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A bioturbation classification of European marine infaunal invertebrates

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Abstract

Bioturbation, the biogenic modification of sediments through particle reworking and burrow ventilation, is a key mediator of many important geochemical processes in marine systems. In situ quantification of bioturbation can be achieved in a myriad of ways, requiring expert knowledge, technology, and resources not always available, and not feasible in some settings. Where dedicated research programmes do not exist, a practical alternative is the adoption of a trait-based approach to estimate community bioturbation potential (BP_c). This index can be calculated from inventories of species, abundance and biomass data (routinely available for many systems), and a functional classification of organism traits associated with sediment mixing (less available). Presently, however, there is no agreed standard categorization for the reworking mode and mobility of benthic species. Based on information from the literature and expert opinion, we provide a functional classification for 1033 benthic invertebrate species from the northwest European continental shelf, as a tool to enable the standardized calculation of BP_c in the region. Future uses of this classification table will increase the comparability and utility of large-scale assessments of ecosystem processes and functioning influenced by bioturbation (e.g., to support legislation). The key strengths, assumptions, and limitations of BP_c as a metric are critically reviewed, offering guidelines for its calculation and application.

Introduction

Marine soft-sediment habitats represent some of the most functionally important ecosystems on Earth, being characterized by a high biomass and diversity of invertebrate organisms that are fundamental to the mediation of a wealth of goods and services (Lotze et al. 2006; White et al. 2010; Widdicombe and Somerfield 2012). Infaunal inverte-

brates exhibit significant influence over benthic sedimentary geochemical environments in soft sediments through bioturbation, that is, the mixing of sediment and particulate materials carried out during foraging, feeding and burrow maintenance activities, and the enhancement of pore water and solute advection during burrow ventilation (Richter 1936; Rhoads 1974; Volkenborn et al. 2010). These processes influence oxygen, pH and redox gradients (Stahl et al. 2006; Pischedda et al. 2008; Queirós et al. 2011), metal cycling (Teal et al. 2009), sediment granulometry (Montserrat et al. 2009), pollutant release (Gilbert et al. 1994), macrofauna diversity (Volkenborn et al. 2007), bacterial activity and composition (Mermillod-Blondin and Rosenberg 2006; Gilbertson et al. 2012), and ultimately carbon (Kristensen 2001) and nitrogen cycling (Bertics et al. 2010). Hence, in light of anticipated changes to marine systems associated with human activity (Halpern et al. 2008; Hoegh-Guldberg and Bruno 2010), large-scale assessments of bioturbation can contribute to a better understanding of how of ecosystem functioning is mediated by biological activity.

Community bioturbation potential (BP_c) is a metric first described by Solan et al. (2004a), which combines abundance and biomass data with information about the life traits of individual species or taxonomic groups. This information describes modes of sediment reworking (R_i) and mobility (M_i) of taxa in a dataset, two traits known to regulate biological sediment mixing, a key component of bioturbation (Solan 2000; and refereces therein; Solan et al. 2004b). BP_c is thus not a direct measure of the process of bioturbation. Rather, BP_c provides an estimate of the potential of a community to bioturbate. Hence, where macrofauna abundance and biomass data are available, BP_c provides a means to estimate the extent to which benthic communities are likely to affect important ecosystem properties that underpin ecosystem functioning. The consequences of environmentally driven changes in biodiversity to BP_c, and its relation to ecosystem functioning, have been explored in this way in terrestrial (Bunker et al. 2005) and marine habitats (Solan et al. 2004a,b); at the local (Lohrer et al. 2010; Teal et al. 2013) and regional scales (Queirós et al. 2011; Birchenough et al. 2012; Solan et al. 2012); for different contexts (e.g., habitat structure and hypoxia, Queirós et al. 2011; Van Colen et al. 2012; Villnäs et al. 2012); and for a variety of ecosystem functions including productivity (Solan et al. 2012), nutrient cycling (Solan et al. 2004a), carbon storage (Bunker et al. 2005; Solan et al. 2012), and decomposition (Josefson et al. 2012). By calculating BP_c over time, or for different locations or scenarios, changes in the efficiency of the organism-sediment couple can be monitored for compliance in support of management and policy objectives (Painting et al. 2012; Van Hoey et al. 2013). For example, the effects of simulated changes in benthic community structure have previously been used to explore possible changes in ecosystem properties like sediment organic carbon at the North Sea scale, based on empirically derived relationships between BP_c and sediment organic carbon (Fig. 1). Similar uses of BP_c could invaluably contribute to an increased understanding of the role of ecosystem structure in the sustenance of marine functioning and its resilience to human activities, an urgent need under current European legislation (Marine Strategy Framework Directive, 2008/56/EC).

A significant obstacle in the widespread application of BP_c, however, is the need for a standard classification scheme that is supported by the benthic research community. As a first step in fulfilling this research gap, we present the findings of the Study Group on Climate Related Benthic Processes in the North Sea, an expert group appointed by the International Council for the Exploration of the Sea (ICES SGCBNS). We present the conclusions of a series of dedicated workshops tasked with deriving a functional classification of northwest European marine invertebrate species to facilitate the calculation of BP_c in different regions of the North Atlantic.

Methods

The classification of marine invertebrate infauna into bioturbation groups was carried out using 18 datasets compiled from northwest European waters (n = 1033 species). Following Swift (1993) and Solan et al. (2004a), each taxon (1) was scored on categorical scales that reflect increasing mobility (M_i) from 1 (living in a fixed tube) to 4 (free three dimensional movement via burrow system), and increasing sediment reworking (R_i) from 1 (epifauna that bioturbate at the sediment–water interface) to 5 (regenerators that excavate holes, transferring sediment at depth to the surface).

$$BP_c = \sum_{i=1}^{n} \sqrt{Bi/Ai} \times Ai \times Mi \times Ri$$

B_i and A_i are the biomass and abundance of species/taxon i in a sample. Trait scores were derived from an extensive review of published material and expert knowledge (consensus of 12 authors), and details of the scoring system are provided below. Species for which no published information was available were scored based on descriptions of species behavior and information on closely related species at the nearest taxonomic level. As BP_c captures information about sediment particle reworking, pelagic species and those living on hard substrates were not included. Sediment reworking functional types were also defined (Ft_i), according to François et al. (1997), Solan (2000), and Gérino et al. (2003). Taxonomic information and Aphia ID (a unique species database identifier) were extracted from the World Register of Marine Species (2012).

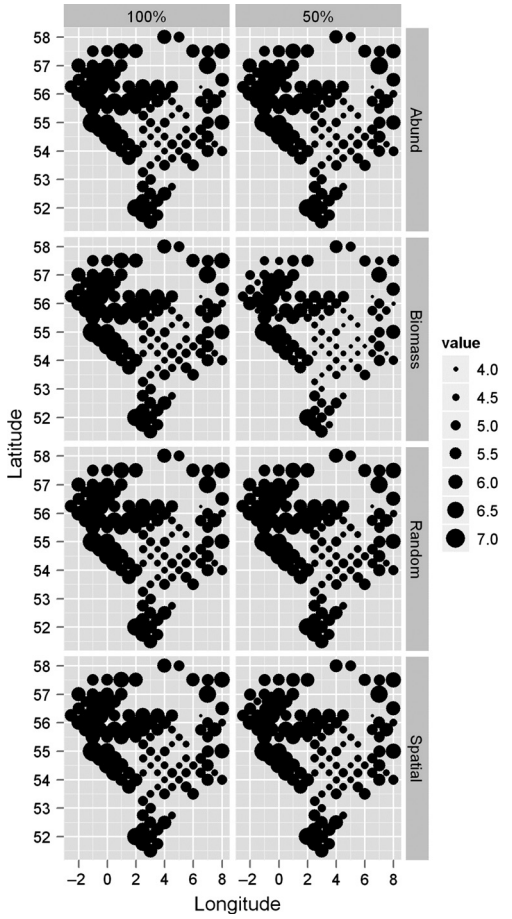

Figure 1. Percentage of sediment organic carbon (circles, diameter scaled to %) at each of 109 sites sampled during the North sea benthos Survey conducted by the Benthos Ecology Working Group of the International Council for the Exploration of the Sea in 1986 (left column, "100%"), and following the implementation of simulated trait based extinction scenarios (right column, "50%"). By combining measurements of ecosystem functions with information on relevant species traits (abundance, biomass, functional group and behaviour), empirically derived relationships between specific ecosystem functions and BP_c can be derived. In this case, the relationship between BP_c and sediment % of organic carbon. Species extinction scenarios can be simulated and the consequential changes in ecosystem functioning recalculated based on changes in community composition and/or structure following implementation of each scenario. In this example, the predicted levels of sediment organic carbon content are presented for a 50% reduction in species richness (right column, "50%") following sequential local expiration of species ordered by the most abundant species within a site (top row), those with the largest biomass (second row from top), or by the most abundant species across the region (bottom row). The consequences for ecosystem functioning (here, sediment organic carbon content) following these ordered extinction scenarios contrast to a scenario where species are extirpated in a random order (third row from top). Implementing various trait-based extinction scenarios in this way provides insights on possible outcomes following, for example, changes in management or as a result of anthropogenic forcing. Modified from Solan et al. (2012).

Results

Table 1 provides the classifications for mobility (M_i) and sediment particle reworking (R_i) assigned to the 1033 marine invertebrate species (and other taxa) from north-west European waters, and the associated sediment reworking functional types (Ft_i). Please refer to the table for details of the scoring criteria.

Discussion

As with any functional classification that on which BP_c is calculated relies on three main assumptions. Understanding these assumptions, and the need to correct for them where information is available, is key steps in the adequate use of BP_c as a metric:

1 If body size is constant, the BP_c of a species/taxon (BP_i) is transferable across space and time. BP_c accounts for two "fixed" traits (R_i and M_i) that are assumed to be directly related to life-history traits and activity levels of each species, that are not altered by context or spatiotemporal variation. Where information to the contrary is available about the alteration of species behavior in response to external stimuli, context-specific adjustments to reworking and mobility trait scores should be made accordingly: for example, thermal stress (Ouellette et al. 2004; Przeslawski et al. 2009); habitat structure (Godbold et al. 2011); ocean acidification (Godbold and Solan 2013); or presence of a predator (Maire et al. 2010). For instance, sediment type has been observed to be influential when determining the classification of a particular species into one of two specific functional groups (Needham et al. 2011), but this has not been documented for the vast majority of bioturbators. Incorporation of this type of information could be achieved using more sophisticated routines, such as fuzzy coding, to capture the influence of intraspecific variability in reworking and mobility traits (Maire et al. 2007; Bremner 2008; Godbold et al. 2011) across known sources of variation (habitat, season, food availability, etc.). The paucity of such information present for the majority of marine species (Tyler et al. 2012) is a source of concern and will be needed to project potential changes in BP_c under future policy or environmental scenarios. Typical body size is a "flexible" trait in the metric, which will vary in response to environmental variation, seasonality, stress, and disturbance (Queirós et al. 2006; Macdonald et al. 2012). BP_c captures this information through changes in the biomass/abundance ratio on which typical body size is calculated.

2 An organism's reworking (R_i) and mobility (M_i) modes remain the same across the life span of each individual.

Table 1. Bioturbation potential allocations for 1033 macrofaunal species. M_i and R_i are the reworking and mobility traits, and Ft_i is the corresponding sediment reworking functional types.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Grania	369702	4	3	B	Annelida	Clitellata	Enchytraeida	Caenogastropoda
Tubificoides amplivasatus	137570	4	3	B	Annelida	Clitellata	Haplotaxida	Tubificidae
Tubificoides insularis	137578	4	3	B	Annelida	Clitellata	Haplotaxida	Tubificidae
Tubificoides pseudogaster	137582	4	3	B	Annelida	Clitellata	Haplotaxida	Tubificidae
Oligochaeta	2036	4	3	B	Annelida	Clitellata		
Cossura longocirrata	129984	2	3	S	Annelida	Polychaeta		Cossuridae
Chirimia biceps	130277	3	2	UC/DC	Annelida	Polychaeta		Maldanidae
Clymenura lankesteri	130284	3	1	UC/DC	Annelida	Polychaeta		Maldanidae
Euclymene	129347	3	1	UC/DC	Annelida	Polychaeta		Maldanidae
Lumbriclymene	129350	3	1	UC/DC	Annelida	Polychaeta		Maldanidae
Nicomache	129357	3	1	UC/DC	Annelida	Polychaeta		Maldanidae
Rhodine	129363	3	1	UC	Annelida	Polychaeta		Maldanidae
Ophelia borealis	130491	4	3	B	Annelida	Polychaeta		Opheliidae
Ophelina cylindricaudata	465714	4	3	B	Annelida	Polychaeta		Opheliidae
Ophelina modesta	130507	4	3	B	Annelida	Polychaeta		Opheliidae
Ophelina norvegica	130508	4	3	B	Annelida	Polychaeta		Opheliidae
Travisia forbesii	130512	4	3	B	Annelida	Polychaeta		Opheliidae
Orbinia norvegica	156278	4	3	B	Annelida	Polychaeta		Orbiniidae
Aricidea (Acmira) laubieri	326587	2	3	S	Annelida	Polychaeta		Paraonidae
Aricidea (Allia) roberti	326598	2	3	S	Annelida	Polychaeta		Paraonidae
Aricidea (Aricidea) wassi	326605	2	3	S	Annelida	Polychaeta		Paraonidae
Aricidea simonae	130570	2	3	S	Annelida	Polychaeta		Paraonidae
Aricidea suecica	130572	2	3	S	Annelida	Polychaeta		Paraonidae
Cirrophorus armatus	152339	2	3	S	Annelida	Polychaeta		Paraonidae
Paraonis fulgens	146932	2	3	S	Annelida	Polychaeta		Paraonidae
Polygordius	129472	2	2	S	Annelida	Polychaeta		Polygordiidae
Protodriloides chaetifer	130837	2	2	S	Annelida	Polychaeta		Protodriloididae
Polyphysia crassa	130977	4	4	B	Annelida	Polychaeta		Scalibregmatidae
Paramphinome jeffreysii	129837	4	3	B	Annelida	Polychaeta	Amphinomida	Amphinomidae
Pareurythoe borealis	129838	4	3	B	Annelida	Polychaeta	Amphinomida	Amphinomidae
Euphrosine foliosa	130083	2	3	S	Annelida	Polychaeta	Amphinomida	Euphrosinidae
Capitellida	890	3	2	UC	Annelida	Polychaeta	Capitellida	
Ophryotrocha	129266	4	3	B	Annelida	Polychaeta	Eunicida	Dorvilleidae
Parougia caeca	130036	4	3	B	Annelida	Polychaeta	Eunicida	Dorvilleidae
Parougia eliasoni	130037	4	3	B	Annelida	Polychaeta	Eunicida	Dorvilleidae
Parougia nigridentata	130039	4	3	B	Annelida	Polychaeta	Eunicida	Dorvilleidae
Protodorvillea kefersteini	130041	4	3	B	Annelida	Polychaeta	Eunicida	Dorvilleidae
Schistomeringos	129274	4	3	B	Annelida	Polychaeta	Eunicida	Dorvilleidae
Schistomeringos rudolphii	154127	4	3	B	Annelida	Polychaeta	Eunicida	Dorvilleidae
Eunice	129278	4	3	B	Annelida	Polychaeta	Eunicida	Eunicidae
Eunice dubitata	130055	4	3	B	Annelida	Polychaeta	Eunicida	Eunicidae
Eunice pennata	130060	4	3	B	Annelida	Polychaeta	Eunicida	Eunicidae
Eunicidae	966	4	3	B	Annelida	Polychaeta	Eunicida	Eunicidae
Lysidice ninetta	130071	4	3	B	Annelida	Polychaeta	Eunicida	Eunicidae
Marphysa	129281	4	3	B	Annelida	Polychaeta	Eunicida	Eunicidae
Marphysa bellii	130072	4	3	B	Annelida	Polychaeta	Eunicida	Eunicidae
Nematonereis unicornis	594957	4	3	B	Annelida	Polychaeta	Eunicida	Eunicidae
Abyssoninoe	129331	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Abyssoninoe hibernica	146469	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Lumbrineriopsis paradoxa	130235	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Lumbrineris	129337	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Lumbrineris agastos	130236	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Lumbrineris aniara	130238	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Lumbrineris fragilis	152285	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Lumbrineris gracilis	130244	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Lumbrineris latreilli	130248	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Lumbrineris magnidentata	155360	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Ninoe armoricana	130254	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Scoletoma	129340	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Scoletoma impatiens	130263	4	3	B	Annelida	Polychaeta	Eunicida	Lumbrineridae
Arabella	129199	4	3	B	Annelida	Polychaeta	Eunicida	Oenonidae
Arabella iricolor	129854	4	3	B	Annelida	Polychaeta	Eunicida	Oenonidae
Drilonereis	129200	4	3	B	Annelida	Polychaeta	Eunicida	Oenonidae
Drilonereis filum	129856	4	3	B	Annelida	Polychaeta	Eunicida	Oenonidae
Hyalinoecia tubicola	130464	2	3	S	Annelida	Polychaeta	Eunicida	Onuphidae
Nothria conchylega	130467	2	3	S	Annelida	Polychaeta	Eunicida	Onuphidae
Nothria hyperborea	181500	2	3	S	Annelida	Polychaeta	Eunicida	Onuphidae
Onuphis	129404	2	3	S	Annelida	Polychaeta	Eunicida	Onuphidae
Paradiopatra \quadricuspis	130480	2	3	S	Annelida	Polychaeta	Eunicida	Onuphidae
Eunicida	895	4	3	B	Annelida	Polychaeta	Eunicida	
Eupanthalis kinbergi	129735	4	3	B	Annelida	Polychaeta	Phyllodocida	Acoetidae
Aphrodita aculeata	129840	4	3	B	Annelida	Polychaeta	Phyllodocida	Aphroditidae
Aphroditidae	938	4	3	B	Annelida	Polychaeta	Phyllodocida	Aphroditidae
Glycera	129296	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera alba	130116	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera celtica	130119	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera fallax	336908	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera gigantea	130122	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera lapidum	130123	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera oxycephala	130126	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera rouxii	130127	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera tesselata	130128	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera tridactyla	130130	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycera unicornis	130131	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glyceridae	952	4	3	B	Annelida	Polychaeta	Phyllodocida	Glyceridae
Glycinde nordmanni	130136	4	3	B	Annelida	Polychaeta	Phyllodocida	Goniadidae
Goniada	129300	4	3	B	Annelida	Polychaeta	Phyllodocida	Goniadidae
Goniada maculata	130140	4	3	B	Annelida	Polychaeta	Phyllodocida	Goniadidae
Goniadella	129301	4	3	B	Annelida	Polychaeta	Phyllodocida	Goniadidae
Goniadella gracilis	130145	4	3	B	Annelida	Polychaeta	Phyllodocida	Goniadidae
Gyptis	129307	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Hesionidae	946	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Kefersteinia cirrata	130164	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Microphthalmus	129313	2	3	S	Annelida	Polychaeta	Phyllodocida	Hesionidae
Microphthalmus similis	130176	2	3	S	Annelida	Polychaeta	Phyllodocida	Hesionidae
Nereimyra punctata	130185	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Oxydromus agilis	710683	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Oxydromus flexuosus	710680	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Podarkeopsis capensis	130195	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Psamathe fusca	152249	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Syllidia armata	130198	4	3	B	Annelida	Polychaeta	Phyllodocida	Hesionidae
Aglaophamus agilis	130343	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtyidae	956	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys	129370	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys assimilis	130353	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys caeca	130355	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys cirrosa	130357	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys hombergii	130359	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys hystricis	130360	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys incisa	130362	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys kersivalensis	130363	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Nephtys longosetosa	130364	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nephtys paradoxa	130365	4	3	B	Annelida	Polychaeta	Phyllodocida	Nephtyidae
Nereididae	22496	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereidae
Alitta succinea	234850	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Ceratocephale loveni	130367	4	3	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Eunereis elittoralis	130374	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Eunereis longissima	130375	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Hediste diversicolor	152302	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Micronereis variegata	130380	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Neanthes fucata	130387	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Neanthes irrorata	130389	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Nereis	129379	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Nereis pelagica	130404	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Nereis zonata	130407	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Websterinereis glauca	130426	4	4	B	Annelida	Polychaeta	Phyllodocida	Nereididae
Paralacydonia paradoxa	130545	2	2	S	Annelida	Polychaeta	Phyllodocida	Paralacydoniidae
Pholoe	129439	2	2	S	Annelida	Polychaeta	Phyllodocida	Pholoidae
Pholoe assimilis	130598	2	2	S	Annelida	Polychaeta	Phyllodocida	Pholoidae
Pholoe baltica	130599	2	2	S	Annelida	Polychaeta	Phyllodocida	Pholoidae
Pholoe inornata	130601	2	2	S	Annelida	Polychaeta	Phyllodocida	Pholoidae
Pholoe minuta	130603	2	2	S	Annelida	Polychaeta	Phyllodocida	Pholoidae
Pholoe pallida	130604	2	2	S	Annelida	Polychaeta	Phyllodocida	Pholoidae
Chaetoparia nilssoni	130610	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eteone	129443	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eteone barbata	231870	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eteone flava	130613	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eteone foliosa	130614	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eteone longa	130616	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eulalia	129445	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eulalia mustela	130631	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eulalia viridis	130639	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eumida	129446	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eumida bahusiensis	130641	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Eumida sanguinea	130644	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Hesionura elongata	130649	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Hypereteone foliosa	152250	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Mysta picta	147026	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Nereiphylla rubiginosa	130659	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Paranaitis kosteriensis	130662	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce	129455	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce (Anaitides) groenlandica	130668	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce groenlandica	334506	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce laminosa	130670	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce lineata	334508	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce longipes	130673	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce maculata	334510	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce mucosa	334512	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodoce rosea	334514	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Phyllodocidae	931	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Pirakia punctifera	147104	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Pseudomystides limbata	130683	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Sige fusigera	130690	4	3	B	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Ancistargis hamata	130692	4	3	B	Annelida	Polychaeta	Phyllodocida	Pilargidae
Ancistrosyllis groenlandica	130695	4	3	B	Annelida	Polychaeta	Phyllodocida	Pilargidae
Glyphohesione klatti	130696	4	3	B	Annelida	Polychaeta	Phyllodocida	Pilargidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Pilargis verrucosa	130700	4	3	B	Annelida	Polychaeta	Phyllodocida	Pilargidae
Sigambra parva	130702	4	3	B	Annelida	Polychaeta	Phyllodocida	Pilargidae
Pisione remota	130707	4	3	B	Annelida	Polychaeta	Phyllodocida	Pisionidae
Acholoe squamosa	146474	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Alentia gelatinosa	130722	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Enipo elisabethae	130737	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Enipo kinbergi	130738	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Enipo kinbergi	130738	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Eunoe nodosa	130745	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Gattyana amondseni	130748	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Gattyana cirrhosa	130749	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Harmothoe	129491	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Harmothoe extenuata	130762	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Harmothoe fraserthomsoni	130764	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Harmothoe glabra	571832	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Harmothoe impar	130770	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Lepidonotus squamatus	130801	1	1	E	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgrenia	147006	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgrenia andreapolis	147008	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella	129499	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella arenicolae	130810	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella castanea	130811	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella darbouxi	130812	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella lilianae	130814	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella ljungmani	130815	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella lunulata	130816	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella mcintoshi	130818	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Malmgreniella polypapillata	236712	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Polynoidae	939	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Polynoinae	155091	4	3	B	Annelida	Polychaeta	Phyllodocida	Polynoidae
Labioleanira yhleni	131067	4	3	B	Annelida	Polychaeta	Phyllodocida	Sigalionidae
Neoleanira tetragona	131069	4	3	B	Annelida	Polychaeta	Phyllodocida	Sigalionidae
Sigalion mathildae	131072	4	3	B	Annelida	Polychaeta	Phyllodocida	Sigalionidae
Sigalionidae	943	4	3	B	Annelida	Polychaeta	Phyllodocida	Sigalionidae
Sthenelais	129595	4	3	B	Annelida	Polychaeta	Phyllodocida	Sigalionidae
Sthenelais boa	131074	4	3	B	Annelida	Polychaeta	Phyllodocida	Sigalionidae
Sthenelais limicola	131077	4	3	B	Annelida	Polychaeta	Phyllodocida	Sigalionidae
Ephesiella abyssorum	131081	4	3	B	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae
Sphaerodorum gracilis	131100	4	3	B	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae
Erinaceusyllis erinaceus	195953	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Eurysyllis tuberculata	131288	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Eusyllis assimilis	131289	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Eusyllis blomstrandi	131290	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Exogone (Exogone) naidina	131304	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Exogone (Exogone) verugera	131307	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Exogone (Parexogone) hebes	131302	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Myrianida	129659	2	2	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Myrianida prolifera	238200	2	2	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Odontosyllis ctenostoma	131325	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Odontosyllis gibba	131328	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Pionosyllis	129669	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Proceraea	129671	2	2	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Prosphaerosyllis tetralix	195980	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Sphaerosyllis bulbosa	131379	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Sphaerosyllis hystrix	131388	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Sphaerosyllis taylori	131394	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Streptodonta pterochaeta	238207	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Streptosyllis websteri	131402	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Syllidae	948	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Syllides benedicti	131405	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Syllis	129680	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Syllis armillaris	131415	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Syllis cornuta	157583	4	3	B	Annelida	Polychaeta	Phyllodocida	Syllidae
Syllis gracilis	131435	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Syllis hyalina	131436	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Syllis prolifera	131452	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Trypanosyllis (Trypanosyllis) coeliaca	335151	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Trypanosyllis zebra	131467	2	3	S	Annelida	Polychaeta	Phyllodocida	Syllidae
Tomopteris (Johnstonella) helgolandica	334946	1	2	E	Annelida	Polychaeta	Phyllodocida	Tomopteridae
Galathowenia oculata	146950	2	1	S	Annelida	Polychaeta	Sabellida	Oweniidae
Myriochele	129426	2	1	S	Annelida	Polychaeta	Sabellida	Oweniidae
Myriochele heeri	130542	2	1	S	Annelida	Polychaeta	Sabellida	Oweniidae
Owenia fusiformis	130544	2	1	S	Annelida	Polychaeta	Sabellida	Oweniidae
Oweniidae	975	2	1	S	Annelida	Polychaeta	Sabellida	Oweniidae
Sabellaria spinulosa	130867	1	1	E	Annelida	Polychaeta	Sabellida	Sabellariidae
Sabellariidae	979	1	1	E	Annelida	Polychaeta	Sabellida	Sabellariidae
Branchiomma bombyx	130878	2	2	S	Annelida	Polychaeta	Sabellida	Sabellidae
Chone	129525	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Chone acustica	130885	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Chone duneri	130888	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Euchone	129528	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Euchone rubrocincta	130909	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Euchone southerni	130910	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Jasmineira candela	130919	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Jasmineira caudata	130920	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Jasmineira elegans	130921	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Paradialychone filicaudata	558743	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Potamethus murrayi	416508	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Potamilla reniformis	155389	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Pseudopotamilla reniformis	130963	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Sabella pavonina	130967	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Sabellidae	985	2	1	S	Annelida	Polychaeta	Sabellida	Sabellidae
Apistobranchus	129198	2	3	S	Annelida	Polychaeta	Spionida	Apistobranchidae
Apistobranchus tenuis	129850	2	3	S	Annelida	Polychaeta	Spionida	Apistobranchidae
Apistobranchus tullbergi	129851	2	3	S	Annelida	Polychaeta	Spionida	Apistobranchidae
Chaetopteridae	918	3	1	UC/DC	Annelida	Polychaeta	Spionida	Chaetopteridae
Chaetopterus variopedatus	129914	3	1	UC/DC	Annelida	Polychaeta	Spionida	Chaetopteridae
Spiochaetopterus costarum	129922	3	1	UC/DC	Annelida	Polychaeta	Spionida	Chaetopteridae
Spiochaetopterus typicus	129924	3	1	UC/DC	Annelida	Polychaeta	Spionida	Chaetopteridae
Magelona	129341	2	2	S	Annelida	Polychaeta	Spionida	Magelonidae
Magelona alleni	130266	2	1	S	Annelida	Polychaeta	Spionida	Magelonidae
Magelona filiformis	130268	2	2	S	Annelida	Polychaeta	Spionida	Magelonidae
Magelona johnstoni	130269	2	2	S	Annelida	Polychaeta	Spionida	Magelonidae
Magelona minuta	130270	2	2	S	Annelida	Polychaeta	Spionida	Magelonidae
Magelona mirabilis	130271	2	2	S	Annelida	Polychaeta	Spionida	Magelonidae
Magelonidae	914	2	2	S	Annelida	Polychaeta	Spionida	Magelonidae
Poecilochaetidae	916	2	2	S	Annelida	Polychaeta	Spionida	Poecilochaetidae
Poecilochaetus serpens	130711	2	2	S	Annelida	Polychaeta	Spionida	Poecilochaetidae
Aonides	129605	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Aonides oxycephala	131106	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Aonides paucibranchiata	131107	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Aurospio banyulensis	146532	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Dipolydora caulleryi	131116	4	3	B	Annelida	Polychaeta	Spionida	Spionidae
Dipolydora coeca	131117	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Dipolydora socialis	131124	4	3	B	Annelida	Polychaeta	Spionida	Spionidae
Laonice	129613	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Laonice bahusiensis	131127	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Laonice cirrata	131128	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Laonice sarsi	131129	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Malacoceros fuliginosus	131131	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Microspio atlantica	131137	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Minuspio cirrifera	152392	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Paraprionospio pinnata	131140	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Paraspio decorata	334397	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Polydora	129619	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Polydora ciliata	131141	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Polydora cornuta	131143	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio	129620	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio caspersi	131152	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio cirrifera	131153	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio dubia	131155	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio ehlersi	131156	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio fallax	131157	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio malmgreni	131159	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio multibranchiata	131160	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio saldanha	338540	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Prionospio sexoculata	131163	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Prionospio steenstrupi	131164	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Pseudopolydora antennata	131166	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Pseudopolydora paucibranchiata	131168	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Pseudopolydora pulchra	131169	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Pygospio elegans	131170	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Scolelepis	129623	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Scolelepis (Scolelepis) foliosa	334741	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Scolelepis (Scolelepis) squamata	157566	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Scolelepis bonnieri	131171	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Scolelepis korsuni	131174	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Scolelepis tridentata	131178	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spio	129625	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spio armata	131180	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spio filicornis	131183	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spio goniocephala	131184	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spio martinensis	131185	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spio multioculata	131186	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spionidae	913	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spiophanes	129626	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spiophanes bombyx	131187	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spiophanes kroyeri	131188	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Spiophanes wigleyi	131190	3	1	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Streblospio benedicti	131191	3	2	UC/DC	Annelida	Polychaeta	Spionida	Spionidae
Macrochaeta clavicornis	129745	2	2	S	Annelida	Polychaeta	Terebellida	Acrocirridae
Macrochaeta helgolandica	129746	2	2	S	Annelida	Polychaeta	Terebellida	Acrocirridae
Ampharete	129155	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Ampharete acutifrons	129775	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Ampharete baltica	129776	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Ampharete falcata	129777	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Ampharete finmarchica	129778	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Ampharete grubei	152272	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Ampharetidae	981	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Amphicteis gunneri	129784	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Amphicteis midas	129785	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Amythasides macroglossus	129788	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Anobothrus gracilis	129789	3	1	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Melinna cristata	129804	3	1	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Melinna elisabethae	129805	3	1	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Melinna palmata	129808	3	1	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Mugga wahrbergi	129813	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Pterolysippe vanelli	334692	3	1	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Samytha sexcirrata	129819	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Sosane sulcata	129821	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Ampharetidae
Aphelochaeta	129240	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Aphelochaeta filiformis	129937	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Aphelochaeta marioni	129938	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Caulleriella	129241	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Caulleriella alata	129943	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Caulleriella bioculata	129944	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Caulleriella killariensis	129945	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Caulleriella zetlandica	129948	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Caulleriella zetlandica	129948	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Chaetozone	129242	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Chaetozone christiei	152217	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Chaetozone gibber	129953	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Chaetozone setosa	129955	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Cirratulidae	919	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Cirratulus	129243	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Cirratulus caudatus	129957	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Cirriformia tentaculata	129964	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Monticellina dorsobranchialis	129972	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Monticellina heterochaeta	129973	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Tharyx	129249	2	2	S	Annelida	Polychaeta	Terebellida	Cirratulidae
Fauveliopsis	129288	2	2	S	Annelida	Polychaeta	Terebellida	Fauveliopsidae
Brada villosa	130099	3	2	UC/DC	Annelida	Polychaeta	Terebellida	Flabelligeridae
Diplocirrus glaucus	130100	3	2	UC	Annelida	Polychaeta	Terebellida	Flabelligeridae
Flabelligeridae	976	3	2	UC	Annelida	Polychaeta	Terebellida	Flabelligeridae
Pherusa monilifera	130112	3	2	UC	Annelida	Polychaeta	Terebellida	Flabelligeridae
Pherusa plumosa	130113	3	2	UC	Annelida	Polychaeta	Terebellida	Flabelligeridae
Amphictene auricoma	152448	3	1	UC	Annelida	Polychaeta	Terebellida	Pectinariidae
Lagis koreni	152367	3	1	UC	Annelida	Polychaeta	Terebellida	Pectinariidae
Pectinaria	129437	3	1	UC	Annelida	Polychaeta	Terebellida	Pectinariidae
Pectinaria (Amphictene) auricoma	130590	3	1	UC	Annelida	Polychaeta	Terebellida	Pectinariidae
Pectinariidae	980	3	1	UC	Annelida	Polychaeta	Terebellida	Pectinariidae
Sternaspis scutata	131242	4	3	B	Annelida	Polychaeta	Terebellida	Sternaspidae
Amaeana trilobata	131471	3	1	UC/DC	Annelida	Polychaeta	Terebellida	Terebellidae
Axionice maculata	131484	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Eupolymnia nesidensis	131490	1	1	E	Annelida	Polychaeta	Terebellida	Terebellidae
Hauchiella tribullata	152389	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Lanice	129697	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Lanice conchilega	131495	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Lysilla loveni	131500	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Neoamphitrite affinis	131502	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Nicolea zostericola	131508	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Paramphitrite birulai	152454	2	2	S	Annelida	Polychaeta	Terebellida	Terebellidae
Phisidia aurea	131513	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Pista cristata	131516	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Pista lornensis	154972	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Pistella lornensis	131522	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Polycirrus	129710	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Polycirrus medusa	131531	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Streblosoma bairdi	131538	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Streblosoma intestinale	131540	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Terebella	129713	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Terebellidae	982	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Thelepus cincinnatus	131543	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae
Thelepus setosus	131544	3	1	DC	Annelida	Polychaeta	Terebellida	Terebellidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Terebellides stroemii	131573	3	1	DC	Annelida	Polychaeta	Terebellida	Trichobranchidae
Trichobranchidae	983	3	1	DC	Annelida	Polychaeta	Terebellida	Trichobranchidae
Trichobranchus glacialis	131574	3	1	DC	Annelida	Polychaeta	Terebellida	Trichobranchidae
Trichobranchus roseus	131575	3	1	DC	Annelida	Polychaeta	Terebellida	Trichobranchidae
Arenicolides	129207	3	2	UC	Annelida	Polychaeta		Arenicolidae
Capitella	129211	3	2	UC	Annelida	Polychaeta		Capitellidae
Capitella capitata	129876	3	2	UC	Annelida	Polychaeta		Capitellidae
Capitella minima	129879	3	2	UC	Annelida	Polychaeta		Capitellidae
Capitellidae	921	3	2	UC	Annelida	Polychaeta		Capitellidae
Heteromastus filiformis	129884	3	2	UC	Annelida	Polychaeta		Capitellidae
Mediomastus fragilis	129892	3	2	UC	Annelida	Polychaeta		Capitellidae
Notomastus	129220	3	2	UC	Annelida	Polychaeta		Capitellidae
Notomastus latericeus	129898	3	2	UC	Annelida	Polychaeta		Capitellidae
Peresiella clymenoides	129906	3	2	UC	Annelida	Polychaeta		Capitellidae
Pseudoleiocapitella	129226	3	2	UC	Annelida	Polychaeta		Capitellidae
Cossuridae	908	2	3	S	Annelida	Polychaeta		Cossuridae
Asychis biceps	146523	3	1	UC	Annelida	Polychaeta		Maldanidae
Clymenella torquata	130279	3	1	UC	Annelida	Polychaeta		Maldanidae
Clymenura	129346	3	1	UC	Annelida	Polychaeta		Maldanidae
Euclymene droebachiensis	130291	3	1	UC	Annelida	Polychaeta		Maldanidae
Euclymene lombricoides	209899	3	1	UC	Annelida	Polychaeta		Maldanidae
Euclymene oerstedi	130294	3	1	UC	Annelida	Polychaeta		Maldanidae
Heteroclymene robusta	146978	3	1	UC	Annelida	Polychaeta		Maldanidae
Johnstonia clymenoides	130298	3	1	UC	Annelida	Polychaeta		Maldanidae
Macroclymene santandarensis	130301	3	1	UC	Annelida	Polychaeta		Maldanidae
Maldanidae	923	3	1	UC	Annelida	Polychaeta		Maldanidae
Notoproctus	129358	3	1	UC	Annelida	Polychaeta		Maldanidae
Praxillella affinis	130322	3	1	UC	Annelida	Polychaeta		Maldanidae
Praxillella gracilis	130324	3	1	UC	Annelida	Polychaeta		Maldanidae
Rhodine gracilior	130330	3	1	UC	Annelida	Polychaeta		Maldanidae
Euzonus flabelligerus	130487	4	3	B	Annelida	Polychaeta		Opheliidae
Ophelia limacina	130494	4	3	B	Annelida	Polychaeta		Opheliidae
Opheliidae	924	4	3	B	Annelida	Polychaeta		Opheliidae
Ophelina acuminata	130500	4	3	B	Annelida	Polychaeta		Opheliidae
Polyophthalmus pictus	130510	4	3	B	Annelida	Polychaeta		Opheliidae
Orbinia (Orbinia) sertulata	334310	4	3	B	Annelida	Polychaeta		Orbiniidae
Orbiniidae	902	4	3	B	Annelida	Polychaeta		Orbiniidae
Scoloplos	129425	4	3	B	Annelida	Polychaeta		Orbiniidae
Scoloplos (Scoloplos) armiger	334772	4	3	B	Annelida	Polychaeta		Orbiniidae
Aedicira mediterranea	130546	2	3	S	Annelida	Polychaeta		Paraonidae
Aricidea	129430	2	3	S	Annelida	Polychaeta		Paraonidae
Aricidea (Acmira) catherinae	333034	2	3	S	Annelida	Polychaeta		Paraonidae
Aricidea (Acmira) cerrutii	525497	2	3	S	Annelida	Polychaeta		Paraonidae
Aricidea (Acmira) lopezi	333036	2	3	S	Annelida	Polychaeta		Paraonidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Aricidea minuta	130564	2	3	S	Annelida	Polychaeta		Paraonidae
Cirrophorus branchiatus	130576	2	3	S	Annelida	Polychaeta		Paraonidae
Levinsenia gracilis	130578	2	3	S	Annelida	Polychaeta		Paraonidae
Paradoneis lyra	130585	2	3	S	Annelida	Polychaeta		Paraonidae
Paraonidae	903	2	3	S	Annelida	Polychaeta		Paraonidae
Polygordius appendiculatus	130712	2	2	S	Annelida	Polychaeta		Polygordiidae
Polygordius lacteus	130714	2	2	S	Annelida	Polychaeta		Polygordiidae
Protodriloides	129513	2	2	S	Annelida	Polychaeta		Protodriloididae
Asclerocheilus intermedius	130974	4	4	B	Annelida	Polychaeta		Scalibregmatidae
Scalibregma celticum	130979	4	4	B	Annelida	Polychaeta		Scalibregmatidae
Scalibregma inflatum	130980	4	4	B	Annelida	Polychaeta		Scalibregmatidae
Scalibregmatidae	925	4	4	B	Annelida	Polychaeta		Scalibregmatidae
Acidostoma	101586	2	3	S	Arthropoda	Malacostraca	Amphipoda	Acidostomatidae
Ampelisca	101445	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca armoricana	101888	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca brevicornis	101891	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca diadema	101896	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca gibba	101898	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca macrocephala	101908	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca sarsi	101923	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca spinipes	101928	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca tenuicornis	101930	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca typica	101933	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampelisca vervecei	101937	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Byblis	101446	2	4	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Haploops tubicola	101958	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Amphilochoides boecki	101960	2	3	B	Arthropoda	Malacostraca	Amphipoda	Amphilochidae
Amphilochoides serratipes	101963	2	3	B	Arthropoda	Malacostraca	Amphipoda	Amphilochidae
Amphilochus manudens	101967	2	3	B	Arthropoda	Malacostraca	Amphipoda	Amphilochidae
Amphilochus neapolitanus	101968	2	3	B	Arthropoda	Malacostraca	Amphipoda	Amphilochidae
Gitana sarsi	101977	2	3	B	Arthropoda	Malacostraca	Amphipoda	Amphilochidae
Paramphilochoides odontonyx	101982	2	3	B	Arthropoda	Malacostraca	Amphipoda	Amphilochidae
Ampithoe ramondi	102000	1	1	E	Arthropoda	Malacostraca	Amphipoda	Ampithoidae
Aora gracilis	102012	1	3	S	Arthropoda	Malacostraca	Amphipoda	Aoridae
Aora typica	146895	1	3	S	Arthropoda	Malacostraca	Amphipoda	Aoridae
Aoridae	101368	1	3	S	Arthropoda	Malacostraca	Amphipoda	Aoridae
Autonoe longipes	102021	1	3	S	Arthropoda	Malacostraca	Amphipoda	Aoridae
Microdeutopus	101471	1	3	S	Arthropoda	Malacostraca	Amphipoda	Aoridae
Argissa hamatipes	102064	2	3	S	Arthropoda	Malacostraca	Amphipoda	Argissidae
Atylus	101497	2	3	S	Arthropoda	Malacostraca	Amphipoda	Atylidae
Atylus guttatus	102127	2	3	S	Arthropoda	Malacostraca	Amphipoda	Atylidae
Atylus swammerdami	102131	2	3	S	Arthropoda	Malacostraca	Amphipoda	Atylidae
Atylus vedlomensis	102132	2	3	S	Arthropoda	Malacostraca	Amphipoda	Atylidae
Nototropis falcatus	102139	2	3	S	Arthropoda	Malacostraca	Amphipoda	Atylidae
Apherusa	101509	2	3	S	Arthropoda	Malacostraca	Amphipoda	Calliopiidae
Apherusa bispinosa	102160	2	3	S	Arthropoda	Malacostraca	Amphipoda	Calliopiidae
Apherusa clevei	102164	2	3	S	Arthropoda	Malacostraca	Amphipoda	Calliopiidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Apherusa jurinei	102168	2	3	S	Arthropoda	Malacostraca	Amphipoda	Calliopiidae
Apherusa ovalipes	102172	2	3	S	Arthropoda	Malacostraca	Amphipoda	Calliopiidae
Caprella acanthifera	101822	2	2	S	Arthropoda	Malacostraca	Amphipoda	Caprellidae
Caprella linearis	101839	2	2	S	Arthropoda	Malacostraca	Amphipoda	Caprellidae
Pariambus typicus	101857	2	2	S	Arthropoda	Malacostraca	Amphipoda	Caprellidae
Parvipalpus capillaceus	101858	2	2	S	Arthropoda	Malacostraca	Amphipoda	Caprellidae
Phtisica marina	101864	2	2	S	Arthropoda	Malacostraca	Amphipoda	Caprellidae
Pseudoprotella phasma	101871	2	2	S	Arthropoda	Malacostraca	Amphipoda	Caprellidae
Cheirocratus	101669	2	3	S	Arthropoda	Malacostraca	Amphipoda	Cheirocratidae
Cheirocratus intermedius	102795	2	3	S	Arthropoda	Malacostraca	Amphipoda	Cheirocratidae
Cheirocratus sundevalli	102798	2	3	S	Arthropoda	Malacostraca	Amphipoda	Cheirocratidae
Apocorophium lacustre	148594	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Corophium	101489	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Crassicorophium bonellii	237004	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Leptocheirus	101470	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Leptocheirus hirsutimanus	102036	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Leptocheirus mariae	102038	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Leptocheirus pectinatus	102039	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Leptocheirus tricristatus	102041	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Medicorophium affine	423507	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Monocorophium acherusicum	225814	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Monocorophium insidiosum	148592	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Monocorophium sextonae	148603	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Protomedeia	101574	2	4	S	Arthropoda	Malacostraca	Amphipoda	Corophiidae
Peltocoxa brevirostris	101983	2	3	S	Arthropoda	Malacostraca	Amphipoda	Cyproideidae
Dexamine	101498	2	3	S	Arthropoda	Malacostraca	Amphipoda	Dexaminidae
Dexamine spinosa	102135	2	3	S	Arthropoda	Malacostraca	Amphipoda	Dexaminidae
Guernea (Guernea) coalita	102137	2	3	S	Arthropoda	Malacostraca	Amphipoda	Dexaminidae
Tritaeta gibbosa	102141	2	3	S	Arthropoda	Malacostraca	Amphipoda	Dexaminidae
Dyopedos	101736	2	3	S	Arthropoda	Malacostraca	Amphipoda	Dulichiidae
Dyopedos monacantha	103042	2	3	S	Arthropoda	Malacostraca	Amphipoda	Dulichiidae
Eusirus longipes	102202	2	3	S	Arthropoda	Malacostraca	Amphipoda	Eusiridae
Haustorius arenarius	102317	2	3	S	Arthropoda	Malacostraca	Amphipoda	Haustoriidae
Hyperia galba	103251	2	3	S	Arthropoda	Malacostraca	Amphipoda	Hyperiidae
Iphimedia	101554	2	3	S	Arthropoda	Malacostraca	Amphipoda	Iphimediidae
Iphimedia minuta	102345	2	3	S	Arthropoda	Malacostraca	Amphipoda	Iphimediidae
Iphimedia obesa	102347	2	3	S	Arthropoda	Malacostraca	Amphipoda	Iphimediidae
Ericthonius punctatus	102408	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae
Jassa falcata	102431	1	1	E	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae
Siphonoecetes (Centraloecetes) kroyeranus	102111	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Siphonoecetes (Centraloecetes) neapolitanus	102112	2	1	S	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae
Siphonoecetes (Centraloecetes) striatus	102115	1	1	S	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae
Leucothoe incisa	102460	2	3	S	Arthropoda	Malacostraca	Amphipoda	Leucothoidae
Leucothoe lilljeborgi	102462	2	3	S	Arthropoda	Malacostraca	Amphipoda	Leucothoidae
Leucothoe richiardii	212784	2	3	S	Arthropoda	Malacostraca	Amphipoda	Leucothoidae
Leucothoe spinicarpa	102470	2	3	S	Arthropoda	Malacostraca	Amphipoda	Leucothoidae
Liljeborgia	101582	2	3	S	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae
Liljeborgia kinahani	102483	2	3	S	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae
Liljeborgia pallida	102485	2	3	S	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae
Liljeborgia psaltrica	102486	2	3	S	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae
Listriella mollis	102488	2	3	S	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae
Hippomedon bidentatus	102569	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Hippomedon denticulatus	102570	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Hippomedon massiliensis	102576	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Lepidepecreum longicornis	102599	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Lysianassidae	101395	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Orchomene humilis	102665	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Orchomenella nana	102691	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Tryphosella sarsi	102771	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Tryphosella simillima	102773	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Tryphosites longipes	102779	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae
Acidostoma nodiferum	102496	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae s.l.
Acidostoma obesum	102497	2	3	S	Arthropoda	Malacostraca	Amphipoda	Lysianassidae s.l.
Animoceradocus semiserratus	531364	2	3	S	Arthropoda	Malacostraca	Amphipoda	Maeridae
Maera	101675	2	3	S	Arthropoda	Malacostraca	Amphipoda	Maeridae
Maera grossimana	102815	2	3	S	Arthropoda	Malacostraca	Amphipoda	Maeridae
Maera loveni	102820	2	3	S	Arthropoda	Malacostraca	Amphipoda	Maeridae
Maera schmidti	102826	2	3	S	Arthropoda	Malacostraca	Amphipoda	Maeridae
Othomaera othonis	534781	2	3	S	Arthropoda	Malacostraca	Amphipoda	Maeridae
Megaluropus agilis	102783	2	3	S	Arthropoda	Malacostraca	Amphipoda	Megaluropidae
Abludomelita obtusata	102788	2	2	S	Arthropoda	Malacostraca	Amphipoda	Melitidae
Eriopisa elongata	102807	2	2	S	Arthropoda	Malacostraca	Amphipoda	Melitidae
Maerella tenuimana	102831	2	2	S	Arthropoda	Malacostraca	Amphipoda	Melitidae
Microprotopus	101561	2	3	S	Arthropoda	Malacostraca	Amphipoda	Microprotopidae
Microprotopus maculatus	102380	2	3	S	Arthropoda	Malacostraca	Amphipoda	Microprotopidae
Odius carinatus	102861	1	3	E	Arthropoda	Malacostraca	Amphipoda	Odiidae
Deflexilodes acutipes	236538	2	3	S	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Deflexilodes gibbosus	236539	2	3	S	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Monoculodes carinatus	102882	2	3	S	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Perioculodes longimanus	102915	2	3	S	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Pontocrates altamarinus	102916	2	3	S	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Pontocrates arenarius	102918	2	3	S	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Synchelidium haplocheles	102924	2	2	S	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Synchelidium maculatum	102928	2	2	S	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Westwoodilla caecula	102932	2	3	B	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Westwoodilla rectirostris	102937	2	3	B	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
Gammaropsis cornuta	148545	2	2	S	Arthropoda	Malacostraca	Amphipoda	Photidae
Gammaropsis maculata	102364	2	2	S	Arthropoda	Malacostraca	Amphipoda	Photidae
Gammaropsis nitida	102367	1	2	S	Arthropoda	Malacostraca	Amphipoda	Photidae
Gammaropsis palmata	102369	2	2	S	Arthropoda	Malacostraca	Amphipoda	Photidae
Gammaropsis sophiae	102371	2	2	S	Arthropoda	Malacostraca	Amphipoda	Photidae
Megamphopus cornutus	102377	2	3	S	Arthropoda	Malacostraca	Amphipoda	Photidae
Photis longicaudata	102383	2	1	S	Arthropoda	Malacostraca	Amphipoda	Photidae
Photis reinhardi	102387	2	1	S	Arthropoda	Malacostraca	Amphipoda	Photidae
Harpinia	101716	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Harpinia agna	102957	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Harpinia ala	102958	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Harpinia antennaria	102960	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Harpinia crenulata	102963	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Harpinia dellavallei	102966	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Harpinia pectinata	102972	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Harpinia plumosa	102973	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Metaphoxus	101720	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Metaphoxus pectinatus	102983	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Parametaphoxus tulearensis	549079	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Phoxocephalus holbolli	102989	2	3	S	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
Pleustidae	101404	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pleustidae
Bathyporeia	101742	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae
Bathyporeia elegans	103058	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae
Bathyporeia guilliamsoniana	103060	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae
Bathyporeia nana	103064	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae
Bathyporeia pelagica	103066	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae
Bathyporeia pilosa	103068	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae
Bathyporeia sarsi	103073	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae
Bathyporeia tenuipes	103076	2	3	S	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae
Scopelocheirus hopei	102720	2	3	S	Arthropoda	Malacostraca	Amphipoda	Scopelocheiridae
Stegocephaloides christianiensis	103102	2	3	S	Arthropoda	Malacostraca	Amphipoda	Stegocephalidae
Metopa	101764	2	3	S	Arthropoda	Malacostraca	Amphipoda	Stenothoidae
Metopa alderi	103116	2	3	S	Arthropoda	Malacostraca	Amphipoda	Stenothoidae
Metopa latimana	103125	2	3	S	Arthropoda	Malacostraca	Amphipoda	Stenothoidae
Stenothoe marina	103166	2	3	S	Arthropoda	Malacostraca	Amphipoda	Stenothoidae
Austrosyrrhoe fimbriatus	103179	2	3	S	Arthropoda	Malacostraca	Amphipoda	Synopiidae
Unciola crenatipalma	102057	2	3	B	Arthropoda	Malacostraca	Amphipoda	Unciolidae
Unciola planipes	102061	2	3	B	Arthropoda	Malacostraca	Amphipoda	Unciolidae
Tmetonyx cicada	102736	2	1	B	Arthropoda	Malacostraca	Amphipoda	Uristidae
Urothoe	101789	2	3	S	Arthropoda	Malacostraca	Amphipoda	Urothoidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Urothoe brevicornis	103226	2	3	S	Arthropoda	Malacostraca	Amphipoda	Urothoidae
Urothoe elegans	103228	2	3	S	Arthropoda	Malacostraca	Amphipoda	Urothoidae
Urothoe marina	103233	2	3	S	Arthropoda	Malacostraca	Amphipoda	Urothoidae
Urothoe poseidonis	103235	2	3	S	Arthropoda	Malacostraca	Amphipoda	Urothoidae
Bodotria scorpioides	110445	2	3	S	Arthropoda	Malacostraca	Cumacea	Bodotriidae
Iphinoe	110391	2	3	S	Arthropoda	Malacostraca	Cumacea	Bodotriidae
Iphinoe serrata	110460	2	3	S	Arthropoda	Malacostraca	Cumacea	Bodotriidae
Iphinoe tenella	110461	2	3	S	Arthropoda	Malacostraca	Cumacea	Bodotriidae
Iphinoe trispinosa	110462	2	3	S	Arthropoda	Malacostraca	Cumacea	Bodotriidae
Diastylidae	110380	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastylis	110398	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastylis bradyi	110472	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastylis cornuta	110474	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastylis laevis	110481	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastylis lucifera	110483	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastylis neapolitana	110484	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastylis rathkei	110487	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastylis rugosa	110488	2	3	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Diastyloides biplicatus	110494	2	2	S	Arthropoda	Malacostraca	Cumacea	Diastylidae
Hemilamprops roseus	110514	2	3	S	Arthropoda	Malacostraca	Cumacea	Lampropidae
Lamprops fasciatus	110516	2	3	S	Arthropoda	Malacostraca	Cumacea	Lampropidae
Eudorella emarginata	110524	2	3	S	Arthropoda	Malacostraca	Cumacea	Leuconidae
Eudorella truncatula	110535	2	3	S	Arthropoda	Malacostraca	Cumacea	Leuconidae
Eudorellopsis deformis	110536	2	3	S	Arthropoda	Malacostraca	Cumacea	Leuconidae
Leucon (Leucon) nasica	110618	2	3	S	Arthropoda	Malacostraca	Cumacea	Leuconidae
Cumella (Cumella) pygmaea	110567	2	3	S	Arthropoda	Malacostraca	Cumacea	Nannastacidae
Nannastacus unguiculatus	110574	2	3	S	Arthropoda	Malacostraca	Cumacea	Nannastacidae
Monopseudocuma gilsoni	422916	2	3	S	Arthropoda	Malacostraca	Cumacea	Pseudocumatidae
Pseudocuma	110427	2	3	S	Arthropoda	Malacostraca	Cumacea	Pseudocumatidae
Pseudocuma (Pseudocuma) longicorne	110627	2	3	S	Arthropoda	Malacostraca	Cumacea	Pseudocumatidae
Pseudocuma (Pseudocuma) simile	110628	2	3	S	Arthropoda	Malacostraca	Cumacea	Pseudocumatidae
Alpheus glaber	107477	4	4	B	Arthropoda	Malacostraca	Decapoda	Alpheidae
Athanas nitescens	107486	2	2	S	Arthropoda	Malacostraca	Decapoda	Alpheidae
Aristaeomorpha foliacea	158326	1	4	E	Arthropoda	Malacostraca	Decapoda	Aristeidae
Atelecyclus rotundatus	107273	5	4	R	Arthropoda	Malacostraca	Decapoda	Atelecyclidae
Calocaris macandreae	107726	4	4	B	Arthropoda	Malacostraca	Decapoda	Axiidae
Callianassa	107072	4	4	B	Arthropoda	Malacostraca	Decapoda	Callianassidae
Callianassa subterranea	107729	4	4	B	Arthropoda	Malacostraca	Decapoda	Callianassidae
Callianassidae	106800	4	4	B	Arthropoda	Malacostraca	Decapoda	Callianassidae
Pestarella tyrrhena	238027	4	4	B	Arthropoda	Malacostraca	Decapoda	Callianassidae
Corystes cassivelaunus	107277	5	4	R	Arthropoda	Malacostraca	Decapoda	Corystidae
Crangon	107007	2	4	S	Arthropoda	Malacostraca	Decapoda	Crangonidae
Crangon allmanni	107551	2	4	S	Arthropoda	Malacostraca	Decapoda	Crangonidae
Crangon crangon	107552	2	4	S	Arthropoda	Malacostraca	Decapoda	Crangonidae
Crangonidae	106782	2	4	S	Arthropoda	Malacostraca	Decapoda	Crangonidae
Philocheras bispinosus bispinosus	108207	2	4	S	Arthropoda	Malacostraca	Decapoda	Crangonidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Philocheras trispinosus	107562	2	4	S	Arthropoda	Malacostraca	Decapoda	Crangonidae
Diogenes pugilator	107199	1	4	E	Arthropoda	Malacostraca	Decapoda	Diogenidae
Galathea	106834	4	3	B	Arthropoda	Malacostraca	Decapoda	Galatheidae
Galathea dispersa	107148	4	3	B	Arthropoda	Malacostraca	Decapoda	Galatheidae
Galathea intermedia	107150	4	3	B	Arthropoda	Malacostraca	Decapoda	Galatheidae
Eualus cranchii	156083	2	4	S	Arthropoda	Malacostraca	Decapoda	Hippolytidae
Inachus	106905	1	3	E	Arthropoda	Malacostraca	Decapoda	Inachidae
Inachus dorsettensis	107327	1	3	E	Arthropoda	Malacostraca	Decapoda	Inachidae
Macropodia	205077	1	3	E	Arthropoda	Malacostraca	Decapoda	Inachidae
Macropodia deflexa	107338	1	3	E	Arthropoda	Malacostraca	Decapoda	Inachidae
Macropodia rostrata	107345	1	3	E	Arthropoda	Malacostraca	Decapoda	Inachidae
Jaxea nocturna	107737	4	4	B	Arthropoda	Malacostraca	Decapoda	Laomediidae
Ebalia	106889	1	3	E	Arthropoda	Malacostraca	Decapoda	Leucosiidae
Ebalia cranchii	107294	1	3	E	Arthropoda	Malacostraca	Decapoda	Leucosiidae
Ebalia granulosa	107298	1	3	E	Arthropoda	Malacostraca	Decapoda	Leucosiidae
Ebalia tuberosa	107301	1	3	E	Arthropoda	Malacostraca	Decapoda	Leucosiidae
Nephrops norvegicus	107254	4	4	B	Arthropoda	Malacostraca	Decapoda	Nephropidae
Anapagurus	106849	1	4	E	Arthropoda	Malacostraca	Decapoda	Paguridae
Anapagurus bicorniger	107213	1	4	E	Arthropoda	Malacostraca	Decapoda	Paguridae
Anapagurus laevis	107218	1	4	E	Arthropoda	Malacostraca	Decapoda	Paguridae
Paguridae	106738	1	4	E	Arthropoda	Malacostraca	Decapoda	Paguridae
Pagurus	106854	1	4	E	Arthropoda	Malacostraca	Decapoda	Paguridae
Pagurus bernhardus	107232	1	4	E	Arthropoda	Malacostraca	Decapoda	Paguridae
Pagurus cuanensis	107235	1	4	E	Arthropoda	Malacostraca	Decapoda	Paguridae
Palaemon elegans	107614	1	4	E	Arthropoda	Malacostraca	Decapoda	Palaemonidae
Pandalus montagui	107651	1	4	E	Arthropoda	Malacostraca	Decapoda	Pandalidae
Pilumnus hirtellus	107418	2	3	S	Arthropoda	Malacostraca	Decapoda	Pilumnidae
Liocarcinus	106925	5	4	R	Arthropoda	Malacostraca	Decapoda	Polybiidae
Liocarcinus depurator	107387	5	4	R	Arthropoda	Malacostraca	Decapoda	Polybiidae
Liocarcinus holsatus	107388	5	4	R	Arthropoda	Malacostraca	Decapoda	Polybiidae
Liocarcinus marmoreus	107390	5	4	R	Arthropoda	Malacostraca	Decapoda	Polybiidae
Liocarcinus navigator	107392	5	4	R	Arthropoda	Malacostraca	Decapoda	Polybiidae
Liocarcinus pusillus	107393	5	4	R	Arthropoda	Malacostraca	Decapoda	Polybiidae
Pisidia longicornis	107188	1	3	E	Arthropoda	Malacostraca	Decapoda	Porcellanidae
Carcinus maenas	107381	5	4	R	Arthropoda	Malacostraca	Decapoda	Portunidae
Processa	107054	1	4	E	Arthropoda	Malacostraca	Decapoda	Processidae
Processa acutirostris	107681	1	4	E	Arthropoda	Malacostraca	Decapoda	Processidae
Processa canaliculata	107682	1	4	E	Arthropoda	Malacostraca	Decapoda	Processidae
Processa elegantula	107684	1	4	E	Arthropoda	Malacostraca	Decapoda	Processidae
Processa modica modica	108343	1	4	E	Arthropoda	Malacostraca	Decapoda	Processidae
Processa nouveli holthuisi	108344	1	4	E	Arthropoda	Malacostraca	Decapoda	Processidae
Solenocera membranacea	107120	1	4	E	Arthropoda	Malacostraca	Decapoda	Solenoceridae
Thia scutellata	107281	2	4	S	Arthropoda	Malacostraca	Decapoda	Thiidae
Upogebia deltaura	107739	3	4	DC	Arthropoda	Malacostraca	Decapoda	Upogebiidae
Upogebia pusilla	107741	3	4	DC	Arthropoda	Malacostraca	Decapoda	Upogebiidae
Upogebia stellata	107742	3	4	DC	Arthropoda	Malacostraca	Decapoda	Upogebiidae
Upogebiidae	106803	3	4	DC	Arthropoda	Malacostraca	Decapoda	Upogebiidae
Anthura gracilis	118467	2	2	S	Arthropoda	Malacostraca	Isopoda	Anthuridae
Astacilla longicornis	119024	4	3	B	Arthropoda	Malacostraca	Isopoda	Arcturidae
Cirolana cranchi	118839	2	3	S	Arthropoda	Malacostraca	Isopoda	Cirolanidae
Conilera cylindracea	118842	1	2	E	Arthropoda	Malacostraca	Isopoda	Cirolanidae
Eurydice pulchra	118852	2	3	S	Arthropoda	Malacostraca	Isopoda	Cirolanidae
Eurydice spinigera	148637	2	3	S	Arthropoda	Malacostraca	Isopoda	Cirolanidae
Natatolana borealis	118859	2	3	S	Arthropoda	Malacostraca	Isopoda	Cirolanidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Gnathia maxillaris	118994	2	3	S	Arthropoda	Malacostraca	Isopoda	Gnathiidae
Gnathia oxyuraea	118995	2	3	S	Arthropoda	Malacostraca	Isopoda	Gnathiidae
Gnathiidae	118278	2	3	S	Arthropoda	Malacostraca	Isopoda	Gnathiidae
Paragnathia formica	119001	2	3	S	Arthropoda	Malacostraca	Isopoda	Gnathiidae
Idotea	118454	2	3	S	Arthropoda	Malacostraca	Isopoda	Idoteidae
Janira maculosa	118732	2	3	S	Arthropoda	Malacostraca	Isopoda	Janiridae
Sphaeroma serratum	118973	2	3	S	Arthropoda	Malacostraca	Isopoda	Sphaeromatidae
Gastrosaccus spinifer	120020	2	3	S	Arthropoda	Malacostraca	Mysida	Mysidae
Haplostylus normani	148698	1	1	E	Arthropoda	Malacostraca	Mysida	Mysidae
Nebalia bipes	147032	1	3	E	Arthropoda	Malacostraca	Nebaliacea	Nebaliidae
Apseudes spinosus	136284	2	2	S	Arthropoda	Malacostraca	Tanaidacea	Apseudidae
Apseudes talpa	136285	2	2	S	Arthropoda	Malacostraca	Tanaidacea	Apseudidae
Apseudopsis latreillii	247077	2	2	S	Arthropoda	Malacostraca	Tanaidacea	Apseudidae
Akanthophoreus gracilis	136340	2	2	S	Arthropoda	Malacostraca	Tanaidacea	Leptognathiidae
Pseudoparatanais batei	136457	2	2	S	Arthropoda	Malacostraca	Tanaidacea	Paratanaoidea incertae sedis
Tanaopsis graciloides	136458	2	2	S	Arthropoda	Malacostraca	Tanaidacea	Paratanaoidea incertae sedis
Pseudosphyrapus anomalus	136319	2	2	S	Arthropoda	Malacostraca	Tanaidacea	Sphyrapidae
Tanaissus lilljeborgi	136486	2	2	S	Arthropoda	Malacostraca	Tanaidacea	Tanaissuidae
Stomatopoda	14355	4	4	B	Arthropoda	Malacostraca		
Longipedia coronata	116368	2	3	S	Arthropoda	Maxillopoda	Harpacticoida	Longipediidae
Cylindroleberis mariae	238708	2	3	S	Arthropoda	Ostracoda	Myodocopida	Cylindroleberididae
Philomedes (Philomedes) lilljeborgi	128460	2	4	S	Arthropoda	Ostracoda	Myodocopida	Philomedidae
Philomedes brenda	127718	2	3	S	Arthropoda	Ostracoda	Myodocopida	Philomedidae
Myodocopida	2104	2	3	S	Arthropoda	Ostracoda	Myodocopida	
Achelia echinata	134599	2	2	S	Arthropoda	Pycnogonida	Pantopoda	Ammotheidae
Callipallene brevirostris	134643	1	1	E	Arthropoda	Pycnogonida	Pantopoda	Callipallenidae
Nymphon brevirostre	150520	1	1	S	Arthropoda	Pycnogonida	Pantopoda	Nymphonidae
Anoplodactylus	134592	1	4	E	Arthropoda	Pycnogonida	Pantopoda	Phoxichilidiidae
Anoplodactylus petiolatus	134723	1	4	E	Arthropoda	Pycnogonida	Pantopoda	Phoxichilidiidae
Anoplodactylus virescens	134730	1	4	E	Arthropoda	Pycnogonida	Pantopoda	Phoxichilidiidae
Pycnogonida	1302	1	4	E	Arthropoda	Pycnogonida		
Priapulus caudatus	101160	4	2	B	Cephalorhyncha	Priapulida		Priapulidae
Ascidiella aspersa	103718	1	1	E	Chordata	Ascidiacea	Phlebobranchia	Ascidiidae
Eugyra arenosa	103764	2	3	S	Chordata	Ascidiacea	Stolidobranchia	Molgulidae
Styelidae	103450	1	1	E	Chordata	Ascidiacea	Stolidobranchia	Styelidae
Branchiostoma lanceolatum	104906	4	3	B	Chordata	Leptocardii		Branchiostomidae
Actinia equina	100803	1	1	E	Cnidaria	Anthozoa	Actiniaria	Actiniidae
Urticina felina	100834	1	1	E	Cnidaria	Anthozoa	Actiniaria	Actiniidae
Edwardsia	100730	2	2	S	Cnidaria	Anthozoa	Actiniaria	Edwardsiidae
Edwardsia claparedii	100880	2	2	S	Cnidaria	Anthozoa	Actiniaria	Edwardsiidae
Edwardsiidae	100665	2	2	S	Cnidaria	Anthozoa	Actiniaria	Edwardsiidae
Scolanthus callimorphus	100910	2	2	S	Cnidaria	Anthozoa	Actiniaria	Edwardsiidae
Halcampa chrysanthellum	100916	2	2	S	Cnidaria	Anthozoa	Actiniaria	Halcampidae
Calliactis parasitica	100946	2	2	S	Cnidaria	Anthozoa	Actiniaria	Hormathiidae
Sagartia troglodytes	100994	1	1	E	Cnidaria	Anthozoa	Actiniaria	Sagartiidae
Actiniaria	1360	2	2	S	Cnidaria	Anthozoa	Actiniaria	

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Cerianthus	100782	2	1	S	Cnidaria	Anthozoa	Ceriantharia	Cerianthidae
Cerianthus lloydii	283798	2	1	S	Cnidaria	Anthozoa	Ceriantharia	Cerianthidae
Pteroeides griseum	181504	2	2	S	Cnidaria	Anthozoa	Pennatulacea	Pennatulidae
Virgularia mirabilis	128539	2	2	S	Cnidaria	Anthozoa	Pennatulacea	Virgulariidae
Asterias rubens	123776	1	3	E	Echinodermata	Asteroidea	Forcipulatida	Asteriidae
Astropecten irregularis	123867	2	3	S	Echinodermata	Asteroidea	Paxillosida	Astropectinidae
Psammechinus miliaris	124319	1	3	E	Echinodermata	Echinoidea	Camarodonta	Parechinidae
Echinocyamus pusillus	124273	2	3	S	Echinodermata	Echinoidea	Clypeasteroida	Echinocyamidae
Echinidea	510534	4	3	B	Echinodermata	Echinoidea	Echinoida	
Brissopsis lyrifera	124373	4	3	B	Echinodermata	Echinoidea	Spatangoida	Brissidae
Echinocardium	123426	4	3	B	Echinodermata	Echinoidea	Spatangoida	Loveniidae
Echinocardium cordatum	124392	4	3	B	Echinodermata	Echinoidea	Spatangoida	Loveniidae
Echinocardium flavescens	124394	4	3	B	Echinodermata	Echinoidea	Spatangoida	Loveniidae
Spatangus purpureus	124418	4	3	B	Echinodermata	Echinoidea	Spatangoida	Spatangidae
Spatangoida	123106	4	3	B	Echinodermata	Echinoidea	Spatangoida	
Labidoplax buskii	124455	2	3	S	Echinodermata	Holothuroidea	Apodida	Synaptidae
Leptosynapta	123449	2	3	S	Echinodermata	Holothuroidea	Apodida	Synaptidae
Leptosynapta bergensis	124462	2	3	S	Echinodermata	Holothuroidea	Apodida	Synaptidae
Leptosynapta inhaerens	124465	2	3	S	Echinodermata	Holothuroidea	Apodida	Synaptidae
Oestergrenia digitata	152547	2	3	S	Echinodermata	Holothuroidea	Apodida	Synaptidae
Synaptidae	123182	2	3	S	Echinodermata	Holothuroidea	Apodida	Synaptidae
Leptopentacta	123481	2	3	S	Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae
Leptopentacta elongata	124635	2	3	S	Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae
Leptopentacta elongata	124635	2	3	S	Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae
Leptopentacta tergestina	124636	2	3	S	Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae
Thyone fusus	124670	2	3	S	Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae
Amphilepis norvegica	125057	4	3	B	Echinodermata	Ophiuroidea	Ophiurida	Amphilepididae
Acrocnida brachiata	236130	4	3	B	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae
Amphipholis squamata	125064	4	3	B	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae
Amphiura	123613	4	3	B	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae
Amphiura (Ophiopeltis) securigera	125195	4	3	B	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae
Amphiura chiajei	125073	4	3	B	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae
Amphiura filiformis	125080	4	3	B	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae
Ophiocomina nigra	125027	2	2	S	Echinodermata	Ophiuroidea	Ophiurida	Ophiocomidae
Ophiothrix fragilis	125131	2	2	S	Echinodermata	Ophiuroidea	Ophiurida	Ophiotrichidae
Ophiocten affinis	124850	2	2	S	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae
Ophiura	123574	2	2	S	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae
Ophiura albida	124913	2	2	S	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae
Ophiura ophiura	124929	2	2	S	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae
Ophiuridae	123200	2	2	S	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae
Maxmuelleria gigas	110367	5	4	R	Echiura	Echiuroidea	Bonelliida	Bonelliidae
Echiurus echiurus	110377	3	2	DC	Echiura	Echiuroidea	Echiurida	Echiuridae
Thalassema thalassemum	110375	3	2	DC	Echiura	Echiuroidea	Echiurida	Echiuridae
Echiurida	110345	3	2	DC	Echiura	Echiuroidea	Echiurida	
Echiura	1269	3	2	DC	Echiura			
Glandiceps talaboti	137612	5	4	R	HemiChordata	Enteropneusta	Enteropneusta	Spengelidae
Enteroptneusta	178738	5	4	R	HemiChordata	Enteropneusta		
Ensis magnus	160539	2	2	S	Mollusca	Bivalvia		Pharidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
							[unassigned] Euheterodonta	
Hiatella arctica	140103	1	2	E	Mollusca	Bivalvia	[unassigned] Euheterodonta	Hiatellidae
Saxicavella jeffreysi	140108	1	2	E	Mollusca	Bivalvia	[unassigned] Euheterodonta	Hiatellidae
Ensis	138333	2	2	S	Mollusca	Bivalvia	[unassigned] Euheterodonta	Pharidae
Ensis directus	140732	2	2	S	Mollusca	Bivalvia	[unassigned] Euheterodonta	Pharidae
Ensis ensis	140733	2	2	S	Mollusca	Bivalvia	[unassigned] Euheterodonta	Pharidae
Pharus legumen	140736	2	2	S	Mollusca	Bivalvia	[unassigned] Euheterodonta	Pharidae
Phaxas adriaticus	156343	2	2	S	Mollusca	Bivalvia	[unassigned] Euheterodonta	Pharidae
Phaxas pellucidus	140737	2	2	S	Mollusca	Bivalvia	[unassigned] Euheterodonta	Pharidae
Cuspidaria obesa	139450	3	2	UC/DC	Mollusca	Bivalvia	Anomalodesmata	Cuspidariidae
Lyonsia norwegica	140291	2	2	S	Mollusca	Bivalvia	Anomalodesmata	Lyonsiidae
Cochlodesma praetenue	181373	3	2	DC	Mollusca	Bivalvia	Anomalodesmata	Periplomatidae
Thracia	138549	3	2	DC	Mollusca	Bivalvia	Anomalodesmata	Thraciidae
Thracia convexa	141644	3	2	DC	Mollusca	Bivalvia	Anomalodesmata	Thraciidae
Thracia phaseolina	152378	3	2	DC	Mollusca	Bivalvia	Anomalodesmata	Thraciidae
Thracia villosiuscula	141651	3	2	DC	Mollusca	Bivalvia	Anomalodesmata	Thraciidae
Glycymeris glycymeris	140025	2	2	S	Mollusca	Bivalvia	Arcoida	Glycymeridae
Limopsis cristata	140253	1	1	E	Mollusca	Bivalvia	Arcoida	Limopsidae
Astarte borealis	138818	2	2	S	Mollusca	Bivalvia	Carditoida	Astartidae
Astarte montagui	138823	2	2	S	Mollusca	Bivalvia	Carditoida	Astartidae
Goodallia triangularis	138831	2	2	S	Mollusca	Bivalvia	Carditoida	Astartidae
Arcturellina	492197	2	2	S	Mollusca	Bivalvia	Carditoida	Carditidae
Limatula gwyni	140237	1	2	E	Mollusca	Bivalvia	Limoida	Limidae
Limatula subauriculata	140242	1	2	E	Mollusca	Bivalvia	Limoida	Limidae
Lucinella divaricata	140282	2	2	S	Mollusca	Bivalvia	Lucinoida	Lucinidae
Lucinoma borealis	140283	2	2	S	Mollusca	Bivalvia	Lucinoida	Lucinidae
Myrtea spinifera	140287	2	2	S	Mollusca	Bivalvia	Lucinoida	Lucinidae
Axinulus croulinensis	234161	3	2	DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Axinulus eumyarius	234162	3	2	UC/DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Mendicula ferruginosa	152905	2	2	S	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Mendicula pygmaea	152424	2	2	S	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Thyasira	138552	3	2	DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Thyasira biplicata	141655	3	2	DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Thyasira equalis	141659	3	2	DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Thyasira flexuosa	141662	3	2	DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Thyasira obsoleta	141668	3	2	DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Thyasira sarsi	141672	3	2	DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Thyasira succisa	141676	3	2	DC	Mollusca	Bivalvia	Lucinoida	Thyasiridae
Corbula gibba	139410	2	2	S	Mollusca	Bivalvia	Myoida	Corbulidae
Mya	138211	2	2	S	Mollusca	Bivalvia	Myoida	Myidae
Mya arenaria	140430	2	2	S	Mollusca	Bivalvia	Myoida	Myidae
Mya truncata	140431	2	2	S	Mollusca	Bivalvia	Myoida	Myidae
Sphenia binghami	140432	2	2	S	Mollusca	Bivalvia	Myoida	Myidae
Crenella decussata	140440	2	3	S	Mollusca	Bivalvia	Mytiloida	Mytilidae
Modiolula phaseolina	140461	2	2	S	Mollusca	Bivalvia	Mytiloida	Mytilidae
Modiolus modiolus	140467	2	2	S	Mollusca	Bivalvia	Mytiloida	Mytilidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Mytilus	138228	1	1	E	Mollusca	Bivalvia	Mytiloida	Mytilidae
Mytilus edulis	140480	1	1	E	Mollusca	Bivalvia	Mytiloida	Mytilidae
Nuculana minuta	140577	2	3	S	Mollusca	Bivalvia	Nuculanoida	Nuculanidae
Yoldiella lucida	142002	2	3	S	Mollusca	Bivalvia	Nuculanoida	Yoldiidae
Ennucula tenuis	140584	2	3	S	Mollusca	Bivalvia	Nuculida	Nuculidae
Nucula	138262	2	3	S	Mollusca	Bivalvia	Nuculida	Nuculidae
Nucula hanleyi	140588	2	3	S	Mollusca	Bivalvia	Nuculida	Nuculidae
Nucula nitidosa	140589	2	3	S	Mollusca	Bivalvia	Nuculida	Nuculidae
Nucula nucleus	140590	2	3	S	Mollusca	Bivalvia	Nuculida	Nuculidae
Nucula sulcata	140592	2	3	S	Mollusca	Bivalvia	Nuculida	Nuculidae
Nucula turgida	152274	2	3	S	Mollusca	Bivalvia	Nuculida	Nuculidae
Nuculidae	204	2	3	S	Mollusca	Bivalvia	Nuculida	Nuculidae
Anomiidae	214	1	1	E	Mollusca	Bivalvia	Pectinoida	Anomiidae
Monia patelliformis	153027	2	2	S	Mollusca	Bivalvia	Pectinoida	Anomiidae
Aequipecten opercularis	140687	2	3	S	Mollusca	Bivalvia	Pectinoida	Pectinidae
Palliolum striatum	140709	2	3	S	Mollusca	Bivalvia	Pectinoida	Pectinidae
Palliolum tigerinum	140710	2	3	S	Mollusca	Bivalvia	Pectinoida	Pectinidae
Pectinidae	213	2	3	S	Mollusca	Bivalvia	Pectinoida	Pectinidae
Arctica islandica	138802	2	2	S	Mollusca	Bivalvia	Veneroida	Arcticidae
Acanthocardia	137732	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Acanthocardia aculeata	138990	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Acanthocardia echinata	138992	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Acanthocardia paucicostata	138993	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Cardiidae	229	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Cerastoderma edule	138998	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Laevicardium crassum	139004	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Parvicardium exiguum	139008	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Parvicardium minimum	139010	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Parvicardium scabrum	139012	2	2	S	Mollusca	Bivalvia	Veneroida	Cardiidae
Donax vittatus	139604	2	2	S	Mollusca	Bivalvia	Veneroida	Donacidae
Kelliella miliaris	152396	4	2	B	Mollusca	Bivalvia	Veneroida	Kelliellidae
Vesicomya abyssicola	464333	4	2	B	Mollusca	Bivalvia	Veneroida	Kelliellidae
Hemilepton nitidum	246148	2	2	S	Mollusca	Bivalvia	Veneroida	Lasaeidae
Lepton squamosum	140218	2	2	S	Mollusca	Bivalvia	Veneroida	Lasaeidae
Lutraria lutraria	140295	2	2	S	Mollusca	Bivalvia	Veneroida	Mactridae
Mactra	138158	2	2	S	Mollusca	Bivalvia	Veneroida	Mactridae
Mactra stultorum	140299	2	2	S	Mollusca	Bivalvia	Veneroida	Mactridae
Spisula	138159	2	2	S	Mollusca	Bivalvia	Veneroida	Mactridae
Spisula elliptica	140300	2	2	S	Mollusca	Bivalvia	Veneroida	Mactridae
Spisula solida	140301	2	2	S	Mollusca	Bivalvia	Veneroida	Mactridae
Spisula subtruncata	140302	2	2	S	Mollusca	Bivalvia	Veneroida	Mactridae
Devonia perrieri	140365	2	2	S	Mollusca	Bivalvia	Veneroida	Montacutidae
Epilepton clarkiae	140366	2	2	S	Mollusca	Bivalvia	Veneroida	Montacutidae
Kurtiella bidentata	345281	2	2	S	Mollusca	Bivalvia	Veneroida	Montacutidae
Montacuta phascolionis	140374	2	2	S	Mollusca	Bivalvia	Veneroida	Montacutidae
Montacuta substriata	140377	2	2	S	Mollusca	Bivalvia	Veneroida	Montacutidae
Tellimya ferruginosa	146952	2	2	S	Mollusca	Bivalvia	Veneroida	Montacutidae
Tellimya tenella	152397	2	2	S	Mollusca	Bivalvia	Veneroida	Montacutidae
Gari	138388	2	2	S	Mollusca	Bivalvia	Veneroida	Psammobiidae
Gari costulata	140868	2	2	S	Mollusca	Bivalvia	Veneroida	Psammobiidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Gari depressa	140869	2	2	S	Mollusca	Bivalvia	Veneroida	Psammobiidae
Gari fervensis	140870	2	2	S	Mollusca	Bivalvia	Veneroida	Psammobiidae
Gari tellinella	140873	2	2	S	Mollusca	Bivalvia	Veneroida	Psammobiidae
Abra	138474	2	2	S	Mollusca	Bivalvia	Veneroida	Semelidae
Abra alba	141433	2	2	S	Mollusca	Bivalvia	Veneroida	Semelidae
Abra nitida	141435	2	2	S	Mollusca	Bivalvia	Veneroida	Semelidae
Abra prismatica	141436	2	2	S	Mollusca	Bivalvia	Veneroida	Semelidae
Azorinus chamasolen	141541	2	2	S	Mollusca	Bivalvia	Veneroida	Solecurtidae
Solecurtus scopula	141543	2	2	S	Mollusca	Bivalvia	Veneroida	Solecurtidae
Angulus	146491	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Angulus fabula	152829	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Angulus incarnatus	594114	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Angulus pygmaeus	152828	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Angulus tenuis	146492	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Arcopagia crassa	141577	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Macoma balthica	141579	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Moerella donacina	147021	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Peronaea planata	605934	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Tellina distorta	141585	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Tellina nitida	141589	2	2	S	Mollusca	Bivalvia	Veneroida	Tellinidae
Turtonia minuta	141875	2	2	S	Mollusca	Bivalvia	Veneroida	Turtoniidae
Chamelea gallina	141907	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Chamelea striatula	141908	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Clausinella fasciata	141909	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Dosinia	138636	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Dosinia exoleta	141911	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Dosinia lupinus	141912	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Gouldia minima	141916	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Mysia undata	140728	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Petricolaria pholadiformis	156961	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Polititapes virgineus	507877	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Timoclea ovata	141929	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Venerupis corrugata	181364	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Venerupis corrugata	181364	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Venus casina	141934	2	2	S	Mollusca	Bivalvia	Veneroida	Veneridae
Chaetoderma nitidulum	139106	2	2	S	Mollusca	Caudofoveata	Chaetodermatida	Chaetodermatidae
Caudofoveata	151365	2	2	S	Mollusca	Caudofoveata		
Odostomia scalaris	141014	4	3	B	Mollusca	Gastropoda		Pyramidellidae
Gibbula cineraria	141782	1	3	E	Mollusca	Gastropoda		Trochidae
Bittium reticulatum	139054	2	4	S	Mollusca	Gastropoda	[unassigned] Caenogastropoda	Cerithiidae
Epitonium turtonis	139738	2	2	S	Mollusca	Gastropoda	[unassigned] Caenogastropoda	Epitoniidae
Eulima bilineata	566940	4	3	B	Mollusca	Gastropoda	[unassigned] Caenogastropoda	Eulimidae
Eulima glabra	139805	4	3	B	Mollusca	Gastropoda	[unassigned] Caenogastropoda	Eulimidae
Eulimidae	135	4	3	B	Mollusca	Gastropoda	[unassigned] Caenogastropoda	Eulimidae
Vitreolina philippi	139903	4	3	B	Mollusca	Gastropoda	[unassigned] Caenogastropoda	Eulimidae
Turritella communis	141872	4	3	B	Mollusca	Gastropoda	[unassigned] Caenogastropoda	Turritellidae
Hedylopsis spiculifera	140085	4	3	B	Mollusca	Gastropoda	Acochlidiacea	Hedylopsidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Akera bullata	138734	2	3	S	Mollusca	Gastropoda	Anaspidea	Akeridae
Cylichna alba	139474	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae
Cylichna cylindracea	139476	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae
Philine	138339	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Philinidae
Philine aperta	140744	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Philinidae
Philine scabra	140761	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Philinidae
Retusa	138432	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Retusidae
Retusa truncatula	141138	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Retusidae
Roxania utriculus	139486	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae
Scaphander lignarius	139488	2	3	S	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae
Aporrhais pespelecani	138760	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Aporrhaidae
Caecum glabrum	138952	1	2	E	Mollusca	Gastropoda	Littorinimorpha	Caecidae
Crepidula fornicata	138963	1	1	E	Mollusca	Gastropoda	Littorinimorpha	Calyptraeidae
Galeodea echinophora	139023	1	4	E	Mollusca	Gastropoda	Littorinimorpha	Cassidae
Hydrobiidae	120	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Hydrobiidae
Ceratia	138082	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Iravadiidae
Ceratia proxima	140128	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Iravadiidae
Hyala vitrea	140129	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Iravadiidae
Euspira pulchella	140539	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Naticidae
Lunatia catena	150590	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Naticidae
Lunatia montagui	150639	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Naticidae
Naticidae	145	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Naticidae
Alvania	138439	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Rissoidae
Alvania cancellata	141165	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Rissoidae
Alvania cimicoides	141168	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Rissoidae
Alvania subsoluta	141247	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Rissoidae
Alvania testae	141251	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Rissoidae
Rissoa	138456	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Rissoidae
Rissoa parva	141365	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Rissoidae
Lamellaria latens	140172	2	3	S	Mollusca	Gastropoda	Littorinimorpha	Velutinidae
Buccinum undatum	138878	2	4	S	Mollusca	Gastropoda	Neogastropoda	Buccinidae
Neptunea antiqua	138920	2	4	S	Mollusca	Gastropoda	Neogastropoda	Buccinidae
Mangelia attenuata	139265	2	4	S	Mollusca	Gastropoda	Neogastropoda	Conidae
Raphitoma linearis	139371	2	4	S	Mollusca	Gastropoda	Neogastropoda	Conidae
Nassarius incrassatus	140503	2	3	S	Mollusca	Gastropoda	Neogastropoda	Nassariidae
Nassarius reticulatus	140513	2	3	S	Mollusca	Gastropoda	Neogastropoda	Nassariidae
Onchidoris	138288	1	1	S	Mollusca	Gastropoda	Nudibranchia	Onchidorididae
Cuthona	138543	1	2	E	Mollusca	Gastropoda	Nudibranchia	Tergipedidae
Acteon tornatilis	138691	2	3	S	Mollusca	Gastropoda		Acteonidae
Turbonilla	138421	2	2	S	Mollusca	Gastropoda		Pyramidellidae
Turbonilla acuta	141052	2	2	S	Mollusca	Gastropoda		Pyramidellidae
Turbonilla crenata	141057	2	2	S	Mollusca	Gastropoda		Pyramidellidae
Rissoella	144173	2	3	S	Mollusca	Gastropoda		Rissoellidae
Rissoella diaphana	141147	2	3	S	Mollusca	Gastropoda		Rissoellidae
Rissoella opalina	141149	2	3	S	Mollusca	Gastropoda		Rissoellidae
Lepidochitona (Lepidochitona) cinerea	140143	1	2	E	Mollusca	Polyplacophora	Chitonida	Tonicellidae
Leptochiton asellus	140199	1	2	E	Mollusca	Polyplacophora	Lepidopleurida	Leptochitonidae
Antalis entalis	150534	3	2	UC	Mollusca	Scaphopoda	Dentaliida	Dentaliidae
Antalis vulgaris	196380	3	2	UC/DC	Mollusca	Scaphopoda	Dentaliida	Dentaliidae
Entalina tetragona	139691	2	2	S	Mollusca	Scaphopoda	Gadilida	Entalinidae
Nematoda	799	2	2	S	Nematoda			
Cerebratulus	122348	4	3	B	Nemertea	Anopla		Cerebratulidae
Lineidae	122314	4	3	B	Nemertea	Anopla		Cerebratulidae

Table 1. Continued.

Scientific Name	Aphia ID	Ri	Mi	Fti	Phylum	Class	Order	Family
Nemertea	152391	4	3	B	Nemertea			
Tubularia	600947	1	1	E	Ochrophyta	Bacillariophyceae		
Phoronida	1789	2	1	S	Phoronida			Phoronidae
Phoronis	128545	2	1	S	Phoronida			
Phoronis muelleri	128549	2	1	S	Phoronida			
Phoronis pallida	128551	2	1	S	Phoronida			
Turbellaria	794	2	2	S	Platyhelminthes	Turbellaria		
Platyhelminthes	793	2	2	S	Platyhelminthes			
Pachymatisma johnstonia	134057	1	1	E	Porifera	Demospongiae	Astrophorida	Geodiidae
Golfingia	136021	4	3	B	Sipuncula	Sipunculidea	Golfingiida	Golfingiidae
Golfingia (Golfingia) elongata	175026	4	3	B	Sipuncula	Sipunculidea	Golfingiida	Golfingiidae
Golfingia (Golfingia) iniqua	136042	4	3	B	Sipuncula	Sipunculidea	Golfingiida	Golfingiidae
Golfingia (Golfingia) vulgaris vulgaris	410724	4	3	B	Sipuncula	Sipunculidea	Golfingiida	Golfingiidae
Nephasoma (Nephasoma) minutum	136060	4	3	B	Sipuncula	Sipunculidea	Golfingiida	Golfingiidae
Thysanocardia procera	136063	4	3	B	Sipuncula	Sipunculidea	Golfingiida	Golfingiidae
Onchnesoma	136024	4	3	B	Sipuncula	Sipunculidea	Golfingiida	Phascolionidae
Onchnesoma magnibathum	136064	4	3	B	Sipuncula	Sipunculidea	Golfingiida	Phascolionidae
Onchnesoma steenstrupii steenstrupii	410742	2	2	S	Sipuncula	Sipunculidea	Golfingiida	Phascolionidae
Phascolion (Phascolion) strombus strombus	410749	2	2	S	Sipuncula	Sipunculidea	Golfingiida	Phascolionidae
Sipunculidea	1296	4	3	B	Sipuncula	Sipunculidea		
Sipuncula	1268	4	3	B	Sipunculida			
Aspidosiphon (Aspidosiphon) muelleri muelleri	410717	4	3	B				
Ericthonius	101567	2	1	S				
Goneplax rhomboides	107292	4	4	B				
Isaeidae	101388	2	3	S				
Melitidae	101397	2	2	S				

M_i scores: 1 for organisms that live in fixed tubes; 2 indicates limited movement; 3 indicates slow, free movement through the sediment matrix; 4 indicates free movement, that is, via burrow system. R_i scores: 1 for epifauna; 2 for surficial modifiers; 3 for upward and downward conveyors; 4 for biodiffusors; and 5 for regenerators. Reworking types (Ft_i): "S" for surficial modifiers; "B" for biodiffusors; "UC" and "DC" for upward and downward conveyors; and "R" for regenerators".

Thus far, variation in burrowing behavior across life stages has been poorly documented in the literature. However, in some species, juveniles and adults are known to exhibit different burial behavior, which can also be modified during reproductive stages (Aguzzi and Sardà 2007; Schwalb and Pusch 2009). If such changes in behavior are known to occur, different trait scores should be attributed as appropriate to different genders or life stages.

3 Where no species level information exists, taxa are assumed to have a similar bioturbation mode to others, which are closely related taxonomically. The paucity of

information on many bioturbators (Teal et al. 2008) necessitates matching some species with the closest possible species or taxonomic group (e.g., genus or family). Regardless of whether taxonomic relatedness is a good indicator of the ecological characteristics of a species (Bevilacqua et al. 2012), the table presented here does not account for changes in taxonomic classification over time. Such changes in taxonomy could alter an organism's taxonomic relatedness to other taxa and therefore its assumed bioturbation classification. For example, *Alitta virens* (Sars 1835) and *Hediste diversicolor* (Müller 1776) may have been classified as being functionally similar, as both these species were formerly classified under the genus *Nereis* (Linnaeus 1758). Recent changes to their taxonomic classification now better reflect fundamental differences in bioturbation modes (i.e., gallery diffusor and conveyor, respectively, François et al. 2002). Nevertheless, in the absence of specific information, we consider it likely that genetically and physically similar taxa are likely to be functionally similar. As BP_c is a biomass-weighted sum of traits from many species, we consider it unlikely that small changes to trait assignments of individual species would greatly influence large-scale assessments. The current structure of the table reflects the taxonomic classification of the species at the time of analysis and will need updating as taxonomic inventories are refined.

Accepting the limitations imposed by the assumptions underpinning BP_c, the classification list we have assembled will facilitate the calculation of BP_c across most temperate coast and shelf benthic environments in the North Atlantic. This aspects makes a strong case for a wider implementation of BP_c as a standardized indicator: the ability to build on existing data (abundance and biomass) to fill gaps about bioturbation patterns where direct assessments are not, or cannot, been routinely carried out. Further efforts will need to take place for other regions of the world or particular circumstances. There is also tremendous potential for application to historical datasets, to estimate bioturbation rates in the past, providing insight into how this process has helped to shape sedimentary ecosystems over time (Solan et al. 2008). Finally, the Marine Strategy Framework Directive (2008/56/EC) now requires an integrated understanding and management of regional scale patterns of marine ecosystem functioning, based on the use of inexpensive, rapid indicators. Few functional indicators currently exist for European waters, and initial tests of the suitability and applicability of BP_c suggest that it holds promise as a tool for informing management and policy (Van Hoey et al. 2010; Birchenough et al. 2012).

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Conflict of Interest

None declared.

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