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TAXONOMIC COMPOSITION AND LONG-TERM DYNAMICS OF MEROPLANKTON ABUNDANCE IN COASTAL WATERS OF THE TAMAN PENINSULA (THE KERCH STRAIT, BLACK SEA)

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At the study site between the Taman Bay and the Bugazsky Liman, larvae of benthic invertebrates representing 47 taxa were identified: Polychaeta, 14; Cirripedia, 4; Phoronida, 1; Decapoda, 10; Bivalvia, 13; Gastropoda, 3; and Hydrozoa, 2. The highest meroplankton density (up to $30.6{\times}10^3$ ind.·m^{-3}) against the backdrop of the lowest taxonomic diversity (17 taxa) was recorded in the semi-closed Taman Bay affected by the Sea of Azov waters. In June and July, meroplankton was chiefly represented by bivalves *Cerastoderma* sp. in the Taman Bay; by *Cerastoderma* sp. and *Spisula subtruncata* in the Tuzla Spit–Panagiya Cape; and by *S. subtruncata* and *Mytilaster lineatus* in the Zhelezny Rog Cape–Bugazsky Liman. Despite heavy shipping traffic and significant anthropogenic pollution of the study site, meroplankton density ensured sufficient reproductive potential of the area. In the seaport of Taman, a summer–autumn peak in abundance was registered ($13{\times}10^3$ to $15.4{\times}10^3$ ind.·m^{-3}) driven by mass release of larvae of bivalves *C. gallina* and *M. lineatus*; it is characteristic of the Black Sea waters. In the Kerch Strait, larval density of previously rare decapod *Upogebia pusilla* increased ($0.24{\times}10^3$ ind.·m^{-3}), and this confirms the necessity of further study of meroplankton biodiversity in the Taman Peninsula coastal waters.

Keywords: meroplankton, Taman Bay, Tuzla Spit–Panagiya Cape, Zhelezny Rog Cape–Bugazsky Liman, port of Taman

The Kerch Strait and adjacent coastal waters of the Black Sea are the zone of the heaviest shipping traffic and very intensive fishing [Fashchuk, Petrenko, 2008]. Transport-related pollution due to cargo transfers, oil spills, port operations in Taman, dumping of substratum, *etc.* leads to sedimentation, contamination of bottom sediments, and restructuring of zoobenthic taxonomic composition and diversity in the strait area and adjacent coastal waters of the Black Sea [Eremeev et al., 2008; Fashchuk et al., 2012; Golovkina, Nabozhenko, 2012]. As known, taxonomic composition, density, and abundance of benthic animal larvae (meroplankton) are among the main indicators of the state of benthos [Lisitskaya, 2017, 2018; Selifonova, 2012; Selifonova, Samyshev, 2022]. In 2018, autumn meroplankton community was investigated in the Kerch Strait and adjacent coastal waters of the Black Sea [Remizova, Teyubova, 2021]. However, there was no long-term monitoring of dynamics and changes in the meroplankton structure/composition and its current state in this area.

The aim of this study is to analyze the taxonomic composition and seasonal dynamics of meroplankton abundance in the Kerch Strait and adjacent Taman coastal waters of the Black Sea in a long-term perspective.

MATERIAL AND METHODS

The study area. The Taman Peninsula is located in the west of the Kuban Plain and washed by the Black Sea, Sea of Azov, and Kerch Strait connecting them (Fig. 1). The maximum depths at the entrance to the strait from the Black Sea exceed 18 m. In the strait, on the borderline of the Black Sea and Sea of Azov, there is a frontal zone with noticeable salinity gradients (from 11‰ in the north to 17‰ in the south) [Eremeev et al., 2003; Samyshev, 2004]. It is the area of specific distribution of planktonic and benthic communities.

The Taman Bay occupies the eastern coast of the Kerch Strait between the Chushka and Tuzla spits. It juts into the mainland for 16 km (width at the entrance is 8 km, and depth is up to 5 m). The Panagiya Cape is situated on the borderline of the Black Sea and Sea of Azov, on the Kerch Strait coast. This cape, about 30 m high, is a reef built by mosses. It has a much-indented coastline and is characterized by occurrence of numerous bays, coastal spits, estuaries, and mud volcanoes. The Zhelezny Rog Cape occupies the southern coast of the Taman Peninsula. The cape stretches for 1.3 km and is located at an altitude of 65 m above sea level. On the cape, there is the open-type port of Taman, with free water exchange with the open sea. The port is a transshipment point for land and sea transportation.

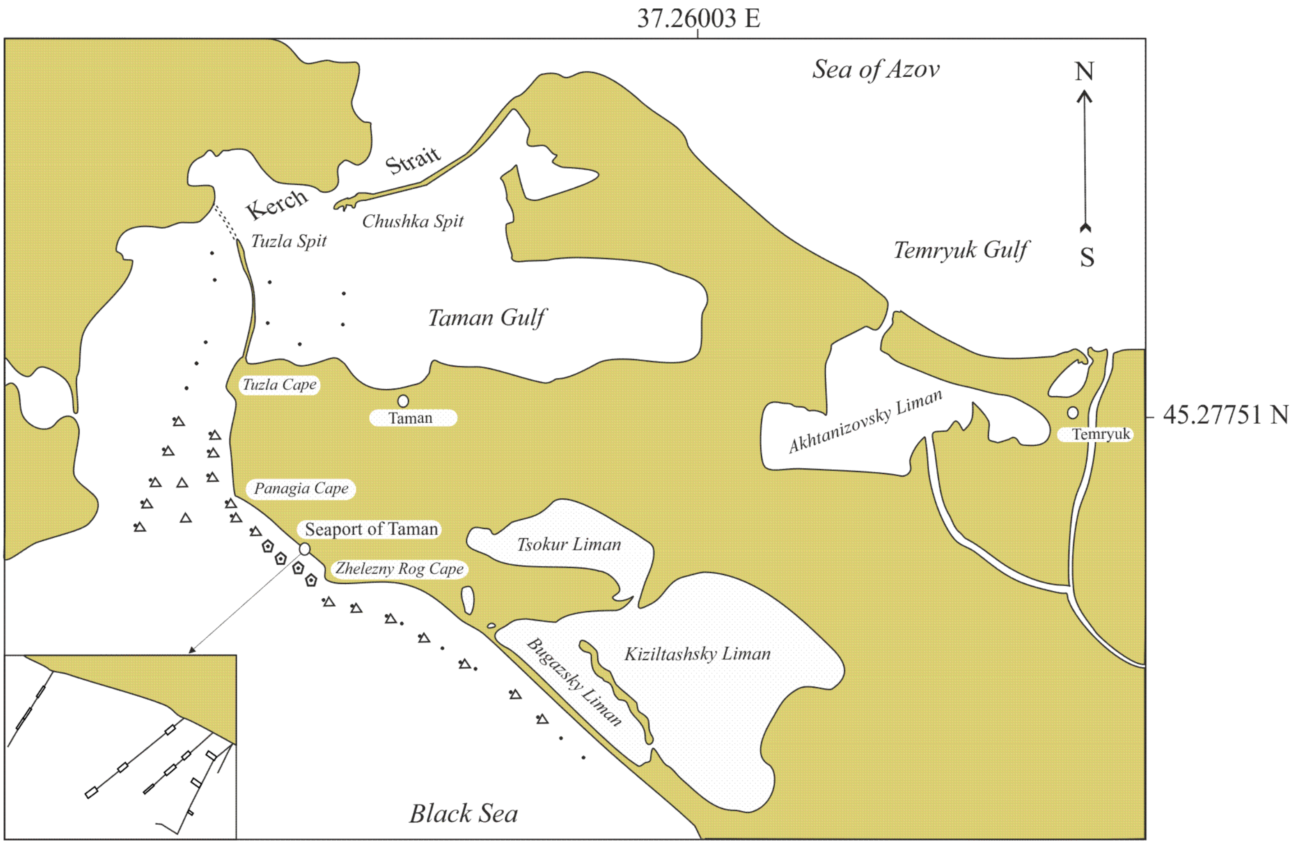

Fig. 1. The scheme of zooplankton sampling stations in the study area. Sampling stations are indicated by points (2010) and triangles (2015); sampling spots in the seaport of Taman are indicated by pentagons (2013–2014 and 2018–2021)

Sampling and laboratory studies. Zooplankton was sampled in June–July 2010 and 2015 in the Kerch Strait and Taman coastal waters of the Black Sea (see Fig. 1). In 2013–2014 and 2018–2021, a full-season monitoring was carried out in the port of Taman area. Depths of sampling varied from 3 m (the Taman Bay) to 16 m (the seaport of Taman). During sampling, the sea surface temperature ranged from +8.5 °C (December 2018) to +26.5 °C (August 2019) (see Fig. 2). Meroplankton (larvae of benthic organisms > 100–500 μm) was sampled throughout the water column with a medium-sized Juday net with an opening diameter of 25 cm (mesh size of 110 and 120 μm) by total catch. The material was fixed in 2–4% neutral formaldehyde and processed in a laboratory by a conventional procedure. Zooplankton abundance was calculated taking into account the catch power of the net [Shushkina, Vinogradov, 2002; Sorokin, Sorokin, 2010]. Standard plankton nets mostly have mesh size of > 150–200 μm and thus significantly undercatch small hydrobionts, 0.15–0.25 mm wide (2–10 times, depending on zooplankton composition and kind of a net). To calibrate our net, we filtered 50 L of water sampled with a bucket through a 40-μm mesh. The main literature sources used to identify major zooplanktonic species and families were those of K. Zakhvatkina [1972], V. Chukhchin [1984], Yu. Makarov [2004], O. Poltarukha and O. Korn [2008], and V. Surugiu *et al.* [2023]. Systematic classification and nomenclature of zooplankton species are given according to WoRMS [2024].

RESULTS AND DISCUSSION

Meroplankton of the Kerch Strait and adjacent Taman coastal waters of the Black Sea comprised 47 taxa: Polychaeta, 14 species; Cirripedia, 4; Phoronida, 1; Decapoda, 10; Bivalvia, 13; Gastropoda, 3; and Hydrozoa, 2 (Table 1). In the seaport of Taman, the maximum number of taxa was recorded, 36–37. In the Taman Bay, Tuzla Spit–Panagiya Cape, and Zhelezny Rog Cape–Bugazsky Liman, we registered 17, 25, and 26–33 species, respectively.

Table 1. Taxonomic composition of meroplankton of the Kerch Strait and adjacent Taman coastal waters of the Black Sea: TB, Taman Bay; TS–PC, Tuzla Spit–Panagiya Cape; ZRC–BL, Zhelezny Rog Cape–Bugazsky Liman; TSP, the seaport of Taman area; +, taxon was found; ++, common taxon; +++, mass taxon

Taxon	Kerch Strait			Taman coastal waters of the Black Sea			
	TB	TS–PC		ZRC–BL		TSP	
	2010	2010	2015	2010	2015	2013–2014	2018–2021
POLYCHAETA							
Nephthys hombergii Savigny in Lamarck, 1818	++	+	+	+	+	++	++
Harmothoe spp.						+	+
Alitta succinea (Leuckart, 1847)		+	+	+	+	+	+
Platynereis dumerilii (Audouin & Milne Edwards, 1833)		+	+		+		
Perinereis cultrifera (Grube, 1840)					+	+	
Hediste diversicolor (O. F. Müller, 1776)					+	+	+
Malacoceros fuliginosus (Claparède, 1868)		+	+		+	++	++
Microspio mecznikowiana (Claparède, 1869)		+	+	+	+	+	+
Spio filicornis (O. F. Müller, 1776)		+	+	+	+	+	+
Polydora cornuta Bosc, 1802	++	+	+		+	++	++

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Taxon	Kerch Strait			Taman coastal waters of the Black Sea			
	TB	TS–PC		ZRC–BL		TSP	
	2010	2010	2015	2010	2015	2013–2014	2018–2021
Prionospio spp.		+	+	+	+	+	+
Pygospio elegans Claparède, 1863	+	+					
Capitella capitata capitata (Fabricius, 1780)						+	+
Heteromastus filiformis (Claparède, 1864)						+	+
PHORONIDA							
Phoronis euxinicola Selys-Longchamps, 1907	++	+	+	+	+	+	+
CIRRIPEDIA							
Amphibalanus improvisus (Darwin, 1854)	++	++	++	+	+	++	++
Amphibalanus eburneus (Gould, 1841)				+	+	+	+
Verruca spengleri Darwin, 1854			+	+	+	+	+
Chthamalus sp.		+	+	+	+	+	+
DECAPODA							
Palaemon elegans Rathke, 1836						+	+
Upogebia pusilla (Petagna, 1792)	++	++	++	+	+	+	++
Diogenes pugilator (Roux, 1829)	+	+	+	+	+	++	++
Pisidia bluteli (Risso, 1816)				+	+		+
Xantho poressa (Olivi, 1792)				+	+	+	+
Eriphia verrucosa (Forskål, 1775)					+		+
Pilumnus spinulosus Kessler, 1861				+	+	+	+
Rhithropanopeus harrisii (Gould, 1841)	+	+	+	+	+	+	+
Liocarcinus vernalis (Risso, 1827)		+	+	+	+	++	++
Carcinus aestuarii Nardo, 1847					+	+	+
BIVALVIA							
Anadara kagoshimensis (Tokunaga, 1906)						+	+
Mytilus galloprovincialis Lamarck, 1819	+	+		+	+	+	+
Mytilaster lineatus (Gmelin, 1791)	+	++	++	+++	+++	+++	+++
Abra segmentum (Récluz, 1843)	+	+	+	+	+		
Spisula subtruncata (da Costa, 1778)		+++	+++	+++	+++	+++	+++
Chamelea gallina (Linnaeus, 1758)						+++	+++
Cerastoderma sp.	+++	+++	+++				
Cardiidae gen. sp.				+	++		
Teredo navalis Linnaeus, 1758						+	+
Mya arenaria Linnaeus, 1758	+	+	+				
GASTROPODA							
Bittium reticulatum (da Costa, 1778)	++	+	+	++	++	++	++
Rapana venosa (Valenciennes, 1846)				+	+	++	++
Parthenina terebellum (R. A. Philippi, 1844)	+	+	+	+	+		
HYDROZOA							
Sarsia tubulosa (M. Sars, 1835)			+		+	+	++
Blackfordia virginica Mayer, 1910	+	+	+	+		+	+

The Taman Bay (Kerch Strait). In June–July 2010, 17 taxa were found in meroplankton: Polychaeta, 3; Phoronida, 1; Cirripedia, 2; Decapoda, 3; Bivalvia, 5; Gastropoda, 2; and Hydrozoa, 1. During the study period, the total abundance of larvae of benthic invertebrates reached the maximum, $(30.6 \pm 0.5) \times 10^3$ ind.·m^{-3} (Table 2). Meroplankton mostly consisted of larvae of bivalves *Cerastoderma* sp. (72.2% of the total abundance of meroplankton). Low values were registered for larvae of polychaetes *Nephthys hombergii* and *Polydora cornuta*, a gastropod *Bittium reticulatum*, a barnacle *Amphibalanus improvisus*, a decapod *Upogebia pusilla*, a phoronid *Phoronis euxinicola*, and others. It is noteworthy as follows: high density of *P. euxinicola* larvae was observed only in this area and in the Anapa Bay [$(0.3 \pm 0.01) \times 10^3$ ind.·m^{-3} and 0.2×10^3 ind.·m^{-3}, respectively], while these larvae are usually rare in summer meroplankton in the northeastern Black Sea [Selifonova, 2012; Selifonova, Samyshev, 2022] and Crimean coastal waters [Lisitskaya, 2017, 2018].

Table 2. Meroplankton abundance ($\times 10^3$ ind.·m^{-3}) in the Kerch Strait and adjacent Taman coastal waters of the Black Sea (June–July 2010 and 2015). Designations are the same as in Table 1

Taxon	Kerch Strait			Taman coastal waters of the Black Sea	
	TB	TS–PC		ZRC–BL	
	2010	2010	2015	2010	2015
Polychaeta	3 ± 0.05	0.78 ± 0.05	0.66 ± 0.09	0.06 ± 0.01	0.07 ± 0.02
Phoronida	0.3 ± 0.01	0.003 ± 0.004	0.01 ± 0.03	0	0.1 ± 0.01
Cirripedia	1.3 ± 0.05	0.3 ± 0.01	0.9 ± 0.01	0.006 ± 0.001	0.2 ± 0.02
Decapoda	0.76 ± 0.03	0.14 ± 0.01	0.3 ± 0.02	0.016 ± 0.01	0.1 ± 0.03
Bivalvia	22.1 ± 0.1	10.3 ± 0.01	15.4 ± 0.05	6.7 ± 0.2	10.5 ± 0.08
Gastropoda	2.9 ± 0.01	1.5 ± 0.05	2 ± 0.06	1.4 ± 0.04	1.9 ± 0.3
Hydrozoa	0.1 ± 0.02	0.007 ± 0.01	0.005 ± 0.01	0	0.02 ± 0.08
Meroplankton share in the total abundance of zooplankton, %	45.5	62	65	34.8	25.2

The Tuzla Spit–Panagiya Cape (Kerch Strait). Species composition of larvae of benthic invertebrates was richer there than in the Taman Bay. In June–July 2010, a total of 25 taxa were recorded in meroplankton: Polychaeta, 9; Phoronida, 1; Cirripedia, 2; Decapoda, 4; Bivalvia, 6; Gastropoda, 2; and Hydrozoa, 1. However, the total abundance of meroplankton was twice lower than in the Taman Bay, while its share in zooplankton reached 62%. Meroplankton was formed chiefly by larvae of bivalves *Spisula subtruncata* and *Cerastoderma* sp. (79.2% of the total abundance of meroplankton). From June to mid-July, larvae of *U. pusilla* (Decapoda), *A. improvisus* (Cirripedia), and *Mytilaster lineatus* (Bivalvia) were common in plankton. Interestingly, 80% of decapod larvae were *U. pusilla* ones; this hydrobiont, the Mediterranean mud shrimp, used to be a protected and rare species in several countries of the Black Sea region [Revkov et al., 2019]. Adult individuals of this species inhabit burrows on soil bottom sediments of coastal zones of the Black Sea (from the water's edge down to 45 m) and Sea of Azov. In 1960s, the communities dominated by *U. pusilla* and a bivalve *Pitar rudis* were registered in the Caucasian coastal waters at depths of 24–30 m [Kiseleva, Slavina, 1965, 1966]. Since the late 1980s, there is a significant drop in *U. pusilla* abundance both off the Caucasian and Crimean coasts. A depressive period in the development of *U. pusilla* population was associated with the Black Sea eutrophication which affected coastal zones the most [Revkov et al., 2019; Zaika, 2011; Zaitsev, 1992]. Nowadays, *U. pusilla* abundance increases off the Crimean coast [Revkov et al., 2019]. Therefore, in the northeastern

Black Sea, a rise in this species abundance is possible. It is confirmed by findings of an adult *U. pusilla* specimen in July 2022 at a 49-m depth in Adler vicinity (an oral communication of PhD N. Bulysheva, Southern Scientific Centre of the Russian Academy of Sciences) and its larvae in the Tuzla Spit–Panagiya Cape (our study).

In 2015, larvae of benthic invertebrates of 25 taxa were recorded in the Tuzla Spit–Panagiya Cape: Polychaeta, 8; Phoronida, 1; Cirripedia, 3; Decapoda, 4; Bivalvia, 5; Gastropoda, 2; and Hydrozoa, 2. The total abundance of meroplankton during the study period averaged $(19.3 \pm 0.3) \times 10^3$ ind.·m^{-3}. The value was 1.5 times higher than in 2010. Meroplankton contribution to total zooplankton by density averaged 65%. Larvae of bivalves were the most abundant (79.7% of the total abundance of meroplankton) mainly determining the dynamics of the total density of meroplankton. The key contributors to a summer density peak were larvae of *S. subtruncata* and *Cerastoderma* sp. (80% of the total abundance of bivalves). In 2010 and 2015, we registered maximum density of *U. pusilla* larvae: $(0.11 \pm 0.01) \times 10^3$ and $(0.24 \pm 0.02) \times 10^3$ ind.·m^{-3}, respectively.

The Zhelezny Rog Cape–Bugazsky Liman (Taman coastal waters of the Black Sea). In June–July 2010, larvae of benthic invertebrates comprised 26 taxa: Polychaeta, 5; Phoronida, 1; Cirripedia, 4; Decapoda, 7; Bivalvia, 5; Gastropoda, 3; and Hydrozoa, 1. The total abundance of meroplankton was at the minimum, $(8.1 \pm 1.6) \times 10^3$ ind.·m^{-3}; this value was 3.5 times lower than in the Taman Bay. Meroplankton share in the total abundance of zooplankton was 34.8%. Summer meroplankton was represented mostly by Bivalvia larvae (81.7% of the total abundance of meroplankton). In larvae of bivalves, *S. subtruncata* and *M. lineatus* dominated accounting for 81.7% of meroplankton. The most common meroplankton species was a gastropod *B. reticulatum*.

In 2015, meroplankton of the Zhelezny Rog Cape–Bugazsky Liman comprised 33 taxa: Polychaeta, 10; Phoronida, 1; Cirripedia, 4; Decapoda, 9; Bivalvia, 5; Gastropoda, 3; and Hydrozoa, 1. The total abundance of meroplankton was of 12.7×10^3 ind.·m^{-3}, 1.5 times higher than in 2010. Its share in zooplankton did not exceed 25.2%. Meroplankton mostly consisted of larvae of bivalves *S. subtruncata* and *M. lineatus*. Abundance of larvae of bivalves in total meroplankton reached 82.6%. We noted elevated concentrations of larvae of a non-identified bivalve Cardiidae gen. sp., gastropod *B. reticulatum*, barnacle *A. improvisus*, and decapod *Liocarcinus vernalis*.

The port of Taman area (Taman coastal waters of the Black Sea). In 2013–2014, larvae of benthic invertebrates representing 36 taxa were identified in the seaport area: Polychaeta, 13; Phoronida, 1; Cirripedia, 4; Decapoda, 8; Bivalvia, 6; Gastropoda, 2; and Hydrozoa, 2. Meroplankton abundance averaged $(5.5 \pm 2.1) \times 10^3$ ind.·m^{-3}. A noticeable decrease in meroplankton abundance was observed at low temperatures, +6…+12 °C (Fig. 2).

Meroplankton abundance had the lowest values in March and November: 0.09×10^3 to 0.37×10^3 ind.·m^{-3}. In these months, water temperature in the port of Taman area did not exceed +10…+14 °C. However, meroplankton share in zooplankton was high, for the basis of zooplankton was formed by larvae of a barnacle *A. improvisus*. Its share in the total abundance of meroplankton reached 94.5–100%. In summer and early autumn, with water warming up to +22.6…+26.5 °C, abundance of larvae of benthic invertebrates in zooplankton naturally rose. In July, a density peak (13×10^3 ind.·m^{-3}) was ensured by larvae of a bivalve *M. lineatus* (80% of the total abundance of meroplankton). Meroplankton contribution to total zooplankton was 67%. In August, water temperature reached +26.7 °C, and we recorded elevated density of larvae of bivalves *C. gallina* and *M. lineatus*: up to 6.6×10^3 ind.·m^{-3} in total (77.4% of the total abundance of meroplankton).

In 2018–2021, larvae of benthic invertebrates of 37 taxa were registered in the seaport of Taman area: Polychaeta, 12; Phoronida, 1; Cirripedia, 4; Decapoda, 10; Bivalvia, 6; Gastropoda, 2; and Hydrozoa, 2. Long-term mean abundance of meroplankton, $(10 \pm 4.67) \times 10^3$ ind.·m^{-3}, differed much from that of 2013–2014; it was on average 3.5 times higher than in previous years [Remizova, Teyubova, 2021]. Larvae of bivalves made a significant contribution to a larval pool in 2018–2021 (80% of the total abundance of zooplankton). In the dynamics of meroplankton abundance, three density peaks were determined: in July (12.9×10^3 ind.·m^{-3}), August (8.5×10^3 ind.·m^{-3}), and September (9.9×10^3 to 15.4×10^3 ind.·m^{-3}) (see Fig. 2). Larvae of bivalves prevailed in summer and early autumn (76–93% of the total abundance of meroplankton). In June, with a rise in water temperature up to +24.8 °C, meroplankton abundance reached 1.9×10^3 ind.·m^{-3}. In the seaport area, larvae of bivalves *S. subtruncata* and *M. lineatus* dominated ensuring 57.8% of the total abundance of meroplankton. Along with larvae of these species, larvae of a gastropod *B. reticulatum* were recorded in small abundance (26.3%), as well as larvae of polychaetes (5.2%), barnacles (6.3%), *etc.* Meroplankton share in zooplankton reached 55%. In July, meroplankton was abundant largely due to larvae of a bivalve *M. lineatus* (9.9×10^3 ind.·m^{-3}), a gastropod *B. reticulatum* (1.2×10^3 ind.·m^{-3}), a barnacle *A. improvisus* (0.8×10^3 ind.·m^{-3}), polychaetes *P. cornuta* and *N. hombergii* (0.9×10^3 ind.·m^{-3} in total), and decapods *U. pusilla*, *Diogenes pugilator*, and *Brachynotus sexdentatus* (0.1×10^3 ind.·m^{-3} in total). Meroplankton contribution to the total abundance of zooplankton increased to a mean of 74.8%. In August, we established a rise in meroplankton density due to mass release of *C. gallina* and *M. lineatus* larvae (9.9×10^3 ind.·m^{-3}). Along with the latter, significant densities of planktonic larvae were observed for a barnacle *A. improvisus*, gastropods *B. reticulatum* and *Rapana venosa*, a polychaete *Malacoceros fuliginosus*, and others. An autumn generation of larvae of benthic invertebrates was represented chiefly by those of bivalves *C. gallina* and *M. lineatus* (80.8–93.9%). From late autumn to early spring, meroplankton mostly consisted of *A. improvisus* larvae (91.1–94.7%).

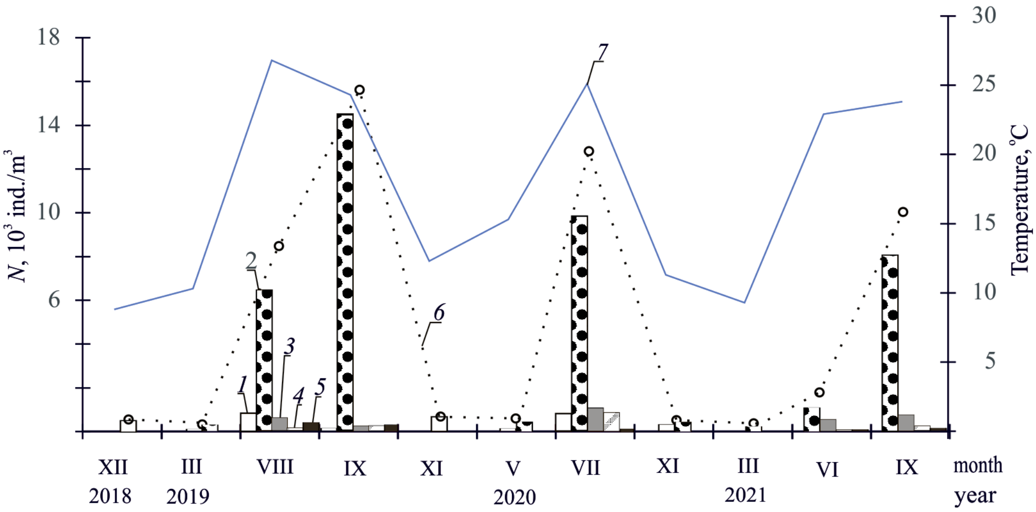

Fig. 2. Dynamics of meroplankton abundance (N, left axis) and water temperature (right axis) in the seaport of Taman area (2018–2021): 1, barnacles; 2, bivalves; 3, gastropods; 4, polychaetes; 5, decapods; 6, total meroplankton; 7, temperature

Hence, larvae of benthic invertebrates of the Kerch Strait and Taman coastal waters of the Black Sea are characterized by higher taxonomic richness, in contrast to meroplankton of the northern Kerch Strait in the area of the seaport Kavkaz and Sea of Azov [Selifonova, 2008; Selifonova, Samyshev, 2022].

However, taxonomic composition registered (47 taxa) is less diverse in comparison with that for other areas of the Black Sea. Specifically, at the well-studied sites, the southwestern Crimea and northeastern Black Sea, researchers recorded 63 and 73 taxa, respectively [Lisitskaya, 2018; Selifonova, 2012]. In the Kerch Strait and Taman coastal waters of the Black Sea, the list of dominant meroplankton species in summer season consisted of larvae of bivalves, and it differed from lists for polluted bays and harbors of the northeastern Black Sea and southwestern Crimea. In June–July, bivalves were represented mostly by *Cerastoderma* sp. in the Taman Bay; *Cerastoderma* sp. and *S. subtruncata* in the Tuzla Spit–Panagiya Cape; and *S. subtruncata* and *M. lineatus* in the Zhelezny Rog Cape–Bugazsky Liman. Pretty high density of meroplankton, up to 30.6×10^3 ind.·m^{-3}, against the backdrop of the lowest taxonomic diversity (17 taxa) was noted only in the semi-closed Taman Bay affected by the Sea of Azov waters. Similar early-summer peaks of meroplankton density were observed for the Sea of Azov [Selifonova, 2008]. As already mentioned, high density of phoronid larvae was reported only for this area and the Anapa Bay, whereas usually these larvae rarely occur in meroplankton [Selifonova, 2012]. In the Tuzla Spit–Panagiya Cape, larvae of decapods were represented mainly by *U. pusilla* which, as noted above, used to be a rare and even protected species in several countries of the Black Sea region. To date, abundance of its larvae increased to 0.24×10^3 ind.·m^{-3}. Meroplankton contribution to the total abundance of zooplankton was the most noticeable there accounting for 62–65%.

In spite of heavy shipping traffic and anthropogenic pollution, meroplankton density at the study site is characterized by sufficient reproductive potential. In the seaport of Taman area, a summer–autumn peak in abundance was recorded (13×10^3 to 15.4×10^3 ind.·m^{-3}) governed by mass release of larvae of bivalves *C. gallina* and *M. lineatus* which is typical for the Black Sea waters. Larvae of a barnacle *A. improvisus* prevailed from late autumn to early spring.

The results obtained provide an insight into ecological state of marine pelagic and benthic communities in the Kerch Strait and Taman coastal waters of the Black Sea. An increase in larval density of *U. pusilla*, a previously rare decapod, was registered for the Kerch Strait, and it confirms expediency and necessity of further study of meroplankton biodiversity in the Taman Peninsula coastal waters.

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ТАКСОНОМИЧЕСКИЙ СОСТАВ И МНОГОЛЕТНЯЯ ДИНАМИКА ЧИСЛЕННОСТИ МЕРОПЛАНКТОНА В ПРИБРЕЖНЫХ ВОДАХ ТАМАНСКОГО ПОЛУОСТРОВА (КЕРЧЕНСКИЙ ПРОЛИВ, ЧЁРНОЕ МОРЕ)

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В исследуемом районе от Таманского залива до Бугазского лимана идентифицировано 47 таксонов личинок донных беспозвоночных: Polychaeta — 14, Cirripedia — 4, Phoronida — 1, Decapoda — 10, Bivalvia — 13, Gastropoda — 3, Hydrozoa — 2. В полузакрытом Таманском заливе, находящемся под влиянием вод Азовского моря, отмечена самая высокая плотность меропланктона (до $30{,}6 \times 10^3$ экз.·м$^{-3}$) при низком таксономическом разнообразии (17 таксонов). В Таманском заливе в июне и июле меропланктон был представлен преимущественно двустворчатыми моллюсками *Cerastoderma* sp.; в районе косы Тузла и мыса Панагия — *Cerastoderma* sp. и *Spisula subtruncata*; в районе мыса Железный Рог и Бугазского лимана — *S. subtruncata* и *Mytilaster lineatus*. Несмотря на интенсификацию судоходства и значительное антропогенное загрязнение исследуемого полигона, высокая плотность меропланктона обеспечивала достаточный репродуктивный потенциал района. В акватории морского порта Тамань зарегистрирован летне-осенний пик численности (от 13×10^3 до $15{,}4 \times 10^3$ экз.·м$^{-3}$), обусловленный массовым выходом личинок двустворчатых моллюсков *C. gallina* и *M. lineatus*, что характерно для вод Чёрного моря. Увеличение в Керченском проливе плотности личинок ранее редкого вида десятиногих ракообразных *Upogebia pusilla* ($0{,}24 \times 10^3$ экз.·м$^{-3}$) подтверждает целесообразность и необходимость дальнейшего изучения биоразнообразия меропланктона в прибрежных водах Таманского полуострова.

Ключевые слова: меропланктон, Таманский залив, коса Тузла — мыс Панагия, мыс Железный Рог — Бугазский лиман, порт Тамань