

## Mediterranean Marine Science

Vol 6, No 1 (2005)



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doi: [10.12681/mms.193](https://doi.org/10.12681/mms.193)

#### To cite this article:

SURUGIU, V. (2005). Inventory of inshore Polychaetes from the Romanian coast (Black Sea). *Mediterranean Marine Science*, 6(1), 51-74. <https://doi.org/10.12681/mms.193>

## **Inventory of inshore polychaetes from the romanian coast (Black Sea)**

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### **Abstract**

*A survey conducted in inshore waters along the Romanian coast of the Black Sea from 1994 to 2000, yielded 24 polychaete species belonging to 10 families as follows: Polynoidae (2), Phyllodocidae (2), Syllidae (3), Nereididae (5), Spionidae (5), Capitellidae (3), Nerillidae (1), Sabellidae (1), Serpulidae (1), and Spirorbidae (1). Polydora websteri (Hartman, 1943) is a new record for the Mediterranean and Black Sea region. P. cornuta (Bose, 1802) is first recorded in the Black Sea. Additionally, two other species, namely Harmothoe imbricata (Linnaeus, 1767) and Typosyllis hyalina (Grube, 1863), are new to the Romanian fauna. The systematic position of some species is discussed. The information on geographical distribution within the Mediterranean region of species found is also provided.*

**Keywords:** Annelida; Polychaeta; Black Sea; Romanian coast; Inventory.

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### **Introduction**

Despite the fact that from a bionomical point of view the polychaete fauna of the Romanian coast of the Black Sea is relatively well documented (Borcea, 1926a, 1926b, 1928, 1931a, 1934a; Băcescu *et al.*, 1957, 1963, 1965a, 1965b, 1965c, 1967a, 1967b, 1971; Dumitrescu, 1957, 1962, 1963, 1973; Manoleli, 1967, 1969, 1973, 1980; Țigănuș, 1986, 1988, 1992), information on the taxonomic problems of this group was provided for very few species (Dumitrescu, 1957; Codreanu & Mack-Firă, 1961; Surugiu, 2000a). The lack of thorough

systematic papers on polychaetes of the Black Sea gave rise to much confusion in the literature, some species being cited under wrong or old names.

In addition, during the last three decades the zoobenthic communities of the Romanian Black Sea coast have been influenced by major anthropogenic stress, such as an increasing level of pollution and eutrophication and sediment disturbance.

The purposes of the present study, which is part of a doctoral thesis (SURUGIU, 2002), are: (1) to provide information on composition and distribution of the polychaete fauna from

the Romanian coast and (2) to elucidate the problematic taxonomic status of some species.

### Materials and Methods

The material was collected between 1994 and 2000, from 79 stations, at 15 localities situated along the Romanian coast of the Black Sea (Fig. 1). Information on the sampling stations, such as locality, collecting date, coordinates, depth, types of substrate are listed in Table 1.

In the littoral zone samples were collected by hand. The sublittoral samples, at depths from 0.5 m to 18.5 m, were obtained by taking chunks of the substrate (pieces of rock, seaweed tufts, colonies of mussels, soft sediments, etc.) by free and SCUBA diving.

Samples were screened through a 0.5 mm sieve and polychaetes retained were fixed in 10% formalin and preserved in 70% ethanol.

For the preliminary identifications the keys provided by Vinogradov & Losovskaya (1968) and Marinov (1977) have been used. Specification of the systematic status has been carried out, as far as possible, by means of recent revisions on major polychaete families (e.g. Barnich & Fiege, 2003; Pleijel & Dales, 1991; Licher, 1999; Blake, 1996; Fitzhugh, 1990, ten Hove & Weerdenburg, 1978, Rzhavsky, 1991 etc.). The taxonomic layout is based largely on systematization presented in Fauchald & Rouse (1997) and Rouse & Fauchald (1995, 1997, 1998).

For each species, selected synonyms with reference to the corresponding literature and

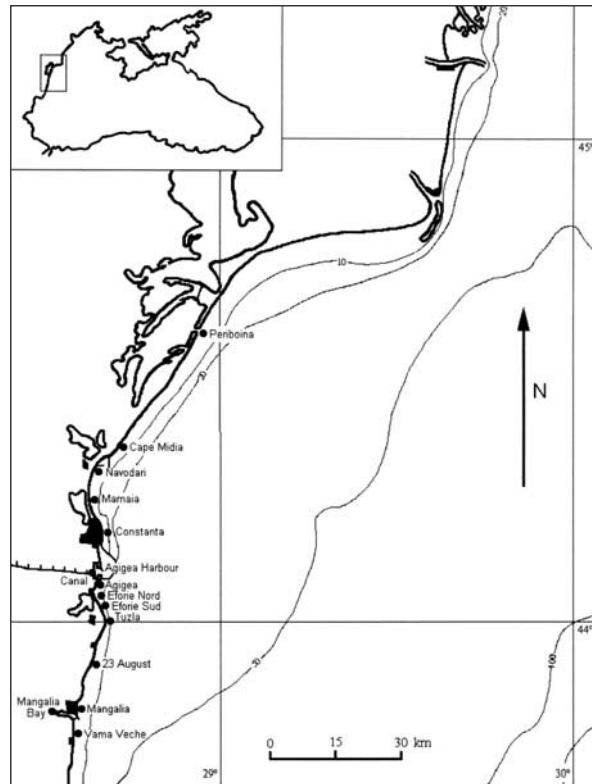


Fig. 1: Map of the Romanian littoral showing sampling stations.

**Table 1**  
**List of stations.**

Station	Locality	Date	Latitude	Longitude	Depth	Substrate
1	Agigea	13-08-1994	44°04'56.2" N	28°38'29.1" E	0.5	rock
2	Agigea harbour	16-08-1994	44°05'52.8" N	28°38'31.0" E	0.5	muddy rock
3	Agigea	19-08-1994	44°05'18.0" N	28°41'00.0" E	18	mud
4	Agigea	20-08-1994	44°05'09.0" N	28°39'40.0" E	10	rock
5	Canal	17-12-1994	44°06'01.6" N	28°38'09.1" E	0.2	mud
6	Periboina	28-09-1995	44°38'51.6" N	28°57'51.4" E	3	fine sand
7	Periboina	28-09-1995	44°37'41.8" N	28°56'45.5" E	3	fine sand
8	Periboina	28-09-1995	44°36'28.5" N	28°56'02.0" E	3	fine sand
9	Periboina	28-09-1995	44°35'28.1" N	28°55'13.3" E	3	fine sand
10	Periboina	28-09-1995	44°34'03.9" N	28°54'16.0" E	3	fine sand
11	Agigea	24-05-1997	44°04'56.0" N	28°38'28.8" E	0	rock + algal detritus
12	Agigea	03-06-1997	44°04'56.2" N	28°38'29.1" E	1	rock
13	Vama Veche	06-06-1997	43°45'03.7" N	28°34'40.8" E	0.5	rock
14	Agigea	13-06-1997	44°04'56.2" N	28°38'29.1" E	1	rock
15	Agigea	26-06-1997	44°04'56.0" N	28°38'28.8" E	0	rock
16	Agigea	27-06-1997	44°04'56.2" N	28°38'29.1" E	1	sandy clayrock
17	Agigea	30-06-1997	44°04'56.2" N	28°38'29.1" E	1.5	rock
18	Agigea	02-07-1997	44°04'56.2" N	28°38'29.1" E	1.2	rock
19	Agigea	30-07-1997	44°04'56.0" N	28°38'28.8" E	0	rock
20	Agigea	01-08-1997	44°04'57.4" N	28°38'36.3" E	3.5	sandy clayrock
21	Agigea	01-08-1997	44°04'57.4" N	28°38'36.3" E	3.5	sand
22	Eforie Nord	01-08-1997	44°03'49.8" N	28°38'42.0" E	5	rock
23	Eforie Nord	01-08-1997	44°03'49.8" N	28°38'42.0" E	5	sand
24	Eforie Nord	05-08-1997	44°03'15.2" N	28°38'38.8" E	4	rock
25	Eforie Sud	05-08-1997	44°02'37.9" N	28°38'59.4" E	3	sand
26	Eforie Sud	05-08-1997	44°01'37.4" N	28°39'43.5" E	4.5	rock
27	Tuzla	05-08-1997	44°00'32.2" N	28°40'12.0" E	3	rock
28	Cape Midia	07-08-1997	44°21'07.8" N	28°41'42.9" E	0.5	black mud
M1	Mangalia Bay	09-08-1997	43°48'48.4" N	28°31'06.4" E	0.2	muddy rock
29	Agigea	25-08-1997	44°04'56.2" N	28°38'29.1" E	0.5	rock
30	Eforie Nord	26-09-1997	44°03'57.5" N	28°38'44.6" E	5	sand
31	Eforie Nord	26-09-1997	44°03'23.2" N	28°39'13.1" E	8	sand
32	Eforie Sud	26-09-1997	44°02'38.4" N	28°39'35.1" E	8	muddy rock
33	Eforie Sud	26-09-1997	44°01'48.4" N	28°40'29.5" E	16	mud
34	Tuzla	26-09-1997	44°00'30.3" N	28°40'42.8" E	8	rock
35	Agigea	27-09-1997	44°05'06.3" N	28°39'27.7" E	6	rock
36	Agigea	24-06-1998	44°04'56.0" N	28°38'28.8" E	0	rock
37	Agigea	25-06-1998	44°05'09.3" N	28°39'23.0" E	10	rock
38	Eforie Nord	25-06-1998	44°03'51.6" N	28°38'53.4" E	8	sand

(continued)

**Table 1**  
(continued)

Station	Locality	Date	Latitude	Longitude	Depth	Substrate
39	Eforie Nord	25-06-1998	44°03'23.6" N	28°39'12.1" E	10	sand
40	Eforie Sud	25-06-1998	44°02'36.6" N	28°39'33.3" E	10	rock
41	Eforie Sud	25-06-1998	44°01'45.3" N	28°40'21.6" E	18.5	mud
42	Tuzla	25-06-1998	44°00'31.7" N	28°40'18.5" E	6	rock
43	Năvodari	26-06-1998	44°18'51.7" N	28°37'58.8" E	0	fine sand
44	Năvodari	26-06-1998	44°18'51.7" N	28°38'09.0" E	2	fine sand
45	Năvodari	26-06-1998	44°18'51.7" N	28°38'48.0" E	3	fine sand
46	Agigea	25-07-1998	44°04'56.0" N	28°38'28.8" E	0	coarse sand
47	Eforie Nord	19-08-1998	44°03'51.6" N	28°38'53.4" E	8	sand
48	Agigea	23-08-1998	44°04'56.0" N	28°38'28.8" E	0	coarse sand
49	Agigea	23-08-1998	44°05'18.0" N	28°41'00.0" E	17	mud
50	23 August	24-08-1998	43°55'23.2" N	28°38'08.8" E	4	rock
51	Eforie Nord	28-08-1998	44°03'22.0" N	28°38'53.4" E	6	sand
52	Eforie Sud	28-08-1998	44°02'49.1" N	28°39'11.3" E	9	rock
53	Eforie Sud	28-08-1998	44°01'47.3" N	28°39'46.0" E	5	rock
54	Eforie Sud	28-08-1998	44°01'47.3" N	28°39'46.0" E	5	algae
55	Tuzla	28-08-1998	44°00'47.9" N	28°40'41.1" E	8	rock
56	Agigea	29-08-1998	44°05'14.9" N	28°39'26.1" E	7	rock
57	Năvodari	31-08-1998	44°18'51.7" N	28°37'58.8" E	2.5	fine sand
58	Mamaia	31-08-1998	44°15'31.9" N	28°37'22.4" E	2.5	fine sand
59	Constanța	31-08-1998	44°10'55.6" N	28°39'29.0" E	4	sand
60	Agigea	01-09-1998	44°04'56.2" N	28°38'29.1" E	0	rock
61	Agigea	23-09-1998	44°04'46.9" N	28°38'24.0" E	0	coarse sand
62	Agigea	30-10-1998	44°04'46.9" N	28°38'24.0" E	0	coarse sand
63	Constanța	27-07-1999	44°10'45.0" N	28°39'31.0" E	0.7	sand
64	Tuzla	28-07-1999	43°59'30.0" N	28°40'06.0" E	0	rock
65	Agigea	05-08-1999	44°04'56.2" N	28°38'29.1" E	1	rock
M2	Mangalia Bay	07-08-1999	43°48'48.4" N	28°31'06.4" E	0.5	muddy rock
66	Canal	09-08-1999	44°05'61.6" N	28°38'09.1" E	3	muddy rock
67	Agigea harbour	09-08-1999	44°05'52.0" N	28°38'31.0" E	2	muddy rock
68	Mangalia	10-08-1999	43°49'15.9" N	28°35'20.6" E	0.3	rock
69	Vama Veche	10-08-1999	43°45'54.0" N	28°35'00.8" E	5	rock
70	Năvodari	12-08-1999	44°18'53.7" N	28°38'01.5" E	0.5	fine sand
71	Mamaia	12-08-1999	44°17'17.7" N	28°37'22.7" E	0	fine sand
72	Eforie Sud	13-08-1999	44°01'45.6" N	28°39'32.0" E	0.5	rock
M3	Mangalia Bay	23-04-2000	43°48'24.5" N	28°31'54.9" E	0.4	muddy rock
M4	Mangalia Bay	23-04-2000	43°48'47.6" N	28°31'07.9" E	0.5	mud
M5	Mangalia Bay	23-04-2000	43°48'45.1" N	28°31'32.7" E	0.1	muddy rock
73	Agigea	13-06-2000	44°04'56.2" N	28°38'29.1" E	0.5	limestone
74	Agigea harbour	16-09-2000	44°05'52.0" N	28°38'31.0" E	0.5	ship hull

figures are included. Additionally, the total number of individuals collected, followed by the locality name, the station number, number of specimens per station (in parenthesis), depth and substrate type are given. Geographical distribution within the Mediterranean region is also provided based on the records found in the relevant literature available. Remarks commenting on the taxonomic status of species are also included. The specimens are deposited in the Senckenberg Museum Frankfurt.

## Results

Examination of 15,474 individuals collected during this study permitted us to identify only 24 species of the total of 81 polychaete species

which have been reported in the Romanian Black Sea and Danube by different authors (Table 2). This small number of species found, compared to other studies in the same region, is probably due essentially to the sampling method of collecting a small amount of sediment or substrate by hand and to the fact that our research was carried at depth of less than 20 m. Taking into account the polychaete species which inhabit the depth below 20 m, this number will be greater, but will still remain smaller than some 30 years ago. Also it is related to the type of habitat sampled mostly belonging to the upper sublittoral zone and finally to the man-made impact which has increased compared to some 30 years ago (SURUGIU, 2002b).

**Table 2**  
**Check list of polychaete species reported from the Romanian coast.**

<p><b>Scolecida</b></p> <p><b>Arenicolidae Johnston, 1835</b> <i>Arenicola marina</i> (Linnaeus, 1758) <i>Arenicolides branchialis</i> (Audouin &amp; M.-Edwards, 1833)</p> <p><b>Capitellidae Grube, 1862</b> <i>Capitella capitata</i> (Fabricius, 1780) <i>Capitella minima</i> Langerhans, 1880 <i>Heteromastus filiformis</i> (Claparède, 1864) <i>Notomastus profundus</i> Eisig, 1887</p> <p><b>Maldanidae Malmgren, 1867</b> <i>Leiochone clypeata</i> Saint-Joseph, 1894</p> <p><b>Opheliidae Malmgren, 1867</b> <i>Ophelia bicornis</i> Savigny, 1818 <i>Ophelia limacina</i> (Rathke, 1843)</p> <p><b>Paraonidae Cerruti, 1909a</b> <i>Aricidea claudiae</i> Laubier, 1967</p> <p><b>Palpata, Aciculata, Phyllodocida, Nereidiformia</b></p> <p><b>Aphroditoidea Malmgren, 1867</b> <i>Harmothoe extenuata</i> (Grube, 1840) <i>Harmothoe imbricata</i> (Linnaeus, 1767) <i>Harmothoe impar</i> (Johnston, 1839)</p> <p><b>Pholoidae Kinberg, 1858</b> <i>Pholoe synophthalmica</i> Claparède, 1868</p>	<p><b>Sigalionidae Kinberg, 1856</b> <i>Sthenelais boa</i> (Johnston, 1833)</p> <p><b>Pisionidae Ehlers, 1901</b> <i>Pisione remota</i> (Southern, 1914)</p> <p><b>Palpata, Aciculata, Phyllodocida, Nereidiformia</b></p> <p><b>Nereididae Johnston, 1865</b> <i>Namanereis littoralis</i> (Grube, 1872) <i>Nereis zonata</i> Malmgren, 1867 <i>Hediste diversicolor</i> (O.F. Müller, 1776) <i>Neanthes succinea</i> (Frey &amp; Leuckart, 1847) <i>Perinereis cultrifera</i> (Grube, 1840) <i>Platynereis dumerilii</i> (Audouin &amp; M.-Edwards, 1833)</p> <p><b>Syllidae Grube, 1850</b> <i>Syllis gracilis</i> Grube, 1840 <i>Typosyllis hyalina</i> (Grube, 1863) <i>Syllides longocirratu</i>s (Oersted, 1845) <i>Trypanosyllis zebra</i> (Grube, 1860) <i>Pseudobrania clavata</i> (Claparède, 1863) <i>Exogone naidina</i> Oersted, 1845 <i>Sphaerosyllis bulbosa</i> Southern, 1914</p> <p><b>Nereidiformia incertae sedis</b> <i>Microphthalmus fragilis</i> Bobretzky, 1870 <i>Microphthalmus szcelkowiei</i> Meczniow, 1865 <i>Microphthalmus similis</i> Bobretzky, 1870</p>
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(continued)

Table 2  
(continued)

<p><b>Palpata, Aciculata, Phyllococida unplaced</b></p> <p><b>Glyceriformia Fauchald, 1977</b>  <i>Glycera alba</i> (O.F. Müller, 1776)  <i>Glycera tridactyla</i> Schmarda, 1861</p> <p><b>Nephtyidae Grube, 1850</b>  <i>Nephtys cirrosa</i> Ehlers, 1868  <i>Nephtys hombergii</i> Savigny, 1818  <i>Micronephthys stammeri</i> (Augener, 1932)</p> <p><b>Phyllococidae Öersted, 1843a</b>  <i>Phyllococe maculata</i> (Linnaeus, 1767)  <i>Nereiphylla paretii</i> Blainville, 1828  <i>Nereiphylla rubiginosa</i> (Saint-Joseph, 1888)  <i>Eteone picta</i> Quatrefages, 1865  <i>Eumida sanguinea</i> (Oersted, 1843)  <i>Pterocirrus macroceros</i> (Grube, 1860)</p> <p><b>Palpata, Aciculata, Eunicida</b></p> <p><b>Dorvilleidae Chamberlin, 1919</b>  <i>Protodorvillea kefersteini</i> (McIntosh, 1869)</p> <p><b>Palpata, Aciculata unplaced</b></p> <p><b>Nerillidae Levinsen, 1883</b>  <i>Nerilla antennata</i> O. Schmidt, 1848</p> <p><b>Palpata, Canalipalpata, Sabellida</b></p> <p><b>Sabellariidae Johnston, 1865</b>  <i>Sabellaria taurica</i> (Rathke, 1837)</p> <p><b>Sabellidae Malmgren, 1867</b>  <i>Fabricia stellaris</i> (Müller, 1774)  <i>Manayunkia caspica</i> Annenkova, 1929  <i>Oriopsis armandi</i> (Claparède, 1864)</p> <p><b>Serpulidae Johnston, 1865</b>  <i>Ficopomatus enigmaticus</i> (Fauvel, 1923)  <i>Janua pagenstecheri</i> (Quatrefages, 1865)  <i>Pileolaria militaris</i> (Claparède, 1868)  <i>Pomatoceros triqueter</i> (Linnaeus, 1767)  <i>Serpula vermicularis</i> Linnaeus, 1767  <i>Vermiliopsis infundibulum</i> (Philippi, 1844)</p> <p><b>Palpata, Canalipalpata, Terebellida, Cirratuliformia</b></p> <p><b>Ctenodrilidae Kennel, 1882</b>  <i>Ctenodrilus serratus</i> (Schmidt, 1857)</p>	<p><b>Palpata, Canalipalpata, Terebellida, Terebelliformia</b></p> <p><b>Ampharetidae Malmgren, 1867</b>  <i>Hypania invalida</i> (Grube, 1860)  <i>Hypaniola kowalewskii</i> (Grimm, 1877)  <i>Melinna palmata</i> Grube, 1870</p> <p><b>Pectinariidae Quatrefages, 1865</b>  <i>Pectinaria koreni</i> (Malmgren, 1866)</p> <p><b>Terebellidae Grube, 1850</b>  <i>Polycirrus jubatus</i> Bobretzky in Annenklova, 1924  <i>Terebellides stroemii</i> M. Sars, 1835</p> <p><b>Palpata, Canalipalpata, Spionida</b></p> <p><b>Magelona Müller, 1858</b>  <i>Magelona mirabilis</i> (Johnston, 1865)  <i>Magelona minuta</i> Eliasson, 1907</p> <p><b>Spionidae Grube, 1850</b>  <i>Aonides oxycephala</i> (M. Sars, 1872)  <i>Aonides paucibranchiata</i> Southern, 1914  <i>Malacocerus tetracerus</i> (Schmarda, 1861)  <i>Polydora ciliata</i> (Johnston, 1838)  <i>Polydora cornuta</i> Bosc, 1802  <i>Polydora limicola</i> Annenkova, 1934  <i>Polydora websteri</i> Hartman, 1943  <i>Prionospio steenstrupi</i> Malmgren, 1867  <i>Prionospio cirrifer</i> Wirén, 1883  <i>Pygospio elegans</i> Claparède, 1863  <i>Scolecopsis cirratulus</i> (Delle Chiaje, 1828)  <i>Pseudomalacoceros cantabra</i> (Rioja, 1918)  <i>Spio decoratus</i> Bobretzky, 1871  <i>Streblospio benedicti</i> Webster, 1879</p> <p><b>Palpata, Canalipalpata unplaced</b></p> <p><b>Polygordiidae Czerniavsky, 1881a</b>  <i>Polygordius neapolitanus</i> Fraipont, 1882</p> <p><b>Protodrilida Pettibone, 1982</b>  <i>Protodrilus flavocapitatus</i> (Uljanin, 1877)  <i>Saccocirrus papillocerus</i> Bobretzky, 1871</p>
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## Scolecida Capitellidae Grube, 1862

### 1. *Capitella capitata* (Fabricius, 1780)

*Capitella capitata*.—Uschakov, 1955: 328, fig. 121, C.D.—Marinov, 1977: 184-185, pl. XXVI, fig. 2.—Vinogradov & Losovskaya, 1968: 312, pl. XVII, fig. 1.—Manoleli, 1995: 190, fig. 25.29.—Hartmann-Schröder, 1996: 436-438, fig. 214.  
*Capitella capitata capitata*.—Warren, 1976: 198-201.

*Material examined*.—49 ind.: Năvodari, sta. 57(1), Mamaia, sta. 58(1), Agigea, sta. 12(1), Eforie Nord, sta. 30(13), Eforie Sud, sta. 26(2), 53(11), 72(1), Vama Veche, sta. 69(19), 0.5-5 m, sandy and hard substrata.

*Distribution* – A cosmopolitan species (Warren, 1976), reported on the Pacific coast of America, Gulf of Mexico (Hartman, 1951), Far Eastern seas (Uschakov, 1955), Atlantic, North Sea (Hartmann-Schröder, 1996), Western Mediterranean (Pérès, 1954; Bellan, 1964; Castelli *et al.*, 1995), Eastern Mediterranean (Fauvel, 1937), Adriatic Sea (Pozar-Domac, 1978), Aegean Sea (Arvanitidis, 2000, Simboura & Nicolaidou, 2001), Marmara Sea (Gillet & Ünsal, 2000), Bosphorus (La Greca, 1949; Rullier, 1963; Gillet & Ünsal, 2000), Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea recorded throughout: Prebosphoric region (Gillet & Ünsal, 2000), Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Bobretzky, 1870; Jakubova, 1930), north-western part of the Black Sea (Losovskaya, 1956, 1977, 1978; Vinogradov & Losovskaya, 1963), Romanian (Băcescu *et al.*, 1957, 1965a, 1967a; Dumitrescu, 1963, 1973; Manoleli, 1967; Tigănuș, 1982, 1986; Manoleli & Surugiu, 1998/1999) and Bulgarian coasts (Marinov, 1957a, 1963).

### 2. *Capitella minima* Langerhans, 1880

*Capitomastus minimus*.—Băcescu *et al.*, 1957: 336, fig. 9, B.—Marinov, 1977: 185, pl. XXVI, fig. 4.—Vinogradov & Losovskaya, 1968: 312, pl. VII, fig. 3.  
*Capitella minima*.—Hartmann-Schröder, 1996: 439-441, fig. 216.

*Material examined*.—595 ind.: Periboina, sta. 6(5), 7(54), 8(4), 9(17), 10(48), Năvodari, sta. 57(9), 70(3), Mamaia, sta. 58(7), Agigea, sta. 37(7), 65(1), Eforie Nord, sta. 31(54), 38(25), 39(37), 47(186), 51(7), Eforie Sud, sta. 25(4), 26(7), 32(1), 33(51), 40(3), 41(25), 52(4), 53(16), Tuzla, sta. 42(2), 55(1), 23 August, sta. 50(14), Mangalia, sta. 68(3), 0.3-18.5 m, hard, sandy and muddy substrata.

*Distribution* – North-eastern Atlantic, North Sea (Hartmann-Schröder, 1996), Western Mediterranean (Bellan, 1964, Castelli *et al.*, 1995), Aegean Sea (Arvanitidis, 2000, Simboura & Nicolaidou, 2001), Bosphorus (Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960), Red Sea.

In the Black Sea recorded on the Georgian coast (Komakhidze & Mazmanidi, 1998), Bay of Sevastopol (Jakubova, 1930), north-western part of the Black Sea (Vinogradov & Losovskaya, 1963; Losovskaya, 1978), Romanian (Băcescu *et al.*, 1957, 1963, 1965a, 1965b, 1965c, 1967a, 1967b; Gomoiu & Müller, 1962; Băcescu, 1963; Dumitrescu, 1963, 1973; Manoleli, 1967, 1969; Tigănuș, 1991/1992; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Marinov, 1957a).

### 3. *Heteromastus filiformis* (Claparède, 1864)

?*Capitella multioculata* Perejaslavzeva, 1891: 25.  
*Heteromastus filiformis*.—Vinogradov, 1931: 18-19, fig. 9.—Uschakov, 1955: 327, fig. 121, E.—Marinov, 1977: 183-184, pl. XXVI, fig. 3.—Vinogradov & Losovskaya, 1968: 311, pl. XVI, fig. 6.—Hartmann-Schröder, 1996: 441-443, fig. 217.

*Material examined*.—76 ind.: Agigea, sta. 37(1), 56(1), Eforie Nord, sta. 31(2), 39(1), 47(3), Eforie Sud, sta. 40(34), 41(22), 52(2), Tuzla, sta. 34(9), Vama Veche, sta. 69(1), 7-18.5 m, hard, sandy and muddy substrata.

*Distribution* – Cosmopolitan species (Hartmann-Schröder, 1996), occurring on Atlantic and Pacific coasts of North America, Gulf of Mexico (Hartman, 1951), Far Eastern seas (Uschakov, 1955), North Sea (Hartmann-Schröder, 1996), English Channel, Western Mediterranean (Bellan, 1964, Castelli *et al.*, 1995), Eastern Mediterranean (Fauvel, 1937), Aegean Sea (Arvanitidis, 2000, Simboura & Nicolaidou, 2001), Marmara Sea (Rullier,



1963; Gillet & Ünsal, 2000), Sea of Azov (Mordukhai-Boltovskoi, 1960).

Known in the Black Sea from: Prebosphoric region (Dumitrescu, 1960; Rullier, 1963), Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1930, 1931, 1949), Bay of Sevastopol (Jakubova, 1930), north-western part of the Black Sea (Losovskaya, 1956, 1978, 1988; Vinogradov & Losovskaya, 1963), Romanian (Dumitrescu, 1957, 1963, 1973; Băcescu *et al.*, 1957, 1965a, 1965b, 1965c, 1967a; Manoleli, 1967; Surugiu & Manoleli, 1998/1999) and Bulgarian coast (Marinov, 1957a).

*Remarks* – Perejaslavzeva (1891) described the species *Capitella multioculata* from the Bay of Sevastopol. Vinogradov (1949), and later Marinov (1977), assigned this record to *Heteromastus filiformis* without examining the material identified by Perejaslavzeva. However, the original description of Perejaslavzeva is very brief and incomplete and does not permit even a generic assignment and type material is probably lost. Consequently, *Capitella multioculata* must be left as a nomen dubium.

**Palpata, Aciculata, Phyllococida,  
Aphroditiformia  
Aphroditoidea Malmgren, 1867**

**4. *Harmothoe imbricata*  
(Linnaeus, 1767)**

*Polynoe granulosa*. – Bobretzky, 1870: 192 [partim].

*Polynoe incerta*. – Bobretzky, 1881: 5-7, fig. 1.

?*Harmothoe imbricata incerta* La Greca, 1949: 156.

*Harmothoe imbricata*. – Uschakov, 1955: 154, fig. 38, A-E. – Vinogradov & Losovskaya, 1968: 264, pl. III, fig. 1. – Marinov, 1977: 72, pl. VI, fig. 2. – Hartmann-Schröder, 1996: 46-48, fig. 12. – Chambers & Muir, 1997: 104-105, fig. 26. – Barnich & Fiege, 2000: 1899-1900, fig. 5; 2003: 47-48, fig. 22A-D.

*Material examined*. – 2 ind.: Agigea, sta. 56(1), Vama Veche, sta. 69(1), 5-7 m, on hard substrate among mussels' byssuses.

*Distribution* – A widely distributed arctic-boreal species (Hartmann-Schröder, 1996), known in the Pacific Ocean (Uschakov, 1955), Arctic seas, north-western European coasts (Rasmussen, 1973; Hartmann-Schröder, 1996; Chambers & Muir, 1997), Western and Central Mediterranean (Bellan, 1964; Barnich & Fiege, 2000, 2003), Eastern Mediterranean (Fauvel, 1937), Adriatic Sea (Pozar-Domac, 1978; Castelli *et al.*, 1995), Aegean Sea (Barnich & Fiege, 2000; Simboura & Nicolaidou, 2001), Ionian Sea, Amvrakikos gulf (Simboura & Nicolaidou, 2001), Marmara Sea (Rullier, 1963), Bosphorus (La Greca, 1949; Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea this species has been reported on the Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Bobretzky, 1881; Jakubova, 1930), north-western part of the Black Sea (Borcea, 1931; Losovskaya, 1956, 1978, 1988; Vinogradov & Losovskaya, 1963) and *Bulgarian coast* (Marinov, 1964; Müller, 1971). First record on the Romanian coast.

*Remarks* – Specimens from the Bosphorus strait found by La Greca (1949) and designated as *Harmothoe imbricata incerta* differ from *H. imbricata* by lack of macrotubercles and by different pigmentation of the elytra. However, our material presents a row of drop-like pointed macrotubercles near the posterior margin of the elytra.

**5. *Harmothoe impar*  
(Johnston, 1839)**

*Polynoe granulosa*. – Bobretzky, 1870: 189-193, figs. 1-4 [partim].

*Polynoe reticulata*. – Bobretzky, 1881: 3-5.

?*Harmothoe (Polynoe) incesta*. – Borcea, 1931a: 670, 688; 1937: 11.

*Harmothoe reticulata*. – La Greca, 1949: 156-157. – Marinov, 1977: 72-73, pl. VI, fig. 4. – Vinogradov & Losovskaya, 1968: 264, pl. III, fig. 2. – Manoleli, 1995: 183, fig. 25.3 A,B.

*Harmothoe impar*. – Rasmussen, 1973: 63-64. – Hartmann-Schröder, 1996: 48-50, fig. 13. – Chambers & Muir, 1997:

106-107, fig. 27.–Barnich & Fiege, 2000: 1906-1907, fig. 9; 2003: 48-49, fig. 23A-D.

*Material examined.* – 132 ind.: Agigea, sta. 37(12), 49(15), 56(3), Eforie Nord, sta. 24(2), 39(5), Eforie Sud, sta. 32(8), 33(35), 40(14), 41(9), 52(1), 54(3), Tuzla, sta. 34(10), 42(4), 55(5), 23 August, sta. 50(3), Vama Veche, sta. 69(3), 4-18.5 m, in the detritus and mud deposited in the interstices of the mussel colonies.

*Distribution* – Reported in the Barents Sea, British Channel (Chambers & Muir, 1997), North European (Rasmussen, 1973; Hartmann-Schröder, 1996) and African coasts of the Atlantic (Fauvel & Rullier, 1959), Western Mediterranean (Bellan, 1964; Castelli *et al.*, 1995), Eastern Mediterranean (Fauvel, 1937; Barnich & Fiege, 2000, 2003), Aegean Sea (Marinov, 1959b; Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Bosphorus (La Greca, 1949; Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea it is known in the Prebosphoric region (Dumitrescu, 1960), the Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Bobretzky, 1870, 1881; Jakubova, 1930), north-western part of the Black Sea (Losovskaya, 1956, 1978; Vinogradov & Losovskaya, 1963; Vinogradov *et al.*, 1967; Müller, 1968), Romanian (Dumitrescu, 1957, 1963, 1973; Băcescu, 1963; Băcescu *et al.*, 1963, 1965b, 1967a; Manoleli, 1967, 1969, 1973; Manoleli & Nalbant, 1976; Tigănuș, 1986, 1988, 1991/1992; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Borcea, 1937; Marinov, 1957a, 1959a, 1966b).

*Remarks* – Authors working in the Black Sea, with the exception of Bobretzky (1870, 1881), recorded this species under the name of *H. reticulata*. Since Rasmussen (1973) synonymised *H. reticulata* with *H. impar*, it must be referred to as *H. impar*.

According to Barnich & Fiege (2003) due to the confusion of *H. impar* with other species of *Harmothoe* all literature records of these species in the Mediterranean and the North East Atlantic are doubtful.

Borcea (1931a, 1937) have cited the species *Harmothoe (Polynoe) incesta* in the *Phyllophora* fields without giving any taxonomic details. As Vinogradov *et al.* (1967) mentioned that *H. reticulata* from ‘Zernov’s *Phyllophora* field’ matches a homochromic colouration, brownish-red, similar with that of the algae, we tentatively consider specimens referred to *Harmothoe (Polynoe) incesta* to be *H. impar*.

## Palpata, Aciculata, Phyllodocida, Nereidiformia Nereididae Johnston, 1865

### 6. *Nereis zonata* Malmgren, 1867

*Heteronereis bipartita* Bobretzky, 1868: 148-150, fig. 31-36.

*Nereis cylindrata*.–Bobretzky, 1870: 207-210, fig. 31-38.

*Nereis zonata*.–La Greca, 1949: 165-166.–Uschakov, 1955: 212, fig. 66, k.–Dumitrescu, 1957: 122, pl. III, figs. 7-12.–Marinov, 1977: 107-108, pl. XII, fig. 2, pl. XXXVI, fig. 2.–Vinogradov & Losovskaya, 1968: 282-283: pl. VIII, fig. 6.–Manoleli, 1995: 185, fig. 25.8.–Hartmann-Schröder, 1996: 199-200.

*Material examined.* – 25 ind.: Agigea, sta. 14(3), 18(4), 35(2), 49(1), Eforie Nord, sta. 22(2), 24(1), Eforie Sud, sta. 25(1), 40(8), Tuzla, sta. 27(1), 42(1), 23 August, sta. 50(1), 1-17 m, on hard substrate.

*Distribution* – A widespread species occurring in the Persian Gulf, North Pacific (Uschakov, 1955), Barents Sea, Greenland Sea, Norwegian Sea, North Sea, British Channel, North Atlantic waters (Hartmann-Schröder, 1996), Mediterranean (Bellan, 1964), Adriatic Sea (Banse, 1959; Pozar-Domac, 1978), Aegean Sea (Arvanitidis, 2000, Simboura & Nicolaidou, 2001), Bosphorus (La Greca, 1949; Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea it is known on the Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Jakubova, 1930), north-western part (Losovskaya, 1956; Vinogradov & Losovskaya, 1963), Romanian (Dumitrescu, 1957, 1962, 1973; Gomoiu & Müller, 1962; Băcescu *et al.*, 1963; Manoleli, 1967, 1969; Müller *et al.*, 1969; Tigănuș, 1991/1992; Surugiu

& Manoleli, 1998/1999) and Bulgarian coasts (Marinov, 1957a, 1959a).

### 7. *Neanthes succinea* (Frey & Leuckart, 1847)

*Nereis (Neanthes) succinea*.—Annenkova, 1929b: 139.—La Greca, 1949: 166.—Dumitrescu, 1957: 122, pl. II, figs. 7-12.—Marinov, 1977: 111-112, pl. XVI, fig. 2.—Vinogradov & Losovskaya, 1968: 281, pl. VIII, fig. 2.—Hartmann-Schröder, 1996: 207-209, fig. 90.

*Neanthes succinea*.—Rioja, 1946: 205-206, fig. 1, 2.—Manoleli, 1995: 184, fig. 25.7 A, B.

*Material examined*.—3301 ind.: Periboina, sta. 6(14), 7(32), 8(31), 9(56), 10(8), Năvodari, sta. 57(63), 70(1), Mamaia 58(27), 71(1), Constanța, sta. 59(56), Danube – Black Sea Canal, sta. 5(36), 66(90), Agigea harbour, sta. 2(82), 67(348), Agigea, sta. 1(3), 3(17), 4(52), 12(8), 16(3), 18(6), 20(3), 21(14), 35(43), 37(96), 49(13), 56(219), 60(1), 65(92), Eforie Nord, sta. 22(6), 24(5), 31(17), 38(7), 39(19), 47(154), 51(73); Eforie Sud, sta. 32(29), 33(63), 40(174), 41(41), 52(27), 53(89), 72(10), Tuzla, sta. 27(6), 34(158), 42(85), 55(173); 23 August, sta. 50(337); Mangalia, sta. 68(7), Mangalia Bay, sta. M1(1), M2(35), M3(235), M4(97), M5(2), Vama Veche, sta. 69(36), at all depths investigated (0-18.5 m), on all types of substrata, preferably in soft detrital sediments (mud, muddy sand and muddy shell gravel).

*Distribution* – Cosmopolitan species (Hartman, 1951), mostly found in the brackish-water estuaries and lagoons from temperate and subtropical regions, both in boreal and austral hemispheres. It has been reported on the South African coast, El Salvador, Gulf of Mexico (Hartman, 1951), North Sea (Hartmann-Schröder, 1996), Baltic Sea (Rasmussen, 1973), British Channel, Atlantic Ocean (Fauvel & Rullier, 1959), Eastern Mediterranean (Fauvel, 1937), Adriatic Sea (Pozar-Domac, 1978), Aegean Sea (Marinov, 1959b; Arvanitidis, 2000; Simboursa & Nicolaidou, 2001), Bosphorus (La Greca, 1949; Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960; Stark, 1959).

In the Black Sea it is known on the Caucasian coast (Annenkova, 1929b), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Jakubova, 1930), north-western part of the Black Sea (Vinogradov & Losovskaya, 1963; Losovskaya, 1956, 1963, 1978, 1988), Romanian (Dumitrescu, 1957, 1962, 1963,

1973; Băcescu & Dumitrescu, 1958; Gomoiu & Müller, 1962; Băcescu *et al.*, 1965a, 1965b, 1965c, 1967a; Manoleli, 1967, 1980; Müller *et al.*, 1969; Manoleli & Nalbant, 1975; Tigănuș, 1982, 1986, 1988, 1992; Dumitrache, 1996/1997; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Marinov, 1957a, 1959a, 1963).

*Remarks* – Fauvel (1937) and later Arvanitidis (2000) showed that in the Mediterranean under the name *Neanthes succinea*, individuals belonging to *Nereis lamellosa* Ehlers, 1868 have often been reported. The latter species closely resembles the former. As in all specimens collected by us notopodial homogomph falcigers in the posterior parapodia are missing and the pharyngeal area III is formed of a rectangular group of paragnaths disposed in 3-4 rows, they could clearly identified as *Neanthes succinea*.

### 8. *Hediste diversicolor* (O.F. Müller, 1776)

*Nereis falsa*.—Bobretzky, 1870: 210-211, fig. 24-25.

*Nereis (Hediste) diversicolor*.—Bobretzky, 1881: 10-11, fig. 2.

*Nereis diversicolor*.—Dumitrescu, 1957: 122, pl. III, figs. 1-6.—Marinov, 1977: 110-111, pl. XIII, fig. 1.—Vinogradov & Losovskaya, 1968: 282, pl. VIII, fig. 4.

*Hediste diversicolor*.—Manoleli, 1995: 185, fig. 25.9 A,B.—Hartmann-Schröder, 1996: 201-204, fig. 88.

*Material examined*.—74 ind.: Năvodari, sta. 44(11), 45(2), Mamaia, sta. 58(4), Constanța, 59(2), 63(4), Eforie Nord, sta. 47(36), 51(6), Eforie Sud, sta. 25(1), 53(7); Mangalia, sta. 68(1), 0.3-8 m, sandy substrate.

*Distribution* – An amphiboreal species (Hartmann-Schröder, 1996), known in the North Pacific (Hartman, 1960), Scandinavian and British coasts, North Atlantic coasts of Europe (Hartmann-Schröder, 1996) and America, Western Mediterranean (Bellan, 1964), Eastern Mediterranean (Fauvel, 1937), Adriatic Sea (Pozar-Domac, 1978), Aegean Sea (Marinov, 1959b; Arvanitidis, 2000; Simboursa & Nicolaidou, 2001), Bosphorus (La Greca, 1949; Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960); introduced

into the Caspian Sea (Birstein, 1956; Hartman, 1960; Khlebovich, 1963).

In the Black Sea the species inhabits almost all coastal lagoons and bays and penetrates deeply upward into the inferior courses of the rivers. It is known in the Prebosphoric region (Rullier, 1963), Georgian coast (Komakhidze & Mazmanidi, 1998), Santa-Anna and Feodosia Bays (Vinogradov, 1949), Bay of Sevastopol (Bobretzky, 1870, 1881; Jakubova, 1930), in the north-western Black Sea (Losovskaya, 1956, 1963, 1978; Vinogradov & Losovskaya, 1963), Romanian (Borcea, 1924, 1926a, 1926b, 1931a, 1931b, 1934a, 1934b; Băcescu *et al.*, 1957; 1965a, 1965b, 1965c, 1967a; Dumitrescu, 1957, 1963, 1973; Băcescu & Dumitrescu, 1958; Gomoiu & Müller, 1962; Manoleli, 1967, 1980; Müller, 1968; Manoleli & Nalbant, 1975) and Bulgarian coasts (Borcea, 1937; Marinov, 1957a, 1963, 1966b).

#### 9. *Perinereis cultrifera* (Grube, 1840)

*Nereis cultrifera*.—Bobretzky, 1870: 206-207.

*Perinereis cultrifera*.—Dumitrescu, 1957: 122, pl. I, figs. 1-7.—Marinov, 1977: 113, pl. XVI, fig. 1, pl. XXXVII, fig. 1.—Vinogradov & Losovskaya, 1968: 284, pl. IX, fig. 3.—Manoleli, 1995: 184, fig. 25.6.—Hartmann-Schröder, 1996: 211.

*Material examined*.—2 ind.: Vama Veche, sta. 69(2), 5 m, hard substrate.

*Distribution* – Cosmopolitan species (Fauvel & Rullier, 1959), occurring in the Indian Ocean, Burma, Indonesia, Philippines, Pacific Ocean, South Chinese Sea, Yellow Sea, Japanese coasts, North Sea (Hartmann-Schröder, 1996), British Channel, Eastern Atlantic, Western Mediterranean (Pérès, 1954; Bellan, 1964), Eastern Mediterranean (Fauvel, 1937), Adriatic Sea (Pozar-Domac, 1978), Aegean Sea (Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Bosphorus (La Greca, 1949; Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea it is found in the Karadag region (Vinogradov, 1949), Bay of Sevastopol (Jakubova, 1930), north-western part of the sea (Losovskaya, 1956; Vinogradov &

Losovskaya, 1963), Romanian (Borcea, 1926b, 1931a, 1931b; Dumitrescu, 1957, 1973; Gomoiu & Müller, 1962; Băcescu *et al.*, 1963, 1965c; Manoleli, 1967, 1969; Tigănuș, 1991/1992) and Bulgarian coasts (Marinov, 1957a).

#### 10. *Platynereis dumerilii*

(Audouin & Milne-Edwards, 1833)

*Nereis dumerilii*.—Bobretzky, 1870: 201-206, figs. 26-30.

*Platynereis dumerilii*.—Dumitrescu, 1957: 122, pl. II, figs. 1-6.—Marinov, 1977: 114-116, pl. XIV, fig. 1, pl. XXXV, figs. 3-4.—Vinogradov & Losovskaya, 1968: 285, pl. IX, fig. 4.—Manoleli, 1995: 184, fig. 25.5 A,B.—Hartmann-Schröder, 1996: 211-214, fig. 92.

*Material examined*.—445 ind.: Agigea, sta. 11(1), 14(7), 17(6), 18(1), 29(13), 35(27), 37(7), 49(12), 56(9), Eforie Nord, sta. 22(14), 24(6), Eforie Sud, sta. 32(2), 40(30), 41(10), 52(2), 53(30), Tuzla, sta. 27(3), 34(6), 42(20), 55(13), 23 August, sta. 50(215), Vama Veche, sta. 13(9), 69(2), 0-18.5 m, on hard substrate.

*Distribution* – Cosmopolitan species, commonly occurring in the Indian Ocean, Persian Gulf, Red Sea, Pacific Ocean, Sea of Japan, Gulf of Mexico (Hartman, 1951), North and Baltic seas (Hartmann-Schröder, 1996), British Channel, Atlantic waters of Europe (Rasmussen, 1973) and Africa (Fauvel & Rullier, 1959), Western Mediterranean (Bellan, 1964), Eastern Mediterranean (Fauvel, 1937), Adriatic Sea (Banse, 1959; Pozar-Domac, 1978), Aegean Sea (Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Bosphorus (La Greca, 1949; Rullier, 1963).

In the Black Sea this species was recorded in the Prebosphoric region (Rullier, 1963), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Marcusen, 1867; Bobretzky, 1868, 1870; Jakubova, 1930), north-western part of the Black Sea (Losovskaya, 1956, 1978; Vinogradov & Losovskaya, 1963), Romanian (Borcea, 1931a, 1931b, 1934b; Dumitrescu, 1957, 1962, 1963, 1973; Băcescu *et al.*, 1963, 1965a; Manoleli, 1967, 1969; Müller *et al.*, 1969; Tigănuș, 1991/1992; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Marinov, 1957a).

## Syllidae Grube, 1850

### 11. *Syllis gracilis* Grube, 1840

*Syllis mixtosetosa* Bobretzky 1870: 227-229, fig. 49-50.  
*Syllis gracilis*.—Bobretzky, 1881: 14-15.—La Greca, 1949: 162.—Marinov, 1977: 89, pl. IX, fig. 4.—Vinogradov & Losovskaya, 1968: 272: pl. V, fig. 6.—Manoleli, 1995: 185, fig. 25.10.—Hartmann-Schröder, 1996: 150-151, fig. 65; Licher, 1999: 289-291, Abb. 10A.

*Material examined*. — 24 ind.: Eforie Sud, sta. 53(2), Tuzla, sta. 27(2), 23 August, sta. 50(1), Vama Veche, sta. 69(19), 3-5 m, epibiosis of rocks, macrophyte algae and in canals of the sponge *Dysidea fragilis*.

*Distribution* — A cosmopolitan species (Hartmann-Schröder, 1996) recorded in the Indian Ocean, Red Sea (Licher, 1999), Pacific coast of Mexico, British Channel, Atlantic coasts of Europe (Hartmann-Schröder, 1996) and Africa (Fauvel & Rullier, 1959), Mediterranean Sea (Bellan, 1964; Fauvel, 1937), Eastern Mediterranean (Licher, 1999), Adriatic Sea (Banse, 1959; Pozar-Domac, 1978), Aegean and Ionian Seas (Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Bosphorus (La Greca, 1949; Rullier, 1963).

Cited in the Black Sea, on the Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Bobretzky, 1881; Jakubova, 1930), Romanian (Dumitrescu, 1962, 1973; Manoleli, 1969; Tigănuș, 1991/1992) and Bulgarian coasts (Marinov, 1957a, 1963).

### 12. *Typosyllis hyalina* (Grube, 1863)

*Syllis velox* Bobretzky.—1870: 225-227, figs. 46-48.  
*Syllis hyalina*.—Bobretzky, 1881: 13-14.—Marinov, 1977: 91-92, pl. X, fig. 1, pl. XXXV, fig. 2.—Vinogradov & Losovskaya, 1968: 273: pl. VI, fig. 1.  
*Syllis (Typosyllis) hyalina*.—La Greca, 1949: 163.  
*Typosyllis hyalina*.—Hartmann-Schröder, 1996: 153-154, fig. 67; Licher, 1999: 199-205, Abb. 170, 86.

*Material examined*. — 3 ind.: 23 August, sta. 50(3), 4 m, hard substrate.

*Distribution* — A cosmopolitan species (Hartmann-Schröder, 1996; Licher, 1999), reported in the Philippines, Australia, Pacific coast of Mexico, Magellan Strait, Norwegian coasts, British Channel, Atlantic (Hartmann-

Schröder, 1996), Western Mediterranean (Bellan, 1964), Eastern Mediterranean (Fauvel, 1937), Adriatic Sea (Pozar-Domac, 1978), Aegean and Ionian Seas (Marinov, 1959b, Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Bosphorus (La Greca, 1949).

In the Black Sea it is known on the Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Bobretzky, 1870, 1881; Jakubova, 1930) and Bulgarian coast (Marinov, 1966a). First record on the Romanian coast.

### 13. *Grubeosyllis clavata* (Claparède, 1863)

*Grubea clavata*.—Uschakov, 1955: 189, fig. 56, A, B.—La Greca, 1949: 163-164.—Marinov, 1977: 98-99, pl. XI, fig. 1, pl. XXXV, fig. 3.—Vinogradov & Losovskaya, 1968: 277: pl. VII, fig. 5.

*Brania clavata*.—Manoleli, 1995: 185, fig. 25.11.

*Grubeosyllis clavata*.—San Martin, 1991: 718: fig. 2a, b.

*Material examined*. — 1011 ind.: Constanța, sta. 59(2), Agigea, sta. 12(71), 18(129), 29(19), 35(2), 37(8), 56(1), 61(1), 65(200), Eforie Sud, sta. 26(4), 40(1), 41(9), 53(11), 72(46), Tuzla, sta. 27(2), 23 August, sta. 50(177), Mangalia, sta. 68(51), Mangalia Bay, sta. M3(3), Vama Veche, sta. 13(12), 69(262), 0-18.5 m, in thin layer of coarse sand laid down on hard substrate.

*Distribution* — An amphiboreal species, known in the North Pacific (Uschakov, 1955), New England, Antilles, British Channel, Atlantic Ocean, western coast of Africa, Mediterranean (Bellan, 1964), Tyrrhenian Sea, Adriatic Sea (Banse, 1959; Pozar-Domac, 1978), Aegean Sea (Marinov, 1959b; Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Bosphorus (La Greca, 1949; Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea it is reported in the Prebosphoric region (Rullier, 1963), Karadag, Feodosia harbour and Novy Svet Bay (Vinogradov, 1949), north-western sector of the sea (Losovskaya, 1977), Romanian (Dumitrescu, 1957, 1962, 1963, 1973; Gomoiu & Müller, 1962; Băcescu *et al.*, 1963, 1965a; Manoleli, 1967, 1969; Müller *et al.*, 1969; Tigănuș, 1991/1992; Surugiū & Manoleli, 1998/1999) and Bulgarian coasts (Marinov, 1957a, 1959a).

*Remarks* – Two other species of the subfamily have been recorded in the Black Sea: *Grubeosyllis limbata* and *Brania tenuicirrata*. The former differs from the species recorded above in that the terminal blade is a unidentate falciger, while in *G. clavata* it is bidentate. Bellan (1964) has observed that the secondary tooth of chaeta of *G. clavata* can be strongly worn-out as a result of friction with sand grains or even to be missing completely for some setae, in rest being bidentate. However, considerable differences exist between these species, which most probably have to do with their mode of life: *G. limbata* inhabits mostly soft bottoms (sand, muddy sand), whereas *G. clavata* prefers near-shore algal epibiosis. The other species, *B. tenuicirrata*, differs from *G. clavata* by the median position of the pharyngeal tooth and by the dorsal cirri of the first segment, which are much longer than the remaining.

## Palpata, Aciculata, Phyllococida unplaced

### Phyllococidae öersted, 1843a

#### 14. *Nereiphylla rubiginosa* (de Saint-Joseph, 1888)

*Phyllococe tuberculata* Bobretzky, 1868: 150-152, figs. 37-40.–La Greca, 1949: 159, figs. 3-4.–Vinogradov & Losovskaya, 1968: 260, pl. I, fig. 3.

*Phyllococe (Nereiphylla) tuberculata*.–Marinov, 1977: 60-61, pl. IV, fig. 2, pl. XXXIV, fig. 2.

*Nereiphylla rubiginosa*.–Pleijel & Dales, 1991: 76-77, fig. 17A-D.

*Genetyllis tuberculata*.–Manoleli, 1995: 188, fig. 25.20.

*Material examined*. – 5 ind.: Agigea, sta. 14(1), Eforie Nord, sta. 24(1), Eforie Sud, sta. 53(1), Tuzla, sta. 42(1), Vama Veche, sta. 69(1), 1-6 m, among algae and mussel banks.

*Distribution* – British Channel, Atlantic coasts of Europe (Pleijel & Dales, 1991), Western Mediterranean (Bellan, 1964), Adriatic Sea (Pozar-Domac, 1978), Aegean Sea (Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Bosphorus (La Greca, 1949), Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea this species is known in the Prebosphoric region (Dumitrescu, 1960), Karadag (Vinogradov, 1949), Bay of Sevastopol (Bobretzky, 1868; Jakubova, 1930), north-western sector (Losovskaya, 1956, 1978, 1988; Vinogradov & Losovskaya, 1963), Romanian (Borcea, 1926a, 1926b, 1928, 1931a, 1934b; Dumitrescu, 1963, 1973; Băcescu, 1963; Băcescu *et al.*, 1963, 1965a, 1965b; Manoleli, 1967, 1969, 1973, 1976; Müller, 1968, Müller *et al.*, 1969; Tigănuş, 1991/1992; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Borcea, 1937; Marinov, 1957a, 1959a).

*Remarks* – Jakubova (1930) and later La Greca (1949) brought attention to the resemblance between *Ph. tuberculata*, described by Bobretzky in 1868 in the Bay of Sevastopol, and *Phyllococe rubiginosa*, described by Saint-Joseph in 1888 from the North Atlantic. Unfortunately, type material of *Ph. tuberculata* is unavailable and the original description is very brief. Nevertheless, our material is in good agreement with both descriptions of Bobretzky (1868) and Pleijel & Dales (1991). Consequently, *P. tuberculata* should be considered as a synonym of *Nereiphylla rubiginosa*. In order to avoid further nomenclatural changes, Pleijel (pers. comm.) suggests that *P. tuberculata* should be left as a nomen dubium.

#### 15. *Eteone picta* Quatrefages, 1865

*E. striata* Bobretzky 1868: 154-155, fig. 44-46.

*E. armata*.–Bobretzky, 1870: 242.

*Eteone picta*.–Vinogradov & Losovskaya, 1968: 262-263, pl. II, fig. 5.–Pleijel & Dales, 1991: 60-61, fig. 9A-C.

*Eteone (Mysta) picta*.–Marinov, 1977: 65-66, pl. V, fig. 1, pl. XXXIV, fig. 3.–Hartmann-Schröder, 1996: 111.

*Mysta picta*.–Manoleli, 1995: 188, fig. 25.21 A,B.

*Material examined*. – 8 ind.: Agigea, sta. 17(1), 20(1), Eforie Nord, sta. 24(1), 30(1), 47(1), Eforie Sud, sta. 25(3), 1.5-8 m, on sandy, rocky and clay substrata.

*Distribution* – English Channel, European coasts of the Atlantic (Pleijel & Dales, 1991; Hartmann-Schröder, 1996), Western Mediterranean (Pérès, 1954; Bellan, 1964), Aegean Sea and Ionian Seas (Arvanitidis, 2000;

Simboursa & Nicolaidou, 2001), Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea it is known on the Caucasian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Jakubova, 1930), north-western part (Losovskaya, 1956; Vinogradov & Losovskaya, 1963), Romanian (Dumitrescu, 1957, 1963, 1973; Băcescu *et al.*, 1957, 1963, 1965a, 1965c, 1967a; Gomoiu & Müller, 1962; Manoleli, 1967, 1969; Müller *et al.*, 1969; Tigănuș, 1986; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Marinov, 1957a, 1959a).

### **Palpata, Aciculata unplaced Nerillidae Levinsen, 1883**

#### **16. *Nerilla antennata* O. Schmidt, 1848**

*Nerilla antennata*.—Marinov, 1957b: 122, fig. 1; 1977: 239-241, pl. XXXIII, fig. 2.—Khlebovich, 1961: 130-131.—Vinogradov & Losovskaya, 1968: 335, pl. XXII, 3.—Hartmann-Schröder, 1996: 587-588, fig. 287.

*Material examined*. — 9 ind.: Eforie Sud, sta. 72(9), 0.5 m, interstitial in coarse sand.

*Distribution* — Cosmopolitan species (Hartmann-Schröder, 1996). Reported in the White Sea, Barents Sea (Khlebovich, 1961), Baltic Sea (Rasmussen, 1973), North Sea (Hartmann-Schröder, 1996), British Channel, Irish Sea, Mediterranean (Bellan, 1964, Castelli *et al.*, 1995), south-west Africa.

Cited in the Black Sea in the Bay of Sevastopol (Jakubova, 1930), Karadag region (Vinogradov, 1949), Romanian (Băcescu *et al.*, 1967b; Dumitrescu, 1973) and Bulgarian coasts (Marinov, 1957b, 1971).

### **Palpata, Canalipalpata, Sabellida Sabellidae Malmgren, 1867**

#### **17. *Fabricia stellaris* (O.F. Müller, 1774)**

*Fabricia sabella*.—Uschakov, 1955: 414, fig. 157, A-E.—Marinov, 1977: 215, pl. XXIX, fig. 4.—Vinogradov & Losovskaya, 1968: 326-327, pl. XIX, fig. 9.—Manoleli, 1995: 189, fig. 25.25.

*Fabricia sabella caspica*.—Annenkova, 1929a: 17-19, pl. III, figs. 5,6, pl. IV, figs. 13-15.

*Fabricia stellaris stellaris*.—Fitzhugh, 1990: 4, fig. 1.—Hartmann-Schröder, 1996: 553-555, fig. 270.

*Material examined*. — 226 ind.: Agigea, sta. 12(21), 29(36), 65(1), Vama Veche, sta. 13(6), 23 August, sta. 50(5), Mangalia, sta. 68(157), 0.3-4 m, in thin layer of coarse sand and detritus laid down on hard substrate.

*Distribution* — An arctic-boreal species, recorded in the North Pacific (Uschakov, 1955), Bering Sea, Kara Sea, White Sea, Barents Sea, Greenland Sea, Norwegian Sea, North Sea, Baltic Sea (Hartmann-Schröder, 1996), British Channel, North Atlantic, Western Mediterranean (Bellan, 1964, Castelli *et al.*, 1995), Eastern Mediterranean (Fauvel, 1937), Adriatic Sea (Pozar-Domac, 1978), Aegean and Ionian Seas (Arvanitidis, 2000, Simboursa & Nicolaidou, 1991), Sea of Azov (Mordukhai-Boltovskoi, 1960), Caspian Sea (Annenkova, 1929a).

Known in the Black Sea on the Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Marcusen, 1867; Bobretzky, 1870; Jakubova, 1930), north-western part of the Black Sea (Glembotsky, 1939; Vinogradov & Losovskaya, 1963), Romanian (Gomoiu & Müller, 1962; Dumitrescu, 1962, 1963, 1973; Băcescu *et al.*, 1963; Manoleli, 1967, 1969; Müller *et al.*, 1969; Tigănuș, 1991/1992; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Marinov, 1957a, 1966b).

### **Serpulidae Johnston, 1865**

#### **18. *Ficopomatus enigmaticus* (Fauvel, 1923)**

*Mercierella enigmatica*.—Annenkova, 1929b: 139-140.—Marinov, 1960: 405-408, figs. 1, 2; 1977: 223-224, pl. XL, fig. 3.—Vinogradov & Losovskaya, 1968: 330, pl. XX, fig. 7.—Kühl, 1977: 99-103, abb. 1, 2.

*Ficopomatus enigmaticus*.—ten Hove & Weerdenburg, 1978: 114, figs. 2e-I, 3d, l-q, s, aa-bb, nn-vv, zz, 5c.—Hartmann-Schröder, 1996: 571-572, fig. 279.

*Material examined*. — 47 ind.: Danube — Black Sea Canal, sta. 66(4), Agigea harbour, sta. 74(43), Mangalia Bay, sta. M3 (empty tubes), 0-3 m, on hard substrate (ships hull, hydrotechnical constructions and mussel shells).

*Distribution* — Cosmopolitan species, known in the North Sea (Hartmann-Schröder,

1996), British Channel, Atlantic, in the Mediterranean (Fauvel, 1937; Castelli *et al.*, 1995), Aegean (Marinov, 1959b; Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Marmara Sea and Bosphorus (Rullier, 1963), Sea of Azov (Mordukhai-Boltovskoi, 1960), Caspian Sea (Bogoroditsky, 1963); also found in North and South America, Indian Ocean, South Africa, Australia, Hawaii and New Guinea.

In the Black Sea it was found in Gelendjik Bay, Lake Paleostomi and rivers flowing into it (Annenkova, 1929b), Poti harbour (Turpaeva, 1961), Constanța harbour (Dumitrescu, 1962; Pitiș & Lăcătușu, 1971), Varna and Mandrenskoto lakes, Varna and Balchik bays (Marinov, 1957a, 1960).

### 19. *Janua pagenstecheri* (Quatrefages, 1865)

*Spirorbis (Dexiospira) pagenstecheri*.—Vinogradov & Losovskaya, 1968: 333, pl. XXI, fig. 4.

*Spirorbis (Dexiospira) pusilla*.—Vinogradov, 1949: 80-81.—Losovskaya, 1956:5.—Vinogradov & Losovskaya, 1963: 10; 1968: 332, pl. XXI, fig. 3.—Vinogradov *et al.*, 1967: 198 (non Rathke, 1837).

*Spirorbis pusilloides*.—Vorobiov, 1949: 116.

*Spirorbis pusilla*.—Marinov, 1964: 83; 1977: 230, pl. XLI, fig. 1, pl. XXXII, fig. 2 (non Rathke, 1837).

*Janua pagenstecheri*.—Manoleli, 1995: 189, fig. 25.27.—Hartmann-Schröder, 1996: 583-584, fig. 285.—Rzhavsky, 1991: 37-39 (synonymy).

*Material examined*. — 183 ind.: Agigea, sta. 17(5), sta. 18(110), Tuzla, sta. 27(1), 23 August, sta. 50(67), 0.2-4 m, on mussels shells.

*Distribution* — Cosmopolitan species (Hartmann-Schröder, 1996), recorded in the Indian Ocean, Pacific Ocean (Rzhavsky, 1991), North and Baltic seas (Hartmann-Schröder, 1996), British Channel, Atlantic Ocean, Mediterranean (Bellan, 1964, Castelli *et al.*, 1995), Adriatic Sea (Pozar-Domac, 1978), Aegean Sea (Arvanitidis, 2000), Bosphorus (Rullier, 1963), Sea of Azov (Vorobiov, 1949; Mordukhai-Boltovskoi, 1960).

In the Black Sea this species has been reported in the Karadag and Sudak regions (Vinogradov, 1931, 1949), Bay of Sevastopol (Jakubova, 1930), north-western part of the Black Sea (Losovskaya, 1956; Vinogradov & Losovskaya, 1963), on Romanian (Borcea,

1926a, 1931a, 1934b; Müller *et al.*, 1969; Manoleli, 1973; Tigănuș, 1991/1992; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Borcea, 1937; Marinov, 1964).

## Palpata, Canalpalpata, Spionoida Spionidae Grube, 1850

### 20. *Spio decoratus* Bobretzky, 1871

*Spio decoratus* Bobretzky, 1871: 256-257, figs. 74-77.—Giordanella, 1969: 325, figs. 1-3.—Dauvin, 1989: 169, fig. 1.

*Spio filicornis*.—Vinogradov, 1931:5.—Marinov, 1977: 153-155, pl. XXI, fig. 3.—Vinogradov & Losovskaya, 1968: 299-300, pl. XIII, fig. 5.—Manoleli, 1995: 187, fig. 25.15 (non O.F. Müller, 1776).

*Material examined*. — 967 ind.: Periboina, sta. 6(1), Năvodari, sta. 70(24), Mamaia, sta. 58(7), Constanța, sta. 59(1), Agigea, sta. 21(10), 37(4), Eforie Nord, sta. 23(26), 30(203), 31(69), 38(9), 39(260), 47(86), Eforie Sud, sta. 25(145), 26(6), 41(87), 52(27), 54(1), Tuzla, sta. 42(1), 0.5-18.5 m, fine sand.

*Distribution* — Known from the French coast of the Channel (Dauvin, 1989), Western Mediterranean (Giordanella, 1969; Lardicci, 1990), Aegean Sea and Ionian Seas (Arvanitidis, 2000, Simboura & Nicolaidou, 2001), from the Black Sea (Bobretzky, 1870), Bosphorus (Rullier, 1963) and from the Sea of Azov (Mordukhai-Boltovskoi, 1960).

In the Black Sea reported at the Georgian littoral (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1931, 1949), the north-western sector of the Black Sea (Vinogradov & Losovskaya, 1963; Losovskaya, 1978, 1988), Romanian (Dumitrescu, 1957, 1963, 1973; Băcescu *et al.*, 1957, 1965a, 1965b, 1965c, 1967a, 1967b; Băcescu & Dumitrescu, 1958; Gomoiu & Müller, 1962; Manoleli & Nalbant, 1975; Manoleli, 1980; Tigănuș, 1982, 1986, 1988, 1991/1992, 1992; Surugiu & Manoleli, 1998/1999) and Bulgarian coasts (Marinov, 1957a, 1963, 1966b).

*Remarks* — Careful examination of individuals, previously identified as *Spio filicornis* (O.F. Müller, 1776), from the Northern Aegean by Arvanitidis (1994),



showed that these individuals belong to *Spio decoratus*. Also Simboura & Nicolaidou (2001) for the polychaete species of Greece, mention that *Spio filicornis* is a boreal species probably not existing in the Mediterranean and confused with *Spio decoratus* or *Spio martinensis* Mesnil, 1896. The same observations have been made for individuals identified as *Spio filicornis* from other locations of the Mediterranean and from the French coasts of the Channel (Giordanella, 1969, Dauvin, 1989). Following the original description provided by Bobretzky (1871), we found that in all specimens examined the prostomium had an entire frontal edge and the neuropodial hooded hooks occurred from the 11th setiger, rarely from the 10th setiger. Also, hooded hooks were tridentate.

### 21. *Polydora ciliata* (Johnston, 1838)

*Polydora cornuta*.—Perejaslavzeva, 1891: 262-263 (non Bosc, 1802).

*Polydora ciliata*.—Uschakov, 1955: 271, fig. 94, E.—Marinov, 1977: 158-159, pl. XXI, fig. 2, pl. XXXVIII, fig. 4.—Codreanu & Mack-Firă, 1961: 489-490, fig. 9-11.—Manoleli, 1995: 186, fig. 25.14 A,B.—Vinogradov & Losovskaya, 1968: 301, pl. XIV, fig. 3.—Ramberg & Schram, 1983: 235-239, figs. 1-3.—Hartmann-Schröder, 1996: 314-315, fig. 142.

*Material examined*.—1 ind.: 23 August, sta. 50(1), 4 m, hard substrate.

*Distribution* — Cosmopolitan species (Hartmann-Schröder, 1996), reported in Far Eastern seas (Uschakov, 1955), Barents Sea, North and Baltic seas (Hartmann-Schröder, 1996), British Channel, north and south Atlantic, Mediterranean (Pérès, 1954; Bellan, 1964), Adriatic Sea (Pozar-Domac, 1978), Aegean Sea (Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Red Sea, Mozambique, Senegal, Australia.

In the Black Sea recorded on the Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1949), Bay of Sevastopol (Jakubova, 1930), Romanian coast (Codreanu & Mack-Firă, 1961; Dumitrescu, 1962, 1973; Băcescu *et al.*, 1963, 1967a; Manoleli, 1967, 1969; Müller *et al.*, 1969; Tigănuș, 1991/1992; Surugiu & Manoleli,

1998/1999) and Bulgarian coast (Marinov, 1957a, 1959a, 1966b).

### 22. *Polydora cornuta* Bosc, 1802

*Polydora ligni*.—Hartman, 1951: 82.—Blake, 1971: 5-6, figs. 1-2.—Ramberg & Schram, 1983: 240-242, figs. 4, 5.—Hartmann-Schröder, 1996: 315-317, fig. 144.

*Polydora cornuta*.—Tena *et al.*, 1991: 32, fig. 3.—Blake, 1996: 171, fig. 4.28H.

*Material examined*.—1111 ind.: Periboina, sta. 7(2), Cape Midia, sta. 28(3), Năvodari, sta. 57(21), Constanța, sta. 59(1), Danube – Black Sea Canal, sta. 5(6), 66(11), Agigea harbour, sta. 2(1), 67(11), Agigea, sta. 12(8), 20(1), 21(49), 35(3), 37(24), 49(8), 56(15), Eforie Nord, sta. 22(11), 24(1), 30(8), 31(52), 39(12), 47(2), 51(1), Eforie Sud, sta. 32(1), 40(41), 41(28), 52(12), 53(12), Tuzla, sta. 27(3), 34(1), 42(16), 55(12), 23 August, sta. 50(108), Mangalia, sta. 68(4), Mangalia Bay, sta. M1(95), M2(29), M3(221), M5(225), Vama Veche, sta. 69(52), 0-18.5 m, black foetid mud, muddy rock, shell debris and sand.

*Description* — The species measures up to 20 mm long for 80 segments. Colour of living specimens pale-yellow with red blood vessels. Body without pigmentation. Tubes brownish-yellowish, made from fine sand grains and detritus, up to 20 mm long.

Prostomium anteriorly forked and flared laterally, prolonged posteriorly by a caruncle reaching the posterior end of setiger 3. Caruncle with an occipital antenna. Four oval-rounded eyes arranged more or less in a square. Palps long, when extended reaching setiger 19.

The first setiger only with capillary neurosetae. Setiger 5 somewhat larger than the adjacent segments, carrying 6-10 specialized setae and companion chaetae arranged in a single straight or slightly curved row. Major spines of setiger 5 with small distinct lateral tooth. Companion setae penicillate, closely adhering to major spines. Beginning from setiger 7 neuropodia presents 5-12 bidentate hooded hooks. Shaft of the hooks with a prominent constriction. Branchiae digitiform, long and thin, not fused with notopodial lobes, beginning from setiger 7 to the last 6-9 setigers.

The pygidium large, disk-like, with a dorsal notch.

*Distribution* – Atlantic and Pacific coasts of North America (Blake, 1996), northern Europe (Ramberg & Schram, 1983; Hartmann-Schröder, 1996), Australia and Western Mediterranean (Tena *et al.*, 1991). New record for the Black Sea.

*Remarks* – It is possible that polydorid specimens reported as *Polydora limicola* Annenkova, 1934 in the north-western part of the Black Sea (Losovskaya & Nesterova, 1964; Losovskaya, 1976, 1977, 1978) and on the Romanian coast (Manoleli & Nalbant, 1975; Manoleli, 1980; Tigănuş, 1982, 1986, 1988, 1992; Dumitrache, 1996/1997), are actually *P. cornuta*. Due to the impossibility of obtaining these specimens this hypothesis could not be verified for the moment.

### 23. *Polydora websteri*

Hartman in Loosanoff & Engle, 1943

*Polydora websteri*.–Hartman, 1951: 81-82.–Blake, 1971: 6-8, fig. 3; 1996: 176, fig. 4.28, M-P.–Radashevsky, 1999: 110-112, fig. 1, A-F.

*Material examined*. – 157 ind.: Agigea, sta. 12(9), 18(2), 65(40), 73(106), 0.5-1.2 m, boring in limestone.

*Description* – The species is small, slender, measuring up to 20 mm long for 100 segments. Living animals light tan with red branchiae, palps and blood vessels. Body unpigmented.

The burrows are U-shaped, lined by a membranous sheath which is prolonged outside the gallery by a short muff.

Prostomium with anterior margin weakly incised, bearing a caruncle which extends posteriorly to setiger 2 or 3. Four poorly developed or almost non-existent eyes. Two long caducous palps, reaching approximately to setigers 10-12.

Setiger 1 has only capillary neurosetae and postsetal neuropodial lamellae. Modified setiger 5 much broader than adjacent ones, partially covering setiger 6, with a row of 5-6 pairs of major spines, alternating with lanceolate companion seta. Major spines of setiger 5 falcate with a lateral flange. From setiger 7 neuropodia present 6-11 hooded

hooks in a vertical row. Hooded hooks with a constriction on the shaft and ending in a bifid tip in which the main fang is about at right angles to the shaft. Branchiae begin on setiger 7, reaching maximum length by setiger 9-10. The last 10-16 setigers lacking branchiae.

Pygidium cup-shaped with a dorsal notch.

*Distribution* – Known on the Atlantic and Pacific coasts of North America, Gulf of Mexico (Hartman, 1951), Hawaii, west coast of South America, south-east Australia (Blake, 1996). New species in the Mediterranean and Black Sea region.

### 24. *Prionospio cirrifer* Wirén, 1883

*Prionospio cirrifer*.–Vinogradov, 1931: 12-14, fig. 6.–Uschakov, 1955: 278.–Marinov, 1977: 159-160, pl. XXII, fig. 3, pl. XXXIX, fig. 1.–Vinogradov & Losovskaya, 1968: 302, pl. XIV, fig. 4.–Manoleli, 1995: 187, fig. 25.18.–Hartmann-Schröder, 1996: 329-330, fig. 149. – Sigvaldadottir, 1996: V2, fig. 9.

*Minuspio cirrifer*.–Fauchald, 1977: 24.

*Material examined*. – 4 ind.: Eforie Nord, sta. 39(1), Eforie Sud, sta. 40(2), Tuzla, sta. 42(1), 6-10 m, hard and sandy substrata.

*Distribution* – Cosmopolitan species, known in the Indian Ocean, Gulf of Mexico (Hartman, 1951), North Pacific (Uschakov, 1955), Arctic waters, North Sea (Hartmann-Schröder, 1996), Atlantic coasts of Europe, Western Mediterranean (Castelli *et al.*, 1995), Adriatic Sea (Pozar-Domac, 1978), Aegean and Ionian Seas (Arvanitidis, 2000; Simboura & Nicolaidou, 2001), Marmara Sea (Gillet & Ünsal, 2000).

Recorded throughout the Black Sea: Prebosphoric region (Dumitrescu, 1960; Gillet & Ünsal, 2000), Georgian coast (Komakhidze & Mazmanidi, 1998), Karadag region (Vinogradov, 1930, 1931, 1949), Bay of Sevastopol (Jakubova, 1930), north-western part of the Black Sea (Losovskaya, 1956, 1978, 1988; Vinogradov & Losovskaya, 1963), Romanian (Dumitrescu, 1963, 1973; Băcescu *et al.*, 1957, 1965a, 1965b, 1965c, 1967a; Băcescu, 1963; Müller, 1968; Manoleli, 1973;

Manoleli & Nalbant, 1975) and Bulgarian coasts (Marinov, 1957a, 1959a, 1963).

## Acknowledgements

I should like to thank Drs. Ruth Barnich, Fredrik Pleijel, Vasily Radashevsky, Sashka Rzhavsky and Helmut Zibrowius for clarifying some aspects regarding certain polychaete taxa. Special thanks to Dr Mary Petersen and Dr Christos Arvanitidis for critical reading of the manuscript and for valuable comments. For critical comments and helpful suggestions I am deeply indebted to peer-reviewers Dr. Nomiki D. Simboura and Dr. Valentina Todorova.

## References

- ANNENKOVA, N.P., 1929a. Über die pontokaspischen Polychaeten. II. Die Gattungen *Hypaniola*, *Parhypania*, *Fabricia* und *Manajunkia*. *Ann. Mus. Zool.*, 30(1): 13-20.
- ANNENKOVA, N.P., 1929b. Polychaeten aus dem Reliktsee Paläostom (West Kaukasus) und den mit ihm verbundenen Flüssen. *Dokl. Akad. Nauk SSSR*, 21: 138-140.
- ARVANITIDIS, C., 1994. *Systematic and bionomic study of the macrobenthic Polychaeta of the Northern Aegean*. PhD Thesis, Aristotelian University of Thessaloniki, x+512 p. [not seen].
- ARVANITIDIS, C., 2000. Polychaete fauna of the Aegean Sea: inventory and new information. *Bull. Mar. Sci.*, 66(1): 73-96.
- BANSE, K., 1959. Polychaeten aus Rovinj (Adria), *Zoologischer Anzeiger*, 162(9/10): 295-313.
- BARNICH, R. & FIEGE, D., 2000. Revision of the Mediterranean species of *Harmothoe* Kinberg, 1856 and *Lagisca* Malmgren, 1865 (Polychaeta: Polynoidae: Polynoinae) with descriptions of a new genus and a new species. *Journal of Natural History*, 34: 1889-1938.
- BARNICH, R. & FIEGE, D., 2003. The Aphroditoidea (Annelida: Polychaeta) of the Mediterranean Sea. *Abh. Senckenberg. Naturforsch. Ges.*, 559: 1-170.
- BĂCESCU, M., 1963. Contribution à la biocoenologie de la Mer Noire. L'étage périazoïque et la faciès paleo-dreissenifère et leurs caractéristiques. *Rapp. et Pr. Verb. d. Réun. C.I.E.S.M.M.*, 17(2): 107-122.
- BĂCESCU, M. & DUMITRESCU, H., 1958. Les lagunes en formation aux embouchures du Danube et leur importance pour les poissons migrateurs. *Verh. Internat. Ver. Limnologie*, Stuttgart, 13: 699-709.
- BĂCESCU, M., DUMITRESCU, E., MANEA, V., POR, F. & MAYER, R., 1957. Les sables à *Corbulomya* (*Aloidis*) *maeotica* Mil., base trophique de premier ordre pour les poissons de la Mer Noire. *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 1: 305-374.
- BĂCESCU, M., DUMITRESCU, E., MARCUS, A., PALLADIAN, G. & MAYER, R., 1963. Données quantitatives sur la faune pétricole de la Mer Noire à Agigea (secteur roumain) dans la conditions spéciales de l'année 1961. *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 4: 131-155.
- BĂCESCU, M., GOMOIU, M.-T., BODEANU, N. & PETRAN, A., 1965a. Studii asupra variației vieții marine în zona litorală nisipoasă de la Constanța. *Ecologie marină*, 1: 7-138.
- BĂCESCU, M., MÜLLER, G., SKOLKA, H., PETRAN, A., ELIAN, V., GOMOIU, M.-T., BODEANU, N. & STĂNESCU, S., 1965b. Cercetări de ecologie marină în sectorul predeltaic în condițiile anilor 1960-1961. *Ecologie marină*, 1: 185-344.
- BĂCESCU, M., GOMOIU, M.-T., BODEANU, N., PETRAN, A., MÜLLER, G. & STĂNESCU, S., 1965c. Recherches écologiques sur les fonds sablonneux de la Mer Noire (côte roumaine). *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 5: 33-82.
- BĂCESCU, M., GOMOIU, M.-T., BODEANU, N., PETRAN, A., MÜLLER, G.I. & CHIRILĂ, V., 1967a. Dinamica populațiilor animale și vegetale din zona nisipurilor fine de la nord de Constanța în condițiile anilor 1962-1965. *Ecologie marină*, 2: 7-167.
- BĂCESCU, M., DUMITRESCU, E., GOMOIU, M.-T. & PETRAN, A., 1967b. Éléments pour la caractérisation de la zone sédimentaire médio-littorale de la Mer Noire. *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 7: 1-14.
- BĂCESCU, M., MÜLLER, G. & GOMOIU, M.-T., 1971. Cercetări de ecologie bentală în Marea Neagră. Analiza cantitativă, calitativă și comparată a faunei bentală pontice. *Ecologie marină*, 4, 1-357.
- BELLAN, G., 1964. Contributions à l'étude systématique, bionomique et écologique des Annelides Polychètes de la Méditerranée. *Rec. Trav. Stat. Mar. Endoume*, 49(33): 1-371.

- BIRSTEIN, J.A., 1956. Résultats de l'acclimatation de *Nereis succinea* dans la mer Caspienne et leur critique. *Biull. m. o-va isp. Prirody, Otd. Biologii*, 61(1): 23-44. [in Russian].
- BLAKE, J.A., 1971. Revision of the genus *Polydora* from the east coast of North America (Polychaeta: Spionidae). *Smithson. Contr. Zool.*, 75: 1-32.
- BLAKE, J.A., 1996. Family Spionidae Grube, 1850. Including a review of the genera and species from California and a revision of the genus *Polydora* Bosc, 1802. In: *Taxonomic Atlas of the Benthic Fauna of the Santa Maria Basin and Western Santa Barbara Channel*, Blake J.A., B. Hilbig & P.H. Scott (eds.), Santa Barbara Museum of Natural History, Vol. 6: 81-223.
- BOBRETZKY, N., 1868. Chaetopod worms (Annulata Chaetopoda) of the Sevastopol Bay. *Tr. I siezda russk. Estestvoisp. Otd. zool. S.Pb.*: 139-159. [in Russian].
- BOBRETZKY, N., 1870. Materials to the fauna of the Black Sea (Annelida Polychaeta). *Zap. Kievsk. o-va estestvoisp.*, 1(2): 1-30. [in Russian].
- BOBRETZKY, N., 1881. Additions to the annelid fauna of the Black Sea. *Zap. Kievsk. o-va estestvoisp.*, 6(2): 183-212. [in Russian].
- BOGORODITSKY, P.V., 1963. Mass development of polychaete *Mercierella enigmatica* Fauvel in Krasnovodsk Bay. *Tr. Inst. okeanol. Akad. Nauk SSSR*, 70: 26-28. [in Russian].
- BORCEA, I., 1924. Observations sur la faune des lacs Razelm. *Ann. Sci. Univ. Jassy*, 13: 424-448.
- BORCEA, I., 1926a. Note sur les moules et sur les faciès ou biocoenoses à moules de la région littorale roumaine de la Mer Noire. *Ann. Sci. Univ. Jassy*, 14: 129-139.
- BORCEA, I., 1926b. Données sommaires sur la faune de la Mer Noire (littoral de Roumanie). *Ann. Sci. Univ. Jassy*, 14: 536-581.
- BORCEA, I., 1928. Nouvelles observations sur la faune côtière du littoral roumain de la Mer Noire. *Ann. Sci. Univ. Jassy*, 15: 286-298.
- BORCEA, I., 1931a. Nouvelles contributions à l'étude de la faune bentonique dans la Mer Noire, près du littoral roumain. *Ann. Sci. Univ. Jassy*, 16: 655-750.
- BORCEA, I., 1931b. Action du froid et du gel sur la faune littorale de la Mer Noire. *Ann. Sci. Univ. Jassy*, 16: 751-759.
- BORCEA, I., 1934a. Addendas aux communications antérieures: 1) Nouvelles contributions à l'étude de la faune bentonique dans la Mer Noire, près du littoral roumain. *Ann. Sci. Univ. Jassy*, 19: 398-401.
- BORCEA, I., 1934b. Liste des animaux marins récoltés jusqu'à présent dans la région de la Station d'Agigéa (Mer Noire). *Ann. Sci. Univ. Jassy*, 19: 402-407.
34. BORCEA, I., 1937. Les résultats de l'expédition de recherches dans la Mer Noire entre les 28 Août et 1 Septembre 1935. *Ann. Sci. Univ. Jassy*, 23: 1-26.
- CASTELLI, A., ABBIATI, M., BADALAMENTI, F., BIANCHI, C.N., CANTONE, G., GAMBI, M.C., GIANGRANDE, A., GRAVINA, M.F., LANERA, P., LARDICCI, C., SOMASCHINI, A. & SORDINO, P., 1995. Annelida *Polychaeta*, *Pogonophora*, *Echiura*, *Sipuncula*. In: Minelli, A., Ruffo, S. & La Posta, S. (eds.), *Checklist delle specie della fauna italiana*, Calderini, Bologna, 19: 1-45.
- CHAMBERS S.J. & A.I. MUIR, 1997. *Polychaetes: British Chrysopetaloidea, Pisionoidea and Aphroditoidea*. Linnean Society Synopses of the British Fauna (new series), 54, 1-202 pp.
- CODREANU, R. & MACK-FIRĂ, V., 1961. Sur un Copépode, *Sunaristes paguri* Hesse 1867 et un Polychète, *Polydora ciliata* (Johnston) 1838, associés au pagure *Diogenes pugilator* (Roux) dans la Mer Noire et la Méditerranée. La notion de cryptotropisme. *Rapp. Pr. Verb. C.I.E.S.M.M.*, 16(2): 471-494.
- DAUVIN, J.-C., 1989. Sur la presence de *Spio decoratus* Bobretzky, 1871 en Manche et remarques sur *Spio martinensis* Mesnil, 1896 et *Spio filicornis* (Müller, 1776). *Cah. Biol. Mar.*, 30: 167-180.
- DUMITRACHE, C., 1996-1997. Present state of the zoobenthos from the Romanian Black sea continental shelf. *Cercetări marine*, 29-30: 141-150.
- DUMITRESCU, E., 1957. Contribuții la studiul polichetelor din Marea Neagră, litoralul românesc. *Bul. științ. Secț. biol. Seria zool.*, 9(2): 119-130.
- DUMITRESCU, E., 1960. Contributions à la connaissance des Polychètes de la Mer Noire, spécialement des eaux prébosphoriques. *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 2: 69-85.
- DUMITRESCU, E., 1962. Nouvelle contribution à l'étude des Polychètes de la Mer Noire. *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 3: 61-68.
- DUMITRESCU, E., 1963. Polychètes marines de la zone littorale roumaine (1 à 20 m de profondeur). *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 4: 181-192.
- DUMITRESCU, E., 1973. Nouvelles données écologiques et quantitatives sur les Polychètes pétricoles de la Mer Noire (littoral roumain). *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 13: 39-46.

- FAUCHALD, K., 1977. *The polychaete worms. Definitions and Keys to the Orders, Families and Genera*. Natural History Museum of Los Angeles County, Science Series, 28, 188 pp.
- FAUCHALD, K. & ROUSE, G. W., 1997. Polychaete systematics: Past and present. *Zoologica Scripta*, 26(2): 71-138.
- FAUVEL, P., 1937. Les fonds de pêche près d'Alexandrie. XI. Annélides Polychètes. *Direction des recherches des pêcheries, Notes et Mémoires*, 19: 1-60.
- FITZHUGH, K., 1990. A revision of the genus *Fabricia* Blainville, 1828 (Polychaeta: Sabellidae: Fabriciinae). *Sarsia*, 75: 1-16.
- GILLET, P. & ÜNSAL, M., 2000. Résultats de la campagne océanographique du 'Bilim': annélides polychètes de la Mer de Marmara, du Bosphore et des régions prébosporiques de la Mer Noire (Turquie). *Mésogée*, 58: 85-91.
- GIORDANELLA, E., 1969. Contribution à l'étude de quelques Spionidae. *Rec. Trav. St. mar. Endoume* 45(61): 325-349.
- GLEMBOTSKY, V., 1939. Mass development of *Fabricia sabella* (Ehrenberg) in Odessa Bay of the Black Sea. *Priroda*, 4: 59. [in Russian].
- GOMOIU, M.-T. & MÜLLER, G.J., 1962. Studies concerning the benthic association dominated by *Barnea candida* in the Black Sea. *Rev. Biol.*, 7(2): 255-271.
- HARTMAN, O., 1951. The littoral marine annelids of the Gulf of Mexico. *Publ. Inst. Mar. Sci Univ. Texas.*, 2(1): 7-124.
- HARTMAN O., 1960. On account of the Nereid worm *Neanthes diversicolor* new combination in the Caspian Sea and its more extensive distribution. *Zool. Zhurn.*, 39(1), 35-39. [in Russian].
- HARTMANN-SCHRÖDER, G., 1996. Annelida, Borstenwürmer, Polychaeta. *Die Tierwelt Deutschlands*, 2. neubearbeitete Auflage, Gustav Fischer Verlag, Jena, 58: 1-648.
- HOVE, TEN, H.A. & WEERDENBURG, J.C.A., 1978. A generic revision of the brackish-water serpulid *Ficopomatus* Southern 1921 (Polychaeta: Serpulinae), including *Mercierella* Fauvel 1923, *Sphaeropomatus* Treadwell 1934, *Mercierellopsis* Rioja 1945 and *Neopomatus* Pillai 1960. *Biol. Bull.*, 154: 96-120.
- JAKUBOVA, L.I., 1930. List of Archannelidae and Polychaeta of the Sevastopol Bay of the Black Sea. *Izv. Akad. Nauk SSSR*, 7(9): 863-881. [in Russian].
- KHLEBOVICH, V.V., 1961. Occurrence of the archannelid worm *Nerilla antennata* O. Schmidt on the Barents Sea shore. *Zool. Zhurn.*, 40(1): 130-131. [in Russian with English summary].
- KHLEBOVICH, V.V., 1963. On the systematic position of the Nereids of the Caspian Sea. *Zool. Zhurn.*, 42(1): 129-131. [in Russian with English summary].
- KOMAKHIDZE, A. & MAZMANIDI, N., 1998. Black Sea Biological Diversity. Georgia. *Black Sea Environmental Series*, Vol. 8, UN Publications, 167 pp.
- KÜHL, H., 1977. *Mercierella enigmatica* (Polychaeta: Serpulidae) an der deutschen Nordseeküste. *Veröff. Inst. Meeresforsch. Bremerh.*, 16: 99-104.
- LA GRECA, M., 1949. Note sur les Polychètes du Bosphore. *Rev. Fac. Sci. Univ. Istanbul*, Ser. B, 14(3): 153-169.
- LARDICCI, C., 1990. Censimento dei Policheti dei Mari Italiani: Spionidae Grube, 1850. *Atti Soc. Tosc. Sc. Nat. Mus.*, 96: 121-152.
- LICHER, F., 1999. Revision der gattung *Typosyllis* Langerhans, 1879 (Polychaeta: Syllidae) Morphologie, taxonomie und phylogenie. *Abh. Senckenberg. Naturforsch. Ges.*, 551: 1-363.
- LOSOVSKAYA, G.V., 1956. *Polychaete fauna of the north-western part of the Black Sea*. Avtoref. diss., Odesskii Gossud. Univ. im. I.I. Mecnikov, Odessa, 12 pp. [in Russian].
- LOSOVSKAYA, G.V., 1963. On the distribution of the marine polychaete species *Nereis (Neanthes) diversicolor* O. F. Müller and *Nereis (Neanthes) succinea* (Leuck.) in the Dnieper-Bug liman. *Nauk. Zap. Odessk. Biol. st.*, 5: 34-38. [in Ukrainian].
- LOSOVSKAYA, G.V., 1976. On the area extension of *Polydora limicola* Annenkova – polychaete species new to the Black Sea. – *Gidrobiol. Zhurn.* 12(1): 102-103. [In Russian].
- LOSOVSKAYA, G.V., 1977. *The ecology of polychaetes of the Black Sea*. Naukova Dumka, Kiev, 92 pp. [in Russian]
- LOSOVSKAYA, G.V., 1978. Effect of hypoxia and anoxia on species composition and quantity of Polychaeta from the Black Sea. *Gidrobiol. Zhurn.*, 14(4): 29-32. [in Russian].
- LOSOVSKAYA, G.V., 1988. Long-term changes in the composition and distribution of polychaetes of the north-western part of the Black Sea. *Gidrobiol. Zhurn.*, 24(4): 21-25. [in Russian].
- LOSOVSKAYA, G.V. & D.A. NESTEROVA, 1964. On the mass development of a form of Polychaeta,

- Polydora ciliata* ssp. *limicola* Annenkova, new for the Black Sea, in the Sukhoi liman (north-western part of the Black Sea). *Zool. Zhurn.*, 43(10): 1559-1560. [In Russian].
- MANOLELI, D., 1967. Date ecologice asupra polichetelor din dreptul Stațiunii marine de la Agigea. *Studii și cerc. de Biol. Ser. Zool.*, Acad. R.S.R., 19(6): 509-515.
- MANOLELI, D., 1969. Contribution à l'étude de la dynamique des Polychètes du littoral roumain devant la Station de Recherches Marines d'Agigea. *Lucr. Staț. Cerc. Marine 'Prof. I. Borcea', Agigea*, 3: 77-82.
- MANOLELI, D., 1973. Contribution a la connaissance de la faune de Polychètes des fonds a *Phyllophora* du littoral roumain de la Mer Noire. *Rapp. Comm. int. Mer Médit.*, 22(4): 75.
- MANOLELI, D., 1980. Les populations de Polychètes des eaux saumâtres oligohalines de la Roumanie. Quelques observations et problèmes. *Trav. Mus. Hist. Nat. 'Gr. Antipa'*, 21: 111-129.
- MANOLELI, D., 1995. Phylum Annelida. Polychaeta. In *Diversitatea lumii vii. Determinatorul ilustrat al florei și faunei românești*, Vol.I - Mediul marin, Ed. Bucura Mond, București: 179-196.
- MANOLELI, D. & NALBANT, T., 1975. Betrachtungen über den Einfluss des Donau-Astuars auf die Verteilung und die Biomasse der Bodenfauna im St. Georg-Arm. *Vorgelegt zur 18 Jahres-Arbeitstagung der Internationalen Arbeitsgemeinschaft Donauforschung*: 521-527.
- MARCUSEN, J., 1867. Zur Fauna des Schwarzen Meeres. *Arch. fur Naturg.*, 33(1): 357-363.
- MARINOV, T., 1957a. Beitrag zur Kenntnis unserer Schwarzmeer Polychätenfauna. *Tr. Morsk. biol. st. g. Varna*, 19: 105-119. [in Bulgarian].
- MARINOV, T., 1957b. Beitrag zur Kenntnis unserer Schwarzmeer Archiannelidenfauna. *Tr. Morsk. biol. st. g. Varna*, 19: 121-126. [in Bulgarian].
- MARINOV, T., 1959a. Sur la faune de Polychètes des amas de moules de la mer Noire. *Compt. Rend. Acad. Bulg. Sci.*, 12(5): 443-446.
- MARINOV, T., 1959b. Beitrag zur Erforschung der Polychäten vom Ägäischen meer. *Izv. Zool. Inst. Mus.*, 8: 293-295. [in Bulgarian].
- MARINOV, T., 1960. On the finding of *Mercierella enigmatica* Fauvel (Polychaeta) along the Bulgarian Black Sea coast. *Izv. Zool. Inst. Mus.*, 9: 405-409. [in Bulgarian].
- MARINOV, T., 1963. Über die Polychätenfauna der Sandbiozönose vor der Bulgarischen Schwarzmeerküste. *Izv. Centr. Nauk. Izsled. Inst. Ribov. i Ribolov.*, 3: 61-78. [in Bulgarian].
- MARINOV, T., 1964. Composition and features of the polychaetous fauna off the Bulgarian Black Sea coast. *Izv. Zool. Inst. Mus.*, 17: 79-107. [in Bulgarian].
- MARINOV, T., 1966a. Unknown Black Sea polychaetes off the Bulgarian coast. *Izv. Zool. Inst. Mus.*, 21: 69-75. [in Bulgarian].
- MARINOV, T., 1966b. Polychaete fauna in the brackish basins along the Bulgarian Black Sea coasts (lakes, marshes, estuaries). *Izv. Zool. Inst. Mus.*, 21: 139-152. [in Bulgarian].
- MARINOV, T., 1971. Polychètes et Archiannelides des eaux souterraines de plages du littoral bulgare de la mer Noire. *Rapp. Comm. int. Mer Médit.*, 20(3): 207-209.
- MARINOV, T., 1977. *Fauna of Bulgaria. Bristle worms (Polychaeta)*. Izd. na Bulgarskata Akademia na Naukite, Sofia, 6, 258 pp. [in Bulgarian].
- MORDUKHAI-BOLTOVSKOI, F.D., 1960. Catalogue of the free-living invertebrate fauna of the Sea of Azov. *Zool. Zhurn.*, 39(10): 1454-1466. [in Russian].
- MÜLLER, G.J., 1968. Ergebnisse einer tauchexpedition im randgebiet des *Phyllophora*-feldes im Schwarzen Meer. *Rev. Roum. Biol., sér. Zool.*, 13(6): 425-431.
- MÜLLER, G.J., 1971. Neue Angaben über die Bionomie des Zoobenthos der Sedimentböden im Litoralsystem an der Westküste des Schwarzen Meeres. *Cercetări marine*, 1: 167-194.
- MÜLLER, G.J., SKOLKA, H.V. & BODEANU, N., 1969. Date preliminare asupra populațiilor algale și animale asociate vegetației de *Cystoseira barbata* de la litoralul românesc al Mării Negre. *Hidrobiologia*, 10: 279-290.
- PEREJASLAVZEVA, S.M., 1891. Additions to the fauna of the Black Sea. *Trudy o-va ispyt. prirody pri Harkov. Univ.*, 25: 235-274. [in Russian].
- PÉRÈS, J.M., 1954. Contribution à l'étude des Annélides Polychètes benthiques des profondeurs moyennes de la Méditerranée. *Rec. Trav. Stat. Mar. Endoume*, 26(16): 103-135.
- PITIȘ, I. & LĂCĂTUȘU, V., 1971. Pollution biologique de l'eau du port de Constanța (Mer Noire) avec *Mercierella enigmatica*. *Rapp. Comm. int. Mer Médit.*, 20(3): 287-288.
- PLEIJEL, F. & DALES, R.P., 1991. *Polychaetes: British Phyllocoideans, Typhloscolecoideans and Tomopteroideans*. Linnean Society Synopses of the British Fauna (new series), 45, 202 pp.

- POZAR-DOMAC, A., 1978. Catalogue of the polychaetous annelids of the Adriatic Sea. 1. Northern and central Adriatic. *Acta Adriatica*, 19(3): 2-59.
- RADASHEVSKY, V.I., 1999. Description of the proposed lectotype for *Polydora websteri* Hartman in Loosanoff & Engle, 1943 (Polychaeta: Spionidae). *Ophelia*, 51(2): 107-113.
- RAMBERG, J.P. & SCHRAM, T., 1983. A systematic review of the Oslofjord species of *Polydora* Bosc and *Pseudopolydora* Czerniavsky with some new biological and ecological data (Polychaeta: Spionidae). *Sarsia*, 68(4): 233-247.
- RASMUSSEN, E., 1973. Systematics and ecology of the Isefjord marine fauna (Denmark). With a survey of the Eelgrass (*Zostera*) Vegetation and its Communities. *Ophelia*, 11(1-2): 1-507.
- RIOJA, E., 1946. Estudios anelidológicos. XIV. Neréidos de Agua Salobre de los Esteros del Litoral del Golfo de México. *An. Inst. Biol. México*, 17(1): 205-214.
- ROUSE, G.W. & FAUCHALD, K., 1995. The articulation of annelids. *Zoologica Scripta*, 24: 269-301.
- ROUSE, G. W. & FAUCHALD, K., 1997. Cladistics and polychaetes. *Zoologica Scripta*, 26(2): 139-204.
- ROUSE, G. W. & FAUCHALD, K., 1998. Recent views on the status, delineation and classification of the Annelida. *Amer. Zool.*, 38: 953-964.
- RULLIER, F., 1963. Les annélides polychètes du Bosphore, de la mer de Marmara et de la mer Noire, en relation avec celles de la Méditerranée. *Rapp. Pr.-Verb. Réunion. C.I.E.S.M.M.*, 17(2): 161-260.
- RZHAVSKY A.V., 1991. Revision of Januinae (Polychaeta, Spirorbidae) in the seas of the USSR. *Zool. Zhurn.*, 70(8): 37-45. [in Russian].
- SAN MARTIN, G., 1991. *Grubeosyllis* and *Exogone* (Exogoninae, Syllidae, Polychaeta) from Cuba, the gulf of Mexico, Florida and Puerto Rico, with a revision of *Exogone*. *Bull. Mar. Sci.*, 49(3): 715-740. [not seen].
- SIGVALDADOTTIR, E., 1996. *Systematics of Spionidae and Prionospio (Polychaeta)*. Ph.D. Thesis, Stockholm University, Department of Zoology. [not seen].
- SIMBOURA, N. & NICOLAIDOU, A., 2001. The Polychaetes (Annelida, Polychaeta) of Greece: checklist, distribution and ecological characteristics. *Monographs on Marine Sciences*, Series no 4. NCMR, 115 p.
- STARK, I.N., 1959. *Nereis succinea* in the Sea of Azov. *Zool. Zhurn.*, 38(11): 1634-1348.
- SURUGIU, V. & MANOLELI, D., 1998/1999. Nouvelle contribution à l'étude des annélides polychètes de la région d'Agigea (littoral roumain). *An. Șt. Univ. 'Al. I. Cuza' Iași, s. Biol. Anim.*, 44/45: 21-25.
- SURUGIU, V., 2000a. The presence of *Namanereis littoralis* (Polychaeta, Nereididae, Namanereidinae) on the Romanian littoral of the Black Sea. *Rev. Roum. Biol., Sér. Biol. anim.*, 45(1): 43-49.
- SURUGIU, V., 2000b. Des modifications survenues dans la structure des peuplements d'Annélides Polychètes d'Agigea dans les 30 dernières années. *An. Șt. Univ. 'Al. I. Cuza' Iași, s. Biol. Anim.*, 46: 73-81.
- SURUGIU, V., 2002. *Populations of the Polychaetes (Annelida) from the Romanian coast of the Black Sea and from the littoral lakes and their ecological role*. Ph.D. Thesis, 'Al. I. Cuza' Univ. Iași, 1-277 [in Romanian].
- TENA, J., CAPACCIONI-AZZATI, R., PORRAS, R. & TORRE-GAVILÁ, F.J., 1991. Cuatro especies de Poliquetos nuevas para las costas Mediterráneas españolas en los sedimentos del antepuerto de Valencia. *Misc. Zool.*, 15: 29-41.
- TURPAEVA, E.P., 1961. Relation of the Black Sea's bristle-worm *Mercierella enigmatica* Fauvel to the conditions of varying salinity. *Tr. Inst. Okeanol.*, 49: 187-199. [in Russian].
- ȚIGĂNUȘ, V., 1982. Données préliminaires sur le zoobenthos du substrat meuble de la zone portuaire Constanța. *Cercetări marine*, 15: 107-114.
- ȚIGĂNUȘ, V., 1986. Structure des peuplements de Polychètes de substrat sableux sous condition de forte eutrophisation en Mer Noire. *Rapp. Comm. int. Mer Médit.*, 30(2): 20.
- ȚIGĂNUȘ, V., 1988. Distribution des peuplements des Polychètes les plus fréquentes du secteur marin devant les embouchures du Danube. *Rapp. Comm. int. Mer Médit.*, 31(2): 23.
- ȚIGĂNUȘ, V., 1992. Evolution des populations de certaines espèces de masse de Polychètes de la zone marine roumaine. *Rapp. Comm. Int. mer Médit.*, 33: 54.
- USCHAKOV, P.V., 1955. *Polychaeta of the Far Eastern Seas of the U.S.S.R.* 56. Izd. Akad. Nauk SSSR, Moskva-Leningrad, 446 pp. [in Russian].
- VINOGRADOV, K.A., 1930. Note sur la présence de la *Magelona rosea* Moore dans la Mer Noire. *Tr. Karadag. biol. st.*, 3: 39-40. [in Russian].

- VINOGRADOV, K.A., 1931. Quelques additions a la Faune des Polychètes de la Mer Noire. *Tr. Karadag. biol. st.*, 4: 5-21. [in Russian].
- VINOGRADOV, K.A., 1949. To the fauna of the bristle worms (Polychaeta) of the Black Sea. *Tr. Karadag. biol. st.*, 8: 1-84. [in Russian].
- VINOGRADOV, K.A., Losovskaya, G.V., 1963. Polychaeta of the north-western part of the Black Sea. *Nauk. zap. Odessk. biol. st.*, 5: 3-11. [in Ukrainian].
- VINOGRADOV, K.A. & LOSOVSKAYA, G.V., 1968. Phylum Annelida: Class Polychaeta. In *Opređelitel' fauny Chernogo i Azovskogo morey*, vol. 1, Izd. Naukova Dumka, Kiev: 251-359. [in Russian].
- VINOGRADOV, K.A., LOSOVSKAYA, G.V. & KAMINSKAYA, L.D., 1967. Short overview of the specific composition of the invertebrate fauna of the north-western part of the Black Sea (by systematic groups). In: *Biologia severo-zapadnoy chasti Chernogo morya*. Izd. Naukova Dumka, Kiev: 177-201. [in Russian].
- VOROBIOV, V.P., 1949. *Benthos of the Sea of Azov*. Tr. AzCherNIRO, 13, Krymizdat, Simferopol, 193 pp. [in Russian, not seen].
- WARREN, L.M., 1976. A review of the genus *Capitella* (Polychaeta, Capitellidae). *J. Zool., Lond.*, 180: 195-209.



