

## Supplementary Table 1

Species list, with abundance of fauna, from the kelp farm, the wild kelp forests, and the water column. SL = *Saccharina latissima*, AE = *Alaria esculenta*, LH = *Laminaria hyperborea*; FT = the species/group collected with fauna traps, K = the species/group found on the kelp. The numbers 3 and 7 in brackets indicate *S. latissima* with a three- and seven-months growth period, respectively. The species list, with abundance from kelp and fauna traps shown separate, is uploaded to Zenodo (Bekkby et al., 2023a).

Species/groups	Kelp farm			Wild kelp forest			Water column
	SL(3)	SL(7)	AE	SL	LH	AE	WM
PHYLUM ARTHROPODA - SUBPHYLUM CHELICERATA - CLASS INSECTA							
Acari indet.		1 (K)		1 (FT)	7 (FT,K)		
Chironomidae larvae				4 (K)		4 (K)	
SUBEPHYLUM CRUSTACEA - ORDER DECAPODA							
<i>Hippolyte varians</i>				2 (K)		2 (K)	
<i>Pagarus bernhardus</i>						1 (FT)	
ORDER MYSIDA							
Mysida indet.				3 (K)		3 (K)	2(FT)
ORDER AMFIPODA - SUBORDER GAMMARIDEA							
<i>Aeginina longicornis</i>		2 (FT)					
Amphipoda indet.				26 (FT,K)	8 (K)	23 (FT,K)	
<i>Aora typica</i> (Krøyer)				1 (K)		1 (FT)	
Aoridae indet.	1 (FT)	1 (FT)					
<i>Apherusa bispinosa</i>				1 (K)	10 (FT)	1 (K)	
<i>Caprella</i> sp. juvenile		10 (K)					
<i>Caprella linearis</i>		1 (FT)					
<i>Phtisica marina</i>				2 (K)		2 (K)	

<i>Dexamine spinosa</i>	1 (FT)						
<i>Dexamine thea</i>	1 (FT)	1 (K)		69 (FT,K)	19 (FT,K)	36 (K)	
Dexaminidae indet.				2 (K)		2 (K)	
<i>Echinogammarus marinus</i>			2 (FT,K)	1 (FT)		9 (FT)	
Gammarus spp.	1 (FT)		2 (FT,K)	6 (FT,K)	8 (FT,K)	59 (FT,K)	
Ischyroceridae					1 (K)		
<i>Ischyrocerus anguipes</i>	2 (FT,K)	7 (FT,K)			3 (K)		
<i>Jassa falcata</i>					4 (K)		
Stenothoidae indet.					2 (FT,K)		
ORDER ISOPODA							
<i>Idotea pelagica</i>	5 (FT)	3 (FT)	9 (FT,K)		6 (FT,K)	1 (FT)	
Janira sp.					1 (K)		
PHYLUM MOLLUSCA - CLASS POLYPLACOPHORA							
Polyplacophora juv				1 (K)			
CLASS GASTROPODA							
<i>Lacuna vincta</i>					1 (K)		3 (FT)
<i>Skeneopsis planorbis</i>		1 (K)		1 (FT)	1 (K)		
<i>Lepeta caeca</i>		1 (K)			1 (K)		
<i>Tritia incrassata</i>					1 (K)		
Rissoidae		1 (K)	2 (FT)	24 (FT,K)	26 (FT,K)	17 (K)	1 (FT)
<i>Steromphala cineraria</i>				1 (FT)			
Assimineae spp.					2 (K)		
<i>Eulima bilineata</i>					2 (K)		
<i>Margarites helicinius</i>	2 (K)	6 (K)	19 (FT,K)	1 (K)	10 (FT,K)	1 (K)	

CLASS BIVALVIA							
<i>Mytilus edulis</i>					1 (K)		
CLASS OSTRACODA							
Ostracoda indet.			1 (FT)	7 (FT)	2 (FT,K)		2 (FT)
PHYLUM LEDDORMER - CLASS POLYCHAETA							
Polynoidae indet.				3 (K)	2 (K)	3 (K)	1 (FT)
Nereidae					2 (K)		
<i>Nereis pelagica</i>					2 (K)		
PHYLUM ECHINODERMATA - CLASS OPHIUROIDEA							
<i>Ophiopholis aculata</i>				1 (FT)	1 (K)		
PHYLUM CHAETOGNATHA							
Chaetognatha indet.			4 (K)	4 (K)			