

## Parasitic Metazoa in Freshwater Bream (*Abramis brama* L.) from selected lakes of the Drawa Watershed Area

Iza Raulin

Department of General Zoology, Faculty of Biology, University of Szczecin, ul. Felczaka 3c, 71-412 Szczecin, Poland

Corresponding Author: Iza Raulin; e-mail: izaraulin@gmail.com

As bream has the highest economic importance among Polish freshwater fish, it is a relatively well-known subject of parasitic research. Previous studies have mainly focused on fish from the Vistula and Odra and Lake Dąbie, as well as Lakes Warmia and Masuria. However, as there has been no research on the population of bream from the Drawa Watershed Area, the present study examines the structure of infection in fish from Lake Lubie and Lake Osiek.

The research was conducted on bream caught in the first half of 2012. In total, 49 fish came from Lubie and 20 from Osiek. Bream from Lubie were 20.4 - 20.9 cm long and weighed within the range 115.4-316.1 g; the fish from Osiek were 21.9-31.2 cm long and weighed within the range of 106.8-308.2 g.

Each fish underwent parasitic examination. The analysis included skin, muscles, gastrointestinal tract, swim bladder, eyes and gills. All the organs were examined under the stereoscopic microscope. The parasites were preserved in 70% alcohol (nematodes in alcohol with 5% glycerine). After setting, these were dyed and solid preparations were produced.

Prevalence of parasitic Metazoa was 100% in the fish from Lubie and 95% in those from Osiek. In the analysed bream, six species of parasites and one collective species were found. Metacercariae of *Diplostomum* spp. dominated, and these occurred in both vitreous body (prevalence 73.5%) and lens (93.9%), with a maximum intensity of 114 (mean value 27.8) for Lake Lubie. In Lake Osiek, the prevalence was 10% in the vitreous body and 95% in the lens, with a maximum intensity of 184 (mean value 5.1). In the fish from Lake Osiek, *Tylodelphys clavata* was observed in vitreous body (30%, range 1-11). Bream from both lakes were infected with *Ergasilus sieboldi* (44.9%, int. 7, mean 2.1 from Osiek; 35%, int. 7, mean 2.2 from Lubie), *Raphidascaris acus* (42.9%, int. 5 and 60%, int. 4, respectively), *Caryophyllaeus laticeps* (36.6%, int. 12 and 40% and int. 6, respectively) and metacercariae of *Posthodiplostomum cuticola* (20.4%, int. 21 and 30% and int. 58, respectively). *Asymphylogora imitans* was seldom observed (Lubie 6.1%, Osiek 25%). Only one fish from Lake Lubie possessed *Diplozoon paradoxum*.

Metazoa observed in bream from Drawa watershed area are polyxenic species parasitizing in or on different parasitifiers, and monoxenic ones specific only for cyprinids.