Peculiarities of adaptation of *Stichorchis subtriquetra* (Trematoda, Cladorchiidae) in beaver populations

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Thirty-three helminth species have been registered in two species of beaver. The basis of helminthofauna of beavers is monospecific species of helminths. The manifestation of monospecificity in helminths is the result of the joint evolution of the beaver-parasite system.

The formation of a parasitic system was primarily affected by:
First, the features of the biology of the beaver.
Secondly, the habitat of the beaver is the ecological conditions of the biotopes.

Among the helminths, the most common is the trematode *Stichorchis subtriquetra*. For *S. subtriquetra*, high rates of infection have been identified - the extent of infection and the abundance index (the abundance index) of helminths. This trematode affects the population dynamics of beavers.
Life cycle of *Stichorchis subtriquetra*:

a - Bithyniidae mollusks; b – cercaria *S. subtriquetra*; c – metacercaria *S. subtriquetra*.

The life cycle is dixental, includes the intermediate host - freshwater mollusks, free-living stages - cercariae and metacercaria. Metacercaria is an inflectional larva, attached to aquatic plants. Maritas of *S. subtriquetra* parasitize the large intestine of beavers.
The ecology of beavers of different ages influences the abundance dynamics (abundance index) of hemipopulations of *Stichorchis subtriquetra*.

The age of beavers, the features of feeding and behavior of beavers affect the dynamics of abundance (an abundance index) of hemipopulations of *S. subtriquetra*.
In the beaver yearlings (4-11 mounts), the maximum abundance of *S. subtriquetrus* was revealed and the highest rate of growth in the number of *S. subtriquetrus* hemipopulations was recorded. The index of abundance of *S. subtriquetrus* increases six-fold in beavers at the age of 7-10 months in relation to the first period of infection (3-4 months). The data obtained show that *S. subtriquetrus* can affect the number of beavers' yearlings.
Beaver at the age from one to two years registered a tendency to decrease the index of abundance of maritas *S. subtriquetras* by 30% in comparison with juveniles.

During the year, a seasonal variation in the infection of year-old beavers was detected, the maximum of *S. subtriquetras* marked in summer and autumn.
In adult beavers, a significant decrease in the abundance index of *S. subtriquetrus* is registered. The results obtained indicate the stabilization and stable functioning of the parasite-host system - *S. subtriquetrus* + *C. fiber* in adult beavers.
The most active phase of infection of *S. subtriquetra*us beavers was detected in summer and autumn. Maximum number of maritas of *S. subtriquetra*us in beaver population was registered in the autumn, the minimum - in the spring.
Life expectancy of maritas of *S. subtriquetrus* is 30 months (2.5 years) and includes three periods: pre-reproductive (2 months), reproductive (28 months) and post-productive (less than 1 month). The greatest productivity in maritas of *S. subtriquetrus* is noted at the age of two to six months, maximum at the age of three months.
Dynamics of the number of different age groups of *S. subtriquetrus* in the Voronezh population of beavers. The highest numbers are registered among maritas in size groups from 5 to 13 mm.
The daily productivity of the adult marita *S. subtriquetru* averages 60 eggs.

By the number of eggs of *S. subtriquetru*, as a result of studies of feces, it is possible to determine the intensity of infection of the beaver - the number of maritas in the infected animal.
Thank you for attention!