Paracoenogonimus ovatus mechanism of regulation (TREMATODA, CYATHOCOTYLIDAE)

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Data describing the distribution and abundance of Paracoenogonimus ovatus metacsercariae as roach (Rutilus rutilus), different age groups. With increasing age of ram indicators prevalence and saturation index first rose and then fell. Fish ages 0+ – + 2 had the lowest rates of infection, prevalence was 30,09 % and the saturation index was 12 copies. Fish in the age range + 3 – + 4 had higher rates of infestation: prevalence to – 38,01 %, and the saturation index was 18 copies. At the age of 7 + – 5 + indicator prevalence significantly increased compared to the previous age group and reached 82,3 %, the index is not significantly different saturation – 22 copies. Roach age + 8 – + 10 characterized decrease prevalence to 71,6 %, but the saturation index widened and it was the highest in this age group –39 copies. In the group of fish age group 11 parameters prevalence and others decreased compared to previous and were 66,7 % and 32 copies, respectively.

We believe that such separation of metacercaria in ram by age origin, due to the predominant type of power and stay in its layers of water throughout his life.

We know that the basis of resistance and susceptibility of fish to pathogens helminths are biochemical, immunological and genetic mechanisms that determine the specificity of the parasite to the host and the difference in levels infestation different local populations. It is believed that immunity to parasites formed more frequently in cases where fish subjected to intensive infestation at a young age.

It should also be noted that along with live metacercaria met and those that did not show signs of his life. The surviving foreign and hyaline membranes, such metacercaria had disrupt content. The largest number metacercaria that did not show signs of life, watching the fish age range + 8 – + 10.

For its development in the host of parasites there are a number of devices such as morphological, physiological, environmental and others. However, the basis adjustment is still biochemical. Because, once in the host organism, worms are not distinguished as "wrong" because they trigger healing mechanisms of the immune system of the host. As you know, foreign proteins that the body of fish caught, causing the synthesis of antibodies. Over time, this leads to an immune response in fish. Established that the parasites are able to modulate the immune response and to block the host immune response and developments. Basically, this process depends on the globulin proteins that are responsible for the formation of antibodies.

In the absence of the system of "turn on" protein compatibility, parasites are destroyed by the immune system of the host or stop the development of the latter at an early stage. Increased parasite antigenic activity increases under formation of antibodies that the immune system, leading to no healing parasites and their removal.

So, to prevent diseases and human battering ram requires constant monitoring of species composition and quantity of fish contamination metacercariae trematodes.