

Article

Project “Biodiversity MARE Tricase”: A Species Inventory of the Coastal Area of Southeastern Salento (Ionian Sea, Italy)

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Abstract: Biodiversity is a broad concept that encompasses the diversity of nature, from the genetic to the habitat scale, and ensures the proper functioning of ecosystems. The Mediterranean Sea, one of the world’s most biodiverse marine basins, faces major threats, such as overexploitation of resources, pollution and climate change. Here we provide the first multi-taxa inventory of marine organisms and coastal terrestrial flora recorded in southeastern Salento (Ionian Sea, Italy), realized during the project “Biodiversity MARE Tricase”, which provided the first baseline of species living in the area. Sampling was carried out by SCUBA and free diving, fishing gears, and citizen science from 0 to 70 m. Overall, 697 taxa were found between March 2016 and October 2017, 94% of which were identified to the species level. Of these, 19 taxa represented new records for the Ionian Sea (36 additional new records had been reported in previous publications on specific groups, namely Porifera and Mollusca Heterobranchia), and two findings represented the easternmost records in the Mediterranean Sea (*Helicosalpa virgula* and *Lampea pancerina*). For eight other taxa, our findings represented the only locality in the Ionian Sea, besides the Straits of Messina. In addition to the species list, phenological events (e.g., blooms, presence of reproductive traits and behaviour) were also reported, with a focus on gelatinous plankton. Our results reveal that even for a relatively well-known area, current biodiversity knowledge may still be limited, and targeted investigations are needed to fill the gaps. Further research is needed to understand the distribution and temporal trends of Mediterranean biodiversity and to provide baseline data to identify ongoing and future changes.

Keywords: species list; checklist; benthos; gelatinous plankton; temperate mesophotic ecosystems; citizen science

1. Introduction

Biodiversity is the most valuable resource on Earth [1]. In marine ecosystems, increased diversity of structural elements and functional traits are correlated with optimal resource use, which consequently increases and stabilizes energy and matter flows [2]. Conversely, biodiversity loss is associated with decreased productivity, recovery potential, and ecosystem stability [3]. Marine biodiversity provides key ecosystem goods and services such as food, raw materials, pharmaceuticals, genetic information, climate regulation, tourism, recreation, and many others [4]. Recent estimates (2011) of global ecosystem services ranged between US\$125 and US\$145 trillion/year, with coastal marine ecosystems as the most valuable biome, accounting for 22–27% of the total ecosystem services [5]. Nowadays, the importance of marine biodiversity is recognised by the scientific community, decision makers and citizens [6]. For instance, the European Union chose “Biodiversity is maintained” as the first descriptor of good environmental status in its Marine Strategy Framework Directive (2008/56/EC).

The Mediterranean Sea is a biodiversity hotspot, hosting more than 17,000 species, 20% of which are endemic [7]. This is particularly relevant considering that the Mediterranean Sea covers only 0.82% of the world’s ocean surface area [8]. Humans have benefited from Mediterranean marine ecosystems and their services for millennia, profoundly affecting their biodiversity [9]. Historically, coastal urbanisation pressure, habitat degradation and overexploitation of resources have been the main drivers of biodiversity changes [10]. However, following the industrial revolution and the demographic explosion of the last century, new threats have emerged, and these changes have dramatically accelerated [9]. Recent anthropogenic threats include industrial pollution, eutrophication, microplastics, and non-indigenous species [7]. Furthermore, climate change is altering the distribution, phenology and physiology of many animals, algae, and plants [11–15]. On the one hand, the gradual rise in global temperatures is promoting the spread of warm-water organisms in the Mediterranean, leading to the so-called process of “tropicalization” [16]. On the other hand, extreme thermal events, also called marine heatwaves, have already caused several mass mortalities in the Mediterranean Sea and will likely worsen in the future [13,17–19]. Although the Mediterranean basin is one of the most studied seas in the world, there are still important gaps in basic knowledge, such as taxonomy, distribution, abundance, and temporal trends of occurrence of most taxa [7,20]. There are many regional-scale databases, but the knowledge of local and small-scale biodiversity is lacking [21]. This gap hinders the reliable estimates of current changes in biodiversity patterns and the prediction of future scenarios. Hence, there is an urgent need for biodiversity data at a high taxonomic resolution, including species inventories and long-term data series [22,23].

The MARE Outpost was established in Tricase (southeastern Salento, Apulia, Italy) to monitor the local coastal and marine biodiversity and to investigate the phenology and behaviour of marine organisms [24,25]. The remarkable biological uniqueness of this stretch of coastline has been recognized since the 1970s [26,27] and was confirmed by recent findings [28]. Due to its naturalistic importance, Tricase Porto is included in a forthcoming Marine Protected Area that will extend from Otranto to Leuca [29]. Following the institution of the MARE Outpost, the project “Biodiversity MARE Tricase” was initiated to inventory the coastal and marine biodiversity of the area and promote public environmental knowledge and awareness [24].

In the last 50 years, several species lists have been published for the area, but they were all almost exclusively limited to specific taxonomic groups (Mollusca Heterobranchia, [30,31]; shell-bearing Mollusca [32]; Porifera [26,33,34]; Hydrozoa [35]; Polychaeta [36]; Macroalgae [37]), or specific habitats (e.g. caves, [38,39]).

The main aim of this work was to increase current knowledge on the biodiversity of the Central Mediterranean Sea, providing the first multi-taxa species inventory of the coastal area of the southeastern Salento peninsula (Ionian Sea). In addition to the species list, data on depth distribution and phenology are provided, with a special focus on gelatinous plankton.

2. Materials and Methods

2.1. Study Sites and Sampling Methods

Samplings were carried out on the southeastern coast of the Salento Peninsula, in the Otranto Channel (Ionian Sea), between March 2016 and October 2017. Samplings were mostly conducted in an area of ~33 km² (Figure 1), having as the northern boundary the latitude 39°59'30.7" N, the southern boundary the latitude 39°54'13.5" N, the western boundary the coastline, and the eastern boundary a bathymetric depth of 70 m (the depth limit for local fishermen). In addition to the area described above, four additional sites were investigated: Acquaviva's cave, Bortone's cave, Ciolo's cave and the Castro's mussel farm (Figure 1). The specific sampling location with coordinates (available for 63% of the specimens recorded) is provided in Supplementary Material.

The sampling area is characterised by different substrate and habitat types. A steep rocky substrate, mainly consisting of limestone bedrock, is found from the surface to about 18 m depth. At higher depths, the slope decreases and patches of coralligenous banks (up to 3 m high) alternate with sand and mud down to about 70 m [27]. The area is also characterised by many karst freshwater springs and marine karst caves [40].

Sampling activities focused on the following ecological categories: hard and soft bottom phyto- and zoobenthos, gelatinous zooplankton, nekton, and terrestrial coastal vegetation. Sampling was carried out by free diving to sample benthic organisms, gelatinous plankton, and nekton from 0 to 20 m; by SCUBA diving, to sample benthos and nekton between 0 and 45 m; with fishing gear (set nylon trammel nets, set monofilament gillnets, pole and line and long line) to sample nekton, benthos, and substrates from both catch and bycatch between 0 and 70 m; by citizen scientists (i.e., locals, bathers, divers, and fishermen) to sample between the intertidal and 20 m.

Sampling in SCUBA and free diving was mainly carried out using a visual collection technique [41]. Compared to traditional sampling methods (quadrats, transects, substrate scraping), this visually oriented technique is equivalent in terms of species yields, but it is advantageous in terms of processing time and effort [12]. Samples of specimens of visible size (>5 mm) were collected physically and/or photographically. In addition, pieces of rocky and biogenic substrate were collected for subsequent screening and sorting in the laboratory under a dissecting microscope (Leica MZ6) to search for sessile and vagile organisms. In target stations, soft sediment (detritus) was collected to search for vagile organisms (mainly molluscs).

Sampling with artisanal and recreational fishing gear involved the visually oriented collection of visible catch and bycatch, and the screening of pieces of rocky and biogenic substrate that were collected by the nets for subsequent screening and sorting in the laboratory.

Citizen scientists sampling involved the physical and/or photographic collection of specimens by members of the public, such as locals, tourists, bathers, spear fishers, diving shops, and local fish shops.

In situ and laboratory photos were taken using cameras: Canon Power-Shot D30, Sony Rx100, Nikon AW130, and Sony A7 II. Overall, 134 sampling sessions were carried out. For most of the collected organisms, phenological traits (i.e., seasonality, presence of reproductive structures, mating behaviour) were also noted by stereoscope/light microscope observation and recorded.

2.2. Organism Preservation and Species Identification

Specimens that could not be identified in situ or from photographic material were sampled and brought to the field station, where they were photographed in vivo, and fixed

in EtOH and/or formalin 10% as reference material, following the protocol for “Invertebrate Specimen Processing Procedures: Methods of Fixation and Preservation” of the Department of Invertebrate Zoology of the Smithsonian National Museum of Natural History.

Preliminary identification of taxa was made using available taxonomic guides [42–57] together with specific literature and original descriptions. Successively, samples and photographic materials were analysed by experienced taxonomists for accurate species identification. Nomenclature follows the World Register of Marine Species [58], and AlgaeBase [59], although authorities are only reported in tables (see below).

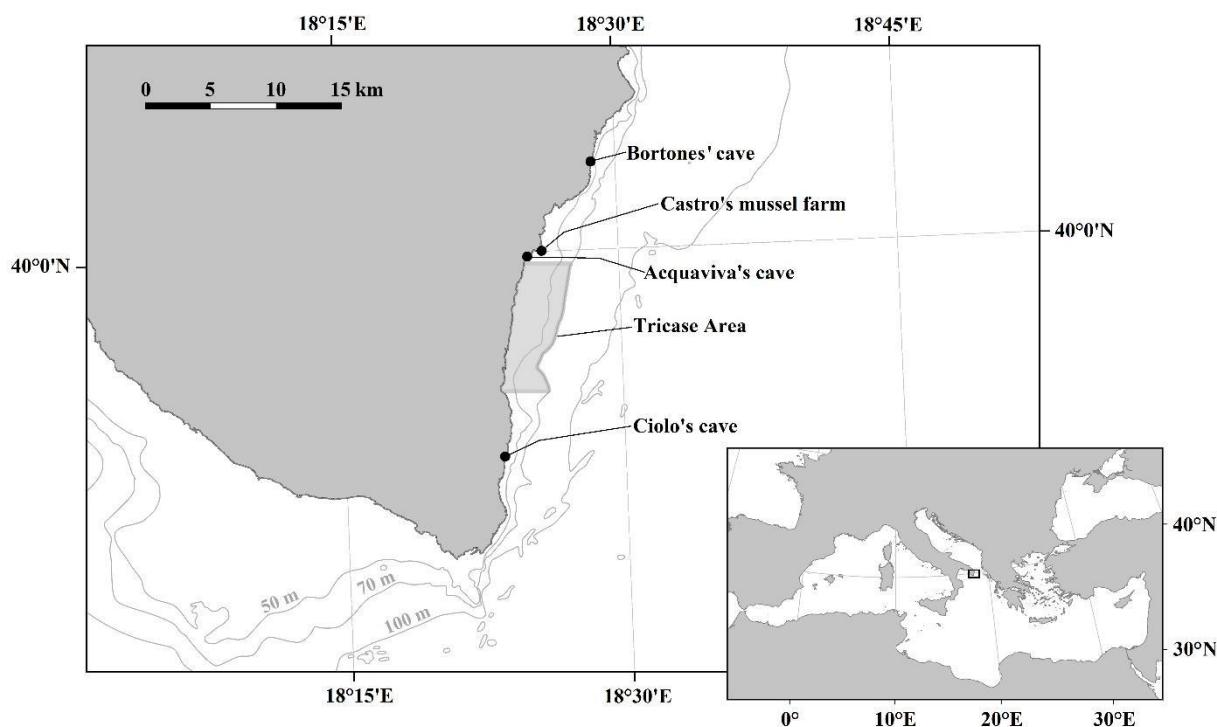


Figure 1. Map of the southeastern tip of the Salento Peninsula (Italy). The Tricase Area is highlighted in gray; black dots indicate the additional study sites. In the bottom right corner: the location of the study area in the Mediterranean Sea. After Micaroni et al. [49].

3. Results

3.1. General Description of Marine Biodiversity in the Area

The study area was characterized by rocky substrates from the surface to about 18 m. Below, the slope decreased, and rocky outcrops alternated with sand. In the supralittoral zone, *Melarhaphé neritoides* (Gastropoda) and *Ligia italica* (Isopoda) were abundant everywhere, along with algae such as *Cladophora dalmatica* and *Cladophora laetevirens* (Figure 2a). Algae such as *Ellisolandia elongata* and molluscs such as *Lepidochitona caprearum* and *Patella rustica* were common in the intertidal zone. The fuclean brown alga *Ericaria amentacea* was common in the infralittoral fringe (0–0.5 m), although it formed dense and continuous belts in a limited number of places. Algae such as *Dictyota dichotoma* (very common and abundant everywhere from 0 to 30 m), *Jania rubens* and species of the *Laurencia* complex (*Laurencia* cfr. *obtusa*, *Laurencia glandulifera*, *Palisada perforata*) were well represented in the upper infralittoral zone, from 0 to 3 m (Figure 2b). Then, from 3 to 13 m, the contribution of the *Laurencia* complex decreased, and other algae became abundant, such as *Padina pavonica*, *Halimeda tuna* and *Flabellia petiolata* (Figure 2c). Together with these algae, the sponges *Sarcotragus spinosulus* and *Chondrosia reniformis* were very common between 1 and 7 m.

At 14–18 m, coralligenous formations started. Calcareous algae such as *Peyssonnelia heteromorpha*, *Peyssonnelia rosa-marina* and *Peyssonnelia squamaria*, were very abundant in this habitat. Here, widespread sponges were *Petrosia* (*Petrosia*) *ficiformis*, *Agelas oroides*, *Axinella*

cannabina, *A. damicornis*, *A. polypoides*, *A. verrucosa* and *Acanthella acuta*. Very abundant were the bryozoans *Schizoretepora serratimargo*, which formed large (>100 cm) bioconstructions in the upper mesophotic zone (40–60 m), *Schizobrachiella sanguinea*, and *Adeonella pallasii*. Patches of *Posidonia oceanica* were found from 15–18 m, interspersed with coralligenous formations (Figure 2d).

The Rio area was characterized by the presence of wastewater treatment plant discharges, so it was likely more eutrophic than its surroundings and hosted a different algal assemblage. In particular, *Colpomenia sinuosa*, *Gelidium spinosum* and *Ellisolandia elongata* were abundant (Figure 2e). In addition, *Ericaria amentacea* formed very dense belts in spring, with much longer fronds than in other areas.

The copious karst caves scattered around the coast hosted distinctive communities and high biodiversity. Very common species were *Paractaea monodi*, *Herbstia condyliata* (Brachyura), *Polycyathus muelleriae* (Anthozoa) and *Prostheceraeus giesbrechtii* (Polycladida) feeding on *Pycnoclavella* sp. (Ascidiacea). In addition, a high diversity of encrusting and massive sponges such as *Aplysina cavernicola*, *Fasciospongia cavernosa*, and species of the genera *Haliclona*, *Petrosia*, and *Plakina* were found (Figure 2f).

3.2. Overall Species Inventory

Overall, we sampled and recorded 1032 specimens belonging to 697 taxa, 655 of which were identified at the species level (94% of taxa), 11 at the species complex level, 28 at the genus level, and 3 at the family level—538 taxa are firstly reported here, while 159 were reported in Micaroni et al. [30] and Costa et al. [33]. The complete list of species is reported in Table 1 and Supplementary Material Table S1; the list of recorded and identified specimens with additional metadata (depth, site, coordinates, substrate, sampling method, and notes) is reported in Table S2.

The most diverse phyla were Mollusca (144), Porifera (112), Chordata (108), Cnidaria (85), Arthropoda (62), Rhodophyta (52) and Annelida (33) (Figure 3a). Among Mollusca, the most diverse classes were Gastropoda (107) and Bivalvia (30), while the most diverse orders were Nudibranchia (29), Littorinimorpha (19), and Neogastropoda (19). Most Chordata belonged to the classes Actinopterygii (89, mostly Perciformes: 64) and Ascidiacea (9). Regarding cnidarians, most taxa belonged to the classes Hydrozoa (49) and Anthozoa (31) (Figure 3b).

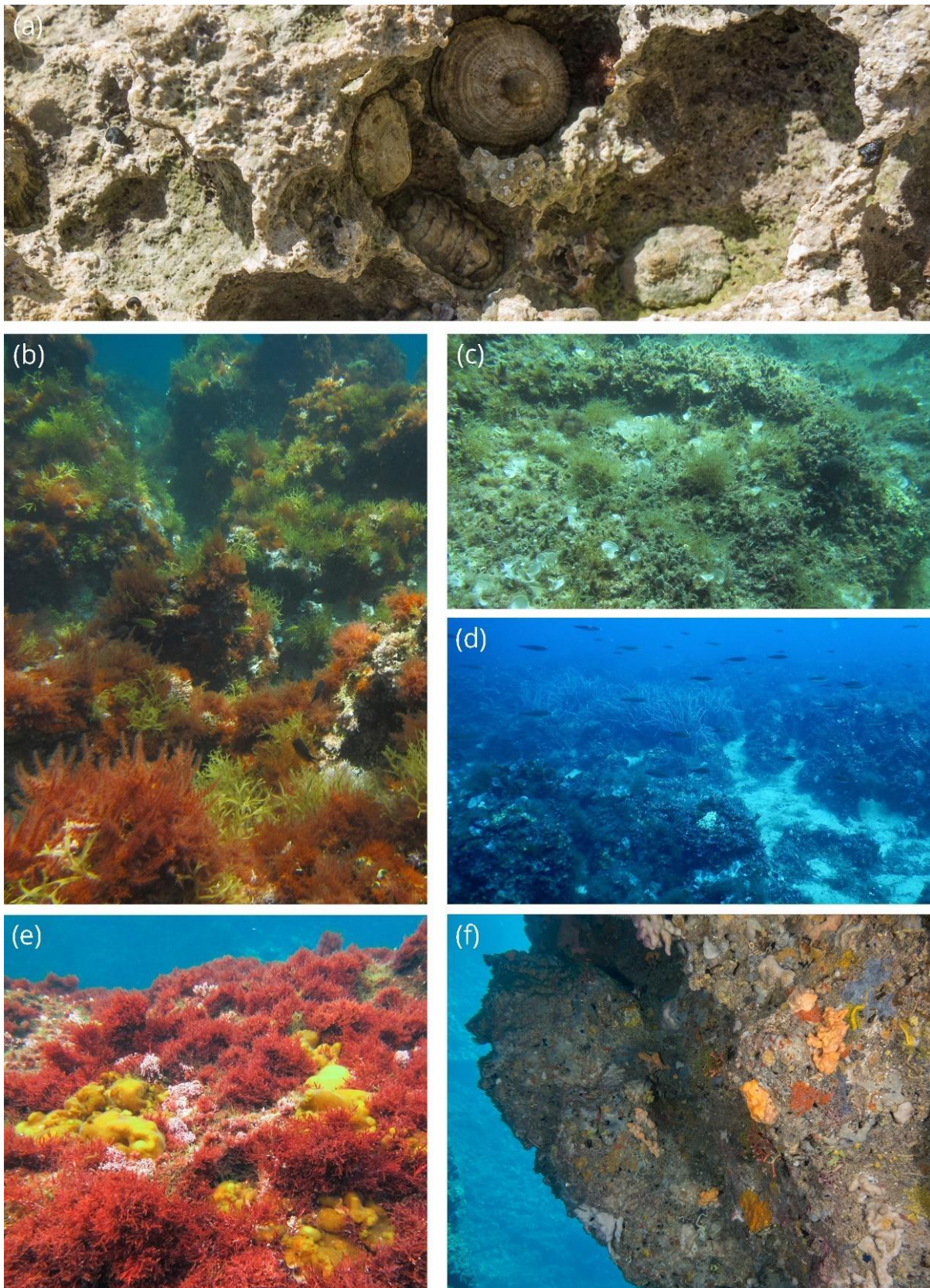


Figure 2. Marine habitats found in the coastal area of Tricase. (a) Intertidal zone, (b) upper infralittoral (2–4 m), (c) lower infralittoral (10–13 m), (d) coralligenous formation with *Posidonia oceanica* patches (17–22 m), (e) eutrophic infralittoral, (f) cave environment.

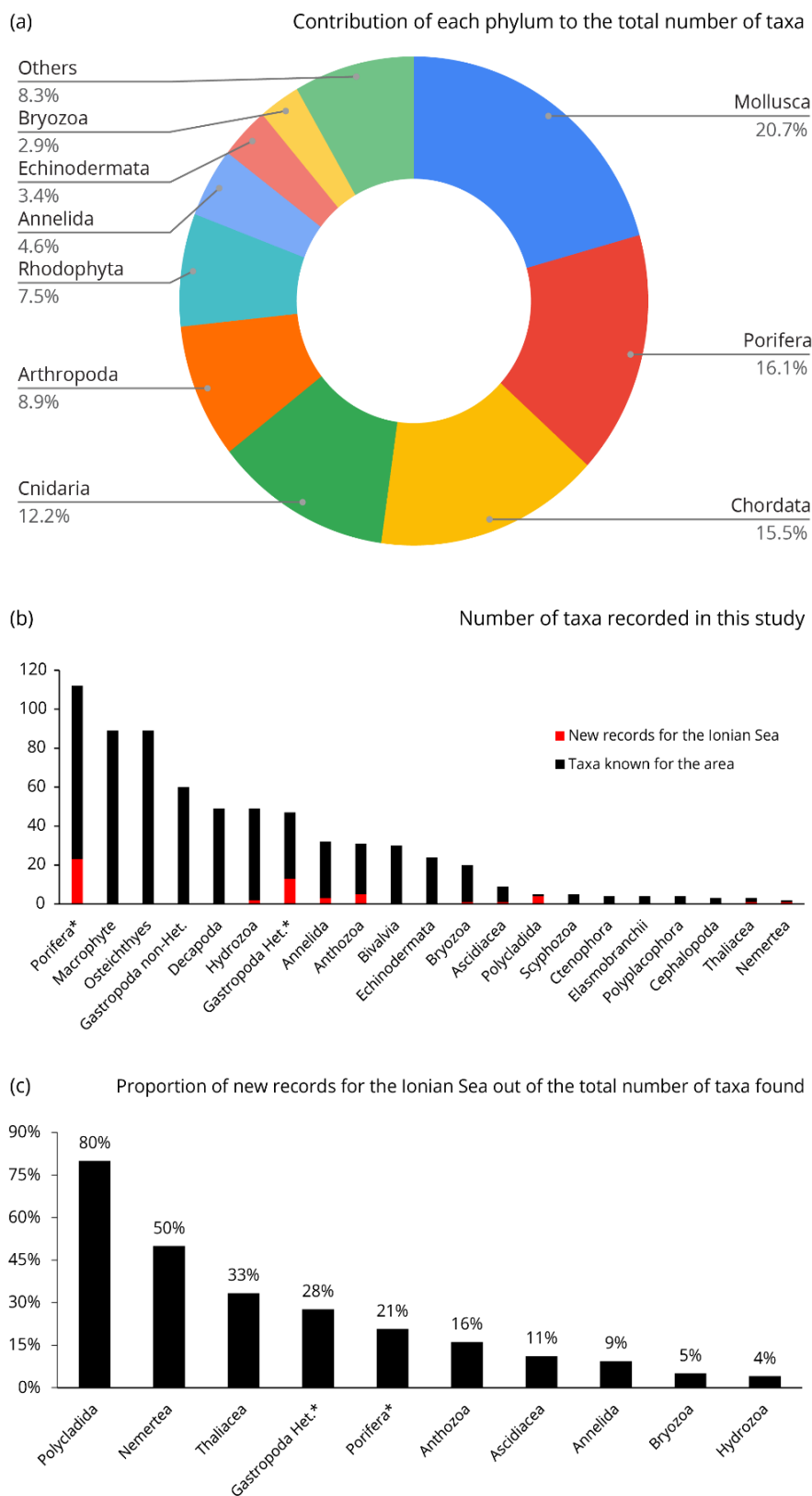


Figure 3. General description of the taxonomic composition and new records found by this study. (a) Relative contribution of each phylum to the total number of taxa. (b) Total number of taxa and new records (in red) for each major taxonomic group. (c) Percentage proportion of new records for the Ionian Sea out of the total number of taxa found in this study. Het., Heterobranchia. * indicates taxonomic groups that have been already included in previous publications [30,33].

Of all identified taxa, 55 represented new records for the Ionian Sea (36 of which were reported in Micaroni et al. [30] and Costa et al. [33]) (Table 1; Figures 3b, 4 and 5). Most of the new records belonged to the phyla Porifera (23, Costa et al., 2019), Mollusca (13), Cnidaria (7, of which 5 belonged to the class Anthozoa and 2 to the class Hydrozoa), Platyhelminthes (4, all from the order Polycladida), and Annelida (3). For other 8 taxa, our finding represented the only location in the Ionian Sea other than the Strait of Messina, considered by many authors to be a different biogeographical sector [16,60–62] (Table 1). Furthermore, records of *Helicosalpa virgula* (Chordata: Thaliacea) and *Lampea pancarina* (Ctenophora: Tentaculata) account for the easternmost sightings in the Mediterranean Sea (Table 1).



Figure 4. Photos of selected new records in the field. (a) *Halcampoides purpureus* on sand in Matrona Cave at 4 m; (b) *Planocera ceratommata* under a boulder on a rocky reef at 8 m; (c) *Pseudoceros maximus*-type A under a boulder on a rocky reef at 15 m; (d) *Thysanozoon brocchii* on a vertical wall in the Bortone's cave at 8 m; (e) *Pycnoclavella* sp. at the entrance of Matrona Cave, 15 m; (f) colonies of *Zoothamnium niveum* at the edge between a rocky cliff and sand, 10 m. The scale bars correspond to 1 cm.

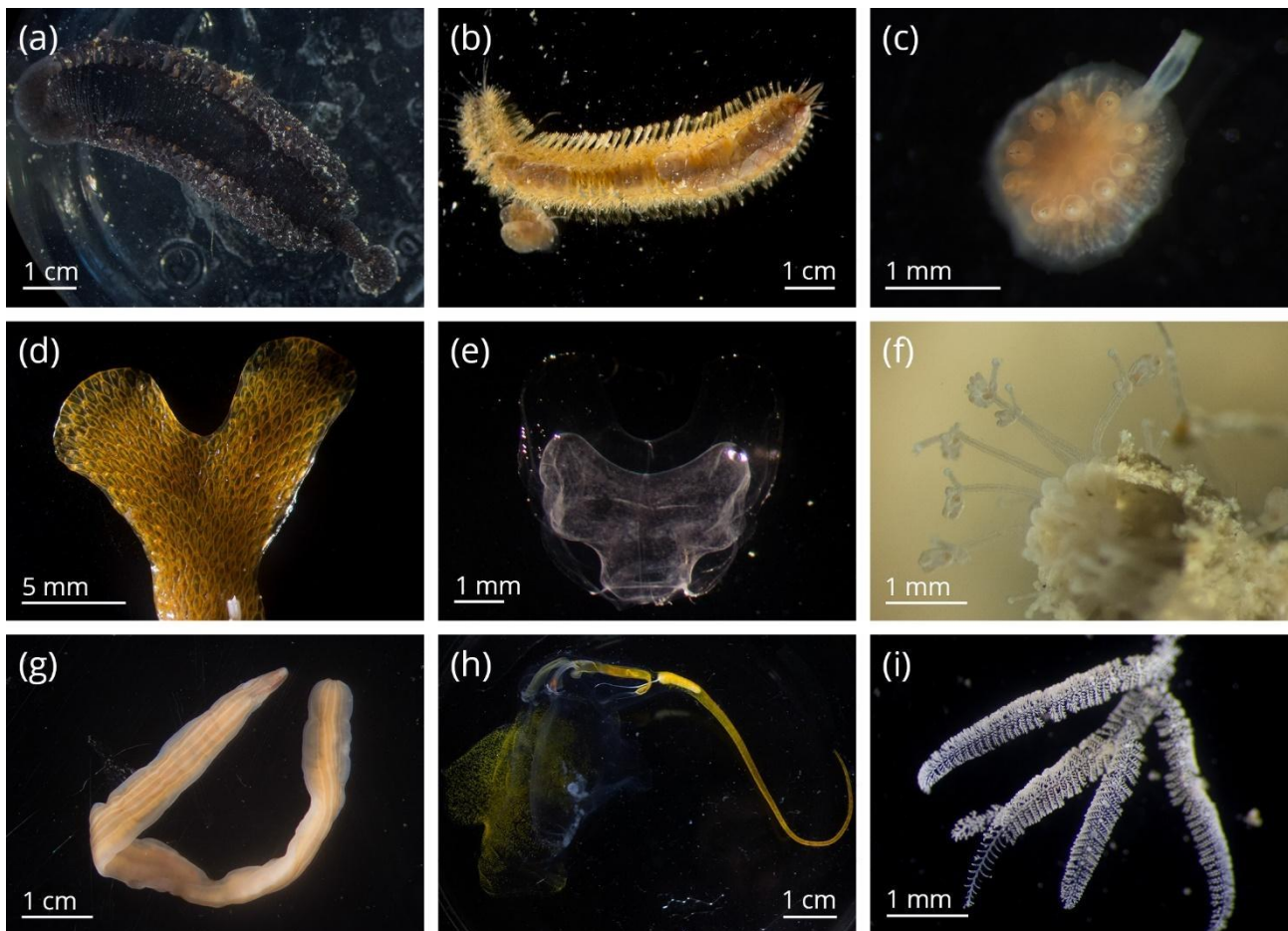


Figure 5. Photos of selected new records under a dissection microscope, in vivo. (a) *Branchellion torpedinis*; (b) *Harmothoe pagenstecheri*; (c) *Myzostoma glabrum*; (d) *Chartella* ind.; (e) nectophore of *Halistemma rubrum*; (f) *Proboscidactyla ornata*; (g) *Gibsonnemertes spectabilis*; (h) *Helicosalpa virgula*; (i) *Zoothamnium niveum*.

Polycladida (Platyhelminthes) was the taxonomic group with a higher proportion of new records on the total number of taxa, with 80% of the species found being new records for the Ionian Sea (4 out of 5 taxa), followed by Nemertea (50%, 1 out of 2), Thaliacea (33%, 1 out of 3), Heterobranchia (28%, 13 out of 47), Porifera (21%, 23 out of 112), and Anthozoa (16%, 5 out of 31) (Figure 3c). Similar results were found comparing the proportion of new records in this study to the total number of taxa found in the Italian Ionian Sea by the checklist of the Italian marine fauna [60,61], with Polycladida (Platyhelminthes), Nemertea, Anthozoa, Porifera, Thaliacea, and Heterobranchia being the taxa with the highest proportion of new records (Figure 6a).

The majority of taxa (48.8%) were recorded between 0 and 10 m, whereas 29.2% of taxa were sampled between 11 and 25 m and 21.9% from 26 to 70 m. The highest percentage of new records (10%) has been reported for the depth range 11–25 m (Figure 7).

For 63 of the taxa found, phenology traits were also reported. These included the presence of reproductive structures (31), the occurrence of seasonal organisms (25), and instances of reproductive behaviour (6) (Tables 1 and S1).

Overall, we found 9 non-indigenous species (NIS), including two polychaetes (*Lysidice collaris* and *Hydroides elegans*), two crustaceans (*Callinectes sapidus* and *Percnon gibbesi*), two hydroids (*Clytia linearis* and *Eudendrium merulum*), and one ascidian, macroalga and ctenophore (*Botrylloides niger*, *Caulerpa cylindracea* and *Mnemiopsis leidyi*) (Table 1). None of these represent a new record for the area.

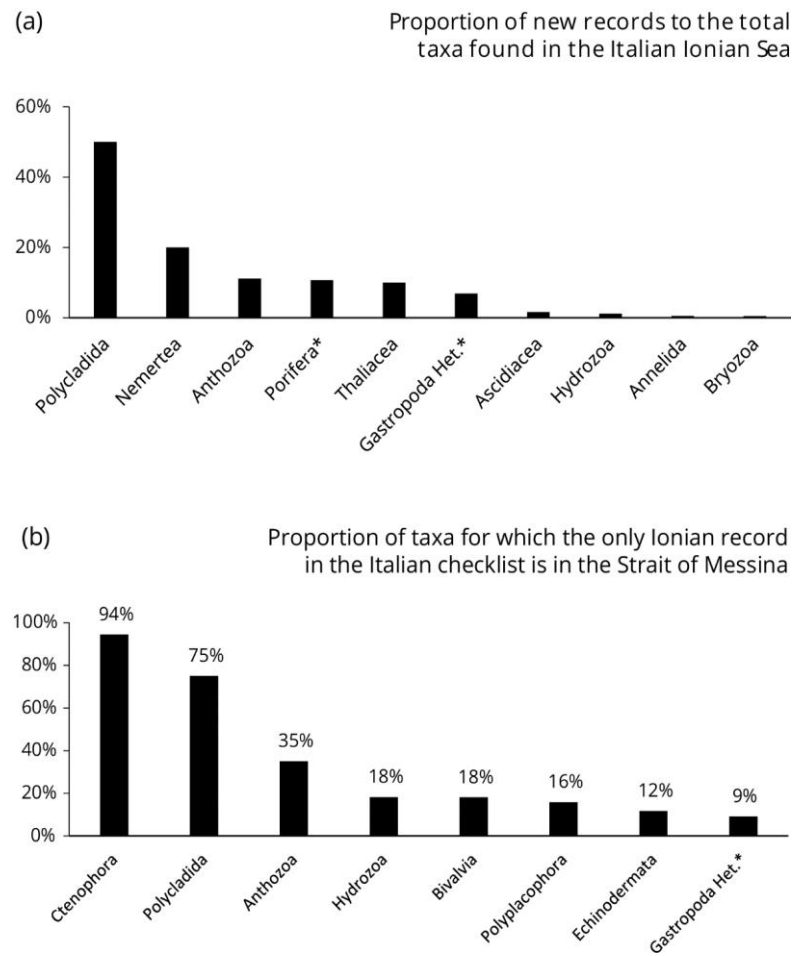


Figure 6. Comparison with the check list of the Italian marine fauna [60,61]. (a) Percentage proportion of new records found by this study to the total taxa reported in the Italian Ionian Sea by Relini [60,61]. (b) The proportion of taxa for which the only Ionian record in Relini [60,61] comes from the Strait of Messina biogeographic sector. Het., Heterobranchia. * indicates taxonomic groups that have already been included in previous publications [30,33].

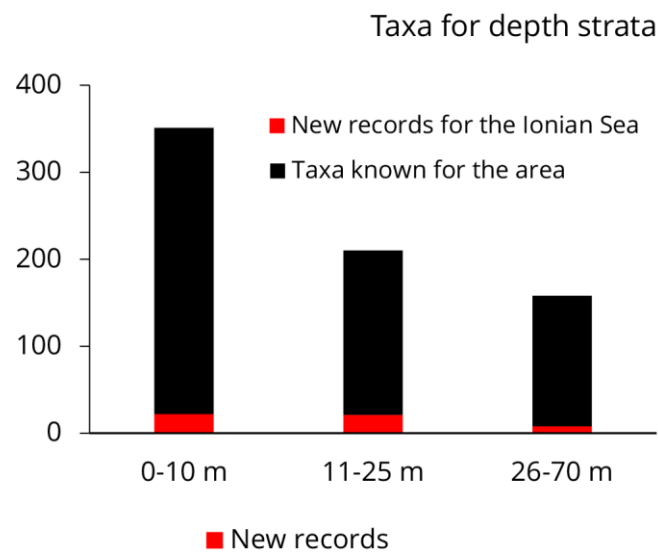


Figure 7. Total number of taxa and new records (in red) found by this study per depth strata.

Most specimens were collected by SCUBA diving (32%), free diving (31%) and by artisanal fishers' fishing gear (29%), while citizen science and recreational fishing gear, provided only 3% and 1% of the specimens, respectively. Regarding SCUBA and free diving, 79% of the specimens were collected physically either using the visual collection technique or by sampling substrate (biogenic substrate, pieces of rocks, and soft sediment), while the remaining 21% was only recorded photographically (mainly fish and organisms that could be identified only by the external morphology). Regarding sampling with fishing gears, most specimens were collected by set nylon trammel nets (63%), that were left 3–6 days in the water, and set monofilament gillnets (15%), that were left <24 h in the water (Table S2).

As for sampling substrate, most specimens we collected from rocky substrate (34%), coralligenous formations and rubble (22%), soft sediments including mud and sand (7%), while 9% were pelagic (Table S2).

Regarding the terrestrial near-shore vegetation, 81 species were found, 79 of which referred to the division Magnoliophyta and 2 to the division Polypodiophyta. Most species belonged to the order Asterales (16), Lamiales (13), Caryophyllales (10) and Poales (8). Regarding families, the most speciose ones were Asteraceae (13), Poaceae (8), Plantaginaceae (5), Apiaceae (4), and Crassulaceae (4). None of these species represent a new record for the area (Table S1).

3.3. Observations on Gelatinous Zooplankton

Gelatinous plankton blooms mostly occurred in spring and early summer, when complex communities developed. These communities were mainly composed of thaliaceans, scyphozoan and hydrozoan jellyfish, siphonophores, ctenophores, alciopid polychaetes and pterotracheid molluscs. Minor blooms involving fewer species also occurred throughout the year (Table 1 and Table S1).

Thaliaceans were very abundant in spring. *Salpa fusiformis* was the most abundant species and formed very dense blooms between March and April 2016; occasional isolated specimens were also found in autumn (November 2016). *Salpa maxima* bloomed later than *S. fusiformis* (April–May 2016). Isolate blastozooids of a rare helicosalpid (*Helicosalpa virgula*) were recorded on the 27 April 2016.

Regarding cnidarians, scyphozoan jellyfish mostly occurred in spring–summer. In 2016, *Aurelia solida* and *Chrysaora hysoscella* bloomed throughout April and May. Other scyphozoans were rarer, and only isolated specimens were found, and in particular *Rhizostoma pulmo* (February and June), and *Cotylorhiza tuberculata* (July–August). Regarding hydrozoan jellyfish, we found blooms of *Aequorea forskalea* and *Oceania armata* (April), and isolated specimens of *Geryonia proboscidalis* (April) and *Olindias muelleri* (September). Siphonophores were very common during the salp blooms in April and May, particularly *Halistemma rubrum*, *Nanomia bijuga*, *Forskalia formosa*, and *Hippopodius hippopus*.

As for ctenophores, the only blooming species was *Mnemiopsis leidyi* which occurred from November 2016 to January 2017. Other species were reported occasionally, including *Leucothea multicornis* (April–September), *Lampea panzerina* (April 2016, preying on *Salpa fusiformis*), and *Cestum veneris* (one specimen, May 2016).

Table 1. Complete list of marine species found during the project “Biodiversity MARE Tricase” with indication of depth or depth range (when multiple specimens were found) at which taxa were recorded during this study. For phenology, Rep. behav., reproductive behaviour; Rep. structures, reproductive structures. In the column New Record, * indicates a new record for the Ionian Sea, ‡ indicates that the only other record in the Ionian Sea is from the Messinian Strait, † indicates the easternmost record in the Mediterranean Sea, # indicates new species for science. For the records that were already reported in a separate publication, the reference is given at the end of the species name.

Taxa	Depth	Phenology	New Record
Kingdom BACTERIA			
Phylum CYANOBACTERIA			
Class CYANOPHYCEAE			
Order NOSTOCALES			
Family RIVULARIACEAE			
<i>Rivularia</i> ind Roth ex Bornet & Flahault, 1886	0 m	-	
Kingdom CHROMISTA			
Phylum FORAMINIFERA			
Class GLOBOTHALAMEA			
Order ROTALIIDA			
Family HOMOTREMATIDAE			
<i>Miniacina miniacea</i> (Pallas, 1766)	30 m	-	
Order TEXTULARIIDA			
Family TEXTULARIIDAE			
<i>Textularia</i> ind Defrance, 1824	25 m	-	
Phylum RADIOZOA			
Class POLYCYSTINA			
Order COLLODARIA			
<i>Collozoum</i> ind Haeckel, 1862 sensu Brandt, 1905	0–5 m	Occurrence (VI–VII)	
Phylum OCHROPHYTA			
Class PHAEOPHYCEAE			
Order CUTLERIALES			
Family CUTLERIACEAE			
<i>Cutleria multifida</i> (Turner) Greville	1 m	-	
<i>Zanardinia typus</i> (Nardo) P.C.Silva	5 m	-	
Order DICTYOTALES			
Family DICTYOTACEAE			
<i>Dictyopteris polypodioides</i> (A.P.De Candolle) J.V.Lamouroux	1 m	-	
<i>Dictyota</i> cf. <i>implexa</i> (Desfontaines) J.V.Lamouroux	20 m	-	
<i>Dictyota dichotoma</i> (Hudson) J.V.Lamouroux	0–15 m	-	
<i>Padina pavonica</i> (Linnaeus) Thivy	1–10 m	-	
Order ECTOCARPALES			
Family SCYTOSIPHONACEAE			
<i>Colpomenia sinuosa</i> (Mertens ex Roth) Derbès & Solier	10 m	-	
<i>Scytosiphon lomentaria</i> (Lyngbye) Link	1 m	-	
Order FUCALES			
Family SARGASSACEAE			
<i>Cystoseira compressa</i> (Esper) Gerloff & Nizamuddin	1 m	-	
<i>Cystoseira foeniculacea</i> (Linnaeus) Greville	20 m	-	
<i>Ericaria amentacea</i> (C.Agardh) Molinari & Guiry	0–1 m	-	
<i>Sargassum vulgare</i> C.Agardh	10 m	-	
Order SPHACELARIALES			
Family CLADOSTEPHACEAE			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Cladostephus hirsutus</i> (Linnaeus) Boudouresque & M.Perret-Boudouresque ex Heesch & al.	3 m	-	
Family SPHACELARIACEAE			
<i>Sphacelaria</i> sp.	20 m	-	
Family STYPOCAULACEAE			
<i>Halopteris scoparia</i> (Linnaeus) Sauvageau	10 m	-	
Order SPOROCHNALES			
Family SPOROCHNACEAE			
<i>Nereia filiformis</i> (J.Agardh) Zanardini	40 m	-	
Phylum CILIOPHORA			
Class HETEROTRICHEA			
Order HETEROTRICHIDA			
Family FOLLICULINIDAE			
Folliculinidae ind (T.S. Wright, 1859) Dons, 1934	70 m	-	
Class OLIGOHYMENOPHOREA			
Order SESSILIDA			
Family ZOOTHAMNIIDAE			
<i>Zoothamnium niveum</i> Ehrenberg, 1838	10 m	-	*
Kingdom PLANTAE			
Phylum RHODOPHYTA			
Class COMPSOPOGONOPHYCEAE			
Order ERYTHROPELTALES			
Family ERYTHROTRICHIACEAE			
<i>Erythrotrichia carnea</i> (Dillwyn) J.Agardh	0 m	-	
Class FLORIDEOPHYCEAE			
Order BONNEMAISONIALES			
Family BONNEMAISONIACEAE			
<i>Asparagopsis taxiformis</i> (Delile) Trevisan de Saint-Léon	1 m	-	
Order CERAMIALES			
Family CALLITHAMNIACEAE			
<i>Callithamnion granulatum</i> (Ducluzeau) C.Agardh	0 m	-	
<i>Crouania attenuata</i> (C.Agardh) J.Agardh	10 m	-	
Family CERAMIACEAE			
<i>Ceramium</i> cf. <i>virgatum</i> Roth	0 m	-	
<i>Ceramium diaphanum</i> (Lightfoot) Roth	0 m	-	
<i>Gayliella mazoyeræ</i> T.O.Cho, Fredericq & Hommersand	2 m	-	
Family DASYACEAE			
<i>Dasya rigidula</i> (Kützing) Ardissonne	20 m	-	
Family DELESSERIACEAE			
<i>Hypoglossum hypoglossoides</i> (Stackhouse) Collins & Hervey	1 m	-	
Family RHODOMELACEAE			
<i>Chondria</i> sp. (Montagne)	0 m	-	
<i>Herposiphonia secunda</i> (C.Agardh) Ambronn	20 m	-	
<i>Laurencia</i> cf. <i>microcladia</i> Kützing	20 m	-	
<i>Laurencia</i> cf. <i>obtusa</i> (Hudson) J.V.Lamouroux	1 m	-	
<i>Laurencia glandulifera</i> (Kützing) Kützing	1 m	-	
<i>Osmundaria volubilis</i> (Linnaeus) R.E.Norris	30 m	-	
<i>Osmundea truncata</i> (Kützing) K.W.Nam & Maggs	0 m	-	
<i>Palisada perforata</i> (Bory) K.W.Nam	2 m	-	
<i>Polysiphonia opaca</i> (C.Agardh) Moris & De Notaris	0 m	-	
<i>Polysiphonia sertularioides</i> (Grateloup) J.Agardh	0 m	-	
<i>Vertebrata fruticulosa</i> (Wulfen) Kuntze	1 m	Rep. structures (IV)	
<i>Xiphosiphonia pennata</i> (C.Agardh) Savoie & G.W.Saunders	0 m	-	
Family WRANGELIACEAE			
<i>Wrangelia penicillata</i> (C.Agardh) C.Agardh	10 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Order CORALLINALES			
Family CORALLINACEAE			
<i>Ellisolandia elongata</i> (J.Ellis & Solander) K.R.Hind & G.W.Saunders	0–1 m	-	
<i>Jania rubens</i> (Linnaeus) J.V.Lamouroux	2 m	-	
<i>Jania virgata</i> (Zanardini) Montagne	10–18 m	-	
Family LITHOPHYLLACEAE			
<i>Amphiroa rigida</i> J.V.Lamouroux	2 m	-	
<i>Lithophyllum byssoides</i> (Lamarck) Foslie	0 m	-	
<i>Lithophyllum</i> cf. <i>incrusters</i> Philippi	3 m	-	
<i>Lithophyllum stictiforme</i> (J.E. Areschoug) Hauck	5–10 m	-	
<i>Tenarea tortuosa</i> (Esper) Me.Lemoine	1 m	-	
<i>Titanoderma trochanter</i> (Bory) Benhissoune, Boudouresque, Perret-Boudouresque & Verlaque	1 m	-	
Family MASTOPORACEAE			
<i>Pneophyllum fragile</i> Kützing	0 m	-	
Order GELIDIALES			
Family GELIDIACEAE			
<i>Gelidium spinosum</i> (S.G.Gmelin) P.C.Silva	1 m	-	
Family PTEROCLADIACEAE			
<i>Pterocladia capillacea</i> (S.G.Gmelin) Santelices & Hommersand	0 m	-	
Order GIGARTINALES			
Family CYSTOCLONIACEAE			
<i>Hypnea musciformis</i> (Wulfen) J.V.Lamouroux	2 m	-	
Family GIGARTINACEAE			
<i>Chondracanthus acicularis</i> (Roth) Fredericq	0 m	-	
Family PHYLLOPHORACEAE			
<i>Phyllophora crispa</i> (Hudson) P.S.Dixon	30 m	-	
<i>Schottera nicaeensis</i> (J.V.Lamouroux ex Duby) Guiry & Hollenberg	1 m	-	
Family RHIZOPHYLLIDACEAE			
<i>Contarinia squamariae</i> (Meneghini) Denizot	5 m	-	
Family SPHAEROCOCCACEAE			
<i>Sphaerococcus coronopifolius</i> Stackhouse	7–10 m	-	
Order HALYMENIALES			
Family HALYMENIACEAE			
<i>Halymenia floresii</i> (Clemente) C.Agardh	15 m	-	
Order NEMALIALES			
Family GALAXAURACEAE			
<i>Tricleocarpa fragilis</i> (Linnaeus) Huisman & R.A.Townsend	10 m	-	
Family LIAGORACEAE			
<i>Liagora viscida</i> (Forsskål) C.Agardh	0–2 m	-	
Order NEMASTOMATALES			
Family NEMASTOMATAACEAE			
<i>Predaea ollivieri</i> Feldmann	22 m	-	
Family SCHIZYMENIACEAE			
<i>Platoma cycloclpum</i> (Montagne) F.Schmitz	3 m	Rep. structures (VIII)	
Order PEYSSONNELIALES			
Family PEYSSONNELIACEAE			
<i>Peyssonnelia heteromorpha</i> (Zanardini) Athanasiadis	10 m	-	
<i>Peyssonnelia rosa-marina</i> Boudouresque & Denizot	20 m	-	
<i>Peyssonnelia rubra</i> (Greville) J.Agardh	0 m	-	
<i>Peyssonnelia squamaria</i> (S.G.Gmelin) Decaisne ex J.Agardh	5–20 m	-	
Order RHODYMENIALES			
Family CHAMPIACEAE			
<i>Gastroclonium clavatum</i> (Roth) Ardissonne	1 m	-	
Family RHODYMENIACEAE			
<i>Botryocladia</i> sp.	30 m	-	
<i>Irvinea boergesenii</i> (Feldmann) R.J.Wilkes, L.M.McIvor & Guiry	30 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Phylum CHLOROPHYTA			
Class PYRAMIMONADOPHYCEAE			
Order PALMOPHYLLALES			
Family PALMOPHYLLACEAE			
<i>Palmophyllum crassum</i> (Naccari) Rabenhorst	4 m	-	
Class ULVOPHYCEAE			
Order BRYOPSIDALES			
Family BRYOPSIDACEAE			
<i>Bryopsis</i> cf. <i>pennata</i> J.V.Lamouroux	1 m	-	
<i>Bryopsis cupressina</i> J.V.Lamouroux	0 m	-	
Family CAULERPACEAE			
<i>Caulerpa cylindracea</i> Sonder	8–45 m	-	
<i>Caulerpa prolifera</i> (Forsskål) J.V.Lamouroux	15 m	-	
Family CODIACEAE			
<i>Codium bursa</i> (Olivi) C.Agardh	8 m	-	
<i>Codium</i> cf. <i>vermilara</i> (Olivi) Delle Chiaje	5–10 m	-	
<i>Codium coralloides</i> (Kützinger) P.C.Silva	8–10 m	-	
Family HALIMEDACEAE			
<i>Halimeda tuna</i> (J.Ellis & Solander) J.V.Lamouroux	10–25 m	-	
Family UDOTACEAE			
<i>Flabellia petiolata</i> (Turra) Nizamuddin	10–15 m	-	
<i>Pseudochlorodesmis furcellata</i> (Zanardini) Børgesen	3 m	-	
Order CLADOPHORALES			
Family ANADYOMENACEAE			
<i>Anadyomene stellata</i> (Wulfen) C.Agardh	1–20 m	-	
Family CLADOPHORACEAE			
<i>Chaetomorpha linum</i> (O.F.Müller) Kützinger	0 m	-	
<i>Cladophora dalmatica</i> Kützinger	0 m	-	
<i>Cladophora laetevirens</i> (Dillwyn) Kützinger	0 m	-	
Family VALONIACEAE			
<i>Valonia utricularis</i> (Roth) C.Agardh	2 m	-	
Order DASYCLADALES			
Family POLYPHYSACEAE			
<i>Acetabularia acetabulum</i> (Linnaeus) P.C.Silva	3–10 m	-	
Order ULVALES			
Family ULVACEAE			
<i>Ulva linza</i> Linnaeus	0 m	-	
Phylum TRACHEOPHYTA			
Class MAGNOLIOPSIDA			
Order ALISMATALES			
Family CYMODOCEACEAE			
<i>Cymodocea nodosa</i> (Ucria) Ascherson	6 m	-	
Family POSIDONIACEAE			
<i>Posidonia oceanica</i> (Linnaeus) Delile	10–22 m	-	
Kingdom ANIMALIA			
Phylum CTENOPHORA			
Class TENTACULATA			
Order CESTIDA			
Family CESTIDAE			
<i>Cestum veneris</i> Lesueur, 1813	3 m	Occurrence (V)	‡
Order CYDIPPIDA			
Family LAMPEIDAE			
<i>Lampea panczerina</i> (Chun, 1879)	3 m	Occurrence (IV)	‡‡
Order LOBATA			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Family BOLINOPSIDAE			
<i>Mnemiopsis leidyi</i> A. Agassiz, 1865	1–5 m	Occurrence (XI–I)	
Family LEUCOTHEIDAE			
<i>Leucothea multicornis</i> (Quoy & Gaimard, 1824)	0–3 m	Occurrence (IV–IX)	
Phylum PORIFERA			
Class CALCAREA			
Order CLATHRINIDA			
Family CLATHRINIDAE			
<i>Clathrina clathrus</i> (Schmidt, 1864) [33]	40 m	-	
Order LEUCOSOLENIDA			
Family SYCETTIDAE			
<i>Sycon raphanus</i> Schmidt, 1862 [33]	70 m	-	
Class DEMOSPONGIAE			
Order AGELASIDA			
Family AGELASIDAE			
<i>Agelas oroides</i> (Schmidt, 1864) [33]	20–42 m	-	
Family HYMERHABDIIDAE			
<i>Hymerhabdia oxytrunca</i> Topsent, 1904 [33]	20 m	-	*
<i>Prosuberites longispinus</i> Topsent, 1893 [33]	20 m	-	
Order AXINELLIDA			
Family AXINELLIDAE			
<i>Axinella cannabina</i> (Esper, 1794) [33]	20–50 m	-	
<i>Axinella damicornis</i> (Esper, 1794) [33]	20–35 m	-	
<i>Axinella polypoides</i> Schmidt, 1862 [33]	10 m	-	
<i>Axinella verrucosa</i> (Esper, 1794) [33]	20–40 m	-	
Family RASPAILIIDAE			
<i>Didiscus stylifer</i> Tsurumai, 1969 [33]	20 m	-	
<i>Eurypon cinctum</i> Sarà, 1960 [33]	20 m	-	*
<i>Eurypon clavatum</i> (Bowerbank, 1866) [33]	20 m	-	
<i>Eurypon coronula</i> (Bowerbank, 1874) [33]	20 m	-	*
<i>Eurypon gracile</i> Bertolino, Calcinaï & Pansini, 2013 [33]	20 m	-	
<i>Eurypon major</i> Sarà & Siribelli, 1960 [33]	20 m	-	
<i>Eurypon obtusum</i> Vacelet, 1969 [33]	20 m	-	*
<i>Eurypon viride</i> (Topsent, 1889) [33]	20 m	-	
<i>Raspaciona aculeata</i> (Johnston, 1842) [33]	20 m	-	
<i>Raspailia (Raspailia) viminalis</i> Schmidt, 1862 [33]	70 m	-	*
Family STELLIGERIDAE			
<i>Halicnemina geniculata</i> Sarà, 1958 [33]	20 m	-	*
Order BIEMNIDA			
Family RHABDEREMIIDAE			
<i>Rhabderemia gallica</i> van Soest & Hooper, 1993 [33]	20 m	-	*
<i>Rhabderemia minutula</i> (Carter, 1876) [33]	20 m	-	
Order BUBARIDA			
Family BUBARIDAE			
<i>Bubaris carcisis</i> Vacelet, 1969 [33]	20 m	-	
<i>Bubaris vermiculata</i> (Bowerbank, 1866) [33]	20 m	-	
<i>Monocrepidium vermiculatum</i> Topsent, 1898 [33]	20 m	-	*
<i>Rhabdobaris implicata</i> Pulitzer-Finali, 1983 [33]	20 m	-	*
Family DESMANTHIDAE			
<i>Desmanthus incrustans</i> (Topsent, 1889) [33]	20 m	-	
Family DICTYONELLIDAE			
<i>Acanthella acuta</i> Schmidt, 1862 [33]	25–30 m	-	
<i>Dictyonella incisa</i> (Schmidt, 1880) [33]	10 m	-	
<i>Dictyonella obtusa</i> (Schmidt, 1862) [33]	22 m	-	
Order CHONDRILLIDA			
Family CHONDRILLIDAE			
<i>Chondrilla nucula</i> Schmidt, 1862 [33]	5–25 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Order CHONDROSIIDA			
Family CHONDROSIIDAE			
<i>Chondrosia reniformis</i> Nardo, 1847 [33]	2–20 m	Spawning (VII)	
Order CLIONAIDA			
Family CLIONAIDAE			
<i>Cliona amplicavata</i> Rützler, 1974 [33]	20 m	-	*
<i>Cliona burtoni</i> Topsent, 1932 [33]	20 m	-	*
<i>Cliona celata</i> Grant, 1826 [33]	5 m	-	
<i>Cliona schmidtii</i> (Ridley, 1881) [33]	10 m	-	
<i>Cliona viridis</i> (Schmidt, 1862) [33]	5–20 m	-	
<i>Cliothosa hancocki</i> (Topsent, 1888) [33]	20 m	-	
<i>Spiroxya heteroclita</i> Topsent, 1896 [33]	20 m	-	
<i>Spiroxya sarai</i> (Melone, 1965) [33]	20 m	-	
Family SPIRASTRELLIDAE			
<i>Diplastrella bistellata</i> (Schmidt, 1862) [33]	20 m	-	
<i>Diplastrella boeroi</i> Bertolino, Costa & Pansini, 2019 [33]	20 m	-	#
<i>Spirastrella cunctatrix</i> Schmidt, 1868 [33]	20 m	-	
<i>Spirastrella regina</i> Bertolino, Costa & Pansini, 2020 [33]	20 m	-	#
Order DICTYOCERATIDA			
Family DYSIDEIDAE			
<i>Dysidea avara</i> (Schmidt, 1862) [33]	20 m	-	
<i>Dysidea fragilis</i> (Montagu, 1814) [33]	20 m	-	
Family IRCINIIDAE			
<i>Ircinia variabilis</i> (Schmidt, 1862) [33]	10 m	-	
<i>Sarcotragus foetidus</i> Schmidt, 1862 [33]	5–10 m	-	
<i>Sarcotragus spinosulus</i> Schmidt, 1862 [33]	12 m	-	
Family THORECTIDAE			
<i>Fasciospongia cavernosa</i> (Schmidt, 1862) [33]	5–20 m	-	
<i>Scalarispongia scalaris</i> (Schmidt, 1862) [33]	10 m	-	
Order HAPLOSCLERIDA			
Family CHALINIDAE			
<i>Haliclona (Reniera) mediterranea</i> Griessinger, 1971 [33]	5 m	-	
<i>Haliclona (Rhizoniera) sarai</i> (Pulitzer-Finali, 1969) [33]	5 m	-	
<i>Haliclona (Soestella) mucosa</i> (Griessinger, 1971) [33]	7 m	-	*
<i>Haliclona (Soestella) valliculata</i> (Griessinger, 1971) [33]	5 m	-	*
Family PETROSIIDAE			
<i>Petrosia (Petrosia) clavata</i> (Esper, 1794) [33]	20 m	-	
<i>Petrosia (Petrosia) ficiformis</i> (Poiret, 1789) [33]	7–40 m	-	
<i>Petrosia (Strongylophora) pulitzeri</i> Pansini, 1996 [33]	7 m	-	*
<i>Petrosia (Strongylophora) vansoesti</i> Boury-Esnault, Pansini & Uriz, 1994 [33]	5 m	-	*
Family PHLOEODICTYIDAE			
<i>Oceanapia perforata</i> (Sarà, 1960) [33]	7 m	-	*
Order POECILOSCLERIDA			
Family COELOSPHAERIDAE			
<i>Lissodendoryx (Anomodoryx) cavernosa</i> (Topsent, 1892) [33]	20 m	-	
Family CRAMBEIDAE			
<i>Crambe crambe</i> (Schmidt, 1862) [33]	5 m	-	
Family CRELLIDAE			
<i>Crella</i> sp. Gray, 1867 [33]	20 m	-	
Family ESPERIOPSISIDAE			
<i>Ulosa digitata</i> (Schmidt, 1866) [33]	10 m	-	
Family HYMEDESMIIDAE			
<i>Hamigera hamigera</i> (Schmidt, 1862) [33]	3 m	-	
<i>Hemimycale columella</i> (Bowerbank, 1874) [33]	6 m	-	
<i>Phorbis dives</i> (Topsent, 1891) [33]	20 m	-	
<i>Phorbis fictitius</i> (Bowerbank, 1866) [33]	20 m	-	
<i>Phorbis tenacior</i> (Topsent, 1925) [33]	20 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Family MICROCIONIDAE			
<i>Clathria (Clathria) coralloides</i> (Scopoli, 1772) [33]	70 m	-	
<i>Clathria (Clathria) toxistricta</i> Topsent, 1925 [33]	70 m	-	
<i>Clathria (Clathria) toxivaria</i> (Sarà, 1959) [33]	20 m	-	
Family MYCALIDAE			
<i>Mycale (Mycale) lingua</i> (Bowerbank, 1866) [33]	20 m	-	
<i>Mycale (Mycale) massa</i> (Schmidt, 1862) [33]	20 m	-	
Order SUBERITIDA			
Family HALICHONDRIIDAE			
<i>Axinyssa aurantiaca</i> (Schmidt, 1864) [33]	20 m	-	
<i>Halichondria (Halichondria) cf. panicea</i> (Pallas, 1766) [33]	20 m	-	
<i>Halichondria (Halichondria) contorta</i> (Sarà, 1961) [33]	10 m	-	*
<i>Spongosorites intricatus</i> (Topsent, 1892) [33]	20 m	-	
Family SUBERITIDAE			
<i>Aptos aaptos</i> (Schmidt, 1864) [33]	4–10 m	-	
<i>Protosuberites epiphytum</i> (Lamarck, 1815) [33]	20 m	-	
<i>Terpios gelatinosus</i> (Bowerbank, 1866) [33]	20 m	-	
Order TETHYIDA			
Family TETHYIDAE			
<i>Tethya aurantium</i> (Pallas, 1766) [33]	20 m	-	
<i>Tethya citrina</i> Sarà & Melone, 1965 [33]	20 m	-	
Family TIMEIDAE			
<i>Timea stellata</i> (Bowerbank, 1866) [33]	20 m	-	
<i>Timea unistellata</i> (Topsent, 1892) [33]	20 m	-	
Order TETRACTINELLIDA			
Family ANCORINIDAE			
<i>Ancorina cerebrum</i> Schmidt, 1862 [33]	20 m	-	*
<i>Dercitus (Stoeba) plicatus</i> (Schmidt, 1868) [33]	20 m	-	
<i>Jaspis incrustans</i> (Topsent, 1890) [33]	20 m	-	
<i>Jaspis johnstonii</i> (Schmidt, 1862) [33]	20 m	-	
<i>Stelletta grubii</i> Schmidt, 1862 [33]	20 m	-	
<i>Stelletta mediterranea</i> (Topsent, 1893) [33]	20 m	-	*
<i>Stelletta stellata</i> Topsent, 1893 [33]	20 m	-	
Family CALTHROPELLIDAE			
<i>Calthropella (Corticellopsis) stelligera</i> (Schmidt, 1868) [33]	-	-	*
Family GEODIIDAE			
<i>Erylus discophorus</i> (Schmidt, 1862) [33]	20 m	-	
<i>Geodia cydonium</i> (Linnaeus, 1767) [33]	20 m	-	
<i>Penares euastrum</i> (Schmidt, 1868) [33]	20 m	-	
<i>Penares helleri</i> (Schmidt, 1864) [33]	20 m	-	
Family PACHASTRELLIDAE			
<i>Pachastrella monilifera</i> Schmidt, 1868 [33]	20 m	-	
<i>Triptolemma simplex</i> (Sarà, 1959) [33]	20 m	-	
Family TETILLIDAE			
<i>Tetilla</i> sp. Schmidt, 1868 [33]	20 m	-	
Family THOOSIDAE			
<i>Alectona millari</i> Carter, 1879 [33]	20 m	-	
<i>Delectona madreporica</i> Bavestrello, Calcinai, Cerrano & Sarà, 1997 [33]	20 m	-	*
Family VULCANELLIDAE			
<i>Poecillastra compressa</i> (Bowerbank, 1866) [33]	20 m	-	
Order VERONGIIDA			
Family APLYSINIDAE			
<i>Aplysina aerophoba</i> (Nardo, 1833) [33]	20 m	-	
<i>Aplysina cavernicola</i> (Vacelet, 1959) [33]	70 m	-	
Family IANTHELLIDAE			
<i>Hexadella racovitzai</i> Topsent, 1896 [33]	15 m	-	
Class HOMOSCLEROMORPHA			
Order HOMOSCLEROPHORIDA			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Family OSCARELLIDAE			
<i>Oscarella</i> cf. <i>tuberculata</i> (Schmidt, 1868) [33]	5–15 m	-	*
Family PLAKINIDAE			
<i>Corticium candelabrum</i> Schmidt, 1862 [33]	20 m	-	
<i>Plakina dilopha</i> Schulze, 1880 [33]	20 m	-	*
<i>Plakina reducta</i> (Pulitzer-Finali, 1983) [33]	20 m	-	
<i>Plakina trilopha</i> Schulze, 1880 [33]	20 m	-	
<i>Plakortis simplex</i> Schulze, 1880 [33]	20 m	-	
Phylum CNIDARIA			
Class ANTHOZOA			
Order ACTINIARIA			
Family ACTINIIDAE			
<i>Actinia mediterranea</i> Schmidt, 1971	0 m	-	
<i>Anemonia viridis</i> (Forsskål, 1775)	10 m	-	
<i>Condylactis aurantiaca</i> (Delle Chiaje, 1825)	28 m	-	
<i>Paranemonia cinerea</i> (Contarini, 1844)	3 m	-	*
Family AIPTASIIDAE			
<i>Aiptasia mutabilis</i> (Gravenhorst, 1831)	3 m	-	
<i>Exaiptasia diaphana</i> (Rapp, 1829)	8 m	-	
Family HALCAMPIDAE			
<i>Halcampoides purpureus</i> (Studer, 1879)	4 m	-	*
Family HORMATHIIDAE			
<i>Calliactis parasitica</i> (Couch, 1842)	20–50 m	-	
Family PHYMANTHIDAE			
<i>Phymanthus pulcher</i> (Andrès, 1883)	23 m	-	*
Order ALCYONACEA			
Family ALCYONIIDAE			
<i>Alcyonium</i> cf. <i>coralloides</i> (Pallas, 1766)	45 m	-	‡
<i>Alcyonium palmatum</i> Pallas, 1766	60 m	-	
Family CORALLIIDAE			
<i>Corallium rubrum</i> (Linnaeus, 1758)	60 m	-	
Family CORNULARIIDAE			
<i>Cornularia cornucopiae</i> (Pallas, 1766)	5–70 m	-	*
Family GORGONIIDAE			
<i>Eunicella cavolini</i> (Koch, 1887)	40 m	-	
<i>Leptogorgia sarmentosa</i> (Esper, 1789)	30 m	-	
Family PLEXAURIDAE			
<i>Paramuricea clavata</i> (Risso, 1826)	55 m	-	
Order ANTIPATHARIA			
Family MYRIOPATHIDAE			
<i>Antipathella subpinnata</i> (Ellis & Solander, 1786)	80 m	-	
Order PENICILLARIA			
Family ARACHNACTIDAE			
<i>Arachnanthus</i> cf. <i>oligopodus</i> (Cerfontaine, 1891)	4 m	-	
Order PENNATULACEA			
Family PENNATULIDAE			
<i>Pteroeides griseum</i> (Bohadsch, 1761)	70 m	-	
Family VIRGULARIIDAE			
<i>Virgularia mirabilis</i> (Müller, 1776)	70 m	-	*
Order SCLERACTINIA			
Family CARYOPHYLLIIDAE			
<i>Caryophyllia</i> (<i>Caryophyllia</i>) cf. <i>inornata</i> (Duncan, 1878)	3 m	-	
<i>Paracyathus pulchellus</i> (Philippi, 1842)	70 m	-	
<i>Phyllangia americana mouchezii</i> (Lacaze-Duthiers, 1897)	40 m	-	
<i>Polycyathus muelleriae</i> (Abel, 1959)	4 m	-	
Family DENDROPHYLLIIDAE			
<i>Balanophyllia</i> (<i>Balanophyllia</i>) <i>europaea</i> (Risso, 1826)	4–15 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Family POCILLOPORIDAE			
<i>Madracis pharensis</i> (Heller, 1868)	15 m	-	
Family SCLERACTINIA INCERTAE SEDIS			
<i>Cladocora caespitosa</i> (Linnaeus, 1767)	8 m	-	
Order SPIRULARIA			
Family CERIANTHIDAE			
<i>Cerianthus membranaceus</i> (Gmelin, 1791)	10–20 m	-	
Order ZOANTHARIA			
Family EPIZOANTHIDAE			
<i>Epizoanthus</i> ind Gray, 1867	60 m	-	
Family PARAZOANTHIDAE			
<i>Parazoanthus axinellae</i> (Schmidt, 1862)	21 m	-	
<i>Savalia savaglia</i> (Bertoloni, 1819)	60 m	-	
Class HYDROZOA			
Order ANTHOATHECATA			
Family CORYNIDAE			
<i>Coryne pintneri</i> Schneider, 1897	10–60 m	Rep. structures (VII)	
Family EUDENDRIIDAE			
<i>Eudendrium merulum</i> Watson, 1985	25 m	-	
<i>Eudendrium moulouyensis</i> Marques, Peña Cantero & Vervoort, 2000	5 m	Rep. structures (IX)	
<i>Eudendrium racemosum</i> (Cavolini, 1785)	20 m	-	
Family OCEANIIDAE			
<i>Corydendrium parasiticum</i> (Linnaeus, 1767)	1 m	-	
<i>Oceania armata</i> Kölliker, 1853	1 m	Medusa, Eggs (IV)	‡
<i>Rhizogeton nudus</i> Broch, 1910	3 m	-	
<i>Turritopsis dohrnii</i> (Weismann, 1883)	2–70 m	Medusa (VII-IX)	
Family PANDEIDAE			
<i>Amphinema rugosum</i> (Mayer, 1900)	25 m	-	
Family PENNARIIDAE			
<i>Pennaria disticha</i> Goldfuss, 1820	3 m	-	
Family PROBOSCIDACTYLIDAE			
<i>Proboscidactyla ornata</i> (McCrary, 1859)	70 m	Medusa (VI)	*
Family TUBULARIIDAE			
<i>Ectopleura wrighti</i> Petersen, 1979	20 m	-	
Family ZANCLEIDAE			
<i>Halocoryne epizoica</i> Hadzi, 1917	10–20 m	Medusa (VI)	
<i>Zanclaea giancarloii</i> Boero, Bouillon & Gravili, 2000	70 m	-	
Order LEPTOTHECATA			
Family AEQUOREIDAE			
<i>Aequorea forskalea</i> Péron & Lesueur, 1810	0–5 m	Medusa (IV)	
Family AGLAOPHENIIDAE			
<i>Aglaophenia elongata</i> Meneghini, 1845	11–50 m	-	
<i>Aglaophenia kirchenpaueri</i> (Heller, 1868)	50 m	Rep. structures (IV)	
<i>Aglaophenia octodonta</i> (Heller, 1868)	1–5 m	Rep. structures (IV)	
<i>Aglaophenia tubiformis</i> Marktanner-Turneretscher, 1890	11 m	Rep. structures (V)	
Family CAMPANULARIIDAE			
<i>Clytia hemisphaerica</i> (Linnaeus, 1767)	11 m	-	
<i>Clytia hummelincki</i> (Leloup, 1935)	5 m	-	
<i>Clytia linearis</i> (Thorneley, 1900)	30 m	-	
<i>Obelia dichotoma</i> (Linnaeus, 1758)	3–4 m	-	
<i>Orthopyxis integra</i> (MacGillivray, 1842)	0 m	-	
Family HALECIIDAE			
<i>Halecium petrosum</i> Stechow, 1919	5 m	-	
<i>Halecium pusillum</i> Sars, 1856	3 m	-	
Family HALOPTERIDIDAE			
<i>Antennella secundaria</i> (Gmelin, 1791)	3–11 m	-	
<i>Antennella siliquosa</i> (Hincks, 1877)	15 m	-	
Family HEBELLIDAE			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Anthoebella parasitica</i> (Ciamician, 1880)	1–2 m	-	
<i>Scandia gigas</i> (Pieper, 1884)	10 m	-	
Family KIRCHENPAUERIIDAE			
<i>Kirchenpaueria pinnata</i> (Linnaeus, 1758)	0–20 m	-	
Family LAFOEIDAE			
<i>Filellum serpens</i> (Hassall, 1848)	-	-	
Family LAODICEIDAE			
<i>Laodicea undulata</i> (Forbes & Goodsir, 1853)	45 m	-	
Family PLUMULARIIDAE			
<i>Monotheca obliqua</i> (Johnston, 1847)	2 m	-	
<i>Nemertesia ramosa</i> (Lamarck, 1816)	70 m	-	
<i>Plumularia posidoniae</i> (Picard, 1952)	12 m	-	
<i>Plumularia setacea</i> (Linnaeus, 1758)	3–5 m	-	
Family SERTULARELLIDAE			
<i>Sertularella ellisii</i> (Deshayes & Milne Edwards, 1836)	3–60 m	Rep. structures (VI)	
<i>Sertularella gayi</i> (Lamouroux, 1821)	70 m	-	
<i>Sertularella mediterranea</i> Hartlaub, 1901	50 m	-	
Family SERTULARIIDAE			
<i>Dynamena disticha</i> (Bosc, 1802)	2 m	-	
Family SYNTHECIIDAE			
<i>Synthecium eoansi</i> (Ellis & Solander, 1786)	70 m	-	
Order LIMNOMEDUSAE			
Family GERYONIIDAE			
<i>Geryonia proboscidalis</i> (Forsskål, 1775)	3 m	Medusa (IV)	‡
Family OLINDIIDAE			
<i>Olindias muelleri</i> Haeckel, 1879	7 m	Medusa (IX)	
Order SIPHONOPHORAE			
Family AGALMATIDAE			
<i>Halistemma rubrum</i> (Vogt, 1852)	0 m	Occurrence (IV)	*
<i>Nanomia bijuga</i> (Delle Chiaje, 1844)	5 m	Occurrence (IV)	
Family FORSKALIIDAE			
<i>Forskalia formosa</i> Keferstein & Ehlers, 1860	1–2 m	Occurrence (IV)	‡
Family HIPPOPODIIDAE			
<i>Hippopodius hippopus</i> (Forsskål, 1776)	1 m	Occurrence (IV-V)	
Family PRAYIDAE			
<i>Rosacea cymbiformis</i> (Delle Chiaje, 1830)	0–5 m	Occurrence (IV-V)	
Class SCYPHOZOA			
Order CORONATAE			
Family NAUSITHOIDAE			
<i>Nausithoe</i> ind Kölliker, 1853	70 m	-	
Order RHIZOSTOMEAE			
Family CEPHEIDAE			
<i>Cotylorhiza tuberculata</i> (Macri, 1778)	1 m	Medusa (VII)	
Family RHIZOSTOMATIDAE			
<i>Rhizostoma pulmo</i> (Macri, 1778)	2 m	Medusa (II; VI)	
Order SEMAEOSTOMEAE			
Family PELAGIIDAE			
<i>Chrysaora hysoscella</i> (Linnaeus, 1767)	0–2 m	Medusa (IV-V)	
Family ULMARIDAE			
<i>Aurelia solida</i> Browne, 1905	0–5 m	Medusa (IV-V)	
Phylum HEMICHORDATA			
Class GRAPTOLITHOIDEA			
Order RHABDOPLEUROIDEA			
Family RHABDOPLEURIDAE			
<i>Rhabdopleura recondita</i> Beli, Cameron and Piraino, 2018	70 m	-	
Phylum ECHINODERMATA			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Class ASTEROIDEA			
Order FORCIPULATIDA			
Family ASTERIIDAE			
<i>Coscinasterias tenuispina</i> (Lamarck, 1816)	6 m	-	
<i>Marthasterias glacialis</i> (Linnaeus, 1758)	3–15 m	-	
Order PAXILLOSIDA			
Family ASTROPECTINIDAE			
<i>Astropecten aranciacus</i> (Linnaeus, 1758)	10–34 m	-	
Order SPINULOSIDA			
Family ECHINASTERIDAE			
<i>Echinaster (Echinaster) sepositus</i> (Retzius, 1783)	60 m	-	
Order VALVATIDA			
Family CHAETASTERIDAE			
<i>Chaetaster longipes</i> (Bruzelius, 1805)	70 m	-	
Family GONIASTERIDAE			
<i>Peltaster placenta</i> (Müller & Troschel, 1842)	45 m	-	
Family OPHIDIASTERIDAE			
<i>Hacelia attenuata</i> Gray, 1840	25 m	-	
<i>Ophidiaster ophidianus</i> (Lamarck, 1816)	10 m	-	
Class CRINOIDEA			
Order COMATULIDA			
Family ANTEDONIDAE			
<i>Antedon mediterranea</i> (Lamarck, 1816)	45 m	-	
Class ECHINOIDEA			
Order ARBACIOIDA			
Family ARBACIIDAE			
<i>Arbacia lixula</i> (Linnaeus, 1758)	1–12 m	-	
Order CAMARODONTA			
Family ECHINIDAE			
<i>Echinus melo</i> Lamarck, 1816	50 m	-	
Family PARECHINIDAE			
<i>Paracentrotus lividus</i> (Lamarck, 1816)	1–10 m	-	
<i>Psammechinus microtuberculatus</i> (Blainville, 1825)	34 m	-	
Family TOXOPNEUSTIDAE			
<i>Sphaerechinus granularis</i> (Lamarck, 1816)	8 m	-	
Order CIDAROIDA			
Family CIDARIDAE			
<i>Cidaris cidaris</i> (Linnaeus, 1758)	70 m	-	
<i>Stylocidaris affinis</i> (Philippi, 1845)	70 m	-	
Order CLYPEASTEROIDA			
Family FIBULARIIDAE			
<i>Echinocyamus pusillus</i> (O.F. Müller, 1776)	18 m	-	
Order DIADEMATOIDA			
Family DIADEMATIDAE			
<i>Centrostephanus longispinus</i> (Philippi, 1845)	50 m	-	
Class HOLOTHUROIDEA			
Order HOLOTHURIIDA			
Family HOLOTHURIIDAE			
<i>Holothuria (Holothuria) tubulosa</i> Gmelin, 1791	7 m	-	
<i>Holothuria (Panningothuria) forskali</i> Delle Chiaje, 1823	2 m	-	
<i>Holothuria (Platyperona) sanctori</i> Delle Chiaje, 1823	4 m	-	‡
Order SYNALLACTIDA			
Family STICHOPODIDAE			
<i>Parastichopus regalis</i> (Cuvier, 1817)	60 m	-	
Class OPHIUROIDEA			
Order AMPHILEPIDIDA			
Family OPHIOTRICHIDAE			
<i>Ophiothrix fragilis</i> (Abildgaard in O.F. Müller, 1789)	30–50 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Order OPHIACANTHIDA			
Family OPHIODERMATIDAE			
<i>Ophioderma longicaudum</i> (Bruzeliuss, 1805)	10 m	-	
Phylum CHORDATA			
Class ACTINOPTERYGII			
Order ANGUILLIFORMES			
Family CONGRIDAE			
<i>Conger conger</i> (Linnaeus, 1758)	2–4 m	-	
Family MURAENIDAE			
<i>Muraena helena</i> Linnaeus, 1758	8–11 m	-	
Order ATHERINIFORMES			
Family ATHERINIDAE			
<i>Atherina boyeri</i> Risso, 1810	2 m	-	
<i>Atherina hepsetus</i> Linnaeus, 1758	2 m	-	
Order AULOPIFORMES			
Family SYNODONTIDAE			
<i>Synodus saurus</i> (Linnaeus, 1758)	1–10 m	-	
Order BELONIFORMES			
Family BELONIDAE			
<i>Belone belone</i> (Linnaeus, 1760)	1 m	-	
Order CLUPEIFORMES			
Family CLUPEIDAE			
<i>Sardina pilchardus</i> (Walbaum, 1792)	25 m	-	
<i>Sardinella aurita</i> Valenciennes, 1847	-	-	
Family ENGRAULIDAE			
<i>Engraulis encrasicolus</i> (Linnaeus, 1758)	1–5 m	-	
Order GADIFORMES			
Family MERLUCCIIDAE			
<i>Merluccius merluccius</i> (Linnaeus, 1758)	-	-	
Family PHYCIDAE			
<i>Phycis phycis</i> (Linnaeus, 1766)	30 m	-	
Order LOPHIIFORMES			
Family LOPHIIDAE			
<i>Lophius ind</i> Linnaeus, 1758	60 m	-	
Order MUGILIFORMES			
Family MUGILIDAE			
<i>Chelon auratus</i> (Risso, 1810)	2 m	-	
<i>Chelon labrosus</i> (Risso, 1827)	1 m	-	
Order PERCIFORMES			
Family APOGONIDAE			
<i>Apogon imberbis</i> (Linnaeus, 1758)	5 m	-	
Family BLENNIIDAE			
<i>Aidablennius sphyinx</i> (Valenciennes, 1836)	1 m	-	
<i>Coryphoblennius galerita</i> (Linnaeus, 1758)	0 m	-	
<i>Lipophrys trigloides</i> (Valenciennes, 1836)	1 m	-	
<i>Microlipophrys caneavae</i> (Vinciguerra, 1880)	1 m	-	
<i>Parablennius gattorugine</i> (Linnaeus, 1758)	8–11 m	-	
<i>Parablennius incognitus</i> (Bath, 1968)	2 m	-	
<i>Parablennius rouxi</i> (Cocco, 1833)	10 m	-	
<i>Parablennius sanguinolentus</i> (Pallas, 1814)	0–3	-	
<i>Parablennius zvonimiri</i> (Kolombatovic, 1892)	3 m	-	
Family CARANGIDAE			
<i>Lichia amia</i> (Linnaeus, 1758)	1 m	Sperm (XI)	
<i>Seriola dumerili</i> (Risso, 1810)	2 m	-	
<i>Trachinotus ovatus</i> (Linnaeus, 1758)	3 m	-	
<i>Trachurus trachurus</i> (Linnaeus, 1758)	60 m	-	
Family CENTRACANTHIDAE			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Spicara maena</i> (Linnaeus, 1758)	-	-	
<i>Spicara smaris</i> (Linnaeus, 1758)	7–25 m	Rep. behav. (IV)	
Family GOBIIDAE			
<i>Gobius cobitis</i> Pallas, 1814	0–3	-	
<i>Gobius geniporus</i> Valenciennes, 1837	7 m	-	
<i>Gobius incognitus</i> Kovačić & Sanda, 2016	1–11 m	-	
Family LABRIDAE			
<i>Coris julis</i> (Linnaeus, 1758)	1–15 m	-	
<i>Labrus merula</i> Linnaeus, 1758	20 m	-	
<i>Symphodus doderleini</i> Jordan, 1890	3 m	-	
<i>Symphodus mediterraneus</i> (Linnaeus, 1758)	25 m	-	
<i>Symphodus ocellatus</i> (Linnaeus, 1758)	2 m	-	
<i>Symphodus roissali</i> (Risso, 1810)	2 m	-	
<i>Symphodus rostratus</i> (Bloch, 1791)	5 m	-	
<i>Symphodus tinca</i> (Linnaeus, 1758)	3 m	Rep. behav. (VI-VII)	
<i>Thalassoma pavo</i> (Linnaeus, 1758)	1–5 m	-	
<i>Xyrichtys novacula</i> (Linnaeus, 1758)	18 m	-	
Family MULLIDAE			
<i>Mullus barbatus barbatus</i> Linnaeus, 1758	60 m	-	
<i>Mullus surmuletus</i> Linnaeus, 1758	60 m	-	
Family POMACENTRIDAE			
<i>Chromis chromis</i> (Linnaeus, 1758)	1–20 m	Rep. behav. (VIII)	
Family POMATOMIDAE			
<i>Pomatomus saltatrix</i> (Linnaeus, 1766)	-	-	
Family SCARIDAE			
<i>Sparisoma cretense</i> (Linnaeus, 1758)	3 m	-	
Family SCIAENIDAE			
<i>Sciaena umbra</i> Linnaeus, 1758	23 m	-	
Family SCOMBRIDAE			
<i>Auxis rochei rochei</i> (Risso, 1810)	-	-	
<i>Euthynnus alletteratus</i> (Rafinesque, 1810)	1 m	-	
<i>Sarda sarda</i> (Bloch, 1793)	20 m	-	
<i>Scomber colias</i> Gmelin, 1789	18 m	-	
<i>Scomber scombrus</i> Linnaeus, 1758	60 m	-	
Family SERRANIDAE			
<i>Anthias anthias</i> (Linnaeus, 1758)	40 m	-	
<i>Epinephelus costae</i> (Steindachner, 1878)	30 m	-	
<i>Epinephelus marginatus</i> (Lowe, 1834)	4 m	-	
<i>Serranus cabrilla</i> (Linnaeus, 1758)	4–15 m	-	
<i>Serranus hepatus</i> (Linnaeus, 1758)	7–25 m	-	
<i>Serranus scriba</i> (Linnaeus, 1758)	2–18 m	-	
Family SPARIDAE			
<i>Boops boops</i> (Linnaeus, 1758)	1–10 m	-	
<i>Dentex dentex</i> (Linnaeus, 1758)	-	-	
<i>Diplodus puntazzo</i> (Walbaum, 1792)	5–15 m	-	
<i>Diplodus sargus</i> (Linnaeus, 1758)	7 m	-	
<i>Diplodus vulgaris</i> (Geoffroy Saint-Hilaire, 1817)	5–15 m	-	
<i>Lithognathus mormyrus</i> (Linnaeus, 1758)	7 m	-	
<i>Oblada melanura</i> (Linnaeus, 1758)	1 m	-	
<i>Pagellus acarne</i> (Risso, 1827)	20 m	-	
<i>Pagellus bogaraveo</i> (Brünnich, 1768)	0–3	-	
<i>Pagellus erythrinus</i> (Linnaeus, 1758)	20 m	-	
<i>Pagrus pagrus</i> (Linnaeus, 1758)	0–3	-	
<i>Sarpa salpa</i> (Linnaeus, 1758)	30 m	-	
<i>Sparus aurata</i> Linnaeus, 1758	2 m	-	
<i>Spondyliosoma cantharus</i> (Linnaeus, 1758)	0–2 m	-	
Family SPHYRAENIDAE			
<i>Sphyraena sphyraena</i> (Linnaeus, 1758)	30 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Family TRACHINIDAE			
<i>Trachinus araneus</i> Cuvier, 1829	25 m	-	
Family TRIPTERYGIIDAE			
<i>Tripterygion tripteronotum</i> (Risso, 1810)	0–3	-	
Family URANOSCOPIDAE			
<i>Uranoscopus scaber</i> Linnaeus, 1758	30 m	-	
Order PLEURONECTIFORMES			
Family BOTHIDAE			
<i>Bothus podas</i> (Delaroche, 1809)	1–4 m	-	
Family SOLEIDAE			
<i>Microchirus ocellatus</i> (Linnaeus, 1758)	20 m	-	
<i>Solea solea</i> (Linnaeus, 1758)	20 m	-	
Order SCORPAENIFORMES			
Family DACTYLOPTERIDAE			
<i>Dactylopterus volitans</i> (Linnaeus, 1758)	-	-	
Family SCORPAENIDAE			
<i>Scorpaena maderensis</i> Valenciennes, 1833	3–15 m	-	
<i>Scorpaena notata</i> Rafinesque, 1810	20 m	-	
<i>Scorpaena porcus</i> Linnaeus, 1758	16 m	-	
<i>Scorpaena scrofa</i> Linnaeus, 1758	25 m	-	
Family TRIGLIDAE			
<i>Chelidonichthys lastoviza</i> (Bonnaterre, 1788)	-	-	
Order TETRAODONTIFORMES			
Family BALISTIDAE			
<i>Balistes capriscus</i> Gmelin, 1789	15 m	-	
Order ZEIFORMES			
Family ZEIDAE			
<i>Zeus faber</i> Linnaeus, 1758	67 m	-	
Class ASCIDIACEA			
Order APLOUSOBRANCHIA			
Family CLAVELINIDAE			
<i>Pycnoclavella</i> ind Garstang, 1891	15 m	-	*
Family DIDEMNIDAE			
<i>Diplosoma spongiforme</i> (Giard, 1872)	1–60 m	-	
Family POLYCITORIDAE			
<i>Polycitor crystallinus</i> (Renier, 1804)	30 m	-	
Family POLYCLINIDAE			
<i>Aplidium</i> ind Savigny, 1816	15 m	-	
Order PHLEBOBRANCHIA			
Family ASCIDIIDAE			
<i>Ascidia mentula</i> Müller, 1776	4 m	-	
Order STOLIDOBRANCHIA			
Family PYURIDAE			
<i>Halocynthia papillosa</i> (Linnaeus, 1767)	5–30 m	-	
<i>Microcosmus</i> ind Heller, 1877	20 m	-	
<i>Pyura tessellata</i> (Forbes, 1848)	60 m	-	
Family STYELIDAE			
<i>Botrylloides niger</i> Herdman, 1886	1–3 m	-	
Class ELASMOBRANCHII			
Order MYLIOBATIFORMES			
Family DASYATIDAE			
<i>Dasyatis pastinaca</i> (Linnaeus, 1758)	20 m	-	
Order RAJIFORMES			
Family RAJIDAE			
<i>Raja brachyura</i> Lafont, 1871	20 m	-	
<i>Raja miraletus</i> Linnaeus, 1758	67 m	Eggs (V)	
Order TORPEDINIFORMES			
Family TORPEDINIDAE			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Torpedo marmorata</i> Risso, 1810	5 m	-	
Class LEPTOCARDII			
Family BRANCHIOSTOMATIDAE			
<i>Branchiostoma lanceolatum</i> (Pallas, 1774)	7–11 m	-	
Class MAMMALIA			
Order CETARTIODACTYLA			
Family DELPHINIDAE			
<i>Tursiops truncatus</i> (Montagu, 1821)	0 m	-	
Class REPTILIA			
Order TESTUDINES			
Family CHELONIIDAE			
<i>Caretta caretta</i> (Linnaeus, 1758)	2 m	-	
Class THALIACEA			
Order SALPIDA			
Family SALPIDAE			
<i>Helicosalpa virgula</i> (Vogt, 1854)†	3 m	Occurrence (IV)	*†
<i>Salpa fusiformis</i> Cuvier, 1804	0–5 m	Occurrence (III–IV)	
<i>Salpa maxima</i> Forskål, 1775	0–5 m	Occurrence (IV–V)	
Phylum NEMATODA			
Class CHROMADOREA			
Order RHABDITIDA			
Family ANISAKIDAE			
<i>Anisakis</i> ind Dujardin, 1845	-	-	
Phylum ARTHROPODA			
Class COLLEMBOLA			
Family NEANURIDAE			
<i>Anurida maritima</i> (Guérin-Méneville, 1836)	0 m	-	
Class HEXANAUPLIA			
Family SACCULINIDAE			
<i>Sacculina</i> ind Thompson, 1836	1 m	-	
Order LEPADIFORMES			
Family LEPADIDAE			
<i>Lepas (Anatifa) pectinata</i> Spengler, 1793	0 m	-	
Order SIPHONOSTOMATOIDA			
Family PENNELLIDAE			
<i>Pennella</i> ind Oken, 1815	-	-	
Class MALACOSTRACA			
Order AMPHIPODA			
Family CAPRELLIDAE			
<i>Caprella</i> ind Lamarck, 1801	3–5 m	-	
<i>Phtisica marina</i> Slabber, 1769	5 m	-	
<i>Pseudoprotella phasma</i> (Montagu, 1804)	5 m	-	
Family ISCHYROCERIDAE			
<i>Jassa marmorata</i> Holmes, 1905	2 m	-	
Family PHRONIMIDAE			
<i>Phronima sedentaria</i> (Forskål, 1775)	3 m	-	
Order DECAPODA			
Family ALPHEIDAE			
<i>Alpheus dentipes</i> Guérin, 1832	-	Eggs (VI)	
<i>Synalpheus gambarelloides</i> (Nardo, 1847)	-	-	
Family CALAPPIDAE			
<i>Calappa granulata</i> (Linnaeus, 1758)	40–60 m	Eggs (II)	
Family CARCINIDAE			
<i>Xaiva biguttata</i> (Risso, 1816)	7 m	-	
Family DIOGENIDAE			
<i>Calcinus tubularis</i> (Linnaeus, 1767)	1 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Clibanarius erythropus</i> (Latreille, 1818)	1 m	-	
<i>Dardanus arrosor</i> (Herbst, 1796)	70 m	-	
<i>Dardanus calidus</i> (Risso, 1827 in [Risso, 1826–1827])	20–50 m	Eggs (VIII)	
<i>Diogenes pugilator</i> (P. Roux, 1829) complex	7 m	-	
<i>Paguristes eremita</i> (Linnaeus, 1767)	-	-	
Family DORIPPIDAE			
<i>Medorippe lanata</i> (Linnaeus, 1767)	60 m	-	
Family DROMIIDAE			
<i>Dromia personata</i> (Linnaeus, 1758)	5–50 m	Eggs (VIII)	
Family EPIALTIDAE			
<i>Acanthonyx lunulatus</i> (Risso, 1816)	1 m	-	
<i>Herbstia condyliata</i> (Fabricius, 1787)	4 m	-	
<i>Pisa</i> cf. <i>armata</i> (Latreille, 1803)	70 m	-	
<i>Pisa</i> cf. <i>nodipes</i> Leach, 1815	60 m	-	
Family ERIPHIIDAE			
<i>Eriphia verrucosa</i> (Forskål, 1775)	2 m	Eggs (VIII)	
Family GALATHEIDAE			
<i>Galathea squamifera</i> Leach, 1814 [in Leach, 1813–1815]	5 m	-	
Family GONEPLACIDAE			
<i>Goneplax rhomboides</i> (Linnaeus, 1758)	60 m	-	
Family GRAPSIDAE			
<i>Pachygrapsus marmoratus</i> (Fabricius, 1787)	0 m	Eggs (VI)	
Family HOMOLIDAE			
<i>Homola barbata</i> (Fabricius, 1793)	60 m	Eggs (VI)	
Family INACHIDAE			
<i>Macropodia</i> ind Leach, 1814 [in Leach, 1813–1815]	20 m	-	
Family LEUCOSIIDAE			
<i>Ebalia edwardsii</i> O.G. Costa, 1838 [in O.G. Costa & A. Costa, 1838–1871]	25 m	-	
<i>Ilia nucleus</i> (Linnaeus, 1758)	7 m	-	
Family MAJIDAE			
<i>Maja crispata</i> Risso, 1827 in [Risso, 1826–1827]	-	-	
<i>Maja squinado</i> (Herbst, 1788)	50 m	Eggs (VI;IX)	
<i>Neomaja goltziana</i> (d'Oliveira, 1889)	-	-	
Family PAGURIDAE			
<i>Cestopagurus timidus</i> (P. Roux, 1830 [in P. Roux, 1828–1830])	5 m	-	
<i>Pagurus anachoretus</i> Risso, 1827 in [Risso, 1826–1827]	-	-	
Family PALAEMONIDAE			
<i>Brachycarpus biunguiculatus</i> (H. Lucas, 1846)	5 m	-	
<i>Palaemon</i> cf. <i>serratus</i> (Pennant, 1777)	1 m	Eggs (VI)	
<i>Palaemon elegans</i> Rathke, 1836	0–1 m	-	
<i>Pontonia pinnophylax</i> (Otto, 1821)	10 m	-	
Family PALINURIDAE			
<i>Palinurus elephas</i> (Fabricius, 1787)	70 m	-	
Family PARTHENOPIDAE			
<i>Spinolambrus macrochelos</i> (Herbst, 1790 [in Herbst, 1782–1790])	70 m	-	
Family PENAEIDAE			
<i>Penaeus kerathurus</i> (Forskål, 1775)	20 m	-	
Family PERCNIDAE			
<i>Percnon gibbesi</i> (H. Milne Edwards, 1853)	1 m	-	
Family PILUMNIDAE			
<i>Pilumnus hirtellus</i> (Linnaeus, 1761)	50 m	-	
<i>Pilumnus spinifer</i> H. Milne Edwards, 1834	50 m	Eggs (V)	
<i>Pilumnus villosissimus</i> (Rafinesque, 1814)	0 m	-	
Family POLYBIIDAE			
<i>Liocarcinus vernalis</i> (Risso, 1827 in [Risso, 1826–1827])	0 m	-	
Family PORTUNIDAE			
<i>Callinectes sapidus</i> Rathbun, 1896	-	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Portunus hastatus</i> (Linnaeus, 1767)	2–30 m	-	
Family PROCESSIDAE			
<i>Processa</i> ind Leach, 1815 [in Leach, 1815–1875]	3 m	-	
Family SCYLLARIDAE			
<i>Scyllarides latus</i> (Latreille, 1803)	60 m	Eggs (VI)	
Family STENOPODIDAE			
<i>Stenopus spinosus</i> Risso, 1827 in [Risso, 1826–1827]	3 m	-	
Family XANTHIDAE			
<i>Paractaea monodi</i> Guinot, 1969	5 m	-	
<i>Xantho granulicarpus</i> Forest in Drach & Forest, 1953	0 m	-	
<i>Xantho poretta</i> (Olivi, 1792)	0 m	-	
Order ISOPODA			
Family GNATHIIDAE			
<i>Gnathia</i> ind Leach, 1814	-	-	
Family IDOTEIDAE			
<i>Idotea metallica</i> Bosc, 1802	0 m	-	
Family LIGIIDAE			
<i>Ligia italica</i> Fabricius, 1798	0 m	-	
Order STOMATOPODA			
Family SQUILLIDAE			
<i>Squilla mantis</i> (Linnaeus, 1758)	60 m	-	
Phylum PLATYHELMINTHES			
Order POLYCLADIDA			
Family EURYLEPTIDAE			
<i>Prostheceraeus giesbrechtii</i> Lang, 1884	4–16 m	-	‡
Family PLANOCERIDAE			
<i>Planocera ceratommata</i> (Palombi, 1936)	8 m	-	*
Family PSEUDOCEROTIDAE			
<i>Pseudoceros maximus-type A</i> Lang, 1884	15 m	-	*
<i>Pseudoceros velutinus</i> (Blanchard, 1847)	2 m	-	*
<i>Thysanozoon brocchii</i> (Risso, 1818)	8 m	-	*
Class MONOGENEA			
Order MAZOCRAEIDEA			
Family HEXOSTOMATIDAE			
<i>Hexostoma thynni</i> (Delaroche, 1811) Rafinesque, 1815	-	-	
Phylum MOLLUSCA			
Class BIVALVIA			
Order ADAPEDONTA			
Family HIATELLIDAE			
<i>Hiatella arctica</i> (Linnaeus, 1767)	1 m	-	
Order ARCIDA			
Family ARCIDAE			
<i>Arca noae</i> Linnaeus, 1758	20 m	-	
<i>Barbatia barbata</i> (Linnaeus, 1758)	-	-	
Family GLYCYMERIDIDAE			
<i>Glycymeris bimaculata</i> (Poli, 1795)	18 m	-	
Family NOETIIDAE			
<i>Striarca lactea</i> (Linnaeus, 1758)	50 m	-	
Order CARDIIDA			
Family CARDIIDAE			
<i>Laevicardium crassum</i> (Gmelin, 1791)	18 m	-	
<i>Papillicardium papillosum</i> (Poli, 1791)	10 m	-	
Family TELLINIDAE			
<i>Moerella donacina</i> (Linnaeus, 1758)	18 m	-	
<i>Peronaea planata</i> (Linnaeus, 1758)	18 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Order CARDITIDA			
Family CARDITIDAE			
<i>Cardita calyculata</i> (Linnaeus, 1758)	-	-	
Order GALEOMMATIDA			
Family LASAEIDAE			
<i>Lasaea rubra</i> (Montagu, 1803)	-	-	
Order GASTROCHAENIDA			
Family GASTROCHAENIDAE			
<i>Rocellaria dubia</i> (Pennant, 1777)	2–5 m	-	
Order LIMIDA			
Family LIMIDAE			
<i>Lima lima</i> (Linnaeus, 1758)	4 m	-	
<i>Limaria tuberculata</i> (Olivieri, 1792)	5 m	-	
Order MYTILIDA			
Family MYTILIDAE			
<i>Lithophaga lithophaga</i> (Linnaeus, 1758)	2 m	-	
<i>Musculus costulatus</i> (Risso, 1826)	-	-	
<i>Mytilus galloprovincialis</i> Lamarck, 1819	1 m	-	
Order OSTREIDA			
Family GRYPHAEIDAE			
<i>Neopycnodonte cochlear</i> (Poli, 1795)	4 m	-	
Family PINNIDAE			
<i>Pinna nobilis</i> Linnaeus, 1758	3–20 m	-	
Family PTERIIDAE			
<i>Pteria hirundo</i> (Linnaeus, 1758)	50 m	-	
Order PECTINIDA			
Family ANOMIIDAE			
<i>Anomia ephippium</i> Linnaeus, 1758	20 m	-	
Family PECTINIDAE			
<i>Aequipecten opercularis</i> (Linnaeus, 1758)	20 m	-	
<i>Manupecten pesfelis</i> (Linnaeus, 1758)	-	-	
<i>Mimachlamys varia</i> (Linnaeus, 1758)	10 m	-	
<i>Palliolium incomparabile</i> (Risso, 1826)	50 m	-	
<i>Pecten jacobaeus</i> (Linnaeus, 1758)	-	-	
<i>Talochlamys multistriata</i> (Poli, 1795)	-	-	
Family SPONDYLIDAE			
<i>Spondylus gaederopus</i> Linnaeus, 1758	30 m	-	
Order VENERIDA			
Family VENERIDAE			
<i>Pitar mediterraneus</i> (Aradas & Benoit, 1872)	60 m	-	
<i>Venus verrucosa</i> Linnaeus, 1758	-	-	
Class CEPHALOPODA			
Order MYOPSIDA			
Family LOLIGINIDAE			
<i>Loligo vulgaris</i> Lamarck, 1798	30 m	-	
Order OCTOPODA			
Family OCTOPODIDAE			
<i>Octopus vulgaris</i> Cuvier, 1797 complex	2–30 m	-	
Order SEPIIDA			
Family SEPIIDAE			
<i>Sepia officinalis</i> Linnaeus, 1758	5–30 m	-	
Class GASTROPODA			
Family CERITHIIDAE			
<i>Bittium latreillii</i> (Payraudeau, 1826)	10 m	-	
<i>Bittium reticulatum</i> (da Costa, 1778)	-	-	
<i>Cerithium lividulum</i> Risso, 1826	1 m	-	
<i>Cerithium renovatum</i> Monterosato, 1884 complex	-	-	
<i>Cerithium vulgatum</i> Bruguière, 1792 complex	1 m	-	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Family SILIQUARIIDAE			
<i>Petalopoma elisabettiae</i> Schiaparelli, 2002	40 m	-	
Family LIMAPONTIIDAE			
<i>Ercolania viridis</i> (A. Costa, 1866) [30]	0 m	-	*
Family OMALOGYRIDAE			
<i>Ammonicera fischeriana</i> (Monterosato, 1869)	-	-	
<i>Omalogyra cf. simplex</i> (Costa O. G., 1861)	-	-	
Family PATELLIDAE			
<i>Patella caerulea</i> Linnaeus, 1758	0 m	-	
<i>Patella rustica</i> Linnaeus, 1758 complex	0 m	-	
Family PLAKOBRANCHIDAE			
<i>Bosellia mimetica</i> Trinchese, 1891 [30]	21 m	Eggs (VI)	
<i>Elysia timida</i> (Risso, 1818) [30]	7 m	-	
<i>Elysia viridis</i> (Montagu, 1804) [30]	10 m	-	
<i>Thuridilla hopei</i> (Vérany, 1853) [30]	7 m	-	
Family PYRAMIDELLIDAE			
<i>Folinella excavata</i> (Phillippi, 1836)	-	-	
Order APLYSIIDA			
Family APLYSIIDAE			
<i>Aplysia depilans</i> Gmelin, 1791 [30]	2 m	Rep. behav. (IX)	
<i>Aplysia fasciata</i> Poiret, 1789 [30]	3 m	Rep. behav. (VII)	
<i>Aplysia punctata</i> (Cuvier, 1803) [30]	10 m	Rep. behav. (II)	
Order CEPHALASPIDEA			
Family AGLAJIDAE			
<i>Aglaja tricolorata</i> Renier, 1807 [30]	34 m	-	
Family BULLIDAE			
<i>Bulla striata</i> Bruguière, 1792 [30]	10 m	-	
Family HAMINOEIDAE			
<i>Haminoea</i> ind Turton & Kingston [in Carrington], 1830 [30]	1–40 m	-	
<i>Weinkauffia turgidula</i> (Forbes, 1844) [30]	40 m	-	
Order LEPETELLIDA			
Family FISSURELLIDAE			
<i>Diodora graeca</i> (Linnaeus, 1758)	1 m	-	
<i>Emarginula sicula</i> J.E. Gray, 1825	3 m	-	
Family HALIOTIDAE			
<i>Haliotis tuberculata</i> Linnaeus, 1758	2–10 m	-	
Family SCISSURELLIDAE			
<i>Scissurella costata</i> d'Orbigny, 1824	-	-	
Order LITTORINIMORPHA			
Family APORRHAIIDAE			
<i>Aporrhais pespelecani</i> (Linnaeus, 1758)	3 m	-	
Family CALYPTRAEIDAE			
<i>Calyptrea chinensis</i> (Linnaeus, 1758)	50 m	-	
<i>Crepidula moulinsii</i> Michaud, 1829	20 m	-	
Family CARINARIIDAE			
<i>Carinaria lamarckii</i> Blainville, 1817	3 m	-	
Family CASSIDAE			
<i>Semicassis undulata</i> (Gmelin, 1791)	-	-	
Family CHARONIIDAE			
<i>Charonia seguenzae</i> (Aradas & Benoit, 1872)	11 m	-	
Family CYMATIIDAE			
<i>Monoplex corrugatus</i> (Lamarck, 1816)	10 m	-	
Family CYPRAEIDAE			
<i>Luria lurida lurida</i> (Linnaeus, 1758)	4 m	-	
<i>Naria spurca spurca</i> (Linnaeus, 1758)	4 m	-	
Family LITTORINIDAE			
<i>Melarhaphe neritoides</i> (Linnaeus, 1758)	0 m	Eggs (XI)	
Family RISSOIDAE			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Alvania hirta</i> (Monterosato, 1884)	-	-	
<i>Alvania lineata</i> Risso, 1826	-	-	
<i>Alvania mamillata</i> Risso, 1826	-	-	
<i>Manzonina crassa</i> (Kanmacher, 1798)	-	-	
Family RISSOINIDAE			
<i>Rissoina bruguieri</i> (Payraudeau, 1826)	-	-	
Family TONNIDAE			
<i>Tonna galea</i> (Linnaeus, 1758)	20–60 m	-	
Family VELUTINIDAE			
<i>Lamellaria perspicua</i> (Linnaeus, 1758)	3 m	-	
Family VERMETIDAE			
<i>Dendropoma petraeum</i> (Monterosato, 1884) complex	-	-	
<i>Thylacodes arenarius</i> (Linnaeus, 1758)	70 m	-	
Order NEOGASTROPODA			
Family BUCCINIDAE			
<i>Euthria cornea</i> (Linnaeus, 1758)	-	-	
Family COLUMBELLIDAE			
<i>Columbella rustica</i> (Linnaeus, 1758)	1 m	-	
Family CONIDAE			
<i>Conus ventricosus</i> Gmelin, 1791	2 m	-	
Family COSTELLARIIDAE			
<i>Pusia tricolor</i> (Gmelin, 1791)	4 m	-	
Family FASCIOLARIIDAE			
<i>Fusinus fioritae</i> Russo & Pagli, 2019	40 m	-	
<i>Tarantinaea lignaria</i> (Linnaeus, 1758)	1 m	-	
Family MITRIDAE			
<i>Episcomitra zonata</i> (Marryat, 1818)	-	-	
<i>Isara cornea</i> (Lamarck, 1811)	-	-	
Family MURICIDAE			
<i>Bolinus brandaris</i> (Linnaeus, 1758)	30 m	-	
<i>Hexaplex trunculus</i> (Linnaeus, 1758) complex	1–50 m	Eggs (VI–VII)	
<i>Hirtomurex squamosus</i> (Bivona e Bernardi, 1838)	50 m	-	
<i>Muricopsis cristata</i> (Brocchi, 1814)	30 m	-	
<i>Ocinebrina</i> cf. <i>corallina/aegeensis</i>	40 m	-	
<i>Stramonita haemastoma</i> (Linnaeus, 1767)	0 m	-	
Family NASSARIIDAE			
<i>Tritia corniculum</i> (Olivi, 1792) complex	1 m	-	
<i>Tritia incrassata</i> (Strøm, 1768) complex	1 m	-	
<i>Tritia pellucida</i> (Risso, 1826)	5 m	-	
Family PISANIIDAE			
<i>Aplous dorbignyi</i> (Payraudeau, 1826) complex	-	-	
<i>Pisania striata</i> (Gmelin, 1791)	20 m	-	
Order NUDIBRANCHIA			
Family AEOLIDIIDAE			
<i>Berghia coerulescens</i> (Laurillard, 1832) [30]	1 m	-	
<i>Spurilla neapolitana</i> (Delle Chiaje, 1841) [30]	4 m	-	
Family CALYCIDORIDIDAE			
<i>Diaphorodoris papillata</i> Portmann & Sandmeier, 1960 [30]	30 m	-	*
Family CHROMODORIDIDAE			
<i>Felimare picta</i> (Philippi, 1836) [30]	8–18 m	-	
<i>Felimare tricolor</i> (Cantraine, 1835) [30]	14 m	-	
<i>Felimare villafranca</i> (Risso, 1818) [30]	10 m	-	
<i>Felimida krohni</i> (Vérany, 1846) [30]	40 m	-	
<i>Felimida luteorosea</i> (Rapp, 1827) [30]	40 m	-	
Family DENDRODORIDIDAE			
<i>Dendrodoris grandiflora</i> (Rapp, 1827) [30]	4 m	-	
Family DISCODORIDIDAE			
<i>Peltodoris atromaculata</i> Bergh, 1880 [30]	18–30 m	Eggs (VI)	

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Platydoris argo</i> (Linnaeus, 1767) [30]	22 m	-	
Family DORIDIDAE			
<i>Doris ocelligera</i> (Bergh, 1881) [30]	40 m	-	*
Family DOTIDAE			
<i>Doto acuta</i> Schmekel & Kress, 1977 [30]	2 m	-	*
<i>Doto cf. koenneckeri</i> Lemche, 1976 [30]	2 m	-	*
<i>Doto paulinae</i> Trinchese, 1881 [30]	2 m	-	*
<i>Doto pygmaea</i> Bergh, 1871 [30]	0 m	Eggs (VII)	*
Family EUBRANCHIDAE			
<i>Eubranchius exiguus</i> (Alder & Hancock, 1848) [30]	0 m	-	*
Family FACELINIDAE			
<i>Cratena peregrina</i> (Gmelin, 1791) [30]	21 - 25 m	-	
<i>Facelina annulicornis</i> (Chamisso & Eysenhardt, 1821) [30]	4 m	-	*
Family FIONIDAE			
<i>Fiona pinnata</i> (Eschscholtz, 1831) [30]	0 m	Eggs (V)	*
Family FLABELLINIDAE			
<i>Calmella cavolini</i> (Vérany, 1846) [30]	1 m	-	
<i>Flabellina affinis</i> (Gmelin, 1791) [30]	10 m	-	
Family ONCHIDORIDIDAE			
<i>Onchidorididae</i> ind Gray, 1827 [30]	70 m	-	
Family PHYLLIDIIDAE			
<i>Phyllidia flava</i> Aradas, 1847 [30]	23 m	-	
Family POLYCERIDAE			
<i>Kaloplocamus ramosus</i> (Cantraine, 1835) [30]	70 m	-	
<i>Polycera quadrilineata</i> (O. F. Müller, 1776) [30]	40 m	-	
Family SAMLIDAE			
<i>Luisella babai</i> (Schmekel, 1972) [30]	22 m	-	
Family TRINCHEIIDAE			
<i>Trinchesia caerulea</i> (Montagu, 1804) [30]	2 m	-	
Family TRITONIIDAE			
<i>Tritonia manicata</i> Deshayes, 1853 [30]	1 m	-	
Order PLEUROBRANCHIDA			
Family PLEUROBRANCHAEIDAE			
<i>Pleurobranchaea meckeli</i> (Blainville, 1825) [30]	34 m	-	
Order RUNCINIDA			
Family RUNCINIDAE			
<i>Runcina adriatica</i> T. E. Thompson, 1980 [30]	20–39 m	-	*
<i>Runcina cf. brenkoae</i> T. E. Thompson, 1980 [30]	2 m	-	*
<i>Runcina cf. ornata</i> (Quatrefages, 1844) [30]	20 m	-	*
<i>Runcina ferruginea</i> Kress, 1977 [30]	40 m	-	
Order TROCHIDA			
Family CALLIOSTOMATIDAE			
<i>Calliostoma conulus</i> (Linnaeus, 1758)	4–60 m	-	
Family COLLONIIDAE			
<i>Homalopoma sanguineum</i> (Linnaeus, 1758)	-	-	
Family TROCHIDAE			
<i>Jujubinus exasperatus</i> (Pennant, 1777) complex	-	-	
<i>Jujubinus striatus</i> (Linnaeus, 1758) complex	1 m	-	
<i>Phorcus turbinatus</i> (Born, 1778)	0 m	-	
<i>Steromphala nebulosa</i> (Philippi, 1849)	3 m	-	
Family TURBINIDAE			
<i>Bolma rugosa</i> (Linnaeus, 1767)	-	-	
Order UMBRACULIDA			
Family UMBRACULIDAE			
<i>Umbraculum umbraculum</i> ([Lightfoot], 1786) [30]	1–3 m	-	
Class POLYPLACOPHORA			
Order CHITONIDA			
Family ACANTHOCHITONIDAE			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Acanthochitona fascicularis</i> (Linnaeus, 1767)	20 m	-	
Family CALLOCHITONIDAE			
<i>Callochiton septemvalvis</i> (Montagu, 1803)	20 m	-	
Family CHITONIDAE			
<i>Rhyssoplax olivacea</i> (Spengler, 1797)	10 m	-	
Family LEPIDochITONIDAE			
<i>Lepidochitona caprearum</i> (Scacchi, 1836)	1 m	Eggs (V)	
Phylum ANNELIDA			
Order MYZOSTOMIDA			
Family MYZOSTOMATIDAE			
<i>Myzostoma glabrum</i> Graff, 1877	60 m	-	*
Order SIPUNCULA			
Family PHASCOLOSOMATIDAE			
<i>Phascolosoma (Phascolosoma) granulatum</i> Leuckart, 1828	0–1 m	-	
Class CLITELLATA			
Order RHYNCHOBDELLIDA			
Family PISCICOLIDAE			
<i>Branchellion torpedinis</i> Savigny, 1822	-	-	*
<i>Pontobdella muricata</i> (Linnaeus, 1758)	-	-	
Class POLYCHAETA			
Family OPHELIIDAE			
<i>Armandia polyophthalma</i> Kükenthal, 1887	7 m	-	
Family ORBINIIDAE			
<i>Phylo foetida</i> (Claparède, 1868)	18 m	-	
Order AMPHINOMIDA			
Family AMPHINOMIDAE			
<i>Hermodice carunculata</i> (Pallas, 1766)	5–25 m	Eggs (VIII)	
Order ECHIUROIDEA			
Family BONELLIIDAE			
<i>Bonellia viridis</i> Rolando, 1822	5–15 m	-	
Order EUNICIDA			
Family DORVILLEIDAE			
<i>Dorvillea rubrovittata</i> (Grube, 1855)	35 m	-	
Family EUNICIDAE			
<i>Leodice harassii</i> (Audouin & Milne Edwards, 1833)	70 m	-	
<i>Lysidice collaris</i> Grube, 1870	70 m	-	
<i>Lysidice ninetta</i> Audouin & H Milne Edwards, 1833	15 m	-	
Order PHYLLODOCIDA			
Family HESIONIDAE			
<i>Psamathe fusca</i> Johnston, 1836	70 m	-	
Family NEREIDIDAE			
<i>Ceratonereis (Compositia) costae</i> (Grube, 1840)	20 m	-	
Family PHYLLODOCIDAE			
Alciopini ind Ehlers, 1864	5 m	Occurrence (IV)	
Family POLYNOIDAE			
<i>Harmothoe cf. impar</i> (Johnston, 1839)	35 m	-	
<i>Harmothoe pagenstecheri</i> Michaelsen, 1896	25 m	-	*
<i>Lepidonotus clava</i> (Montagu, 1808)	70 m	-	
Family SIGALIONIDAE			
<i>Sigalion mathildae</i> Audouin & Milne Edwards in Cuvier, 1830	7 m	-	
Family SYLLIDAE			
<i>Paraehlersia ferrugina</i> (Langerhans, 1881)	20 m	-	
<i>Pseudosyllis brevipennis</i> Grube, 1863	70 m	-	
Order SABELLIDA			
Family SABELLIDAE			
<i>Sabella spallanzanii</i> (Gmelin, 1791)	3–20 m	-	
Family SERPULIDAE			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
<i>Hydroides elegans</i> (Haswell, 1883) [nomen protectum]	60 m	-	
<i>Hydroides pseudouncinata</i> Zibrowius, 1968	70 m	-	
<i>Protula</i> ind Risso, 1826	10–70 m	-	
<i>Spirobranchus triqueter</i> (Linnaeus, 1758)	60 m	-	
<i>Spirorbis</i> ind Daudin, 1800	10 m	-	
<i>Vermiliopsis infundibulum</i> (Philippi, 1844)	50–70 m	Eggs (VII)	
<i>Vermiliopsis labiata</i> (O. G. Costa, 1861)	20 m	-	
<i>Vermiliopsis striaticeps</i> (Grube, 1862)	18 m	-	
Order TERESELLIDA			
Family CIRRATULIDAE			
<i>Cirriiformia tentaculata</i> (Montagu, 1808)	18 m	-	
<i>Dodecaceria concharum</i> Örsted, 1843	70 m	-	
Family TERESELLIDAE			
<i>Streblosoma</i> ind M. Sars in G.O. Sars, 1872	35 m	-	
Phylum NEMERTEA			
Class HOPLONEMERTEA			
Order POLYSTILIFERA			
Family DREPANOPHORIDAE			
<i>Gibsonnemertes spectabilis</i> (Quatrefages, 1846)	70 m	-	*
Class PILIDIOPHORA			
Order HETERONEMERTEA			
Family LINEIDAE			
<i>Notospermus geniculatus</i> (Delle Chiaje, 1828)	4 m	-	
Phylum BRYOZOA			
Class GYMNOAEMATA			
Order CHEILOSTOMATIDA			
Family ADEONIDAE			
<i>Adeonella pallasii</i> (Heller, 1867)	20 m	-	
<i>Reptadeonella violacea</i> (Johnston, 1847)	30 m	-	
Family AETEIDAE			
<i>Aetea anguina</i> (Linnaeus, 1758)	0–5 m	-	
Family BEANIIDAE			
<i>Beania magellanica</i> (Busk, 1852)	70 m	-	
Family BIRECTIPORIDAE			
<i>Schizomavella</i> ind Canu & Bassler, 1917	70 m	-	
Family BUGULIDAE			
<i>Bugulina calathus</i> (Norman, 1868)	50 m	-	
Family CANDIDAE			
<i>Caberea boryi</i> (Audouin, 1826)	20–30 m	-	
Family CELLARIIDAE			
<i>Cellaria salicornioides</i> Lamouroux, 1816	-	-	
Family FLUSTRIDAE			
<i>Chartella</i> ind Gray, 1848	70 m	-	*
Family HIPHALIOSINIDAE			
<i>Hippaliosina depressa</i> (Busk, 1854)	10 m	-	
Family MICROPORIDAE			
<i>Calpensia nobilis</i> (Esper, 1796)	5–50 m	-	
Family MYRIAPORIDAE			
<i>Myriapora truncata</i> (Pallas, 1766)	10–70 m	-	
Family PHIDOLOPORIDAE			
<i>Reteporella couchii</i> (Hincks, 1878)	25 m	-	
<i>Reteporella grimaldii</i> (Jullien, 1903)	20 m	-	
<i>Schizoretopena serratimargo</i> (Hincks, 1886)	10–25 m	-	
Family SCHIZOPORELLIDAE			
<i>Schizobrachiella sanguinea</i> (Norman, 1868)	10 m	-	
Order CTENOSTOMATIDA			

Table 1. Cont.

Taxa	Depth	Phenology	New Record
Family MIMOSELLIDAE			
<i>Mimosella gracilis</i> Hincks, 1851	15 m	-	
Family VESICULARIIDAE			
<i>Amathia semiconvoluta</i> Lamouroux, 1824	-	-	
Family WALKERIIDAE			
<i>Walkeria</i> ind Fleming, 1823	30 m	-	
Class STENOLAEMATA			
Order CYCLOSTOMATIDA			
Family FRONDIPORIDAE			
<i>Fron dipora verrucosa</i> (Lamouroux, 1821)	60 m	-	
Phylum BRACHIOPODA			
Class RHYNCHONELLATA			
Order TEREBRATULIDA			
Family MEGATHYRIDIDAE			
<i>Argyrotheca cuneata</i> (Risso, 1826)	70 m	-	

4. Discussion

Biodiversity is currently a central theme of global environmental policies and conservation strategies (e.g., EU's Marine Strategy Framework Directive). However, a sound understanding of biodiversity should be considered at the foundation of any conservation policy. Despite that, our 18-month study showed that the knowledge of Mediterranean biodiversity can still be significantly improved.

This study provides the first species inventory (marine organisms and coastal flora) of the southeastern Salento coastal area and enriches the current basic knowledge information on the biodiversity of the Ionian and the central Mediterranean Sea. Overall, 696 taxa were identified, among which Mollusca, Porifera and Chordata were the most represented, accounting for more than half of the full species inventory. Despite that, the groups with the highest percentages of new records were Polycladida (Platyhelminthes), Nemertea, and Thaliacea, with the relative percentage of new records of 80%, 50% and 33%, respectively.

For some groups, these results reflect the knowledge gaps in their taxonomy and ecology. Some taxa are poorly studied and lack Mediterranean experts, leading to inaccurate estimates of species occurrence. Moreover, the scientific community nowadays tends to overlook descriptive research and biodiversity records [63]. For example, for polyclad platyhelminths and nemerteans, reference monographs for the Mediterranean Sea date back to the end of the 19th century, when they were studied in the Gulf of Naples [64,65]. Similarly, for the phylum Ctenophora, most of the records from Italy come from the Gulf of Naples and the Strait of Messina, the latter being the only location where most ctenophores have been reported in the Ionian Sea (Figure 6b) [66]. Some groups, like anthozoans, have been poorly surveyed in the Ionian Sea, which explains why one tenth of the species found by this study represented new records for the area [67]. For other groups (i.e., Heterobranchia and Porifera), the high proportion of new records and new species (sponges) likely reflects the lack of expert work in the area and the difficulty of taxonomic identification (for an in-depth discussion on these two groups, see [30,33]).

Comparing our species inventory with other works in the central and eastern Mediterranean Sea, the results vary by taxonomic group. However, species inventories at a very small spatial scale, such as ours, are rare, so comparisons are made with caution. Regarding sponges, we reported 112 taxa, while Evcen & Cinar [68] reported 116 taxa of sponges for the whole coast of Turkey, and Voultsiadou et al. [69] reported 81 taxa for the Aegean Sea. The fact that the coastlines of these areas are about two orders of magnitude longer than our study area suggests that the southeastern Salento has a relatively high diversity of sponges, as suggested by Sarà [26]. Regarding hydrozoans, Morri et al. [70] reported 38 taxa for Lebanon, raising the total number of hydrozoans in the Levant Sea to 70.

Morri & Bianchi [71] reported 31 taxa for the Aegean Islands of Kos, raising to 67 the number of hydroids known from the Aegean Sea and nearby areas. Also in this case, considering that these areas are several orders of magnitude larger than southeastern Salento, our finding of 48 taxa represents a relatively high number, suggesting a high diversity in the class Hydrozoa. Regarding anthozoans, Vafidis et al. [72] found 21 taxa belonging to the orders Actiniaria, Corallimorpharja, and Scleractinia in the northern Aegean Sea, while we reported 16 of them, which could be comparable considering the smaller area investigated by our study. Also for molluscs, our species list is comparable to the one realised by Giacobbe & Renda [73] for Capo D'Armi, Sicily. They reported 133 taxa, compared to 144 taxa found in our study. The higher number of our species could be explained by the broader area and depth range of our study. Finally, regarding bony fishes, our list only reports 89 species, while Al-Hassan & El-Silini [74] reported 201 species for the coast of Benghazi, Libya, and Saad [75] reported 224 species for the coast of Syria. These large differences can be related to the larger survey areas in Al-Hassan & El-Silini [74], and to the higher sampling effort focused specifically on this group of organisms.

Comparing our species number with the total number of species in the Mediterranean Sea [7], the groups with a proportionally higher number of species were Anthozoa (19%), Porifera and Echinodermata (16%), Osteichthyes (~14%) and Decapoda (13%) (Table 2). Similarly, compared to the checklist for Italian waters, we recorded 24% of Anthozoa, 22% of Porifera, 20% of Echinodermata and Osteichthyes and 17% of Decapoda. Finally, compared to the checklist of the Italian Ionian Sea, we recorded 78% of Anthozoa, 58% of Porifera, 31% of Echinodermata, 29% of Hydrozoa and 25% of Osteichthyes (Table 2). However, it is important to emphasize that the known distribution for many marine taxa is directly related to the distribution of taxonomists and does not reflect the true distribution of the species [76,77]. Therefore, caution is needed in interpreting the numerical comparisons made in this and the previous paragraph.

Table 2. Comparison of the results of this study with the total number of taxa in the Mediterranean Sea [7], Italian waters [60,61] and Italian Ionian Sea [60,61], for selected taxonomic groups. Numbers represent the number of taxa, while the percentage of taxa found by this study out of the total number of species known for the area is given in brackets. * this figure also includes Chondrichthyes.

	Our Study	Mediterranean Sea	Italian Waters	Italian Ionian Sea
Porifera	112	681 (16%)	509 (22%)	193 (58%)
Gastropoda	107	1564 (7%)	1155 (9%)	763 (14%)
Osteichthyes	89	* 650 (14%)	442 (20%)	351 (25%)
Macrophyte	88	1131 (8%)	949 (9%)	736 (12%)
Hydrozoa	49	457 (11%)	346 (14%)	171 (29%)
Decapoda	49	383 (13%)	293 (17%)	212 (23%)
Annelida	33	1172 (3%)	951 (3%)	577 (6%)
Anthozoa	31	164 (19%)	128 (24%)	40 (78%)
Bivalvia	29	400 (7%)	340 (9%)	227 (13%)
Echinodermata	24	154 (16%)	120 (20%)	77 (31%)

Out of a total of 697 taxa, we reported only 9 NIS. Considering other areas of the Apulia region, this is a considerable low number of NIS [78]. NIS are often opportunistic species that proliferate in heavily impacted ecosystems [79]. The low numbers of NIS we reported in this study may reflect the overall good environmental conditions and lack of major anthropogenic disturbances in the Tricase coastal area.

Our results also depend on sampling methodologies. For instance, we reported only 32 species of annelids, while there are 152 taxa of hard-substrate polychaetes reported in the Otranto channel [36]. This was probably the result of not having performed ad hoc sampling, e.g., [80,81]. Importantly, this work is not intended to be an exhaustive inventory of species in the area, but a baseline. Future in-depth studies on single groups of fauna and flora will be necessary and will likely disclose further diversity of this stretch of coast.

Besides taxonomic groups, the highest proportion of new records was found within the group of gelatinous zooplankton (i.e., scyphozoan and hydrozoan jellyfish, siphonophores, thaliaceans, and ctenophores). Gelatinous plankton is often the dominant macrozooplankton of oceanic systems, and an important component of marine ecosystems, with particular significance for fisheries management and the tourism industry [82,83]. Despite its importance, gelatinous plankton remains one of the less studied and understood marine groups [84]. The reason lies mainly in the difficulty of sampling animals with fragile gelatinous bodies and in their irregular occurrence as adult forms, which makes it difficult to plan sampling campaigns [85,86]. Marine stations, such as the MARE Outpost, offer a significant advantage for the study of these organisms since they allow continuous surveillance of the coastal area and easy sampling by SCUBA and free diving. In addition, citizen science could also offer substantial help in the study of gelatinous plankton, as it can enable monitoring programs on large geographic and temporal scales, while increasing biodiversity awareness among the general public, e.g., [86–91].

Other taxonomic groups appeared to be relatively well studied, with no new records despite the high number of taxa reported. Among these, we found fishes (Osteichthyes), macroalgae, shelled molluscs, decapods (Crustacea), and echinoderms. Fishes are particularly well studied in the Mediterranean Sea, also because of their commercial interest [7,92]. Shelled molluscs are well-known partly due to contributions from amateur shell collectors, who far outnumber professional researchers [93].

Increased knowledge of species distribution and phenology is critical to understand the effects of climate change and human actions on ecosystems and assessing good environmental status, as required by the Marine Strategy Framework Directive. Therefore, long-term biodiversity monitoring and observation are needed to improve our knowledge of biodiversity changes. There is also a need for new taxonomists who can identify and research marine organisms [94]. Inspired by the seminal work of Salvatore Lo Bianco [95] in the Gulf of Naples, this work is an important addition to local and regional biodiversity knowledge and a baseline for future biodiversity monitoring in the Ionian and Mediterranean Sea.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/d14110904/s1>, Table S1: Complete list of marine species and coastal plants found during the project Biodiversity MARE Tricase with the indication of the depth or depth range at which the taxa were recorded, the number of specimens sampled and recorded, phenology, whether the taxa is a non-indigenous species, whether the taxa is a new record for the area, and the reference for records already published in previous publications by the same authors [30,33]; Table S2: Complete list of marine specimens recorded and identified during the project Biodiversity MARE Tricase with relative metadata and notes.

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