

Supplementary materials

Table S1: Partly native or cryptogenic (CRY) species in European seas.

Regional Sea: ANS=Greater North Sea, ACS=Celtic Seas, ABI=Bay of Biscay-Iberian Shelf, MWE=western Mediterranean, MIC= central Mediterranean, MAD=Adriatic Sea, MAL= eastern Mediterranean. Abbreviation of taxonomic groups: BAC=Bacillariophyceae, BRY=Bryozoa, CIR=Cirripedia, CNI=Cnidaria CRU=Crustacea, DIN= Dinophyceae, MOL=Mollusca, MAL=Macroalgae, POL=Polychaeta, TUN=Tunicata, FISH=Fishes

Group	Species	Regional Sea			
		BAL	NEA	MED	BLK
MAL	<i>Acrothrix gracilis</i> Kylin		native	NIS (MWE)	
MAL	<i>Aglaothamnion feldmanniae</i> Halos		native	NIS	
MAL	<i>Antithamnionella spirographidis</i> (Schiffner) E.M. Wollaston		NIS	CRY	
MAL	<i>Ceramium circinatum</i> (Kützing) J.Agardh		NIS (ANS)	native	
MAL	<i>Chorda filum</i> (Linnaeus) Stackhouse		Native	NIS	
MAL	<i>Cladosiphon zosterae</i> (J.Agardh) Kylin		Native	NIS	
MAL	<i>Cutleria multifida</i> (Turner) Greville		native	NIS	
MAL	<i>Dasya baillouviana</i> (S.G.Gmelin) Montagne		NIS	native	
MAL	<i>Desmarestia viridis</i> (O.F.Müller) J.V.Lamouroux		Native	NIS	
MAL	<i>Ectocarpus siliculosus</i> var. <i>hiemalis</i> (P.L.Crouan & H.M.Crouan) Gallardo		Native	NIS (MAD)	
MAL	<i>Fucus spiralis</i> Linnaeus, 1753		Native	NIS	
MAL	<i>Grateloupia minima</i> P.L.Crouan & H.M.Crouan		Native (ACS)	NIS (MWE)	
MAL	<i>Griffithsia corallinoides</i> (Linnaeus) Trevisan		Native	NIS	
MAL	<i>Halothrix lumbricalis</i> (Kützing) Reinke, 1888	native	Native	NIS	
MAL	<i>Punctaria tenuissima</i> (C.Agardh) Greville		native	NIS	
MAL	<i>Pylaiella littoralis</i> (Linnaeus) Kjellman, 1872		native	NIS	
MAL	<i>Rhodophysema georgei</i> Batters, 1900		native	NIS	
MAL	<i>Solieria chordalis</i> (C.Agardh) J.Agardh		NIS	native	
POL	<i>Alitta succinea</i> (Leuckart, 1847)		CRY		NIS
POL	<i>Amphiglena mediterranea</i> (Leydig, 1851)		native	native	NIS
POL	<i>Boccardiella ligerica</i> (Ferroinère, 1898)	NIS	native		
POL	<i>Polydora cornuta</i> Bosc, 1802		CRY	NIS	NIS
POL	<i>Polydora hoplura</i> Claparède, 1868		NIS	native	
CRU	<i>Alpheus dentipes</i> Guérin, 1832		native	native	NIS
CRU	<i>Brachyotus sexdentatus</i> (Risso, 1827 in [Risso])		NIS	native	
CRU	<i>Cercopagis (Cercopagis) pengoi</i> (Ostroumov, 1891)	NIS	-	-	native
CRU	<i>Diamysis lagunaris</i> Ariani & Wittmann, 2000		NIS (ABI)	native	
CRU	<i>Evadne anonyx</i> G.O. Sars, 1897	NIS			native
CRU	<i>Hexapleomera robusta</i> (Moore, 1894)		NIS (ABI)	native	
CRU	<i>Neomysis integer</i> (Leach, 1814)	native	Native	NIS (MWE)	
CRU	<i>Paracartia grani</i> Sars G.O., 1904		Native	NIS	
CRU	<i>Amphibalanus amphitrite</i> (Darwin, 1854)	-	NIS	CRY	NIS

CRU	<i>Chthamalus stellatus</i> (Poli, 1791)		Native	native	NIS
CRU	<i>Erichthonius didymus</i> (Krapp-Schickel, 2013)		NIS (ANS)	native	
BAC	<i>Chaetoceros circinalis</i> (Meunier) K.G. Jensen & Moestrup	NIS	CRY (ANS)		
MOL	<i>Dreissena polymorpha</i> (Pallas, 1771)	NIS	NIS		native
MOL	<i>Gibbula ardens</i> (Salis Marschlins, 1793)		NIS (ANS)	Native	
MOL	<i>Aplus dorbignyi</i> (Payraudeau, 1826)		NIS (AMA)	Native	
MOL	<i>Littorina littorea</i> (Linnaeus, 1758)	-	Native	NIS (MWE)	-
MOL	<i>Littorina saxatilis</i> (Olivi, 1792)		Native	NIS (MAD)	
MOL	<i>Mya arenaria</i> Linnaeus, 1758	CRY	CRY	NIS	NIS
MOL	<i>Ostrea stentina</i> Payraudeau, 1826		NIS (ABI)	Native	
MOL	<i>Phorcus lineatus</i> (da Costa, 1778)		Native	NIS (MWE)	
MOL	<i>Pseudofusus rostratus</i> (Olivi, 1792)		NIS	Native	
MOL	<i>Steromphala adansonii</i> (Payraudeau, 1826)		NIS (ABI)	Native	
MOL	<i>Steromphala adriatica</i> Philippi, 1844		NIS (ABI)	Native	
MOL	<i>Steromphala albida</i> (Gmelin, 1791)		NIS (ABI, ANS)	Native	
MOL	<i>Steromphala cineraria</i> (Linnaeus, 1758)		Native	NIS (MAL, MIC)	
TUN	<i>Ascidella aspersa</i> (Müller, 1776)		Native	NIS	
TUN	<i>Molgula manhattensis</i> (De Kay, 1843)	NIS	CRY	CRY	NIS
CNI	<i>Blackfordia virginica</i> Mayer, 1910	NIS	NIS	native	native
CNI	<i>Cordylophora caspia</i> (Pallas, 1771)	NIS	NIS	NIS	native
CNI	<i>Diadumene cincta</i> Stephenson, 1925		Native	NIS (MAD)	
CNI	<i>Maeotias marginata</i> (Modeer, 1791)	NIS	NIS		native
CNI	<i>Pachycordyle michaeli</i> (Berrill, 1948)		NIS	CRY	
BRY	<i>Escharina vulgaris</i> (Moll, 1803)		NIS (ANS)	native	
FISH	<i>Cyclopterus lumpus</i> Linnaeus, 1758		Native	NIS	

Table S2. Species native/cryptogenic in one subregion, but NIS in another subregion. For subregional abbreviations see Table 1

Group	Species	Native/Cryptogenic	NIS
macroalgae	<i>Cutleria multifida</i> (Turner) Greville	native: MED, NEA	AMA
macroalgae	<i>Grallatoria reptans</i> M.Howe	native: MED, NEA	AMA
macroalgae	<i>Hypnea flagelliformis</i> Greville ex J.Agardh	native: MED, NEA	AMA
macroalgae	<i>Melanothamnus sphaerocarpus</i> (Børgesen) Díaz-Tapia & Maggs	native: MED, NEA	AMA
Polychaeta	<i>Terebella lapidaria</i> Linnaeus, 1767	native: MED, NEA	ACS
Crustacea	<i>Neomysis integer</i> (Leach, 1814)	Native: NEA (ANS)	ABI
Crustacea	<i>Erichthonius didymus</i> Krapp-Schickel, 2013	native: MED	AMA, ANS

Crustacea	<i>Perforatus perforatus</i> (Bruguère, 1789)	native: MED, NEA	AMA, ACS
Crustacea	<i>Zeuxo holdichi</i> Bamber, 1990	native: NEA (ABI)	ANS
Mollusca	<i>Hexaplex trunculus</i> (Linnaeus, 1758)	native: MED, NEA	AMA
Mollusca	<i>Ostrea edulis</i> Linnaeus, 1758	native: MED, NEA	AMA
Mollusca	<i>Ruditapes decussatus</i> (Linnaeus, 1758)	native: MED, NEA	AMA
Mollusca	<i>Bedevea paivae</i> (Crosse, 1864)	native: NEA	AMA
Mollusca	<i>Mytilus galloprovincialis</i> Lamarck, 1819	native: MED native: NEA	AMA
Mollusca	<i>Mytilus edulis</i> Linnaeus, 1758	native: NEA	AMA
Mollusca	<i>Ostrea edulis</i> Linnaeus, 1758	native: MED, NW Europe	AMA
Mollusca	<i>Phorcus sauciatus</i> (F. C. L. Koch, 1845)	native: NEA	AMA
Tunicata	<i>Alloeocarpa loculosa</i> Monniot C., 1974	native: NEA	AMA
Tunicata	<i>Aplidium glabrum</i> (Verrill, 1871)	native: NEA	AMA
Tunicata	<i>Clavelina lepadiformis</i> (Müller, 1776)	native: MED, NEA	AMA
Tunicata	<i>Clavelina dellavallei</i> (Zirpolo, 1925)	native: MED, NEA	AMA
Tunicata	<i>Didemnum candidum</i> Savigny, 1816	native: MED, NEA	AMA
Porifera	<i>Crambe crambe</i> (Schmidt, 1862)	native: MED, NEA	AMA
Bryozoa	<i>Amathia verticillata</i> (delle Chiaje, 1822)	cryptogenic: MED, NEA	AMA
Bryozoa	<i>Amathia gracilis</i> (Leidy, 1855)	cryptogenic: MED, NEA	AMA
Bryozoa	<i>Bugula neritina</i> (Linnaeus, 1758)	cryptogenic: MED, NEA	AMA
Bryozoa	<i>Schizoporella errata</i> (Waters, 1878)	cryptogenic: MED, NEA	AMA
Bryozoa	<i>Watersipora subtorquata</i> (d'Orbigny, 1852)	cryptogenic: MED, NEA	AMA
Cnidaria	<i>Kirchenpaueria halecioides</i> (Alder, 1859)	native: MED, NEA	AMA
Cnidaria	<i>Oculina patagonica</i> de Angelis, 1908	cryptogenic: MED, NEA	AMA
Fishes	<i>Sparus aurata</i> Linnaeus, 1758	native: MED, NEA	AMA