

The first record of *Gyrodactylus latus* Bychowsky, 1933 (Monogenea, Gyrodactylidae) from *Cobitis elongatoides* Bacescu et Maier, 1969 (Teleostei, Cobitidae) in Poland¹

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ABSTRACT. *Gyrodactylus latus* Bychowsky, 1933 (Monogenea, Gyrodactylidae) was found on fins of *Cobitis elongatoides* Bacescu et Maier, 1969 (Teleostei, Cobitidae) from tributaries of the Stobrawa River (Odra Basin, Silesia, Poland). It is new to the Polish parasite fauna; its description, measurements, and figures are presented.

Key words: *Gyrodactylus latus*, Gyrodactylidae, Monogenea, *Cobitis elongatoides*, Poland

Introduction

The native fauna of Gyrodactylidae parasitizing cobitid fishes (Cobitidae) includes two species: *Gyrodactylus cobitis* Bychowsky, 1933 recorded from the spined loach (*Cobitis taenia* L.) and weatherfish (*Misgurnus fossilis* L.), and *Gyrodactylus luckinensis* Prost, 1981 from the weatherfish [1]. During helminthological examination of the second representative of the genus *Cobitis* – the Danube loach (*Cobitis elongatoides* Bacescu et Maier, 1969), recently discovered in Poland, a monogenean species, not previously recorded from Poland, was found on its fins. Its description is presented below.

Material and methods

Eighty one specimens of the Danube loach *Cobitis elongatoides* Bacescu et Maier, 1969 (Cobitidae, Teleostei) and its polyploid hybrids were subject to standard parasitological dissection.

Electrofishing was conducted from January till November 2007 in the Budkowiczanka river – a left bank tributary to the Stobrawa river (Odra river basin) in Silesia. The site is located above the village of Zagwiździe (Opole voivodeship, Murów district). The fish were transported to the laboratory in plastic barrels with river water and subject to standard helminthological dissection. The isolated monogeneans were preserved according to Ergens [2] in glycerin and ammonium picrate, measured, drawn and photographed. The identification was based on Gusev's [3] key and Ergens's [4] redescription. The specimens are deposited in the helminthological collection of the Department of Systematics and Ecology of Invertebrates, Wrocław University of Environmental and Life Sciences.

Results and discussion

Examination of fins of the studied fish yielded several dozen specimens of monogeneans, which were identified as *Gyrodactylus latus*

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Table 1. Measurements mm of haptor hard parts of *Gyrodactylus latus* Bychowsky, 1933 from *Cobitis elongatoides* in relation to the data of other authors

Character	Lom and Ergens [6]	Ergens [4]	Gusev [3]	Own material
Total length of anchors	0.052–0.055	0.050–0.057	0.050–0.057	0.058–0.060
Length of shaft	0.040–0.042	0.040–0.043	0.040–0.044	0.043–0.044
Length of root	0.016–0.018	0.015–0.018	0.015–0.019	0.019–0.020
Length of point	0.026–0.028	0.022–0.027	0.022–0.028	0.022–0.024
Dorsal bar – width	0.014–0.015	0.013–0.017	0.009–0.014	0.012–0.014
Dorsal bar – length	0.001–0.002	0.001–0.002	0.001–0.002	0.002–0.003
Ventral bar – width	0.018–0.020	0.016–0.019	0.013–0.019	0.014–0.016
Ventral bar – length	0.006–0.008	0.006–0.008	0.006–0.007	0.006–0.007
Length of membrane	0.012–0.014	–	0.012–0.014	0.012–0.014
Length of process of ventral bar	–	–	–	0.001
Total length of marginal hooks	0.018–0.020	0.019–0.020	0.019–0.021	0.018–0.021
Length of sickle	0.006–0.007	0.006–0.007	0.007	0.005–0.006
Length of basal part of sickle	–	–	–	0.002–0.003
Width of basal part of sickle	–	–	–	0.003–0.004

Bychowsky, 1933. The prevalence of infection was 56%, and the intensity ranged from 1 to 21 individuals per fish (mean 3.7). Since the Polish ichthyoparasitological literature contained no information on the occurrence of *G. latus*, the species appears to be new to the fauna of Poland. Its morphology and biometrics are presented below.

Description (n=16). Total length of anchors: 0.058–0.060 mm, length of shaft: 0.043–0.044 mm, root: 0.019–0.020 mm, point: 0.022–0.024 mm. Dorsal bar rod-shaped with a semicircular hollow in the middle. Measurements of dorsal bar: length 0.002–0.003 mm, width 0.012–0.014 mm. Ventral bar provided with small anterolateral processes and a tongue-shaped, longitudinally ribbed membrane. Length of ventral bar 0.006–0.007 mm, width 0.014–0.016 mm, membrane length 0.012–0.014 mm, length of process of ventral bar 0.001. Total length of marginal hooks 0.018–0.021 mm. Hook body with a massive blade base, base wider than long, length of sickle 0.005–0.006 mm, length and width of basal part of sickle: 0.002–0.003 × 0.003–0.004 mm (Fig. 1.).

The morphology of the examined specimens agrees with the descriptions contained in Ergens's [4] redescription and Gusev's [3] key. Comparative measurements of haptor hard parts are presented in Table 1. Analysis of our results in relation to the data of other authors shows slight biometrical differences concern to the measurements of components of the anchors which are within the upper range given in the species descriptions.

Literature review shows that, next to Bulgaria, the Czech Republic, Romania, European Russia and former Yugoslavia, Poland is the fifth country where the parasite was recorded. Both the species description and most previous data on the occurrence of *Gyrodactylus latus* pertain to the spined loach – *Cobitis taenia* L. (Cobitidae). Harris et al. [5] point to a second host, a member of Balitoridae – *Lefua costata* (Kessler, 1876). In the light of the presented information the Danube loach *Cobitis elongatoides* Bacescu et Maier, 1969 is a new – third – host of *Gyrodactylus latus*.

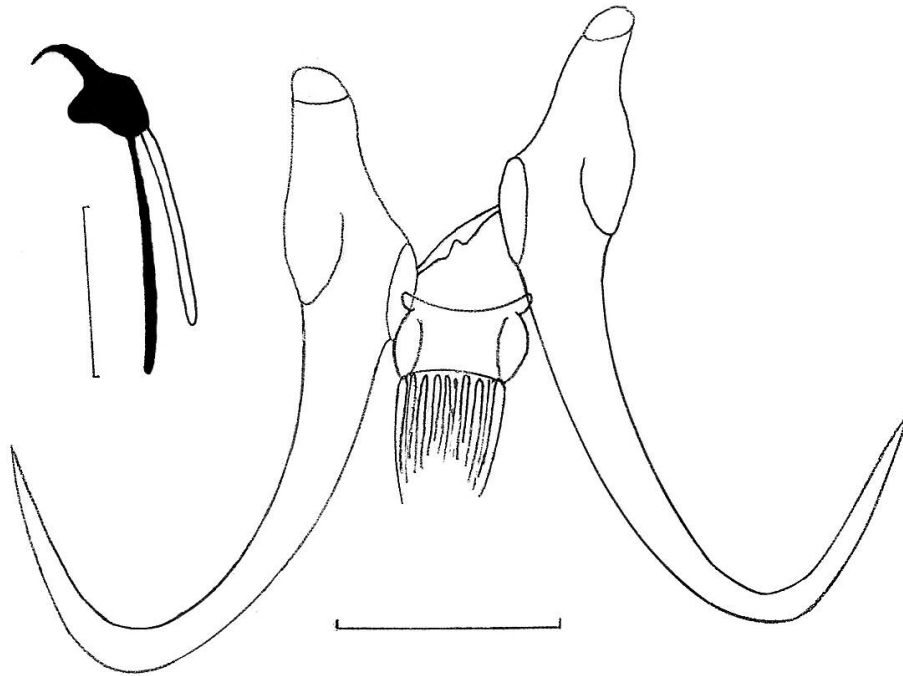


Fig. 1. *Gyrodactylus latus* Bychowsky, 1933. Anchor (scale bar: 30 μ m) and marginal hook (scale bar: 25 μ m).

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