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Parasitofauna Of Productive Fish: Lower Area of The Amudarya River

Sultanov Esbosyn Kosymbetovich

Senior Lecturer of the Department of Zoology, Human Morphophysiology and Teaching Methods, Nukus State Pedagogical Institute named after Ajiniyaz, Uzbekistan

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Abstract: We analyzed this article based on our research on the parasitofauna of productive fish in the lower reaches of the Amu Darya. In this article, we have followed the practical and theoretical views of scholars such as V. Dogel, Y.N. Perevezentseva, S.O. Osmanov, and K. Ubaydullayev.

Keywords: Parasites, trichodina meridionalis, gyrodactylus sp. lech rhipidocotyle illense, carp jchthyhda necatrix, sanguinicola inermis, posthodiplostomum brevicaudatus, Dactylogyrus vastator, Dactylogyrus sp.

Introduction:

Fish are especially sensitive to the influence of various environmental factors in the early stages of their life cycle. It is during this period that, under the conditions of natural reservoirs, they perish and are destroyed in an unaccounted-for quantity, which ultimately affects their numbers and the fish productivity of the reservoir. Therefore, studying young parasites during the first months of postembryonic development is of great scientific and practical interest.

METHODS

In the Aral Sea basin, the parasites are young commercial fish from. The Syr Darya region was first studied (under the guidance of V.A. Dogel) by Y.N. Perevezentseva (1945), young mustachers in the Amu Darya and Aral Sea by S.O.Osmanov (1961). The parasites and diseases of young carp in the Tashkent region of the Republic of Uzbekistan were studied by S.O.Osmanov (1963, 1965), in the ponds of the Republic of Karakalpakstan by A.Urazbayev (1966, 1973). K. Ubaydullayev (1966, 1969) discovered 22 species of lesh and 31 species of carp in the young carp of the Akkala lake system and the freshwater Abbas bay. According to our unpublished data, the parasitofauna of young roaches from the Amu Darya delta is supplemented by species: Trichodina meridionalis, Gyrodactylus sp. Lech Rhipidocotyle illense, carp Jchthyhda necatrix, Sanguinicola inermis, Posthodiplostomum brevicaudatus. We studied the young parasites of commercial fish such as catfish, bream, and carp in 1996 and 2003. 248 young fish caught in the coastal zone of the reservoir were studied. (larvae 141, fry 32, yearlings 60, head 15). The first infection was observed in larvae with a body length of 7-9 mm (approximately 6-10 days). They have Para trichodina inciscalis and Dactylogyrus nanus. In 10-12 mm long larvae, the 10-15 day list of parasites was supplemented by Dactylogyrus crucifer and B.acheilognathi. In 13-20 mm large, but 16-30 day old larvae, the parasitofauna of merlin larvae already included 8 species. Among the newly emerged monogenea (Dactylogyrus rarissimus, D.suecicus, Paradiplozoon homoion) are cestodes (larvae (Gryporhynchus pusillum), whose infection is associated with the consumption of planktonic crustaceans. The infection of larvae with infusoria, dactylogyrids, and botriocephalus has significantly increased.

RESULTS AND DISCUSSION

The list of fry parasites (22-24 mm) includes 21 species. Among them are Caryophyllarus laticeps, whose invasion occurs during the transition (fully or partially) to benthosal nutrition. In this case, the fish, along with other bottom invertebrates, eat the oligochetes of the intermediate hosts of carnations, swallowing the spores of myxosporidia (Myxidium rhodei, Myxidium pfeifferi, Myxobolus pseudodispar) that have settled to the bottom of the reservoir.

The parasitofauna of the females, compared to the

parasitofauna of the fry, has undergone qualitative changes. However, certain quantitative studies have been observed in their infection with certain types of parasites. This is due to the increase in fish size, the increase in the amount of food consumed, as well as the influence of environmental factors.

Plover yearlings, studied in a total of 15 specimens, were infested with 15 species of parasites. Thus, 18 species of parasites have been identified in young ground squirrels under one year of age. With age, a qualitative and quantitative enrichment of the parasitofauna occurs. Young catfish in the Akchakul lake were studied in the amount of 155 specimens. 15 species of parasites were recorded in the fry and females, of which 12 species (Ichthyophthirius multifiliis up to 26.6%, Dactylogyrus auriculatus 40.0, D.wunderi 46.6, D.falcatus 33.3, Diplozoon paradoxum 26.6, Rhipidocotyle illense 40.0%, Diplostomum spathaceum-20.0%, (Ergasilus sieboldi) actively infected them.

The larvae of Gryporhynchus pusillum enter the body when they eat the intermediate hosts, the paddle-footed crustaceans. Many species of fescue fescue parasites are poorly infected. This can be explained by the conditions of contact between the host and the parasite, the small number of the latter in the area where the young are caught. (Osmanov, Yusupov, 1977).

Dactylogyrus wunderi species (46.6%, infestation intensity 1-24 specimens) are more prone to parasitic infection. The increase in the percentage of infection with Diplozoon paradoxum (55.0%), Dactylogyrus auriculatus (60.0 infection intensity 2-72 specimens, average 17.6), D.falcatus (50 infection intensity 1-38 specimens, average 93) indicates increased contact with older fish. D. underi infection was weak (30.0%). Ichthyophthyrus was also frequently encountered in yearlings (45.0%, invasion intensity 1-11 specimens).

Carp. The carp larvae (103 specimens studied) were infested with 9 species of parasites. In individuals with a body length of 10-12 mm, infusoria (Jch. Thyophthirius, Trichodinella epizootica) monogens (Dactylogyrus vastator, Dactylogyrus sp.), actively infecting fish.In larvae with a body length of 13-17 mm, among the newly mated, along with actively infecting choline species (Dactylogyrus anchoratus (100%), D.extensus 16.6-35.7%, there were also those that were infected by eating paddle-footed shrimp (larvae of Gryporhynchus pusillum), echchysts (Eimeria carpelli). Simultaneously, infection intensified (Trichodinella epiootica (42.8%), D.actylogyrus vastator (infection activity 1-21 specimens. Bothriocephalus opsariichthydis (32.1%).The parasitofauna of carp fry is represented by 13 species. Myxobolus dispar, Gyrodactylus medius, Eudiplozoon nipponicum, Diplostomum spathaclum. Eimeria carpelli (51.7%), D.actylogyrus anchoratus (up to 82.7%), D.vastator (100% invasion intensity 1-40 specimens. Average 15.1), B.othriocephalus 51.7%). In females, the number of parasite species increased to 15 (Table 1 of the appendix). In the territory of Lake Akchakul, Ctynaea cyprinid, Myxobolus dispar, Dactylogyrus anchoratus, and Zernaea elegans were recorded for the first time in young carp. The intensity of infection by Eimeria carpelli (80.0%), D.anchoratus (92.0%), B.opsariichthydis up to 17 (115 specimens) increased. The strong infection of young animals of different ages with Trichodinella epizootica (20.0-60.0%), Schthyophthyrius multifilis (8.8-48.0%), monogenia of D.anchoratus, D.vastator (35.5-100%), B.opsariichthydis (10.0-92.0%). Explain the favorable contact conditions in the corded section of the lakes. It can be said that the formation of the young parasitofauna of the studied fish follows previously established patterns (Dogel, 1933, 1958, Polyansky and Shulman, 1956).

CONCLUSION

1. The first to appear in the young are parasites with direct development (infuzories, monogenea). Among the species that develop with the change of hosts, Diplostomum and others are among the first to actively penetrate the fish's body.
2. Later, when transitioning to a zooplankton diet, young fish exhibit B.opsarichthydis Gryporhynchus pusillum, whose intermediate hosts are paddle-footed crustaceans. The transition to benthosal nutrition causes the infection of helminth species by intermediate hosts of these invertebrates. In this type of feeding, the fish also swallow the oocysts of spore-bearing organisms and the spores of knidosporidia.
3. In young commercial fish of the Akchakul lake (pelt, catfish, carp), the invasion intensifies with age and becomes more diverse. Changes in the species and quantitative composition of young parasitofauna are closely related to the growth, development, and qualitative changes in their ecology.

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