Theromyzon tessulatum (O.F. Müller, 1774) (Clitellata: Hirudinida: Glossiphoniidae) – morphometry and structure of the digestive and reproductive systems

Aleksander Bielecki, Iwona Jeleń, Joanna Cichocka, Aldona Walerzak

Department of Zoology, Faculty of Biology and Biotechnology, University of Warmia and Mazury in Olsztyn,

Oczapowskiego 5, 10-719 Olsztyn, Poland

Corresponding Author: Iwona Jeleń; e-mail: iwona.jelen@uwm.edu.pl

Theromyzon tessulatum (O.F. Müller, 1774) is a species inhabiting Palearctic, Nearctic, Neotropical and Ethiopian ecozones. This leech commonly infects aquatic birds.

The aim of this study was the morphometric analysis as well as diligent description of the structure of the digestive and reproductive systems of *T. tessulatum*. The leeches were collected in Lake Jeziorak. Biometrics and internal morphology were analysed in 60 and 35 individuals, respectively.

Morphometric analysis: The examined individuals had average body length and weight 10.8 mm and 0.158 g, respectively. After performing the Spearman correlation test, the null hypothesis has been rejected and a correlation between the length and weight of the body has been found. Spearman coefficient value R (R = 0.42569). The parameters describing the body form are as follows: L/D₁ = 1.50; C^1_1/d_1 = 4.30; C^1_1/D_1 = 0.40; R_1/M_1 = 0.50; C^1_1/C_1 = 1.50; L_1/D_1 = 1.00; D_1/N_1 = 1.70; S_1/S_2 = 1.40; L_2/D_2 = 0.90; D_2/N_2 = 2.00; K_1/K_2 = 0.40; C^1_2/d_7 = 3.30; C^1_2/D_2 = 0.30; R_2/M_2 = 1.80; C^1_2/C_2 = 1.10; L_2/L_1 = 1.50; D_2/D_1 = 1.70; N_2/N_1 = 1.50; C^1_2/C^1_1 = 1.20.

Structure of the digestive system: The study showed no differences in the structure and repeatability in the construction of the digestive system of the analysed individuals. Number of splanchnomeres of the crop and intestine amounted to seven and five, respectively and proboscis in all of the individuals had a length of 3 neurosomites.

Structure of the reproductive system: Gonopores in the analysed species were separated by 4 annuli. Analysis of the structure of the reproductive system showed a variation in characteristics such as length of ejaculatory ducts and ovaries in analysed individuals.

The ejaculatory ducts were located at the 5.0–21.0 ganglion of ventral chain nervous and had a length of 12–16 ns. The ovisacs were located at the 7.0–15.0 ganglion of ventral chain nervous and had a length of 4–8 ns. In the male reproductive system there are 6 pairs of testes.

The results of the study have provided important data to the description of *T. tessulatum*.