

Figure S1. Map of the survey area showing the 24 strata (black) used in the current survey design, overlaid with the ICES fishing areas (red). The survey initially included strata 1 – 12 in the western Channel (2006-2013) but was then extended to the wider Celtic Sea and Bristol Channel (strata A -K) in subsequent years (2014-2022).

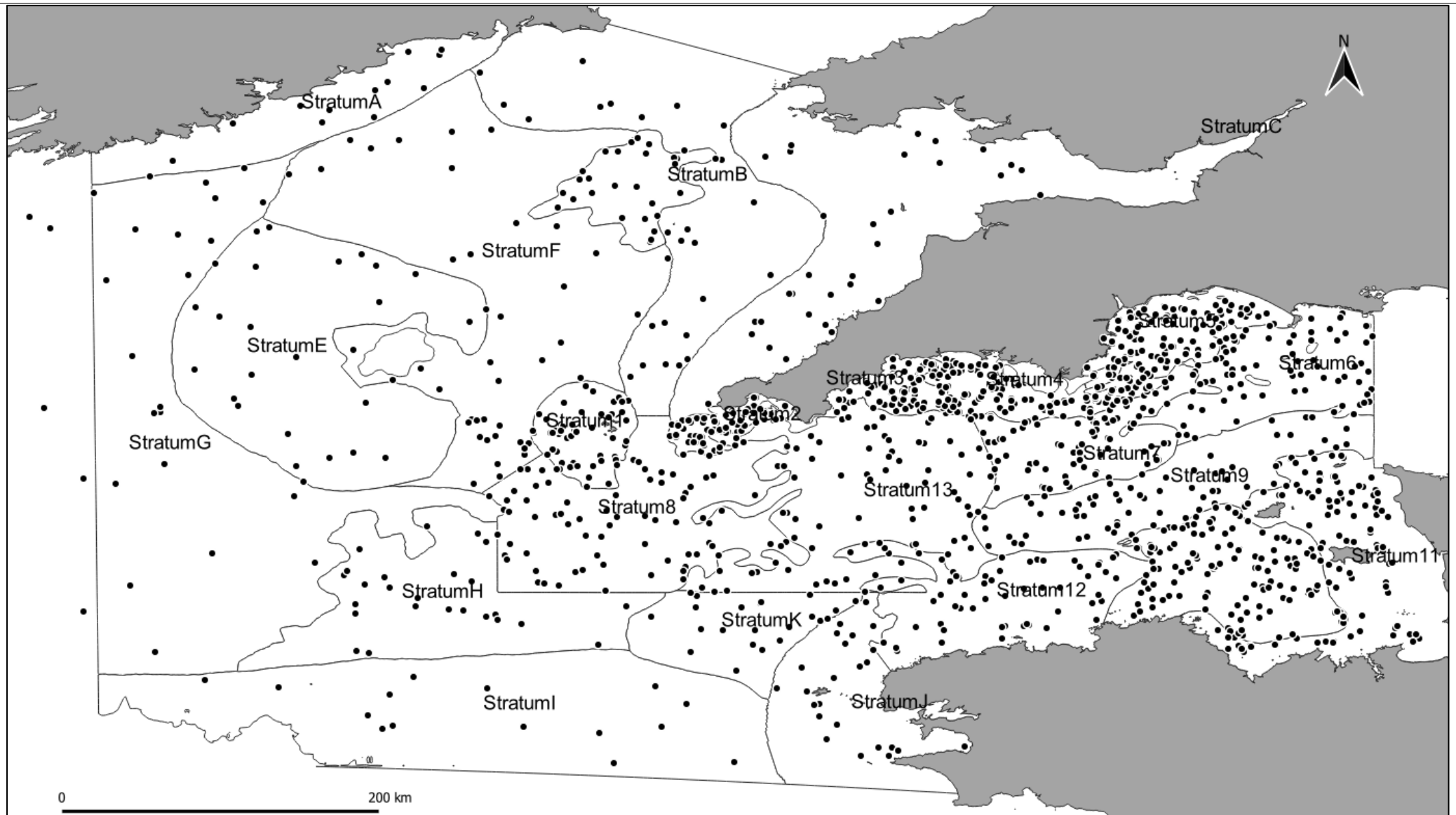


Figure S2. Map of the survey area showing the 1633 survey stations plotted within the 24 strata, used in the current survey design. The survey initially included strata 1 – 12 in the western Channel (2006-2013) but was then extended to the wider Celtic Sea and Bristol Channel (strata A -K) in subsequent years (2014-2022)

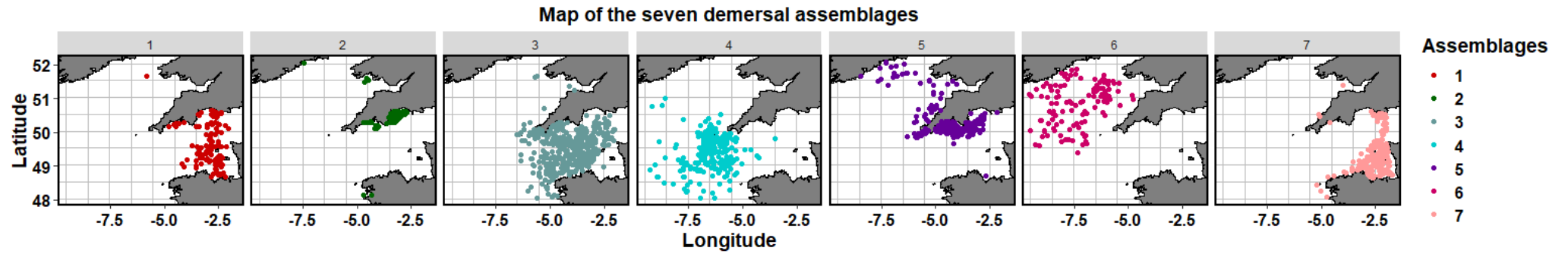


Figure S3. Maps of 7 demersal assemblages – assemblages were established using a Hellinger matrix with a Euclidean distance.

Table S1. List of fish, molluscs and cephalopod species recorded in the surveys (1633 sampling sites) that were included in the data analysis, including common name, Cefas species code, group (Tel. = teleost fishes; Elas. = elasmobranch fishes; Cru. = crustacean; Ceph. = cephalopod and Biv. = bivalve; Mol. = mollusc), the total number of individuals caught (catches converted to numbers per km²) and the relative proportion of the catch (the percentage of the total numbers). Species that were aggregated at higher taxonomic groupings for analysis are listed under their aggregated code (see also Table S2; species excluded from data analysis are also shown in Table S2).

Scientific Name	Common Name	Code	Group	Ind Km2	% Ind km2
<i>Trisopterus minutus</i>	Poor cod	POD	Tel.	4443.65	24.81
<i>Aequipecten opercularis</i>	Queen Scallop	QSC	Biv.	3481.19	19.44
<i>Callionymus lyra</i>	Common dragonet	CDT	Tel.	890.88	4.97
<i>Scyliorhinus canicula</i>	Lesser-spotted dogfish	LSD	Elas.	662.00	3.70
<i>Buglossidium luteum</i>	Solenette	SOT	Tel.	612.56	3.42
<i>Microchirus variegatus</i>	Thickback sole	TBS	Tel.	599.13	3.35
<i>Pleuronectes platessa</i>	European plaice	PLE	Tel.	570.25	3.18
<i>Capros aper</i>	Boarfish	BOF	Tel.	513.30	2.87
<i>Maia squinado</i>	Spiny spidercrab	SCR	Cru.	495.44	2.77
<i>Trisopterus luscus</i>	Bib	BIB	Tel.	424.23	2.37
<i>Arnoglossus laterna</i>	Scaldfish	SDF	Tel.	368.88	2.06
<i>Chelidonichthys cuculus</i>	Red gurnard	GUR	Tel.	362.31	2.02
<i>Pecten maximus</i>	King Scallop	SCE	Biv.	293.25	1.64
<i>Lepidorhombus whiffiagonis</i>	Megrim	MEG	Tel.	269.95	1.51
<i>Merlangius merlangus</i>	Whiting	WHG	Tel.	264.61	1.48
<i>Eutrigla gurnardus</i>	Grey gurnard	GUG	Tel.	247.74	1.38
<i>Limanda limanda</i>	Dab	DAB	Tel.	228.78	1.28
<i>Melanogrammus aeglefinus</i>	Haddock	HAD	Tel.	218.22	1.22
<i>Solea solea</i>	Sole	SOL	Tel.	212.49	1.19
<i>Arnoglossus imperialis</i>	Imperial scaldfish	ISF	Tel.	207.47	1.16
<i>Trisopterus esmarki</i>	Norway pout	NOP	Tel.	185.63	1.04
<i>Lophius piscatorius</i>	Anglerfish	MON	Tel.	178.17	0.99
<i>Microstomus kitt</i>	Lemon sole	LEM	Tel.	154.67	0.86
<i>Nephrops norvegicus</i>	Norway lobster	NEP	Cru.	121.52	0.68
<i>Spondyliosoma cantharus</i>	Black seabream	BKS	Tel.	112.53	0.63
<i>Micromesistius poutassou</i>	Blue whiting	WHB	Tel.	91.33	0.51
<i>Trigloporus lastoviza</i>	Streaked gurnard	GUS	Tel.	89.01	0.50
<i>Mullus surmuletus</i>	Striped red mullet	MUR	Tel.	83.61	0.47
<i>Cancer pagurus</i>	Edible crab	CRE	Cru.	75.03	0.42
<i>Chelidonichthys lucerna</i>	Tub gurnard	TUB	Tel.	65.32	0.36
<i>Callionymus maculatus</i>	Spotted dragonet	SDT	Tel.	63.39	0.35
<i>Merluccius merluccius</i>	European hake	HKE	Tel.	61.02	0.34
<i>Agonus cataphractus</i>	Pogge	POG	Tel.	56.71	0.32
<i>Phrynorhombus norvegicus</i>	Norwegian topknot	NKT	Tel.	55.75	0.31
<i>Hippoglossoides platessoides</i>	Long-rough dab	PLA	Tel.	50.96	0.28
<i>Leucoraja naevus</i>	Cuckoo ray	CUR	Elas.	45.87	0.26
<i>Pomatoschistus</i> spp.	Sand goby (indet.)	POM	Tel.	45.69	0.26
<i>Zeugopterus punctatus</i>	Topknot	TKT	Tel.	44.52	0.25
<i>Lophius budegassa</i>	Black-bellied anglerfish	WAF	Tel.	43.70	0.24
<i>Ctenolabrus rupestris</i>	Goldsinny wrasse	GDY	Tel.	42.69	0.24

<i>Glyptocephalus cynoglossus</i>	Witch	WIT	Tel.	37.79	0.21
<i>Zeus faber</i>	John dory	JOD	Tel.	33.19	0.19
<i>Raja montagui</i>	Spotted ray	SDR	Elas.	32.79	0.18
<i>Echiichthys vipera</i>	Lesser weever	WEL	Tel.	32.04	0.18
<i>Labrus mixtus</i>	Cuckoo wrasse	CUW	Tel.	24.66	0.14
<i>Blennius ocellaris</i>	Butterfly blenny	BBY	Tel.	23.56	0.13
<i>Raja clavata</i>	Thornback ray	THR	Elas.	23.33	0.13
<i>Pegusa lascaris</i>	Sand sole	SOS	Tel.	21.51	0.12
<i>Argentina spp.</i>	Argentine (indet.)	ARG	Tel.	18.87	0.11
<i>Conger conger</i>	Conger eel	COE	Tel.	18.39	0.10
<i>Labrus bergylta</i>	Ballan wrasse	BNW	Tel.	16.33	0.09
<i>Gobius gasteveni</i>	Stevens's goby	GSV	Tel.	14.32	0.08
<i>Gaidropsarus vulgaris</i>	Three-bearded rockling	TBR	Tel.	14.25	0.08
<i>Symphodus bailloni</i>	Baillon's wrasse	BLW	Tel.	12.94	0.07
<i>Syngnathus acus</i>	Greater pipefish	GPF	Tel.	11.69	0.07
<i>Buenia jeffreysii</i>	Jeffrey's goby	JYG	Tel.	10.77	0.06
<i>Scophthalmus rhombus</i>	Brill	BLL	Tel.	10.75	0.06
<i>Gadus morhua</i>	Atlantic cod	COD	Tel.	10.34	0.06
<i>Raja brachyura</i>	Blonde ray	BLR	Elas.	10.19	0.06
<i>Raja undulata</i>	Undulate ray	UNR	Elas.	9.86	0.06
<i>Homarus gammarus</i>	European lobster	LBE	Cru.	9.10	0.05
<i>Platichthys flesus</i>	Flounder	FLE	Tel.	7.94	0.04
<i>Phrynorhombus regius</i>	Eckstrom's topknot	EKT	Tel.	7.49	0.04
<i>Lesueurigobius friesii</i>	Fries's goby	FSG	Tel.	6.72	0.04
<i>Torpedo marmorata</i>	Marbled electric ray	MER	Elas.	6.45	0.04
<i>Dipturus batis</i>	Common blue skate	SKG	Elas.	5.52	0.03
<i>Phycis blennoides</i>	Greater forkbeard	GFB	Tel.	5.38	0.03
<i>Ciliata mustela</i>	Five-bearded rockling	FVR	Tel.	4.65	0.03
<i>Ciliata septentrionalis</i>	Northern rockling	NNR	Tel.	4.57	0.03
<i>Parablennius gattorugine</i>	Tompot blenny	TBY	Tel.	4.54	0.03
<i>Palinurus elephas</i>	Crawfish	SLO	Cru.	4.32	0.02
<i>Scyliorhinus stellaris</i>	Greater-spotted dogfish	DGN	Elas.	4.24	0.02
Gobiidae (indet.)	Goby (indet.)	GOB	Tel.	4.06	0.02
<i>Scophthalmus maximus</i>	Turbot	TUR	Tel.	3.88	0.02
<i>Gobius niger</i>	Black goby	BLG	Tel.	3.78	0.02
<i>Raja microocellata</i>	Small-eyed ray	PTR	Elas.	3.39	0.02
<i>Molva molva</i>	Ling	LIN	Tel.	3.16	0.02
<i>Taurulus bubalis</i>	Sea scorpion	SSN	Tel.	2.69	0.01
<i>Callionymus reticulatus</i>	Reticulated dragonet	RDT	Tel.	2.26	0.01
<i>Enchelyopus cimbricus</i>	Four-bearded rockling	FRR	Tel.	1.85	0.01
<i>Gobius paganellus</i>	Rock goby	RKG	Tel.	1.77	0.01
<i>Cepola rubescens</i>	Redband fish	RPF	Tel.	1.36	0.01
<i>Micrenophrys lilljeborgii</i>	Norway bullhead	NVB	Tel.	1.28	0.01
<i>Leucoraja fullonica</i>	Shagreen ray	SHR	Elas.	1.18	0.01
<i>Chirolophis ascanii</i>	Yarrell's blenny	YBY	Tel.	1.08	0.01
<i>Pholis gunnellus</i>	Butter fish	BTF	Tel.	0.98	0.01
<i>Chelidonichthys obscurus</i>	Long-finned gurnard	GUL	Tel.	0.77	0.00
<i>Centrolabrus exoletus</i>	Small-mouthed wrasse	SMW	Tel.	0.71	0.00
<i>Raniceps raninus</i>	Tadpole fish	LFB	Tel.	0.68	0.00

Labridae (indet.)	Wrasse	WRA	Tel.	0.68	0.00
<i>Gadiculus argenteus</i>	Silvery pout	SYP	Tel.	0.60	0.00
<i>Lepidorhombus boscii</i>	Four-spot megrim	LBI	Tel.	0.56	0.00
<i>Trachinus draco</i>	Greater weever	WEG	Tel.	0.55	0.00
<i>Pagrus pagrus</i>	Couch's seabream	SBC	Tel.	0.33	0.00
<i>Tetronarce nobiliana</i>	Electric ray	ECR	Elas.	0.30	0.00
<i>Pomatoschistus minutus</i>	Sand goby	SDG	Tel.	0.27	0.00
<i>Dasyatis pastinaca</i>	Stingray	SGR	Elas.	0.23	0.00
<i>Myoxocephalus scorpius</i>	Bullrout	BRT	Tel.	0.23	0.00
<i>Lithodes maja</i>	Stone crab	LDM	Crus.	0.17	0.00
<i>Acantholabrus palloni</i>	Scale-rayed wrasse	SRW	Tel.	0.15	0.00
<i>Helicolenus dactylopterus</i>	Blue-mouth redfish	RBM	Tel.	0.14	0.00
<i>Symphodus melops</i>	Corkwing	CWG	Tel.	0.11	0.00
<i>Nerophis lumbriciformis</i>	Worm pipefish	WPF	Tel.	0.10	0.00
<i>Pagellus erythrinus</i>	Pandora seabream	PAC	Tel.	0.10	0.00
<i>Sparus auratus</i>	Gilthead seabream	SBG	Tel.	0.07	0.00
<i>Sepia officinalis</i>	Common cuttlefish	Aggregated as Sepia spp. CTC	Ceph.	274.51	1.60
<i>Sepia elegans</i>	Cuttlefish				
<i>Sepia orbignyana</i>	Pink Cuttlefish				
<i>Mustelus asterias</i>	Starry smooth-hound	Aggregated as SDS	Elas.	42.90	0.24
<i>Mustelus mustelus</i>	Smooth-hound				
<i>Gymnammodytes semisquamatus</i>	Smooth sandeel	Aggregated as Loliginidae SQZ	Tel.	31.60	0.18
<i>Hyperoplus lanceolatus</i>	Greater sandeel				
<i>Hyperoplus immaculatus</i>	Immaculate sandeel				
Ammodytidae	Sandeels				
<i>Alloteuthis subulata</i>	European common squid				
<i>Loligo forbesi</i>	Northern squid				
<i>Loligo vulgaris</i>	Squid				
<i>Loligo</i> spp	Common squid				
Loliginidae	Squids				
<i>Ammodytes tobianus</i>	Sandeel	Aggregated as Sandeels SAX	Tel.	8.64	0.05
<i>Ammodytes marinus</i>	Sandeel				
<i>Ammodytes</i> spp.	Sandeel				
<i>Todaropsis eblanae</i>	Lesser flying squid	Aggregated as Ommastrephidae OMX	Ceph.	6.34	0.04
<i>Illex illecebrosus</i>	Northern shortfin squid				
<i>Todarodes sagittatus</i>	Flying squid				
Ommastrephidae	Squids				
<i>Hippocampus ramulosus</i>	Sea horse	Aggregated as Hippocampus spp. SHE	Tel.	2.69	0.02
<i>Hippocampus hippocampus</i>	Sea horse (short snouted)				
<i>Diplecogaster bimaculata</i>	Two-spotted clingfish	Aggregated as CFX	Tel.	1.92	0.01
<i>Apletodon microcephalus</i>	Small-headed clingfish				
Gobiesocidae	Clingfish (indet.)				
<i>Liparis montagui</i>	Montagu's Sea-snail	Aggregated as Liparidae MSS	Tel.	1.33	0.01
<i>Liparis liparis</i>	Sea-snail				

Table S2. List of fish, shellfish and cephalopod species recorded in the surveys that were excluded from the data analysis, including common name, Cefas species code and data treatment.

Scientific Name	Common Name	Code	Data Treatment	
<i>Squalus acanthias</i>	Spurdog	DGS		
<i>Galeorhinus galeus</i>	Tope	GAG		
<i>Alosa fallax</i>	Twaite shad	TAS		
<i>Engraulis encrasicolus</i>	Anchovy	ANE		
<i>Clupea harengus</i>	Herring	HER		
<i>Sardina pilchardus</i>	Pilchard	PIL		
<i>Sprattus sprattus</i>	Sprat	SPR		
<i>Maurolicus muelleri</i>	Pearlside	PLS		
<i>Atherina presbyter</i>	Sand-smelt	SMT		
<i>Belone belone</i>	Garfish	GAR		
<i>Entelurus aequoreus</i>	Snake pipefish	SKP	Pelagic species: Excluded	
<i>Dicentrarchus labrax</i>	European bass	ESB		
<i>Trachurus trachurus</i>	Horse-mackerel	HOM		
<i>Aphia minuta</i>	Transparent goby	TPG		
<i>Crystallogobius linearis</i>	Crystal goby	CLG		
<i>Scomber scombrus</i>	Mackerel	MAC		
<i>Aurelia aurita</i>	Moon jellyfish	AUA		
<i>Rhizostoma octopus</i>	Barrel jellyfish	BAR		
<i>Cyanea lamarckii</i>	Blue jellyfish	BLU		
<i>Aequorea</i> spp.	Crystal jellies	CRI		
Ctenophora	Ctenophores	CTA		
<i>Pelagia noctiluca</i>	Mauve stinger	PEL		
<i>Amblyraja radiata</i>	Starry ray	SYR	Uncertain identification: Excluded	
<i>Galeus melastomus</i>	Black-mouth dogfish	DBM		
<i>Pollachius pollachius</i>	Pollack	POL		
<i>Pollachius virens</i>	Saithe	POK		
<i>Gaidropsarus macrophthalmus</i>	Big-eyed rockling	AGM		
<i>Gaidropsarus mediterraneus</i>	Shore rockling	SRR		
Gadidae	Cod-like fish (indet.)	GAD	Limited data: Excluded	
<i>Echiodon drummondii</i>	Pearlfish	PRL		
<i>Syngnathus rostellatus</i>	Nilsson's pipefish	NPF		
<i>Pagellus acarne</i>	Auxillary seabream	SBA		
<i>Zoarces viviparus</i>	Eelpout	ELP		
Callionymidae	Dragonet (indet.)	DTX		
Gobiidae	Goby (indet.)	GPA		
<i>Scyllarus arctus</i>	Slipper lobster	ARC		
<i>Necora puber</i>	Velvet swimming crab	MLP		
<i>Buccinum undatum</i>	Common whelk	WHE		Excluded
<i>Corallium japonicum</i>	Aka coral	COJ		
<i>Carcinus aestuarii</i>	Mediterranean shore crab	CMR		
<i>Necora puber</i>	Velvet swimcrab	LIO		
<i>Pagrus major</i>	Japanese seabream	REV		
<i>Solenocera africana</i>	African mud shrimp	SKF		
<i>Thunnus tonggol</i>	Longtail tuna	LOT		