

New findings of *Isidella elongata* (Esper, 1788) in the Levantine-Balearic demarcation (western Mediterranean Sea)

Maria Teresa FARRIOLS, Aida FRANK, Francesc ORDINES, Belén CALERO, Aída PAREJO, Aina DE MESA, Amanda COHEN-SÁNCHEZ, Beatriz GUIJARRO and Enric MASSUTÍ

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Table S1. Abundance (n/250 m²) and biomass (g/250 m²) of epibenthic species estimated through beam trawl during the CIRCA-LEBA-1122 scientific survey, in an area adjacent to the station south-eastern Menorca (mean depth of the sample was 659 m) and during the CIRCA-LEBA-1121 scientific survey, in the station at the Ibiza Channel (mean depth of the sample was 557 m) where *Isidella elongata* was detected.

Area	Group	Species	Abundance	Biomass
South-eastern Menorca	Bivalvia	<i>Abra longicallus</i>	0.4	0.1
		<i>Bathyarca philippiana</i>	0.1	0.1
	Cephalopoda	<i>Bathypolypus sponsalis</i>	0.1	9.1
	Cnidaria	Leftovers of dead <i>Isidella elongata</i>	--	37.5
	Crustacea	<i>Aristeus antennatus</i>	0.5	3.9
		<i>Calocaris macandreae</i>	0.9	0.1
		<i>Geryon longipes</i>	0.4	4.9
		<i>Munida perarmata</i>	0.5	0.8
		<i>Plesionika acanthonotus</i>	0.1	0.1
		<i>Polycheles typhlops</i>	0.4	1.1
		<i>Robustosergia robusta</i>	4.7	0.8
	Fish	<i>Chauliodus sloani</i>	0.3	0.3
		<i>Gaidropsarus biscayensis</i>	0.1	0.1
		<i>Symphurus ligulatus</i>	0.3	0.9
	Scaphopoda	<i>Antalis</i> spp.	0.4	0.1

Continued

Table S1 continued

Area	Group	Species	Abundance	Biomass
Ibiza Channel	Bivalvia	<i>Nucula sulcata</i>	0.9	0.8
	Cnidaria	<i>Isidella elongata</i>	0.1	7.2
	Crustacea	<i>Aegaeon lacazei</i>	0.1	0.3
		<i>Alpheus glaber</i>	0.3	0
		<i>Anapagurus laevis</i>	0.1	0.1
		<i>Bathynectes maravigna</i>	0.1	0.4
		<i>Calocaris macandreae</i>	3	0.6
		<i>Gennadas elegans</i>	0.3	0.1
		<i>Iridonida speciosa</i>	0.1	0.6
		<i>Monodaeus couchii</i>	0.9	2.6
		<i>Munida perarmata</i>	0.1	0.6
		<i>Nephrops norvegicus</i>	0.1	3.6
		<i>Pagurus alatus</i>	0.1	0.4
		<i>Plesionika acanthonotus</i>	0.1	0.1
		<i>Plesionika heterocarpus</i>	0.1	0.1
		<i>Processa canaliculata</i>	0.5	1.3
		<i>Processa nouveli nouveli</i>	0.3	0.5
		<i>Solenocera membranacea</i>	0.1	0.5
	Fish	<i>Argyropelecus hemigymnus</i>	0.1	0.1
		<i>Gadella maraldi</i>	0.1	0.3
		<i>Gaidropsarus biscayensis</i>	0.1	0.4
		<i>Hymenocephalus italicus</i>	0.1	0.9
		<i>Nezumia aequalis</i>	0.1	4.4
	Scaphopoda	Scaphopoda	1.8	0.6

Table S2. Mean abundance (n/km²) and biomass (g/km²) of nekto-benthic species estimated with the experimental bottom trawl GOC-73 during the MEDITS scientific surveys from 2021 and 2022 in the fishing ground adjacent to the station south-eastern Menorca, where *Isidella elongata* was detected. The mean depth of these samples was 670 m.

Group	Species	Abundance	Biomass
Cephalopoda	<i>Histioteuthis reversa</i>	30	2096
	<i>Loligo forbesii</i>	8	1389
	<i>Todarodes sagittatus</i>	46	45744
Crustacea	<i>Aristaeomorpha foliacea</i>	13	274
	<i>Aristeus antennatus</i>	465	5908
	<i>Geryon longipes</i>	159	9826
	<i>Monodaeus couchii</i>	4	13
	<i>Munida perarmata</i>	9	14
	<i>Nephrops norvegicus</i>	4	308
	<i>Parapenaeus longirostris</i>	9	80
	<i>Pasiphaea multidentata</i>	4	21
	<i>Pasiphaea sivado</i>	9	5
	<i>Plesionika acanthonotus</i>	317	753
	<i>Plesionika giglioli</i>	38	80
	<i>Plesionika martia</i>	1877	11592
	<i>Polychaetes typhlops</i>	106	373
	<i>Robustosergia robusta</i>	14	19
Fish	<i>Argyropelecus hemigymnus</i>	18	9
	<i>Centrophorus uyato</i>	5	19181
	<i>Chauliodus sloani</i>	5	19
	<i>Conger conger</i>	41	9678
	<i>Epigonus constanciae</i>	5	61
	<i>Epigonus denticulatus</i>	14	23
	<i>Etmopterus spinax</i>	48	5204
	<i>Galeus melastomus</i>	260	57471
	<i>Hexanchus griseus</i>	5	8602
	<i>Hoplostethus mediterraneus</i>	80	8596
	<i>Hymenocephalus italicus</i>	657	3303
	<i>Lophius piscatorius</i>	9	39636
	<i>Molva dypterygia</i>	9	8194
	<i>Mora moro</i>	19	33
	<i>Nettastoma melanura</i>	9	831
	<i>Nezumia aequalis</i>	91	971
	<i>Notacanthus bonaparte</i>	4	63
	<i>Phycis blennoides</i>	445	18074
	<i>Stomias boa</i>	4	68

Table S3. Abundance (n/30 min) and biomass (g/30 min) of nekto-benthic species captured together with *Isidella elongata* in two commercial bottom trawl hauls conducted on June 30th 2021 in south-eastern Menorca (in commercial haul 1 the depth ranged from 398 to 512 m) and on June 2nd 2022 in south-eastern Menorca (in commercial haul 2 the depth ranged from 480 to 505 m).

Haul	Group	Species	Abundance	Biomass
Commercial haul 1	Cephalopoda	<i>Bathypolypus sponsalis</i>	0.3	14.9
		<i>Histioteuthis reversa</i>	0.2	8.5
		<i>Illex coindetii</i>	1.7	308.5
		<i>Loligo forbesii</i>	2	1080.8
		<i>Pteroctopus tetracirrhus</i>	0.2	35.5
		<i>Todarodes sagittatus</i>	0.7	217.6
	Crustacean	<i>Aristaeomorpha foliacea</i>	1.3	9.1
		<i>Nephrops norvegicus</i>	30.5	1624.1
		<i>Parapenaeus longirostris</i>	398.3	2847.7
		<i>Pasiphaea sivado</i>	16.6	24.9
		<i>Plesionika antgai</i>	3.8	8.8
		<i>Plesionika giglioli</i>	1	2.2
		<i>Plesionika heterocarpus</i>	4.3	14.3
		<i>Plesionika martia</i>	57.3	289.4
		<i>Polycheles typhlops</i>	5	24.9
	Fish	<i>Argyrolepecus hemigymnus</i>	0.2	139.9
		<i>Centrophorus niger</i>	0.2	89.7
		<i>Chlorophthalmus agassizi</i>	66.6	1754.3
		<i>Coelorinchus caelorhincus</i>	39.8	1160.2
		<i>Conger conger</i>	0.2	95.1
		<i>Dipturus oxyrinchus</i>	0.7	841.2
		<i>Epigonus denticulatus</i>	3.3	119.3
		<i>Etmopterus spinax</i>	13.3	256.9
		<i>Gadiculus argenteus</i>	6.6	54.7
		<i>Galeus melastomus</i>	76.2	2786.2
		<i>Helicolenus dactylopterus</i>	3.5	651
		<i>Hoplostethus mediterraneus</i>	7.3	330.5
		<i>Hymenocephalus italicus</i>	16.6	86.2
		<i>Lepidopus caudatus</i>	1.2	45.2
		<i>Lepidorhombus boscii</i>	61.2	1306.9
		<i>Lepidorhombus whiffiagonis</i>	0.2	25.4
		<i>Leucoraja circularis</i>	0.8	2685.4
		<i>Lophius budegassa</i>	0.5	400.4
		<i>Lophius piscatorius</i>	0.2	2180.4
		<i>Micromesistius poutassou</i>	5.3	913.4
		<i>Molva dypterygia</i>	0.7	165.7
		<i>Oxynotus centrina</i>	0.2	78.7
		<i>Pagellus bogaraveo</i>	0.2	34
		<i>Peristedion cataphractum</i>	0.2	21.9
		<i>Phycis blennoides</i>	13.9	842
		<i>Raja clavata</i>	1	978.9
		<i>Raja polystigma</i>	0.2	5.6
		Rajidae	1.2	98.8
		<i>Scorpaena elongata</i>	0.3	108.1
		<i>Scyliorhinus canicula</i>	1.2	234
		<i>Synchiropus phaeton</i>	8.3	92.8
		<i>Trigla lyra</i>	1.2	146.9

Continued

Table S3 continued

Haul	Group	Species	Abundance	Biomass
Commercial haul 2	Cephalopoda	<i>Bathypolypus sponsalis</i>	1.7	61
		<i>Loligo forbesii</i>	0.5	134.1
		<i>Todarodes sagittatus</i>	0.3	86.7
	Crustacea	<i>Aristaeomorpha foliacea</i>	21.3	447.5
		<i>Nephrops norvegicus</i>	22.9	922.7
		<i>Parapenaeus longirostris</i>	240.9	2320.8
		<i>Paromola cuvieri</i>	0.3	195.9
		<i>Plesionika acanthonotus</i>	2.1	3.1
		<i>Plesionika edwardsii</i>	3.1	31.5
		<i>Plesionika gigliolii</i>	3.9	3.9
		<i>Plesionika martia</i>	73.3	317.3
		<i>Polycheles typhlops</i>	5.2	12.2
	Fish	<i>Centrolophus niger</i>	0.1	262.5
		<i>Chimaera monstrosa</i>	0.1	0.7
		<i>Chlorophthalmus agassizi</i>	2.3	21.1
		<i>Coelorinchus caelorhincus</i>	14	654
		<i>Conger conger</i>	0.1	44.1
		<i>Dipturus oxyrinchus</i>	0.2	82.6
		<i>Etmopterus spinax</i>	15.7	504
		<i>Galeus melastomus</i>	26.4	1423
		<i>Helicolenus dactylopterus</i>	2.3	220.4
		<i>Hymenocephalus italicus</i>	8.7	33.1
		<i>Lepidorhombus boscii</i>	14.6	596.9
		<i>Lophius budegassa</i>	0.1	74.9
		<i>Lophius piscatorius</i>	0.1	285.4
		<i>Micromesistius poutassou</i>	2.4	303.2
		<i>Molva macrophthalma</i>	0.4	69.4
		<i>Phycis blennoides</i>	17.7	1273.4
		<i>Raja clavata</i>	0.1	270.9
		<i>Scyliorhinus canicula</i>	0.2	55.5
		<i>Squalus blainville</i>	0.1	14.3
		<i>Stomias boa boa</i>	1.7	13.9

Table S4. Mean abundance (n/km²) and biomass (g/km²) of nekto-benthic species estimated with the experimental bottom trawl GOC-73 during the MEDITS scientific surveys from 2021 and 2022 at the station in the Ibiza Channel, where *I. elongata* was detected. The mean depth of these samples was 582 m.

Group	Species	Abundance	Biomass
Cephalopoda	<i>Abralia veranyi</i>	36	113
	<i>Eledone cirrhosa</i>	8	3791
	<i>Histioteuthis bonnellii</i>	17	20137
	<i>Histioteuthis reversa</i>	33	1809
	<i>Illex coindetii</i>	14	1491
	<i>Octopus salutii</i>	5	1161
	<i>Sepietta oweniana</i>	9	41
	<i>Todarodes sagittatus</i>	13	3503
Crustacea	<i>Aristeus antennatus</i>	600	8860
	<i>Bathynectes maravigna</i>	5	45
	<i>Calocaris macandreae</i>	17	13
	<i>Geryon longipes</i>	318	23017
	<i>Monodaeus couchii</i>	9	41
	<i>Munida speciosa</i>	5	14
	<i>Munida tenuimana</i>	9	14
	<i>Nephrops norvegicus</i>	53	1508
	<i>Pagurus cuanensis</i>	5	9
	<i>Pasiphaea multidentata</i>	261	1242
	<i>Plesionika acanthonotus</i>	159	440
	<i>Plesionika gigliolii</i>	48	112
	<i>Plesionika heterocarpus</i>	9	23
	<i>Plesionika martia</i>	602	3398
	<i>Polycheles typhlops</i>	27	77
	<i>Processa canaliculata</i>	4	8
	<i>Processa nouveli</i>	39	148
	<i>Robustosergia robusta</i>	13	17
	<i>Sergia robusta</i>	72	81
Fish	<i>Arctozenus risso</i>	21	17
	<i>Argyropelecus hemigymnus</i>	13	9
	<i>Bathophilus nigerrimus</i>	5	27
	<i>Chauliodus sloani</i>	5	23
	<i>Chlorophthalmus agassizi</i>	5	23
	<i>Coelorinchus caelorhincus</i>	21	2088
	<i>Conger conger</i>	4	762
	<i>Epigonus denticulatus</i>	18	158
	<i>Etmopterus spinax</i>	49	4726
	<i>Gadella maraldi</i>	4	8
	<i>Gaidropsarus biscayensis</i>	9	14

Continued

Table S4 continued

Group	Species	Abundance	Biomass
	<i>Galeus melastomus</i>	306	60381
	<i>Helicolenus dactylopterus</i>	4	530
	<i>Hoplostethus mediterraneus</i>	71	3586
	<i>Hymenocephalus italicus</i>	208	1254
	<i>Lophius piscatorius</i>	9	111062
	<i>Nezumia aequalis</i>	60	1123
	<i>Notacanthus bonaparte</i>	18	262
	<i>Notolepis risso</i>	9	86
	<i>Phycis blennoides</i>	5	5
	<i>Scyliorhinus canicula</i>	9	18
	<i>Stomias boa boa</i>	80	1123
	<i>Symphurus nigrescens</i>	5	63

Table S5. Mean abundance (n/250 m²) and biomass (g/250 m²) of epibenthic species estimated with a beam trawl during the IN-TEMARES scientific surveys from 2019 and 2020 at stations in Ses Olives seamount (Mallorca Channel) where *Isidella elongata* was detected. The mean depth of the samples was 664 m.

Group	Species	Abundance	Biomass
Bivalvia	<i>Abra longicallus</i>	0.37	0.12
	<i>Allogramma formosa</i>	0.21	0.14
	<i>Batharca philippiana</i>	0.53	0.05
	<i>Cardiomya costellata</i>	0.04	0.01
	<i>Cuspidaria rostrata</i>	0.03	0.01
	<i>Ledella messanensis</i>	0.24	0.02
	<i>Lyonsia</i> sp.	0.03	0.01
Brachiopoda	<i>Gryphus vitreus</i>	0.18	0.81
Cnidaria	Leftovers of dead <i>Isidella elongata</i>	0.03	0.72
Crustacea	<i>Aegaeon lacazei</i>	0.12	0.07
	Alpheidae	0.03	0.03
	<i>Alpheus platydactylus</i>	0.11	0.06
	<i>Anamathia rissoana</i>	0.1	0.1
	<i>Calocaris macandreae</i>	8.18	2.41
	<i>Dorhynchus thomsoni</i>	0.18	0.03
	<i>Ebalia nux</i>	0.26	0.04
	<i>Ergasticus clouei</i>	0.03	0.02
	<i>Geryon longipes</i>	1.32	9.77
	<i>Latreillia elegans</i>	0.03	0.01
	<i>Monodaeus couchii</i>	0.45	0.24
	<i>Munida perarmata</i>	0.36	0.74
	<i>Nephrops norvegicus</i>	0.11	1.47
	<i>Pagurus alatus</i>	0.03	0.03
	<i>Philocheras bispinosus</i>	0.03	0.01
	<i>Plesionika acanthonotus</i>	0.22	0.53
	<i>Plesionika gigliolii</i>	0.04	0.01
	<i>Plesionika martia</i>	0.11	0.83
	<i>Polychaetes typhlops</i>	0.97	5.48
Echinodermata	<i>Amphipholis squamata</i>	0.03	0
	<i>Astropecten</i> spp.	0.04	0
	<i>Brissopsis atlantica mediterranea</i>	0.11	0.42
	<i>Gracilechinus acutus</i>	0.03	0
	<i>Leptometra phalangium</i>	0.06	0.01
Fish	<i>Cyclothone braueri</i>	0.03	0
	<i>Gaidropsarus biscayensis</i>	0.14	0.26
	<i>Nettastoma melanura</i>	0.04	0.71
	<i>Nezumia aequalis</i>	0.12	2.43
	<i>Notacanthus bonaparte</i>	0.03	0.09
	<i>Phycis blennoides</i>	0.03	1.89
Gastropoda	<i>Aporrhais serresiana</i>	0.11	0.37
Porifera	<i>Cladorhiza abyssicola</i>	0.28	0.01
	<i>Desmacella inornata</i>	0.39	0.06
	<i>Desmacella</i> sp.	0.11	0.39
	<i>Rhizaxinella</i> sp.	0.03	0
	<i>Thenea muricata</i>	6.36	1.71