CONSIDERATIONS REGARDING THE FREE-LIVING MARINE NEMATODA IN THE NORTHERN AREA OF THE ROMANIAN BLACK SEA COAST

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Abstract
From seven quantitative samples performed in the northern area of the Romanian coast of the Black Sea, 38 species of free-living Nematoda were determined. Thus, the species richness of observed Nematoda at the Romanian Black Sea coast increased of eight species (*Enoploides brevis, E. hirsutus, Chromadorella pontica, Paramonhystera elliptica, Theristus littoralis, Terschellingia pontica, Sphaerolaimus gracilis, Sphaerocephalum crassicauda*).
Keywords: Zoobenthos, Black Sea, Biodiversity

Introduction
The scientific literature concerning Nematoda at the Romanian Black Sea coast are quite poor and each paper presents some species that were not described before in the studied area [1-6].

Material and Methods
The present paper is based on a research study where Nematoda species were identified from seven quantitative samples. In the period May-July 2003, the samples were obtained by collecting 100 cm^2 of sediment at different depths (3m, 5m, 15m, and 20m) in the northern part of the Romanian Black Sea Coast, between Sf. Gheorghe (near the mouths of the Danube) and Mamaia, on sedimentary (mud and fine sand) sea bottom.

Tab. 1. The qualitative and quantitative structure (D= ind·m^{-2}) of the free-living marine nematoda in the northern area of the Black Sea in 2003

Species	Sf. Gheorghe area	Mamaia area
Enoplus quadridentatus Berlin, 1853	3600	2100
Enoplus littoralis Filipjev, 1918	33200	7200
Enoploides brevis Filipjev, 1918	15200	0
Enoploides hirsutus Filipjev, 1918	2400	0
Viscosia cobbi Filipjev, 1918	12000	400
Viscosia minor Filipjev, 1918	1600	2600
Viscosia glabra Bastian, 1865	800	0
Oncholaimus dujardini de Man, 1868	12000	600
Oncholaimus campylocercoides C. et Schu.-Stekh., 1993	32000	16600
Metoncholaimus demani zur Strassen,1894	3200	0
Anoplostoma viviparum Bastian, 1865	9000	0
Sabatieria clavicauda Filipjev, 1918	77200	0
Sabatieria longicaudata Filipjev, 1922	1600	0
Cyatholaimus gracilis (Eberth, 1863) Bastian, 1865	0	1300
Halichoanolaimus clavicauda Filipjev, 1918	21200	5200
Chromadora nudicapitata Bastian, 1865	7000	11200
Euchromadora striata Eberth, 1863	0	1400
Chromadorella pontica Filipjev, 1922	14000	0
Paramonhystera elliptica Filipjev, 1918	0	15000
Penzacia euxina Filipjev, 1918	6000	0
Theristus setosus Bütschli, 1874	800	0
Theristus maeoticus Filipjev, 1922	800	119900
Theristus longicaudatus Filipjev, 1922	1600	12800
Theristus littoralis Filipjev, 1922	800	38400
Theristus latissimus Filipjev, 1922	30000	2300
Linhomoeus hirsutus Bastian, 1865	6800	0
Disconema alaima Filipjev, 1918	0	400
Terschellingia pontica Filipjev, 1918	0	3600
Terschellingia longicaudata de Man, 1907	800	0
Prosphaerolaimus eurypharinx Filipjev, 1918	0	800
Sphaerolaimus gracilis de Man, 1884	2400	0
Sphaerolaimus dispar Filipjev, 1918	23000	800
Sphaerocephalum crassicauda Filipjev, 1918	0	6000
Odontophora angustilaima Filipjev, 1918	0	6400
Axonolaimus setosus Filipjev, 1918	0	1200
Axonolaimus ponticus Filipjev, 1918	0	2400
Bathylaimus assimilis de Man, 1922	6000	4300
Bathylaimus cobbi Filipjev, 1922	800	2800

The density data is expressed as number of individuals per 1 square meter (D= ind·m^{-2}). A total of 38 species of free-living Nematoda were determined (table 1).

Results and Discussion
The determined species belong to four orders (Enoplida, Chromadorida, Monhysterida and Areolaimida), respectively 11 families (Enoplidae, Oncholaimidae, Comesomatidae, Cyatholaimidae, Choanolaimidae, Chromadoridae, Monhysteridae, Linhomoeidae, Sphaerolaimidae, Axonolaimidae and Tripyloididae). Among them, the families Oncholaimidae and Monhysteridae include seven species each, followed by Linhomoeidae with five species and Enoplidae and Axonolaimidae with four species each. Eight of the total number of observed species (*Enoploides brevis, E. hirsutus, Chromadorella pontica, Paramonhystera elliptica, Theristus littoralis, Terschellingia pontica, Sphaerolaimus gracilis, Sphaerocephalum crassicauda*) proved to be new records at the Romanian coast of the Black Sea. The species diversity of Nematoda living on muddy substrata (Sf. Gheorghe area)(28 species) and their density (between 800 ind·m^{-2} and 77 200 ind·m^{-2}) are remarkable. Ten species (35,7 %) have densities which reach over 10 000 ind·m^{-2}. In the area of Mamaia resort, there were found only 24 species on fine sand bottom. Their density varies between 400 ind·m^{-2} and 119 900 ind·m^{-2}, the density of six species (25,0 %) reaching values greater than 10 000 ind·m^{-2}. The densities of *Theristus littoralis* (38 400 ind·m^{-2}) and of *Th. maeoticus* (119 900 ind·m^{-2}) were particularly high. Sixteen species are ubiquitous (*Enoplus quadridentatus, E. littoralis, Viscosia cobbi, V. minor, Oncholaimus dujardini, O. campylocercoides, Sabatieria clavicauda, Halichoanolaimus clavicauda, Chromadora nudicapitata, Theristus maeoticus, Th. longicaudatus, Th. littoralis, Th. latissimus, Sphaerolaimus dispar, Bathylaimus assimilis, B.cobbi*) and are present in each zone sampled. In terms of values of density, the representative species of free living Nematoda for the sedimentary zone in the North area of the Romanian Black Sea coast are *Sabatieira clavicauda* and *Theristus maeoticus*. In terms of values of density, the representative species of free living Nematoda for the sedimentary zone in the North area of the Romanian Black Sea coast are *Theristus maeoticus* (dominance = 20,41%, index of ecological significance = 34,15) followed by *Sabatieria clavicauda* (dominance = 13,05%, index of ecological significance = 19,31) and *Metaparoncholaimus campylocercoides* (dominance = 8,22%, index of ecological significance = 28,66).
In conclusion, the list of free-living marine Nematoda at the Romanian coast of the Black Sea has reached a number of 91 species, now including the new eight species recorded in the Northern area in 2003.

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