NRA South West 105

Environmental Protection
Final Draft Report

TEIGN ESTUARY POST SCHEME APPRAISAL
REPORT OF 1993 SURVEYS

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CONTENTS

INTRODUCTION

The completion of the Teign sewage improvement scheme brought about the requirement for a post scheme appraisal to be undertaken. It was decided that the most appropriate way of approaching this task was to resample a series of intertidal sites along the length of the estuary first studied in 1990 (NRA SW routine work). The samples taken would be processed so that the community structure of the macroinvertebrate infauna of these soft sediments could be assessed.

In addition to repeating the August 1990 survey in 1993, two other site visits were undertaken (during March and October) to provide information on seasonal change and highlight any short term effects of the scheme if there were any.

The samples taken by NRA staff were processed by a consultancy and the results interpreted within the NRA.

METHODS

Three intertidal surveys were undertaken on 24-25th March, 3-4th August and 14-15th October 1993 at sites previously sampled as part of routine NRA SW monitoring on 9th August 1990.

For each survey, eight sites, positioned along the length of the estuary, consisted of four replicate core samples (Figure 1). The cylindrical steel core gave a sample area of 0.01 m^2 and penetrated to a depth of 15 cm.

The sample was sieved through a 0.5 mm mesh on site by "puddling" in available standing water to remove excess sediment. Samples were potted and fixed in 10% buffered formalin.

Sediment samples of at least 50 g for granulometric analysis were taken from the top 1 cm. These were stored in a freezer on the same day that they were taken. Particle size analysis was NAMAS accredited, using laser diffraction methodology. The 1990 analysis used a dry sieving method and hence direct comparison cannot provide robust conclusions.

Site information records (Table 1) consisted of notes on the topography, vegetation etc. Photographic records (retained on file) and site location bearings were taken where appropriate.

All samples were sent to the consultant company for processing including sorting, numeration and identification to species (where possible).

Data Analysis

Univariate analyses were included in the data interpretation process; these consisted of the Shannon-Weiner Diversity Index, Pielou Evenness Index and Species Richness Index. The results from these are presented graphically (Figures 7-9), from values given in Table 6, showing changes in their values along the length of the estuary and between surveys.

Multivariate analysis, based on Bray-Curtis Similarity, represented by an ordination of Multidimensional Scaling (MDS). MDS produces a two-dimensional plot of a multidimensional ordination of all of the replicates for each of the four datasets.

Additional analysis was under taken for a number of sites to test significance of similarity (ANOSIM) for the time series data. An MDS ordination was generated for all of the data at one sample site (from the four survey datasets) and the similarity/dissimilarity tested. An example is given using site 4 (Figure 6).

RESULTS

Site details are given in Table 1. This includes location, approximate shore position and other pertinent information. Site locations are shown in Figure 1. The species data for each survey, including that from 1990, are given in appendices as actual counts per replicate. From this data, ordination plots were generated (Figures 2-5). These indicated close similarities between the bulk of sites (2-7) and distinct faunal assemblages at sites 1 and 8. Such site differences were largely consistent from one survey to the next. Faunal differences for these distinct sites were, for site 1, the predominance of oligochaete species, and site 8 the occurrence of; amphipods, isopods and polychaetes such as Aonides oxycephala, Cirriformia tentaculata and Protodorvillea kefersteini. The remaining sites were typified by euryhaline taxa such as Nereid, Nephtyid and Spionid polychaetes and the bivalve Scrobicularia plana.

The occurrence of Alkmaria romijni at site 3 in March 1993 was noteworthy. This species of ampharetid polychaete is included in the revised list of protected species for the Wildlife and Countryside Act, 1981.

A test for significance of temporal change at some of the sites (4,6,8) was undertaken. As results were consistent the remaining sites were untested. An example ordination plot is given, for all data taken from site 4 (Figure 6). The results of the significance tests are shown in Table 4. The differences between the 1990 and 1993 surveys were significant unlike the differences between the majority of sites from the 1993 surveys, where dissimilarities were not statistically significant.

Mean values for univariate indices are illustrated in Figures 7-9 as bar charts (from Table 3). These indices varied from 1990 to 1993 but failed to show a consistent rise or fall. Likewise, trends within the 1993 surveys were not apparent. Standard deviation values are also given (Table 3).

Particle size analysis (Table 2 and 2.1) was determined for the first two 1993 surveys, the results for the final survey remain outstanding. These were compared with 1990 data though the analytical method differed and accurate interpretation was not possible. The proportion of fines in the sediment varied widely between surveys though the general appearance at the sample site did not.

DISCUSSION

The 1993 surveys were undertaken to assess the impact of the improved arrangements for sewage disposal from dwellings around the Teign estuary. The new system has significantly reduced inputs into the estuary, by treating and transferring the discharge to the sea. An initial NRA SW routine survey in August 1990 provided a dataset and a series of sample sites for the Teign estuary. This first survey has been taken as representative of the condition of the macrobenthic infaunal assemblages prior to the scheme works and sewerage improvements. By comparison with this information the repeat surveys have attempted to identify changes ascribable to water quality improvements.

Sediment granulometry was undertaken to provide non-biological data to help interpret the community data. It is necessary to be in a position to discount biological change due to changes in the physical environment. Though general appearance of the substrate at the sites showed little obvious change (Table 1), particle size analysis indicated wide variation in the proportion of fines (<64 μm). To a large extent this variation is most likely to be a problem with the granulometric analysis of the sample. If a sample were to contain disproportionately large particles (stones) then the relative proportions of each size fraction becomes heavily biased against the smaller fractions. By examination of the particle size data (Table 2), it would appear that this was the case for the March 1993 sample at sites 4 and 8 and site 1 of the August 1993 survey. Therefore it is suggested that the degree of variation between surveys, at least at these three sites, is an effect of the sampling and analytical methodologies and not biologically significant.

Neither diversity or species richness showed conclusively that completion of the scheme has brought about changes in biota. Such measurements will inevitably vary as a result of natural fluctuations in community structure, but should also indicate any improvements if a change in population size and/or number of species occurs. From the data obtained to date, an appreciation of the amplitude of this natural variation remains obscure. Consequently, to ascribe community change to anthropogenic effects is premature.

A more sensitive statistical tool, one that makes fewer mathematical assumptions, is multivariate analysis. In this instance MDS has provided a measure of the similarity of the data. This can be statistically tested for significance using ANOSIM. In this instance the ANOSIM test assessed the degree of similarity/dissimilarity for the communities at individual sites over the period covered by the surveys. Tests of the similarity of sites within a single survey (spatial variation) was not undertaken. For temporal change, significant differences were noted between the 1990 survey and all of the 1993 surveys (Table 4). Significant differences in community structure between the three 1993 surveys were less frequent.

As the requirement for this monitoring programme is to identify temporal change, aside of seasonal variation, then the distinctions between the 1990 and 1993 surveys (particularly the August 1993 survey) is noteworthy. As with univariate indices, however, the causes of such changes cannot be readily distinguished from either natural or random variation or an actual response to scheme improvements. This is particularly so because of the short time interval between completion of the construction work, which likely had an impact on the environment itself, and the sampling.

Another source of variability between the 1990 and the 1993 surveys could be variation in identification due to the use of different workers. Comparison of the datasets indicate that some of the differences are due to distinct changes in the faunal assemblage (e.g. More syllid polychaete and also amphipod taxa at site 8, 1990), others because of numerical changes, whilst a few of the numerically insignificant taxa may show variation in the different naming of the same species (e.g. Tapes decussatus vs Venerupis senegalensis). After due consideration, the effect of possible worker error is unlikely to have significantly modified data interpretation.

Any response that the biota is likely to make to changes in the environment of the Teign estuary will take a period of time to manifest themselves and to reach some new point of equilibrium. It is important to establish what these biological changes might be, not only to assess the "health" of the Teign estuary but also to demonstrate the effects of a scheme of this type.

As indicated by the ordination plots for each of the surveys (Figures 2-5), site 1 is consistently isolated from the remaining sites. The oligohaline fauna of this site varied dramatically during 1993 surveys, including the occurrence of basically freshwater oligochaete species (Tubifex tubifex, and Monopylephorus irroratus). The occurrence of the Water-Starwort, Callitriche stagnalis (August 1993 survey) was further evidence of the near fluviatile nature of the area. In consequence then, it would be inappropriate to continue the use of this site for monitoring in light of the variability of the environmental conditions.

Site 8 is also a unique site in this estuary, but because of its location and differences in community composition it should remain as part of continued monitoring. This habitat may respond to change in a manner different to that of the other sites, for example more rapidly, and therefore it is valid to continue with it.

As the remainder of the sites (2-7) were populated by a common faunal assemblage (characterised by Nereis diversicolor, Streblospio shrubsolii, Caulleriella killariensis, Scrobicularia plana) it would be appropriate to reduce the number of these sites for subsequent surveys. Taking biological as well as logistical (site accessibility) considerations into account, it seems that adequate monitoring could continue by using only sites 2,4 and 5 in addition to site 8.

In essence then, in order to assess the detected changes in community structure, there is a requirement to continue to collect data along a timescale to improve assessment resolution and aid the distinction between natural changes and those due to the scheme. Such monitoring at a reduced number of sites should, further, continue to include a sampling strategy that surveys during more than one period in each sampling period. This would accelerate the process of data accumulation (for accurate and more conclusive post scheme appraisal) and also facilitate the opportunity to identify changes that may not be apparent at all times of the year.

It is generally recognised that macroinvertebrate sampling is best undertaken when the population is at its minimum and is represented only by adult individuals. This avoids the widely fluctuating population sizes of the various breeding periods when highly localised and potentially large scale larval settlement can occur and change community size and structure dramatically and on a very short timescale. In order to minimise such natural variation, then, post-winter sampling is advocated.

CONCLUSIONS

Significant variations in the macrobenthic infaunal communities of the Teign estuary were detected between datasets from a survey in August 1990 and three surveys in 1993. These changes cannot, as yet, be categorically linked with improvements in the sewage effluent loading of the estuary.

Seasonal variation during 1993 was observed but statistical similarity tests were not significant in most cases.

The need to continue monitoring has been identified, with a reduced number of sites, for two surveys in one year. It has been concluded that four sites would adequately provide the required data and that these should include the lowermost site (8), a selection of the middle sites (2,4,5) but exclude the uppermost site (1). Seasonal sampling should continue in August, to supplement the longest time series dataset, and also in March to sample the post-winter mortality.

It is most probable that several years of sampling would be required to fully appraise the effects of the scheme, though decisions as to how to approach this should be made in light of results from the proposed survey in 1994. For example it may be desirable to continue on an annual basis or appropriate to only sample during alternate years.

RECOMMENDATIONS

1) Monitoring should continue in 1994 at four sites (2,4,5,8).

Action: NRA SW/ SWWSL ?

2) Two surveys should be undertaken, in March and August.

Action: NRA SW/ SWWSL ?

3) A decision concerning monitoring strategy beyond 1994 should be considered once the repeat survey has been completed.

Action: NRA SW/ SWWSL ?

APPENDIX A

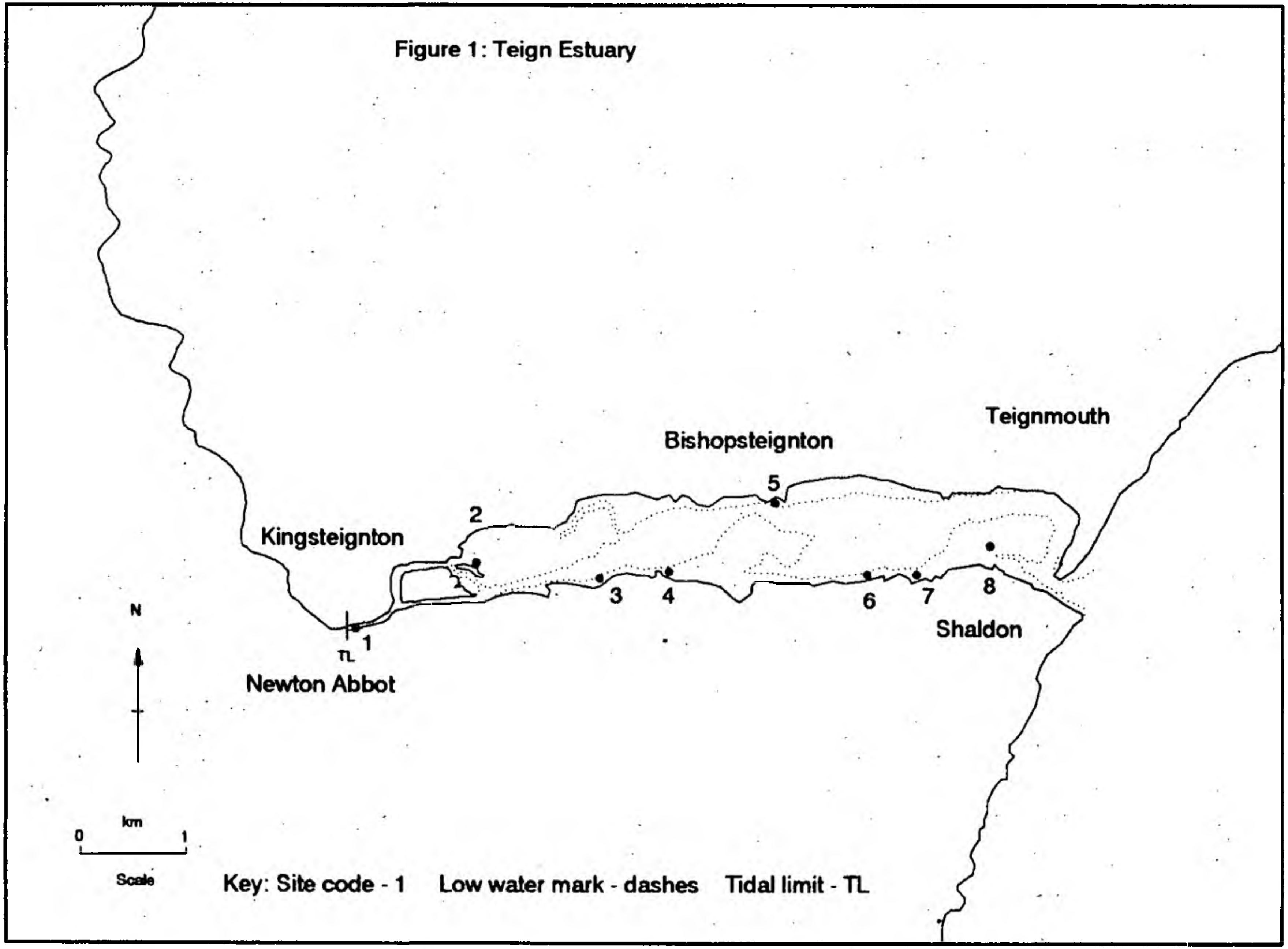


Figure 1: Teign Estuary

FIGURE 2: TEIGN ESTUARY 1990 SURVEY. MDS ORDINATION

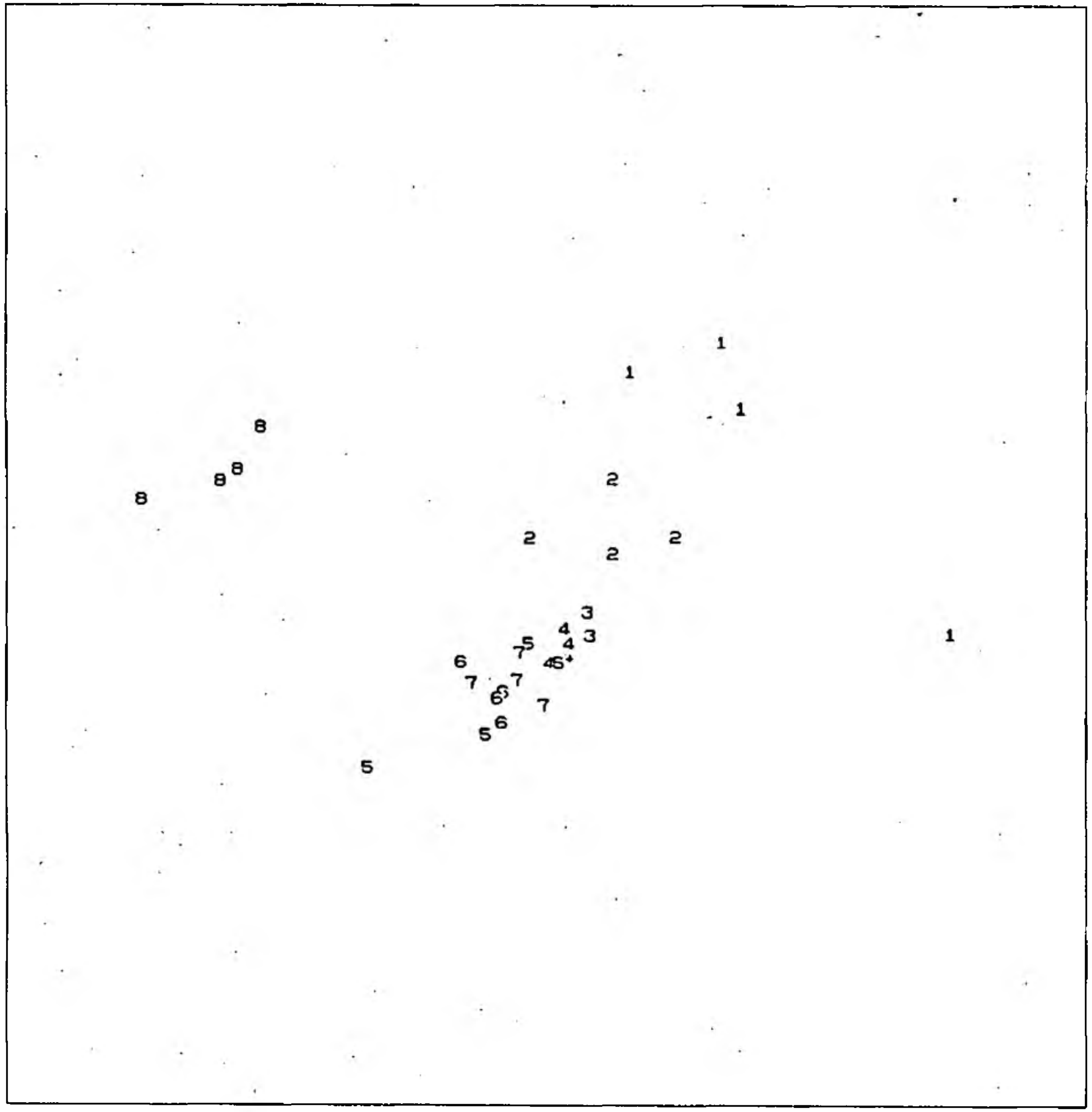


FIGURE 3: TEIGN ESTUARY 1993 SURVEY 1. MDS ORDINATION

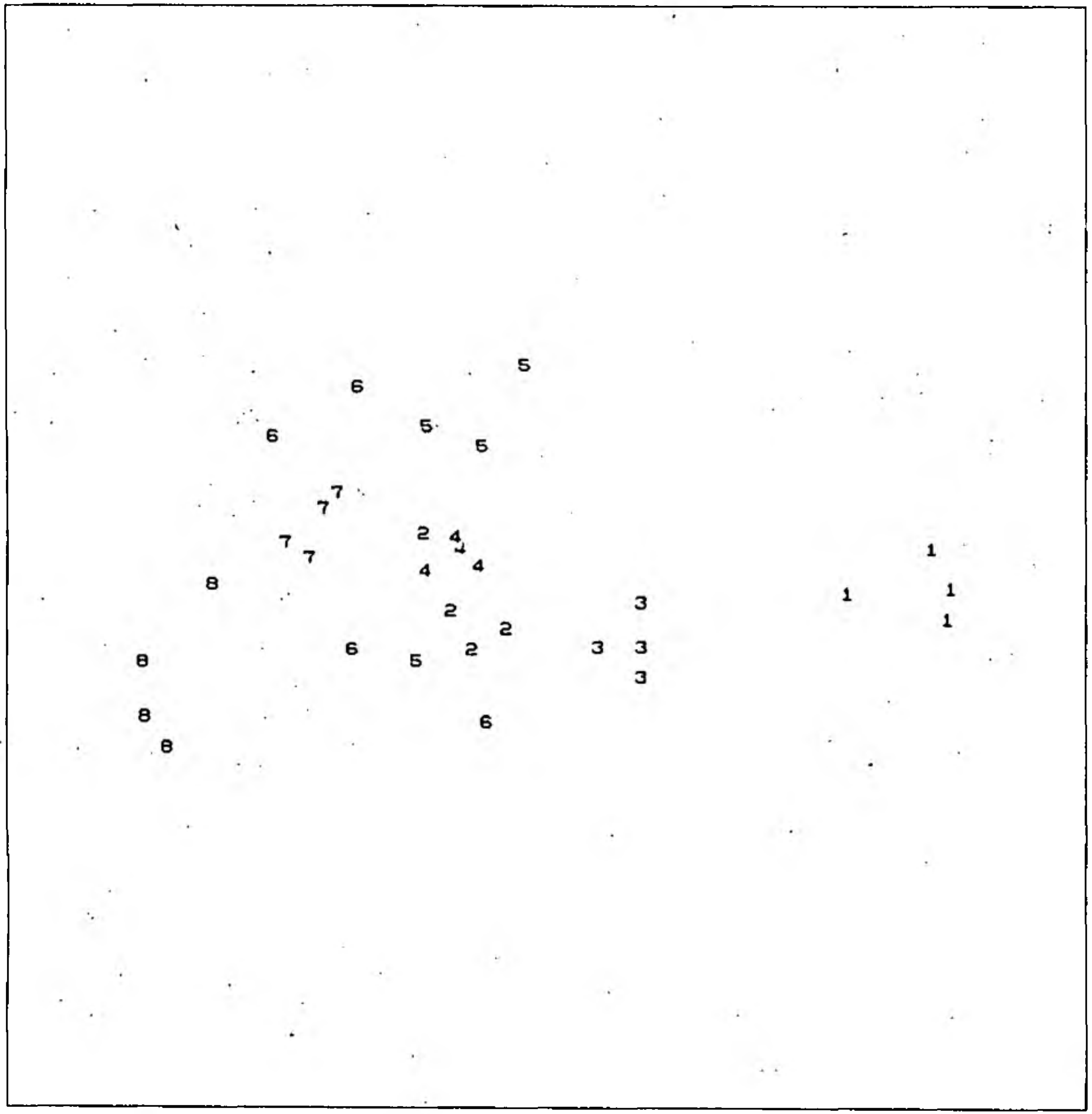


FIGURE 4: TEIGN ESTUARY 1993 SURVEY 2. MDS ORDINATION

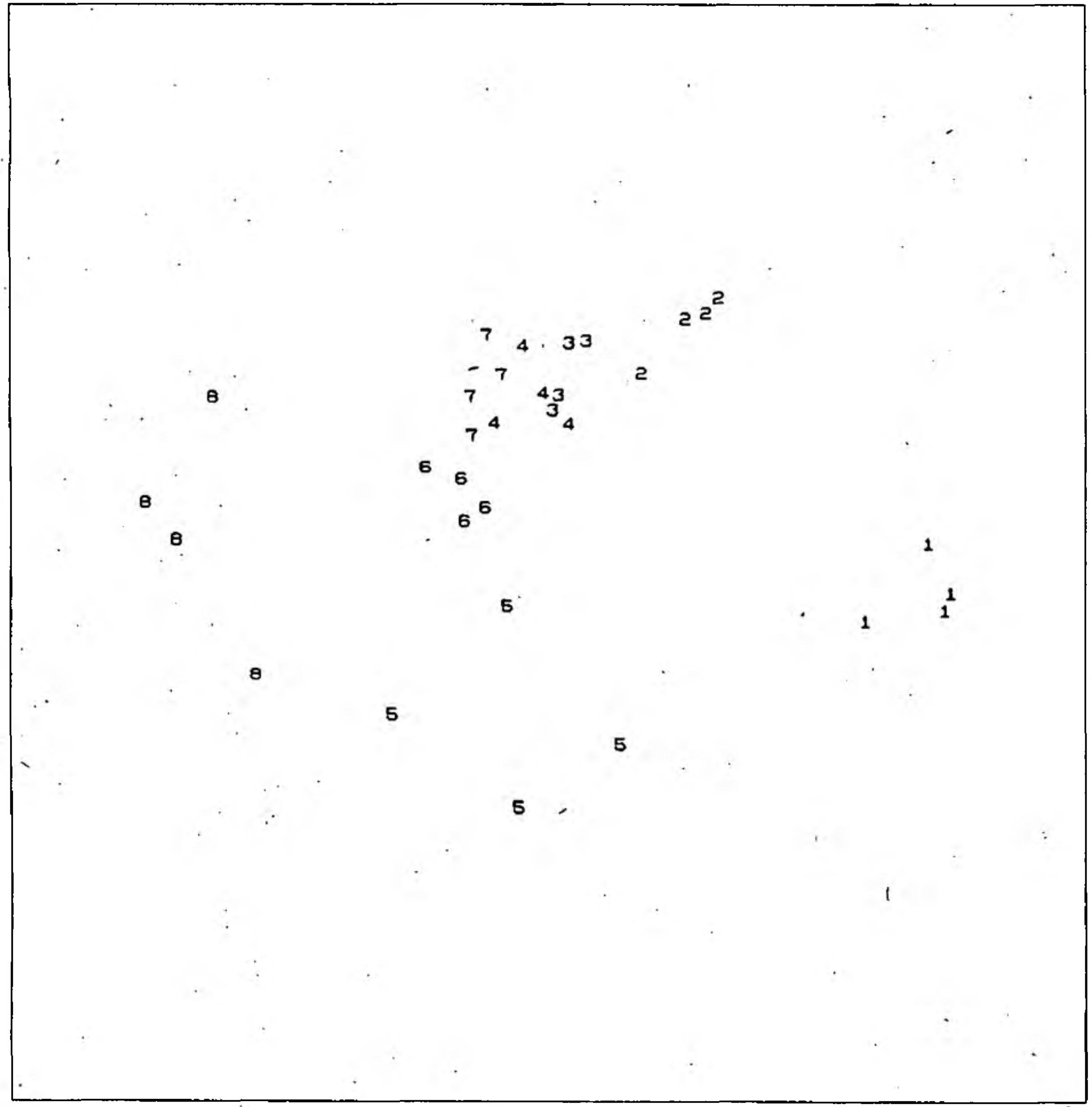


FIGURE 5: TEIGN ESTUARY 1993 SURVEY 3. MDS ORDINATION

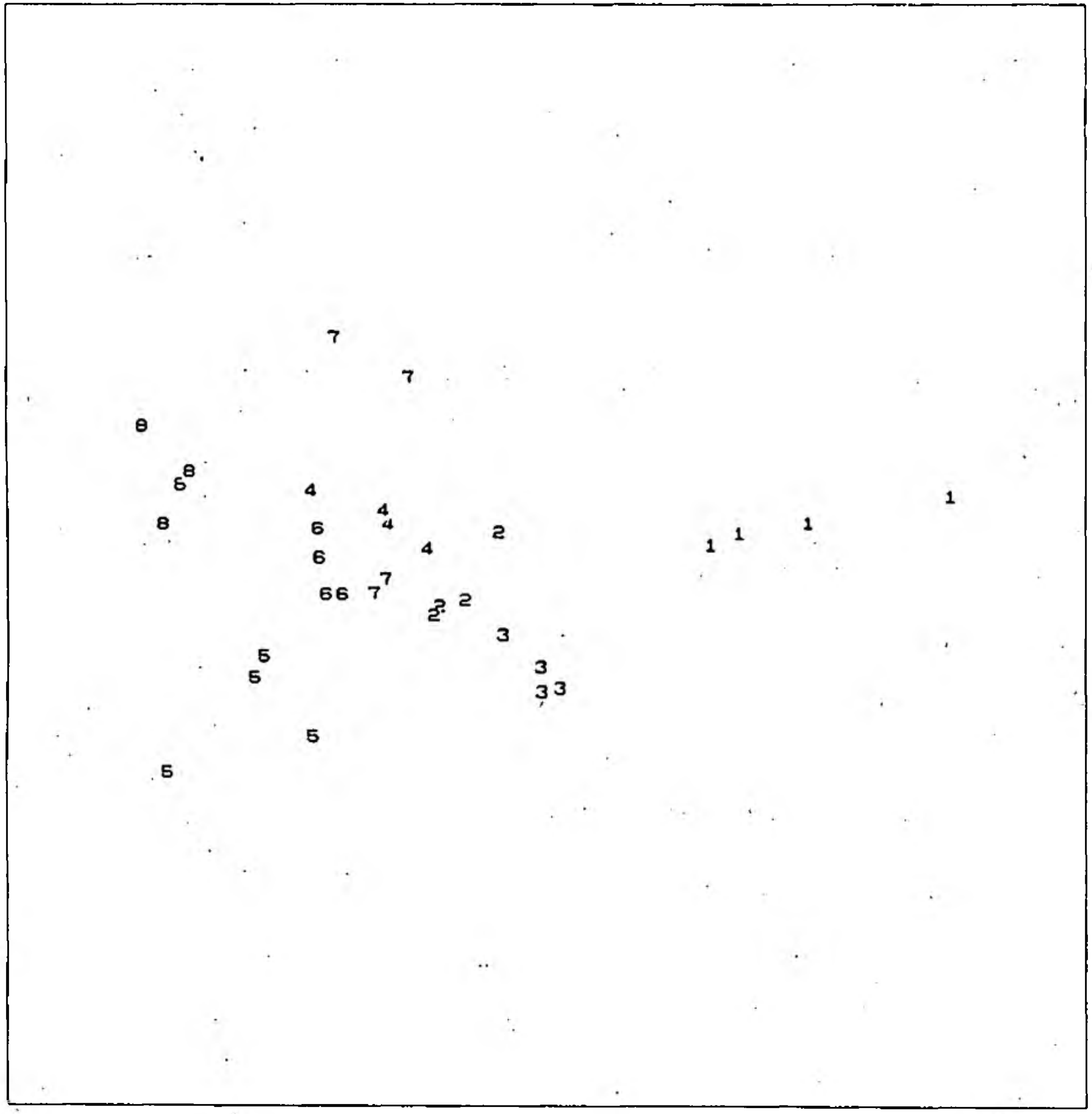


FIGURE 6: MDS PLOT OF SITE 4: ALL SURVEYS FOR ANOSIM TEST

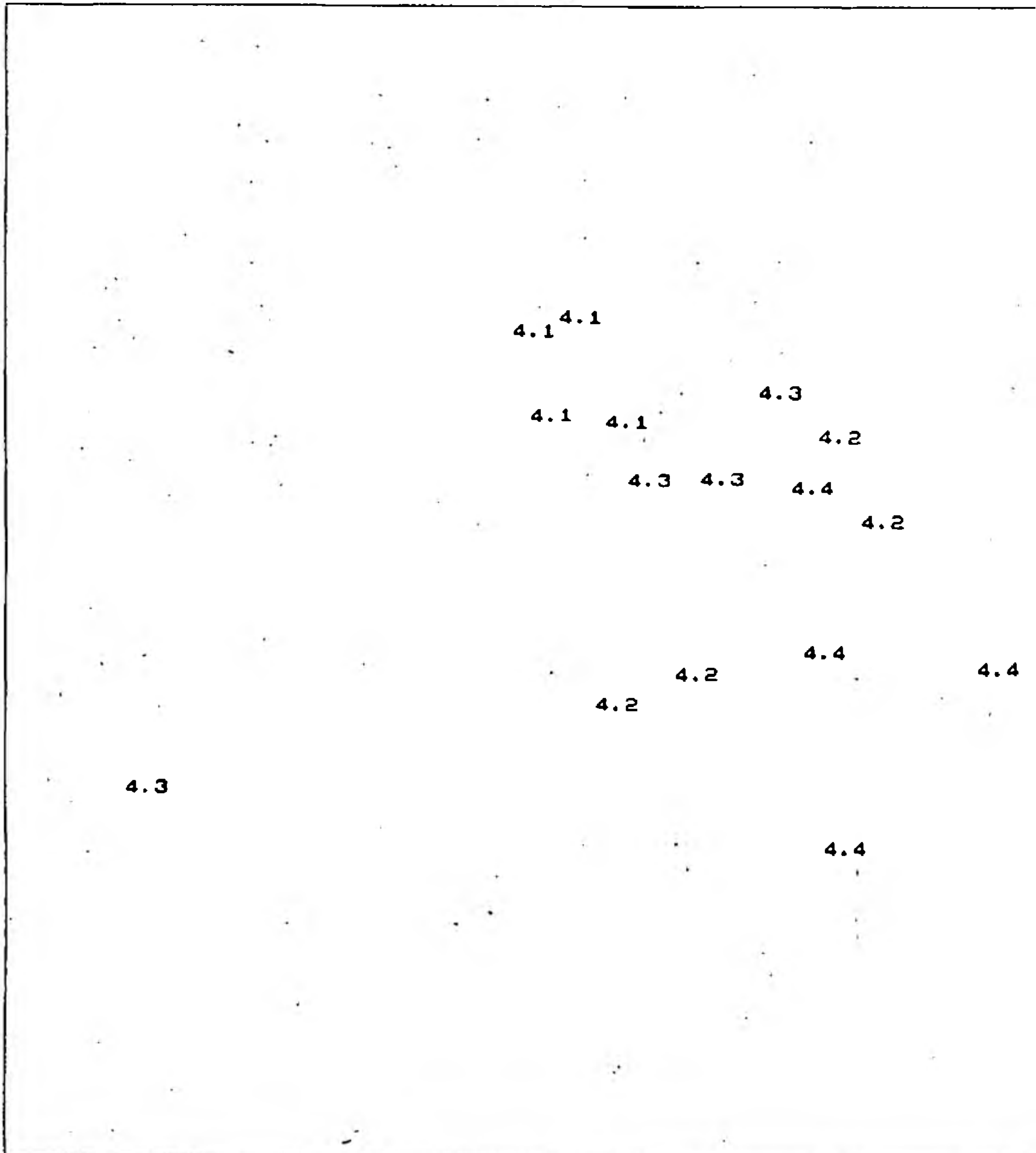


Figure 7: Mean Species Richness for all sites on each survey.

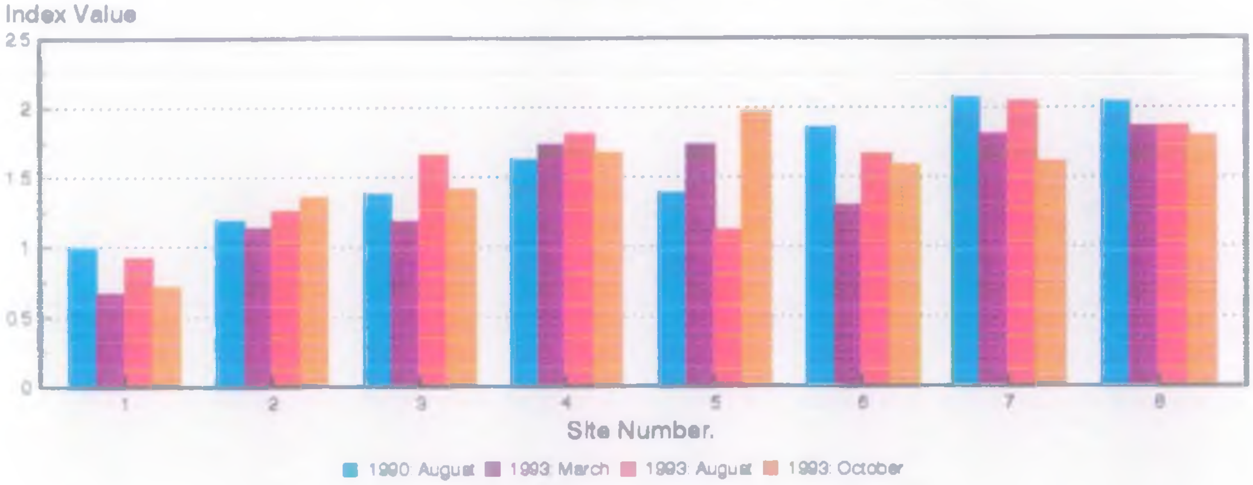
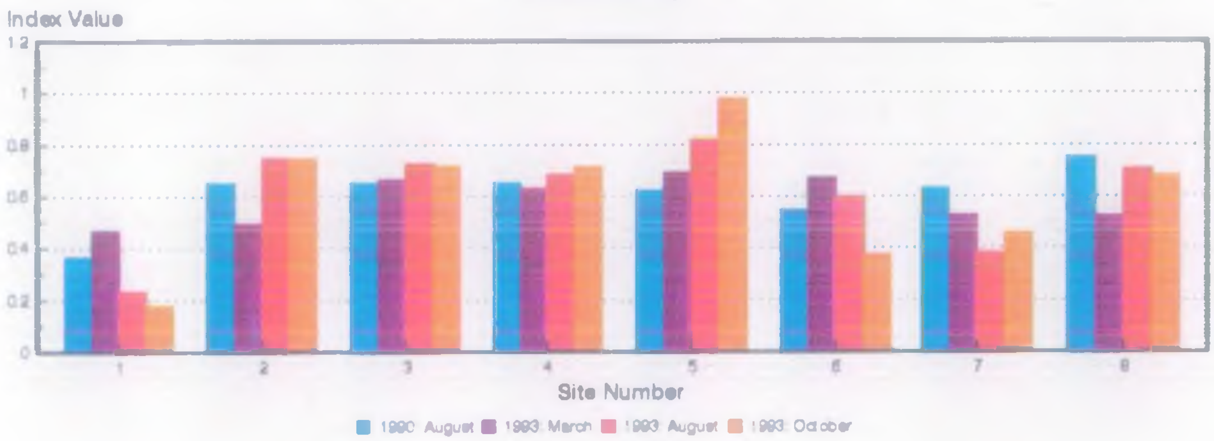


Figure 8: Mean Shannon-Weiner diversity index for all sites on each survey.

Figure 9: Pielou Evenness Index for all sites on each survey.



APPENDIX B

Table 1: Site locations and general information.

SITE NO.	SITE LOCATION	GRID REF.	APPROX. POSITION	SITE DESCRIPTION	R.P.D.
1	Newton Abbot	SX869717	MTL	Epilithic diatoms coating surface of 3-10cm mud over gravel. August 1993: Callitriche stagnalis cover. Channel 0.7ppt	0 cm
2	Passage House Inn, Kingsteignton	SX881723	MTL-HWN	Extensive mudflat of clay/mud fringed with marsh August 1993: Channel 3.5ppt. Standing water 30ppt	0 cm
3	Netherton House	SX895722	MTL	Thick intractable mud below mud with gravel. August 1993: Fucus and Ulva mid/upper shore. Channel 17ppt.	0 cm
4	Coombe Cellars Inn, Elmfield	SX903724	MTL-LWN	Shelly mud below pebbly mud. Standing water and algal debris. Leaf litter at 10 cm. August 1993: Channel 32.5ppt	0 cm
5	Flow Point, Bishopsteignton	SX910728	MTL-MLW	Mud with pebble and shell inclusions. Fucus and Ulvae scattered. Standing water. August 1993: Channel 30.2ppt October 1993: Arenicola casts 2-3 sq.m.	<1 cm
6	West of Gravel Point	SX920724	LWN	Mud overlying stones and rocks. Fucus spp. August 1993: Enteromorpha, Fucus, Chondrus. Channel 22ppt	0 cm
7	Shaldon	SX926723	MTL	Mudflat with scattered shell, clay and gravel. Arenicola casts @ 10-20 sq.m. August 1993: Filamentous algae. Fucus October 1993: Arenicola casts 10 sq.m.	3cm
8	The Salty, Shaldon Bridge	SX932727	MTL	Shingle-pebble (over sand). Epifauna conspicuous (Mytilus, Littorina, Carcinus and Semibalanus). Many boat moorings. August 1993: Clear evidence of shifts in sediment. Channel 35ppt. October 1993:	8cm 2-3 cm

Table 2: Particle size analysis: Initial survey (August 1990).
Percent dry weight (w/w) from sieving.

site number:	1	2	3	4	5	6	7	8
particle fraction								
Retained on 0.5mm	12.5	0.8	1.7	1.7	3.7	4.2	7.5	88.7
Retained on 0.25mm	2.4	0.7	2.6	2.4	6.6	8.1	5.4	8.2
Retained on 0.125mm	3.3	0.7	3.2	9.6	19.6	13.9	12.2	1.9
Retained on 0.063mm	2.4	2.8	9.1	19.6	27.2	17.1	43.1	0.6
% fines (passing 0.063mm)	76.9	93.9	79.7	43.6	41.6	49.8	31.2	0.3

Table 2.1: Particle size analysis: March and August 1993 surveys.
Percent dry weight by laser diffraction analysis.

Surveys	Mar	Aug	Mar	Aug	Mar	Aug	Mar	Aug	Mar	Aug	Mar	Aug	Mar	Aug	Mar	Aug
site number:	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
particle fraction																
> 0.50mm	9.9	57.7	0.2	0.0	–	0.0	0.0	0.0	74.1	7.5	0.0	0.0	0.0	9.2	100.0	10.6
>0.261mm	8.7	3.8	0.2	0.0	–	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	15.6
>0.113mm	7.4	7.1	3.8	1.1	–	0.3	1.4	2.6	0.9	2.6	0.5	1.4	1.1	7.7	0.0	38.7
>0.063mm	11.4	5.4	13.2	10.9	–	7.9	15.7	18.3	4.4	12.0	7.5	12.3	11.3	15.3	0.0	20.6
% fines (<0.064mm)	51.9	25.9	12.0	88.0	–	91.7	82.9	79.1	20.6	77.8	92.0	86.0	87.6	34.8	0.0	14.7

Table 3: Univariate indices. Mean values, and standard deviation for all sites and surveys.

Univariate indices were: Species Richness, Shannon-Weiner diversity and Pielou Evenness.

	SITE NUMBER 1	2	3	4	5	6	7	8
August 1990								
Species richness (mean)	0.999	1.187	1.378	1.625	1.385	1.858	2.070	2.040
(standard deviation)	0.711	0.152	0.038	0.338	0.283	0.344	0.264	0.431
Shannon-Weiner (mean)	0.569	1.246	1.442	1.547	1.290	1.256	1.595	1.728
(standard deviation)	0.743	0.382	0.137	0.102	0.415	0.263	0.231	0.431
Pielou evenness (mean)	0.569	0.650	0.651	0.651	0.651	0.545	0.628	0.750
(standard deviation)	0.743	0.139	0.102	0.102	0.029	0.115	0.095	0.065
March 1993								
Species richness (mean)	0.662	1.136	1.178	1.730	1.730	1.296	1.802	1.849
(standard deviation)	0.213	0.083	0.404	0.494	0.675	0.243	0.163	0.405
Shannon-Weiner (mean)	0.649	0.904	1.138	1.313	1.369	1.161	1.271	1.210
(standard deviation)	0.085	0.110	0.252	0.182	0.594	0.288	0.290	0.371
Pielou evenness (mean)	0.466	0.494	0.494	0.623	0.690	0.671	0.524	0.523
(standard deviation)	0.098	0.059	0.059	0.022	0.220	0.165	0.110	0.133
August 1993								
Species richness (mean)	0.922	1.258	1.659	1.805	1.110	1.667	2.037	1.860
(standard deviation)	0.177	0.134	0.219	0.205	0.287	0.330	0.503	0.546
Shannon-Weiner (mean)	0.474	1.392	1.658	1.581	0.922	1.228	0.950	1.344
(standard deviation)	0.200	0.105	0.118	0.157	0.277	0.220	0.179	0.277
Pielou evenness (mean)	0.231	0.745	0.723	0.681	0.815	0.594	0.377	0.702
(standard deviation)	0.079	0.038	0.038	0.047	0.114	0.054	0.077	0.135
October 1993								
Species richness (mean)	0.710	1.355	1.409	1.680	1.972	1.589	1.609	1.791
(standard deviation)	0.318	0.264	0.242	0.616	0.227	0.225	0.310	0.173
Shannon-Weiner (mean)	0.240	1.453	1.307	1.438	1.331	0.880	0.755	0.761
(standard deviation)	0.079	0.127	0.146	0.350	0.231	0.186	0.521	0.066
Pielou evenness (mean)	0.177	0.746	0.716	0.710	0.977	0.372	0.460	0.678
(standard deviation)	0.080	0.038	0.020	0.063	0.023	0.167	0.437	0.084

Table 4: Significance tests (ANOSIM) of temporal differences in community structure.
The significance level was taken to be 95%. + significant.
- not significant.

Tested pairs	SITE 4	6	8
August 1990 - March 1993	+	+	+
August 1990 - August 1993	+	+	+
August 1990 - October 1993	+	+	+
March 1993 - August 1993	-	-	-
March 1993 - October 1993	-	-	-
August 1993 - October 1993	-	-	+

APPENDIX C

Teign estuary Initial survey :
9th August 1990

SAMPLE CODE

Species	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5.1	5.2	5.4	6.1	6.2	6.3	6.4
Nemertea	–	–	–	–	–	–	–	1	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–
Eteone longa	–	–	–	–	–	–	–	–	1	2	1	–	1	–	4	–	–	–	–	–	1	2	–
Phyllodoce mucosa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Glycera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Glycera tridactyla	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Kefersteinia ?cirrhata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Streptosyllis websteri	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Parapionosyllis minuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Syllis cornuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nereis diversicolor	–	–	1	–	36	35	28	38	65	17	59	22	7	10	17	16	13	–	2	1	7	1	7
Nephtys (juv)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nephtys hombergii	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nephtys kersivalensis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2	1	–
Dorvillea rubrovittata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Protodorvillea kefersteini	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Aonides oxycephala	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Malacoceros ? tetracerus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polydora cornuta	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polydora ciliata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Pygospio elegans	–	–	–	–	–	–	–	–	1	–	–	7	–	–	1	–	5	–	4	2	6	5	–
Streblospio shrubsolii	–	–	–	–	10	–	3	–	19	7	27	35	38	16	8	38	5	–	3	9	7	11	–
Cirratulidae indet.	–	–	–	–	–	–	–	3	–	–	–	2	10	–	15	42	–	2	–	–	–	3	7
Tharyx killariensis	–	–	–	–	–	–	–	3	–	–	5	2	16	28	35	29	10	21	14	67	24	13	7
Caulleriella zetlandicus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cirriformia tentaculata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Capitella	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	2	3	1	–	–	–
Heteromastus filiformis	–	–	–	–	–	–	–	–	1	–	–	1	2	–	2	7	3	–	–	–	1	2	4
Mediomastus fragilis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Notomastus latericeus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–
Arenicola marina	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Melinna palmata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Alkmaria romijni	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete sp.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete acutifrons	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete lindstroemi	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Manayunkia aestuarina	1	–	–	–	1	–	2	–	12	3	59	7	2	13	2	9	–	–	–	–	–	–	–
Paranais litoralis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tubificidae sp.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tubifex tubifex	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clitellio arenarius	1	–	–	2	–	1	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Teign estuary Initial survey :
9th August 1990

Species	SAMPLE CODE 1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5.1	5.2	5.4	6.1	6.2	6.3	6.4
Tubifex costatus	–	268	191	135	25	6	36	10	71	25	110	201	145	45	15	20	7	–	–	–	–	–	–
Tubificoides benedii	–	–	–	1	4	1	–	8	115	46	110	106	166	143	151	76	91	27	140	75	211	63	60
Tubificoides pseudogaster	–	–	–	–	–	–	–	–	351	45	477	49	251	237	105	166	61	–	10	11	2	3	2
Monopylephorus irroratus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Enchytraeidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gammaridae (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Melita palmata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Corophium multisetosum ?	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Corophium volutator	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cyathura carinata	1	–	–	–	–	–	–	–	–	–	–	17	–	–	–	–	–	–	–	–	–	–	–
Sphaeroma monodi	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Jaera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lymnaea peregra	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Potamopyrgus antipodarum	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hydrobia ulvae	–	–	–	1	–	–	–	5	–	–	–	–	–	–	–	–	2	–	2	–	–	–	–
Cerastoderma edule	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	1	1
Mysella bidentata	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–
Macoma balthica (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Scrobicularia plana	–	–	–	–	7	1	5	3	2	1	1	3	4	4	4	1	–	–	–	4	4	3	4
Abra tenuis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tapes decussatus (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Venerupis senegalensis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mya arenaria	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Golfingia sp.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Chironomidae	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dolichopodidae	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tipulidae	2	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Teign estuary Initial survey :
9th August 1990

Species	7.1	7.2	7.3	7.4	8.1	8.2	8.3	8.4
Nemertea	–	–	–	–	–	–	–	–
Eteone longa	1	–	1	7	–	–	–	–
Phyllodoce mucosa	–	–	–	–	–	–	–	–
Glycera	–	–	–	–	–	–	–	–
Glycera tridactyla	–	–	–	–	–	1	1	–
Kefersteinia ?cirrhata	–	–	–	–	1	–	–	–
Streptosyllis websteri	–	–	–	–	–	–	–	–
Parapionosyllis minuta	–	–	–	–	–	–	–	11
Syllis cornuta	–	–	–	–	2	–	–	–
Nereis diversicolor	8	8	26	15	–	–	–	–
Nephtys (juv)	–	–	–	–	–	–	–	–
Nephtys hombergii	–	1	–	–	–	–	–	–
Nephtys kersivalensis	–	–	–	–	–	–	–	–
Dorvillea rubrovittata	–	–	–	–	1	–	–	–
Protodorvillea kefersteini	–	–	–	–	–	–	–	5
Aonides oxycephala	–	–	–	–	5	3	2	3
Malacoceros ? tetracerus	–	–	–	–	–	–	–	–
Polydora cornuta	–	2	–	–	–	–	–	–
Polydora ciliata	–	–	–	1	–	–	–	–
Pygospio elegans	1	1	4	5	–	–	–	–
Streblospio shrubsolii	8	1	5	2	–	–	–	–
Cirratulidae indet.	–	16	6	22	–	–	–	–
Tharyx killariensis	16	26	20	31	–	–	–	–
Caulleriella zetlandicus	–	–	–	–	3	–	–	–
Cirriformia tentaculata	–	–	–	–	–	–	–	1
Capitella	–	–	–	–	–	–	–	–
Heteromastus filiformis	9	22	29	37	–	–	–	–
Mediomastus fragilis	1	3	–	–	2	–	3	–
Notomastus latericeus	–	–	–	–	2	–	1	–
Arenicola marina	–	–	–	–	–	–	–	–
Melinna palmata	–	–	–	–	–	–	–	–
Alkmaria romijni	–	–	–	–	–	–	–	–
Ampharete sp.	1	–	–	–	–	–	–	–
Ampharete acutifrons	–	–	–	–	–	–	–	–
Ampharete lindstroemi	–	–	–	–	–	–	–	–
Manayunkia aestuarina	–	–	–	1	–	–	–	–
Paranais litoralis	–	–	–	–	–	–	–	–
Tubificidae sp.1	–	–	–	–	–	–	–	–
Tubifex tubifex	–	–	–	–	–	–	–	–
Clitellio arenarius	–	–	–	–	–	–	–	–

Teign estuary initial survey :
9th August 1990

Species	7.1	7.2	7.3	7.4	8.1	8.2	8.3	8.4
Tubifex costatus	10	–	–	–	–	–	–	–
Tubificoides benedii	195	120	103	117	–	38	6	7
Tubificoides pseudogaster	86	38	125	43	–	–	–	1
Monopylephorus irroratus	–	–	–	–	–	–	–	–
Enchytraeidae	–	–	–	–	–	1	–	–
Gammaridae (juv.)	–	–	–	–	4	6	–	1
Melita palmata.	–	–	–	–	32	16	20	7
Corophium multisetosum ?	–	–	–	–	–	–	–	–
Corophium volutator	–	–	–	–	–	–	–	–
Cyathura carinata	–	–	–	–	–	–	–	–
Sphaeroma monodi	–	–	–	–	–	–	–	–
Jaera	–	–	–	–	4	25	21	79
Lymnaea peregra	–	–	–	–	–	–	–	–
Potamopyrgus antipodarum	–	–	–	–	–	–	–	–
Hydrobia ulvae	–	1	–	–	–	–	–	–
Cerastoderma edule	–	–	–	–	9	–	7	8
Mysella bidentata	–	–	–	3	–	–	–	–
Macoma balthica (juv.)	–	–	–	–	–	–	–	–
Scrobicularia plana	1	1	5	5	–	–	–	–
Abra tenuis	–	–	–	–	–	–	–	–
Tapes decussatus (juv.)	–	–	–	–	–	–	–	–
Venerupis senegalensis	1	1	1	–	12	8	8	17
Mya arenaria	–	–	–	–	–	–	–	–
Golfingia sp.	–	–	–	–	–	–	–	4
Chironomidae	–	–	–	–	–	–	–	–
Dolichopodidae	–	–	–	–	–	–	–	–
Tipulidae	–	–	–	–	–	–	–	–

Teign estuary 1993 survey 1:
24–25 March 1993

SAMPLE CODE

Species	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5.1	5.2	5.3	5.4	6.1	6.2
Nemertea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Eteone longa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Phyllodoce mucosa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Glycera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Glycera tridactyla	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–
Kefersteinia cirrhata?	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Streptosyllis websteri	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Parapionosyllis minuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Syllis cornuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nereis diversicolor	–	1	–	–	11	8	12	11	45	48	42	47	1	–	1	2	–	5	1	1	–	–
Nephtys (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1
Nephtys hombergii	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	1	–
Nephtys kersivalensis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dorvillea rubrovittata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Protodorvillea kefersteini	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Aonides oxycephala	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Malacoceros ?tetracerus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polydora cornuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polydora ciliata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Pygospio elegans	–	–	–	–	–	1	–	–	–	–	–	–	1	2	–	4	19	–	–		6 2	–
Streblospio shrubsolii	–	–	–	–	3	–	3	1	–	1	6	3	7	4	3	7	–	–	2	–	5	1
Cirratulidae indet.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tharyx killariensis	–	–	–	–	–	1	–	8	–	–	–	–	16	16	20	63	50	4	13		53 7	–
Caulleriella zetlandicus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cirriformia tentaculata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Capitella	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	2	–	–	–	–
Heteromastus filiformis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–
Mediomastus fragilis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	–	–	–
Notomastus latericeus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Arenicola marina	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1 –	–
Ampharete sp.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Melinna palmata	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–
Alkmaria romijni	–	–	–	–	–	–	–	–	2	2	8	3	–	–	–	–	–	–	–	–	–	–
Ampharete acutifrons	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	–
Ampharete lindstroemi	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Manayunkia aesturina	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Paranais litoralis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tubificidae sp.1	49	81	107	142	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tubifex tubifex	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clitellio arenarius	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Teign estuary 1993 survey 1:
24–25 March 1993

SAMPLE CODE

Species	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5.1	5.2	5.3	5.4	6.1	6.2
Tubifex costatus	107	28	15	23	3	–	1	1	27	8	76	24	5	2	1	25	–	–	–	–	2	–
Tubificoides benedii	–	–	–	–	84	48	96	86	1	–	4	–	51	47	27	50	3	–	5	1	4	7
Tubificoides pseudogaster	–	–	–	–	5	5	15	–	–	–	1	–	2	–	–	7	–	–	–	–	–	–
Monopylephorus irroratus	–	3	2	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Enchytraeidae	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	1	–	–	–	–	–	–
Gammaridae (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1	–	–	–	–	–
Melita palmata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Corophium volutator	–	1	3	2	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–
Corophium ?multisetosum	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cyathura carinata	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–
Sphaeroma monodi	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Jaera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lymnaea peregra	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Potamopygrus antipodarum	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hydrobia ulvae	–	–	–	–	–	–	2	2	–	–	4	2	–	–	–	–	2	–	2	–	–	–
Cerastoderma edule	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mysella bidentata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Macoma balthica	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	–	–	–	–	–	–
Scrobicularia plana	–	–	–	–	3	6	2	–	11	12	19	12	–	3	3	–	1	1	8	2	–	–
Abra tenuis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tapes decussatus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Venerupis senegalensis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mya arenaria	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Golfingia sp.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Chironomidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dolichopodidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tipulidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Teign estuary 1993 survey 1:
24–25 March 1993

Species	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3	8.4
Nemertea	–	–	–	–	–	–	7	1	1	–
Eteone longa	–	–	–	–	–	–	–	–	–	–
Phyllodoce mucosa	–	–	–	–	–	–	–	–	–	–
Glycera	–	–	–	–	–	–	–	–	–	–
Glycera tridactyla	–	–	1	–	–	–	–	–	1	1
Kefersteinia cirrhata?	–	–	–	–	–	–	–	–	–	–
Streptosyllis websteri	–	–	–	–	–	–	–	–	1	–
Parapionosyllis minuta	–	–	–	–	–	–	–	–	–	–
Syllis cornuta	–	–	–	–	–	–	–	–	–	–
Nereis diversicolor	1	–	6	27	2	3	1	–	–	–
Nephtys (juv.)	–	–	–	–	–	–	–	–	–	–
Nephtys hombergii	–	2	–	–	–	–	–	–	–	–
Nephtys kersivalensis	–	–	–	–	–	–	–	–	–	–
Dorvillea rubrovittata	–	–	–	–	–	–	–	–	–	–
Protodorvillea kefersteini	–	–	–	–	–	–	7	–	1	2
Aonides oxycephala	–	–	–	–	–	–	13	8	35	28
Malacoceros ?tetracerus	–	–	–	–	–	–	–	–	–	–
Polydora cornuta	–	–	–	–	–	–	–	–	–	–
Polydora ciliata	–	–	–	–	–	–	–	–	–	–
Pygospio elegans	4	1	36	2	2	10	1	–	1	–
Streblospio shrubsolii	19	–	2	–	–	–	–	–	–	–
Cirratulidae indet.	–	–	–	–	–	–	–	–	–	–
Tharyx killariensis	19	3	14	1	33	40	–	–	–	–
Caulleriella zetlandicus	–	–	–	–	–	–	–	–	–	–
Cirriformia tentaculata	–	–	–	–	–	–	9	12	8	5
Capitella	–	–	–	–	–	–	–	–	–	–
Heteromastus filiformis	–	–	33	39	43	56	–	–	–	–
Mediomastus fragilis	3	–	–	–	–	–	4	2	3	4
Notomastus latericeus	–	–	–	–	–	–	–	–	–	–
Arenicola marina	–	–	–	–	–	1	–	–	–	–
Ampharete sp.	–	–	–	–	–	–	–	–	–	–
Melinna palmata	–	–	2	1	–	1	–	–	–	–
Alkmaria romijni	–	–	–	–	–	–	–	–	–	–
Ampharete acutifrons	–	–	–	1	–	1	–	–	–	–
Ampharete lindstroemi	–	–	8	23	2	3	–	–	–	–
Manayunkia aesturina	–	–	–	–	–	–	–	–	–	–
Paranais litoralis	–	–	–	–	–	–	–	–	–	–
Tubificidae sp.1	–	–	–	–	–	–	–	–	–	–
Tubifex tubifex	–	–	–	–	–	–	–	–	–	–
Clitellio arenarius	–	–	–	–	–	–	–	–	–	–

Teign estuary 1993 survey 1:
24–25 March 1993

Species	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3	8.4
Tubifex costatus	–	–	–	–	–	–	–	–	–	–
Tubificoides benedii	14	24	262	114	235	152	56	61	73	157
Tubificoides pseudogaster	–	–	–	–	–	–	–	–	–	–
Monopylephorus irroratus	–	–	–	–	–	–	–	–	–	–
Enchytraeidae	–	–	–	–	–	–	–	–	–	–
Gammaridae (juv.)	–	–	–	–	–	–	3	–	–	4
Melita palmata	–	–	–	–	–	–	–	–	–	–
Corophium volutator	–	–	–	–	–	–	–	–	–	–
Corophium ?multisetosum	–	–	–	–	–	–	–	–	–	–
Cyathura carinata	–	–	–	–	–	–	–	–	–	–
Sphaeroma monodi	–	–	–	–	–	–	–	1	1	–
Jaera	–	–	–	–	–	–	–	–	–	–
Lymnaea peregra	–	–	–	–	–	–	–	–	–	–
Potamopygrus antipodarum	–	–	–	–	–	–	–	–	–	–
Hydrobia ulvae	–	–	16	–	19	7	–	1	1	1
Cerastoderma edule	1	4	4	1	2	4	1	1	1	–
Mysella bidentata	–	–	–	–	–	–	–	–	–	–
Macoma balthica	–	–	–	–	–	–	–	–	–	–
Scrobicularia plana	2	–	–	3	3	11	–	–	–	–
Abra tenuis	–	–	16	1	–	–	–	–	–	–
Tapes decussatus	–	–	–	–	–	–	–	1	–	–
Venerupis senegalensis	–	–	–	–	–	–	–	–	–	–
Mya arenaria	–	–	–	–	1	–	–	–	–	–
Golfingia sp.	–	–	–	–	–	–	–	–	–	–
Chironomidae	–	–	–	–	–	–	–	–	–	–
Dolichopodidae	–	–	–	–	–	–	–	–	–	–
Tipulidae	–	–	–	–	–	–	–	–	–	–

Teign estuary 1993 survey 2:
3–4 August 1993

SAMPLE CODE

Species	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5.1	5.2	5.3	5.4	6.1	6.2
Nemertea	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1	–	–
Eteone longa	–	–	–	–	–	–	–	–	1	3	–	1	4	2	2	1	–	–	–	–	–	1
Phyllodoce mucosa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Glycera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Glycera tridactyla	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Kefersteinia ?cirrhata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Streptosyllis websteri	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Parapionosyllis minuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Syllis cornuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nereis diversicolor	1	–	–	–	28	35	29	24	32	25	32	23	10	13	3	3	3	1	–	–	2	1
Nephtys (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nephtys hombergii	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–
Nephtys kersivalensis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dorvillea rubrovittata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Protodorvillea kefersteini	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Aonides oxycephala	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Malacoceros ? tetracerus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polydora cornuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polydora ciliata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Pygospio elegans	–	–	–	–	–	–	–	–	1	1	–	–	1	3	–	5	3	7	2	8	7	7
Streblospio shrubsolii	–	–	–	–	11	12	1	5	17	6	7	20	3	9	3	7	1	–	–	–	1	1
Cirratulidae indet.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tharyx killariensis	–	–	–	–	–	–	–	–	2	20	4	15	40	70	60	78	–	–	–	–	6	–
Caulleriella zetlandicus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cirriformia tentaculata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Capitella	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
Heteromastus filiformis	–	–	–	–	–	–	–	–	1	–	–	–	4	–	3	3	–	–	–	–	–	–
Mediomastus fragilis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Notomastus latericeus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Arenicola marina	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Melinna palmata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Alkmaria romijni	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete sp.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete acutifrons	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete lindstroemi	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Manayunkia aestuarina	–	–	–	–	–	–	–	–	–	–	1	4	–	–	–	–	–	–	–	–	–	–
Paranais litoralis	162	14	23	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tubificidae sp.1	1259	1475	1144	537	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–
Tubifex tubifex	6	18	94	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clitellio arenarius	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Telgn estuary 1993 survey 2:
3–4 August 1993

SAMPLE CODE

Species	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5.1	5.2	5.3	5.4	6.1	6.2
Tubifex costatus	1	25	39	14	45	38	16	25	98	31	48	80	–	19	2	19	–	–	–	–	–	–
Tubificoides benedii	–	–	3	–	–	–	–	3	71	73	89	80	41	91	54	52	1	–	–	2	33	35
Tubificoides pseudogaster	–	–	–	–	1	–	–	2	18	10	37	28	2	62	6	14	–	–	1	–	–	–
Monopylephorus irroratus	33	9	47	19	–	–	–	–	–	–	–	–	–	1	–	–	–	1	–	–	–	–
Enchytraeidae	–	8	28	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gammaridae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Melita palmata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Corophium volutator	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Corophium ?multisetosum	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cyathura carinata	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sphaeroma monodi	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Jaera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lymnaea peregra	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Potamopyrgus antipodarum	–	–	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hydrobia ulvae	2	–	–	–	3	2	10	3	–	–	1	3	–	–	5	9	–	–	–	–	–	–
Cerastoderma edule	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mysella bidentata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Macoma balthica	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Scrobicularia plana	–	–	–	–	8	6	6	8	4	4	–	8	2	3	–	2	–	–	–	–	–	3
Abra tenuis	–	–	–	–	–	–	–	–	–	–	7	–	–	–	2	4	–	–	–	–	–	–
Tapes decussatus (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Venerupis senegalensis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mya arenaria	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Golfingia sp.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Chironomidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dolichopodidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tipulidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Teign estuary 1993 survey 2:
3–4 August 1993

Species	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3	8.4
Nemertea	–	–	–	–	–	–	–	1	–	1
Eteone longa	2	–	19	6	9	3	1	–	–	–
Phyllodoce mucosa	–	–	–	1	–	–	–	–	–	–
Glycera	–	–	–	–	–	–	–	–	1	–
Glycera tridactyla	–	–	–	–	–	–	–	–	–	–
Kefersteinia ?cirrhata	–	–	–	–	–	–	–	–	–	–
Streptosyllis websteri	–	–	–	–	–	–	–	–	–	–
Parapionosyllis minuta	–	–	–	–	–	–	–	–	–	–
Syllis cornuta	–	–	–	–	–	–	–	–	–	–
Nereis diversicolor	3	3	4	8	2	2	–	–	–	–
Nephtys (juv.)	1	–	–	–	–	2	–	–	–	–
Nephtys hombergii	–	1	1	1	–	1	–	–	–	–
Nephtys kersivalensis	–	–	–	–	–	–	–	–	–	–
Dorvillea rubrovittata	–	–	–	–	–	–	–	–	–	–
Protodorvillea kefersteini	–	–	–	–	–	–	–	1	5	6
Aonides oxycephala	–	–	–	–	–	–	12	–	–	–
Malacoceros ? tetracerus	–	–	–	–	–	–	–	–	2	–
Polydora cornuta	1	1	–	–	–	–	–	–	–	–
Polydora ciliata	–	–	–	–	–	–	–	–	–	–
Pygospio elegans	9	12	2	19	3	5	–	1	–	–
Streblospio shrubsolii	7	1	4	10	7	–	–	–	–	–
Cirratulidae indet.	–	–	–	–	–	–	–	–	–	–
Tharyx killariensis	6	25	21	23	22	10	–	–	–	–
Caulleriella zetlandicus	–	–	–	–	–	–	–	–	–	–
Cirriformia tentaculata	–	–	–	–	–	–	1	–	2	1
Capitella	–	–	1	2	–	–	–	–	–	–
Heteromastus filiformis	–	–	7	3	1	–	–	–	–	1
Mediomastus fragilis	–	–	–	–	–	–	–	–	–	–
Notomastus latericeus	–	–	–	–	–	–	–	–	–	–
Arenicola marina	–	–	–	–	–	–	–	–	–	–
Melinna palmata	–	–	–	–	–	–	–	–	–	–
Alkmaria romijni	–	–	–	–	–	–	–	–	–	–
Ampharete sp.	–	–	–	–	–	–	–	–	–	–
Ampharete acutifrons	–	1	2	2	2	–	–	–	–	–
Ampharete lindstroemi	–	–	–	–	–	–	–	–	–	–
Manayunkia aestuarina	–	–	–	–	–	–	–	–	–	–
Paranais litoralis	–	–	–	–	–	–	–	–	–	–
Tubificidae sp.1	–	–	1	–	–	–	–	–	–	–
Tubifex tubifex	–	–	–	–	–	–	–	–	–	–
Clitellio arenarius	–	–	–	–	–	–	–	–	–	–

Teign estuary 1993 survey 2:
3–4 August 1993

Species	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3	8.4
Tubifex costatus	–	–	–	1	–	–	–	–	–	–
Tubificoides benedii	53	35	362	389	315	101	23	2	27	18
Tubificoides pseudogaster	–	–	48	45	4	–	–	–	–	–
Monopylephorus irroratus	–	–	–	–	–	–	–	–	–	–
Enchytraeidae	–	–	–	1	–	–	–	–	–	–
Gammaridae	2	1	–	–	–	–	–	–	–	–
Melita palmata	–	–	–	–	–	–	–	4	2	1
Corophium volutator	–	–	–	–	–	–	–	–	–	–
Corophium ?multisetosum	–	–	–	–	–	–	–	–	–	–
Cyathura carinata	–	–	–	–	–	–	–	–	–	–
Sphaeroma monodi	–	–	–	–	–	–	–	–	–	–
Jaera	–	–	–	–	–	–	1	1	4	1
Lymnaea peregra	–	–	–	–	–	–	–	–	–	–
Potamopyrgus antipodarum	–	–	–	–	–	–	–	–	–	–
Hydrobia ulvae	–	–	4	4	–	9	–	–	–	–
Cerastoderma edule	–	–	–	1	1	–	–	–	2	1
Mysella bidentata	–	–	–	–	–	–	–	–	–	–
Macoma balthica	–	–	–	1	–	–	–	–	–	–
Scrobicularia plana	–	–	2	–	3	3	–	–	–	–
Abra tenuis	–	2	–	1	–	–	–	–	–	–
Tapes decussatus (juv.)	–	–	–	–	–	–	–	–	–	1
Venerupis senegalensis	–	–	–	–	–	–	–	–	–	–
Mya arenaria	–	–	–	–	–	–	–	–	–	–
Golfingia sp.	–	–	–	–	–	–	–	–	–	–
Chironomidae	–	–	–	–	–	–	–	–	–	–
Dolichopodidae	–	–	–	–	–	–	–	–	–	–
Tipulidae	–	–	–	–	–	–	–	–	–	–

Teign estuary 1993 survey 3:
14 – 15 October 1993

	SAMPLE CODE																					
Species	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5.1	5.2	5.3	5.4	6.1	6.2
Nemertea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Eteone longa	–	–	–	–	2	–	2	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1
Phyllodoce mucosa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Glycera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Glycera tridactyla	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Kefersteinia ?cirrhata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Streptosyllis websteri	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Parapionosyllis minuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Syllis cornuta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nereis diversicolor	1	–	2	–	35	29	30	17	19	27	18	23	3	3	2	–	–	–	–	–	1	–
Nephtys (juv)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nephtys hombergii	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	1	1
Nephtys kersivalensis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dorvillea rubrovittata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Protodorvillea kefersteini	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Aonides oxycephala	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Malacoceros ? tetracerus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polydora cornuta	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Polydora ciliata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Pygospio elegans	–	–	–	–	–	–	–	–	–	–	–	–	1	3	1	2	–	–	–	–	–	3
Streblospio shrubsolii	–	–	–	–	3	1	2	–	1	4	1	1	–	6	–	–	1	1	–	1	1	6
Cirratulidae indet.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tharyx killariensis	–	–	–	–	–	1	3	–	–	–	–	–	18	19	4	24	2	1	1	2	1	4
Caulleriella zetlandicus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cirriformia tentaculata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Capitella	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Heteromastus filiformis	–	–	–	–	–	1	–	–	–	–	–	–	4	3	4	1	–	–	–	–	–	1
Mediomastus fragilis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Notomastus latericeus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Arenicola marina	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Melinna palmata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Alkmaria romijni	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete sp.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete acutifrons	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ampharete lindstroemi	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Manayunkia aestuarina	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Paranais litoralis	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tubificidae sp.1	1043	264	320	40	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tubifex tubifex	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clitellio arenarius	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

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	SAMPLE CODE																					
Species	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5.1	5.2	5.3	5.4	6.1	6.2
Tubifex costatus	6	1	9	–	24	27	41	11	10	11	8	10	–	3	–	–	–	–	–	–	–	–
Tubificoides benedii	–	–	–	–	37	25	61	20	–	1	–	–	47	27	14	30	–	1	–	1	18	62
Tubificoides pseudogaster	–	–	–	–	3	–	14	2	–	–	–	–	2	13	–	3	1	–	–	–	–	–
Monopylephorus irroratus	20	3	7	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Enchytraeidae	2	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gammaridae (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–
Melita palmata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Corophium multisetosum ?	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Corophium volutator	–	–	–	–	–	–	–	–	2	2	1	–	–	–	–	–	–	–	–	–	–	–
Cyathura carinata	–	–	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–
Sphaeroma monodi	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Jaera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lymnaea peregra	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Potamopyrgus antipodarum	1	7	5	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hydrobia ulvae	–	–	–	–	–	5	–	–	–	1	2	1	–	1	–	–	1	–	–	–	–	–
Cerastoderma edule	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mysella bidentata	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Macoma balthica (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Scrobicularia plana	–	–	–	–	6	3	4	–	4	6	7	5	8	–	1	–	–	–	–	–	–	–
Abra tenuis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–
Tapes decussatus (juv.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Venerupis senegalensis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mya arenaria	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Golfingia sp.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Chironomidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dolichopodidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tipulidae	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

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Species	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3	8.4
Nemertea	–	–	–	–	–	–	–	12	3	1
Eteone longa	–	1	1	–	4	–	–	–	–	–
Phyllodoce mucosa	–	–	–	–	–	–	–	–	–	–
Glycera	–	–	–	–	–	–	–	–	–	–
Glycera tridactyla	–	–	–	–	–	–	–	–	–	–
Kefersteinia ?cirrhata	–	–	–	–	–	–	–	–	–	–
Streptosyllis websteri	–	–	–	–	–	–	–	–	–	–
Parapionosyllis minuta	–	–	–	–	–	–	–	–	–	–
Syllis cornuta	–	–	–	–	–	–	–	–	–	–
Nereis diversicolor	1	–	3	–	3	–	–	–	–	–
Nephtys (juv)	–	–	–	–	–	–	–	–	–	–
Nephtys hombergii	1	–	–	–	3	–	–	–	–	–
Nephtys kersivalensis	–	–	–	–	–	–	–	–	–	–
Dorvillea rubrovittata	–	–	–	–	–	–	–	–	–	–
Protodorvillea kefersteini	–	–	–	–	–	–	–	1	2	–
Aonides oxycephala	–	–	–	–	–	–	6	10	16	1
Malacoceros ? tetracerus	–	–	–	–	–	–	1	–	–	1
Polydora cornuta	–	–	–	–	–	–	–	–	–	–
Polydora ciliata	–	–	–	–	–	–	–	–	–	–
Pygospio elegans	–	2	2	–	2	1	–	–	–	–
Streblospio shrubsolii	2	4	3	–	2	–	–	–	–	–
Cirratulidae indet.	–	–	–	–	–	–	–	–	–	–
Tharyx killariensis	2	1	1	–	3	–	1	1	–	1
Caulleriella zetlandicus	–	–	–	–	–	–	–	–	–	–
Cirriformia tentaculata	–	–	–	–	–	–	–	4	1	–
Capitella	–	–	1	–	–	–	–	–	–	–
Heteromastus filiformis	–	–	–	–	–	–	–	–	–	–
Mediomastus fragilis	–	–	–	–	1	–	1	2	–	–
Notomastus latericeus	–	–	–	–	–	–	–	–	–	–
Arenicola marina	–	–	–	–	–	–	–	–	–	–
Melinna palmata	–	–	–	–	–	1	–	–	–	–
Alkmaria romijni	–	–	–	–	–	–	–	–	–	–
Ampharete sp.	–	–	–	–	–	–	–	–	–	–
Ampharete acutifrons	–	–	–	–	–	–	–	–	–	–
Ampharete lindstroemi	–	–	–	–	–	–	–	–	–	–
Manayunkia aestuarina	–	–	–	–	–	–	–	–	–	–
Paranais litoralis	–	–	–	–	–	–	–	–	–	–
Tubificidae sp.1	–	–	–	–	–	–	–	–	–	–
Tubifex tubifex	–	–	–	–	–	–	–	–	–	–
Clitellio arenarius	–	–	–	–	–	–	–	–	–	–

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14 – 15 October 1993

Species	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3	8.4
Tubifex costatus	–	–	–	–	–	–	–	–	–	–
Tubificoides benedii	42	27	235	4	178	2	17	45	26	30
Tubificoides pseudogaster	1	–	–	–	–	–	1	–	–	–
Monopylephorus irroratus	–	–	–	–	–	–	–	–	–	–
Enchytraeidae	–	–	–	–	–	–	–	–	–	–
Gammaridae (juv.)	–	–	–	–	–	–	–	–	–	–
Melita palmata	–	–	–	–	–	–	5	–	–	9
Corophium multisetosum ?	–	–	–	–	–	–	–	–	–	–
Corophium volutator	–	–	–	–	–	–	–	–	–	–
Cyathura carinata	–	–	–	–	–	–	–	–	–	–
Sphaeroma monodi	–	–	–	–	–	–	–	–	1	1
Jaera	–	–	–	–	–	–	16	–	7	5
Lymnaea peregra	–	–	–	–	–	–	–	–	–	–
Potamopyrgus antipodarum	–	–	–	–	–	–	–	–	–	–
Hydrobia ulvae	–	2	–	–	5	1	–	–	–	–
Cerastoderma edule	–	–	–	–	–	–	–	1	–	–
Mysella bidentata	–	–	–	–	–	–	–	–	–	–
Macoma balthica (juv.)	–	1	–	–	–	–	–	–	–	–
Scrobicularia plana	–	–	3	–	1	–	–	–	–	–
Abra tenuis	–	–	–	–	–	–	–	–	–	–
Tapes decussatus (juv.)	–	–	–	–	–	–	4	–	2	–
Venerupis senegalensis	–	–	–	–	–	–	–	–	–	–
Mya arenaria	–	–	–	–	–	–	–	–	–	–
Golfingia sp.	–	–	–	–	–	–	–	–	–	–
Chironomidae	–	–	–	–	–	–	–	–	–	–
Dolichopodidae	–	–	–	–	–	–	–	–	–	–
Tipulidae	–	–	–	–	–	–	–	–	–	–