

# NEMATODA HYSTROTHYLACIUM ADUNCUN (NEMATODA: ASCARIDATA) INFECTION OF BLACK SEA SPRAT OFF THE CRIMEAN COAST IN FEEDING TIME

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Nematoda *Hystrothylacium aduncun* (Nematoda: Ascaridata) infection of Black Sea sprat at the Crimean coastal waters in feeding period was studied. The highest level of infection was observed in fish caught at Lukull cape region in Kalamit Bay, while the lowest was detected in fish collected in the site of the southern coast of Crimea. In Sudak region the main reasons, detecting the peculiarities of infection of the local groups of sprat at Crimean coastal waters are the following: 1) differences of biodiversity of food plankton organisms (the first host of the nematode); 2) regional variations of the number and biomass of zooplankton. All these reasons cause the trend and intensity of invasion transformation via food chain from copepods to sprat in various sites; 3) regional differences of hydrological regime. At the south-western coast of Crimea the intensive development of phytoplankton was shown, which results the increase of food zooplankton organisms increasing. At the southern site the periodical fluctuations and decrease of the temperature were noted at the period from May to September caused the upwelling, which was negative influence on zooplankton development and growth. This fact is negative influences on the development on sprat groups at this region and decreases the possibility of the invasion transition at the beginning of life cycle of parasite.

**Keywords:** sprat, nematode, invasion, *Hystrothylacium aduncum*.

## References

1. Gusar A. G., Getmantsev V. A. *Chernomorskiy shprot: (Raspredeleenie, povedenie, biol. osnovyi svetolova)*, 229 (M.: B. I., 1985).
2. Dascalov G., Rätz H-J. *Report of the SGMED-09-01 Review of advise on Black Sea stocks for 2009*. (23-27 March 2009, Ranco, Italy), 158 (Luxembourg, 2009).
3. Zuev G. V. i dr. Geograficheskaya izmenchivost razmerno-vozrastnoy strukturyi chernomorskogo shprota Sprattus sprattus phalericus (Risso) (Pisces: Clupeidae) i ego vnutrividovoy differentsiatsii, *Morskoy biologicheskiy zhurnal*, **1**, **1**, 24 (2016).
4. Gaevskaya A. V. *Anizakidnyie nematody i zabolevaniya, vyizyivaemye imi u zhivotnyih i cheloveka*, 223 (Sevastopol: EKOSI-Gidrofizika, 2005).
5. Pravdin I. F. *Rukovodstvo po izucheniyu ryib*, 376 (M.: Pischi. prom-t, 1966).
6. Chugunova N. I. *Rukovodstvo po izucheniyu vozrasta i rosta ryib: (metodicheskoe posobie po ihtiologii)*, 125 (M.: Izd-vo AN SSSR, 1959).
7. Byihovskaya-Pavlovskaya I. E. *Parazityi ryib: rukovodstvo po izucheniyu / gl. red. O. A. Skarlato; AN SSSR, Zool. in-t*, 123 (L.: Nauka, 1985).
8. Lakin G. F. *Biometriya*, 343 (M.: Vysshaya shkola, 1973).
9. Gluschenko A. I. Osobennosti pitaniya chernomorskogo shprota Sprattus sprattus phalericus (Risso) (Pisces: Clupeidae) i formirovaniye ego nagulnyih skopleniy, *Mor. ekol. Zhurn*, **7**, **3**, 5 (2008).
10. Zagorodnyaya Yu. A. i dr. *Sovremennoe sostoyanie zooplanktona u beregov Kryima. Sovremennoe sostoyanie bioraznoobraziya pribrezhnyih vod Kryima (chernomorskiy sektor)*. NAN Ukrayni, In-t biologii yuzhnyih morey im. A. O. Kovalevskogo, 49. (Sevastopol, 2003).
11. Ivanov V. A., Mihaylova E. N. *Apvelling v ChYornom more*, NAN Ukrayni, Morskoy gidrofizicheskiy institute, 92. (Sevastopol, 2008).