaring activity could be carried out most safely and presumably when seaborne raiders would be most expected to strike.

In addition to listing major coastal areas and seas, inland waterways should be mentioned as a major site for military activity. Though the term “naval warfare” is sometime thought to preclude all but military activity at sea, the use of ships on rivers is equally important. This is especially true when discussing military operations within continental Europe. The Carolingian Empire is a prime example of a land power that made good use of ships in the course of various recorded campaigns, as shall be demonstrated later. Major rivers such as the Rhine, Weser, Oder, and Seine link the coast to inland areas, just as deep fjords and large lakes do in Scandinavia.

As anyone with a passing knowledge of the Vikings knows, Scandinavian armies in their vessels utilized inland waterways to great advantage in campaigns large and small in Britain, Francia, and elsewhere. Though Scandinavian military activities in the east (namely in Rus) are

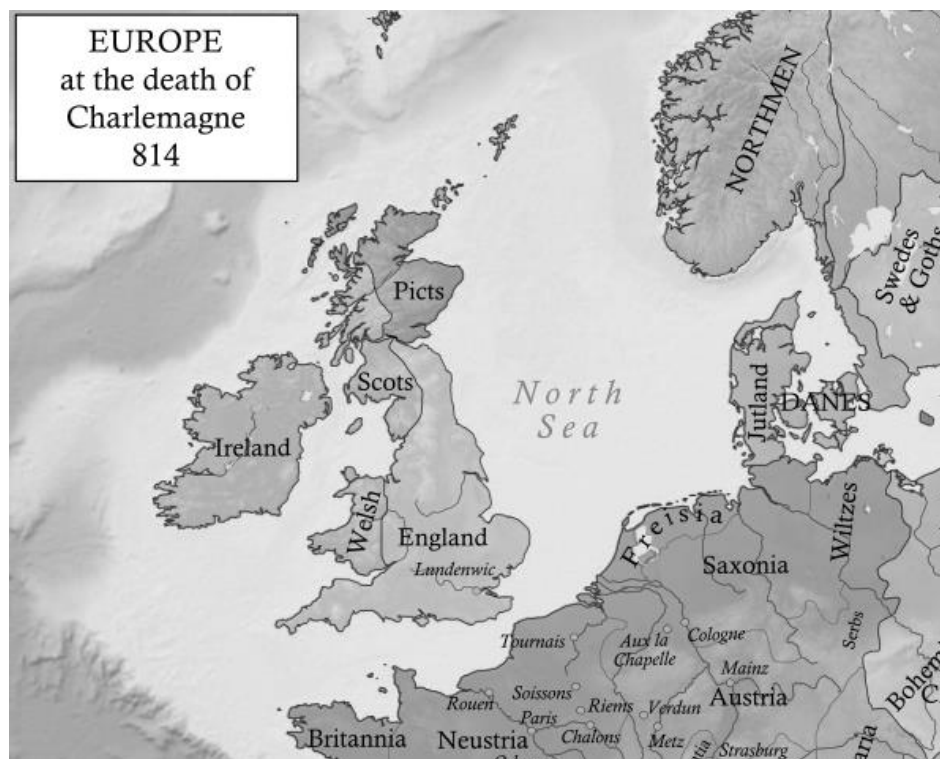
¹⁰ Crumlin-Pedersen, *Archaeology and the Sea*, 17.

¹¹ Fairbridge, *Encyclopedia of Archeology*, 544.

¹² *Royal Frankish Annals*, in “Carolingian Chronicles: Royal Frankish Annals and Nithard's Histories,” trans. Bernhard Walter Scholz (Ann Arbor: University of Michigan Press, 1972), 78.

not the focus of this project, it should be mentioned that riverine transport was the main avenue for trade and warfare here.

Whether Scandinavian rivers were used to similar effect in conflicts is less clear. As illustrated by evidence presented by Gunilla Larsson, access to rivers and inland waterways greatly influenced the economy, culture, and ship building traditions of the Lake Mälaren region.¹³ It can be said with certainty, however, that other types of inland waterways such as deep fjords and expansive lakes, a defining feature of the landscape in Sweden and Norway, constituted major transportation routes where thick forest and rocky terrain made overland transport a significant hindrance. According to Adam of Bremen, “the densely wooded highlands and very rugged mountains, over which the road from Scania into Götaland necessarily runs, make one doubt whether perils by land are more easily avoided than perils by sea.”¹⁴



Hel-hama, Wikipedia, "9th Century." Last modified January 02, 2013. Accessed May 8, 2014.
http://en.wikipedia.org/wiki/9th_century.

¹³ Larsson, *Ship and Society*, 151.

¹⁴ *Archbishops of Hamburg-Bremen*, trans. Tschan, 191.

Viking Age steersmen were surely not solely preoccupied with natural features in the course of their journeys. Ships most often followed fixed patterns of travel, often between human settlements, as evidenced by the patterns of wrecks found from the Viking Age and later periods.¹⁵ The North Sea area was dotted with many harbors and ports. These were settlements whose main reason of existence was the sea, whether in the form of trade, fishing, or military significance. Very likely, large ports depended on all of these to thrive. This work will briefly discuss the role that these settlements played in the Viking Age economic and political world and why they are important in any study of naval warfare.

Some conditions needed to be met to allow for the growth of a significant port. Perhaps the first among these is safety from weather. The port area needed to be sufficiently sheltered from storms and violent weather so that ships could be safely docked there. The Norwegian coast offers many of these in the form of offshore island chains that provide shelter from dangerously high North Sea waves. Here, along with the east coast of Scotland and northern England, the land is rocky and steeply shelves, leaving inland areas and a few more gradually sloping beaches available for the construction of harbors.¹⁶

Ports also needed to be located in an area with sufficient economic affluence, for the simple reason that in order to participate in significant trade, one must have some goods of value to offer in an exchange. As Ulf Näsman has noted, major ports are very often located in regions with high agricultural output. “Thus, good subsistence conditions are the precondition for taking part in long-distance exchange. A productive agriculture is the basis of a large, rich population.”¹⁷ For this reason, ports and harbors were often situated in regions controlled by magnates with strong economic (and by extension military) power.

Harbors needed to be situated in a position where goods could be efficiently conducted from the sea abroad to deep into the mainland, and visa-versa. As explained by Axel

¹⁵ Ole Crumlin-Pedersen, “Ship Types and Sizes: AD 800-1400,” in *Aspects of Maritime Scandinavia AD 200 – 1200: Proceedings of the Nordic Seminar on Maritime Aspects of Archaeology, Roskilde, 13th-15th March, 1989*, ed. Ole Crumlin-Pedersen (Roskilde Viking Ship Museum: Roskilde, 1991), 73.

¹⁶ Dirk Meier, *Seafarers, Merchants, and Pirates in the Middle Ages*, (Woodbridge: The Boydell Press, 2006), 54.

¹⁷ Ulf Näsman, “Sea Trade During the Scandinavian Iron Age: its Character, Commodities, and Routes,” in *Aspects of Maritime Scandinavia AD 200 – 1200: Proceedings of the Nordic Seminar on Maritime Aspects of Archaeology, Roskilde, 13th-15th March, 1989*, ed. Ole Crumlin-Pedersen (Roskilde Viking Ship Museum: Roskilde, 1991), 27.

Christophersen, “there was a natural development of centres on the boundary between the coastal and inland areas, and the existence of these centres was based on cultural and economic contact with the outside world. The centres provided a steady flow of cultural impulses, utility articles, and valuables up and down the coast, as well as to inland areas. The inland areas perpetuated this flow, by producing goods in demand in other parts of the country and abroad.”¹⁸

As centers of concentrated wealth and valuables, it comes as no surprise that these merchant harbors were desirable and common targets for military actions staged from the sea. In 808, the Danish king Godfred attacked Reric and destroyed the town.¹⁹ *Vita Anskarii* (the ninth century *Life of St. Ansgar*) tells of a King Anoundus who had been driven into exile among the Danes. In 851, in order to garner support for his claim to the Swedish throne, he apparently “offered [the Danes] Birka...because it contained many rich merchants, and a large amount of goods and money.” Anoundus later led an expedition with 32 ships and launched a surprise attack on Birka.²⁰

In addition to the major ports commonly mentioned by primary sources, some scholars such as Dan Carlsson have argued that many more, perhaps smaller harbors existed to serve smaller agricultural and fishing communities.²¹ This is not unlikely. These modest harbor sites would have been attractive places for ships travelling long distances to stop to purchase provisions and perhaps even conduct trade with the locals. It may have been an enticing alternative to going ashore in wilderness areas where foraging and hunting may or may not produce results.

Testimonies of Oversea Travel

Though a modern construction of Northern Europe’s hydrography is useful in this study, an understanding of how contemporary mariners reckoned the region’s waterways is perhaps more important to detail. When a Norwegian merchant and landowner, whose name is recorded

¹⁸ Axel Christopherson, “Ports and Trade in Norway,” in *Aspects of Maritime Scandinavia AD 200 – 1200: Proceedings of the Nordic Seminar on Maritime Aspects of Archaeology, Roskilde, 13th-15th March, 1989*, ed. Ole Crumlin-Pedersen (Roskilde Viking Ship Museum: Roskilde, 1991), 159.

¹⁹ *Royal Frankish Annals*, trans. Scholz, 88.

²⁰ *Anskar. The Apostle of the North, 801-865*, trans. Charles H. Robinson (London: SPG, 1921), 65.

²¹ Dan Carlsson, “Harbours and Trading Places on Gotland: AD 600-1000,” in *Aspects of Maritime Scandinavia AD 200 – 1200: Proceedings of the Nordic Seminar on Maritime Aspects of Archaeology, Roskilde, 13th-15th March, 1989*, ed. Ole Crumlin-Pedersen (Roskilde Viking Ship Museum: Roskilde, 1991), 145.

as Ohthere, came to the Anglo-Saxon court of King Alfred in the late ninth century, his knowledge of Northern European waterways was written down. This was added to the corpus of geographical knowledge compiled in Orosius' *Historiae adversus paganos*, originally an early fifth century work.

From the account of Ohthere's journeys, some sense of oversea space and distance can be discerned from his testimony of how long it took him to sail to the various places he visited. Ohthere, who claimed to live in "Halogland" (probably somewhere in the northern part of Norway, perhaps near Tromsø), described two journeys: one that took him far north over the Barents Sea and down south again into a "large river" which he described as being settled by a people he called *Beormas* (likely the White Sea). His second journey was from his home in Northern Norway to Hedeby in Southern Denmark.

In his northern expedition ("he chiefly went there, in addition to surveying the land, for the walruses, because they have very fine bone in their teeth")²², Ohthere claims that it took him six days' sailing north before the land began to turn east. After four more days of sailing with the coast on his starboard side, he had to wait for a wind from the north to continue his journey (it can be assumed that he had sailed far enough into the Barents Sea that he was now heading south toward modern Vardø or perhaps Murmansk.) Ohthere then sailed south for five days before encountering "a large river there [stretching] up into the land." According to his testimony (or that of Alfred's scribes), the journey took Ohthere fifteen days altogether.²³

Describing his southern journey, Ohthere said that from his home in "Halogland," one could not reach "Sciringes healh" in less than one month.²⁴ The physical location of Sciringes healh is likely Kaupang, located in modern Vestfold, Norway (The *Orosius* records that it was "a port in the southern part of the land"). From here, he sails through Skagerrak and the Kattegat, through the Danish archipelago, and into the Baltic (Crumlin-Pedersen's "Central Gateway between East and West"). He describes the Baltic as "a very great sea [that] penetrates up into the land; it is broader than any man may see over." This stretch from Sciringes healh south to Hedeby (now in Schleswig-Holstein, Germany.) took five days.²⁵

²² *Ohthere's Voyages : a Late 9th-century Account of Voyages Along the Coasts of Norway and Denmark and its Cultural Context*, ed. Janet Bately and Anton Englert, (Roskilde: Roskilde Viking Ship Museum, 2007), 45.

²³ Bately & Englert, *Ohthere's Voyages*, 44-45.

²⁴ *Ibid*, 47.

²⁵ *Ibid*, 55.

Another account that follows directly after Ohthere's in the *Oriosis* is one attributed to a man named Wulfstan. Who Wulfstan was or whether he made the journey himself is subject to debate, but the sea voyage described gives a further valuable bit of information about oversea travel. "Wulfstan said that he travelled from the Heaths [Hedeby] to *Truso* in seven days and nights, [and] that the boat was all the way running under sail."²⁶ *Truso*, likely located just east of the mouth of the Vistula near modern Elbląg, Poland, is approximately 650 km away from the likely location of Hedeby (in a direct measurement; a contemporary seafarer would likely sail according to the direction of the wind and in anything but a straight line.) A theoretical course plotted on a map that more or less hugs the coastline measures approximately 450-500 nautical miles. Therefore, the crew sailed at an average of 64-71 nautical miles per day.

Had Wulfstan chosen a more direct course that did not so closely follow the contour of the land, this means of course that he did not cover as much distance per day in the attested journey to *Truso*. Indeed, sailing away from land would be the only safe way to sail at night. A more direct route could have been as short as 380 nautical miles, making for a speed of only fifty four nautical miles per twenty four hours if indeed the ship was "all the way running under sail." These calculations seem to agree with Detlev Ellmers' basic conclusion about the average speed of trade ships in the early Middle Ages. He theorized that an average speed of thirty nautical miles per day could be easily achieved if a ship sailed only by day and up to sixty if a ship sailed both day and night.²⁷

From the accounts of Wulfstan and Ohthere, there can be gleaned some basic realities about seafaring and navigation in the Viking Age. Though this is only a small survey of historically attested sea journeys for this period, one will notice that (despite the speculation above about Wulfstan's sailing to *Truso*) they likely stayed fairly close to shore throughout. As will be discussed in another chapter, the vast majority of military activities involving ships also took place in close proximity to shore. This is not surprising, since the vast majority of peaceful seafaring was done along the same routes used by vessels bent on war! There are a few obvious reasons for this strategy.

²⁶ Bately & Englert, *Ohthere's Voyages*, 48.

²⁷ Detlev Ellmers, *Frühmittelalterliche Handelsschiffahrt in Mittel- und Nordeuropa*, (Neumünster: Karl Wachholtz Verlag, 1972), 266.

The first of these is ease of navigation. Some scholars have postulated the use of primitive navigational instruments, though this will not be a point of discussion in this work. A much more common method of finding direction at sea must have been the use of coastal landmarks. Using peculiar features on land (either man-made or natural), a navigator could both get his bearings and get a sense of the speed of his vessel based on the time it took to travel from one landmark to the next.

Also, staying close to land meant that a crew could find a suitable sheltered place on land to forage, trade with local inhabitants, or camp, though this was undoubtedly a decision the crew or commander needed to make, as evidenced by Ohthere's testimony of his trip from his home in Northern Norway to southern Norway. "To [Sciringes healh] he said that it was not possible to sail on one month, if one camped at night and each day had a favorable wind."²⁸ This begs the mention of two points. First is that longer voyages (perhaps longer than a week) likely required regular portages to rest the crew and take on provisions, either scavenged, traded for, or stolen from the local shore.

A second vital consideration for anyone planning a sea voyage would be the disposition of the inhabitants living near the waters one intends to sail through. As Ohthere and his crew crested the northern reaches of Norway and sailed back south toward the White Sea, Alfred's scribe reports, "...a large river there stretched up into the land. Then they turned up into that river, because they dared not sail on past the river because of hostility, since the land was all settled on the other side of the river."²⁹ The decision of Ohthere and his crew to avoid the waters beyond this river indicates that perhaps they feared seaborne attack from the natives there (with whatever watercraft these people may have had at their disposal.) More likely, however, Ohthere was taking into account that he would *need* to go ashore sooner or later, and that it would be a risky prospect to venture into a region whose people had a less than friendly attitude toward them. Thus it may be said that where water-bound forces could sail was in some part dictated by the people living close to the shore of that particular maritime region, especially if those forces were not sufficiently strong in numbers to dominate the natives militarily, either on land or sea. This makes one wonder whether the journey attested to by Wulfstan from Hedeby to Truso was

²⁸ Bately & Englert, *Ohthere's Voyages*, 47.

²⁹ *Ibid*, 45.

affected by potential hostility of the Wendish natives residing nearby (“...the boat was all the way running under sail.”)³⁰

Another source which may help to understand standard sailing times in long-distance journeys is Rimbert’s *Vita Anskarii*. From *Schleswig* (Hedeby/ Haitabu), Ansgar sought to travel to Birka in southern Lake Malaren, Sweden. According to the account, he was on a ship for 20 days before he reached his destination.³¹ Assuming Ansgar’s vessel steered close to shore the entire journey, this was approximately 500 nautical miles (an average of 25 nautical miles per day). Here it will be noted that journey above attributed to Wulfstan was nearly the same distance, yet took only seven days “all the way running under sail.” If it is assumed that vessel that Ansgar travelled in stopped on land every night, it makes sense that Wulfstan’s voyage was over two times faster although the oversea distance was similar.

Weather and Disaster at Sea

An intimate knowledge of these waters’ disparate idiosyncrasies was essential to negotiating them with ships, yet weather at sea constantly represented potential peril. It is only until recent times with modern shipbuilding technology that Northern European waters have been traversed without much fear. In the Viking Age, the sea must have been a very unpredictable mode of transportation (therefore another reason to stay close to shore, especially in the case of Ohthere’s northern voyage, would be to avoid dangerous weather which the ships of this period were so prone to.)

Indeed, navigation to and from a battle site could be just as dangerous as the fight itself. The *Anglo-Saxon Chronicle* records that in 794, “...Northumbria was ravaged by the heathen, and Ecgrith’s monastery at [Jarrow] looted; and there one of their leaders was slain, and some of their ships besides were shattered by storms: and many of them were drowned there, and some came ashore alive and were soon slain at the river mouth.”³²

Large groups of ships were apparently as vulnerable to sudden violent weather as small ones. The *Anglo-Saxon Chronicle* reports in 877 the destruction of 120 Danish ships off

³⁰ *Ibid*, 15.

³¹ *Anskar, The Apostle of the North*, trans. Robinson.

³² *Anglo-Saxon Chronicle*, trans. Garmonsway, 57.

Swanage in modern Dorset. The *Chronicle* tells that this force was a component of a land army marching on Exeter which was able to reach the protection of a fortress there, but was compelled to exchange hostages with King Alfred's army.³³

The sea claimed not only ship-borne armies and fleets. The *Chronicle* records the death of Ætheling (prince) Edwin, son of the English King Edward, who "was drowned" in otherwise unknown circumstances in 933.³⁴

Among the greater disasters told by the *Chronicle* is the betrayal of Anglo-Saxon noble Wulnoth, who in 1009, "...fled the country and succeeded in winning over as many as twenty ships, and went harrying everywhere along the south coast, and did all manner of evil." When another nobleman, Beorthric, attempted to track down and capture Wulnoth, "he was met by a storm worse than anyone could remember: the ships were all battered and knocked to pieces and cast ashore." Wulnoth was then able to come and burn Beorthric's ships, thus rendering the fleet severely crippled. These multiple misfortunes opened England to attack from a Viking army under *Thurkill*, who was able to extort 3000 pounds (of silver) from the noblemen of East Kent.³⁵

The *Annals of St. Bertin* report the total loss of Danish naval forces to bad weather on two occasions (likely to the satisfaction of the chroniclers). In 838, "...Danish pirates sailed out from their homeland but a sudden and severe storm arose at sea and they were drowned with scarcely any survivors."³⁶ On another occasion in 844, a combination of enemy resistance and rough weather spelled disaster for an unspecified number of Scandinavian raiders in Spain. "The Northmen sailed up the Garonne as far as Toulouse, wreaking destruction everywhere, without opposition. Then some of them withdrew and attacked Galicia, but they perished, partly because they met resistance from missile-throwers, partly because they were caught in a storm at sea."³⁷

Often, ship captains and military commanders in charge of vessels went to great lengths to avoid poor or unpredictable weather altogether. In a poem by Þjóðólfr ór Hvini, who probably lived in the late ninth or early tenth century, he warns his foster-son Guðrøðr not to go to sea

³³ *Ibid*, 75.

³⁴ *Anglo-Saxon Chronicle*, trans. Garmonsway, 107.

³⁵ *Ibid*, 138.

³⁶ *The Annals of St. Bertin*, trans. Janet L. Nelson (Manchester: Manchester University Press, 1991), 39.

³⁷ *Annals of St. Bertin*, trans. Nelson, 60.

from Hvinir to Rogaland because of storms. Guðrøðr departs anyway, and is killed along with all of his men.³⁸

Snorri's *Heimskringla*, though a later source, should nevertheless contain wisdom about sailing that would have been present in the Viking Age. Snorri tells how Olav Tryggvason had his ships anchored off Bornholm when nasty weather made him seek a safe harbor in Wendland to the south. Later, Olav waited for a full week to enter Salten fjord with his fleet, as a terrible storm was raging there.³⁹

A perhaps similar storm caused the capsizing of another mariner in the Sognefjord, as attested by a runic inscription found on a nearby stone. The dating of the Eggja Stone is controversial, but the language used is a late-stage transition from proto-Norse to Old Norse, placing it perhaps around the eighth century. It describes in poetic verse a failure of a certain part of a ship's mast and then a fatal wave (a "corpse-wave") that wrecked the boat.⁴⁰ This shows that even inland waterways such as the deep Sognefjord could be subject to dangerous storms. Perhaps the fate of this vessel was precisely what Olav Tryggvason wished to avoid!

Dangerous weather was not only a threat to contemporary mariners, but has also threatened modern sailors of replicas of Viking Age vessels. The *Ormen Friske*, launched in 1949 by the Swedish Frisksportförbundet, was a reproduction of the Gokstad find. After a long journey across the Baltic Sea and through the Strait of Denmark to the North Sea, disaster struck. Even with the benefit of a compass and meteorological reports, a storm claimed *Ormen Friske* off Helgoland, drowning all 15 people onboard.⁴¹

The seas were not the only waterways that were subject to unpredictable natural occurrences. Nithard reports in his *Histories* that during the civil conflict that fractured the Carolingian Empire, Charles the Bald looked to cross the flooded Seine, though he had no boats or usable bridges to transport his army. The flood which at first seemed to hinder Charles benefited him unexpectedly, for "they learned that merchant ships had been driven from the

³⁸ *Skaldic Poetry from the Scandinavian Middle Ages: Poetry from the Kings' Sagas* 1, Vol. 1, ed. Diana Whaley (Turnhout: Brepols, 2012), 65.

³⁹ *Heimskringla*. Snorri Sturluson, trans. Lee M. Hollander (Austin: University of Texas Press, 1964), 162, 213.

⁴⁰ Terje Spurkland, *Norwegian Runes and Runic Incriptions*, (Woodbridge: The Boydell Press, 2005), 69. This translation of the inscription by Ottar Grønvik is contested, but generally accepted by Spurkland.

⁴¹ Rune Edberg, *Vikingaskeppet Ormen Friskes undergång: Ett drama i det kalla krigets skugga*, (Stockholm: Elanders Gotab, 2004) Much controversy has surrounded the sinking of *Ormen Friske*. Causes of its destruction have also been blamed on the ship's faulty construction and an inexperienced crew, though not all ships in the Viking Age may have been well-built or well-crewed either.

mouth of the Seine by a violent tide and had drifted ashore near Rouen. When he arrived on the scene Charles filled twenty-eight of the boats with armed men” and came down the Seine, sending the forces of his brother Lothar to flight.⁴² Despite the dangerous nature of sea travel, many people, like Ohthere and Wulfstan, were able to use waterways to great advantage in this period and it can be assumed that their experience with sailing and navigation was able to keep them relatively safe.

Ship Technology and Design

Likely by the Late Iron Age, some key features of Nordic ships coalesced into the extremely successful design that made possible Scandinavian naval hegemony during the Viking Age. “Nordic” ships are characterized by lightly-curved stems and overlapping, iron-riveted planks most commonly sealed with tar and hair.⁴³ Perhaps the most important feature was the keel, which gave enough strength to the hull for the vessel to withstand the pressure of the sea.⁴⁴ This, along with the overall thin and light construction of the hull, gave Nordic-style boats a shallow draught, allowing them to traverse far up rivers and streams. Oarlocks, located either on the top strake or drilled into the gunwale, gave rowers leverage to make powerful strokes, increasing the ships’ speed under oars. When the sail was added to this design perhaps in the sixth or seventh century AD, Scandinavian steersmen had at their disposal swift, maneuverable craft that was also capable of impressively long-distance journeys.

Not all Scandinavian ships were built exactly alike. “An important and immediate observation when the ship-archeological material is studied is that there is not just one but many different boat types. This can be related to social and environmental factors, but the most decisive factor for a ship’s shape and construction was probably the function. The intended use of the ship was built into the hull and visible in many details. When the boat builder built a boat or a ship, he designed it for a special purpose.”⁴⁵ There are, however, other influences to consider. The final form of the vessel was at the same time wholly dependent on the regional shipbuilding tradition of the shipwright’s time. As far as we know, shipwrights followed no blueprints or plans as could be recognized today, but rather wrought a ship from memory and

⁴² *Royal Frankish Annals*, trans. Scholz, 147.

⁴³ Crumlin-Pedersen, “Ship Types and Sizes,” 73.

⁴⁴ Brøgger and Shetelig, *The Viking Ships*, 36.

⁴⁵ Larsson, *Ship and Society*, 57.

experience. This lent to distinct regional styles that, though surely adapted to suit certain functions, were tied firmly to culture.

What is known about ship design in the Viking Age is very dependent on a relatively few archeological finds, most of which are boat-burials. Though the number of finds has grown steadily over recent years and has given more desperately-wanted information to the picture, it is still far from ideal. Some obvious problems arise from this. Chiefly it makes tracking boatbuilding and design trends a very difficult prospect. There is also a rather uneven distribution of finds dated to this period, “weighted” strongly in favor of tenth and eleventh-century Denmark. In contrast, no well-preserved Viking-Age finds are extant from the Swedish Lake Mälaren region.⁴⁶ If there was a significantly different design common to this area, solid evidence for it (in the form of such spectacular finds as Oseberg and Gokstad) has yet to emerge. Some evidence of Eastern Scandinavian boatbuilding, though scant, will be presented here.

Finds from Eastern Scandinavia and the Baltic

Though the Baltic Sea region is not the focus of this thesis, it is important to include Eastern Scandinavia in this discussion (partly to illustrate the previously-mentioned influences of function and regional culture on shipbuilding.) As was stated, no well-preserved finds have yet been uncovered with a firmly Viking Age dating in the Uppland Swedish region, though the remains of some Iron Age and Viking Age boat burials in the form of rivets can be examined. Examples of cemeteries with boat burials in Sweden are Vendel, Tuna, and Gamla Uppsala, though these contained only small boats (none of these vessels were longer than 9 m).⁴⁷

Some of the most prolific ship burials in Sweden are those from the Valsgärde cemetery, a burial ground in Uppland from which many aristocratic artifacts have arisen, among which were fifteen ship burials. Many of these burials included weapons and the bones of animals. Though the wood planking of the ships was not very well preserved, archeologists can tell a great deal about their dimensions and construction by looking at the ships’ rivets, many of which have partially survived. The positioning of these rivets, fortunately, was exhaustively

⁴⁶ Crumlin-Pedersen, “Ship Types and Sizes.”

⁴⁷ Larsson, *Ship and Society*, 45-53.

documented when they were found in the early twentieth century. The burial ground was in use for a long period, from the Migration Period to the late Viking Age.⁴⁸

The vessels are clinker-built⁴⁹, held together with iron rivets, though with “archaic lines” (*altertümliche Züge*) and broad hull planks typical of pre-Viking Age vessels. As is usual for ships of this time period, there is no evidence for the presence of a mast or sail.⁵⁰ Instead, these boats employ between 3 and 5 pairs of oars for propulsion. They are on average 9 meters in length, but the longest found was Valsgärde 3, a vessel 14.1 meters long and dated to between 650 and 700.⁵¹

Gunilla Larsson has interpreted the Valsgärde vessels as small warships. She has hypothesized that warships in use in Eastern Scandinavia were specially designed to navigate the river systems of Eastern Europe. It was necessary that they be built small and light so that they had an extremely shallow draught, allowing them access to more shallow rivers and streams. They could also be easily lifted out of the water and carried overland when they needed to be portaged between waterways. According to her, larger vessels such as those found in Norway would have been too large and heavy to manage in this capacity.⁵²

Another possible piece of evidence of Eastern Scandinavian ships comes from an island off the coast of Estonia near the town of Salme. Here, two clinker-built, iron-riveted ships were found (the first in 2008, the second in 2010) when digging electrical trenches to light a jogging path. These have been C-14 dated to between 650 and 720, at the cusp of the Viking Age. The vessels are small when compared to later vessels found in Norway and are much closer in size to the Valsgärde finds. Also, their find location in the Eastern Baltic, some nautical miles away from the exit of Lake Mälaren by modern Stockholm, points strongly to an Eastern Scandinavian origin.

The first ship uncovered was about 11.5 meters long, built with pinewood, and had room for about 12 pairs of oars.⁵³ The second vessel was significantly larger (16.8 meters in length). A

⁴⁸ John Ljungkvist, “Development and Change of a Burial Ground over 1300 Years,” *Occasional Papers on Archeology* (42) 2009: 13-56.

⁴⁹ Clinker construction denotes a ship construction method where hull planks are overlapped and caulked, commonly with tar, animal hair, or cloth.

⁵⁰ Greta Arwidsson, *Die Gräberfunde von Valsgärde, I, Valsgärde 6*, (Uppsala: Almqvist & Wiksell, 1942), 102.

⁵¹ Ljungkvist, *Development and Change*, 18; Larsson, *Ship and Society*, 46

⁵² Larsson, *Ship and Society*, 24

⁵³ Konsa, Allmäe, Maldre, and Vasiljev, “Rescue Excavations of a Vendel-Era Boat Grave in Salme, Saaremaa,” *Archeological Fieldwork in Estonia* (2008): 53-65, 57.

multitude of artifacts were present in both ships: weapons, gaming pieces, and animal bones were found beside the remains of several humans. Although these are rather commonly-found items in burials, the context of the find does not point to a normal ritual inhumation, but of a battle that ended disastrously. The presence of multiple bodies and the lack of an elevated earthen mound marks it distinct from aristocratic burials in Scandinavia and Britain. Many of the bones found in the ships showed evidence of severe wounds. Also, several arrowheads were found on the outside of the ship's hull planks, which could mean that they were embedded in the wood there during a battle at sea involving missile weapons.⁵⁴

Why examine ship finds from Eastern Scandinavia when talking about naval warfare in the North Sea region? Several runic inscriptions have been found in the Uppland region testifying to expeditions West to Britain, Ireland, and Saxony.⁵⁵ It is possible that light, relatively small ships like those found at Salme and Valsgärde were taken on these journeys, though as Gunilla Larsson has pointed out they were likely optimized for use on the calmer waters of the Baltic and the river systems of eastern Rus.⁵⁶ Until more ship finds emerge from this region, it will not be known whether Upplanders built different types of ships for journeys westward, or whether they simply joined the crews of warriors from Norway or Denmark. It is of course possible that their ship designs from this region changed over the course of the Viking Age, though these smaller vessels of the seventh and eighth centuries may have had some advantage on shallow river systems and inlets both in Britain and on the Continent.

Finds from Western Scandinavia

The design of the Kvalsund boat, found in a bog in Møre og Romsdal, Norway, is roughly contemporaneous to the Salme ships and some of the vessels found at Valsgärde (dated to circa 700) and could serve as further evidence for significant differences in Western Scandinavian shipbuilding and design. There were no weapons or military gear extant in the

⁵⁴ Andrew Curry, *Archeology Magazine*, "The First Vikings." Last modified June 10, 2013. Accessed April 17, 2014. <http://archaeology.org/issues/95-1307/features/941-vikings-saaremaa-estonia-salme-vendel-oseberg>.

⁵⁵ Judith Jesch, *Ships and Men in the Late Viking Age: The Vocabulary of Runic Inscriptions and Skaldic Verse*, (Woodbridge: The Boydell Press, 2001), 76, 80.

⁵⁶ Larsson, *Ship and Society*, 143.

vicinity of the find, so although the vessel was large and likely stable enough for this purpose, it cannot be assumed that this was a ship employed for war.

Though there were no clear provisions for a mast or sail, many who have studied the boat are open to the possibility that it could have weathered the open sea. Regardless whether it was at one time rigged, its primary method of propulsion was oars, mounted on locks on the ship's top strake.

Among the most striking features of the Kvalsund boat is its size. This vessel is 18 meters in length, drew only 80 cm of water, and is rather narrow in comparison with later hull shapes found in Western Scandinavia. It also sported an extremely high, upswept bow and stern with light decoration on the uppermost joining planks. In addition to having a keel plank, the hull of the ship was built with narrower and more numerous strakes, giving more elasticity and therefore more strength in rough seas (compare to the so-called "*altertümliche Züge*" of the Valsgärde boats). This lends some credence to the notion that ships of Western Scandinavia were in general built heartier and larger to ply the rougher seas off the Norwegian coast.

The Oseberg ship is a megalith among Viking artifacts and perhaps the single most recognizable ship from the period, though it was likely not suited to combat. Dated to the early ninth century, it is the first Scandinavian vessel with a mast and mast-step fully extant. It was most likely a craft for ferrying dignitaries in calm waters close to shore, as evidenced by its relatively light construction. Indeed, its mast-step shows clear signs of cracking and repair with a strip of iron.⁵⁷ However, at 21.5 meters in length and a 5.1 meter beam, the Oseberg ship represents a significant expansion in size and width from its predecessors.

The Gokstad and Tune finds, dated firmly within the Viking Age (895 and 910 respectively) are further reflections of the large, broad, and sturdy build of Western Scandinavian vessels. These were found in Southern Norway, in Vestfold and Østfold respectively. Both were found as male graves and included weapons. Shetelig and Brøgger praised them as "perfect boats" and the culmination of shipbuilding developments that had been taking place since the Iron Age.⁵⁸ The Gokstad ship is in all respects larger and sturdier than any of its predecessors. It is 23.2 meters long and 5.2 meters wide amidships. It is also significantly taller than the Oseberg

⁵⁷ Jan Bill, "Viking Ships and the Sea," in *The Viking World*, ed. Stefan Brink and Niel Price (London: Routledge, 2008), 172.

⁵⁸ Brøgger and Shetelig, *The Viking Ships*, 32.

ship (2 meters from keel to gunwale.) The Tune ship, though smaller than the Gokstad ship (measuring 18.4 meters in length), was nevertheless a ship very well-suited to sailing the open sea. It dates to roughly the same period (around 910).⁵⁹

Some controversy has arisen over the actual height of the Tune ship, owing to the relatively poor find quality of that portion. Brøgger and Shetelig also commented on how apparently wide and low-riding the Tune ship was for a sailing vessel, wondering at how it could have withstood high waves. He speculated that the relative width lent quite a bit of stability and kept the ship from being swamped when heaving to under sail.⁶⁰ Knut Paasche convincingly argued that the dimensions of the Tune ship have been measured incorrectly. He has proposed that the vessel originally had 12 hull strakes instead of 10, lending it significantly more height.⁶¹

The Oseberg, Gokstad, and Tune ships were broad in comparison with ship finds before and after their estimated datings. All have a length-to-breadth ratio of approximately 4.8:1 (the Tune ship was slightly more narrow with a L/B ration of 4.5:1). These are the first confirmed Viking Age sailing ships in the archeological record and all appear to have been extremely well-suited to their relative tasks. With their higher rails and wider beams, the Gokstad and Tune ships seem to have been designed for sailing in rougher seas, though no Scandinavian vessels of such proportions have yet emerged with a younger dating than the Tune ship.

Finds from Southern Scandinavia

A discussion about ship design based on finds from Southern Scandinavia (modern Denmark and Skåne) is in many ways tangent to a discussion of the relationship between Denmark and Southern Norway. This also touches upon some of the key points brought forth at the beginning of this section, chiefly the questions of design change over time, designs according to function, and design influenced by regional culture. For this, the Ladby ship is an appropriate starting point.

The Ladby ship, discovered in 1934 near the town of Kerteminde on the island of Fyn, Denmark was found to have been a boat burial much in the style of Oseberg, Gokstad, and Tune.

⁵⁹ Crumlin-Pedersen, *Archeology and the Sea*, 82.

⁶⁰ Brøgger and Shetelig, *The Viking Ships*, 103.

⁶¹ Knut Paasche, *Tuneskipet: Dokumentasjon og rekonstruktion*, (Oslo: Universitetet i Oslo, 2010), 158-161.

Inside were items associated with aristocracy including weapons, riding gear, and animal bones. Interestingly, some spiral decorations for the ship's stems were found that have been compared with finds from the Valsgärde 7 boat.⁶² The find was not as well-preserved as the Norwegian finds, however: the grave had been disturbed and much of the top portion was not extant. The find has been C-14 dated to between 925 and 975.⁶³

An updated reconstruction of the vessel as documented by Anne Sørensen has given the likely dimensions based on computer modeling. The ship was 21.54 meters long, between 2.75 and 2.85 meters wide, and likely stood 1.02 meters tall amidships.⁶⁴ Crumlin-Pedersen noted that the ship, like others found later in Roskilde harbor, was built much more slender than the slightly older Norwegian finds. The Ladby ship had a length to breadth ratio of 7.3:1.⁶⁵

Along with the aristocratic objects found within the burial, much reminiscent of those in Vestfold and Børre, some other similarities link the Ladby ship with the Norwegian finds. Among these is that the ship was constructed of oak. Found inside the hull of the Ladby ship was an iron anchor, which based on a detailed analysis of the metal could have originated in Southern Norway.⁶⁶

Crumlin-Pedersen suggested that many of the long, slender ships found in Denmark may be indicative of an influence of Alfred the Great's defense fleet which, according to the Anglo-Saxon Chronicle, were meant to be much longer and swifter than the vessels of the Northmen.⁶⁷ He notes, however, that no ninth century vessels from Denmark have been found to compare to the Oseberg and Gokstad ships, making such conclusions problematic (thus drawing again upon the time-versus-region design discussion above.)

Later finds from Southern Scandinavia are all bear a distinctly narrower length-to-width ratio. The Hedeby ship, dated to the late tenth century is among the longest recorded (around 30 meters) and has an approximate length to breadth ratio of 11.4:1. Roskilde 6, thought to date to 1025, was even longer (circa 36 meters), with a length-to-width ratio of 10.3:1.⁶⁸ Again, whether

⁶² Anne Sørensen, *Ladby : a Danish Ship-grave from the Viking Age*, (Roskilde: Roskilde Viking Ship Museum, 2001), 52.

⁶³ *Ibid*, 15.

⁶⁴ Sørensen, *Ladby*, 52.

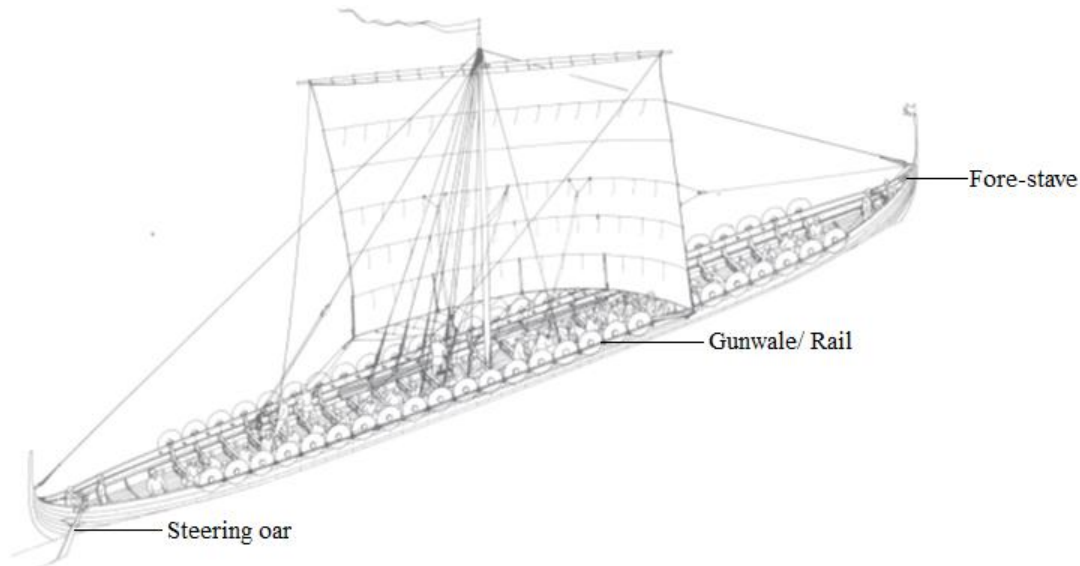
⁶⁵ Crumlin-Pedersen, *Archeology and the Sea*, 81.

⁶⁶ Sørensen, *Ladby*, 52.

⁶⁷ Crumlin-Pedersen, *Archeology and the Sea*, 82.

⁶⁸ *Ibid*, 83

this reflects a regional style adapted to suit the straights and fjords of Denmark or whether it represents an “evolution” in shipbuilding is not entirely clear based on the evidence.



An imagining of the Ladby ship fully rigged and under sail. Ole Crumlin-Pedersen, *Viking-Age ships and shipbuilding in Hedeby/Haithabu and Schleswig*, (Schleswig: Archäologisches Landesmuseum der Christian-Albrechts-Universität, 1997), 93.

Finds from Britain and Continental Europe

Once one moves from Scandinavia to Britain, the archeological material related to ships and shipbuilding becomes very poor. The 27 meter-long clinker-built ship of the sixth-century Sutton Hoo burial is worth mentioning here. This was a large ship, probably propelled by 20-40 oarsmen. Martin Carver postulated that the ship could have been equipped with a sail and therefore been capable of long sea journeys, though there is no conclusive evidence for this.⁶⁹ The Sutton Hoo ship must have been a spectacular vessel, but there is no evidence of a continued tradition of constructing vessels of this type in Britain. Indeed, many scholars have noted the similarities between this craft and the fourth century Nydam find, and also in the material finds between Sutton Hoo in East Anglia and those in the Lake Mälaren region, claiming close diplomatic relations between Britain and Scandinavia in this period.⁷⁰

The Graveney boat, a tenth-century find, is the most complete Anglo-Saxon vessel from the Viking Age. Though its preservation status is incomplete, it has been estimated via

⁶⁹ M.O.H. Carver, *Sutton Hoo: Burial Ground of Kings?*, (London: British Museum Press, 2005), 171.

⁷⁰ Larsson, *Ship and Society*, 117.

reconstructions to have been about 14 m long and 1.5 m high. It was built of oak (a common feature of early Viking-Age finds from Norway) and was clinker-built. Instead of a keel, this vessel had a flat bottom plank. Ellmers speculated that it was likely a cargo ship suited only to travel on rivers and coasts and could not have been a sea-going vessel.⁷¹ Gunilla Larsson, however, noted its very thick and heavy construction, suggesting the Graveney boat's potential use as part of the fleet of Alfred the Great.⁷² There is no convincing evidence, however, that this vessel was ever used in a military capacity. Indeed,

The vessels of Alfred the Great's defensive fleet are described in some detail in the *Anglo-Saxon Chronicle*. According to the *Chronicle*, Alfred ordered built ships to counter the raids of Scandinavians in 897. They were to be, "almost twice as long as the others (likely the Scandinavian vessels), some had sixty oars, some more; and they were both swifter, steadier, and also with more freeboard than the others; they were not shaped after the Frisian design nor after the Danish, but as it seemed that they could be most serviceable."⁷³ These could well have been designed to fight against vessels like the Gokstad ship, which was found equipped with thirty oars (nearly half as many as Alfred's ships). The *Anglo-Saxon Chronicle* makes mention of the building of a fleet in 1008 at the behest of King Æthelred, though there is little detail provided about construction of these ships.⁷⁴

Viking Age ship finds from the Netherlands, Germany, and France are equally scant and incomplete. Most of these are flat-bottomed barges and river-bound craft purposed to carry people and cargo up and down waterways such as the Rhine. These could have been used to help unload seagoing craft, but these vessels were not seaworthy themselves. Among the more complete finds in this region is the late eighth century Utrecht ship, which is classified as a *proto-hulc*. The *proto-hulc* type is roughly banana-shaped vessels with no keel, the bottoms of which were made from hollowed logs.⁷⁵ This craft was 18.60 m in length, 4.2 m broad, and approximately 1.4 m tall.⁷⁶

Charlemagne ordered built a fleet of ships for defense against Scandinavian raiders nearly a century earlier than Alfred in 800. In 810, the Emperor had "on all rivers flowing into the

⁷¹ Ellmers, *Frümittelalterliche Handelsschifffahrt*, 51.

⁷² Larsson, *Ship and Society*, 117.

⁷³ *Anglo-Saxon Chronicle*, trans. Garmonsway, 90.

⁷⁴ *Ibid*, 138.

⁷⁵ Ellmers, *Frümittelalterliche Handelsschifffahrt*, 59.

⁷⁶ *Ibid*, 292.

ocean, including those of Aquitaine, ships...built for the defense against the Normans.”⁷⁷ It is unknown what these ships looked like or how they were constructed, but Crumlin-Pedersen speculated that ships of the Utrecht-type could have been employed for military purposes.⁷⁸ It seems most likely, however, that these craft would have been limited to use on rivers. Indeed, Charlemagne is often mentioned traversing his realm on rivers and employing inland waterways in land campaigns (for example during the Frankish war against the Avars in 791).⁷⁹

*Major Ship Finds ca. 790-1050*⁸⁰

Find	Number oars	Length (m)	Height (m)	Dating
Utrecht		18.6	1.4	790
Oseberg	28	21.5	1.6	820
Gokstad	32	23.33	2.0	895
<i>Alfred's ships</i>	60	40-50?	2-2.5?	897
Tune	22- 24	18.4	1.1-1.2	ca. 910
Ladby	32	21.5	1.02	ca. 925
Graveney		14	1.5	ca. 944
Hedeby 1	ca. 60	ca. 30	1.5	ca. 985
Roskilde 6	ca. 78	ca. 36	ca. 1.7	ca. 1025
Skuldelev 2	ca. 60	ca. 30	1.8	1042
Skuldelev 5	26	Ca. 17.5		1040-50

Conclusion

⁷⁷ *Royal Frankish Annals*, trans. Scholz, 92.

⁷⁸ Crumlin-Pedersen, *Archeology and the Sea*, 75.

⁷⁹ *Royal Frankish Annals*, trans. Scholz, 70.

⁸⁰ Crumlin-Pedersen 2010, Sørensen, Ellmers, Paasche.

The centrality of waterways to the communities of the North Sea cannot be understated. The populations of this region were defined by their access to resources that came from seas and rivers which also served as an efficient, if more risky, method of transportation. This chapter has shown how, despite the significant danger from weather, tides, and other threatening natural phenomena, people utilized Northern European waterways to great effect for transportation, trade, and fishing. It has demonstrated that ship design was very likely shaped by the nature of the waterways it was intended to operate in and also that designs changed, and arguably, improved over time.

Although much of warfare in this period was what would today be considered small-scale engagements with relatively few ships, the raising of these forces was often a complicated and costly affair when compared to raising land forces. Leaders were obliged to bring together many disparate resources for ships to be built and properly skilled seamen to man them. Even after all this, expensive ships and skilled sailors could be lost at sea, as has been shown. Leaders were often keen to overcome these challenges, however, for the numerous advantages brought by ship forces. The innovation in ship technology that occurred during the Viking Age (outlined in this chapter) played a great role in the organization of military forces, especially in Scandinavia. The next portion of this work will examine how societal structures and their resultant definition of military organization had an equally great impact on the persecution of naval warfare in this period.

Chapter 2: Organization of Naval Forces

Warfare, to include warfare utilizing ships, is inseparable from its cultural context. This becomes especially apparent when studying the way in which military leaders, from steersmen and local magnates to kings, raised groups of men to build, maintain, and crew their ships. A modern, and perhaps anachronistic term for this would be *logistics*. Although this implies a level of national, central organization that did not exist in the Viking Age, it is important nonetheless to explain how the considerable amount of human and material resources required to employ ships in warfare were brought together.

This chapter will take a regional approach to naval organization in the Viking Age. Scandinavia, Britain, and the Continent had differing ways of raising ship forces that were dictated ultimately by how these societies were ordered and what cultural influences were present (these, in turn, were influenced greatly by environmental factors, as has been demonstrated).

For some, the point of departure for Viking Age naval organization is where evidence for centrally-conceived and controlled navies begins to appear. This evidence, however, is not sufficient to prove the existence of any kind of permanent standing maritime force. It can be said with relative safety that throughout of the period, most maritime forces were instead organized and sponsored by local magnates, to include ship owners and merchants, although semi-centrally controlled and organized forces can be occasionally seen.¹ The origins of more developed and permanent organizations such as the *leiðangr* in Scandinavia, first outlined in later medieval law codes, are much-disputed. This chapter will not wade too deeply into this debate, but rather discuss more general aspects of creating and maintaining seaborne military forces.

Logistical Considerations

As on land, the creation of sea-going forces depended greatly on the resources available to their sponsors, usually local magnates. These came in the form of both natural resources for the construction of vessels (such as wood for planking, iron for rivets, and tar for caulk) and also

¹ *War at Sea in the Middle Ages and the Renaissance*, ed. John B. Hattendorf and Richard W. Unger (Woodbridge: The Boydell Press, 2003), 21.

in manpower sufficiently competent to build the vessels and handle them in the waterways they were intended to operate in. For this reason, ownership of vessels of the design and size suited to warfare was likely limited to the highest rungs of society. The symbolic significance of vessels in aristocratic burials in Scandinavia (and in earlier times, elsewhere in Northern Europe) further reinforces this relationship between high status and the ownership of warships.

A requirement as identified by John Haywood in the case of Anglo-Saxon military organization is political will, or a sufficient impetus for creating and maintaining a force that was nearly always a significant drain on the finances of the sponsoring polity or magnate.² Alfred the Great's efforts in organizing defensive measures for Wessex, which included raising ships, has impressed some commentators for this reason: he was able to overcome the inertia among subordinate magnates that came with expensive and time-consuming projects.³ For the same reason, other rulers such as Louis the Pious experienced more mixed success in such endeavors. Despite the extraordinary efforts of some Anglo-Saxon and Frankish rulers, ship-forces were not the most common choice for defense. The cost of raising and keeping ships was surely a major factor in their relatively rare use amid most military forces in the period.

Vessels for maritime forces were expensive, but they were not always built from scratch. One way of getting ships was to simply take ones that were already serviceable. This occurred in 894 and 896 when the militia of London captured the vessels of Scandinavian raiders, towing them back to London.⁴ The next year in 897, the *Anglo-Saxon Chronicle* records that these Scandinavians "that were without stock got themselves ships, and went south over sea to the Seine."⁵ How these men obtained ships is not mentioned, though one wonders how if they were "without stock" they could have purchased ships to leave Britain. It is more likely that they were able to obtain vessels from other Scandinavians who were present in the regions of East Anglia and Northumbria. In 862, Charles the Bald attempted to stop a group of Scandinavians from attacking Meaux, but could not catch up with them "because the bridges had been destroyed and the ships taken over by the Northmen."⁶ It is likely that the Scandinavians sought to deny the

² John Haywood, *Dark Age Naval Power: A Reassessment of Frankish and Anglo-Saxon Warfare in the Viking Age*, (Woodbridge: The Boydell Press, 2010), 76.

³ P.H. Sawyer, *From Roman Britain to Norman England*, (London: Routledge, 1998), 123.

⁴ *Anglo-Saxon Chronicle*, trans. Garmonsway, 86, 89.

⁵ *Ibid*, 89.

⁶ *Annals of St. Bertin*, trans. Nelson, 98.

Franks mobility while increasing their own, and capturing Frankish ships was the cheapest and, most importantly, fastest way of doing so.

One of the objectives of ship-to-ship battles was to capture enemy vessels. Indeed, some commentators have remarked that one of the great differences between warfare in the Mediterranean and the North Sea is the lack of ramming tactics in the latter. Though there were surely other factors at play in this, one of the reasons that Northern European maritime warriors generally did not aim to destroy enemy ships was to preserve the costly vessels for eventual use by their new owners. This was successfully done in 992 by Anglo-Saxon ship forces off the east coast of Britain. The *Anglo-Saxon Chronicle* records the successful boarding and seizure of an enemy ship, “fully armed and equipped with sails.”⁷ There are many more examples of this which will be presented in the next chapter, though here it is pertinent to note that the chronicler specifically refers to some of the most valuable components of the captured ship: the sails, rigging, and the weapons of the slain crew.

As before stated, leaders needed to be able organize a significant amount of skilled people *and* have the political impetus to gather the needed disparate resources even for one crewed ship. In addition, this force needed to be sustained, with provisions for the crew and materials for repairs, at least for the length of the action at-hand (a perhaps even more demanding task). Wooden ships, even the excellent craft of the Scandinavians, were “highly perishable especially when afloat.”⁸ Often when both resources and political will were in short supply, costly ships were abandoned and fell into disrepair.

When Æthelred ordered the creation of a fleet in 992, he called for the gathering together of “all the ships that were of any value” at London.⁹ This suggests that there were many warships that were not serviceable or seaworthy enough to be to a war fleet.¹⁰ Costly vessels, though surely a significant burden to the magnates that financed them, could simply be abandoned. After a series of disasters that befell Æthelred’s 1009 fleet, the political will for maintaining these ships was reportedly lost, “everything was in confusion,” and the vessels were abandoned.¹¹

⁷ *Anglo-Saxon Chronicle*, trans. Garmonsway, 127.

⁸ Susan Rose, *Medieval Naval Warfare: 1000-1500*, (New York: Routledge, 2001), 6.

⁹ *Anglo-Saxon Chronicle*, trans. Garmonsway, 127.

¹⁰ Ryan Lavelle, *Alfred's Wars: Sources and Interpretations of Anglo-Saxon Warfare in the Viking Age*, (Woodbridge: The Boydell Press, 2010), 146.

¹¹ *Anglo-Saxon Chronicle*, trans. Garmonsway, 139.

Organization of Naval Assets and Coastal Defense in Francia

Of the regions profiled in this chapter, there is surely the least amount of evidence available for how Frankish leaders raised and maintained seaborne forces. In offensive operations, sources describing the use of naval forces were used in a relatively limited time and context, namely the overland campaigns of Charlemagne where ships were used on rivers. In a defensive role, ships were integral to a land-based coastal defense system which appears to have been created in the reign of Charlemagne and maintained in a significant way only by his successor Louis the Pious. For this reason, it is difficult to draw many detailed conclusions.

One might begin a discussion of Carolingian naval organization by examining how land forces were formed. Charlemagne inherited a formidable system of recruitment that gave commanders the ability to call upon a large bodies of armed men rather quickly, and though it is not clear whether the same mechanisms existed for maritime forces, is possible that they were gathered using the same methods.

These mechanisms were manifold and diverse and depended on a “highly militarized civilian population.”¹² In a practice inherited largely from the Romans, inhabitants of significant, fortified towns were expected to provide military service in a defensive role. Regional defense in the countryside was organized along similar lines, with both free farmers and slaves filling this role. Expeditionary campaigns outside of the Franks’ borders placed a higher demand on the individual since they were expected to be away for long periods of time. Accordingly, this “select levy” was organized according personal wealth and, more importantly, land ownership. The more wealth and land a man possessed, the greater were his obligations (the richest were required to bring war horses, a full complement of weapons, and heavy armor on campaign.)¹³

There is no evidence indicating how the crews of maritime force were recruited, though it must be assumed that these people were already highly skilled at handling ships. This may have restricted the Carolingians’ recruitment efforts, forcing them to draw maritime warriors from regions where a significant portion of the male population worked professionally on the sea. These men could, of course, come from territories held in vassalage. In the late eighth century, Charlemagne used ships in three major campaigns against his enemies on the eastern borders of

¹² Bernard S. Bachrach, *Early Carolingian Warfare: Prelude to Empire*, (Philadelphia: University of Pennsylvania Press, 2001), 243.

¹³ *Ibid*, 51-57.

the Carolingian realm. As the Anglo-Saxons presumably demanded of the Scots after defeating them in 945, the Carolingians required military service of their tribute peoples. This is apparent from two of these campaigns utilizing inland waterways that naval service could be a way of fulfilling these military obligations.

In 791, Charlemagne launched an attack against the Avars in the region of Pannonia, marching along the Danube with a coalition force of Saxons, Franks, and Frisians with “ships in the middle of the river”. From the Spartan and ambiguous description in the *Royal Frankish Annals*, is not clear who among these peoples manned the “ships in the middle.”¹⁴ For one familiar with sources attesting to seafaring in the Viking Age, the first instinct might be to simply assume them to have been Frisians, though this need not be the case. John Haywood has noted this, pointing out that the *Annals of Fulda* and *Royal Frankish Annals* do not agree as to the ethnic identity of the riverine fleet (even different versions of these sources are contradictory.) Ultimately, Haywood favors the idea that the fleet was Bavarian, though there is no reason to believe that this fleet could not have been manned by a mixture as diverse as the land force that it supported.¹⁵

Charlemagne gathered an army of Frankish, Saxon, Sorb, and Obodrites in an attack on the Wilzi tribe in 789. In the *Royal Frankish Annals*, it is specified that “Frisians joined him by ship, on the River Havel, along with some Franks.”¹⁶ Here, the geographic proximity to Frisia makes it more probable that Frisians were indeed involved as members of the fleet though, as Haywood notes, the 789 entry in the *Annals* is the only explicit mention of them as being shipmen despite their mention elsewhere as seafarers.¹⁷

In 797, the *Annales Guelferbytani* record an expedition into Saxony led by Charlemagne “with large ships carried over land and water.”¹⁸ The sparing prose leaves out any other details,

¹⁴ *Royal Frankish Annals*, trans. Scholz, 69.

¹⁵ Haywood, *Dark Age Naval Power*, 99-100. Haywood offers as evidence the revised *Royal Frankish Annals*, which recorded the fleet as Bavarian. He believed that it was stronger on the weight of being closer to the events than the Fulda Annals. He also notes that Bavarians would have had easier access to the Danube than the further-away Frisians.

¹⁶ *Royal Frankish Annals*, trans. Scholz, 69.

¹⁷ Three Frisians, apparently ship steersmen, are also listed as being among the casualties of a battle in 897 between Scandinavian raiders and Anglo-Saxons, though it must be noted that Frisian involvement is not a hard-and-fast indicator of naval expertise- they are also mentioned in sources as having been land-based troops in other campaigns.

¹⁸ Ildar Garipzanov, “Annales Guelferbytani: Changing Perspectives of a Local Narrative,” in *Zwischen niederschrift und wiederschrift: Frühmittelalterliche hagiographie und historiographie im*

but it is possible that this campaign, like those in 789 and 791, utilized specialists from the Franks' tributaries to handle the ships. Likely candidates based on the campaigns that preceded this one, as well as geographical proximity, are Frisians, Franks, or even Saxons. Surely it would have been useful to have individuals who knew how to negotiate the marshy lowlands of the area, especially when it was necessary to pull the vessels overland when it became impossible to continue via waterways.

It is soon after these three campaigns that the Scandinavian threat spurred Charlemagne to take defensive measures to defend the coasts of his realm. Part of this was the creation of fleets, though these were integral to land defenses such as fortifications and beacons. The first attestation of this comes in 800, when he "traversed the shore of the Gallic Sea. He built a fleet on this sea, which was then infested with pirates, set guards in different places..."¹⁹

The *Royal Frankish Annals* report the creation of fleets in 802 and 808.²⁰ In 810, Charlemagne ordered additional fleets built. "On all rivers flowing into the ocean, including those of Aquitaine, ships were built for the defense against the Normans."²¹ Apparently, the defensive preparations did not entirely falter after the death of Charlemagne, for another defensive fleet was ordered built in 838.²² From where these fleets were drawn or constructed is not mentioned, though it may be assumed that they were gathered from the coastal areas they were assigned to protect. The inhabitants of coastal areas would certainly have a large portion of fishermen, ferrymen, and others occupationally familiar with ships. It is likely that responsibility for personal oversight in the construction of these defenses fell to local magnates, as Charlemagne issued a mandate for them to make preparations for battle at sea in 810.²³

That coastal defense was a responsibility of local Frankish noblemen is supported by the *Annals of St. Bertin*. After a particularly destructive attack on Frisia in 837 by a force of Scandinavians, Louis held a public council with "those magnates to whom he had delegated the task of guarding that coast [in Frisia]."²⁴

spannungsfeld von kompendienüberlieferung und editionstechnik, Edited by Richard Corrandini, Max Diesenberger, and Meta Niederkorn-Bruck, (Vienna : Verlag der Österreichischen Akademie der Wissenschaften, 2010), 105-120, 119.

¹⁹ *Royal Frankish Annals*, trans. Scholz, 78.

²⁰ Haywood, *Dark Age Naval Power*, 118.

²¹ *Royal Frankish Annals*, trans. Scholz, 194.

²² *Annals of Fulda*, trans. Timothy Reuter (Manchester: Manchester University Press, 1992), 15.

²³ Haywood, *Dark Age Naval Power*, 119.

²⁴ *Annals of St. Bertin*, trans. Nelson, 37.

This defense system had its drawbacks, particularly in the recruitment of reliable manpower and leadership. As Haywood notes: “Another limitation was the lack of a large standing army suitable for permanent guard and garrison duty. The Frankish army was a crushingly powerful offensive weapon but its soldiers served in fulfillment of a legal obligation, not for pay, and were motivated by the chance of plunder. Defensive warfare carried similar risks to offensive warfare but none of the opportunities for profit...”²⁵ Indeed, the chronicler of the *Royal Frankish Annals* decries the “carelessness of the defenders” in an attack by Vikings on the coast of Flanders in 820.²⁶ In 834, the *Annals of St. Bertin* record that Louis came to Aachen after a devastating attack on Dorestad and organized more effective defenses for the coast.²⁷

In 837 he was obliged to make major improvements to the coastal defenses around Nijmegen, “partly through the sheer impossibility of the task, partly due to the disobedience of certain men.” This included emplacement of supplies, defenders, and more reliable local organizers “so that pirates’ savagery and our men’s fecklessness might now be avoided.”²⁸ It is highly likely that the same problems affected the defensive fleets, for though it was necessary to recruit men with seafaring expertise, the same problems of motivation that plagued coastal guards surely affected maritime forces.

With the death of Louis in 840 and the subsequent descent into civil war in the Carolingian realm, maintenance of defensive systems, including the fleets, appear to have fallen largely to the wayside. Though the rulers of the various kingdoms of the fractured empire occasionally took action in defense (Charles the Bald ordered fortifications built on the Seine in 864)²⁹, the level of organization and amount of resources needed to create and maintain them was, in the chaos, no longer available on the same scale. The results of this are apparent in contemporary sources. Attacks from Scandinavian raiders immediately take off, increasing in frequency and scope throughout the ninth and tenth centuries.

With this, Frankish interest turned markedly inward, and though ships were surely used as transports for land based troops (as will be discussed briefly in the next chapter), measures to halt incursions of the Norsemen were no longer taken at sea. As Anglo-Saxon rulers did in the

²⁵ Haywood, *Dark Age Naval Power*, 121.

²⁶ *Royal Frankish Annals*, trans. Scholz, 108.

²⁷ *Annals of St. Bertin*, trans. Nelson, 33.

²⁸ *Ibid*, 39.

²⁹ *Ibid*, 120.

latter half of the Viking Age, the Franks often purchased Scandinavian ship forces as short-term mercenaries (usually pitted against rival Frankish rulers or other groups of Vikings). This was not always an ideal solution. In 860, Charles the Bald paid a group of Danes 3,000 pounds of silver to turn on another force of Scandinavians operating on the Seine. As the Franks did not have the complete sum, the Scandinavians received hostages and sailed away to attack England.³⁰

Organization of Naval Assets in Britain

“It is ironic,” John Haywood writes, “that just at the point when we can be absolutely certain that Anglo-Saxons had effective sailing ships, recorded Anglo-Saxon naval activity ceases.” Indeed, there is a long period of silence in Anglo-Saxon sources on naval affairs from the mid seventh century (the time of the Sutton Hoo ship burial) to the mid ninth century. Although specific information about military affairs is difficult to glean from the surviving evidence, it does appear that the Anglo-Saxons in Britain turned their attention almost solely to land. For the slowing and eventual cease of Anglo-Saxon raids on their neighbors, namely the Franks, Haywood cites the stabilizing effects of Christianity and the laying down of increasingly centralized kingdoms in Britain.³¹

It is ironic in an additional sense that this consolidation of kingly authority should, at first glance, have made the raising of sizable ship forces more of a possibility with its implications for taxation and military obligations. This need not be the case, however. It could simply be that ships were too costly to maintain (without a good reason for having them) and that the rulers of the Anglo-Saxon kingdoms found that land forces were a more cost effective alternative to projecting their power. In short, they were not thought to be needed in the earliest stages of the Viking Age.

It would seem strange that after the 791 attack on the Lindesfarne monastery, more would not have been done by the leaders of the various Anglo-Saxon kingdoms to protect their coasts. As Peter Sawyer has pointed out, some evidence exists in the early ninth century for the erection

³⁰ *Ibid*, 92.

³¹ Haywood, *Dark Age Naval Power*, 75.

of land fortifications, although there is no mention of building of defensive fleets.³² This assumes, however, that ship forces were broadly considered to be effective to counter enemy ship forces in a defensive role. As will be covered in the next chapter, ship-to-ship battles were for various reasons rather rare occurrences in comparison to action on land. For this reason, anachronistic views of national defense through naval strength are not fitting to this period.

Between the Lindesfarne raid and the reign of Alfred, there is only one mention of Anglo-Saxons taking to ships in a military context. This came in 851, when “King Athelstan and Alderman Elchere fought in their ships...” near Sandwich, defeating a “great host” of Scandinavians. According to the *Anglo-Saxon Chronicle*, the Anglo-Saxon force captured nine ships, suggesting that they possessed a force of equal or greater size vis-à-vis the Scandinavians.³³ This might imply that Anglo-Saxon kings had maintained some form of naval forces in their own personal retinue, though modest in number, and that they could also rely upon the ship forces of the men pledged to them.

It can be assumed that whatever way his predecessors raised naval forces that Alfred did the same in his early efforts in defending his kingdom from the surge of Scandinavian raids in the late ninth century. The *Anglo-Saxon Chronicle* has Alfred participating personally in battles at sea in 875 and 882 against seven and four Danish “ships’ companies” respectively.³⁴ Alfred is also credited with sending ships from Kent into East Anglia, where they encountered sixteen Danish ships at the mouth of the river Stour and defeated them.³⁵ Again, it is probable in this instance that the Anglo-Saxon naval force was composed of at least the same numbers or greater. A reasonable estimate would put the strength of the Anglo-Saxons at 100-200% of the size of their enemies, however accurate the number of Scandinavian ships given in the *Chronicle*. It is likely that they were relatively few.

One of Alfred’s most noted achievements is the ordering of nine ships in 896, built larger and broader than previous vessels, with additional features “as it seemed to himself that they could be most serviceable.” In the same year, Alfred’s new vessels met in battle with six Scandinavian ships, winning the fight but incurring significant losses.³⁶ Though some overly-

³² Sawyer, *Roman Britain to Norman England*, 114.

³³ *Anglo-Saxon Chronicle*, trans. Garmonsway, 65.

³⁴ *Ibid*, 74, 78.

³⁵ *Ibid*, 79. Whether because they were weakened by attrition from the battle or whether the “great fleet of pirates” described in the *Chronicle* was truly superior in numbers, the Anglo-Saxon force was later defeated.

³⁶ *Anglo-Saxon Chronicle*, trans. Garmonsway, 90.

romantic Victorian writers cited this as the genesis of the Royal Navy, one cannot construe this as evidence for anything approaching a permanent naval force. In his discussion of Anglo-Saxon military organization, Ryan Lavelle poses the question of whether Alfred's longships were a short-term defensive measure or part of a development toward a more extensive organization for raising ship forces seen later in the period. He seems to come down in favor of the former idea, commenting on the terminology used in the *Chronicle*:

Although the verb *faran*, related to the Old English *fyrð* ('army', 'force') is used to refer to Alfred's command dispatching them, it is noteworthy that the nine Anglo-Saxon vessels recorded in the 896 entry of the Anglo-Saxon Chronicle are never referred to collectively as a *scipfyrð* ('ship-force'), a term which is used in later Anglo-Saxon Chronicle entries to refer to much larger fleets.³⁷

Interestingly, the year before the creation of Alfred's new model ships, some abandoned Scandinavian vessels ("those that were serviceable") were captured and brought back to London after their crews were trapped by the London militia. The same occurred in 894, with some reportedly taken to London and some to Rochester. It is tempting to speculate as to why this was done. Of course, the valuable ships could have been taken as trophies or booty (if not as whole ships, then as scrap ("all that they could not take away they broke up")) although it is also possible that they were taken to London in an effort to assemble as many working vessels as could be found that were suitable for warfare.³⁸ One wonders whether these captured vessels were examined closely by Alfred and his shipwrights and used as a basis for the improvements attributed to the king. Whether or not this was the case, capturing enemy vessels would have been a cost-effective and fast way of assembling ships quickly while denying Scandinavian raiders their vehicles which afforded them so much mobility and made their attacks so difficult to stop.

The shipboard skirmishes of the latter ninth century seem to have involved only relatively small numbers of vessels. It is of interest, however, that there are more recorded instances in the *Anglo-Saxon Chronicle* of ship-to-ship battles in the reign of Alfred than any other king.³⁹ Many of Alfred's defensive measures such as the building of the fortified *burhs* are credited with having potentially saved Anglo-Saxon England from Scandinavian conquest in the ninth century, though it is doubtful that defenses in the form of ship forces contributed significantly to this. As

³⁷ Lavelle, *Alfred's Wars*, 147.

³⁸ *Anglo-Saxon Chronicle*, trans. Garmonsway, 89, 86.

³⁹ The West-Saxon bias of the *Anglo-Saxon Chronicle* must be put forth as a potential reason for this.

Sawyer suggests, the greatest triumph of Alfred in raising ships for defense was not so much the results they gave on the battlefield, but the king's successful persuasion of his subjects and vassals of the need for the building and maintenance of defensive measures of all stripes (the significant price of which they would largely bear).⁴⁰

It would be stretching the scant evidence to suggest that a system of maritime defense in Britain started as early as Alfred's reign, though his efforts and mixed successes at sea could have at least provided an example for his successors to follow in a period when defense with ships was perhaps hardly considered. Anglo-Saxon records from the tenth century are not overly enlightening when it comes to naval affairs, though it does appear that sea power was utilized. In 904, Æthelwold, revolting against his cousin Edward the Elder, came to Essex from Northumbria with "all the ships he could muster."⁴¹ How he was able to raise this ship force is not known, though it could be that they were Scandinavian, since the Danish power in Northumbria sponsored him as king.⁴²

There is at least one reference to Edward the Elder employing a ship force in his resistance to Scandinavian incursions. In 911, a fleet of around 100 ships was assembled at Kent to meet the king in Mercia in a campaign against the Danes.⁴³ Although the exact numbers of ships given in the Anglo-Saxon Chronicle cannot be taken at face value, it is interesting that Edward was suddenly able to muster so many more ships than his father Alfred. It is not clear whether they were inherited from Alfred, who died in 899. It is more likely that the ships were raised at Edward's behest (likely from his subordinate magnates).

King Æthelstan employed a fleet of vessels in 934 in an attack on Scotland with "both a land and a naval force, and harried much of the country." In 992, a fleet composed of ships "of any account [was] gathered together at London" in a plan to attack Scandinavian ship forces. Despite lacking details on where these ships were gathered from or how men were found to crew them, it is of note that bodies of vessels could be mustered for limited periods of time to accomplish specific goals. "The evidence suggests," Lavelle comments, "that the English

⁴⁰ Sawyer, *Roman Britain to Norman England*, 123.

⁴¹ *Anglo-Saxon Chronicle*, trans. Garmonsway, 93.

⁴² Sawyer, *Roman Britain to Norman England*, 120.

⁴³ *Anglo-Saxon Chronicle*, trans. Garmonsway, 97.

kingdom was able to develop fleets in such a fashion that it was considered as a coherent entity, even if only at particular times.”⁴⁴

Components of ship forces could likely have consisted of the ships of tributaries of Anglo-Saxon kingdoms. In 945, Edmund attacked Strathclyde in Scotland, naming Malcolm king “on the condition that he would be his fellow worker both by sea and land.”⁴⁵ Though there is no mention of Scottish naval assistance in future conflicts, it must be assumed that Malcolm was expected to provide ships and crews when they were needed.

Upon the death of Edgar in 975, a panegyric from the *Anglo-Saxon Chronicle* celebrates the size and success of Edgar’s maritime forces.⁴⁶ Other parts of Edgar’s character were not so positive, at least in the opinion of the churchman that described them in a version of the *Chronicle*. Sawyer speculates that the “foreign and harmful people” that Edgar is said to have attracted to England could have been Scandinavian seamen in the employ of his naval forces.⁴⁷ This is not specifically stated, though it is far from outside the realm of possibility.

There is much firmer evidence in the eleventh century for the hiring of foreign mercenaries to augment naval forces. Surely by the reign of Æthelred in the eleventh century are Scandinavians to be found in the service of Anglo-Saxon kingdoms. In 1001, the Danish *Pallig*, brother-in-law of Svein Forkbeard, left the service of Æthelred “with all the ships he could assemble,” and joined a Scandinavian army at Devon (“despite all the pledges he had given [to the king]”).⁴⁸ In 1012, a group of 45 ships commanded by Thorkell the Tall swore to defend Æthelred’s kingdom in exchange for food and other provisions. Like Pallig, he soon abandoned this pledge, falling in with Swein the following year.⁴⁹ This not only illustrates the turbulent events of the reign of Æthelred the Unready, but clearly shows that foreign mercenaries could not always be relied upon.

It is in 1008 that some of the first traces of a complex naval organization based on landholding begin to appear. The ‘E’ manuscript of the *Anglo-Saxon Chronicle* reads: “In this year the king gave orders that ships should be speedily built throughout the whole of England: namely one large warship was to be provided from every 300 ‘hides’ and a cutter from every ten

⁴⁴ Lavelle, *Alfred’s Wars*, 146.

⁴⁵ *Anglo-Saxon Chronicle*, trans. Garmonsway, 111.

⁴⁶ *Ibid*, 107, 121.

⁴⁷ Sawyer, *Roman Britain to Norman England*, 127.

⁴⁸ *Anglo-Saxon Chronicle*, trans. Garmonsway, 132.

⁴⁹ *Ibid*, 144.

‘hides,’ while every eight ‘hides’ were to provide a helmet and a corselet [body armor].”⁵⁰ Lavelle interpreted this as meaning “from three hundred hides and from ten hides a *scegð*”, claiming a probable corruption in the text and the fact that one warship (*scegð*) of reasonable size made more sense in this context. Based on Lavelle’s calculations, around 200 ships (or the required supplies for these ships) could have been extracted from the 70,000 hides represented in southern England.⁵¹

The ships of this fleet, referred to in the *Chronicle* as a *scipfyrd* (“there were more of them, according to what the books tell us, than there had ever been before in England...”), were assembled off Sandwich and ready the next year in 1009, though their fate was disaster. Before they could be deployed against any Scandinavian attackers, the nobleman Wulfnoth fled from the fleet with around 20 ships. After a failed attempt by another nobleman Brihtric to capture Wulfnoth (resulting in the burning and destruction of many ships), the fleet was abandoned, “thus inconsiderably allowing the effort of the whole nation to come to naught.”⁵²

Although the raising of these ships is touted by the *Chronicle* as having been a great ‘public’ project, the command of the fleet in 1009 could very well have been divided among nobles such as Wulfnoth and Brihtric. Indeed, that these two were able to command the loyalty of such great bodies of the fleet (20 and 80 ships respectively) suggests that that this *scipfyrd* need not be the work of the centralized authority of Æthelred. Though the 1008 passage in the *Chronicle* claimed that the ships and men were supplied from all over the kingdom, individual commanders and magnates could still wield a great deal of influence over them. This sentiment is echoed by Nicholas Hooper and expanded. To him, the raising of the *scipfyrd* in 1008 “implies that while the kingdom was organized to pay for ships and to provide for their crews, the actual ownership of vessels could be vested in individuals.” This opens a further possibility: that “part of the cost could be offset by employing vessels for personal gain when they were not required for war.”⁵³

Two terms encountered in late Anglo-Saxon sources related to the mustering of maritime forces are identified by Hooper. These are *lithsmen* and *butsecarls*. In a literal sense, they are

⁵⁰ *Anglo-Saxon Chronicle*, trans. Garmonsway, 138.

⁵¹ Lavelle, *Alfred's Wars*, 149.

⁵² *Anglo-Saxon Chronicle*, trans. Garmonsway, 139.

⁵³ Nicholas Hooper, "Some Observations on the Navy in Late Anglo-Saxon England," *Alfred's Wars: Sources and Interpretations of Anglo-Saxon Warfare in the Viking Age*, ed. Ryan Lavelle (Woodbridge: The Boydell Press, 2010),

both general terms, taken to mean ‘boat-men’ or a ‘members of a military force’, but they are seen in different contexts in contemporary sources. The *lithsmen* were a hired fleet closely related to the military forces of Scandinavian rulers in the late Viking Age. One way that Hooper identifies who the *lithsmen* were is to compare them with the *housecarls*. The *lithsmen*, unlike *housecarls*, did not receive grants of land for their services, but could be paid off and dismissed at once.⁵⁴

Butsecarls are found most commonly in post Viking Age sources such as *Domesday Book* and are most likely mercenaries from coastal towns such as Kent, Sandwich, and Romney. For Hooper, these ports can be directly linked with later vestiges of naval organization such as the *Cinque Ports*. They are described as having been hired (or in one case of 1066, coerced) into serving in military requiring naval services. These could have been men that owed ship service to the king but offered their services for personal gain as well.⁵⁵

Although much attention is drawn to the defensive fleets of the Anglo-Saxons, offensive and raiding operations were also very much on the table (for example: Æthelstan’s apparently successful raids on Scotland in 934). There is unfortunately insufficient evidence in the context of Anglo-Saxon maritime forces to open a discussion of the relative effectiveness of ship forces intended for offensive purposes versus forces created to defend coasts. The language of Edgar’s panegyric in the *Chronicle*, however, does indicate that some kings viewed fleets as an effective method to project their power.

Despite perhaps wishful thinking, it would be a faulty evaluation of the evidence to assume that any form of permanent naval service was available to Anglo-Saxon kings in the Viking Age. Although fleets of relatively large sizes were undoubtedly raised, they were created on specific occasions as a response to specific crises (namely the Viking threat). The most common form of raising ship forces remained ad hoc by magnates that were wealthy and influential enough to do so. As has been seen in the case of the fleet of 1009, maritime forces organized by the king could be subject to individual nobles such as Wulfnoth and Brihtric. In the end, the efforts by Anglo-Saxon rulers to defend their lands with maritime forces met with mixed results, with as many failures and outright disasters as successes.

⁵⁴ Hooper, *Some Observations on the Navy*, 155.

⁵⁵ *Ibid*, 156.

Organization of Scandinavian Naval Forces

As opposed to the maritime forces raised by Anglo-Saxons and Franks, an overwhelming amount of contemporary evidence for organization of Scandinavian ship forces points to offensive-oriented coalitions, purpose-formed by individual magnates. A major (albeit highly-debated) theme in Viking Age scholarship is the movement from older “Germanic” kingship and rank-society (*Rang-gesellschaft*)⁵⁶ toward central authority, the Scandinavian lands were not organized in a centralized way like the kingdoms of Anglo-Saxon Britain or Frankia. Studies of Scandinavian military organization can be broadly applied to the raising of naval forces thanks to the highly maritime culture of the region and the resultant reliance on ships (discussed in Chapter 1. As Sawyer notes: “in areas where boats were essential, power must always have depended on the control of fleets...”).⁵⁷

By and large, Scandinavian forces were raised through the influence, wealth, and charisma of individual magnates. It is only rarely that forces of ships are attributed to Scandinavian kings such as Godfred in the early ninth century or Canute in the eleventh. The large “armies” attested to by contemporary sources were likely coalitions of individual leaders or regional strong-men (though their exact numbers may very well be exaggerated in contemporary sources). Guy Halsall has pointed to the dynamic “between core and periphery,” where, as regional magnates in Scandinavia became stronger and in possession of more power, other factions were driven away to endeavor abroad.⁵⁸ These coalitions were often very fluid, however. As Niels Lund has noted, these amalgamations of forces were held together largely by promise of mutual gain and could disperse as quickly as they were formed once the objectives were accomplished (or seemed unachievable).⁵⁹

This type of one-off, ad hoc formation can be seen in the attack on Birka by a coalition of Swedish and Danish ships, attested to by *Vita Anskarii* in the mid ninth century. King Anoundus, in exile in Denmark, offered “to lead them to this place where, without much loss to their army,

⁵⁶ Described by Heiko Steuer and, in the context of Scandinavian maritime organization, Björn Varenus, “Maritime warfare as an organizing principle in Scandinavian society 1000-1300 AD”, *Maritime Warfare in Northern Europe: Technology, Organisation, Logistics and Administration 500 BC-1500 AD*, ed. Anne Nørgård Jørgensen, (Copenhagen: National Museum, 2002): 249-255, 249.

⁵⁷ Sawyer, “Kings and Vikings: Scandinavia and Europe: AD 700–1100,” (London: Routledge, 1982), 55.

⁵⁸ Guy Halsall, “Warfare and Society in the Barbarian West: 450-900,” (London: Routledge, 2003), 106.

⁵⁹ Niels Lund, “Naval Force in the Viking Age and High Medieval Denmark,” *War at Sea in the Middle Ages and the Renaissance*, ed. John B. Hattendorf and Richard W. Unger (Woodbridge: The Boydell Press, 2003), 25-35.

they might gain that which they wanted. Enticed by the promised gifts and eager to acquire treasure, they filled twenty-one ships with men ready for battle and placed them at his disposal; moreover he had eleven of his own ships.”⁶⁰ It is this type of purpose-driven coalition that was most likely the most common method of gathering ship forces of any size in the Scandinavian region.

Lund has argued that the forces led by individual magnates were likely that man’s personal troops, their *lið*. This word, whose meaning is somewhat disputed, is basically, if not ambiguously, a name for a group of people. Geir Zoëga’s *A Concise Dictionary of Old Icelandic* defines this term as both a family group and a military unit.⁶¹ Judith Jesch describes the meaning of *lið* as “‘troop’, ‘retinue’, ‘help’, ‘assistance’, and even ‘fleet’” as “all specializations of this primary [term].” Jesch has given examples from runic inscriptions and skaldic poetry mentioning expeditions and military operations involving this term. She suggests that these *lið* were generally commanded by one man, but the meaning of this word is so flexible that this cannot be a forgone conclusion.⁶² It would be most safe to maintain the most general sense of the term as being any sort of armed troop.

It is tempting to compare the *lið* mentioned on runic inscriptions to the *lithsmen* of the kings of late Anglo-Saxon Britain (Canute, Harald, Harthacanute, and Edward the Confessor), though the *lithsmen* appeared in a somewhat different context. Though they may have been originally raised in the ‘traditional’ method at home in Scandinavia, the *lithsmen* became a paid, semi-standing mercenary force.⁶³

It is important to distinguish here the concept of *lið* from the term *húskarl*. The exact difference between these is, like so many Old Norse terms, not completely clear. Jesch has pointed out a greater ‘proximity’ of a *húskarl* to the man he served, suggesting that they may have shared the same literal household. One excerpt she gives from a skaldic poem in which Magnus the Good confronts the *húskarlar* of the enemy fleet at the Battle of Århus. It contains both *húskarl* and *lið*: *þverði jarli húskarla lið* (The “jarl’s troop of *húskarlar* diminished”).⁶⁴ Here the generality of *lið* is underscored in the presence of the more specific *húskarl*.

⁶⁰ Anskar, *The Apostle of the North*, Robinson, 65.

⁶¹ Geir Zoëga, *A Concise Dictionary of Old Icelandic*, (Toronto: University of Toronto Press, 1975), 270.

⁶² Jesch, *Ships and Men*, 187.

⁶³ Hooper, *Some Observations on the Navy*, 155.

⁶⁴ Jesch, *Ships and Men*, 237.

The use of term *lið*, then, is not a sufficient indicator to believe that all the members of a fleet were sworn men of a singular magnate. Assuming that the ships Swedish king Anoundus had an average crew of 50 warriors⁶⁵, this would mean that he had 511 men. This could perhaps be a rather inflated number for the household following (*húskarlar*) of a magnate, even one calling himself a king. Indeed, when one begins to examine the numbers that would likely be involved in examples cited by Lund, it becomes apparent some of the forces attributed to these individual leaders were likely to have come from elsewhere. “When [Thorkell the Tall’s] fleet dispersed in 1012,” Lund writes, “he kept forty-five ships with him, with which he took service with the English king. They were presumably his own forces.”⁶⁶ Though the numbers of ships cited are far from reliable, a personal following of 45 ships’ crews seems rather bloated.

It is more likely that it was the individual steersmen who owed direct loyalty to Thorkell and Anoundus. This fits well with the theory of Björn Varenius which puts forth a repeating pattern (*typification*) of male rank in kinship groups that he believes characteristic of early medieval Scandinavian society. In this, a man is “subordinate to his father, but in charge of his sons.” This concept can then be applied to military structure where, for example, “a person at the top could control an ever increasing number of people, depending on how many followers he had. In turn, these followers had followers, just as overlords controlled a number of other lords.” Just as Thorkell or Anoundus likely had their own bodyguards, they could add to the pyramid-shaped structure of their *lið* “entire units of men (=small retinues)...without causing problems because of the established hierarchical principle of dominance.”⁶⁷

To outsiders such as Rimbart or the compilers of the *Anglo-Saxon Chronicle*, such a complex social/military structure might not be readily apparent or even of interest. Simply naming the highest-ranking man might suffice. Some sense of these social structures was likely present among other non-Scandinavians, perhaps even if their complexity was not wholly grasped. Various commentators have referenced the use of the Latin term *sodalitates* (“bands of companions; ‘brotherhoods’). Prominent leaders are often referred to as *comites* (“counts/

⁶⁵ N.A.M. Rodger concluded that the majority of Scandinavian warships in the tenth century and beyond had between 20 and 25 pairs of oars: Rodger, *Safeguard of the Sea*, 14. The Gokstad ship, with provisions for 32 oars, is roughly contemporaneous with the account from *Vita Anskarii*. Some estimates of the crew size for this ship are as high as 70 men, but groups of ships need not have all been of uniform size and design (the average vessel size in this period may have been closer to that of the larger of the Salme ships). Therefore, a more conservative number was chosen.

⁶⁶ Lund, *Naval Force in the Viking Age*, 27.

⁶⁷ Varenius, *Maritime Warfare as an Organizing Principle*, 250.

earls”)⁶⁸. This is recorded in the *Annals of St. Bertin* as the interpretation by the Frankish chroniclers of Scandinavian military organization as it appeared to them.⁶⁹

This social and consequently military ordering of Scandinavians may be seen in the movements of certain Viking bands in Britain and Francia. Warriors gathered around an influential or promising leader (or multiple leaders; ‘*comites*’), who in turn could might forces with other leaders. As has been noted, the make-up of armies could be very fluid as armies broke apart and coalesced according to the fortunes of the campaign.

The dispersal of large Scandinavian armies into smaller components is recorded in the *Anglo-Saxon Chronicle*. In 897, after being forced to abandon their ships on the Lea, a Scandinavian force “dispersed, some to East Anglia, some to Northumbria...”⁷⁰ In 875, the “Great Army” which had landed in Britain in 865, fractured into two parts. One part, led by *Healfden* struck out north to attack Northumbria, the Picts, and Strathclyde. At the same time, *Guthrum*, *Oskytel*, and *Anwind* reportedly led another part southeast to Cambridge, where they stayed for a year.⁷¹

The *Annals of St. Bertin* are among the most useful resources in tracking the movements of Scandinavian ship forces operating in Francia. In 844, a group of Scandinavian raiders split up after attacking Toulouse, with some heading for northern Spain and others for south-western Spain.⁷² The fluidity of ship forces is exemplified in the activities of Viking forces from 860 to 862 reported by the *Annals*. In 860, a force of Scandinavians was promised 3,000 lb of silver by Charles to attack another raiding band of Scandinavians who were active on the Seine. After besieging them in a fortification in 861, the army “employed” by Charles forced their fellow Scandinavians to pay them 6,000 lb of silver and gold, and also to join them. After the besieged agreed to this, the new, greater force sailed for the open sea. They then “split up according to their brotherhoods (*sodalitates*) into groups allocated to various ports, from the sea-coast right up to Paris.” This was not the end of this coalition, for the *Annals* describe the leader of one group, *Weland*, leading one part of the force up to the Seine to Melun. Another part, led by *Weland*’s son, went to the monastery of St-Maur-des-Fossés.⁷³

⁶⁸ Halsall, *Warfare and Society*, 106; Sawyer, *Kings and Vikings*, 55.

⁶⁹ *Annals of St. Bertin*, trans. Nelson, 96.

⁷⁰ *Anglo-Saxon Chronicle*, trans. Garmonsway, 89.

⁷¹ *Ibid*, 74 ; Also noted in Halsall, *Warfare and Society*, 106

⁷² *Annals of St. Bertin*, trans. Nelson, 60.

⁷³ *Ibid*, 92-96.

It appears that this force was not finished campaigning. The next year in 862, Weland led a force of ships down the Marne, attempting to attack Meaux. Charles, however, maneuvered forces against him and built a bridge, forcing the Scandinavians to give hostages and leave Francia and sail for the sea. The *Annals* report that “when the ships had been repaired, the Danes made for the open sea, and split up into several flotillas which sailed off in different directions according to their various choices. Most of them made for the Bretons...and these Danes were joined by the ones who had been in Spain.”⁷⁴

Among the most vigorously debated issues in Viking Age scholarship has been the question of whether there existed some form of complex military organization linked to a kingly power in Scandinavia, namely the *leiðangr*. The term, which appears first in the tenth century in skaldic poetry, carries the basic definition of a ‘fleet of ships.’ Judith Jesch argues, however, that the term was likely appropriated in the medieval period to describe aspects of later military organization and is not acceptable evidence for a Viking Age dating of a centrally-controlled fleet.⁷⁵

The vast majority of evidence for this structure of military obligation, namely law codes, comes from well after the Viking Age. These law codes were important parts of a struggle between regional magnates and the person of the king. The conception of kingship as an investiture of absolute power in one person very likely did not exist in the Viking Age. Rather, he was seen more as a ‘first among equals’, capable indeed of bringing together significant forces through charisma and coercion, but not daring to demand the same kind of shown to kings in later times. For this reason, questions of the *leiðangr* are nearly indivisible from the broader discussion of the nature of Scandinavian society.⁷⁶

Some have attempted to place the origins of the *leiðangr* in the early Viking Age and before while others claim that nothing resembling such a force could have existed until well into the twelfth century. Niels Lund has provided perhaps the most important contributions to this discussion in recent years. For him, attempts to attribute a centralized system of naval organization are not adequately substantiated by evidence. Lund explains that the invasions of Svein Forkbeard and Canute the Great, held up by some scholars as proof of a Viking Age dating

⁷⁴ *Ibid*, 99.

⁷⁵ Jesch, *Ships and Men*, 197.

⁷⁶ Niels Lund, *Lið, leiding og landværn*, (Roskilde: Vikingskibshallen, 1996), 7.

for levy obligations in Scandinavia, need not have been made possible by the same kind of formal military organization described in detail in later medieval law codes. On the contrary, it was entirely possible to raise great numbers of men on a more or less voluntary basis, depending perhaps on the past successes or charisma of individual leaders. On the other hand, “nothing speaks to the fleets of Knut or Svein, as large or well-organized as they might have been, being raised on the basis of a *leding* organization and constituted a force that the people were expected to supply to the king.”⁷⁷

Conclusion

For all three of the regions profiled in this chapter, the nature of organization of naval assets was dependent greatly on societal structures. Although it is not the task of this work to enter the highly contentious debate of changes in Viking Age societies (specifically, to contest or support the narrative of change from regional to centralized authority), the Scandinavian and Anglo-Saxon evidence regarding military organization points to a trend of raising of larger and larger fleets. This cannot, however, be regarded as proof of increasingly centralized or permanent naval forces in either region. As has been shown, it was more likely a result of increasing Scandinavian ambition vis-à-vis Britain as well as increasingly elaborate defensive efforts on the part of the Anglo-Saxons. The result of this was a greater prominence of ship forces in the minds of military leaders on both sides of the North Sea.

By contrast, the fracture of the Carolingian Empire brought with it greater decentralization, and as a result, less effective defenses against Scandinavian maritime forces. Where Charlemagne raised highly effective riverine fleets to assist his armies in projecting Carolingian power on his borders as well as defensive fleets on his coasts, later rulers of the splintered Western European kingdoms struggled to maintain reliable coastal guards to meet the Viking threat on land. From the sources available, it appears that ship forces nearly disappeared from the Frankish consciousness both as a tool of power projection and a method of defense.

This underscores a central theme in naval organization in the Viking Age, and perhaps indeed for all pre-modern maritime forces. Militaries were costly, resource- and time- consuming enterprises that were a significant drain on the coffers of whoever sponsored and maintained

⁷⁷ Lund, *Lið, leding og landværn*, 12.

them. Ship-forces, with their expensive and highly-perishable vehicles, were even more so. As will be discussed in the final chapter, ships could be extremely effective and gave numerous advantages to military forces comprised of men who knew the waterways and how to negotiate them. Naval forces, however, were not equally suited to defense as they were to offense, where defensive forces were deprived of many of the advantages afforded to an attacking ship-bound force.

Chapter 3: The Employment of Ships in Military Action

At first glance, it would seem that until relatively modern times, the use of ships in warfare was wholly subservient to the objectives and needs of land campaigns. As Susan Rose has stated, the vast majority of use of ships in the Middle Ages was as a troop-mover: that is, to transport warriors from one place to another so that they may carry out main operations on land.¹ This is not an entirely incorrect assessment, especially in the case of the Carolingian Franks and the Anglo-Saxons. The Scandinavians, undoubtedly most prominent in the public imagination as seaborne warriors, very often used their famed vessels as swift-moving, versatile fighting platforms in their campaigns. An important distinction must be made, however, between the use of ships simply to cross water obstacles in land campaigns and commanders using ships as battle implements in and of themselves.

According to several contemporary sources, military leaders in this period were able to use maritime forces effectively and creatively to accomplish their objectives. One role of ships that is sometimes overlooked is their simultaneous employment alongside ground forces. This was done by military leaders in all parts of regions profiled here, but some of the most effective use of this strategy can be seen in the campaigns of Charlemagne, who on various occasions used inland river systems as highways to wage war against his neighbors.

It is important to illustrate, however, that ships also played a significant role as standalone forces in both attack and defense. Seaborne forces feature prominently and often in many contemporary accounts of conflicts in the North Sea region. Ship forces were used to achieve many of the same goals as land forces, though strategies, tactics, and technologies were tailored to suit the region's maritime-oriented landscape (described in the first chapter). In offensive actions, military leaders often targeted settlements with economic or strategic significance such as ports, harbors, or centers of wealth. Conversely, ship forces acting in defense were obliged to block access to these areas and try to stop landings. The relative effectiveness of these forces will be a main point of discussion.

Occasionally, ship forces met each other in open battle. Several of these battles took place between the forces of Alfred the Great and Scandinavian raiders, as recorded in the *Anglo-*

¹ Susan Rose, *Medieval Naval Warfare: 1000-1500*, (New York: Routledge, 2001), 25.

Saxon Chronicle, though details about them are rather lacking. As would perhaps be expected, the most significant ship-to-ship battles of the Viking Age took place in Scandinavia, though the accounts of them are mostly found in dubious Icelandic saga literature of the later Middle Ages. To glean precious details about the battles themselves, one must lean rather heavily upon skaldic poetry, despite the well-known faults of this medium. This work will also examine archeological evidence and discuss whether certain of these accounts are feasible or likely.

As will be shown, seaborne forces were very often highly effective tools for achieving political aims. As is true in conflicts in all time periods, battles were often avoided, sometimes by both parties, as a strategic decision. In the Viking Age, ship forces were commonly utilized as military deterrents, where political will was exercised through the threat of force represented by assembled vessels with armed crews.

Ships as Transports: 'naval warfare'?

Perhaps the most common use for the ship in warfare throughout history has been to ferry warriors from place to place in order to conduct operations on land. The technological triumph of Scandinavian shipbuilding allowed for the transport of armed forces to practically anywhere adjacent to a waterway. As Susan Rose explains, "many so-called naval battles at this date were really amphibious engagements...when the role of seafarers was to transport warriors with silent speed to unexpected landfalls."² N.A.M. Rodger has expressed the same sentiment.³ Much like the horse on land, the ship was mostly employed as a means of transport, meant to be steered to a suitable area near an intended battle site or target of attack where it would be left behind to do major fighting on foot. The relative swiftness of ships when compared to foot travel, combined with the vastness of the sea and deep-reaching fingers of river systems made possible fast, unpredictable attacks.

In the Viking Age, ships were used very often in this capacity, yet this begs asking the question: where does one make the distinction between land warfare and naval warfare? When ships are used solely to carry fighting men to a land battlefield, can they be said to have participated in naval operations, or does the centrality of the deciding terrestrial battle

² Rose, *Medieval Naval Warfare*, 25.

³ Rodger, *Safeguard of the Sea*, 4.

overshadow the transport of the men on ships? These are central questions that are most fitting to the defining military actions of this period.

The main characteristic of naval warfare can be said to be the centrality of waterways and ships in the conception and practice of military action. However, ships may be used in land campaigns to ford rivers and utilize them to quickly move ground forces to where they are needed. The use of ships as pure troop transports can be seen in the campaigns of Charles and Louis against their brother Lothar in 841 and 842. They appear to have simply used them to cross the Moselle in order to overwhelm the forces of Lothar. Leaving the ships behind, they caused Lothar's army to flee and moved to occupy the riverbank.⁴

Often, ships were scrounged from wherever they could be found, with the intent of using them for single operations. In 862, Charles the Bald sought to stop a small Scandinavian force that was sailing up the Seine to Meaux, though, "he could not catch up with them, because the bridges had been destroyed and the ships taken over by the Northmen."⁵ It is interesting to note that the Scandinavians, knowing full well the advantage that ships could bring to a land force in the form of mobility, proactively destroyed all the vessels in the area, along with fortified bridges.

"When the year 925 began," report the *Annals of Flodoard of Reims*, "Ragenoldus with his Northmen devastated Burgundy." After several Frankish nobles and bishops joined forces to meet them in battle, the Scandinavians were, after reportedly losing 800 men, forced to flee to a fortified camp on the Seine. Difficulties in approaching the camp ("a struggle on foot", along with a successful sally and counterattack by the Scandinavian forces) forced the Franks to hold one army three miles away from the camp of the Northmen while the other waited on the opposite bank of the Seine. They then chose to wait until reinforcements could be shipped down the river from Paris. As the *Annals* report, "with the complicity of some of our men, as it is said, the Northmen broke out of their camp and... some of our own men went home."⁶

This can be a fitting illustration of the differences in use of ship assets that could stand between Scandinavian ship-based forces and armies on the continent. The Scandinavians, confident in their maritime skills, used their ships as mobile platforms to sail deep into the

⁴ *Royal Frankish Annals*, trans. Scholz, 164.

⁵ *Annals of St. Bertin*, trans. Nelson, 99.

⁶ *Annals of Flodoard of Reims (919-966)*, trans. Steven Fanning and Bernard S. Bachrach (Orchard Park: Broadview Press, 2004), 13.

Frankish interior, making fast and unexpected attacks in the Burgundy area. Mindful that they are a relatively small force in a region capable of mustering large numbers of militia, they probably also designated a back-up plan in the form of a fortified camp where they may fall back in the eventuality that they meet unexpectedly stiff resistance (indeed, a significant number of Northmen were reported killed, showing that they likely did not expect to encounter a large Frankish force there).

The vessels of the Scandinavians, however, ultimately serve as the base of their operations here. When the Franks in 925 in Burgundy failed to establish a close siege against their camp, the commander or commanders of the Scandinavians, “sought the cover of a certain forest to shield their movement” and led their men to escape, likely back to their ships.⁷ It is the advantage of high mobility which is able to make up in some way for their inferior numbers. Having these highly-mobile vehicles allowed for a quick escape, and consequently, bold attacks.

These are the well-known tactics of the Vikings, familiar both to the scholar and the amateur, yet for the purposes of demonstrating Frankish versus Scandinavian use of water transport, the appearance of Frankish ship forces in this account is of interest. It is not specified whether the ships that the Franks “awaited ...to come from Paris” were crewed by dedicated sailors or whether they were a land militia that boarded river boats (such as the Utrecht boat in the archeological record). There is some reason to believe that they were the latter. There is little evidence suggesting that the ship forces raised by Charlemagne and Louis were still operational. In any case, these forces are said only to have been posted to the coasts and the mouths of major rivers.

There are examples of when the high mobility of the Scandinavian ships was countered by defenders. This occurred most often on river systems, which were blocked to strip the Scandinavians’ advantage of speed and surprise. This occurred in 896, when King Alfred, hearing of a large group of Northmen that had sailed into the Lea, blocked their access to the sea downriver. The Scandinavian attackers, seeing that their mobility was taken from them (thereby effectively compromising their operation and robbing any chance of its success), they abandoned the fortified camp they were constructing along with all their ships. These vessels were broken up or towed to London by the local militia force.⁸

⁷ *Annals of Flodoard of Reims*, trans. Fanning and Bachrach, 13.

⁸ *Anglo Saxon Chronicle*, trans. Garmonsway, 89.

The Franks used this tactic to defend their river systems as well. In 852, *Godefrid* (“son of Harald the Dane”) attacked Frisia before sailing down the Loire and then the Seine. Lothar and Charles brought forces to blockade the Danish forces on both sides of the river.⁹

Major distinctions can be made, then, between naval operations and land operations making use of ships as transports. The most important is flexibility in the capabilities of the ship, made possible by the vessel’s design as well as skill and seafaring know-how of the crew. A military leader seeking to adopt a naval warfare strategy should ensure that most members of the crew of his ship or ships are experienced seafarers, accustomed to the environs of the sea. The crew must also be prepared for a variety of engagements, including fights on land and at sea (and perhaps from fortifications). They must be ready for fast movements on land and on the water under oars throughout the operation, for the naval commander must consider both land and sea holistically as part of the operations area.

On the other hand, the ship used simply as a ferry for land troops serves a strategically limited role. The majority of personnel onboard may not be accustomed to sailing, though the manpower they represented may have been utilized to man the ships’ oars. Land-based warriors inexperienced in handling ships could row ships on rivers, though it is possible that more experienced sailors were hired or pressed into service for the length of operations. The skills of operating ships were likely extremely valuable to military commanders. Indeed, when in Earl Tostig fled from Sandwich in 1066 in the face of a great naval force led by his brother King Harold, he took away “shipmen from the port; some went willingly, but others unwillingly.”¹⁰

In the mind of the land-oriented military leader, the main purpose of the ship is to cross a water obstacle quickly and continue land operations. The ship, then, was often a disposable tool for the land commander, not intended for much reuse after playing its role. This stands in direct contrast to a force employing a strategy of naval warfare, where the ship is the mobile base of operations (and as such, is accordingly protected).

⁹ *Annals of St. Bertin*, trans. Nelson, 75.

¹⁰ *Anglo-Saxon Chronicle*, trans. Garmonsway, 196.

Characteristics of naval-oriented versus land-oriented use of ships

Land warfare using “troop transports”	Naval warfare
<ul style="list-style-type: none">• Water feature is seen as an obstacle to the land campaign that must be overcome with watercraft.• Warriors generally intend to use ships in a limited manner, leaving them behind when they have served their purpose.• Warriors being transported are not trained sailors, so competent experts often need to be utilized.• There is no expectation of an engagement at sea and warriors onboard are not trained or equipped to handle one.	<ul style="list-style-type: none">• Waterways are used consciously as a part of overall strategy in order to gain advantage over the enemy.• Forces generally remain close to their vessels when on land, intending to return to them once objectives on land are met.• Warriors onboard are all familiar with the workings of vessels, are inured to the hardships maritime travel, and likely all assist in some way in shipboard duties.• Warriors onboard are, if not trained or experienced in ship-to-ship engagement, psychologically prepared to face one. Ship’s steersman considers this an eventuality and an option in his decision-making process.• Land and water are considered equally as part of the battle-space/ warfighting landscape. Ships are utilized as a highly-mobile and tactically flexible battle platform.

Use of naval forces in conjunction with land forces

If it can be established that there are certain characteristics which decisively distinguish maritime-oriented forces from land-based forces utilizing ships as simple transports, one can begin to discuss their deployment parallel to one another as part of the same campaign. Fast-moving ship forces deployed in tandem with land armies represented a potent combination used very effectively in several campaigns in this period. Among the most prodigious users of this strategy was Charlemagne in his eighth century campaigns against the peoples of various territories adjacent the Frankish Empire, though this pairing of land and naval forces seems to have been in common use throughout the Viking Age by various peoples.

Frankish use of combined land and naval forces

The first in a series of military triumphs by Charlemagne, as described in the *Royal Frankish Annals*, occurred in 789. The target of the Frankish assault were the Wilzi, a Slavic tribe living in the area of modern Mecklenburg-Vorpommern, likely clustered around the Havel (apparently, they had “always been hostile to the Franks and used to hate and harass their neighbors who were either subject to the Franks or allied with them and provoke them into war”).¹¹ This operation came first in a series of combined arms attacks that made good strategic use of the inland waterways.

The campaign was launched from Aachen with a coalition force composed of several of the Franks’ tributaries. As the *Royal Frankish Annals* report, the land component was made up of Franks and Saxons. In addition, the army was joined by a contingent of Sorbs and Obodrites, likely gathered on the way as the Frankish army passed through their lands. Interestingly, Charlemagne ordered built a pair of wood and earth fortresses on either side of the Elbe after bridges had been built there. It is likely that this was done to secure a route of retreat or reinforcement for the Frankish army in the case that things went disastrously wrong. It also bears some similarity to the fortified camps that Scandinavians built as forward strongpoints in their naval campaigns on the rivers of Francia.

As Charlemagne’s land force reached the Havel, the naval element made of both Frisians and Franks joined with the land element. Note should be made of the Frisian association with seafaring in Anglo-Saxon and Frankish sources in his period. This could be an indication that the ship-based component here was manned by expert, dedicated sailors who were familiar with their craft and the waterways they plied. If so, these would have been men who thought of their vessels as mobile platforms that, though disembarked to do fighting on land, were their base of operations.

Once they had reached the Havel, the combined army and naval forces were ready to strike. “Entering the country of the Wilzi, [Charlemagne] ordered everything to be laid waste with fire and sword.”¹² The combined land and ship force quickly overwhelmed the Wilzi who, “although warlike and confident in its numbers, were not able to withstand the attack of

¹¹ *Royal Frankish Annals*, trans. Scholz, 68.

¹² *Ibid*, 68.

Charlemagne's army for very long." The leader of the tribe, *Dragawit*, was said to have surrendered "with all his people" outside of a certain city (*civitas*).¹³

The advantages given to a land army by a supporting naval component would have been flexibility and speed. In offensive operations, a ship force could make swift raids and attacks of opportunity on Wilzi settlements ahead of the Frankish land army that lay in close proximity to the river, thus making forage difficult for any Wilzite force seeking to meet Charlemagne's army. Perhaps more importantly, however, raiding would have dramatic psychological effects on the Wilzite population, likely weakening their will to resistance.

John Haywood speculates that the ship force could have been used in a direct attack on a Wilzite stronghold (he cautiously identifies this as the site of modern Brandenburg an der Havel, an island on the river), though this is not specified in the *Royal Frankish Annals*' account. If this stronghold were located on an island as Haywood suggests, the use of a naval force would have made storming it much easier.¹⁴ Rather than having to worry about constructing bridges or locating transport barges to assault the island, the Franks had at their disposal a dedicated naval force, adept at maneuvering their vessels, as well as embarking and disembarking them.

Perhaps an equally complicated prospect would have been a siege of the island with only land forces. Not only would an exclusively land-based force struggle to stop supplies from being ferried to the island on the river, to completely encircle the Wilzite *civitas* would mean that their own forces would have to be divided by the Havel. The obstacle of the river would have made reinforcement ponderous or impossible for both armies, thus making them extremely vulnerable to a counter-attack.

In addition to offensive actions, the ship-based force likely served in other capacities. They could carry supplies for the Frankish army more easily than in wagons over primitive or nonexistent roads. The ships, though likely crewed by experienced and dedicated sailors, could also be used to ferry land-based warriors across the rivers if the tactical situation demanded reinforcements there. As bridges and fords were relatively few and far between, this could have lent a great benefit to the mobility of the Franks' land forces.

¹³ *Royal Frankish Annals*, trans. Scholz, 68.

¹⁴ Haywood, *Dark Age Naval Power*, 97.

According to the *Annals*, the campaign against the Wilzi was a triumph, but Charlemagne did not wait long before further exercising his military forces on his borders again. Perhaps emboldened by his success two years previous, the future Emperor embarked in 791 on a punitive campaign against the Avars, a tribe occupying an area between the Danube and the Drava in modern Hungary. Like in his campaign against the Wilzi, the Franks' king employed a combination of land and ship forces. Frisians are mentioned again by the *Royal Frankish Annals*, though curiously as a land component which marched alongside Franks and Saxons on the north bank of the Danube. These forces were put under the command of Frankish nobles Count Theodric and Meginfrid. Charlemagne marched with another force on the river's south bank while a naval force sailed between.¹⁵

Charlemagne's army and navy encountered heavy Avar fortifications at two different places on the river, one at *Cumeoburg* and another at *Kamp*. The exact location of these place-names is not certain, but it can be said that they were erected close to the Danube to inhibit or stop Frankish forces from incursion into Avar territory. These efforts were insufficient to stop Charlemagne's combined forces, however. The appearance of ships on the Danube apparently convinced the Avars that their prepared positions were untenable to defend, so they abandoned them.

This underscores another potent advantage that supporting naval forces could represent for a land army. When meeting an enemy land force on the route of march, the ship-based component of the army could nimbly and quickly sail downriver and disembark behind them, either to threaten their flanks, cut lines of communication, or to attack stragglers. If the enemy force was large enough, it would likely need some line of supply in the form of slower-moving wagons, which would be vulnerable to a foray by the ship force.¹⁶ This is likely what the military leaders of the Avars had in mind when vacating their prepared positions.

After the collapse of major Avar resistance, the Frankish force marched and sailed as far as the river Rába before returning home victorious.¹⁷ The only casualties reported by the *Royal Frankish Annals* were horses that had died of disease, though Einhard reports the campaign

¹⁵ *Royal Frankish Annals*, trans. Scholz, 69.

¹⁶ Of course, it is not known whether the Avars had as sophisticated lines of supply and communication as the Franks: Indeed foraging was probably the main means of subsistence for most military forces of the day, though surely Avar military and political leaders sought to keep in contact with one another via messenger.

¹⁷ *Royal Frankish Annals*, trans. Scholz, 70.

slightly differently. “[Charlemagne] managed that war,” he reports, “with greater attention and preparation than his other wars.” According to Einhard, the war with the Avars ended only in 803, with much bloodshed and destruction (“How many battles occurred in that war and how much blood was spilled is indicated by the utter depopulation of [the region] and the desertion of the khan’s palace; in fact, there is hardly a trace that people once lived there”). He indicates that most of the blood spilled was not Frankish, though he does record the deaths of two Frankish nobles, Eric, Duke of Liburnia and Gerold, governor of Bavaria.¹⁸

It is likely that the campaign was decided in the first few weeks, which is the sense that is given by the *Royal Frankish Annals*. The many years of fighting attested to by Einhard was likely the process of despoiling the province while suppressing resistance (indeed, Eric of Friuli is reported to have been killed in an ambush) and taking its extractable wealth.¹⁹ For this, ships would have been an ideal tool, though there is no mention of their use for this in contemporary sources. Their mobility would enable the Franks to quickly move their forces to where they were needed within the province if any further resistance was encountered. Utilizing ships would perhaps make the extraction of plunder simpler as well.

In 797, ships were used in a campaign against the Saxons, though the only source giving any detailed description of this campaign are the *Annales Guelferbytani*. As John Haywood notes, ships were used here as *castellum* (a fortress, likely dragged on land and arranged in a defensive circle.) This could have been for the purposes of creating a temporary fortress or base camp from which to launch further operations, as is seen in Charlemagne’s campaign against the Wilzi, not to mention many of the Scandinavians’ forays into Britain and Frankia.²⁰

Charlemagne is celebrated as being among the most brilliant military minds of his day, though it should be mentioned that some of his ideas and strategies, along with the resources to realize them, were in part inherited from his forbearers. In 734, Charles Martel led a naval expedition against the Frisians, subjugating and converting them to Christianity.²¹ After the AD 797 campaign against the Saxons, there is little mention of Charlemagne utilizing combined ship and land forces in his military endeavors. It could have been that naval forces did not feature as

¹⁸ Einhard, “The Life of Charlemagne,” in *Charlemagne’s Courtier: The Complete Einhard*, ed. Paul Edward Dutton (Peterborough: Broadview Press, 1998), 24.

¹⁹ *Royal Frankish Annals*, trans. Scholz, 78.

²⁰ Haywood, *Dark Age Naval Power*, 98.

²¹ *Ibid*, 88.

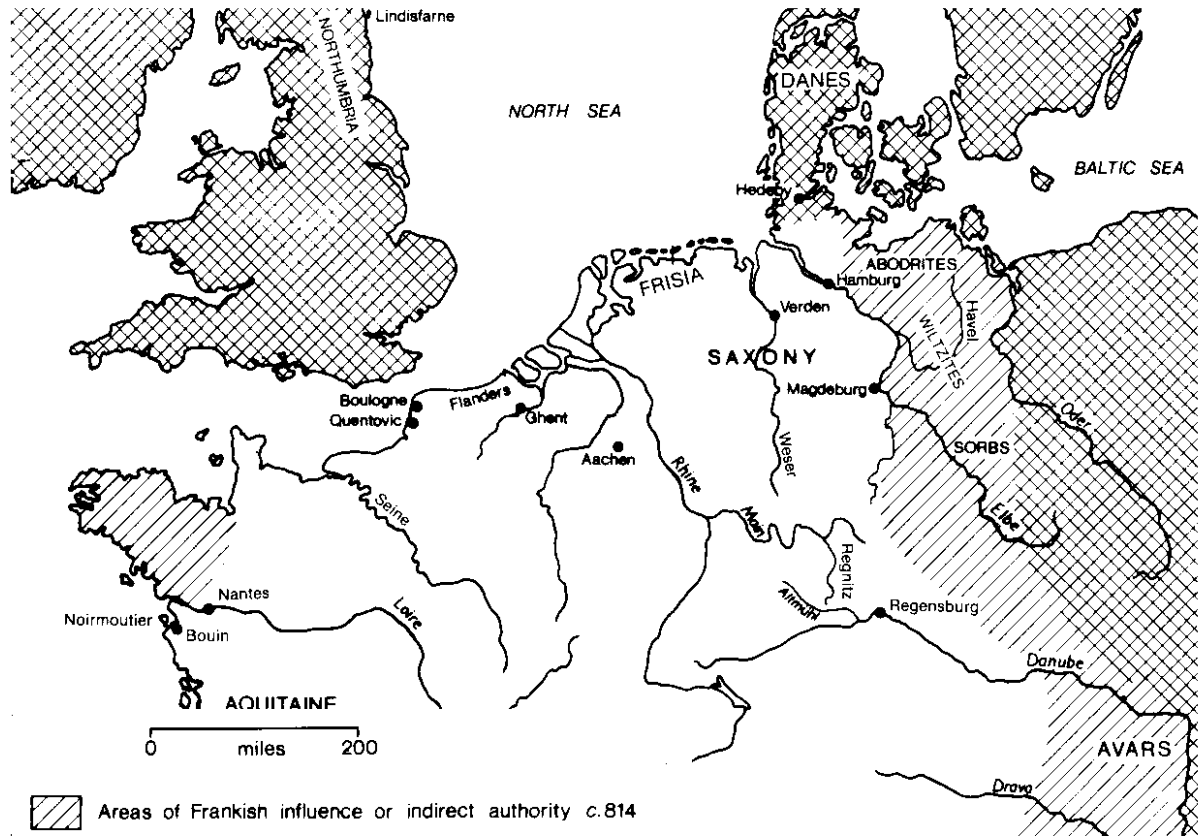
prominently in them, or that they were commonplace and so not worthy of mention to chroniclers. It is unlikely that the Franks ceased using inland waterways to their advantage in the eighth century after experiencing such marked success, however it is interesting that there is no more mention in Charlemagne's time of Frankish combined operations after the first recorded Viking raid in Frankia in 799.

The *Royal Frankish Annals* report Charlemagne's encounter and brinkmanship with the Danish king Godfred beginning in 804. It seems that the Danes, too, were keen to combine naval and land-based forces (he "came with his fleet and the entire cavalry of his kingdom to Schleswig...")²² It is possible that these displays of Danish naval strength and prowess, along with Godfred's depredation in Frisia and also against the Obodrites, spurred Charlemagne to concentrate his precious naval assets at the mouths of the rivers. By most accounts, this was a rather effective tactic, but after the Emperor's death and subsequent civil war among his sons, the lack of centralized and coordinated defense left the rivers of Frankia much more open to the Scandinavians.

There is another mention of Frankish use of combined naval and land forces in this period, found in the *Annals of St. Bertin*, which documents the civil war between Charles the Bald who, allied with his brother Louis the German, contested Lothar. In 838, Lothar set some forces on the Moselle to stop Louis and Charles from crossing, but they were quickly dispersed after Louis and Charles led a combined cavalry and naval force against them.²³ The choice of matching cavalry with ship forces would have allowed for even swifter movement, as cavalry would have been able to more easily keep up with the naval component in fast maneuvers (an advantage that seems to have not been lost on Godfred in his showdown with Charlemagne three decades earlier.)

²² Haywood, *Dark Age Naval Power*, 118; *Royal Frankish Annals*, trans. Scholz, 83.

²³ *Annals of St. Bertin*, trans. Nelson, 52.



Haywood, *Dark Age Naval Power*, 96.

The use of combined land and naval forces in Britain

Military and political leaders in Britain clearly saw the potential in pairing land and seaborne forces. Much of the military actions were simple raiding, much like the attacks that earned the Scandinavians a notorious reputation. The Scots were targets of Anglo-Saxon attacks utilizing combined sea and land arms on multiple occasions, though there is little information to be gleaned from the *Anglo-Saxon Chronicle* regarding specific tactics or strategies employed. In 934, "...went King Athelstan into Scotland, both with a land force and a naval force, and laid waste a great part of it..."²⁴ Over a century later in 1054, Earl Siward, a powerful magnate in northern England led a combined land and ship force against the Scots and drove King Macbeth from his kingdom.²⁵ The victory was not without loss, however, for the earl lost his eldest son

²⁴ *Anglo-Saxon Chronicle*, trans. Garmonsway, 107.

²⁵ *Ibid*, 185.

Osbjorn in the attack. There are no other details about the campaign or even the circumstances of the conflict with the Scots.

Coordination between land and sea forces was sometimes a great challenge. In 999 a force of Danes won a victory on land over the militia called out from Kent and afterwards began to raid the surrounding countryside. According to the *Anglo-Saxon Chronicle*, a ship and land force was prepared to meet them, “but when the ships were ready there was delay from day to day, which was very galling for the unhappy sailors manning the vessels. Time after time the more urgent a thing was the greater was the delay from one day to the next, and all the while they were allowing the strength of their enemies to increase; and as they kept retreating from the sea, so the enemy followed close on their heels. So in the end these naval and land preparations were a complete failure, and succeeded only in adding to the distress of the people, wasting money, and encouraging the enemy.”²⁶

In 1000, King Athelred raided Cumberland by land. The navy, sailing around Chester with the intent of joining the land-based army, were “unable to make contact with him as had been planned...[so] they harried the Isle of Man.”²⁷ This may reflect the difficulties of navigation in the period: even a sizable army may have been difficult to track from the sea. This operation seems to have not been a very coordinated affair, but rather an opportunistic raiding expedition. The *Anglo-Saxon Chronicle* gives little detail concerning the fate of the campaign, either for the land or the sea force, though it seems that little resistance was met.

The ability to out-flank enemy forces with supporting naval contingents can be seen in a standoff in 1052 between Earl Godwin and the forces of King Edward on the Thames at Southwark (near London). The forces of Godwin stood on the south bank of the river while “great land levies” of the king stood on the north bank. Both sides also had naval components to their armies. A bridge (perhaps London Bridge) spanned the river. As Godwin’s land forces deployed along the south bank, his ship force came from upriver and “veered round with the ships towards the north bank as if they were going to surround the king’s ships.”²⁸

If Godwin was significantly outnumbered by Edward’s militia, it would have been a wise move to neutralize his ships by making a daring attack on them. This way, they could not be

²⁶ *Anglo-Saxon Chronicle*, trans. Garmonsway, 133.

²⁷ *Ibid.*

²⁸ *Ibid.*, 180.

utilized to ferry the militia to the south bank, leaving the bridge the only direct attack route for the king. This narrow crossing would have been much easier for a smaller force to defend, since the weight of the king's superior numbers could not be brought to bear against Godwin's forces all at once. Perhaps fortunately for the men of both armies, this encounter did not come to blows. As the *Chronicle* records, "it was hateful to almost all of them to have to fight against men of their own race, for there were few men else of any consequence except Englishmen on either side..."²⁹ Instead, a truce was declared and the armies stood down.

Naval forces as symbols of aristocratic prestige and military deterrent

As has been shown, forces of ships could be very effective on the battlefield as highly mobile fighting platforms. Doubtless, anyone with experience or knowledge of military affairs knew this. The threat of their use was at times enough to achieve the aims of men who led them. Like other types of forces in the Viking Age, maritime forces were used to achieve strategic goals without having to join in battle. These forces also served as powerful symbols for the authority and prestige men who led them.

It appears that fleets could have been used among Danish kings and magnates as a kind of diplomatic tool. Conflicts between the Danes and Carolingians provide some of the most prominent examples of this. Godfred's 804 conference with Charlemagne, referenced earlier (he "came with his fleet and the entire cavalry of his kingdom to Schleswig on the border of his kingdom with Saxony"), appears to have been a kind of show of force. Godfred, apparently fearing treachery, refused to appear for the conference.³⁰

In 826, Harald Klak sailed up the Rhein came to Ingleheim with an entourage of ships to accept baptism and support from Louis the Pious. The poet Ermoldus Nigellus recorded the event in verse. "See, there floats on the Rhine's waves surely one hundred ships, every one beautifully adorned with snow white sails."³¹ Egon Wamers pointed out the contrast between the Carolingians, who would normally travel with their entourage on horseback, and the

²⁹ *Anglo-Saxon Chronicle*, trans. Garmonsway, 180.

³⁰ *Royal Frankish Annals*, trans. Scholz, 84

³¹ Ermoldus Nigellus, *Digt om Kong Haralds Daab (Af Carmen in honorem Hludowici)*, trans. Hans Olrik (Copenhagen: Selskabet for historiske kildeskrifters oversættelse, 1886) Accessed April 17 2014, http://heimskringla.no/wiki/Ermoldus_Nigellus:_Digt_om_kong_Haralds_daab

Scandinavians, who appeared with ships. “This impressive and – for the Franks – not only strange, but indeed probably also threatening appearance of Harald on the scene provides us with a telling vignette of the way of life and life-style of a Scandinavian ‘sea-king’.”³²

It is possible that this was not only a practice among Scandinavians in this period. In 972 (or perhaps 973), Edgar “led all his fleet to Chester, and there six kings came to him to make their submission, and pledged themselves to be his fellow workers by sea and land.” His panegyric recorded upon his death in 975 (“kings honoured the son of Edmund, far and wide over the gannet’s bath, and submitted to the sovereign, as was his birthright, no fleet however proud, no host however strong, was able to win booty for itself, while that noble king, occupied the royal throne.”) suggests that this naval force was tied in a significant way to the person of the king.³³ It is very possible that in the century and a half of conflict and interaction between Scandinavians and Anglo-Saxons that Anglo-Saxon kings like Edgar were influenced to take up Scandinavian customs, becoming “sea kings” in their own right. This would reinforce the notion that the “foreign and harmful people” in Edgar’s court were indeed Scandinavians.

It is possible that the Frankish and Anglo-Saxon defensive fleets described in chapter 2 served as much of a deterrent as an actual interception force. The time of Charlemagne’s reign, for example, was relatively free of major Scandinavian incursions. Some such as John Haywood have pointed to this as evidence for effectiveness of the fleets he ordered built along his northern coasts. It could be that the mere presence of significant maritime forces, posted at river mouths and other incursion points, might have been enough to convince opportunistic raiders to try their fortunes elsewhere.

Engagements at sea

Perhaps the first type of action that comes to mind when considering naval warfare in the Viking Age is the ship-to-ship engagement. That is, when two naval forces fight a battle aboard

³² Egon Wamers, “The 9th Century Danish-Norwegian Conflict: Maritime Warfare and State Formation,” in *Maritime Warfare in Northern Europe: Technology, organization, logistics, and administration, 500 BC – 1500AD*, ed. Anne Nørgård Jørgensen, John Pind, Lars Jørgensen and Birthe Clausen (Copenhagen: National Museum of Denmark, 2002), 237.

³³ *Anglo-Saxon Chronicle*, trans. Garmonsway, 119.

their ships. There are several reasons to believe that this type of engagement was relatively rare. The first among these is that pitched battles of any sort were somewhat uncommon throughout the Middle Ages. Battles were risky in the extreme as any number of unforeseeable factors could lead to disaster. A leader could be slain at the wrong moment, causing his men to lose heart and flee. A numerically superior force could be driven to flight by a skillfully-performed and well-timed maneuver. Even if victory was a fairly sure outcome, casualties in pitched battles could be extremely high for both sides, weakening the victor's forces to the point where achieving the campaign's objectives became impossible.

Another major factor indicating the rarity of battles at sea is the sheer vastness and hostility of the waterways in question. As was discussed in Chapter 1, navigating the oceans was in itself a challenging and risky prospect. Daring the open sea could literally wreck the ambitions of military leaders along with sizable fleets. Additionally, in order to fight a battle at sea, one had to first *find* the enemy. As Susan Rose has written, this was a near impossibility before the age of advanced navigation and radar.³⁴ For this reason, all naval battles attested to in the Viking Age took place relatively close to shore; near river mouths or well-sailed coasts where ship traffic was common.

As with practically all facets of study of the Viking Age, sources for sea battles are potentially problematic. From Anglo-Saxon Britain, there are (contemporary) mentions of ship-to-ship battles only in the *Anglo-Saxon Chronicle*. Most of these have to do with the coastal defense efforts of Alfred the Great and are rather lacking in detail. Many of the great sea battles in Scandinavia are recorded with some detail in *Heimskringla*, though Snorri's thirteenth century account is suspect at best. The poems of the skalds, found frequently peppered among the prose of *Heimskringla* and other Icelandic works, are more widely accepted as being roughly contemporary accounts of events (these are thought especially convincing since Snorri often cites them as his authority on events he describes).³⁵ Though the temptation is sometimes strong to take Snorri's prose commentary at face value in order to fill in sorely lacking detail, one must treat this as ultimately unreliable. This work will lean rather heavily on skaldic poetry for evidence of ship-to-ship battles in Scandinavia.

³⁴ Rose, *Medieval Naval Warfare*, 25.

³⁵ Jesch, *Ships and Men*, 15.

Ship-to-ship battles in Britain

Though Alfred the Great is perhaps the most well-known Anglo-Saxon military leader to have participated in naval battles, he was not the first. A seemingly major naval battle between King Athelstan and Scandinavian naval forces is recorded in 851 in the *Anglo-Saxon Chronicle*. "... in the same year [851] King Athelstan and ealdorman Ealhhere fought in ships, and destroyed a great host at Sandwich, and captured nine ships and drove off the rest."³⁶ There is no further information given about how many ships were present on each side (or indeed, how many a "great host" was considered to be). However, it can be said that the clearing and capturing of enemy vessels was the objective of the Anglo-Saxons. If it is assumed that the nine cleared and captured ships mentioned were those of the model of the roughly contemporaneous Gokstad ship, a low estimate would yield at least 300-400 Scandinavians killed or taken prisoner.³⁷ Perhaps the Scandinavians, wary of sustaining too many losses in enemy waters, fled so as to stem their losses.

The first mention of Alfred fighting onboard ship is in 875, when he "sailed out to sea with a fleet, and fought against seven ships' companies, and captured one of them and put the others to flight."³⁸ He went out to sea again in 882 and fought against four Danish ships. This time, the *Anglo-Saxon Chronicle* reports that his forces, "captured two of the ships, and the men aboard were slain; and two ships' companies surrendered to him, and they were badly cut about and severely wounded before they surrendered."³⁹

In 885, Alfred sent a fleet into East Anglia, which at first met with success. "...they met with sixteen ships of the pirates and fought against them, and captured all the ships, and slew the crews. When they were on their way home with the booty, they met a great fleet of pirates, and fought against them the same day, and the Danish were victorious."⁴⁰

As has been discussed, the *Anglo-Saxon Chronicle* attributed the raising of a new fleet in 897 the King Alfred. It was perhaps from his experience fighting the Scandinavian raiders at sea

³⁶ *Anglo-Saxon Chronicle*, trans. Garmonsway, 65.

³⁷ Such estimations are of course highly problematic. Fleets were likely composed of varied sizes of ships and not all crew of those cleared ships need have perished (they could have jumped to the ships of their comrades when things started looking grim enough).

³⁸ *Anglo-Saxon Chronicle*, trans. Garmonsway, 74.

³⁹ *Ibid*, 78.

⁴⁰ *Anglo-Saxon Chronicle*, trans. Garmonsway, 79.

that spurred Alfred to action when he ordered the defensive fleet built composed of ships designed after his suggestions. They were to be, “almost twice as long as the others, some had sixty oars, some more; they were both swifter, steadier, and with more freeboard than the others...”⁴¹

It is with nine of these new ships that Alfred’s navy met a small Scandinavian force in 897, perhaps near Devon (Lavelle placed the fight at Poole Harbor, Dorset).⁴² The account of this battle is the most detail-rich of the naval encounters described in the *Anglo-Saxon Chronicle*, and speaks to the potentially unpredictable and chaotic nature of this type of combat. Alerted that a group of six Scandinavian ships were attempting to sail out of a certain river and out to sea (they had just raided the Isle of Wight and “done much harm there”), the Anglo-Saxon fleet blockaded the mouth of the river.

Since the prose in the Chronicle somewhat confusing and ambiguous in places, it will be helpful to break down the battle in 897 into separate parts:

- 1.) Three of the six Scandinavian ships launch an attack on the Anglo-Saxons blocking the river mouth while the other three sat aground. The crews of the grounded ships were disembarked and “had gone off inland”.
- 2.) Two of the three attacking Scandinavian ships are cleared and their crews are slain. The third Scandinavian ship manages to escape.
- 3.) Three of the Anglo-Saxon ships run accidentally aground (“awkwardly”) on the same side of the river as the grounded Scandinavian ships (this is given as the reason for the escape of the Scandinavian ship in phase 2 above).
- 4.) Waiting for the tide to ebb enough for land to appear between them, the crews of the grounded Danish ships launch a ground assault on the crews of the grounded Anglo-Saxon ships. The result is 62 Anglo-Saxon and 120 Scandinavian casualties.
- 5.) The tide rises, freeing first the Scandinavians’ ships. They manage to row out of the harbor (“The tide, however, came first to the Danish ships, before the Christians could push off theirs, and hence they rowed away out to sea”).

⁴¹ *Anglo-Saxon Chronicle*, trans. Garmonsway, 90. By “others”, it is assumed here that the chronicler meant either the other ships in the West Saxon fleet or common Scandinavian ships that they had been encountering.

⁴² Lavelle, *Alfred’s Wars*, 288.

- 6.) The surviving crew of the three Scandinavian ships are so badly wounded from the battle that the “sea cast two of them ashore” before they could reach Sussex. A third ship is reported to have reached East Anglia.⁴³

Perhaps the most prominent feature of this account is the role played by nature in the engagement. Ships are run aground, either by currents or by deceptively shifting tides, drastically changing the circumstances of the battle. This episode also underscores another factor unique to combat on ships: it was necessary for there to be enough fit men after a battle to man the oars. Looking back on the account of the sea battle 882, the Scandinavians surrendered after being severely wounded. It is possible that their injuries were so severe that they had no hope of rowing away and fleeing the battle.

Another sea battle described in the *Anglo-Saxon Chronicle* appears to have occurred in 992. Here, king Æthelred the Unready planned to ambush a force of Scandinavians out at sea. He designated his commanders for the task and sent them to carry out his plan. One of his commanders, however, apparently betrayed them, warning the Scandinavians of the attack. Having been forewarned of the assault, the Scandinavian fleet was able to slip away except for one ship, whose crew was killed. The Scandinavian fleet was caught later by ships from London and East Anglia, which “made a great slaughter of [the Scandinavians].” The traitor, the *Chronicle* dutifully records, was among the slain.⁴⁴

Two more naval engagements are recorded in the *Anglo-Saxon Chronicle*, in the reign of Edward the Confessor, at the very end of what is considered the Viking Age. In 1048, “Sandwich and the Isle of Wight were harried, and the best men that were there were slain; and King Edward and the earls put out to sea in their ships in pursuit of them.”⁴⁵ There is no mention of how this operation unfolded or even if contact with the enemy was made, however.

Another sea battle is mentioned in 1050 as part of an ongoing power struggle between Swein the earl and Beorn, his cousin. After having Beorn murdered, a ship force from Hastings

⁴³ *Anglo-Saxon Chronicle*, trans. Garmonsway, 91; F. P. Magoun, “King Alfred’s Naval and Beach Battle with the Danes in 896”, in *Alfred’s Wars: Sources and Interpretations of Anglo-Saxon Warfare in the Viking Age*, ed. Ryan Lavelle, (Woodbridge: The Boydell Press, 2010), 290-296.

⁴⁴ *Ibid*, 127.

⁴⁵ *Ibid*, 166.

attacked Swein's ships, capturing two and slaying the crews. After this, support for Swein fell away and most of his ships deserted him.⁴⁶

The *Anglo-Saxon Chronicle* can be a very valuable source of information about warfare in Britain in this period, persecuted both by the Anglo-Saxons and Scandinavians. It is lacking, however, in what would today be considered an adequate level of detail. Yet, there are some basic conclusions that may perhaps be drawn about ship-to-ship engagements as they are described in the *Chronicle*.

The first, and perhaps most obvious, is that the objective of a sea battle was to kill or force the crews of the enemy's ships to surrender. This was typically done through boarding actions (though the combat might spill onto land as in the case of the battle recorded in 897, whether intentionally or unintentionally). One can fairly safely assume that the throwing and shooting of javelins and arrows preceded hand-to-hand fighting and even continued unabated throughout the engagement as is seen in accounts of land battles (and also from Scandinavian skaldic poetry sources), although the *Chronicle* is largely silent about such details.

Ship-to-ship battles in Scandinavia

As mentioned, contemporary evidence for ship-to-ship battles in Scandinavia is rather thin. Adam of Bremen, apparently well-informed about current events in the region, recorded the battle of Svoldr in 999 or 1000. He reports that the clash of the forces of Olav Trygvasson and his allied Danish enemies occurred between Skåne and Sjælland, adding that this area was "where kings usually go forth to war at sea." Adam tells that the Norwegians led by King Olav were attacked by the Danes and that the Norwegians were "defeated, and routed by the Danes."⁴⁷

Beyond this account, there is only skaldic poetry to rely on for anything approaching detailed descriptions of battles at sea, though there are difficulties in working with this source. Though skaldic poems are thought to be roughly contemporaneous to the events they describe, they are often filled with formulaic tropes that can also be found in descriptions of land battles. These were works of praise meant for the ears of military and political leaders and their retinue, so they cannot necessarily be taken at face value. They can, however, be of good use as some

⁴⁶ *Anglo-Saxon Chronicle*, trans. Garmonsway, 170.

⁴⁷ *Archbishops of Hamburg-Bremen*, trans. Tschan, 82.

conclusions can be drawn, albeit with some caution, by looking for characteristics unique to battles at sea.

It has been assumed by some writers that ship-to-ship battles were made, as much as possible, to be as much like a land battle as possible by the participants. Some claim that ships were simply tied together, rail-to-rail, and that crews of opposing ship forces attacked each other with no more complex tactics or forethought.⁴⁸ This is not reflected in accounts included in skaldic poetry. Although many poems create images of grandiose leaders wading fearlessly into battles, dispensing with guile and caring little for their own safety, it would be foolish to assume from this that these men did not do everything in their power to gain victory.

In battle, the opening stages very likely involved steering the ship into a position that gave advantage over the enemy. Indeed, steersmen, as well as the men at the oars, seem to have taken pride in their ability to maneuver their craft adeptly. Among the “princely” skills (riding, reciting poetry, bow-shooting, skiing, swimming, harp-playing) listed in a jesting verse by Harald Hardrada is rowing.⁴⁹ In another verse, Harald’s crew is praised for their rowing skills.

Rétt kann ræði slíta
ræsis herr ór verri;
ekkjá stendr ok undrask
ára burð sem furðu.

Ært mun, snót, áðr sortuð
sæfong í tvau ganga
(þoll leggir við frið fullan)
Ferkleyf (á þat leyfi.)

“The prince’s troop know how to whip the oars expertly up from the stroke; the woman stands and wonders at the handling of the oars, as a marvel. There’ll be rowing [enough], lady, before the tarred sea-gear [oars], splittable in four, break in two; the fir-tree <woman> gives her approval to this in complete peace.”⁵⁰

As anyone with experience in rowing even small craft knows, it takes a great deal of coordination and cohesion with one’s shipmates to make the most of a vessel’s oars. With long ships such as Roskilde 6 which likely had around 70-80 oars, only a crew and steersman with long experience and high skill could manage these large ships in the stress of battle. Good seamanship would be invaluable in a ship-to-ship battle, especially at its outset, when initial deployments could have a great impact on the strategic situation.

Often, one ship force was obliged to take offensive action while the other would take a relatively defensive posture. At the Battle of Niså in 1062, Sveinn Ulfsson tied his ships together,

⁴⁸ Helen J. Nicholson, *Medieval Warfare*, (Houndsmills: Palgrave Macmillan, 2004), 144. “War fought at sea was (on the decks of ships) otherwise much like land warfare.”

⁴⁹ *Poetry from the Kings' Sagas 2 Vol. 2*, ed. Kari Ellen Gade (Turnhout: Brepols, 2009), 39.

⁵⁰ *Ibid*, 152.

seemingly as a defensive measure against the attack of Harald Hardrada (“The brave king, who brought about their encounter, steered on relentlessly with his [ships], and Sveinn’s supporters tied their ships together”).⁵¹

Forces on the offensive likely steered their ships in dynamic attacks, aimed at meeting the enemy in weak or perhaps unexpected places.

At lögðu skip skatnar
skilit; fell herr á þiljur;
svǫmu jǫrn í ǫmu
óðhǫrð Skota blóði.

Stall drapa- strengir gullu;
stál beit, en rann sveiti;
broddr fló; bifðusk oddar
bjartir-þengils hjarta.

“Men steered ships decisively to the attack; troops slumped to the decking; rage-hard iron blades swam in the dark blood of Scots. The ruler’s heart was not struck with terror; bow-strings shrilled; steel bit, and gore flowed; the spear-head flew; shining sword-points quivered.”⁵²

The phrasing of the poem gives the impression that the way the attacking ships were steered was in the end a deciding factor in the battle. Just as in a land battle, a shock charge at the right moment and against the right place in an enemy’s line might force a turning point in a battle. In an engagement involving ships, however, the seamanship of the steersmen and his crew needed to be very accomplished in order for an attacking force to maintain cohesion and attack the enemy at the proper time and place.

The centrality of good timing and skilled ship-handling in battle is illustrated in a poem about the battle of Århus between Magnus Olafsson and Svein Estridsen:

Skeiðr tók Bjarnar bróður
Ballr Skǫnungum allar
-þjóð røri þeirar tíðar
Þingat-gramr með hringum

“The monarch, baleful to the Skǫnungar, seized all the warships of Björn’s brother [Sveinn], every one; men rowed up at the right moment.”⁵³

In defense, shields likely played as large a role aboard ships as they did on land, and their use in sea battles is mentioned in skaldic poetry. There are poems describing the locking together of shields, which was a common feature of combat on land. This provided mutual protection to the warriors arrayed in a line, steeling the formation against the force of an enemy shock charge while

⁵¹ Snjallr helt at, sás olli/ eirlaust konungr, þeira/ en Sveins liðar, sínum/ saman bundu skip, fundi. *Poems from the Kings’ Sagas* 1 Vol. 2, ed. Diana Whaley. (Turnhout: Brepols, 2012), 560.

⁵² Gade 2009 2:2, 238.

⁵³ *Ibid*, 224.

presenting a solid defensive line. The shield was also an indispensable defense against missiles. Normally, it is the leader (the subject of the poem) who calls for the line of shields to be formed, such as at the Battle of Helganes in AD 1044.

Vítt hefk heyrt at heiti
Helganes, þars elgi
vágs inn víða frægi
vargteitir hrauð marga.

Rökr öndurt bað randir
reggbúss saman leggja;
rógskýja helt rýgjar
Regni hausnött gegnum.

„I have heard that it is called broad Helganes, where the widely famed wolf-cheerer [WARRIOR] stripped many elks of the wave [SHIPS]. At the beginning of twilight the ship-tree [SEAFARER] called for shields to be set together; the rail of the troll-woman of strife-clouds [SHIELDS > AXE > BATTLE] persisted through the autumn night.”⁵⁴

Another poem, celebrating the battle of Niså, adds more detail to the way shields may have been used onboard ship.

Fast bað fýling hrausta
friðvandir jöfurr standa;
hamalt sýndisk mér hqmlur
hildings vinir skilda.

Rammsyndan lauk rðndum
ráðandi manndáða
nýtr fyr Nizi útan
Naðr, svát hver aðra.

“The peace-concerned ruler ordered the valiant troop to stand firm; I witnessed...the friends of the commander setting shields at the rowing-positions, in a wedge-shape. The excellent performer of manly deeds [RULER] enclosed the strong-swimming serpent with shields off the Nissan, so that each one abutted the next.”⁵⁵

The reference to “setting shields at the rowing-positions, in a wedge-shape,” is curious. Diana Whaley assumed the ON term *hamalt* to mean a wedge-shaped formation, commonly used in conjunction with the word *fylkja* (array, formation). Of course, it is always possible that this is part of the formulaic description of battle scenes in skaldic poetry rather than a naturalistic depiction of a fight at sea. However, the use of a formation of interlocked shields in a ship-to-ship battle would make just as much sense as on land. As in battles on foot, a formation of abutted shields that stretched along the gunwales would be a very effective defensive technique, especially if one wanted to deny boarders. The sense of the poem is of the ship’s steersman telling each of his crewmen to defend their oarlock and to interlock their shields (he “ordered the valiant troop to stand firm...the [crew set] shields at the rowing-positions”). When arrayed in this way, the natural contours of the ship would make the formation appear to be vaguely wedge-shaped.

⁵⁴ Gade 2009 2:2, 221.

⁵⁵ *Ibid*, 126.

If such a formation of shields were utilized in ship-to-ship combat, it would be the objective of an attacking force to break this defensive line. It should be pointed out that in this poem, the breaking of the shield wall (“*skjaldborg raufsk*”) is associated the clearing of the Danish ships:

Hrauð, sás hvergi flýði,
heiðmærr Dana skeiðir
glaðr und golli roðnum,
geirjalm, konungr hjalmi

Skjaldborg raufsk, en skúfar
-skaut hoddglötuðr oddum
bragna brynjur gognum
buðlungr-of ná sungu.

“The bright-renowned king, who nowhere fled spear-clangor [BATTLE], cleared, glad under gold-reddened helmet, the warships of the Danes. The shield-wall shattered, and swords sang out over corpses; the hoard-destroyer [GENEROUS RULER], the monarch, shot spear-points through the mail-coats of warriors.”⁵⁶

Whaley also surmised that the reference to shields being set at rowing positions might mean that shields were hung over the sides to protect the oarlocks. Judith Jesch was of the opinion that under oars, shields could not be hung on their racks or lashed to the gunwale, as they would be in the way.⁵⁷ This cannot be a foregone conclusion, as clever mounting devices for shields such as elevated racks or lashings that have not come into the archeological record could have been present on ships. Even if Jesch’s assumption were true, shields could have been set in a defensive array around the ship when in a defensive posture (tied together, as in the case of Svein’s fleet at the battle of Niså). Here, the oars would be unshipped and stored out of the way and the hung shields may have provided extra height to a ship’s rails, and therefore an obstacle to boarders.

In sea battles as in land battles, missiles played a large (and perhaps overlooked) role. The weapons of choice would have been arrows and small, thin spears designed for throwing. Stones (likely readily available the vessel’s hull in the form of the ship’s ballast), along with other debris capable of bodily harm, could also be thrown in a cascade of missiles that would wound, kill, distract, and generally dishearten enemy crews.

Skotit frá skaptiflettum
skjótt ok mǫrgu spjóti
-brǫð fekk hrafn- þars hǫfðum
hjaldr, á breiða skjöldu

Neyttu mest sem mǫttu
menn at vápa sennu,
baugs en barðir lǫgu
bǫrvar, grjóts ok ǫrva.

“I have learned that shafted javelins and many a spear were shot swiftly onto broad shields where we joined battle; the raven got meat. Men made the best use they could of stones and arrows in the slander-match of weapons [BATTLE], and trees of the ring, [MEN] lay beaten down.”⁵⁸

⁵⁶ Gade 2009 2:2, 263.

⁵⁷ Jesch, *Ships and Men*, 157.

⁵⁸ Gade 2009 2:2, 74.

Another depiction of the same engagement attests to the sheer volume of thrown or shot missiles which may have filled the air, though it is unknown how much the poet may have embellished the account for the sake of drama.

Böru böslar fleiri
bogmenn at hór tognum;
mundit þann dag Þræði
þreyta fyrr at skeytum.

Svá þykkt flugu síðan
snæridorr of skæru
-ótt vas ordrif látit-
Illa sátt á milli.

“Bowmen placed more arrows on the drawn bowstring; that day the Þrædir would not be the first to let up with their missiles. Then the thonged javelins flew over the fight so densely [that] you could hardly see between them; a raging arrow-drift was sent.”⁵⁹

Of special note here is the use of the “thonged javelin,” a type of throwing spear with leather or cloth string affixed to the shaft to give the thrower more power and range (a concept akin to the ancient South American *atl-atl*).

Interestingly, the leaders of ships and ship forces are often depicted firing arrows and other ranged weapons.

Alm dró upplenzkr hilmir
alla nótt inn snjalli;
hremsur lét á hvítar
hlífr landreki drífa.

Brynmönnum smó benjar
blóðugr oddr, þars stóðu
-flugr óx fannings vigra-
Finna göld í skjöldum.

“The valiant Oppland king drew his elm-bow all night long; the land-ruler made shafts pelt onto white shields. The bloody point pierced wounds on the byrnie-men, where the tribute of the Saami [ARROWS] penetrated shields; the flight of the ‘fanning’s’ spears increased.”⁶⁰

Although most writers on naval battles in the Viking Age correctly conclude that an exchange of missiles preceded the hand-to-hand engagement, it must be brought into the realm of high likelihood that a more or less steady stream of arrows, rocks, javelins, and other projectiles were kept in the air throughout the battle. As boarding a contested vessel was a difficult prospect, “thinning” enemy ships of defenders with ranged weapons would be a viable tactic.

How ships of the opposing forces closed for close combat is mentioned sparsely in skaldic poetry. Most of the time, the attacking ships are said to have simply pulled up alongside their adversaries facing each other roughly parallel.⁶¹ In theory, this would have placed the entire ship’s

⁵⁹ *Ibid*, 75.

⁶⁰ *Ibid*, 127.

⁶¹ Jesch, *Ships and Men*, 210.

crew available to fight the enemy crews on a broad front, leaving only differences in crew sizes (likely dependent on the ship's size) as determining factors for advantage.

Once the ships closed to within the reach of hand-to-hand weapons, the main objective was to eliminate the enemy crew or to make them flee. The standard ON word to describe this is *hrjóða* (to clear, rid of)⁶², though occasionally warriors are described as simply taking or seizing ships (“Skeiðr tók Bjarnar bróður”).⁶³ The leaders, often the subjects of the poems, were particularly celebrated for clearing enemy ships, as in the example of Haakon the Good, who was said to have cleared twenty five ships at the battle of Hjørungavagr in the late tenth century.⁶⁴ Later, he cleared eleven more in a sea battle with the Danes near Øresund:

Almdrósar fór eisu
élrunnr mörum sunnan
trjónu tings á græna
tveim einum selmeina,

þás ellifu allar
allreiðr Dana skeiðar
Valsendir hrauð vandar
viðfrægr at þat síðan.

“The bush of the storm of the fire of the bow-woman [lit. ‘storm-bush of the fire of the bow-woman’] VALKYRIE>SWORD>BATTLE>WARRIOR=Hakon] went from the south with only two steeds of the prow-beard [SHIPS] on to the green snout of seal-wounds [Selund] when the utterly enraged sender of the Valr <horse> of the mast [(lit. ‘Valr-sender of the mast’) SHIP>SEAFARER=Haakon] cleared all eleven ships of the Danes, widely famed for that afterwards” (Whaley 2012, 160).⁶⁵

It can be assumed that after an initial attack was made, the enemy ships were cleared one-by-one, though how this proceeded is not made clear in the poems. It is likely that the most difficult part of ship-to-ship combat was gaining a foothold on an enemy's ship. To achieve this, the defending crew would need to be pushed back from the rails far enough for the attackers to leap into the ship of the enemy. This could have been done by sheer force with an aggressive attack such as at Niså:

Vér drifum hvatt, þars heyra
Hátt vápnabrák knátti,
-rönd klufu roðnir brandar-
Reiðir upp á skeiðar.

En fyr borð, þars þorðusk,
-búin fengusk skip-
-nár flaut ört við eyri
ófár-búendr sárir.

“We pressed, enraged, keenly up on to the ships, where the loud clash of weapons could be heard; reddened blades split the shield. And wounded farmers went overboard, where they fought; the well-appointed ships were captured; not a few corpses floated swiftly by the land-spit.”⁶⁶

⁶² *Ibid*, 211.

⁶³ Gade 2009, 224.

⁶⁴ Whaley 2012 1:1, 345.

⁶⁵ *Ibid*, 160.

⁶⁶ Whaley 2012 1:2, 568.

It seems that as an enemy began to lose a battle (i.e. their numbers of men and operational ships began to diminish), the attacking force sought to close in from multiple angles to bring the engagement to a close. The last moments of Olav Tryggvasson on his large ship, Ormr inn Langi, are recounted as Eirik and his forced close in at the end of the battle of Svoldr:

Hét á heiptarnýta
hugreifr- með Óleifi
aptr stókk þjóð of þoptur-
þengill sína drengi,

þás hafvita höfðu
hallands of gram snjallan
-varð fyr Vinða myrði
vápneiðr- lokit skeiðum.

“The glad-hearted ruler [Eiríkr] called on his battle-worthy warriors- men sprang aft across the rowing-benches with Olaf-, when they had enclosed the warships of the diminisher of the ocean-beacon [GOLD>GENEROUS MAN=Eiríkr] around the valiant lord [Olaf]; a weapon-oath [BATTLE] took place before the murderer of Wends [Eiríkr]” (Whaley 481).⁶⁷

This begs discussion of two vital features of naval battles in the Viking Age: the role of leaders and the role of the fore-stave (the elevated part of the ship’s bow, often translated as *forecastle*. This term is somewhat anachronistic, however, as a forecastle was a feature of later cog-type vessels). The leader of the group of ships was expected to direct the battle at its onset and choose the positioning of the ships. He was then to encourage his men, often firing arrows and javelins from a visible part of the ship. In times of crisis or in pivotal moments in the battle such as in boarding actions, the leader was obliged to participate in the melee personally (“Magnus urged heroes strongly, one man [urging] another boldly, to drive battle-clouds [SHIELDS] onwards; stern commands brought results where they fought.”⁶⁸

The fore-stave seems to have been the place on the ship where the most valiant and celebrated warriors fought. In skaldic poems, the subjects of praise are often depicted in association with this section of the vessel.

Háði gramr, þars gnúðu,
geira hregg við seggi,
-rauð fnýsti ben blóði
bryngöl í dyn Skóglar,

þás á rausn fyr ræsi
(réð eggliuðr) seggir
-æfr gall hjórr við hlífir-
hnigu fjörvanir (sigri).

“The king fought a storm of spears [BATTLE] against men where mail-shirt-goslings [ARROWS] roared in the din of Skogul <valkyrie> [BATTLE]; the red wound spurted blood as men sank down lifeless before the ruler on the forecastle; the furious sword resounded against shields; the blade-stainer [WARRIOR=Haraldr] gained victory.”⁶⁹

⁶⁷ Whaley 2012 1:1, 481.

⁶⁸ Gade 2009, 77.

⁶⁹ Whaley 2012 1:1, 84.

Judith Jesch opined that most of the hard fighting occurred around the bow and stern of the ship. This might have been the case, although the evidence for this is not ironclad. The elevated portions of the ship could have given warriors a height advantage over their enemies, especially if they were positioned over the lower midsection of the enemy's ship. This could have made a convenient breach point for a boarding action as it would have been easier for men to jump down in the press of an attack into the decks of the enemy's vessel below than if the rails sat at the same height. Perhaps this is why leaders preferred to align their ships more or less side-to-side if they could, so that no one crew had an advantage in close combat.

Indeed, a high freeboard (the distance from the top of a ship's rail to the waterline) could pose problems for attackers. During the battle of Hjørungvagr, Haakon Jarl found it difficult to board a particularly large ship of the Jomsvikings. He ordered the larger of his ships to attack it and after a hard struggle, the battle was won.⁷⁰

Attacks, however, may have been launched from any part of the ship, not only from the fore-stave. Wherever an opening or weakness in the enemy's defenses presented itself could be the site of an attack directed by alert commanders or bold individuals, leading thus to hard fighting. Perhaps the steersman or leader took his place in the elevated parts of the ship so as to be most visible and inspiring to his men. In this case it would be natural that his personal retinue, the most celebrated among his military forces, would accompany and protect their lord there. The use of standards or flags is also sometimes mentioned. These would likely accompany leaders, acting as a point for the men to rally around.⁷¹

⁷⁰ *Ibid*, 363.

⁷¹ Whaley 2012 1:2, 566. "Stong óð, þars gengum/ Gøndlar serks und merkjum."



In ship-to-ship battles, ships likely maneuvered for the most advantageous position possible amid the chaos of hand-to-hand melee and missiles. The elevated fore-stave may have been a good access point to enemy ships. A.G. Smith, *The Story of the Vikings*, (Mineola: Dover Publications, 1988)

Conclusion

As was outlined in the introduction to this chapter, the limits placed by lack of sources make a categorical approach most sensible when discussing the employment of ships in conflict. The Viking Age, however, spanned three centuries and it would be false to assume that no changes took place in this time. Though a challenge, it is possible to trace some patterns of development over time.

Looking at a timeline of maritime warfare in the Viking Age, one notices that much of the naval activity in Britain and the Continent was in direct response to Scandinavian incursions. Egon Warmers has commented on these interactions throughout the period and how maritime warfare came to play a prominent role in conflict on the whole.

“Maritime warfare was not a novelty in Scandinavia itself, where it had been practiced in the coastal regions for centuries, but it was only the new weapon-system consisting of a warship equipped with oars and sails which permitted its extension to the Christian countries in the South and West. How important a role maritime warfare played in the political history of the North in the

9th to 11th centuries is revealed by the fact that nearly all the major military campaigns were maritime expeditions and the decisive battles made use of ships or were actually battles at sea...”⁷²

The deeply maritime nature of Scandinavian culture defined the military practices of this region, making them the most extensive users of ships in this period. It would difficult to argue, however, that there was no exchange of strategies or technologies in the Viking Age between the Scandinavians, the Anglo-Saxons, and the Franks. To be clear, this exchange was not in only one direction (from Scandinavia to the rest of the world).

The narrative of this chapter began with the Carolingians and the early successes of Charlemagne, who used combined land and ship-based forces. At the end of the eighth century, the Carolingians had conquered Saxony, the southern neighbors of the Danes, thus igniting tensions between them. Godfred’s use of naval power, including his combination of cavalry and ships in 804, can be seen as a direct response to the creeping expansion of Carolingian power. It is possible that the Danes, watching closely (and with apprehension) Charlemagne’s eighth century triumphs, imitated him in order to potentially halt his advances.

In the ninth century, Scandinavian attacks on Britain increased drastically. As this chapter has suggested before, Anglo-Saxon military forces of tenth century can be said to have taken on a somewhat Scandinavian character. As Lavelle has noted of tenth century expeditions to Scotland and Wales, ship forces were significant in “...providing rapid means of transport, allowing Anglo-Saxon kings and nobles to ‘go Viking.’”⁷³ It is then possible to trace the implementation of “combined operations” from Frankia, to Scandinavia, and then to Britain.

Lavelle suggested that the defensive measures taken to protect the Frankish realm in the reign of Charlemagne could have influenced rulers in Britain, citing the familiarity of Einhard’s *Vita Karoli* in ninth century Wessex.⁷⁴ The mid ninth century saw an increasing frequency of ship-to-ship battles as Anglo-Saxon kings, namely Athelstan and Alfred, attempted to meet Scandinavian incursions off the coasts. Looking at the sources, this has little precedent, in Britain or elsewhere. How and why these leaders adopted this strategy is unclear, though initiative and innovation seems most likely. In any case, it can

⁷² Warmers, “The 9th Century Danish-Norwegian Conflict,” 238.

⁷³ Lavelle, *Alfred’s Wars*, 200.

⁷⁴ *Ibid*, 146.

be claimed upon a strong basis of evidence that Alfred's successors took after his example, raising larger and more significant maritime forces.

The ship-to-ship battle, though quite possibly a rare occurrence (especially outside of Scandinavia), can be said to be a feature of pure maritime conflict, largely independent of developments on land. Due to the limitations of the technology of the Viking Age, most of the deciding actions were hand-to-hand, just like in a land battle. However, these fights may have been much more nuanced than some commentators have imagined. In particular, the role of missile weapons and intuitive, bold maneuvering of ships could have played a central role to the outcome of battles.

Conclusion

The waterways of the North Sea area served often as the arena where violent conflict great and minor was decided. From the modern vantage, it might appear that ship forces of the Viking Age were closely tethered to land, for this is where an overwhelming portion of deciding combat took place. This is not untrue: the limitations of navigation, along with the ever-present specter of violent weather, meant that vessels were safest when hugging the land's contours. It was the flexibility, stealth, and speed afforded by the ship, however, that often dictated the pace and shape of battle.

Those seeking to take to the seas or other waterways were dependent on the qualities and capabilities of the technology available to them, namely, their ships. These ships were the product of long-term development: people crafted them to behave best in the environments that they were intended for. Warships such as those produced in Scandinavia by the beginning of the Viking Age were very likely the culmination of many centuries of using vessels as highly-mobile tools of war. As is shown by the accounts of Ohthere, Wulfstan, and others, the people of the North Sea region were (at least by the ninth century, but likely even earlier) capable of highly effective navigation.

This provided them with a convenient, relatively swift, if not risk-involved mode of transport to all corners of the North Sea area and beyond. At times, nature was a deadly enemy, greatly impacting the outcomes of campaigns involving ships or indeed eviscerating them before they could begin. Storms were not the only threat to men and vessels. As can be seen in the clash at the river mouth near Devon in 897 between Anglo-Saxon and Scandinavian ship forces, a lack of familiarity with local wind and tidal conditions could lead to disastrous consequences in the midst of battle. The strength of a maritime force depended as much on good seamanship as skill with sword or spear.

It seems that during the Viking Age, Scandinavia was the foremost in all matters having to do with traversing (and especially fighting from) the seas. Archeological evidence indicates that ships in this region were not only technologically better-suited to warfare in many different environments, but more prevalent in Scandinavian culture. The broken up, watery landscape of this region is likely the reason for this. The sheer number of finds interpreted as warships, along

with the well-based theory that vessels played some role in cult and were symbolic of power is indicative of a culture that held the ship in the highest esteem.

The efforts at naval power among the Anglo-Saxons and Franks seems halting and at times impotent in comparison, but these regions can be described as anything but militarily weak. The kingdom of Wessex and the Carolingian Empire in particular were redoubtable foes on land, with recruitment mechanisms capable of raising sizable, well-equipped armies of foot and horse. Indeed, the Carolingian Franks were known to have deployed complex formations of various types of soldier, including engineers in the style of the Roman army whose task was to build fortifications and siege works.¹ Why, then, did they not invest more effort into meeting their seaborne enemies off their shores, or even retaliate with ship-based attacks of their own?

Several factors led to the apparent disparity in naval forces between Scandinavia and other powers. Such a discussion should start with how naval forces came to be formed. This strikes upon one of the central objectives of this thesis: to evaluate possible social and environmental factors that may have affected how maritime forces were gathered in the regions detailed.

For all of these regions, it is most likely that crews for ship forces were recruited in a similar manner to other forces. The main difference was the requirement that these men be gathered from among communities who were already intimately involved with ships and waterways. There did not exist modern-style methods of training; knowledge of seas and rivers came only from practical experience in these environs. The common solution of hiring or pressing qualified foreigners into service was therefore a cost- and time-effective one that seems to have prevailed throughout the Viking Age, especially among the Franks and Anglo-Saxons. Familiarity with the sea can be said to have been the main factor in distinguishing how land and sea forces were formed. It seems obvious that skill with sail and oar, along with knowledge of navigation and sailing, would be a prerequisite for operating from ships, whether for warfare or other pursuits.

As N.A.M Rodger keenly observed, it is within the realm of possibility for people from inland regions (that may have been ignorant of the sea) to learn to row and fight from shipboard. However, this skillset that made truly effective seamen could likely only be gained from extensive experience. “The whole culture of the northern world was permeated with a sense of

¹ Bachrach, *Early Carolingian Warfare*, 233.

the sea, but this cannot possibly mean that skill in shiphandling and pilotage, knowledge of winds and tides, shoals and seamarks, were available by instinct to men who had no professional reason to acquire them.”² The fact that one could not simply thrust a spear and shield into the arms of any reluctant farmer (as could be done to raise a land militia) made the already costly and challenging task of gathering naval forces even harder.

As has been seen, the Anglo-Saxons and Franks were not incapable of raising groups of ships and using them with great effect. Although effective ship forces can be seen in Britain and Francia at various points throughout the Viking Age, it is only the Scandinavians who were able to consistently field significant numbers of skilled ships’ crews and, presumably, well-crafted vessels. Though the targets and objectives of raids and invasions varied over the period, there appears to have always been Scandinavian keels somewhere in the waters of the North Sea area. The largely successful depredations of the Northmen in Europe and elsewhere were made possible largely by virtue of the maritime nature of Scandinavian warfare. The Scandinavians’ martial culture was oriented largely around the ship because such a vehicle had, likely for centuries, been indispensable for the prosecution of war at home.

Not long before the Viking Age, Scandinavians were not the only people who plied the seas, though the Anglo-Saxons and Franks had largely ceased their naval raiding activities around the time they fully adopted the Christian faith. This legacy can be seen in the seventh century Sutton Hoo burial, which can be said to express the essence of the pre-Christian sea lord, familiar in Scandinavia long after it had faded in Britain. By the Viking Age, prevailing aristocratic culture in Francia and Britain no longer valued the ship as it once had. There was much more to be gained, and for less, by investing in land armies to project power.

For noblemen, the cost of levies and militias could be largely born by subordinates. In times of need, armies could be raised from a population that could reasonably be expected to own at least some rudimentary weapons. Once they were raised, they could subsist on foraged (stolen) food. This was not the case with ship forces. Many different highly-skilled individuals were needed simply to craft a serviceable warship and highly-skilled individuals were needed to sail it. Once these forces were raised, they required constant maintenance to retain any of their potential in battle. It is no surprise that they were not often the first choice in defending Britain or Francia’s shores.

² Rodger, *Safeguard of the Sea*, 24.

When crafting this thesis, I possessed an admittedly strongly-entrenched conviction that naval forces were effective coastal defense measures in the Viking Age. This has been largely dismantled by a close examination of available evidence. Maritime forces lose many of their advantages when in a defensive role. When loitering in place waiting for enemy incursions, the ship's great strengths, namely speed and stealth, are extremely difficult to counter, even with other ship forces. It is likely for this reason that defensive fleets were almost inseparably paired with land fortifications, exemplified by the Anglo-Saxon *burh*. In this defensive scheme, land fortifications such as fortresses and bridges were erected to slow or deter an invading force while highly-mobile groups of ships (or horses) could quickly deploy where they were needed along the coast to destroy them.³

It can be seen from the record of warfare between Scandinavians and Anglo-Saxons that this system was only partially successful. Sometimes, bodies of raiders were intercepted and destroyed (on both land and sea), but certain Anglo-Saxon attempts to meet and destroy Scandinavian forces at sea such as in 992 and 1009 were significantly hindered not by the enemy, but by problems of discipline within their own ranks. For all three regions profiled here, large bodies of ships required a highly developed system of command and control that did not yet exist in this period. Rather than being a centrally-controlled "navy" in the modern conception, these significant forces were likely an amalgam of the personal fleets of individual strong-men and were subject to their ambitions and often-shifting personal loyalties.

Conversely, much more uniform success can be observed of maritime forces of all three regions in offensive operations. Charlemagne's invasions of his eastern neighbors, employing highly-mobile riverine vessels to outmaneuver and assault static positions, are demonstrative of the potential of ship forces when combined with land forces. It can be seen in the "Viking" style raids of Æthelstan and Edmund, operations which apparently were successful enough to bring these regions under the Anglo-Saxon yoke. Above all, it is observable in the masterful hands of the Scandinavians, who indeed gave the name to this period by the use of maritime forces in the North Sea region and beyond.

The primacy of ships in the Scandinavian conception of warfare is apparent in the occurrence of ship-to-ship battles, which seems to have taken place with increasing frequency in the latter half of the period. These fights, long celebrated in poetry and literature afterward, are

³ Rodger, *Safeguard of the Sea*, 11.

often presented as final showdowns between great rivals. The fact that ships, tightly clustered in the fray and likely lashed together, were harder to extricate from the battle in case of flight. These were deciding and fiercely destructive encounters where both sides undoubtedly suffered uncommonly high losses.

Naval battles, both in Scandinavian and elsewhere, decided not who controlled the seas as they might have in later eras. With the technology of the period, no one leader could completely deny his enemies access to major waterways. For this, as Nicholson and others have observed, regular patrols and likely systems of advanced warning and reconnaissance would be required to completely close the coastline to attackers.⁴ The objective of the battle at sea was to eviscerate the enemy's warfighting potential in one fell swoop, which meant taking his ships and cutting down his skilled seamen.

This was a risky strategy that depended in large part on the shifting and unpredictable fortunes of battle. It was not a strategy that the Anglo-Saxons or the Franks logically adopt, for in Scandinavia, whose culture and society was geared to produce both vessels and sailors, more warships would soon be available. While powerful fleets could certainly be raised in both Britain and Francia, their creation depended in large part on the "political will" of their leaders, who would be ultimately burdened with the responsibility of financing their maintenance in the long term. Various kings at different points in the period in question, doubtlessly seeing the manifold tactical advantages of maritime forces, pressed their subordinates to create fleets. It is these subordinate nobles, who would shoulder the cost of the king's ships without reaping much of their benefits, who often represented weak planks in fleet organization. For these reasons, it so often made much more sense for the Christian kingdoms to oppose Scandinavians as well as their other neighbors on land.

⁴ Nicholson, *Medieval Warfare*, 152.

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