

Sound of Barra macrobenthic infaunal survey and Eriskay Causeway sediment survey 2015





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RESEARCH REPORT

Research Report No. 951

Sound of Barra macrobenthic infaunal survey and Eriskay Causeway sediment survey 2015

For further information on this report please contact:

Lisa Kamphausen
Scottish Natural Heritage
Great Glen House
Leachkin Road
INVERNESS
IV3 8NW
Telephone: 01463 725014
E-mail: lisa.kamphausen@nature.scot

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RESEARCH REPORT

Summary

Sound of Barra macrobenthic infaunal survey and Eriskay Causeway sediment survey 2015

Research Report No. 951

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Keywords

macrobenthic; sediment; infauna; grab; maerl; Barra; Eriskay; causeway; marine

Background

In 2015 Aquatic Survey & Monitoring Ltd. were commissioned to carry out a grab survey throughout the Sound of Barra SAC, targeting examples of both the maerl and *Zostera marina* biotopes with a view to informing management of the SAC sediment biotopes.

Main findings

- Maerl gravels were sampled at nine stations and found to be faunally relatively rich. Two-hundred and seventy-nine infaunal and epifaunal taxa were recorded quantitatively in the maerl grabs, whilst with the non-quantitative groups included, the total reached 400 taxa. In the *Zostera marina* grabs 188 quantitative taxa were recorded and 244 taxa in total.
- The deep maerl biotopes running down the east side of the SAC appeared to be relatively lacking in live maerl. This was noted from both the grabs and the drop down video taken at the same time. These sediment biotopes were dominated by small bivalves and predatory polychaetes.
- The site richest in macrofauna was a shallow relict maerl site to the east of the Eriskay Causeway. The maerl had died in this location but the 'twigs' of maerl were still providing a complex 3D structure. Silt levels were elevated here, and organic matter levels were also slightly enhanced.
- Sediment monitoring stations in the vicinity of the South Uist / Eriskay causeway showed that particle size has reduced at all but 1 station between 2006 and 2015 following reduction in tidal flows through the Sound of Eriskay.

For further information on this project contact:

Lisa Kamphausen, Scottish Natural Heritage, Great Glen House, Leachkin Road, Inverness, IV3 8NW.

Tel: 01463 725014 or lisa.kamphausen@nature.scot

For further information on the SNH Research & Technical Support Programme contact:

Research Coordinator, Scottish Natural Heritage, Great Glen House, Leachkin Road, Inverness, IV3 8NW.

Tel: 01463 725000 or research@nature.scot

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Many thanks to local suppliers who helped in the delivery of the survey.

1. INTRODUCTION

A macrobenthic grab survey was carried out in the Sound of Barra SAC on the 20th, 21st and 22nd July 2015 from the MV Spray, a survey vessel operated out of North Bay on Barra. Survey operations were conducted from the harbour at North Bay, which is only ten minutes transit from the southern end of the Sound of Barra and of the survey area. The weather was poor during the whole of the survey, with moderately strong winds from both the south-east and then the west. Grab sampling sites visited during the survey are shown in Figure 1 below. The positional data for the grab stations is presented in Annex 1.

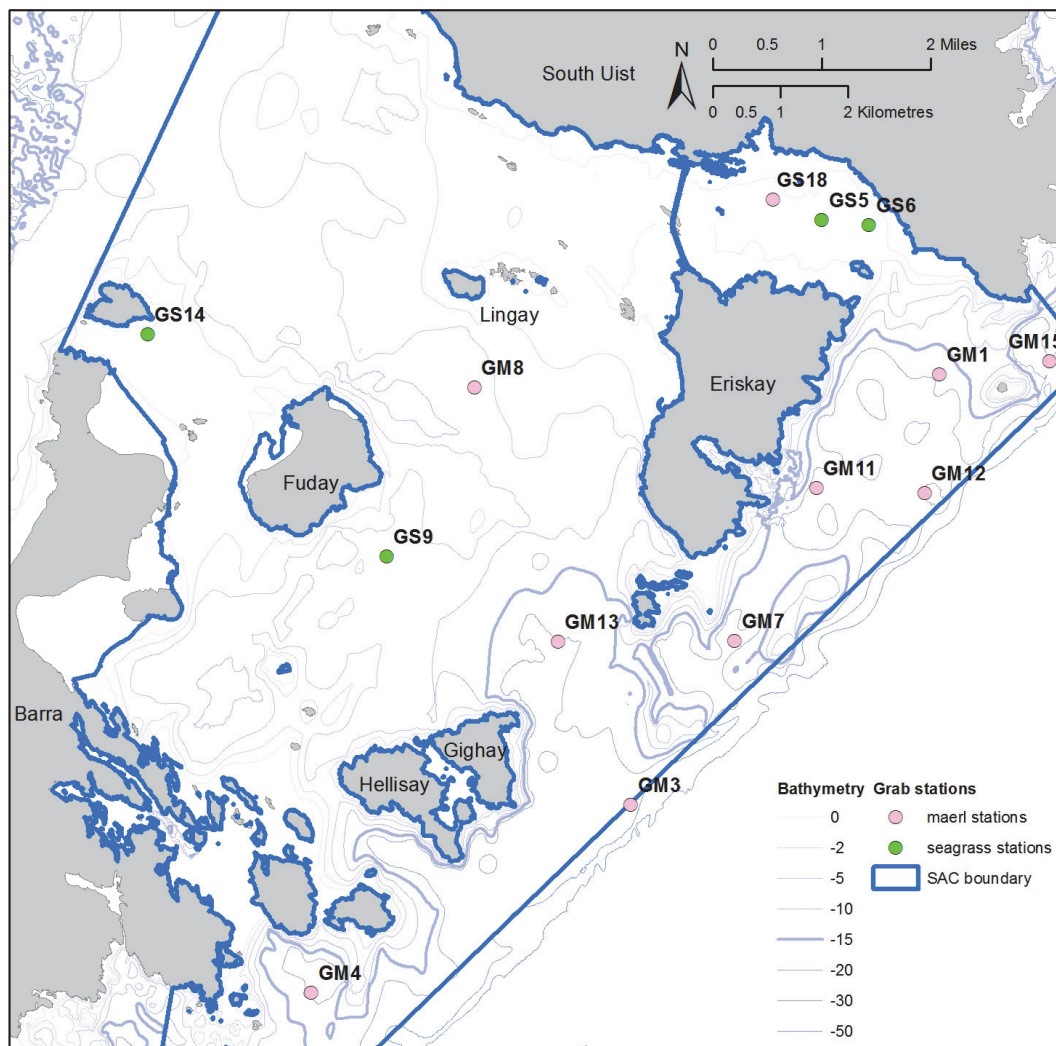


Figure 1. Grab sampling stations in the Sound of Barra 2015 (© Crown copyright and database right 2018. Ordnance Survey 100017908).

2. METHODS

2.1 Macrobenthic grab survey methods

The positions of the grab stations (Figure 1) were based on positions proposed in the Statement of Requirements provided by Scottish Natural Heritage (SNH). The brief was to sample 15 stations. Fourteen sets of samples were successfully obtained. Two further stations were attempted during the course of the survey, but sampling was unsuccessful. This may have been because these sites were made up of very coarse sediments or rocky reef environments.

The process of sediment sampling using a grab followed that outlined in Holme & McIntyre (1984). Fourteen grab stations were sampled using a 0.1 m² stainless steel Day grab (Figure 2). At each station three grab samples were collected as biological replicates and processed for infaunal analysis. In each case the collected sediment was washed on a sieve table and collected over a 1.0 mm mesh, retaining the residue for later fixation with buffered 10-20% formalin solution.



Figure 2. Retrieving a 0.1 m² Day Grab

At each station an additional grab sample was collected and the surface sediments of the grab contents were sub-sampled for particle size distribution (PSD) and loss on ignition analyses (Lol). This grab sample was only processed providing the surface of the sample appeared undisturbed by the collection process, as any flushing of the grab during hauling from the seabed would have lost some of the fine particulate material, critical to the planned analyses. If the surface of the sample did not appear undisturbed a further grab was taken. Approximately 500 g of sediment were taken for the sediment PSD and Lol analyses.

Following the fieldwork each day, the PSD sediment sub-samples were double bagged, labelled and frozen and the infaunal samples were placed in lidded buckets, fixed with formalin solution and stored safely prior to delivery to the analysing laboratory.

2.2 Eriskay causeway sediment monitoring

The SoR required that the ten historical sediment monitoring sites from the vicinity of the Eriskay causeway be re-surveyed in 2015. This was carried out by snorkelling during the September diving survey (reported separately as Bunker *et al.*, 2018), as several of the sites were very shallow and hence inaccessible to the MV Spray during the grab survey. The sites are listed below in Table 1 and are shown in Figure 3. The locations are presented in

standard WGS84 Latitudes and Longitudes, in contrast to UTM NE28 co-ordinates originally supplied in Harries *et al.* (2007).

*Table 1. Eriskay Causeway historical sediment sampling data from 2006 with details of silt/clay v. gravel fractions – the biggest fractions of the samples were fine to medium sand (data from Harries *et al.*, 2007).*

Station	% silt/clay	% gravel	MDØ*	Latitude	Longitude
ES1	1.48	0.29	1.79	57.09210	-7.31918
ES2	2.06	1.53	2.18	57.09455	-7.31241
ES3	1.40	1.56	1.79	57.09560	-7.32036
ES4	1.58	2.44	1.61	57.09662	-7.30960
ES5	2.92	0.90	1.3	57.09723	-7.32045
ES6	5.85	10.11	0.84	57.09889	-7.31883
ES7	7.09	15.04	2.02	57.09786	-7.31146
ES8	2.86	1.49	1.82	57.10039	-7.31935
ES9	6.28	0.00	2.35	57.10029	-7.31412
ES10	8.37	24.50	2	57.09830	-7.31488

MDØ* = median grain diameter in phi units

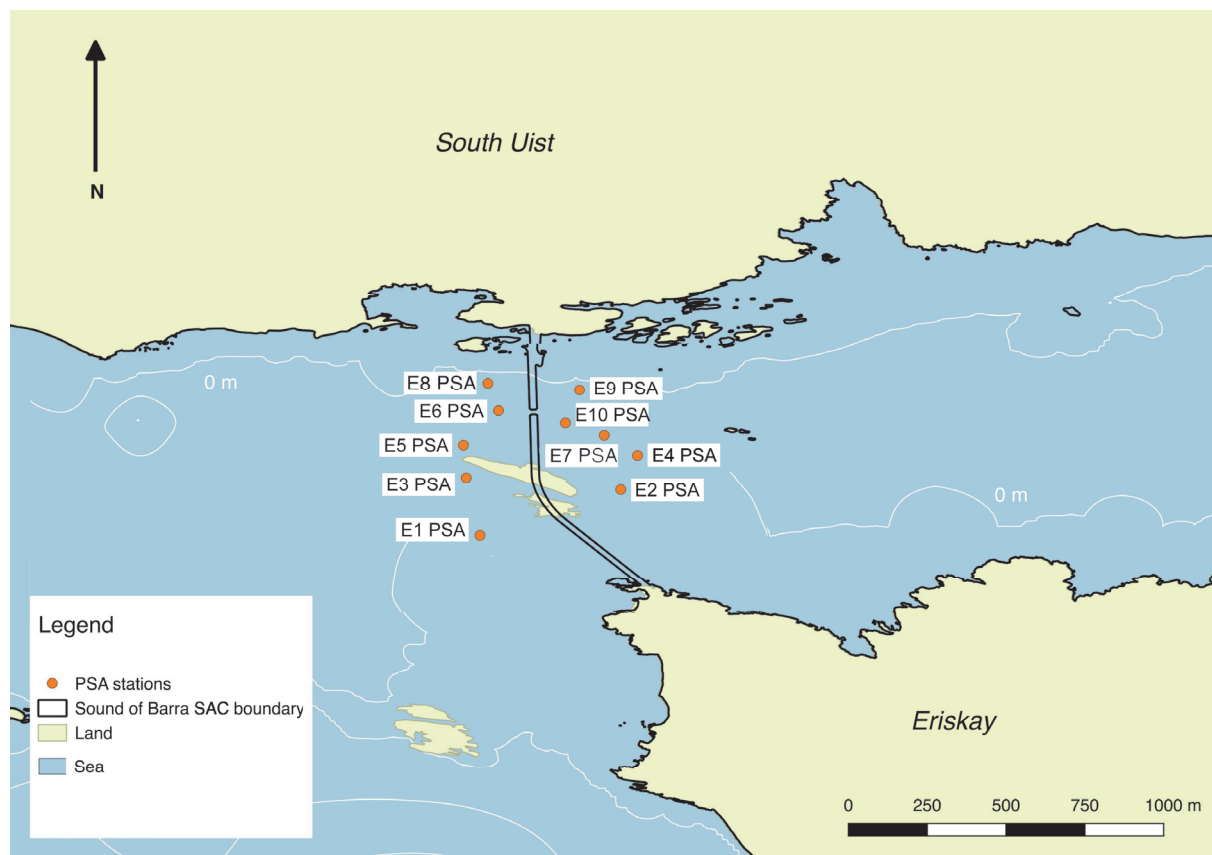


Figure 3. Eriskay Causeway sediment monitoring stations (© Crown copyright and database right 2018. Ordnance Survey 100017908).

2.3 Laboratory methods

2.3.1 *Macrobenthic taxonomy*

Analysis of marine macrobenthic samples was carried out by Hebog Environmental Ltd. The analysis adhered to the mandatory sections of the NMBAQC Processing Requirement Protocol (Version 1.0) which conforms to EN ISO 16665:2005 and BS EN 14996:2006. All three replicate grabs taken at each station were processed and analysed. Each of the fixed and preserved sediment samples from fieldwork was carefully washed in freshwater in the laboratory to remove the formalin, transferred into labelled buckets and Rose Bengal added to stain the biological material in order to facilitate the sorting process. Samples were then placed in gridded white trays, systematically examined by eye and all fauna picked out, sorted into phyletic groups and placed in vials in 70% industrial methylated spirit.

The extracted organisms were identified to the lowest possible taxonomic group using a combination of binocular stereo microscopes and high magnification binocular compound microscopes. The identified fauna were then counted. Where possible all organisms were identified to species level according to the nomenclature of the World Register of Marine Species (WoRMS) with species codes (where available) consistent with Howson & Picton (1997). Taxonomic literature used was consistent with the NMBQAC Taxonomic Literature database (version 107), including use of relevant journal papers, unpublished workshop keys (primarily from NMBAQC workshops), internet keys and internal documents compiled from these sources.

All whole organisms were identified and counted. Damaged or incomplete specimens were identified and counted only if the head was present; otherwise parts of organisms were recorded but not enumerated. Juveniles were recorded as such when identification to species level was not possible due to the under-development of key features, or if the specimen was less than 10% of the average adult body size. The results of the analysis were tabulated in *Microsoft Excel* and a voucher collection of all taxa was prepared and lodged with the National Museum of Scotland.

An analysis of the >1 mm macrobenthic infaunal community was then undertaken using PRIMER 6 (a marine invertebrate community analytical computer package) in order to elucidate any patterns in the data. The results of the analysis are presented in Section 3.

2.3.2 *Particle size distribution analysis and loss on ignition*

Particle size distribution analysis was also carried out by Hebog Environmental Ltd. using a dry sieving technique and sieves conforming to the Wentworth scale. Approximately 80 g of sediment were oven dried at 100°C until constant weight was reached. The dried sediment was weighed and washed through a 63 µm sieve. The effluent, which contained the mud/silt fraction (< 63 µm) was not retained. The remaining sediment was again oven dried at 100°C until constant weight was reached. This weight was recorded and the percentage of the mud/silt fraction (< 63 µm) was calculated as the difference between these two weights. The fractions > 63 µm were transferred to the coarsest of a series of stacked sieves, placed on an automatic shaker for 15 minutes and the contents of each sieve weighed. Fractions are > 8 mm, 4 – 8 mm, 2 – 4 mm, 1000 – 2000 µm, 500 – 1000 µm, 250 – 500 µm, 125 – 250 µm, 63 – 125 µm and < 63 µm. All fractions were weighed to an accuracy of ± 1 mg.

Loss on ignition analysis was also carried out in order to determine the amount of organic matter found in the sediment and available to the macrobenthic infauna. Approximately 10 g of sediment were taken. The sample was placed into a ceramic crucible and dried at 100°C in an oven. The sample was weighed to an accuracy of ± 1 mg and heated to 550°C for 4 hours. The crucible was placed over a desiccant to cool and then re-weighed (Holme and McIntyre, 1984).

3. RESULTS

3.1 Macrobenthic community characteristics

Annex 2 presents the complete infaunal data matrix created during the analysis of the macrobenthic grabs. Non-quantitative records of sessile species (such as hydroids and bryozoans) and included in Annex 2 for completeness, but along with juvenile and damaged motile species were removed from the data for statistical analyses. Table 2 presents the suite of univariate community statistics obtained as an output from PRIMER 6 for the analysed macrobenthic infaunal communities within the stations sampled. Grabs targeting maerl beds were labelled GMx and grabs targeting seagrass beds were labelled GSx. Station GS18 was aimed at seagrass, but a relict / silt-smothered maerl bed was discovered there.

Average infaunal taxa numbers at the maerl sites ranged from 15 to 73 at GM8 and GM7 respectively. The mean number of taxa recorded in all maerl grabs was 56 per grab, which was the same at the seagrass site GS18 was 56 per grab. The abundance of infauna was greatest at station GM7 (1031 per grab), this was caused by a dominance of small bivalve species, in particular *Goodallia triangularis*, whilst again the most depauperate was GM8 with only 36 individuals per grab. The average abundance for all the maerl grabs was 425 individuals. Margalef's richness and Shannon Wiener's diversity were both lowest at GM8 ($d = 3.84$ and $H'(\log_e) = 2.38$) and highest at GM1 ($d = 10.84$ and $H'(\log_e) = 3.32$) with GS18 following close behind with a richness of $d = 10.65$ and GM4 with a diversity of $H'(\log_e) = 3.10$.

The seagrass grabs generally had a lower number of taxa than the maerl grabs. They also had generally lower abundances and diversities, which is probably due to the lower physical complexity of the sandy environment. GS18 possessed a small amount of dead maerl gravel in the sediment and some of the highest levels of organic matter. These factors probably contributed to the fact that it had the highest infaunal total taxa count (S-Tot).

With the exception of GM8, most sites held a rich community of polychaetes, amphipods and bivalves. GM8 was lacking in diversity within all faunal groups.

3.1.1 Multivariate analysis of the infaunal data

Multivariate analysis of the data can be used to further illustrate patterns within the macrobenthic community. A Bray Curtis similarity analysis was performed on the taxa / site dataset producing a similarity matrix. This was then run through a group average clustering routine in PRIMER 6 to produce a dendrogram illustrating similarities within the data (Figure 4).

The group clustering is clearly defined and indicates the strong similarities that exist between the infaunal communities of several groups of sites. If the data are further subjected to a Multi-Dimensional Scaling analysis (MDS) within PRIMER 6, the resulting plot (Figure 5) illustrates the groupings as a 'two dimensional squash', with, in this case, a two dimensional stress value of 0.11, which shows that it is an accurate illustration of both the inter- and intra-site similarities.

3.1.2 Univariate analysis of the grab data

Table 2. Univariate community statistics for the Sound of Barra grabs – 2015

Sample	S	N	d	J'	H'(loge)	1-Lambda'	S- Tot
GM1-1	78	355	13.11	0.76	3.33	0.90	
GM1-2	49	130	9.86	0.92	3.57	0.97	
GM1-3	63	655	9.56	0.74	3.07	0.92	
Mean	63	380	10.84	0.81	3.32	0.93	104
GM3-1	43	284	7.44	0.64	2.42	0.79	
GM3-2	42	229	7.55	0.76	2.83	0.89	
GM3-3	65	568	10.09	0.73	3.06	0.90	
Mean	50	360	8.36	0.71	2.77	0.86	88
GM4-1	68	267	11.99	0.86	3.64	0.96	
GM4-2	57	268	10.02	0.73	2.95	0.89	
GM4-3	44	180	8.28	0.71	2.70	0.86	
Mean	56	238	10.10	0.77	3.10	0.90	115
GM7-1	56	559	8.69	0.66	2.65	0.83	
GM7-2	90	1722	11.94	0.63	2.84	0.86	
GM7-3	74	812	10.90	0.77	3.30	0.93	
Mean	73	1031	10.51	0.69	2.93	0.88	119
GM8-1	14	41	3.50	0.87	2.30	0.89	
GM8-2	16	29	4.46	0.92	2.56	0.94	
GM8-3	14	38	3.57	0.86	2.28	0.89	
Mean	15	36	3.84	0.89	2.38	0.90	29
GM11-1	88	752	13.14	0.79	3.55	0.95	
GM11-2	38	311	6.45	0.79	2.86	0.91	
GM11-3	53	398	8.69	0.75	3.00	0.92	
Mean	60	487	9.42	0.78	3.13	0.93	104
GM12-1	57	419	9.28	0.75	3.05	0.91	
GM12-2	67	565	10.42	0.77	3.25	0.93	
GM12-3	75	640	11.45	0.75	3.23	0.93	
Mean	66	541	10.38	0.76	3.18	0.92	104
GM13-1	46	165	8.81	0.82	3.12	0.92	
GM13-2	71	484	11.32	0.74	3.14	0.89	
GM13-3	60	365	10.00	0.71	2.92	0.90	
Mean	59	338	10.04	0.76	3.06	0.90	94
GM15-1	54	542	8.42	0.74	2.93	0.91	
GM15-2	29	106	6.00	0.87	2.93	0.94	
GM15-3	52	260	9.17	0.76	3.01	0.90	
Mean	45	303	7.87	0.79	2.96	0.92	85
GS5-1	47	321	7.97	0.82	3.14	0.94	
GS5-2	24	94	5.06	0.85	2.69	0.90	
GS5-3	30	139	5.88	0.81	2.75	0.90	
Mean	34	185	6.30	0.82	2.86	0.91	61
GS6-1	29	263	5.03	0.67	2.25	0.82	
GS6-2	28	307	4.72	0.66	2.21	0.82	
GS6-3	35	313	5.92	0.71	2.52	0.86	
Mean	31	294	5.22	0.68	2.33	0.83	49
GS9-1	33	105	6.88	0.85	2.99	0.93	
GS9-2	28	134	5.51	0.72	2.38	0.82	
GS9-3	24	123	4.78	0.59	1.89	0.67	
Mean	28	121	5.72	0.72	2.42	0.81	54
GS14-1	38	153	7.36	0.85	3.11	0.94	
GS14-2	33	217	5.95	0.79	2.75	0.91	
GS14-3	23	95	4.83	0.74	2.33	0.84	
Mean	31	155	6.04	0.79	2.73	0.90	64

Sample	S	N	d	J'	H'(loge)	1-Lambda'	S- Tot
GS18-1	62	463	9.94	0.78	3.20	0.93	
GS18-2	95	812	14.03	0.75	3.43	0.93	
GS18-3	47	320	7.98	0.76	2.94	0.90	
Mean	68	532	10.65	0.76	3.19	0.92	121

Note: The notation in column 1 denotes grabs taken over an expected/previous maerl site (GM) or an expected/ previous seagrass site (GS). GS18 was a previously/expected seagrass area at which a relict/silt-smothered maerl bed was discovered.

S – Total taxa: taxa with non-zero counts.

N – The number of individuals per grab.

d – Margalef's richness for each sample. $(S-1)/\log(N)$ - it is a measure of the number of taxa present, making some allowance for the number of individuals.

J' – Pielou's evenness - this is a measure of equitability, a measure of how evenly the individuals are distributed among the different taxa.

H'(loge) – Shannon-Wiener diversity index

1-Lambda'- Simpson's diversity index

S Tot – Total number of taxa recorded in all three grabs per site

Predictably the maerl grab communities cluster together, with the exception of the depauperate GM8 grabs and two of the GM4 grabs, the most southerly site sampled. Figure 5 illustrates this and also clearly shows the separation between the sandy seagrass sites.

The seagrass sites are quite dissimilar from each other and generally cluster separately with the exception of the grabs at stations GS5 and GS6 which are a pair of stations geographically very close together, with both similar sediments and hydrography. GS 18 clusters separately despite being geographically close as well. Figure 6 shows the spatial arrangement of the major Bray-Curtis clusters seen in the infaunal data.

When the Bray Curtis similarities are subjected to a SIMPER test within PRIMER 6, the taxa responsible for the clustering patterns are revealed. These taxa are shown in Tables 3 - 9. Only taxa with a percentage contribution of over 5%, or those making up the top cumulative 50%, are included.

Table 3. SIMPER taxa for Group A clustered grabs

Group A – Most GM grabs				
Average similarity: 44.56%				
Species	Av.Abund	Av.Sim	Contrib%	Cum.%
Nematoda	8.37	5.19	11.64	11.64
<i>Goodallia triangularis</i>	6.49	2.74	6.16	17.8
<i>Polygordius</i>	5.19	2.6	5.83	23.64
<i>Gari tellinella</i>	3.58	2.33	5.22	28.86
<i>Glycera lapidum</i>	3.25	2.32	5.2	34.06
Nemertea	2.6	1.61	3.61	37.67
<i>Sphaerosyllis bulbosa</i>	3.42	1.46	3.28	40.95
<i>Psamathe fusca</i>	2.74	1.4	3.15	44.1
<i>Pisione remota</i>	2.8	1.3	2.92	47.03
<i>Echinocyamus pusillus</i>	2.21	1.29	2.9	49.93
<i>Timoclea ovata</i>	1.85	1.08	2.42	52.35

The infaunal community in this cluster (the majority of the maerl grabs - Group A), is dominated by small bivalves and polychaetes, with nematodes, nemertean and echinoderms.

Table 4. SIMPER taxa for Group B clustered grabs

Group B – GS14.1 & 14.2				
Average similarity: 47.23				
Species	Av.Abund	Av.Sim	Contrib%	Cum.%
<i>Jassa falcata</i>	5.31	7.05	14.93	14.93
<i>Dexamine spinosa</i>	4.42	6.41	13.57	28.51
<i>Platynereis dumerilii</i>	4.46	4.16	8.81	37.31
<i>Dexamine thea</i>	3.07	4.16	8.81	46.12
<i>Erichthonius punctatus</i>	2.65	3.89	8.24	54.36

This *Zostera* based cluster is dominated by tube building amphipods and a nereid polychaete.

Table 5. SIMPER taxa for Group C clustered grabs

Group C – GM8				
Average similarity: 36.20				
Species	Av.Abund	Av.Sim	Contrib%	Cum.%
<i>Spisula elliptica</i>	1.79	7.17	19.81	19.81
<i>Glycera lapidum</i>	1.88	6.32	17.46	37.27
<i>Nephtys cirrosa</i>	1.24	4.72	13.03	50.3

The sparse infaunal community at GM8 is dominated by two predatory polychaetes and a robust bivalve species.

Table 6. SIMPER taxa for Group D clustered grabs

Group D – GS9 & GS14.3				
Average similarity: 44.04				
Species	Av.Abund	Av.Sim	Contrib%	Cum.%
<i>Tellina (Fabulina) fabula</i>	5.69	9.08	20.61	20.61
<i>Ampelisca brevicornis</i>	3.5	5.17	11.75	32.36
<i>Abra prismatica</i>	2.42	4.33	9.84	42.2
<i>Timoclea ovata</i>	1.73	3.01	6.84	49.04
<i>Tellina tenuis</i>	1.54	2.8	6.37	55.41

This seagrass communities in the centre of the sound are dominated by small bivalve species.

Table 7. SIMPER taxa for Group E clustered grabs

Group E – GS5 & GS6				
Average similarity: 46.26				
Species	Av.Abund	Av.Sim	Contrib%	Cum.%
<i>Moerella pygmaea</i>	6.97	7.06	15.26	15.26
<i>Dosinia lupinus</i>	5.23	6.31	13.64	28.9
<i>Chamelea striatula</i>	3.78	3.63	7.85	36.75
<i>Timoclea ovata</i>	2.65	3.27	7.07	43.82
<i>Iphinoe trispinosa</i>	2.78	3.02	6.53	50.35

These medium sand seagrass and dead maerl sites are dominated by medium sized bivalve species.

Table 8. SIMPER taxa for Group F clustered grabs

Group F – GM4.2 & 4.3				
Average similarity: 53.76				
Species	Av.Abund	Av.Sim	Contrib%	Cum.%
<i>Dosinia lupinus</i>	7.07	8.26	15.36	15.36
<i>Timoclea ovata</i>	6.78	6.71	12.48	27.84
<i>Urothoe elegans</i>	5.53	5.9	10.98	38.82
<i>Echinocyamus pusillus</i>	2.64	2.95	5.49	44.31
<i>Owenia borealis</i>	2	2.41	4.48	48.79
<i>Glycera lapidum</i>	1.98	2.09	3.88	52.67

These grabs at site GM4 contain a mixed community of polychaetes, amphipods, bivalves and echinoderms.

Table 9. SIMPER taxa for Group G clustered grabs

Group G – GS18				
Average similarity: 49.69				
Species	Av.Abund	Av.Sim	Contrib%	Cum.%
<i>Urothoe elegans</i>	8.12	4.43	8.91	8.91
Nematoda	7.42	4.04	8.13	17.04
<i>Dosinia lupinus</i>	4.46	2.6	5.24	22.28
Enchytraeidae	4.65	2.44	4.91	27.19
<i>Phtisica marina</i>	4.69	2.43	4.88	32.07
<i>Notomastus</i>	3.84	2.3	4.63	36.7
<i>Mediomastus fragilis</i>	3.21	2.15	4.33	41.03
<i>Crassikorophium crassicorne</i>	6.22	1.98	3.99	45.02
Nemertea	3.08	1.48	2.98	48
<i>Abra alba</i>	3.01	1.48	2.98	50.97

This relict maerl site has a mixed and varied community of polychaetes, amphipods and bivalves with nematodes, nemertean and caprellids adding to the diversity.

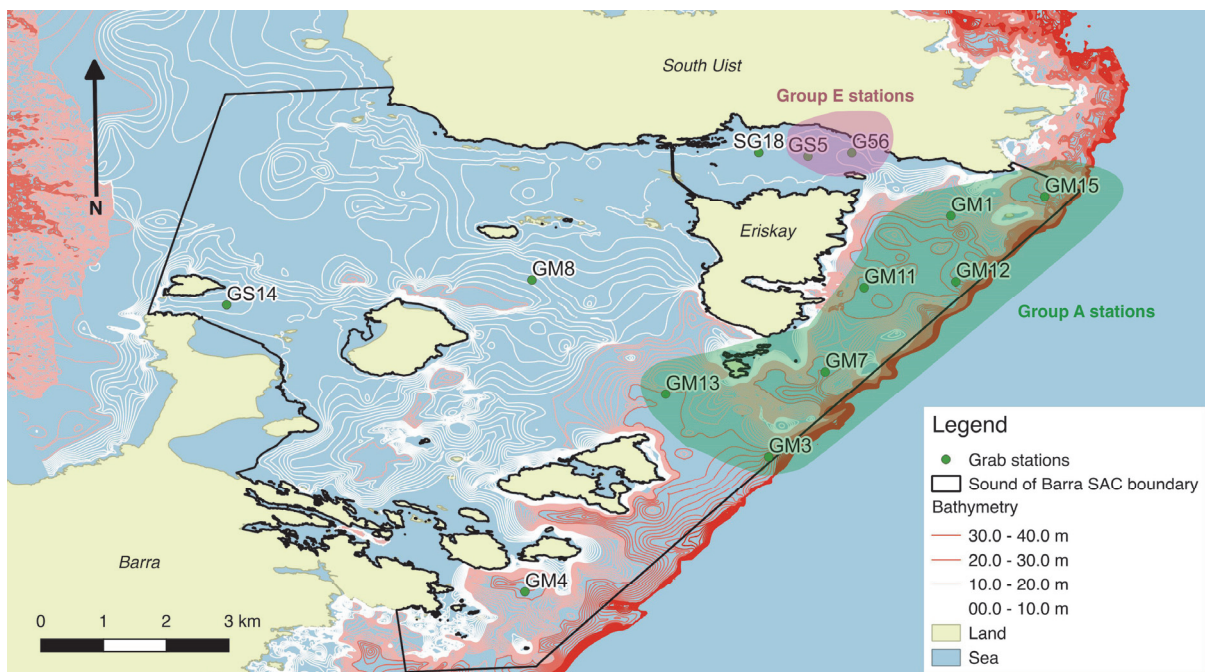


Figure 6. Map showing spatial relationships between major Bray-Curtis clusters seen in the infaunal data. (© Crown copyright and database right 2018. Ordnance Survey 100017908).

Figure 4 highlights the two major infaunal communities identified by the multivariate analysis, the group A and E stations. Group A stations are all found east of the sound itself in deeper water in areas known to be exposed to towed bottom-contacting fishing activities. These beds hold a community dominated by small bivalves. The Group E stations lie in shallow water in the Sound of Eriskay with undisturbed sediments and here the community is dominated by medium sized bivalves.

3.1.3 Physical sediment characteristics at the grab sites

A summary of the particle size data results is shown in Table 10. Full results are presented in Annex 3.

All potential maerl stations sampled (those labelled GM-) were found to possess coarse sediments, with a substantial gravel content. In all cases this gravel was of maerl origin. The potential seagrass sites, labelled GS- , were dominated by medium and fine sands. The organic carbon content of all the sampled sediments varied from ~1% - 5% by weight, with marginally higher levels found at the maerl sites.

Table 10. Particle characteristics of the sediments found at the Sound of Barra grab stations in 2015.

Station	GM1	GM3	GM4	GM7	GM8	GM11	GM12
Station description	Fine gravel	Gravelly coarse sand	Gravelly fine sand	Fine gravel	Gravelly medium sand	Gravelly coarse sand	Gravelly coarse sand
LOI	5.32%	2.82%	4.05%	3.52%	2.79%	3.03%	3.41%

Station	GM13	GM15	GS5	GS6	GS9	GS14	GS18
Station description	Gravelly coarse sand	Sandy gravel	Medium sand	Medium sand	Fine sand	Gravelly medium sand	Gravelly fine sand
LOI	4.65%	4.48%	1.97%	1.24%	2.08%	2.26%	5.16%

LOI*=Loss on ignition ≈ organic content.

3.2 Biotope determination of infaunal grab samples

Table 11 presents infaunal biotopes assigned to the sites on the basis of the macrobenthic analysis.

Table 11. Infaunal biotopes for the species assemblages recorded in the grab samples.

Cluster & stations	Biotope	Description
A Most GM grabs	SS.SCS.ICS.Glap	<i>Glyceria lapidum</i> in impoverished infralittoral mobile gravel and sand.
B GS14.1 & 14.2	SS.SMP.SSgr.Zmar	<i>Zostera marina/angustifolia</i> beds on lower shore or infralittoral clean or muddy sand.
C GM8	SS.SCS.ICS.Glap	<i>Glyceria lapidum</i> in impoverished infralittoral mobile gravel and sand. A much more depauperate example of this biotope than was seen in A.
D GS9 & GS14.3	SS.SMP.SSgr.Zmar	<i>Zostera marina/angustifolia</i> beds on lower shore or infralittoral clean or muddy sand. A slightly less exposed variant of this seagrass infaunal biotope when compared to B.
E GS5 & GS6	SS.SCS.ICS.MoeVen	<i>Moerella spp.</i> with venerid bivalves in infralittoral gravelly sand. Possibly a relict version of this biotope which may change in the future with further sedimentation in the area.
F GM4.2 & 4.3	SS.SSA.CFiSa.EpusOborApri	<i>Echinocyamus pusillus</i> , <i>Ophelia borealis</i> and <i>Abra prismatica</i> in circalittoral fine sand.
G GS18	SS.SSA.IFiSa.TbAmPo	Semi-permanent tube-building amphipods and polychaetes in sublittoral sand.

3.3 Eriskay causeway sediment monitoring sites

The 2015 data were compared with the 2006 data and both sets are presented in Annex 4. The data when presented as particle size distribution curves show that the sediment characteristics have changed at most sites. The curves and the summary tables in Annex 2 show that the median grain size has reduced at all sites except at site ES6, where it has become coarser. Site ES6 is adjacent to the causeway channel where the tidal current through the bridge is amplified. Significant reductions in median grain size are most apparent at ES3, ES5, ES7 and ES10. The silt/clay fraction has also increased at most sites, with the exceptions being ES5, ES6 and ES10, all of which are in the vicinity of the channel and the associated increased current speeds. The percentage gravel component has correspondingly reduced at all sites.

4. DISCUSSION

4.1 Grab survey - macrobenthic infaunal assemblages

The analysis shows that the contrasting environments present in the Sound of Barra SAC are reflected in the infaunal species assemblages.

The stations located east and south of Eriskay, (Group A), sampled deep maerl beds. These all possess a similar infaunal community indicative of regular disturbance, dominated by small robust bivalves and predatory polychaetes (Eleftheriou & Robertson, 1990). The live maerl which is present in this area, which was also seen on video, is sparse and lies in the troughs of the sediment waves created by the strong tidal currents and formed from dead maerl gravel and bivalve shell material. GM4 (Group F) lying in the southeast corner of the SAC possesses a finer sediment, and is dominated by the large bivalve *Dosinia sp*, the pea urchin *Echinocyamus pusillus* and the polychaete *Ophelia borealis*, potentially indicative of lower levels of disturbance.

GM8, (Group C) lies in the middle of the sound and appears to be in an area where a thin veneer of maerl gravel sediment lies over reef or cobble scar. Cobbles and reef algae were retrieved from many of the misfired grab samples. The infaunal community is correspondingly depauperate in comparison to the other stations.

GS5 and 6 and GS18, Groups E and G respectively, are similar in some ways, with GS18 being a more diverse and stable version of GS5 and 6, with a greater amount of fine material and organic matter, increasing the diversity substantially.

GS14 and GS9, Groups B and D, are variations on a theme of the infaunal community associated with *Zostera marina* plants and rhizomes in sand.

In total 279 quantitative infaunal and epifaunal taxa were recorded in the 'prospective maerl' (GM-) grabs, whilst with the non-quantitative groups included, the total reached 400 taxa. In the 'prospective seagrass' (GS-) grabs 188 quantitative tax and 244 total taxa were recorded.

4.2 Eriskay sediment monitoring

As a consequence of building the road causeway, the sediment grain size is reducing both to the east and the west of the structure. Sediments in the vicinity of the channel through the causeway are however coarser due to the amplified currents through the bridge.

5. REFERENCES

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ANNEX 1: SOUND OF BARRA MACROBENTHIC GRAB SURVEY STATION DETAILS - 2015

Station	Date	Time	Latitude	Longitude	Depth BCD	Notes
GM4	21-Jul-15	10:03	56.98456	-7.35684	22m	PSA - sand and maerl fragments, some live
GM4	21-Jul-15	10:24	56.98475	-7.35683	22m	Maerl (some live) and fine sand and shell gravel
GM4	21-Jul-15	10:41	56.98499	-7.35696	22m	Fine sand, live maerl and shell
GM4	21-Jul-15	10:53	56.98506	-7.35708	22m	Fine sand and shell plus dead maerl
GM3	21-Jul-15	12:02	57.01891	-7.29241	20m	Maerl (some live) and shell. Biol 1
GM3	21-Jul-15	12:11	57.01882	-7.29257	20m	Dead maerl, sand and shell - clean. Biol 2
GM3	21-Jul-15	12:23	57.01884	-7.29284	20m	Shell gravel, dead and live maerl. Biol 3 + PSA sub-sample. 1 sand eel returned to sea.
GM7	21-Jul-15	12:46	57.0433	-7.27759	21m	Maerl (live and dead), shell gravel, shell. One sand eel put back. Biol 1
GM7	21-Jul-15	12:53	57.04334	-7.27771	21m	Maerl (live and dead), shell gravel, shell. One sand eel put back. Biol 2 + PSA
GM7	21-Jul-15	13:02	57.04323	-7.2777	21m	Maerl (live and dead), shell gravel and shell. Biol 3
GM11	21-Jul-15	13:29	57.06539	-7.26738	26m	Maerl (live and dead), shell and shell gravel. Biol 1
GM11	21-Jul-15	13:38	57.06534	-7.26756	26m	Shell gravel, shell, and maerl (little). Biol 2
GM11	21-Jul-15	13:45	57.06551	-7.2679	26m	Shell gravel, shell little bit of live maerl. Biol 3
GM1	21-Jul-15	14:10	57.08396	-7.24494	21m	Maerl (live and dead) 20% and shell. Biol 1 and PSA
GM1	21-Jul-15	14:36	57.08404	-7.24502	21m	Muddy gravel. Biol 2
GM1	21-Jul-15	14:41	57.08415	-7.24514	21m	Maerl (live and dead) and shell. Biol 3
GM15	21-Jul-15	15:00	57.0892	-7.21962	26m	Maerl (live and dead) and shell. Biol 1
GM15	21-Jul-15	15:06	57.08916	-7.21957	26m	Maerl (live and dead), shell and coarse sand. Biol 2
GM15	21-Jul-15	15:15	57.08893	-7.21946	26m	Maerl (live and dead), shell and coarse sand. Biol 3 + PSA
GS5	21-Jul-15	15:37	57.09985	-7.28211	4.5m	Medium shell sand. Biol 1
GS5	21-Jul-15	15:40	57.09979	-7.28189	4.5m	Medium shell sand. PSA (1 Carcinus returned)
GS5	21-Jul-15	15:43	57.09994	-7.28206	4.5m	Medium shell sand. Biol 2 (1 Carcinus returned)
GS5	21-Jul-15	15:46	57.09992	-7.28197	4.5m	Medium shell sand. Biol 3
GS6	21-Jul-15	15:54	57.10077	-7.27061	7.0m	Medium shell sand. Biol 1
GS6	21-Jul-15	15:56	57.10041	-7.27078	7.0m	Medium shell sand. Biol 2
GS6	21-Jul-15	15:58	57.10069	-7.27093	7.0m	Medium shell sand. PSA
GS6	21-Jul-15	16:02	57.10066	-7.27083	7.0m	Medium shell sand. Biol 3. 1 Liocarcinus depurator returned
GS14	22-Jul-15	10:19	57.06327	-7.43516	4.0m	Seagrass, with fine sand, some anoxia - PSA
GS14	22-Jul-15	10:27	57.06317	-7.43533	4.0m	Fine shell sand, Zostera and Chorda - Biol 1
GS14	22-Jul-15	10:30	57.06311	-7.43537	4.0m	Fine shell sand, Zostera and Chorda - Biol 2
GS14	22-Jul-15	10:44	57.06334	-7.43538	4.0m	Fine sand and tubes - Biol 3
GM8	22-Jul-15	12:11	57.06719	-7.35454	7.8m	Coarse shell sand - Biol 1
GM8	22-Jul-15	12:15	57.06739	-7.35451	7.8m	Coarse maerl sediment, sand and shell - Biol 2
GM8	22-Jul-15	12:20	57.06758	-7.35443	7.8m	Coarse maerl sediment, sand and shell Biol 3
GM8	22-Jul-15	12:24	57.06749	-7.35449	7.8m	Coarse maerl sediment, sand and shell -PSA

Station	Date	Time	Latitude	Longitude	Depth BCD	Notes
GS9	22-Jul-15	12:53	57.04271	-7.36523	7.0m	Fine sand with polychaete tubes - PSA
GS9	22-Jul-15	13:03	57.04274	-7.36511	7.0m	Fine sand and Zostera - Biol 1
GS9	22-Jul-15	13:06	57.04277	-7.36525	7.0m	Fine sand and Zostera - Biol 2
GS9	22-Jul-15	13:15	57.0427	-7.36508	7.0m	Fine sand with Zostera - Biol 3
GM12	22-Jul-15	14:06	57.06832	-7.24133	27m	Maerl (live and dead), maerl gravel, Glycymeris and Liocarcinus depurator - Biol 1 & PSA
GM12	22-Jul-15	14:13	57.06814	-7.24139	27m	Maerl (live and dead), maerl gravel and shell - Biol 2
GM12	22-Jul-15	14:17	57.06836	-7.24147	27m	Maerl (live and dead), maerl gravel and shell - Biol 3
GM13	22-Jul-15	14:50	57.03746	-7.31943	20m	Maerl (live and dead), maerl gravel and shell - Biol 1 + sand eel (returned)
GM13	22-Jul-15	14:54	57.03745	-7.31958	20m	Maerl (live and dead), maerl gravel and shell - Biol 2
GM13	22-Jul-15	14:58	57.03742	-7.31951	20m	Maerl (live and dead), maerl gravel and shell - Biol 3 + PSA
GS18	22-Jul-15	16:00	57.10082	-7.29500	7.0m	Maerl on sand with Trailliella. Biol 1 and PSA
GS18	22-Jul-15	16:09	57.10078	-7.29476	7.0m	Maerl on sand with Trailliella. Biol 2
GS18	22-Jul-15	16:14	57.10088	-7.29495	7.0m	Maerl on sand with Trailliella. Biol 3

ANNEX 2: INFAUNAL RAW DATA FROM THE GRAB SAMPLES

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
Porifera									
<i>Sycon ciliatum</i>									
<i>Suberitidae</i>						P			
<i>Hemiasterellidae</i>	P	P	P	P			P		
<i>Stelligera rigida</i>									
<i>Cliona celata</i>	P	P	P				P		
<i>Halichondria</i>									
Cnidaria									
<i>Haliclystus</i>									
<i>Sertularella</i>		P							
<i>Kirchenpaueria pinnata</i>									
<i>Clytia hemisphaerica</i>			P						
<i>Laomedea</i>									
<i>Obelia geniculata</i>									
<i>Alcyonium digitatum</i>									
Actiniaria									
<i>Edwardsiidae</i>	2				1	1		1	1
<i>Caryophyllia smithii</i>				1		1			
Platyhelminthes									
<i>Platyhelminthes</i>	1	2		3	1				
Nemertea									
<i>Nemertea</i>	4	5	27	6	6	18	1	2	1
<i>Tubulanus polymorphus</i>	1					2	2	1	
<i>Cerebratulus</i>	1								
Nematoda									
<i>Nematoda</i>	108	10	10	121	67	154	23		1
Clitellata									
<i>Pisicolidae</i>									
Entoprocta									
<i>Entoprocta</i>			P						
<i>Pedicellina</i>									
Chaetognatha									
<i>Chaetognatha</i>					2	5			
Sipuncula									
<i>Golfingiidae</i>			1	1			1		
<i>Golfingia elongata</i>									
<i>Nephasoma minutum</i>	1	1	7		2		1	5	
<i>Phascolion strombus</i>									
Annelida									
<i>Pisione remota</i>	5			36	20	46			
<i>Polynoidae</i>	8	3	10	8	2	1		1	
<i>Malmgrenia darbouxi</i>									
<i>Malmgrenia marphysae</i>									
<i>Malmgrenia mcintoshii</i>									
<i>Harmothoe spinifera</i>									
<i>Pholoe baltica</i>							1		1
<i>Pholoe inornata</i>			1			1		2	
<i>Sthenelais boa</i>									
<i>Eteone longa</i>							2		
<i>Hesionura elongata</i>						3			
<i>Mystides caeca</i>									
<i>Pseudomystides limbata</i>			1		1	1	1		
<i>Phyllodoce lineata</i>									1

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>Phyllodoce mucosa</i>									
<i>Eulalia aurea</i>	1						1	1	
<i>Eulalia bilineata</i>									
<i>Eulalia expusilla</i>									1
<i>Eulalia mustela</i>						1	1		
<i>Eulalia viridis</i>									
<i>Eumida</i>	1						4	2	
<i>Nereiphylla rubiginosa</i>	1		4			2			
<i>Pterocirrus macroceros</i>	1		2						
<i>Lacydonia miranda</i>		3							
<i>Glycera alba</i>								3	
<i>Glycera celtica</i>									
<i>Glycera fallax</i>									
<i>Glycera lapidum</i>	9	5	3	9	15	10	15	5	3
<i>Glycinde nordmanni</i>	1						1		
<i>Goniadella bobrezkii</i>				3		1	1		
<i>Ephesiella abyssorum</i>	6	1	2			1			
<i>Sphaerodorum gracilis</i>	3		6						
<i>Gyptis</i>		1							
<i>Psamathe fusca</i>	23	1	20	2		8	1	1	
<i>Nereimyra punctata</i>									
<i>Oxydromus flexuosus</i>									
<i>Syllidia armata</i>	1								
<i>Syllis garciai</i>	2			2		5	6		
<i>Eurysyllis tuberculata</i>	1								
<i>Syllis</i>			1			3			
<i>Trypanosyllis coeliaca</i>	2	1	4	1	2	6	1		
<i>Trypanosyllis coeliaca</i>									
<i>Syllis armillaris</i>		1	4						
<i>Syllis parapari</i>			2			2			
<i>Syllis pontxioi</i>	1		1	5	4	4			
<i>Amblyosyllis formosa</i>									
<i>Dioplosyllis cirrosa</i>									
<i>Eusyllis blomstrandii</i>									
<i>Odontosyllis ctenostoma</i>							1		
<i>Odontosyllis fulgurans</i>									
<i>Odontosyllis gibba</i>	4								
<i>Xenosyllis scabra</i>						1			
<i>Parexogone hebes</i>									
<i>Exogone verugera</i>									
<i>Sphaerosyllis</i>									
<i>Sphaerosyllis bulbosa</i>	3	2	4	5	12	18			
<i>Sphaerosyllis hystrix</i>						2			
<i>Sphaerosyllis taylori</i>				4					
<i>Myrianida</i>									
<i>Platynereis dumerilii</i>									
<i>Aglaophamus agilis</i>					1	2			
<i>Nephtys</i>									
<i>Nephtys assimilis</i>									
<i>Nephtys caeca</i>									
<i>Nephtys cirrosa</i>									
<i>Nephtys hombergii</i>									
<i>Nephtys kersivalensis</i>									
<i>Pareurythoe borealis</i>	2		2	1					
<i>Spinther oniscoides</i>									
<i>Aponuphis bilineata</i>					1	2	5	2	2

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>Eunice</i>									
<i>Leodice harassii</i>				1		1			
<i>Lysidice unicornis</i>						1		1	
<i>Lumbrineris aniana/cingulata</i>							1	1	1
<i>Scoletoma magnidentata</i>					1	1			
<i>Protodorvillea kefersteini</i>					3	6	2		1
<i>Schistomeringos neglecta</i>						1			
<i>Leitoscoloplos mammosus</i>									
<i>Scoloplos (Scoloplos) armiger</i>				1			1	4	3
<i>Aricidea</i>							1		
<i>Aricidea (Aricidea) minuta</i>									
<i>Aricidea (Acmira) cerrutii</i>							2		
<i>Paradoneis lyra</i>							3	1	4
<i>Aonides oxycephala</i>									
<i>Aonides paucibranchiata</i>	1				12	11			
<i>Laonice</i>									
<i>Laonice bahusiensis</i>	4			2	1	3	5		
<i>Malacoceros</i>									
<i>Malacoceros vulgaris</i>									
<i>Minuspio cirrifera</i>									
<i>Polydora</i>			1						
<i>Dipolydora coeca</i>									
<i>Dipolydora flava</i>									
<i>Dipolydora quadrilobata</i>							1		
<i>Prionospio</i>	2				1	4	4	1	
<i>Prionospio fallax</i>									
<i>Pseudopolydora pulchra</i>							1		
<i>Pygospio elegans</i>									
<i>Spio</i>									
<i>Paraspio decorata</i>									1
<i>Spio filicornis</i>						1	2	1	1
<i>Spio goniocephala</i>									
<i>Spiophanes bombyx</i>							1		
<i>Magelona alleni</i>									1
<i>Aphelochaeta "species A"</i>									
<i>Caulleriella alata</i>							9	1	1
<i>Chaetozone christiei</i>									
<i>Chaetozone zetlandica</i>									1
<i>Cirriformia tentaculata</i>		1							
<i>Monticellina dorsobranchialis</i>									
<i>Flabelligeridae</i>									
<i>Diplocirrus glaucus</i>								2	1
<i>Diplocirrus stopbowitzi</i>						1			
<i>Flabelligera affinis</i>									
<i>Macrochaeta clavicornis</i>	6	2							
<i>Capitella capitata</i>									
<i>Mediomastus fragilis</i>	1				1	8	37	3	2
<i>Notomastus</i>				1		4	5		1

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>Maldanidae</i>									
<i>Clymenura</i>							3		
<i>Microclymene tricirrata</i>									
<i>Euclymene "species A"</i>							1		
<i>Euclymene oerstedii</i>									1
<i>Praxillella affinis</i>							11		
<i>Notoproctus</i>	4		9						
<i>Ophelia</i>									
<i>Ophelia celtica</i>	1								
<i>Travisia forbesii</i>									
<i>Armandia polyophthalma</i>									
<i>Scalibregma celticum</i>							4		
<i>Scalibregma inflatum</i>						1			
<i>Polygordius</i>	9	10	6	23	22	46			
<i>Galathowenia oculata</i>								1	3
<i>Myriochele danielsseni</i>	1						2		
<i>Owenia borealis</i>							2	4	4
<i>Petta pusilla</i>						1		1	
<i>Sabellaria spinulosa</i>									
<i>Ampharetidae</i>									
<i>Ampharete lindstroemi</i>								3	
<i>Terebellidae</i>						1			
<i>Terebellidae</i>									
<i>Lanice conchilega</i>									
<i>Pista</i>						1			
<i>Pista cristata</i>		1	1				2		
<i>Pista mediterranea</i>	2		1				4		
<i>Terebellides stroemii</i>									3
<i>Trichobranthus glacialis</i>									
<i>Nicolea zostericola</i>			1						
<i>Amaeana trilobata</i>									
<i>Polycirrus</i>						4		1	
<i>Polycirrus medusa</i>	1								
<i>Polycirrus norvegicus</i>			2				2		
<i>Parathelepus collaris</i>				2	2	3			
<i>Sabellidae</i>									
<i>Dialychone dunerificta</i>	2	1	2			16	11		
<i>Dialychone longiseta</i>	1			2	1				
<i>Paradialychone filicaudata</i>							1		
<i>Euchone</i>	3								
<i>Euchone pararosea</i>									1
<i>Jasmineira</i>									
<i>Jasmineira caudata</i>	1		1						
<i>Pseudopotamilla cf. reniformis</i>	1		2						
<i>Serpulidae</i>		1				5			
<i>Hydroides</i>			1				8		
<i>Hydroides norvegica</i>	1		1	2	1	6	12	3	
<i>Spirobranchus</i>		1	3						
<i>Spirobranchus lamarcki</i>								1	
<i>Spirobranchus triqueter</i>	3	5	21			5		4	
<i>Apomatus similis</i>									

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>Tubificoides benedii</i>									
<i>Tubificoides pseudogaster</i>									
<i>Enchytraeidae</i>	14		3	2	3	2	5		
Chelicerata									
<i>Achelia echinata</i>	1		1						
<i>Anoplodactylus petiolatus</i>									
Crustacea									
<i>Verruca stroemia</i>						10		1	
<i>Balanoidea</i>						1			
<i>Balanus crenatus</i>		1	P			5	1	1	6
<i>Ostracoda</i>	1	1			1			4	
<i>Nebalia</i>									
<i>Sarsinebalia typhlops</i>								1	
<i>Apherusa</i>									
<i>Apherusa bispinosa</i>	3								
<i>Oedicerotidae</i>									
<i>Monoculodes</i>									
<i>Monoculodes carinatus</i>					2				
<i>Perioculodes longimanus</i>									1
<i>Pontocrates arcticus</i>									
<i>Pontocrates arenarius</i>				1					
<i>Synchelidium haplocheles</i>							1		
<i>Synchelidium maculatum</i>									
<i>Amphilochooides serratipes</i>						1			
<i>Apolochus neapolitanus</i>									
<i>Gitana sarsi</i>									
<i>Peltocoxa damnoniensis</i>	1								
<i>Leucothoe incisa</i>				1			1		
<i>Leucothoe lilljeborgi</i>									
<i>Urothoe</i>						1			1
<i>Urothoe elegans</i>								38	24
<i>Urothoe marina</i>							1		
<i>Harpinia</i>									
<i>Harpinia antennaria</i>								2	
<i>Metaphoxus fultoni</i>	1								
<i>Lysianassidae</i>		1							
<i>Hippomedon denticulatus</i>									
<i>Lepidepecreum longicornis</i>	1	1	3	1					
<i>Lysianassa ceratina</i>									
<i>Lysianassa plumosa</i>	3		7						
<i>Socarnes erythrophthalmus</i>				1			1		
<i>Tmetonyx similis</i>							4		
<i>Tryphosella horingi</i>	3		1						
<i>Tryphosites longipes</i>									
<i>Austrosyrhoe fimbriatus</i>									
<i>Liljeborgia pallida</i>									
<i>Idunella picta</i>									
<i>Atylus</i>									
<i>Nototropis falcatus</i>									
<i>Nototropis</i>									

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>swammerdamei</i>									
<i>Atylus vedlomensis</i>	1								
<i>Dexamine spinosa</i>									
<i>Dexamine thea</i>									
<i>Guernea (Guernea) coalita</i>						1			
<i>Ampelisca</i>							1		
<i>Ampelisca brevicornis</i>									
<i>Ampelisca tenuicornis</i>									
<i>Ampelisca typica</i>									
<i>Bathyporeia</i>									
<i>Bathyporeia elegans</i>									
<i>Bathyporeia guilliamsoniana</i>									
<i>Gammarus</i>									
<i>Megaluropus agilis</i>									
<i>Abludomelita obtusata</i>									
<i>Melita palmata</i>									
<i>Animoceradocus semiserratus</i>	14	5	6	1			2		
<i>Cheirocratus</i>								1	
<i>Cheirocratus intermedius</i>									
<i>Othomaera othonis</i>		1							
<i>Maerella tenuimana</i>									
<i>Ampithoe rubricata</i>									
<i>Gammaropsis</i>									
<i>Megamphopus cornutus</i>									
<i>Gammaropsis nitida</i>									
<i>Microprotopus maculatus</i>									
<i>Erichthonius</i>						1			
<i>Erichthonius punctatus</i>									
<i>Jassa</i>									
<i>Jassa falcata</i>									
<i>Aoridae</i>	1								
<i>Aora gracilis</i>									
<i>Leptocheirus hirsutimanus</i>						2	4		
<i>Leptocheirus pectinatus</i>									
<i>Microdeutopus</i>									
<i>Microdeutopus versiculatus</i>									
<i>Corophium</i>									
<i>Crassicornophium crassicorne</i>									
<i>Siphonoecetes</i>									
<i>Siphonoecetes kroyeranus</i>									
<i>Caprellidae</i>									
<i>Caprella acanthifera</i>									
<i>Pariambus typicus</i>									
<i>Phtisica marina</i>						2			
<i>Pseudoprotella phasma</i>									
<i>Gnathia</i>		1	5	1					
<i>Gnathia</i>	5		5	1	1		1	1	
<i>Gnathia dentata</i>									
<i>Gnathia oxyuraea</i>						1		1	
<i>Gnathia vorax</i>	2	6	10						

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>Anthura gracilis</i>			1						
<i>Cirolanidae</i>									
<i>Conilera cylindracea</i>	1	3		1					1
<i>Eurydice</i>						1			
<i>Eurydice inermis</i>	3	2					1		
<i>Eurydice pulchra</i>									
<i>Dynamene bidentata</i>									
<i>Janira maculosa</i>			1						
<i>Idotea</i>									
<i>Idotea emarginata</i>									
<i>Idotea linearis</i>									
<i>Idotea neglecta</i>									
<i>Astacilla damnoniensis</i>									
<i>Tanaopsis graciloides</i>									
<i>Vaunthompsonia cristata</i>	10		1					2	
<i>Bodotria scorpioides</i>									
<i>Iphinoe trispinosa</i>									
<i>Cumella pygmaea</i>									
<i>Nannastacus brevicaudatus</i>									
<i>Diastylis rugosa</i>									1
<i>Decapoda</i>		1		1	1				
<i>Caridea</i>		1							
<i>Paguridae</i>				2		1			
<i>Anapagurus chiroacanthus</i>		1							
<i>Galathea intermedia</i>	6	3	43					5	
<i>Pisidia longicornis</i>									
<i>Ebalia</i>									
<i>Ebalia tuberosa</i>									
<i>Hyas</i>									
<i>Eurynome</i>			1						
<i>Atelecyclus rotundatus</i>		2					1	1	
<i>Portunidae</i>	1		1		2				
<i>Liocarcinus</i>						1			
<i>Liocarcinus pusillus</i>									
Mollusca									
<i>Polyplacophora</i>		2				9			
<i>Leptochiton asellus</i>	6	10	79		1			1	
<i>Callochiton septemvalvis</i>		2	1						
<i>Lepidochitona cinerea</i>									
<i>Acanthochitona fascicularis</i>									
<i>Gastropoda</i>									
<i>Gastropoda</i>		P							
<i>Tricolia pullus</i>									
<i>Trochidae</i>									
<i>Gibbula</i>					1			1	
<i>Gibbula tumida</i>	3	1	8	1					
<i>Jujubinus montagui</i>		1							
<i>Testudinalia testudinalis</i>								1	
<i>Tectura virginea</i>		1	6						
<i>Patella pellucida</i>									
<i>Lacuna pallidula</i>									
<i>Lacuna vincta</i>									
<i>Rissoa parva</i>									

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>Alvania beanii</i>	6	5	110					2	
<i>Onoba semicostata</i>			85		1				
<i>Caecum glabrum</i>									
<i>Aporrhais pespelecani</i>									1
<i>Euspira nitida</i>					2	1			
<i>Eulima bilineata</i>									
<i>Vitreolina colini</i>	1	1							
<i>Buccinidae</i>									
<i>Nassarius (Hinia)</i>			2						
<i>Nassarius reticulatus</i>									
<i>Turridae</i>									
<i>Bela nebula</i>									
<i>Raphitoma linearis</i>			2						
<i>Odostomia plicata</i>									
<i>Brachystomia eulimoides</i>									
<i>Parthenina decussata</i>									
<i>Chrysallida interstincta</i>								1	
<i>Ondina diaphana</i>				1					
<i>Diaphana minuta</i>			2						
<i>Retusa obtusa</i>									
<i>Retusa umbilicata</i>									
<i>Aplysia punctata</i>									
<i>Berthella plumula</i>									
<i>Onchidorididae</i>									
<i>Bivalvia</i>		1	3					1	1
<i>Glycymeris glycymeris</i>	1		2	4	2				
<i>Modiolula phaseolina</i>	2	2	22						
<i>Crenella decussata</i>					1		4	5	2
<i>Musculus subpictus</i>		2	3						
<i>Musculus</i>									
<i>Limaria hians</i>									
<i>Limatula subauriculata</i>				2	2	3	2	2	1
<i>Mimachlamys varia</i>	1								
<i>Palliolium tigrinum</i>									
<i>Anomiidae</i>									
<i>Monia patelliformis</i>								1	
<i>Lucinoma borealis</i>								3	3
<i>Kellia suborbicularis</i>		2							
<i>Devonia perrieri</i>									
<i>Kurtiella bidentata</i>									
<i>Goodallia triangularis</i>	6	4	62	6	5	26	5	1	
<i>Cardiidae</i>									
<i>Acanthocardia</i>									
<i>Parvicardium scabrum</i>					6				2
<i>Spisula elliptica</i>								1	
<i>Lutraria</i>									
<i>Pharidae</i>								1	
<i>Ensis ensis</i>							1		
<i>Phaxas pellucidus</i>								6	
<i>Tellina</i>									
<i>Tellina tenuis</i>								1	
<i>Arcopagia crassa</i>				1					1
<i>Tellina (Fabulina) fabula</i>									
<i>Moerella donacina</i>									
<i>Moerella pygmaea</i>					2	11	3		1

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>Gastrana fragilis</i>									
<i>Gari</i>				1					
<i>Gari costulata</i>							1		
<i>Gari tellinella</i>									
<i>Gari tellinella</i>	2	5	2	12	7	8	7	2	
<i>Gari fervensis</i>								1	1
<i>Solecurtus scopula</i>									
<i>Abra alba</i>								2	
<i>Abra prismatica</i>								3	1
<i>Venus casina</i>	1	2	4	1		1			
<i>Gouldia minima</i>	5	4	18	2		5		1	
<i>Chamelea striatula</i>								6	2
<i>Clausinella fasciata</i>	2	4	10		1	1			
<i>Timoclea ovata</i>	1		1	1	2	6	2	64	31
<i>Tapetidae</i>			3						
<i>Polititapes rhomboides</i>	6								
<i>Dosinia</i>	1		2						
<i>Dosinia lupinus</i>		1						47	53
<i>Dosinia exoleta</i>	1								
<i>Mysia undata</i>									
<i>Mya</i>								3	
<i>Hiatella arctica</i>	1	2							
<i>Thracia phaseolina</i>									
<i>Thracia villosiuscula</i>	2	1	2	2	1	8	2		1
<i>Cochlodesma praetenuae</i>									
Brachiopoda									
<i>Novocrania anomala</i>									
<i>Argyrotheca cistellula</i>									
Bryozoa									
<i>Crisia</i>									
<i>Crisia denticulata</i>	P	P		P		P			
<i>Tubulipora</i>									
<i>Disporella hispida</i>									
<i>Alcyonidium diaphanum</i>			P						
<i>Alcyonidium hirsutum</i>									
<i>Nolella dilatata</i>									
<i>Amathia</i>									
<i>Aetea sica</i>	P		P						
<i>Aetea truncata</i>									
<i>Eucratea loricata</i>									
<i>Electra pilosa</i>			P					P	
<i>Pyripora catenularia</i>				P					
<i>Flustra foliacea</i>	P	P	P		P	P			
<i>Chartella papyracea</i>									
<i>Securiflustra securifrons</i>									
<i>Cauloramphus spiniferum</i>	P	P							
<i>Amphiblestrum flemingii</i>									
<i>Bugula</i>			P		P				
<i>Bugulina avicularia</i>									
<i>Scrupocellaria</i>								P	
<i>Cradoscrupocellaria reptans</i>	P	P	P						
<i>Aquiloniella scabra</i>									
<i>Scrupocellaria scruposa</i>	P								

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
<i>Micropora normani</i>			P						
<i>Cellaria</i>									
<i>Cellaria sinuosa</i>						P			
<i>Cribrilina annulata</i>								P	
<i>Puellina</i>				P					
<i>Puellina innominata</i>	P		P			P			
<i>Figularia figularis</i>									
<i>Celleporella hyalina</i>	P								
<i>Chorizopora brongniartii</i>	P		P				P		
<i>Escharoides coccinea</i>	P	P	P	P	P	P	P		
<i>Pentapora fascialis</i>									
<i>Escharina hyndmanni</i>									
<i>Parasmittina trispinosa</i>						P			
<i>Schizomavella</i>									
<i>Microporella ciliata</i>	P		P			P	P		
<i>Fenestrulina malusii</i>			P						
<i>Cellepora pumicosa</i>						P			
Phoronida									
<i>Phoronis</i>							3		
Echinodermata									
<i>Asteroidea</i>			2	3					
<i>Ophiuroidea</i>	6	2	1	7	2	4		1	
<i>Ophiothrix fragilis</i>	1	1							
<i>Amphiura (Ophiopeltis) securigera</i>									
<i>Amphipholis squamata</i>	10	1	4	8					
<i>Ophiura</i>	1							2	
<i>Echinoidea</i>		1	6		1				
<i>Echinocyamus pusillus</i>	5	1	3	1	7	53	9	8	6
<i>Echinocardium flavescens</i>									
<i>Holothuroidea</i>									
<i>Thyone fusus</i>									
<i>Leptosynapta bergensis</i>									
<i>Leptosynapta cruenta</i>									
<i>Leptosynapta inhaerens</i>									
<i>Leptosynapta minuta</i>									
Hemichordata									
<i>Enteropneusta</i>							1		
Tunicata									
<i>Polyclinidae</i>			P						
<i>Didemnum maculosum</i>									
<i>Diplosoma listerianum</i>									
<i>Asciidiella aspersa</i>									
<i>Polycarpa fibrosa</i>									
<i>Botryllus schlosseri</i>									
<i>Molgula</i>	2		2			1			
Rhodophyta									
<i>Lithothamnion glaciale</i>		P				P		P	
<i>Phymatolithon calcareum</i>	P		P			P	P		
Pisces									
<i>Liparis liparis liparis</i>									
<i>Ammodytes tobianus</i>					1				

Species	GM1#1	GM1#2	GM1#3	GM3#1	GM3#2	GM3#3	GM4#1	GM4#2	GM4#3
Cephalochordata									
<i>Branchiostoma lanceolatum</i>		1	1	1	3	3	1		
<i>Astrorhiza</i>								1	
<i>Animalia</i>									

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
Porifera										
<i>Sycon ciliatum</i>		P	P	P				P		P
<i>Suberitidae</i>			P	P						
<i>Hemiasterellidae</i>				P				P		P
<i>Stelligera rigida</i>		P	P							
<i>Cliona celata</i>		P	P	P				P	P	P
<i>Halichondria</i>		P								
Cnidaria										
<i>Haliclystus</i>										
<i>Sertularella</i>				P						
<i>Kirchenpaueria pinnata</i>										
<i>Clytia hemisphaerica</i>										
<i>Laomedea</i>										
<i>Obelia geniculata</i>										
<i>Alcyonium digitatum</i>			P	P				P		
<i>Actiniaria</i>									1	
<i>Edwardsiidae</i>										
<i>Caryophyllia smithii</i>										
Platyhelminthes										
<i>Platyhelminthes</i>		3		1						
Nemertea										
<i>Nemertea</i>		5	15	11	1	2		8	5	9
<i>Tubulanus polymorphus</i>										
<i>Cerebratulus</i>						1		2		
Nematoda										
<i>Nematoda</i>		96	226	104				102	18	80
Clitellata										
<i>Piscicolidae</i>										
Entoprocta										
<i>Entoprocta</i>										
<i>Pedicellina</i>								P	P	
Chaetognatha										
<i>Chaetognatha</i>				1						
Sipuncula										
<i>Golfingiidae</i>	Juveniles	20	2	7				3	1	
<i>Golfingia elongata</i>			11	2						
<i>Nephasoma minutum</i>			25	23				28		18
<i>Phascolion strombus</i>										
Annelida										
<i>Pisione remota</i>		15	27	15				4	20	26
<i>Polynoidae</i>		3	5	10				1	5	4
<i>Malmgrenia darbouxi</i>										
<i>Malmgrenia marphysae</i>	?			1						
<i>Malmgrenia mcintoshii</i>										
<i>Harmothoe spinifera</i>			1							
<i>Pholoe baltica</i>										

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>Pholoe inornata</i>			1							
<i>Sthenelais boa</i>										
<i>Eteone longa</i>	Aggregate							1		
<i>Hesionura elongata</i>										
<i>Mystides caeca</i>			11	3						
<i>Pseudomystides limbata</i>			1	3						
<i>Phyllodoce lineata</i>										
<i>Phyllodoce mucosa</i>										
<i>Eulalia aurea</i>										
<i>Eulalia bilineata</i>			1							
<i>Eulalia expusilla</i>										
<i>Eulalia mustela</i>										
<i>Eulalia viridis</i>										
<i>Eumida</i>			2	2				9	1	
<i>Nereiphylla rubiginosa</i>			4	2				7		1
<i>Pterocirrus macroceros</i>										
<i>Lacydonia miranda</i>			5	2				6		
<i>Glycera alba</i>				1						
<i>Glycera celtica</i>										
<i>Glycera fallax</i>										
<i>Glycera lapidum</i>		12	10	11	1	4	7	14	10	12
<i>Glycinde nordmanni</i>								1		
<i>Goniadella bobrezkii</i>		1		1						1
<i>Ephesiella abyssorum</i>			13	16				5		
<i>Sphaerodorum gracilis</i>										
<i>Gyptis</i>										
<i>Psamathe fusca</i>		10	15	12				8	5	5
<i>Nereimyra punctata</i>	?							1		
<i>Oxydromus flexuosus</i>										
<i>Syllidia armata</i>										
<i>Syllis garciai</i>		5	8	5				9	17	15
<i>Eurysyllis tuberculata</i>			6	6				13		
<i>Syllis</i>										1
<i>Trypanosyllis coeliaca</i>		7	44	27				53		1
<i>Trypanosyllis coeliaca</i>	epitoke		7	6				7		
<i>Syllis armillaris</i>		1	9					11	1	1
<i>Syllis parapari</i>				1						3
<i>Syllis pontxioi</i>		15	9	11				21	11	11
<i>Amblyosyllis formosa</i>				1						
<i>Dioplosyllis cirrosa</i>			1							
<i>Eusyllis blomstrandii</i>										
<i>Odontosyllis ctenostoma</i>										1
<i>Odontosyllis fulgurans</i>										
<i>Odontosyllis gibba</i>		1	10	9				11		
<i>Xenosyllis scabra</i>										
<i>Parexogone hebes</i>						2				
<i>Exogone verugera</i>										
<i>Sphaerosyllis</i>	indet									
<i>Sphaerosyllis bulbosa</i>		22	151	36				22		2
<i>Sphaerosyllis hystrix</i>										
<i>Sphaerosyllis taylori</i>			4							
<i>Myrianida</i>										
<i>Platynereis dumerilii</i>										
<i>Aglaophamus agilis</i>										

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>Nephtys</i>	Juveniles									
<i>Nephtys assimilis</i>									1	1
<i>Nephtys caeca</i>										
<i>Nephtys cirrosa</i>					3	1	1			
<i>Nephtys hombergii</i>										
<i>Nephtys kersivalensis</i>										
<i>Pareurythoe borealis</i>		4	11	8						
<i>Spinther oniscoides</i>										
<i>Aponuphis bilineata</i>								4	2	1
<i>Eunice</i>	Juveniles									
<i>Leodice harassii</i>										
<i>Lysidice unicornis</i>								1	1	
<i>Lumbrineris aniara/cingulata</i>	Aggregate									
<i>Scoletoma magnidentata</i>										
<i>Protodorvillea kefersteini</i>				1				1		5
<i>Schistomeringos neglecta</i>										
<i>Leitoscoloplos mammosus</i>			1							
<i>Scoloplos (Scoloplos) armiger</i>										
<i>Aricidea</i>										
<i>Aricidea (Aricidea) minuta</i>										
<i>Aricidea (Acmira) cerrutii</i>										
<i>Paradoneis lyra</i>										
<i>Aonides oxycephala</i>										
<i>Aonides paucibranchiata</i>		3				1		2	1	2
<i>Laonice</i>										
<i>Laonice bahusiensis</i>		1		1				1		
<i>Malacoceros</i>										
<i>Malacoceros vulgaris</i>										
<i>Minuspio cirrifera</i>										
<i>Polydora</i>										
<i>Dipolydora coeca</i>			4					7		
<i>Dipolydora flava</i>										2
<i>Dipolydora quadrilobata</i>										
<i>Prionospio</i>			1					1		
<i>Prionospio fallax</i>										
<i>Pseudopolydora pulchra</i>										
<i>Pygospio elegans</i>										
<i>Spio</i>	Juveniles									
<i>Paraspio decorata</i>										
<i>Spio filicornis</i>						1	1			
<i>Spio gonioccephala</i>	?									
<i>Spiophanes bombyx</i>						2	3			
<i>Magelona alleni</i>										
<i>Aphelochaeta "species A"</i>								1		
<i>Caulleriella alata</i>								2		
<i>Chaetozone christiei</i>										
<i>Chaetozone zetlandica</i>										
<i>Cirriformia tentaculata</i>										
<i>Monticellina</i>			1							

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>dorsobranchialis</i>										
<i>Flabelligeridae</i>										
<i>Diplocirrus glaucus</i>										
<i>Diplocirrus stopbowitzi</i>			1							
<i>Flabelligera affinis</i>										
<i>Macrochaeta clavicornis</i>		1	4	3				4		
<i>Capitella capitata</i>	Species complex									
<i>Mediomastus fragilis</i>			1							
<i>Notomastus</i>		4							5	
<i>Maldanidae</i>										
<i>Clymenura</i>			3							
<i>Microclymene tricirrata</i>										
<i>Euclymene "species A"</i>										
<i>Euclymene oerstedii</i>										
<i>Praxillella affinis</i>										
<i>Notoproctus</i>			8	3						
<i>Ophelia</i>	Juvenile									
<i>Ophelia celtica</i>										
<i>Travisia forbesii</i>										
<i>Armandia polyopthalma</i>										
<i>Scalibregma celticum</i>								3		
<i>Scalibregma inflatum</i>										
<i>Polygordius</i>		32	139	69				49	52	50
<i>Galathowenia oculata</i>										
<i>Myriochele danielsseni</i>										
<i>Owenia borealis</i>										
<i>Petta pusilla</i>			1					1		
<i>Sabellaria spinulosa</i>								1		
<i>Ampharetidae</i>										
<i>Ampharete lindstroemi</i>	Aggregate									
<i>Terebellidae</i>									2	
<i>Terebellidae</i>	indet									
<i>Lanice conchilega</i>										
<i>Pista</i>	damaged									
<i>Pista cristata</i>								3		3
<i>Pista mediterranea</i>		2	1					3	4	1
<i>Terebellides stroemii</i>										
<i>Trichobranchus glacialis</i>										
<i>Nicolea zostericola</i>	?									
<i>Amaeana trilobata</i>								2		
<i>Polycirrus</i>							1			
<i>Polycirrus medusa</i>		1						2		2
<i>Polycirrus norvegicus</i>			1							2
<i>Parathelepus collaris</i>		2							1	
<i>Sabellidae</i>				1						
<i>Dialychone dunerificta</i>				1				41	6	2
<i>Dialychone longiseta</i>			3					1		
<i>Paradialychone filicaudata</i>										
<i>Euchone</i>										
<i>Euchone pararosea</i>										
<i>Jasmineira</i>										

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>Jasmineira caudata</i>										
<i>Pseudopotamilla cf. reniformis</i>										
Serpulidae		7						1		
Hydroides										
<i>Hydroides norvegica</i>		5	5	7				13	1	11
<i>Spirobranchus</i>		1								
<i>Spirobranchus lamarcki</i>								3		4
<i>Spirobranchus triqueter</i>		8	10	10				9	2	31
<i>Apomatus similis</i>		1						1		
<i>Tubificoides benedii</i>			1							
<i>Tubificoides pseudogaster</i>	Aggregate									
Enchytraeidae			4	1				4		
Chelicerata										
<i>Achelia echinata</i>	?									
<i>Anoplodactylus petiolatus</i>										
Crustacea										
<i>Verruca stroemia</i>			P	5				1		7
Balanoidea										
<i>Balanus crenatus</i>			P					1		
Ostracoda			1				1		1	
<i>Nebalia</i>							1			
<i>Sarsinebalia typhlops</i>										
<i>Apherusa</i>			1							
<i>Apherusa bispinosa</i>		1	1	4				2		
Oedicerotidae										
<i>Monoculodes</i>										2
<i>Monoculodes carinatus</i>										1
<i>Periocolodes longimanus</i>						1	1			
<i>Pontocrates arcticus</i>						1				
<i>Pontocrates arenarius</i>										1
<i>Synchelidium haplocheles</i>										
<i>Synchelidium maculatum</i>										
<i>Amphilochoides serratipes</i>			1					1		
<i>Apolochus neapolitanus</i>										
<i>Gitana sarsi</i>								2		
<i>Peltocoxa damnoniensis</i>								2		
<i>Leucothoe incisa</i>		1								
<i>Leucothoe lilljeborgi</i>										
<i>Urothoe</i>										
<i>Urothoe elegans</i>										
<i>Urothoe marina</i>										
<i>Harpinia</i>										
<i>Harpinia antennaria</i>										
<i>Metaphoxus fultoni</i>			2					5		1
Lysianassidae	Juveniles									
<i>Hippomedon denticulatus</i>										
<i>Lepidepecreum longicornis</i>				1						
<i>Lysianassa ceratina</i>										

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>Lysianassa plumosa</i>										
<i>Socarnes erythropthalmus</i>		8	73	25				1		
<i>Tmetonyx similis</i>										
<i>Tryphosella horingi</i>										1
<i>Tryphosites longipes</i>										
<i>Austrosyrrhoe fimbriatus</i>			1							
<i>Liljeborgia pallida</i>										
<i>Idunella picta</i>										
<i>Atylus</i>	Juveniles									
<i>Nototropis falcatus</i>							4			
<i>Nototropis swammerdamei</i>					4	4				
<i>Atylus vedlomensis</i>		1		2						
<i>Dexamine spinosa</i>										
<i>Dexamine thea</i>										
<i>Guernea (Guernea) coalita</i>										
<i>Ampelisca</i>										
<i>Ampelisca brevicornis</i>										
<i>Ampelisca tenuicornis</i>										
<i>Ampelisca typica</i>										
<i>Bathyporeia</i>	Juveniles									
<i>Bathyporeia elegans</i>						1				
<i>Bathyporeia guilliamsoniana</i>					1					
<i>Gammarus</i>										
<i>Megaluropus agilis</i>										
<i>Abludomelita obtusata</i>										
<i>Melita palmata</i>										
<i>Animoceradocus semiserratus</i>			4	7				6		
<i>Cheirocratus</i>	females									
<i>Cheirocratus intermedius</i>										
<i>Othomaera othonis</i>										
<i>Maerella tenuimana</i>										
<i>Ampithoe rubricata</i>										
<i>Gammaropsis</i>	females			1						
<i>Megamphopus cornutus</i>										
<i>Gammaropsis nitida</i>			1							
<i>Microprotopus maculatus</i>					1		10			
<i>Ericthonius</i>	females									
<i>Ericthonius punctatus</i>										
<i>Jassa</i>	females									
<i>Jassa falcata</i>										
<i>Aoridae</i>	females									
<i>Aora gracilis</i>										
<i>Leptocheirus hirsutimanus</i>										
<i>Leptocheirus pectinatus</i>										
<i>Microdeutopus</i>	females									
<i>Microdeutopus versiculatus</i>										
<i>Corophium</i>										
<i>Crassikorophium crassicorne</i>										
<i>Siphonoecetes</i>										

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>Siphonoecetes kroyeranus</i>										
Caprellidae										
<i>Caprella acanthifera</i>							3			
<i>Pariambus typicus</i>										
<i>Phtisica marina</i>										
<i>Pseudoprotella phasma</i>					2					
<i>Gnathia</i>	females	1	7	1				1		
<i>Gnathia</i>	prianiza	2	2	11				2	1	
<i>Gnathia dentata</i>				1						
<i>Gnathia oxyuraea</i>		1	2	2				2		
<i>Gnathia vorax</i>				2						
<i>Anthura gracilis</i>										1
Cirolanidae										
<i>Conilera cylindracea</i>									3	
<i>Eurydice</i>	Juveniles					1				
<i>Eurydice inermis</i>		3		1				1		
<i>Eurydice pulchra</i>			3							
<i>Dynamene bidentata</i>								2		
<i>Janira maculosa</i>										
<i>Idotea</i>	Juveniles				3		1			
<i>Idotea emarginata</i>										
<i>Idotea linearis</i>										
<i>Idotea neglecta</i>										
<i>Astacilla damnoniensis</i>										
<i>Tanaopsis graciloides</i>										
<i>Vaunthompsonia cristata</i>				1						
<i>Bodotria scorpioides</i>										
<i>Iphinoe trispinosa</i>										
<i>Cumella pygmaea</i>		1								
<i>Nannastacus brevicaudatus</i>										
<i>Diastylis rugosa</i>										
Decapoda	megalopa									
Caridea										
Paguridae	Juveniles									
<i>Anapagurus chiroacanthus</i>										
<i>Galathea intermedia</i>			1	6				3		1
<i>Pisidia longicornis</i>				2						
<i>Ebalia</i>	Juveniles									
<i>Ebalia tuberosa</i>										
<i>Hyas</i>	Juveniles									
<i>Eurynome</i>	Juveniles									
<i>Atelecyclus rotundatus</i>	Juveniles									
Portunidae	Juveniles		2	2				3		
<i>Liocarcinus</i>	Juveniles									
<i>Liocarcinus pusillus</i>										1
Mollusca										
Polyplacophora	Juveniles		7					8		
<i>Leptochiton asellus</i>		3	8	21		1		3	1	1
<i>Callochiton septemvalvis</i>										
<i>Lepidochitona cinerea</i>										
<i>Acanthochitona fascicularis</i>										

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
Gastropoda										
Gastropoda	eggs									
<i>Tricolia pullus</i>					3					
Trochidae	damaged									
<i>Gibbula</i>	Juveniles				1					4
<i>Gibbula tumida</i>		3	6	4				2		
<i>Jujubinus montagui</i>			3					1	1	
<i>Testudinalia testudinalis</i>										
<i>Tectura virginea</i>										
<i>Patella pellucida</i>										
<i>Lacuna pallidula</i>										
<i>Lacuna vincta</i>										
<i>Rissoa parva</i>										
<i>Alvania beanii</i>			20	6				1		
<i>Onoba semicostata</i>					2					
<i>Caecum glabrum</i>										
<i>Aporrhais pespelecani</i>										
<i>Euspira nitida</i>			1							
<i>Eulima bilineata</i>										
<i>Vitreolina colini</i>								1		
Buccinidae										
<i>Nassarius (Hinia)</i>	Juveniles									
<i>Nassarius reticulatus</i>										
Turridae										
<i>Bela nebula</i>										
<i>Raphitoma linearis</i>										
<i>Odostomia plicata</i>								1		
<i>Brachystomia eulimoides</i>				1						
<i>Parthenina decussata</i>								1		
<i>Chrysallida interstincta</i>										
<i>Ondina diaphana</i>										
<i>Diaphana minuta</i>										
<i>Retusa obtusa</i>			1					1		
<i>Retusa umbilicata</i>										
<i>Aplysia punctata</i>										
<i>Berthella plumula</i>										
Onchidorididae								1		
<i>Bivalvia</i>						1			5	1
<i>Glycymeris glycymeris</i>		8	6	8				7	1	1
<i>Modiolula phaseolina</i>			1	2				2	1	
<i>Crenella decussata</i>		4	2					9		1
<i>Musculus subpictus</i>							1			
<i>Musculus</i>	Juveniles									
<i>Limaria hians</i>			1					2		
<i>Limatula subauriculata</i>		1	9	5				4	3	2
<i>Mimachlamys varia</i>										
<i>Palliolium tigerinum</i>				1						
Anomiidae	Juveniles	2	1							
<i>Monia patelliformis</i>										
<i>Lucinoma borealis</i>										
<i>Kellia suborbicularis</i>										
<i>Devonia perrieri</i>										
<i>Kurtiella bidentata</i>										
<i>Goodallia triangularis</i>		199	552	149	1			87	53	34

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>Cardiidae</i>	Juveniles			3						
<i>Acanthocardia</i>	Juveniles									
<i>Parvicardium scabrum</i>		1	3	8						1
<i>Spisula elliptica</i>		2	3	1	3	5	2	3	2	1
<i>Lutraria</i>	? Juveniles			3						
<i>Pharidae</i>	Juveniles				P		3			
<i>Ensis ensis</i>					1					
<i>Phaxas pellucidus</i>										
<i>Tellina</i>	Juveniles									
<i>Tellina tenuis</i>										
<i>Arcopagia crassa</i>		1	4	1				1		1
<i>Tellina (Fabulina) fabula</i>										
<i>Moerella donacina</i>										
<i>Moerella pygmaea</i>		2	10	2	10		1	2	23	4
<i>Gastrana fragilis</i>				1				1		
<i>Gari</i>	Juveniles	2		3						
<i>Gari costulata</i>	?									
<i>Gari tellinella</i>	Juveniles									
<i>Gari tellinella</i>		18	33	39		1		24	30	22
<i>Gari fervensis</i>										
<i>Solecortus scopula</i>										
<i>Abra alba</i>										
<i>Abra prismatica</i>										
<i>Venus casina</i>		9	17	5						
<i>Gouldia minima</i>		3	18	19				7	1	
<i>Chamelea striatula</i>										
<i>Clausinella fasciata</i>		11	22	12				13		2
<i>Timoclea ovata</i>		1	12	7				12	7	1
<i>Tapetidae</i>	Juveniles	1	3	1						
<i>Polittapes rhomboides</i>		1	1	4						
<i>Dosinia</i>	Juveniles	2	3	2						
<i>Dosinia lupinus</i>					8	1	1	7	4	1
<i>Dosinia exoleta</i>		3	5					2	3	
<i>Mysia undata</i>										
<i>Mya</i>	Juveniles									
<i>Hiatella arctica</i>			3							
<i>Thracia phaseolina</i>										
<i>Thracia villosiuscula</i>		5	10	2				4	1	1
<i>Cochlodesma praetenuae</i>										
Brachiopoda										
<i>Novocrania anomala</i>			1							
<i>Argyrotheca cistellula</i>		1	2	1						
Bryozoa										
<i>Crisia</i>		P	P	P						
<i>Crisia denticulata</i>			P							
<i>Tubulipora</i>			P	P				P		
<i>Disporella hispida</i>			P							
<i>Alcyonidium diaphanum</i>										
<i>Alcyonidium hirsutum</i>										
<i>Nolella dilatata</i>								P	P	
<i>Amathia</i>										
<i>Aetea sica</i>										
<i>Aetea truncata</i>				P						P
<i>Eucratea loricata</i>										

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>Electra pilosa</i>						P				
<i>Pyripora catenularia</i>			P	P						
<i>Flustra foliacea</i>			P							
<i>Chartella papyracea</i>										
<i>Securiflustra securifrons</i>										
<i>Cauloramphus spiniferum</i>			P							
<i>Amphiblestrum flemingii</i>										
<i>Bugula</i>										
<i>Bugulina avicularia</i>										
<i>Scrupocellaria</i>										
<i>Cradoscrupocellaria reptans</i>										
<i>Aquiloniella scabra</i>								P		
<i>Scrupocellaria scruposa</i>		P		P						
<i>Micropora normani</i>			P	P						
<i>Cellaria</i>										
<i>Cellaria sinuosa</i>	?									
<i>Cribrilina annulata</i>				P						P
<i>Puellina</i>										
<i>Puellina innominata</i>		P		P						
<i>Figularia figularis</i>			P							
<i>Celleporella hyalina</i>								P		
<i>Chorizopora brongniartii</i>				P						P
<i>Escharoides coccinea</i>		P	P	P				P	P	P
<i>Neolagenipora collaris</i>										
<i>Pentapora fascialis</i>								P		
<i>Escharina hyndmanni</i>		P								
<i>Parasmittina trispinosa</i>	?									
<i>Schizomavella</i>				P						P
<i>Microporella ciliata</i>		P		P						P
<i>Fenestulina malusii</i>			P	P				P	P	P
<i>Cellepora pumicosa</i>										
Phoronida										
<i>Phoronis</i>										
Echinodermata										
<i>Asteroidea</i>	Juveniles/ damaged									
<i>Ophiuroidea</i>	Juveniles/ damaged	2	25	52				5		
<i>Ophiothrix fragilis</i>										
<i>Amphiura securigera</i>			2							
<i>Amphipholis squamata</i>		5	42	31				7		
<i>Ophiura</i>	Juveniles									
<i>Echinoidea</i>	Juveniles									
<i>Echinocyamus pusillus</i>		1	4				2	13	9	5
<i>Echinocardium flavescens</i>										
<i>Holothuroidea</i>										
<i>Thyone fusus</i>			1							
<i>Leptosynapta bergensis</i>										
<i>Leptosynapta cruenta</i>										
<i>Leptosynapta inhaerens</i>										

Species	Notes	GM7 #1	GM7 #2	GM7 #3	GM8 #1	GM8 #2	GM8 #3	GM11 #1	GM11 #2	GM11 #3
<i>Leptosynapta minuta</i>		1	8	4						
Hemichordata										
<i>Enteropneusta</i>										
Tunicata										
<i>Polyclinidae</i>										
<i>Didemnum maculosum</i>		P		P				P		P
<i>Diplosoma listerianum</i>										
<i>Asciella aspersa</i>										
<i>Polycarpa fibrosa</i>			1							
<i>Botryllus schlosseri</i>										
<i>Molgula</i>		2	2							
Rhodophyta										
<i>Lithothamnion glaciale</i>			P							P
<i>Phymatolithon calcareum</i>		P		P				P	P	P
Pisces										
<i>Liparis liparis liparis</i>										
<i>Ammodytes tobianus</i>		1								
Cephalochordata										
<i>Branchiostoma lanceolatum</i>				2				1	3	1
<i>Astrorhiza</i>										
<i>Animalia</i>	eggs									

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
Porifera										
<i>Sycon ciliatum</i>										
<i>Suberitidae</i>										
<i>Hemiasporellidae</i>			P							P
<i>Stelligera rigida</i>										
<i>Cliona celata</i>		P	P	P	P	P	P			P
<i>Halichondria</i>										
Cnidaria										
<i>Halicystus</i>						1				
<i>Sertularella</i>										
<i>Kirchenpaueria pinnata</i>										
<i>Clytia hemisphaerica</i>			P							
<i>Laomedea</i>										
<i>Obelia geniculata</i>										
<i>Alcyonium digitatum</i>										
<i>Actinaria</i>										
<i>Edwardsiidae</i>		2	3	1		3				2
<i>Caryophyllia smithii</i>										1
Platyhelminthes										
<i>Platyhelminthes</i>		1	1			1				
Nemertea										
<i>Nemertea</i>		12	11	12	3	3	3	4	1	3
<i>Tubulanus polymorphus</i>						1				
<i>Cerebratulus</i>								1		
Nematoda										
<i>Nematoda</i>		80	108	95	39	142	78	28	13	60
Clitellata										

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Piscicolidae</i>										
Entoprocta										
<i>Entoprocta</i>										
<i>Pedicellina</i>										
Chaetognatha										
<i>Chaetognatha</i>										
Sipuncula										
<i>Golfingiidae</i>	Juveniles	1			2	2	1			
<i>Golfingia elongata</i>										
<i>Nephasoma minutum</i>			6		1	4			2	
<i>Phascolion strombus</i>			1							
Annelida										
<i>Pisione remota</i>		10	10	3		4		4	8	7
<i>Polynoidae</i>		8	7	2	6	10	2	10	1	5
<i>Malmgrenia darbouxi</i>						1	1			
<i>Malmgrenia marphysae</i>	?	2			1		1			
<i>Malmgrenia mcintoshii</i>				1						
<i>Harmothoe spinifera</i>										
<i>Pholoe baltica</i>			1							
<i>Pholoe inornata</i>								1		
<i>Sthenelais boa</i>										
<i>Eteone longa</i>	Aggregate									
<i>Hesionura elongata</i>										
<i>Mystides caeca</i>			1	1						
<i>Pseudomystides limbata</i>		1	3			13	1			1
<i>Phyllodoce lineata</i>										
<i>Phyllodoce mucosa</i>										
<i>Eulalia aurea</i>				1				4		
<i>Eulalia bilineata</i>										
<i>Eulalia expusilla</i>										
<i>Eulalia mustela</i>					2	2			1	
<i>Eulalia viridis</i>										
<i>Eumida</i>			1	1?	1	3	11		1	
<i>Nereiphylla rubiginosa</i>			2	2				3		
<i>Pterocirus macroceros</i>										
<i>Lacydonia miranda</i>		1		6		2	1			
<i>Glycera alba</i>										
<i>Glycera celtica</i>						2				
<i>Glycera fallax</i>										1
<i>Glycera lapidum</i>		14	14	6	7	26	25	8	6	6
<i>Glycinde nordmanni</i>					1					
<i>Goniadella bobrezkii</i>		5	6	2		4	1			1
<i>Ephesiella abyssorum</i>				2		4	1			1
<i>Sphaerodorum gracilis</i>			1							
<i>Gyptis</i>			1	3						
<i>Psamathe fusca</i>		14	34	21	2	19	5	6	1	2
<i>Nereimyra punctata</i>	?									
<i>Oxydromus flexuosus</i>										
<i>Syllidia armata</i>										
<i>Syllis garciai</i>		4	8			3	1		1	1
<i>Eurysyllis tuberculata</i>				3		3				
<i>Syllis</i>										
<i>Trypanosyllis coeliaca</i>		1	3	5	1			1	1	
<i>Trypanosyllis coeliaca</i>	epitoke									

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Syllis armillaris</i>		1		2						
<i>Syllis parapari</i>						1				
<i>Syllis pontxioi</i>		2	7	2		1		1	3	2
<i>Amblyosyllis formosa</i>										
<i>Dioplosyllis cirrosa</i>										
<i>Eusyllis blomstrandii</i>										
<i>Odontosyllis ctenostoma</i>										
<i>Odontosyllis fulgurans</i>					2					
<i>Odontosyllis gibba</i>			3	2						
<i>Xenosyllis scabra</i>			1			1	1			
<i>Parexogone hebes</i>										
<i>Exogone verugera</i>										
<i>Sphaerosyllis</i>	indet			3						
<i>Sphaerosyllis bulbosa</i>		20	39	52		10	4	5	9	7
<i>Sphaerosyllis hystrix</i>										
<i>Sphaerosyllis taylori</i>			3			1				
<i>Myrianida</i>										
<i>Platynereis dumerilii</i>										
<i>Aglaophamus agilis</i>									1	
<i>Nephtys</i>	Juveniles									
<i>Nephtys assimilis</i>										
<i>Nephtys caeca</i>										
<i>Nephtys cirrosa</i>										
<i>Nephtys hombergii</i>										
<i>Nephtys kersivalensis</i>										
<i>Pareurythoe borealis</i>		9	10	15						
<i>Spinther oniscoides</i>					1					
<i>Aponuphis bilineata</i>		1	1			1	2	2		1
<i>Eunice</i>	Juveniles			1						
<i>Leodice harassii</i>										1
<i>Lysidice unicornis</i>						1	1			1
<i>Lumbrineris aniara/cingulata</i>	Aggregate		1		1	1				
<i>Scoletoma magnidentata</i>										
<i>Protodorvillea kefersteini</i>			1		3	1				
<i>Schistomeringos neglecta</i>		2								
<i>Leitoscoloplos mammosus</i>										
<i>Scoloplos (Scoloplos) armiger</i>										
<i>Aricidea</i>										
<i>Aricidea (Aricidea) minuta</i>										
<i>Aricidea (Acmira) cerrutii</i>										
<i>Paradoneis lyra</i>				2			2			
<i>Aonides oxycephala</i>							1			
<i>Aonides paucibranchiata</i>		9	2					2	6	7
<i>Laonice</i>					1					
<i>Laonice bahusiensis</i>		1		5		2	1			2
<i>Malacoceros</i>										
<i>Malacoceros vulgaris</i>										
<i>Minuspio cirrifera</i>										
<i>Polydora</i>										
<i>Dipolydora coeca</i>		3				1		1		1
<i>Dipolydora flava</i>										

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Dipolydora quadrilobata</i>										
<i>Prionospio</i>		2	2	3	1	6	1		1	
<i>Prionospio fallax</i>										
<i>Pseudopolydora pulchra</i>										
<i>Pygospio elegans</i>										
<i>Spio</i>	Juveniles									
<i>Paraspio decorata</i>										
<i>Spio filicornis</i>							1			
<i>Spio goniocephala</i>	?									
<i>Spiophanes bombyx</i>										
<i>Magelona alleni</i>										
<i>Aphelochaeta "species A"</i>										
<i>Caulleriella alata</i>				1			1			
<i>Chaetozone christiei</i>										
<i>Chaetozone zetlandica</i>										
<i>Cirriformia tentaculata</i>										
<i>Monticellina dorsobranchialis</i>										
Flabelligeridae		1								
<i>Diplocirrus glaucus</i>										
<i>Diplocirrus stopbowitzi</i>								2		
<i>Flabelligera affinis</i>			1	1						
<i>Macrochaeta clavicornis</i>			4			1	1			
<i>Capitella capitata</i>	Species complex									
<i>Mediomastus fragilis</i>				1	3	21	73			
<i>Notomastus</i>		1			9	8	1		1	2
Maldanidae										
<i>Clymenura</i>					1	2				
<i>Microclymene tricirrata</i>				1						
<i>Euclymene "species A"</i>										
<i>Euclymene oerstedii</i>										
<i>Praxillella affinis</i>										
<i>Notoproctus</i>				4						
<i>Ophelia</i>	Juvenile					1				
<i>Ophelia celtica</i>			1							
<i>Travisia forbesii</i>										
<i>Armandia polyophtalma</i>										
<i>Scalibregma celticum</i>						1				
<i>Scalibregma inflatum</i>										
<i>Polygordius</i>		80	82	60	5	31	2	7		22
<i>Galathowenia oculata</i>										
<i>Myriochele danielsseni</i>										
<i>Owenia borealis</i>										
<i>Petta pusilla</i>		2	1	1				2		
<i>Sabellaria spinulosa</i>										
Ampharetidae			1							
<i>Ampharete lindstroemi</i>	Aggregate	1								
Terebellidae										
Terebellidae	indet									
<i>Lanice conchilega</i>										
<i>Pista</i>	damaged									

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Pista cristata</i>										
<i>Pista mediterranea</i>					2	11	19			1
<i>Terebellides stroemii</i>										
<i>Trichobranchus glacialis</i>										
<i>Nicolea zostericola</i>	?									
<i>Amaeana trilobata</i>										
<i>Polycirrus</i>					1					
<i>Polycirrus medusa</i>							2			
<i>Polycirrus norvegicus</i>		2	3							
<i>Parathelepus collaris</i>			1							
Sabellidae										
<i>Dialychone dunerificta</i>		3	3	1	5	18	16			5
<i>Dialychone longiseta</i>		1	3		1	3	1	4		3
<i>Paradialychone filicaudata</i>			1	1						
<i>Euchone</i>										
<i>Euchone pararosea</i>										
<i>Jasmineira</i>							2			
<i>Jasmineira caudata</i>										
<i>Pseudopotamilla cf. reniformis</i>							2	2		
Serpulidae										2
Hydrooides										
<i>Hydrooides norvegica</i>		1	4	2		3	6	2		1
<i>Spirobranchus</i>										
<i>Spirobranchus lamarcki</i>										
<i>Spirobranchus triqueter</i>			1	1	1			19	9	1
<i>Apomatus similis</i>										
<i>Tubificoides benedii</i>				1						
<i>Tubificoides pseudogaster</i>	Aggregate									
Enchytraeidae		3	6	12	11	36	22	17		2
Chelicerata										
<i>Achelia echinata</i>	?							1		
<i>Anoplodactylus petiolatus</i>										
Crustacea										
<i>Verruca stroemia</i>										2
Balanoidea										
<i>Balanus crenatus</i>										
Ostracoda										
<i>Nebalia</i>			1			2	4			
<i>Sarsinebalia typhlops</i>										
<i>Apherusa</i>										
<i>Apherusa bispinosa</i>										
Oedicerotidae										
<i>Monoculodes</i>										
<i>Monoculodes carinatus</i>										
<i>Periculodes longimanus</i>										
<i>Pontocrates arcticus</i>										
<i>Pontocrates arenarius</i>		1								
<i>Synchelidium haplocheles</i>										
<i>Synchelidium maculatum</i>										
<i>Amphilochooides serratipes</i>			1				1			

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Apolochus neapolitanus</i>										
<i>Gitana sarsi</i>										
<i>Peltocoxa damnoniensis</i>										
<i>Leucothoe incisa</i>										
<i>Leucothoe lilljeborgi</i>										
<i>Urothoe</i>										
<i>Urothoe elegans</i>										
<i>Urothoe marina</i>										
<i>Harpinia</i>										
<i>Harpinia antennaria</i>										
<i>Metaphoxus fultoni</i>			2	1	1	4				1
<i>Lysianassidae</i>	Juveniles									
<i>Hippomedon denticulatus</i>						2				
<i>Lepidepecreum longicornis</i>										
<i>Lysianassa ceratina</i>										
<i>Lysianassa plumosa</i>								3		
<i>Socarnes erythropthalmus</i>		14	36	35		6	4			
<i>Tmetonyx similis</i>					3	1	2			
<i>Tryphosella horingi</i>										
<i>Tryphosites longipes</i>										
<i>Austrosyrrhoe fimbriatus</i>			1							
<i>Liljeborgia pallida</i>				1						
<i>Idunella picta</i>							2			
<i>Atylus</i>	Juveniles						1			
<i>Nototropis falcatus</i>										
<i>Nototropis swammerdamei</i>										
<i>Atylus vedlomensis</i>		1								
<i>Dexamine spinosa</i>										
<i>Dexamine thea</i>										
<i>Guernea (Guernea) coalita</i>						4	1			
<i>Ampelisca</i>										
<i>Ampelisca brevicornis</i>										
<i>Ampelisca tenuicornis</i>										
<i>Ampelisca typica</i>							1			
<i>Bathyporeia</i>	Juveniles									
<i>Bathyporeia elegans</i>										
<i>Bathyporeia guilliamsoniana</i>										
<i>Gammarus</i>										
<i>Megaluropus agilis</i>										
<i>Abludomelita obtusata</i>										
<i>Melita palmata</i>										
<i>Animocera docus semiserratus</i>		3	3	4				8		
<i>Cheirocratus</i>	females									
<i>Cheirocratus intermedius</i>										
<i>Othomaera othonis</i>										
<i>Maerella tenuimana</i>										
<i>Ampithoe rubricata</i>										
<i>Gammaropsis</i>	females		1							
<i>Megamphopus cornutus</i>										
<i>Gammaropsis nitida</i>										

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Microprotopus maculatus</i>										
<i>Ericthonius</i>	females									
<i>Ericthonius punctatus</i>										
<i>Jassa</i>	females									
<i>Jassa falcata</i>										
Aoridae	females									
<i>Aora gracilis</i>										
<i>Leptocheirus hirsutimanus</i>					1		5		1	
<i>Leptocheirus pectinatus</i>			2	1						
<i>Microdeutopus</i>	females									
<i>Microdeutopus versiculatus</i>										
<i>Corophium</i>										
<i>Crassikorophium crassicorne</i>										
<i>Siphonoecetes</i>										
<i>Siphonoecetes kroyeranus</i>										
Caprellidae										
<i>Caprella acanthifera</i>										
<i>Pariambus typicus</i>										
<i>Phtisica marina</i>										
<i>Pseudoprotella phasma</i>										
<i>Gnathia</i>	females	2	3	3						
<i>Gnathia</i>	prianiza	7	4	4				5		2
<i>Gnathia dentata</i>								1		
<i>Gnathia oxyuraea</i>		2	6	4				2		
<i>Gnathia vorax</i>			2	2						1
<i>Anthura gracilis</i>										
Cirolanidae										
<i>Conilera cylindracea</i>			1		9	6	4			1
<i>Eurydice</i>	Juveniles									
<i>Eurydice inermis</i>		2	1		3	2	1		2	1
<i>Eurydice pulchra</i>										
<i>Dynamene bidentata</i>										
<i>Janira maculosa</i>										
<i>Idotea</i>	Juveniles									
<i>Idotea emarginata</i>										
<i>Idotea linearis</i>										
<i>Idotea neglecta</i>										
<i>Astacilla damnoniensis</i>			1							
<i>Tanaopsis graciloides</i>										
<i>Vaunthompsonia cristata</i>			1	3						
<i>Bodotria scorpioides</i>										
<i>Iphinoe trispinosa</i>							1			
<i>Cumella pygmaea</i>										
<i>Nannastacus brevicaudatus</i>		1								
<i>Diastylis rugosa</i>										
Decapoda	megalopa		1	1						
Caridea										
Paguridae	Juveniles	2		1						
<i>Anapagurus chiroacanthus</i>										
<i>Galathea intermedia</i>		2	10	6		1		43		

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Pisidia longicornis</i>										
<i>Ebalia</i>	Juveniles			1						
<i>Ebalia tuberosa</i>								1		
<i>Hyas</i>	Juveniles									
<i>Eurynome</i>	Juveniles									
<i>Atelecyclus rotundatus</i>	Juveniles									
Portunidae	Juveniles	3					1	2		2
<i>Liocarcinus</i>	Juveniles									
<i>Liocarcinus pusillus</i>				1						
Mollusca										
<i>Polyplacophora</i>	Juveniles					1				
<i>Leptochiton asellus</i>		8	6	20	5	2		57		1
<i>Callochiton septemvalvis</i>										
<i>Lepidochitona cinerea</i>										
<i>Acanthochitona fascicularis</i>								1		
Gastropoda						1				
Gastropoda	eggs									
<i>Tricolia pullus</i>							1			
Trochidae	damaged				1					
<i>Gibbula</i>	Juveniles					1				
<i>Gibbula tumida</i>								2		
<i>Jujubinus montagui</i>			2	4	1		1			
<i>Testudinalia testudinalis</i>										
<i>Tectura virginea</i>				1						
<i>Patella pellucida</i>										
<i>Lacuna pallidula</i>										
<i>Lacuna vincta</i>										
<i>Rissoa parva</i>										
<i>Alvania beanii</i>		3	2	10				38		
<i>Onoba semicostata</i>								1	1	
<i>Caecum glabrum</i>				1						
<i>Aporrhais pespelecani</i>										
<i>Euspira nitida</i>						1	1	1		1
<i>Eulima bilineata</i>										
<i>Vitreolina colini</i>								2		
Buccinidae										
<i>Nassarius (Hinia)</i>	Juveniles									
<i>Nassarius reticulatus</i>								1		
Turridae										
<i>Bela nebula</i>										
<i>Raphitoma linearis</i>										
<i>Odostomia plicata</i>										
<i>Brachystomia eulimoides</i>										
<i>Parthenina decussata</i>						1				
<i>Chrysallida interstincta</i>										
<i>Ondina diaphana</i>										
<i>Diaphana minuta</i>				1						1
<i>Retusa obtusa</i>										
<i>Retusa umbilicata</i>										
<i>Aplysia punctata</i>										
<i>Berthella plumula</i>					1					
Onchidorididae										
<i>Bivalvia</i>		1			2				2	1

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Glycymeris glycymeris</i>		7	17	7				2		3
<i>Modiolula phaseolina</i>		3		8				10		1
<i>Crenella decussata</i>					3	2	1			
<i>Musculus subpictus</i>										
<i>Musculus</i>	Juveniles				1					
<i>Limaria hians</i>										
<i>Limatula subauriculata</i>			3	1	1	3			1	1
<i>Mimachlamys varia</i>										
<i>Palliolium tigrinum</i>										
Anomiidae	Juveniles									
<i>Monia patelliformis</i>										
<i>Lucinoma borealis</i>										
<i>Kellia suborbicularis</i>		1	1							
<i>Devonia perrieri</i>										
<i>Kurtiella bidentata</i>					1	2	1			
<i>Goodallia triangularis</i>		41	84	40		1	3	127	13	45
Cardiidae	Juveniles									
<i>Acanthocardia</i>	Juveniles									
<i>Parvicardium scabrum</i>								1		
<i>Spisula elliptica</i>									1	
<i>Lutraria</i>	? Juveniles									
Pharidae	Juveniles						1			
<i>Ensis ensis</i>										
<i>Phaxas pellucidus</i>										
<i>Tellina</i>	Juveniles									
<i>Tellina tenuis</i>										
<i>Arcopagia crassa</i>		1	1			2	1			3
<i>Tellina (Fabulina) fabula</i>										
<i>Moerella donacina</i>					1	1	1			
<i>Moerella pygmaea</i>			3	1		1	1			5
<i>Gastrana fragilis</i>										
<i>Gari</i>	Juveniles									
<i>Gari costulata</i>	?					1				
<i>Gari tellinella</i>	Juveniles									
<i>Gari tellinella</i>		9	9	6	17	17	25	13	10	6
<i>Gari fervensis</i>										
<i>Solecurtus scopula</i>		1								
<i>Abra alba</i>										
<i>Abra prismatica</i>										
<i>Venus casina</i>		2	6	1				5		1
<i>Gouldia minima</i>		5	10	38	1	1		49		10
<i>Chamelea striatula</i>										
<i>Clausinella fasciata</i>		4	13	9	1	1		29	2	12
<i>Timoclea ovata</i>		5	4	8	2	4	3	4	3	5
Tapetidae	Juveniles		1	4						
<i>Polititapes rhomboides</i>			3			1	1	1		
<i>Dosinia</i>	Juveniles									1
<i>Dosinia lupinus</i>					1			2		
<i>Dosinia exoleta</i>						3				
<i>Mysia undata</i>										
<i>Mya</i>	Juveniles									
<i>Hiatella arctica</i>								1		
<i>Thracia phaseolina</i>										
<i>Thracia villosiuscula</i>		3		4	3	3	4	3	2	3

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Cochlodesma praetenuae</i>										
Brachiopoda										
<i>Novocrania anomala</i>										
<i>Argyrotheca cistellula</i>										
Bryozoa										
<i>Crisia</i>										
<i>Crisia denticulata</i>		P	P							
<i>Tubulipora</i>					P					
<i>Disporella hispida</i>						P	P			
<i>Alcyonidium diaphanum</i>										
<i>Alcyonidium hirsutum</i>										
<i>Nolella dilatata</i>										
<i>Amathia</i>			P							
<i>Aetea sica</i>										
<i>Aetea truncata</i>			P							
<i>Eucratea loricata</i>			P							
<i>Electra pilosa</i>				P						
<i>Pyripora catenularia</i>										
<i>Flustra foliacea</i>			P					P		
<i>Chartella papyracea</i>										P
<i>Securiflustra securifrons</i>				P						
<i>Cauloramphus spiniferum</i>							P			
<i>Amphiblestrum flemingii</i>			P							
<i>Bugula</i>										
<i>Bugulina avicularia</i>								P		
<i>Scrupocellaria</i>										
<i>Cradoscrupocellaria reptans</i>										
<i>Aquiloniella scabra</i>										
<i>Scrupocellaria scruposa</i>		P				P	P			
<i>Micropora normani</i>										
<i>Cellaria</i>		P								
<i>Cellaria sinuosa</i>	?									
<i>Cribriliina annulata</i>		P	P			P				
<i>Puellina</i>										
<i>Puellina innominata</i>		P	P							P
<i>Figularia figularis</i>										
<i>Celleporella hyalina</i>			P			P				
<i>Chorizopora brongniartii</i>		P	P			P				
<i>Escharoides coccinea</i>		P	P	P	P		P	P		P
<i>Neolagenipora collaris</i>										P
<i>Pentapora fascialis</i>				P						
<i>Escharina hyndmanni</i>										
<i>Parasmittina trispinosa</i>	?		P							
<i>Schizomavella</i>							P			
<i>Microporella ciliata</i>		P	P	P						P
<i>Fenestulina malusii</i>						P				
<i>Cellepora pumicosa</i>										
Phoronida										
<i>Phoronis</i>					2			1		1
Echinodermata										
<i>Asteroidea</i>	Juveniles/ damaged	1								1

Species	Notes	GM12 #1	GM12 #3	GM12 #2	GM13 #1	GM13 #2	GM13 #3	GM15 #1	GM15 #2	GM15 #3
<i>Ophiuroidea</i>	Juveniles/ damaged	4	11	4					1	3
<i>Ophiothrix fragilis</i>										
<i>Amphiura securigera</i>		1	2							
<i>Amphipholis squamata</i>			3	8		2	4			
<i>Ophiura</i>	Juveniles									
<i>Echinoidea</i>	Juveniles		1					3		
<i>Echinocyamus pusillus</i>		7	5	4	2	4	2	5	3	5
<i>Echinocardium flavescens</i>										
<i>Holothuroidea</i>										
<i>Thyone fusus</i>										
<i>Leptosynapta bergensis</i>										
<i>Leptosynapta cruenta</i>										
<i>Leptosynapta inhaerens</i>										
<i>Leptosynapta minuta</i>										
Hemichordata										
<i>Enteropneusta</i>										
Tunicata										
<i>Polyclinidae</i>										
<i>Didemnum maculosum</i>										
<i>Diplosoma listerianum</i>										
<i>Ascidella aspersa</i>								1		
<i>Polycarpa fibrosa</i>										
<i>Botryllus schlosseri</i>										
<i>Molgula</i>										1
Rhodophyta										
<i>Lithothamnion glaciale</i>		P			P		P			
<i>Phymatolithon calcareum</i>		P	P	P		P	P	P		P
Pisces										
<i>Liparis liparis liparis</i>										
<i>Ammodytes tobianus</i>										
Cephalochordata										
<i>Branchiostoma lanceolatum</i>		1	3		1	3	2		2	4
<i>Astrorhiza</i>										
<i>Animalia</i>	eggs									

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
Porifera										
<i>Sycon ciliatum</i>										
<i>Suberitidae</i>										
<i>Hemiasterellidae</i>										
<i>Stelligera rigida</i>										
<i>Cliona celata</i>										
<i>Halichondria</i>										
Cnidaria										
<i>Haliclystus</i>								1		
<i>Sertularella</i>										
<i>Kirchenpaueria pinnata</i>								P		
<i>Clytia hemisphaerica</i>								P		
<i>Laomedea</i>										

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>Obelia geniculata</i>								P		
<i>Alcyonium digitatum</i>										
<i>Actiniaria</i>								P		
<i>Edwardsiidae</i>										
<i>Caryophyllia smithii</i>										
Platyhelminthes										
<i>Platyhelminthes</i>										
Nemertea										
<i>Nemertea</i>		9	3	1	2	4	2	2		
<i>Tubulanus polymorphus</i>										
<i>Cerebratulus</i>										
Nematoda										
<i>Nematoda</i>		1		1	1	2				
Clitellata										
<i>Piscicolidae</i>										
Entoprocta										
<i>Entoprocta</i>										
<i>Pedicellina</i>										
Chaetognatha										
<i>Chaetognatha</i>										
Sipuncula										
<i>Golfingiidae</i>	Juveniles									
<i>Golfingia elongata</i>										
<i>Nephasoma minutum</i>										
<i>Phascolion strombus</i>										
Annelida										
<i>Pisione remota</i>										
<i>Polynoidae</i>				1						
<i>Malmgrenia darbouxi</i>										
<i>Malmgrenia marphysae</i>	?									
<i>Malmgrenia mcintoshii</i>										
<i>Harmothoe spinifera</i>										
<i>Pholoe baltica</i>										
<i>Pholoe inornata</i>										
<i>Sthenelais boa</i>										
<i>Eteone longa</i>	Aggregate							1		
<i>Hesionura elongata</i>										
<i>Mystides caeca</i>										
<i>Pseudomystides limbata</i>		1								
<i>Phyllodoce lineata</i>										
<i>Phyllodoce mucosa</i>			1							
<i>Eulalia aurea</i>										
<i>Eulalia bilineata</i>										
<i>Eulalia expusilla</i>										
<i>Eulalia mustela</i>										
<i>Eulalia viridis</i>								1		
<i>Eumida</i>		1	1			1				
<i>Nereiphylla rubiginosa</i>										
<i>Pterocirrus macroceros</i>										
<i>Lacydonia miranda</i>										
<i>Glycera alba</i>										
<i>Glycera celtica</i>										
<i>Glycera fallax</i>										
<i>Glycera lapidum</i>		3	2	2						
<i>Glycinder nordmanni</i>			1							

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>Goniadella bobrezkii</i>										
<i>Ephesiella abyssorum</i>										
<i>Sphaerodorum gracilis</i>										
<i>Gyptis</i>										
<i>Psamathe fusca</i>										
<i>Nereimyra punctata</i>	?									
<i>Oxydromus flexuosus</i>										
<i>Syllidia armata</i>										
<i>Syllis garciai</i>										
<i>Eurysyllis tuberculata</i>										
<i>Syllis</i>										
<i>Trypanosyllis coeliaca</i>										
<i>Trypanosyllis coeliaca</i>	epitoke									
<i>Syllis armillaris</i>										
<i>Syllis parapari</i>										
<i>Syllis pontxioi</i>										
<i>Amblyosyllis formosa</i>										
<i>Dioplosyllis cirrosa</i>										
<i>Eusyllis blomstrandii</i>								2		
<i>Odontosyllis ctenostoma</i>										
<i>Odontosyllis fulgurans</i>										
<i>Odontosyllis gibba</i>										
<i>Xenosyllis scabra</i>										
<i>Parexogone hebes</i>		3		5	1					
<i>Exogone verugera</i>										
<i>Sphaerosyllis</i>	indet									
<i>Sphaerosyllis bulbosa</i>										
<i>Sphaerosyllis hystrix</i>										
<i>Sphaerosyllis taylori</i>										
<i>Myrianida</i>								1		
<i>Platynereis dumerilii</i>		1						9		
<i>Aglaophamus agilis</i>										
<i>Nephtys</i>	Juveniles									
<i>Nephtys assimilis</i>										
<i>Nephtys caeca</i>			1							
<i>Nephtys cirrosa</i>		1		2	3	5	6		1	1
<i>Nephtys hombergii</i>				1					1	2
<i>Nephtys kersivalensis</i>										
<i>Pareurythoe borealis</i>										
<i>Spinther oniscoides</i>										
<i>Aponuphis bilineata</i>			2							
<i>Eunice</i>	Juveniles									
<i>Leodice harassii</i>										
<i>Lysidice unicornis</i>										
<i>Lumbrineris aniana/cingulata</i>	Aggregate									
<i>Scoletoma magnidentata</i>										
<i>Protodorvillea kefersteini</i>		1								
<i>Schistomeringos neglecta</i>										
<i>Leitoscoloplos mammosus</i>										
<i>Scoloplos (Scoloplos) armiger</i>								1	2	2
<i>Aricidea</i>										
<i>Aricidea (Aricidea) minuta</i>										

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>Aricidea (Acmira) cerrutii</i>										
<i>Paradoneis lyra</i>										
<i>Aonides oxycephala</i>										
<i>Aonides paucibranchiata</i>		1					1			
<i>Laonice</i>										
<i>Laonice bahusiensis</i>										
<i>Malacoceros</i>							1			
<i>Malacoceros vulgaris</i>										
<i>Minuspio cirrifera</i>										
<i>Polydora</i>										
<i>Dipolydora coeca</i>										
<i>Dipolydora flava</i>										
<i>Dipolydora quadrilobata</i>										
<i>Prionospio</i>								1	1	
<i>Prionospio fallax</i>				1						4
<i>Pseudopolydora pulchra</i>							1			
<i>Pygospio elegans</i>									1	1
<i>Spio</i>	Juveniles									
<i>Paraspio decorata</i>		1			1				1	1
<i>Spio filicornis</i>		2	2	7			1			
<i>Spio gonioccephala</i>	?									
<i>Spiophanes bombyx</i>										1
<i>Magelona alleni</i>									1	
<i>Aphelochaeta "species A"</i>										
<i>Cauleriella alata</i>		1								
<i>Chaetozone christiei</i>									5	2
<i>Chaetozone zetlandica</i>										
<i>Cirriformia tentaculata</i>					5	4	4	1		
<i>Monticellina dorsobranchialis</i>										
<i>Flabelligeridae</i>										
<i>Diplocirrus glaucus</i>										
<i>Diplocirrus stopbowitzi</i>										
<i>Flabelligera affinis</i>										
<i>Macrochaeta clavicornis</i>										
<i>Capitella capitata</i>	Species complex	1								
<i>Mediomastus fragilis</i>		9	3	13						
<i>Notomastus</i>			3	6						
<i>Maldanidae</i>		1								
<i>Clymenura</i>										
<i>Microclymene tricirrata</i>									1	
<i>Euclymene "species A"</i>									1	
<i>Euclymene oerstedii</i>										1
<i>Praxillella affinis</i>										
<i>Notoproctus</i>										
<i>Ophelia</i>	Juvenile									
<i>Ophelia celtica</i>										
<i>Travisia forbesii</i>						1	2			
<i>Armandia polyophtalma</i>					1		1			
<i>Scalibregma celticum</i>										
<i>Scalibregma inflatum</i>										

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>Polygordius</i>										
<i>Galathowenia oculata</i>										
<i>Myriochele danielsseni</i>										
<i>Owenia borealis</i>								1		
<i>Petta pusilla</i>										
<i>Sabellaria spinulosa</i>										
Ampharetidae										
<i>Ampharete lindstroemi</i>	Aggregate									
Terebellidae										
Terebellidae	indet							3	10	
<i>Lanice conchilega</i>						3	1			1
<i>Pista</i>	damaged									
<i>Pista cristata</i>		3		1						
<i>Pista mediterranea</i>			4							
<i>Terebellides stroemii</i>										
<i>Trichobranchus glacialis</i>										
<i>Nicolea zostericola</i>	?									
<i>Amaeana trilobata</i>										
<i>Polycirrus</i>		3		3						
<i>Polycirrus medusa</i>		2								
<i>Polycirrus norvegicus</i>										
<i>Parathelepus collaris</i>										
Sabellidae										
<i>Dialychone dunerificta</i>										
<i>Dialychone longiseta</i>										
<i>Paradialychone filicaudata</i>										
<i>Euchone</i>										
<i>Euchone pararosea</i>										
<i>Jasmineira</i>										
<i>Jasmineira caudata</i>										
<i>Pseudopotamilla cf. reniformis</i>										
Serpulidae										
Hydroides										
<i>Hydroides norvegica</i>										
<i>Spirobranchus</i>										
<i>Spirobranchus lamarcki</i>										
<i>Spirobranchus triqueter</i>										
<i>Apomatus similis</i>										
<i>Tubificoides benedii</i>		1								
<i>Tubificoides pseudogaster</i>	Aggregate									
Enchytraeidae									1	
Chelicerata										
<i>Achelia echinata</i>	?									
<i>Anoplodactylus petiolatus</i>										
Crustacea										
<i>Verruca stroemia</i>										
Balanoidea										
<i>Balanus crenatus</i>										
Ostracoda		2	1	1						
<i>Nebalia</i>										
<i>Sarsinebalia typhlops</i>										
<i>Apherusa</i>										

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>Apherusa bispinosa</i>										
<i>Oedicerotidae</i>					1					
<i>Monoculodes</i>										
<i>Monoculodes carinatus</i>										
<i>Periculodes longimanus</i>		8			3		3	1	1	1
<i>Pontocrates arcticus</i>										
<i>Pontocrates arenarius</i>										
<i>Synchelidium haplocheles</i>										
<i>Synchelidium maculatum</i>		2		1			3			1
<i>Amphilochooides serratipes</i>										
<i>Apolochus neapolitanus</i>								1		
<i>Gitana sarsi</i>										
<i>Peltocoxa damnoniensis</i>										
<i>Leucothoe incisa</i>										
<i>Leucothoe lilljeborgi</i>										
<i>Urothoe</i>		2	1							
<i>Urothoe elegans</i>							1			
<i>Urothoe marina</i>		40	3	10						
<i>Harpinia</i>										
<i>Harpinia antennaria</i>										
<i>Metaphoxus fultoni</i>										
<i>Lysianassidae</i>	Juveniles			1						
<i>Hippomedon denticulatus</i>										
<i>Lepidepecreum longicornis</i>										
<i>Lysianassa ceratina</i>										
<i>Lysianassa plumosa</i>										
<i>Socarnes erythrophthalmus</i>										
<i>Tmetonyx similis</i>										
<i>Tryphosella horingi</i>										
<i>Tryphosites longipes</i>		2					1			
<i>Austrosyrrhoe fimbriatus</i>										
<i>Liljeborgia pallida</i>										
<i>Idunella picta</i>										
<i>Atylus</i>	Juveniles									
<i>Nototropis falcatus</i>		2				2	2			
<i>Nototropis swammerdamei</i>										
<i>Atylus vedlomensis</i>		4							1	
<i>Dexamine spinosa</i>										
<i>Dexamine thea</i>		1								
<i>Guernea (Guernea) coalita</i>		2								
<i>Ampelisca</i>										
<i>Ampelisca brevicornis</i>								2	17	7
<i>Ampelisca tenuicornis</i>					1					
<i>Ampelisca typica</i>		5								
<i>Bathyporeia</i>	Juveniles							1		
<i>Bathyporeia elegans</i>		9				2	2			
<i>Bathyporeia guilliamsoniana</i>				2				4	7	2
<i>Gammarus</i>										
<i>Megaluropus agilis</i>		1					2			

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>Abludomelita obtusata</i>										
<i>Melita palmata</i>										
<i>Animoceradocus semiserratus</i>										
<i>Cheirocratus</i>	females									
<i>Cheirocratus intermedius</i>										
<i>Othomaera othonis</i>										
<i>Maerella tenuimana</i>										
<i>Ampithoe rubricata</i>										
<i>Gammaropsis</i>	females									
<i>Megamphopus cornutus</i>										
<i>Gammaropsis nitida</i>										
<i>Microprotopus maculatus</i>		2		1	1					1
<i>Erichthonius</i>	females					1				
<i>Erichthonius punctatus</i>								1	1	
<i>Jassa</i>	females							6	2	
<i>Jassa falcata</i>										
Aoridae	females									
<i>Aora gracilis</i>										
<i>Leptocheirus hirsutimanus</i>										
<i>Leptocheirus pectinatus</i>										
<i>Microdeutopus</i>	females									
<i>Microdeutopus versiculatus</i>								1		
<i>Corophium</i>			9						1	1
<i>Crassikorophium crassicorne</i>		28								
<i>Siphonoecetes</i>						1				
<i>Siphonoecetes kroyeranus</i>		30		38		2	3			
Caprellidae										
<i>Caprella acanthifera</i>								4		
<i>Pariambus typicus</i>		11		4		1		1		
<i>Phtisica marina</i>		2	2							
<i>Pseudoprotella phasma</i>								2		
<i>Gnathia</i>	females									
<i>Gnathia</i>	prianiza									
<i>Gnathia dentata</i>										
<i>Gnathia oxyuraea</i>										
<i>Gnathia vorax</i>										
<i>Anthura gracilis</i>										
Cirolanidae										
<i>Conilera cylindracea</i>										
<i>Eurydice</i>	Juveniles	1								
<i>Eurydice inermis</i>										
<i>Eurydice pulchra</i>										
<i>Dynamene bidentata</i>										
<i>Janira maculosa</i>										
<i>Idotea</i>	Juveniles							3	1	
<i>Idotea emarginata</i>								1		
<i>Idotea linearis</i>										1
<i>Idotea neglecta</i>								2		
<i>Astacilla damnoniensis</i>										
<i>Tanaopsis graciloides</i>										
<i>Vaunthompsonia</i>										

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>cristata</i>										
<i>Bodotria scorpioides</i>										
<i>Iphinoe trispinosa</i>		34	4	3	5	6	6			
<i>Cumella pygmaea</i>										
<i>Nannastacus brevicaudatus</i>										
<i>Diastylis rugosa</i>										
Decapoda	megalopa									
Caridea										
Paguridae	Juveniles									
<i>Anapagurus chiroacanthus</i>										
<i>Galathea intermedia</i>										
<i>Pisidia longicornis</i>										
<i>Ebalia</i>	Juveniles									
<i>Ebalia tuberosa</i>										
<i>Hyas</i>	Juveniles									
<i>Eurynome</i>	Juveniles									
<i>Atelecyclus rotundatus</i>	Juveniles									
Portunidae	Juveniles									
<i>Liocarcinus</i>	Juveniles									
<i>Liocarcinus pusillus</i>										
Mollusca										
<i>Polyplacophora</i>	Juveniles	1								
<i>Leptochiton asellus</i>										
<i>Callochiton septemvalvis</i>										
<i>Lepidochitona cinerea</i>										
<i>Acanthochitona fascicularis</i>										
Gastropoda										
Gastropoda	eggs									
<i>Tricolia pullus</i>										
Trochidae	damaged									
<i>Gibbula</i>	Juveniles									
<i>Gibbula tumida</i>										
<i>Jujubinus montagui</i>										
<i>Testudinalia testudinalis</i>										
<i>Tectura virginea</i>										
<i>Patella pellucida</i>								6	1	
<i>Lacuna pallidula</i>										
<i>Lacuna vincta</i>									4	
<i>Rissoa parva</i>								15	1	1
<i>Alvania beanii</i>										
<i>Onoba semicostata</i>										
<i>Caecum glabrum</i>										
<i>Aporrhais pespelecani</i>										
<i>Euspira nitida</i>										
<i>Eulima bilineata</i>										
<i>Vitreolina colini</i>										
Buccinidae										
<i>Nassarius (Hinia)</i>	Juveniles									
<i>Nassarius reticulatus</i>										
Turridae										
<i>Bela nebula</i>										
<i>Raphitoma linearis</i>										
<i>Odostomia plicata</i>										
<i>Brachystomia</i>										

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>eulimoides</i>										
<i>Parthenina decussata</i>										
<i>Chrysallida interstincta</i>										
<i>Ondina diaphana</i>										
<i>Diaphana minuta</i>					1					
<i>Retusa obtusa</i>		1		1	2		5		1	
<i>Retusa umbilicata</i>		1	1		6		17			
<i>Aplysia punctata</i>								1		
<i>Berthella plumula</i>										
Onchidorididae										
<i>Bivalvia</i>		1	1	1			2	1		
<i>Glycymeris glycymeris</i>										
<i>Modiolula phaseolina</i>										
<i>Crenella decussata</i>					6	6	8			
<i>Musculus subpictus</i>										
<i>Musculus</i>	Juveniles									
<i>Limaria hians</i>										
<i>Limatula subauriculata</i>										
<i>Mimachlamys varia</i>										
<i>Palliolum tigerinum</i>										
Anomiidae	Juveniles									
<i>Monia patelliformis</i>										
<i>Lucinoma borealis</i>										
<i>Kellia suborbicularis</i>										
<i>Devonia perrieri</i>							1			
<i>Kurtiella bidentata</i>		4								
<i>Goodallia triangularis</i>						1	1			
Cardiidae	Juveniles									
<i>Acanthocardia</i>	Juveniles					1				
<i>Parvicardium scabrum</i>				1						
<i>Spisula elliptica</i>		5	2		2	2	3	1		
<i>Lutraria</i>	? Juveniles									
Pharidae	Juveniles	4	2		3	2	7			
<i>Ensis ensis</i>		5	2	1	1	2	7		3	
<i>Phaxas pellucidus</i>										
<i>Tellina</i>	Juveniles					3				
<i>Tellina tenuis</i>					33	37	37	2	3	1
<i>Arcopagia crassa</i>										
<i>Tellina (Fabulina) fabula</i>			4			2		17	53	70
<i>Moerella donacina</i>										
<i>Moerella pygmaea</i>		29	23	3	97	106	95			
<i>Gastrana fragilis</i>										
<i>Gari</i>	Juveniles									1
<i>Gari costulata</i>	?									
<i>Gari tellinella</i>	Juveniles									
<i>Gari tellinella</i>				1						
<i>Gari fervensis</i>				2	1					
<i>Solecurtus scopula</i>										
<i>Abra alba</i>		9		4						
<i>Abra prismatica</i>		4	2	2	1	5		7	6	10
<i>Venus casina</i>										
<i>Gouldia minima</i>										
<i>Chamelea striatula</i>		3	3	3	29	43	31	6	9	4
<i>Clausinella fasciata</i>										
<i>Timoclea ovata</i>		15	7	10	5	3	5	6	3	3

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
Tapetidae	Juveniles									
<i>Politapes rhomboides</i>										
<i>Dosinia</i>	Juveniles							4		
<i>Dosinia lupinus</i>		19	16	11	36	51	43		5	4
<i>Dosinia exoleta</i>										
<i>Mysia undata</i>								2		
<i>Mya</i>	Juveniles	2	1							
<i>Hiatella arctica</i>										
<i>Thracia phaseolina</i>		1	2		10	9	13		2	1
<i>Thracia villosiuscula</i>					3	3	1			
<i>Cochlodesma praetenuae</i>					3		2			
Brachiopoda										
<i>Novocrania anomala</i>										
<i>Argyrotheca cistellula</i>										
Bryozoa										
<i>Crisia</i>										
<i>Crisia denticulata</i>										
<i>Tubulipora</i>										
<i>Disporella hispida</i>										
<i>Alcyonidium diaphanum</i>										
<i>Alcyonidium hirsutum</i>										
<i>Nolella dilatata</i>										
<i>Amathia</i>										
<i>Aetea sica</i>										
<i>Aetea truncata</i>										
<i>Eucratea loricata</i>										
<i>Electra pilosa</i>								P		
<i>Pyripora catenularia</i>										
<i>Flustra foliacea</i>										
<i>Chartella papyracea</i>										
<i>Securiflustra securifrons</i>										
<i>Cauloramphus spiniferum</i>										
<i>Amphiblestrum flemingii</i>										
<i>Bugula</i>										
<i>Bugulina avicularia</i>										
<i>Scrupocellaria</i>										
<i>Cradoscrupocellaria reptans</i>										
<i>Aquiloniella scabra</i>										
<i>Scrupocellaria scrupea</i>										
<i>Micropora normani</i>										
<i>Cellaria</i>										
<i>Cellaria sinuosa</i>	?									
<i>Cribrilina annulata</i>										
<i>Puellina</i>										
<i>Puellina innominata</i>										
<i>Figularia figularis</i>										
<i>Celleporella hyalina</i>								P	P	
<i>Chorizopora brongniartii</i>										
<i>Escharoides coccinea</i>										
<i>Neolagenipora collaris</i>										
<i>Pentapora fascialis</i>										
<i>Escharina hyndmanni</i>										

Species	Notes	GS5#1	GS5#2	GS5#3	GS6#1	GS6#2	GS6#3	GS9#1	GS9#2	GS9#3
<i>Parasmittina trispinosa</i>	?									
<i>Schizomavella</i>										
<i>Microporella ciliata</i>										
<i>Fenestrulina malusii</i>										
<i>Cellepora pumicosa</i>										
Phoronida										
<i>Phoronis</i>										
Echinodermata										
<i>Asteroidea</i>	Juveniles/ damaged									
<i>Ophiuroidea</i>	Juveniles/ damaged		1						1	
<i>Ophiothrix fragilis</i>						1				
<i>Amphiura securigera</i>										
<i>Amphipholis squamata</i>										
<i>Ophiura</i>	Juveniles									
<i>Echinoidea</i>	Juveniles									
<i>Echinocyamus pusillus</i>				1	1	1				
<i>Echinocardium flavescens</i>					2					
<i>Holothuroidea</i>										
<i>Thyone fusus</i>										
<i>Leptosynapta bergensis</i>										
<i>Leptosynapta cruenta</i>										
<i>Leptosynapta inhaerens</i>										
<i>Leptosynapta minuta</i>										
Hemichordata										
<i>Enteropneusta</i>										
Tunicata										
<i>Polyclinidae</i>										
<i>Didemnum maculosum</i>										
<i>Diplosoma listerianum</i>								P	P	
<i>Ascidella aspersa</i>										
<i>Polycarpa fibrosa</i>										
<i>Botryllus schlosseri</i>										
<i>Molgula</i>						2	1			
Rhodophyta										
<i>Lithothamnion glaciale</i>										
<i>Phymatolithon calcareum</i>										
Pisces										
<i>Liparis liparis liparis</i>								1		
<i>Ammodytes tobianus</i>										
Cephalochordata										
<i>Branchiostoma lanceolatum</i>										
<i>Astrorhiza</i>										
<i>Animalia</i>	eggs							P		

ANNEX 3: PARTICLE SIZE DISTRIBUTION ANALYSIS OF GRAB SAMPLES

Analysis by dry sieving.

Percentage fractional data															
Size	Phi	GM1	GM3	GM4	GM7	GM8	GM11	GM12	GM13	GM15	GS5	GS6	GS9	GS14	GS18
>8mm	<-3	1.34	0.41	1.50	0.91	0	7.42	0	1.06	1.52	0	0	0.12	2.81	0
5.6-8mm	-2.5 to -3	9.09	0.98	1.25	2.44	3.12	2.69	0.73	1.61	0.98	0	0	0.07	0.75	0.35
4-5.6mm	-2 to -2.5	14.97	1.48	1.76	9.79	1.67	2.29	4.78	3.66	5.07	0.13	0.05	0	1.76	2.29
2.8-4mm	-1.5 to -2	30.58	3.62	1.83	27.63	4.34	5.44	12.65	10.98	20.53	0.25	0.08	0.35	2.03	3.73
2-2.8 mm	-1 to -1.5	26.39	5.51	1.44	29.30	4.09	12.58	15.01	23.08	24.00	0.48	0.27	0.21	1.46	2.02
1.4-2mm	-0.5 to -1	12.72	12.49	1.07	19.69	4.26	23.90	19.00	29.98	26.40	0.83	0.63	0.16	2.82	1.65
1-1.4mm	0 to -0.5	2.18	16.57	0.96	6.06	2.77	19.45	12.52	9.69	9.41	1.33	0.97	0.12	2.18	0.99
710-1000µm	0.5 to 0	0.87	23.62	1.21	1.91	2.93	12.97	12.36	4.01	5.18	2.52	2.02	0.13	3.40	1.37
500-710µm	1 to 0.5	0.37	23.22	2.52	0.45	13.34	6.03	10.31	2.37	2.79	9.26	9.03	0.18	9.80	2.35
350-500µm	1.5 to 1	0.17	7.33	4.26	0.15	23.38	2.68	4.89	1.30	0.95	19.59	21.25	0.75	21.41	4.50
250-350µm	2 to 1.5	0.15	1.61	9.10	0.09	27.14	1.37	2.97	1.42	0.42	36.48	39.86	4.35	24.38	10.31
177-250µm	2.5 to 2	0.24	0.29	22.79	0.08	9.13	0.60	1.28	3.42	0.25	19.58	17.95	33.01	13.75	18.94
125-177µm	3 to 2.5	0.30	0.14	21.37	0.09	1.64	0.42	0.64	3.14	0.23	4.48	5.44	53.15	8.10	20.05
90-125µm	3.5 to 3	0.24	0.09	16.49	0.08	0.23	0.28	0.32	1.38	0.17	1.38	0.69	5.09	2.50	10.66
63-90µm	4 to 3.5	0.10	0.05	5.47	0.06	0.08	0.09	0.13	0.36	0.08	0.40	0.07	0.21	0.50	4.14
<63µm	>4	0.28	2.59	7.00	1.28	1.90	1.79	2.41	2.54	2.03	3.31	1.69	2.09	2.34	16.66

ANNEX 4: ERISKAY SEDIMENT MONITORING SITE DATA

Percentage fractional data for the sediments illustrating the particle size distribution for the sites.

Size	Phi	ES1 SOB	ES2 SOB	ES3 SOB	ES4 SOB	ES5 SOB	ES6 SOB	ES7 SOB	ES8 SOB	ES9 SOB	ES10 SOB
>8mm	<-3	0	0	0	0	0	4.55	1.51	0	0	0.97
5.6-8mm	-2.5 to -3	0.21	0	0	0.21	0	0.93	1.94	0	0	0
4-5.6mm	-2 to -2.5	0	0	0	0.24	0.06	2.03	2.38	0.05	0	0.25
2.8-4mm	-1.5 to -2	0	0.08	0.08	0.22	0.10	3.55	2.48	0.04	0.22	0.94
2-2.8 mm	-1 to -1.5	0.05	0.45	0.05	0.38	0.34	3.94	1.99	0.10	0.25	1.88
1.4-2mm	-0.5 to -1	0.13	0.75	0.15	0.71	1.25	5.16	2.15	0.40	0.34	2.59
1-1.4mm	0 to -0.5	0.21	0.59	0.15	0.80	1.64	4.59	1.31	0.53	0.31	1.91
710-1000µm	0.5 to 0	0.61	0.79	0.50	1.41	4.14	8.57	2.24	1.99	0.78	2.72
500-710µm	1 to 0.5	5.55	2.15	5.38	6.76	23.89	25.07	8.98	10.13	2.39	5.75
350-500µm	1.5 to 1	19.88	7.36	20.44	29.61	30.68	19.05	11.47	17.17	6.46	9.61
250-350µm	2 to 1.5	40.78	22.94	41.01	43.97	18.88	14.31	12.71	30.83	20.54	22.40
177-250µm	2.5 to 2	25.28	41.45	24.15	11.36	11.61	4.25	16.88	21.68	26.89	23.31
125-177µm	3 to 2.5	4.51	19.06	5.66	1.83	4.28	0.62	12.61	8.52	14.50	11.91
90-125µm	3.5 to 3	0.33	1.58	0.48	0.22	0.73	0.30	5.79	4.28	5.97	5.46
63-90µm	4 to 3.5	0.05	0.22	0.07	0.05	0.19	0.13	2.68	0.86	2.84	2.83
<63µm	>4	2.41	2.58	1.90	2.22	2.22	2.95	12.89	3.42	18.50	7.45

Cumulative fractional data for the sediments at the sites

Phi	ES1 SOB	ES2 SOB	ES3 SOB	ES4 SOB	ES5 SOB	ES6 SOB	ES7 SOB	ES8 SOB	ES9 SOB	ES10 SOB
-3	0.00	0.00	0.00	0.00	0.00	4.55	1.51	0.00	0.00	0.97
-2.5	0.21	0.00	0.00	0.21	0.00	5.47	3.45	0.00	0.00	0.97
-2	0.21	0.00	0.00	0.46	0.06	7.50	5.83	0.05	0.00	1.22
-1.5	0.21	0.08	0.08	0.68	0.15	11.06	8.31	0.09	0.22	2.16
-1	0.26	0.53	0.12	1.07	0.49	15.00	10.30	0.20	0.48	4.04
-0.5	0.39	1.28	0.27	1.77	1.74	20.16	12.45	0.60	0.82	6.64
0	0.59	1.87	0.42	2.58	3.38	24.75	13.76	1.13	1.13	8.54
0.5	1.20	2.66	0.92	3.98	7.52	33.32	16.00	3.11	1.91	11.27
1	6.75	4.80	6.29	10.74	31.41	58.39	24.97	13.24	4.30	17.01
1.5	26.63	12.16	26.74	40.35	62.09	77.44	36.44	30.41	10.76	26.63
2	67.41	35.10	67.75	84.33	80.97	91.75	49.15	61.24	31.30	49.03
2.5	92.69	76.56	91.90	95.69	92.58	96.01	66.04	82.91	58.19	72.34
3	97.20	95.62	97.56	97.52	96.87	96.63	78.64	91.44	72.69	84.25
3.5	97.53	97.20	98.04	97.74	97.60	96.93	84.43	95.72	78.66	89.71
4	97.59	97.42	98.10	97.78	97.78	97.05	87.11	96.58	81.50	92.55
>4	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

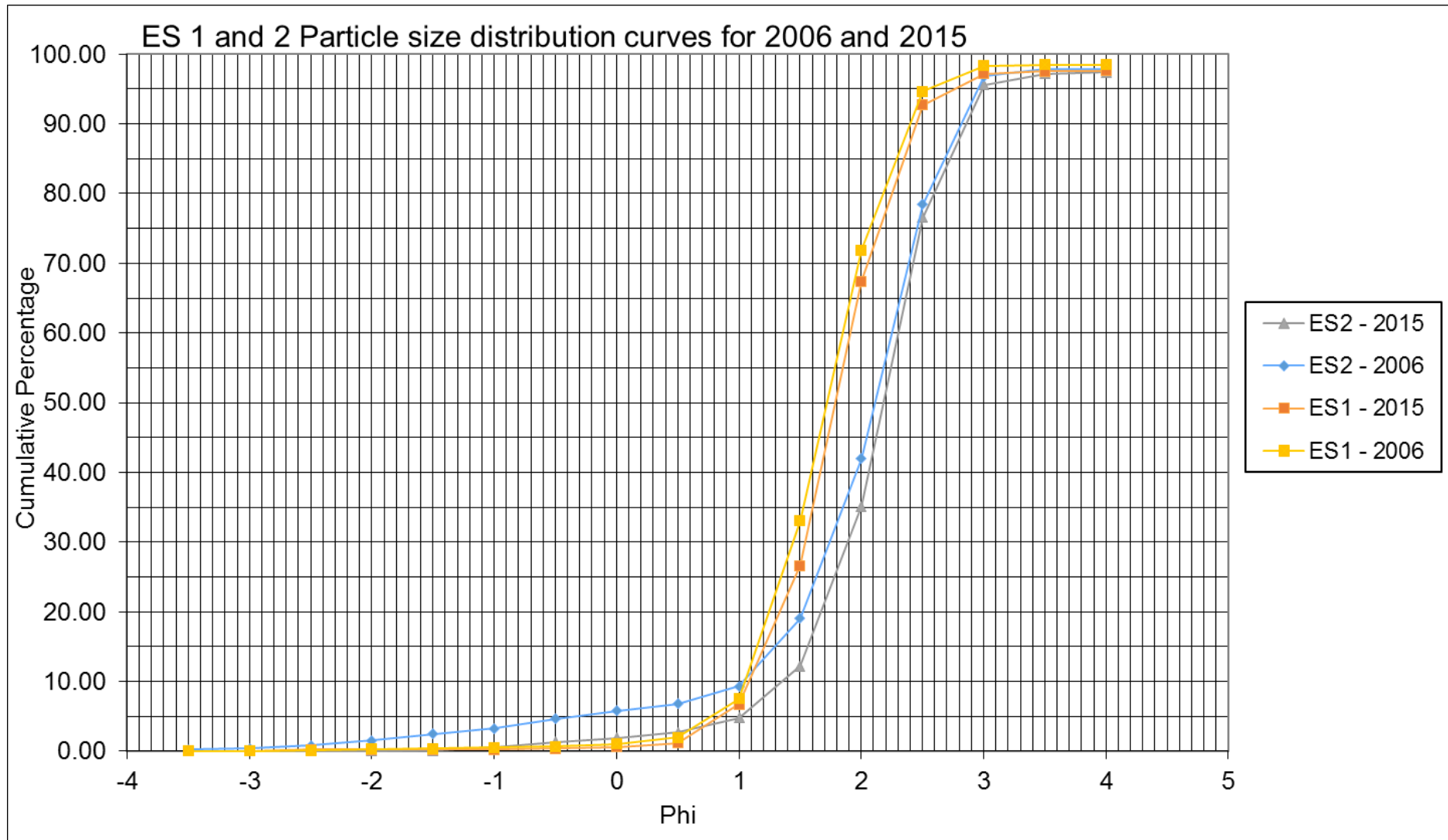
Phi values for the separate quartiles for each site

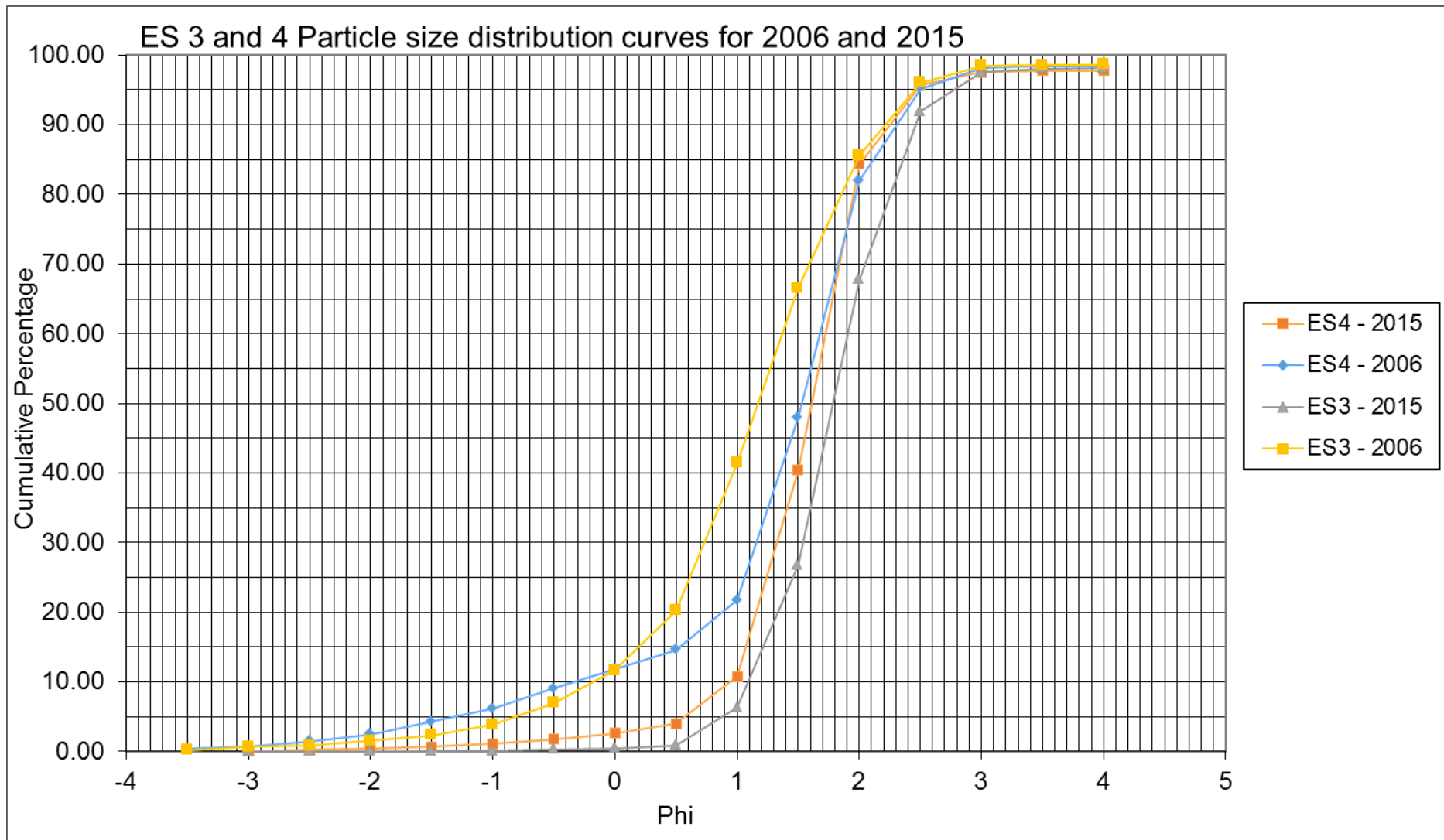
Q3	2.15	2.48	2.15	1.9	1.85	1.84	2.86	2.32	3.2	2.6
Q2	1.79	2.18	1.79	1.61	1.3	0.84	2.02	1.82	2.35	2
Q1	1.45	1.78	1.45	1.23	0.87	0	1	1.35	1.85	1.4

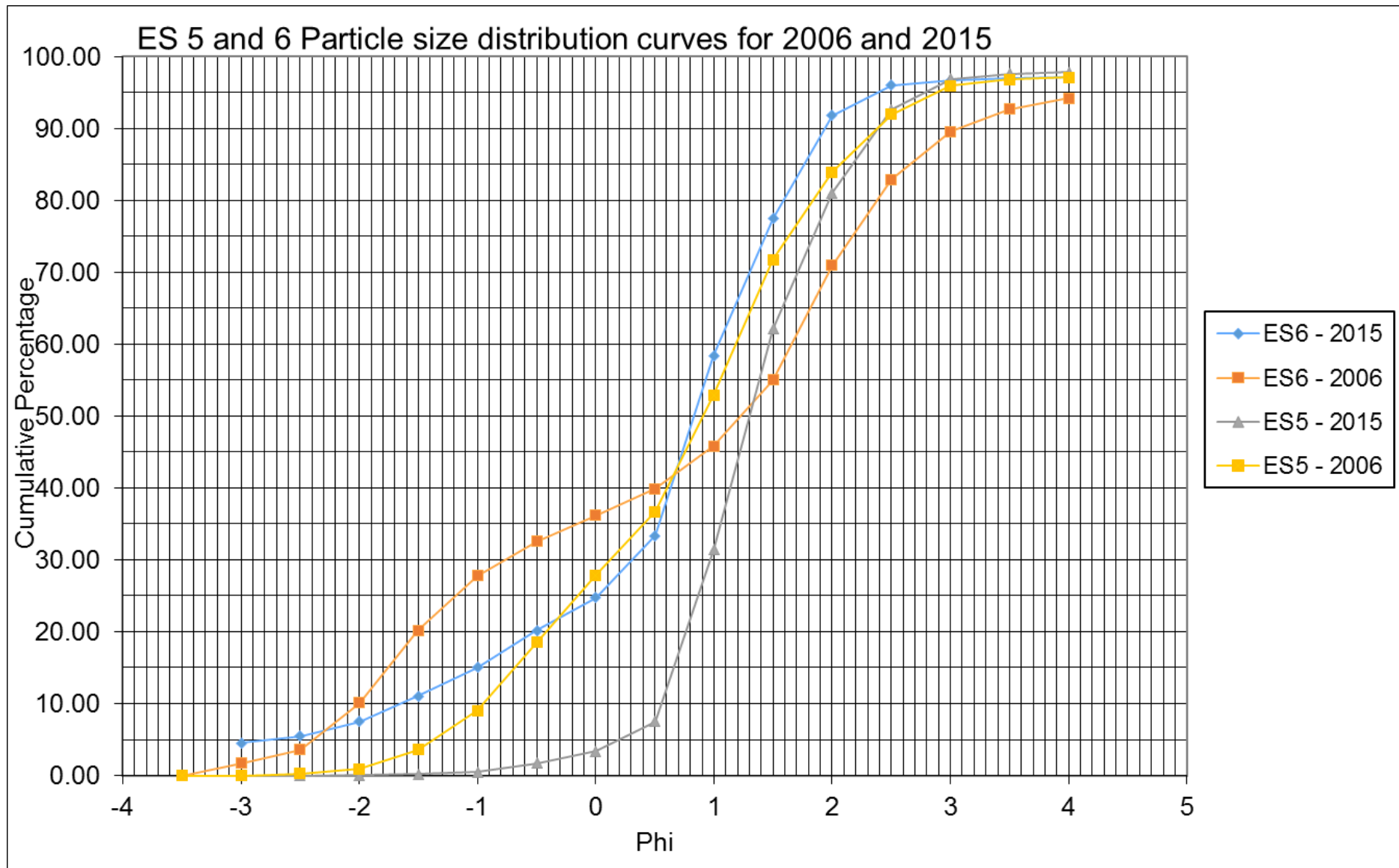
Key:

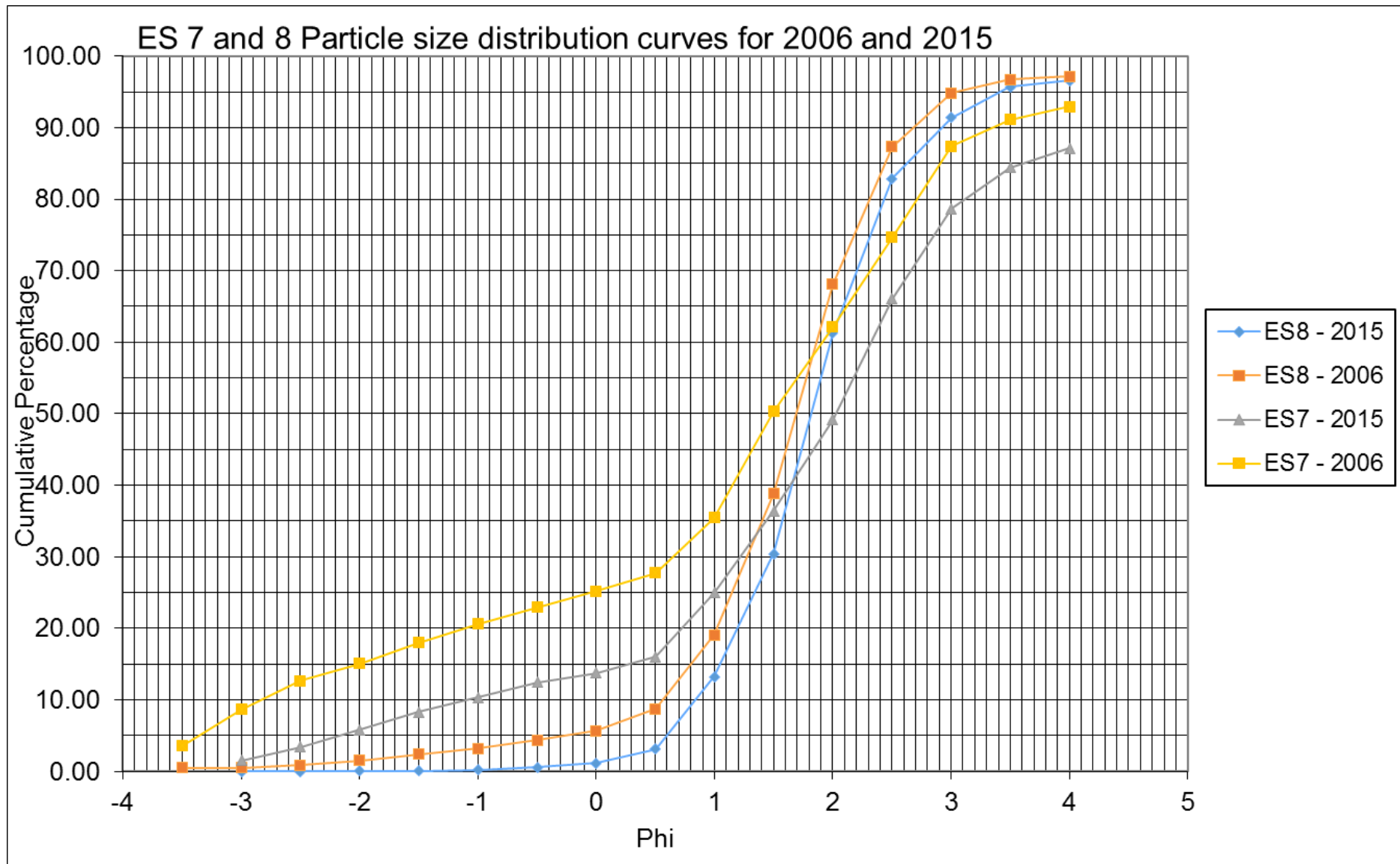
MD_φ	1.79	2.18	1.79	1.61	1.3	0.84	2.02	1.82	2.35	2
Md_{mic}	289	221	289	328	406	559	247	283	196	250
QD_φ	0.35	0.35	0.35	0.335	0.49	0.92	0.93	0.485	0.675	0.6
% silt/clay	2.4	2.6	1.9	2.2	2.2	2.9	12.9	3.4	18.5	7.5
% sand	97.4	97.4	98.1	97.3	97.7	89.6	81.3	96.5	81.5	91.3
% gravel	0.2	0.0	0.0	0.5	0.1	7.5	5.8	0.1	0.0	1.2

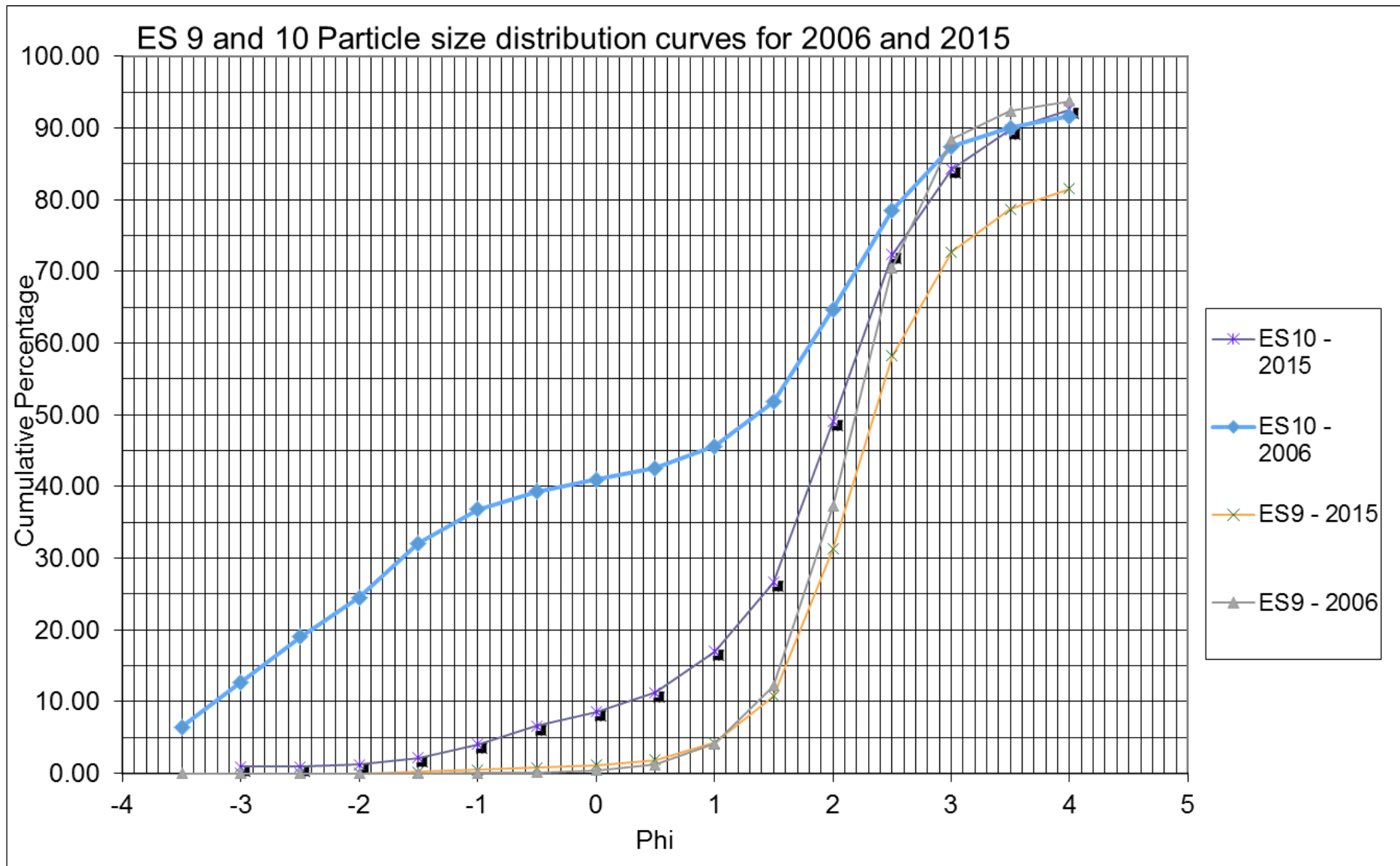
MD_φ Median Phi value
Md_{mic} Median particle size in microns
QD_φ Quartile coefficient of dispersion











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Great Glen House, Leachkin Road, Inverness, IV3 8NW
T: 01463 725000

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