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Research Note

First record of *Octomacrum europaeum* Roman et Bychowsky, 1956 on the gills of spirlin *Alburnoides bipunctatus* (Bloch, 1782) in north-eastern Europe

E. DZIKA

Department of Medical Biology, Faculty of Medical Science, Warmia and Mazury University, Żołnierska Street 14c, 10-561 Olsztyn, Poland; E-mail: *e.dzika@uwm.edu.pl*

Summary

Octomacrum europaeum (Monogenea: Octomacridae) was collected, for the first time in north-eastern Europe, from the gills of spirlin (*Alburnoides bipunctatus)*. Morphometric characters were compared with those of other populations and conform to the original description of the species.

Keywords: *Octomacrum europaeum*; Octomacridae; spirlin; Cyprinidae; Europe

Octomacrum europaeum Roman et Bychovsky, 1956 is a specific parasite of the spirlin (*Alburnoides bipunctatus*). The species was first described by Roman and Bychowsky (1956) from the gills of spirlin in Romania. The genus *Octomacrum* contains 6 species of which a single one has been recorded in Europe on the spirlin (Cyprinidae). The remaining 5 species are known from catostomids and cyprinids in North America (Lambert & Le Brun, 1988; Hoffmann, 1999). The *O. europaeum* life cycle has not been studied in any detail. In Poland, Prost (1993) found the species on the gills of spirlin in the stream Wołkowyja (District of Krosno, southern Poland), but failed to provide a description or drawing, whereas Lucky (1959) and Matejusova and Koubkova (2002) reported the species from the River Dyje in the Czech Republic.

Examination of 10 spirlins (*A. bipunctatus*) measuring 8.5–11 cm and weighing 3.5 – 9.6 g, caught in the River Pasłęka (north-eastern Poland; 54º 1 – 55′ N; 20º 9 – 18′ E) in November 2009, yielded 10 individuals of *O. europaeum* (Fig. 1A). Nine of the 10 fish (prevalence = 90%) were infected by 1 – 2 worms. Dimensions of soft body parts (length, width, oral sucker size, pharynx, genital sucker size) were determined from one individual. The remaining individuals were placed in GAP (Malmberg, 1957) on a microscope slide with a coverslip for measurement of the attachment clamps (Fig. 1 C, E), central hooks (Fig. 1 D) as well as the genital sucker (Fig. 1 B). The measurements and photographs were taken using an Olympus light microscope, equipped with phase contrast and the Cell^ B software (Basic Imagining Software). The specimens are deposited in the helminthological collection of the Department of Medical Biology, Olsztyn University of Warmia and Mazury.

The morphometric data for the *O. europaeum* individuals examined are summarized in Table 1 and compared with data reported by other authors. Overall, the measurements

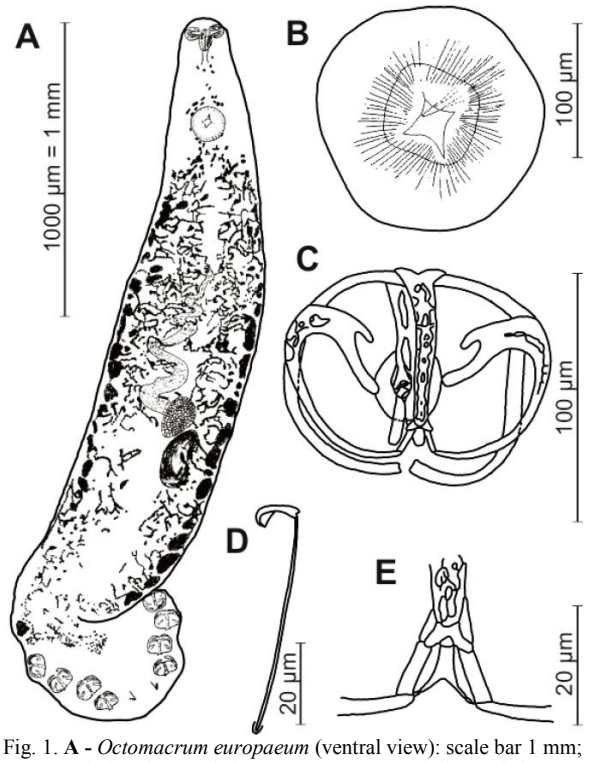

Fig. 1. **A -** *Octomacrum europaeum* (ventral view): scale bar 1 mm; **B -** Genital sucker: scale bar 0.1 mm; **C -** Morphology of clamp: scale bar 0.1 mm; **D -** Central hook: scale bar 0.02 mm; **E -** Detail of the joining sclerites of anterior part of medial plate: scale bar 0.02 mm

Table 1. Morphometrical data of *Octomacrum europaeum* specimens from the present study and according to other authors (ranges with means in parenthesis in μm)

Measurements		Khotenovsky (1985)	Matejusova & Koubkova (2002)	Present study (mean)
Dimension of body	**Length**	700 – 1500	1750	2400
	Width	–	350	586
Bucal suckers	**Diameter**	–	50 – 60 x 30	67 – 63
Pharynx	**Length**	76 – 81	80	119
	Width	33 – 43	30	54
Genital atrium	**Diameter**	189 – 216	125	160 – 162
First pair of clamps	**Length**	70 – 81	85 – 93 (89)	69 – 82 (74)
	Width	97 – 108	89 – 117 (101)	90 – 103 (96)
Second pair of clamps	**Length**	70 – 85	84 – 103 (95)	77 – 89 (83)
	Width	108 – 117	102 – 126 (114)	102 – 109 (106)
Third pair of clamps	**Length**	70 – 76	82 – 99 (92)	76 – 85 (80)
	Width	108 – 117	93 – 125 (101)	96 – 107 (101)
Fourth pair of clamps	**Length**	76 – 85	74 – 95 (84)	73 – 83 (77)
	Width	97 – 117	84 – 104 (93)	93 – 103 (97)
Copulatory apparatus	**Length of tube**	–	–	30.5
Central hooks	**Length of body**	14 – 16	14.6 – 15.2 (14.9)	15.8 – 16.2 (16.1)
	Length of the handle	47 – 48	52.9 – 54.1 (53.7)	51.1 – 53.5 (51.8)
	Length of point	6	–	5.05 – 7.31 (6.2)

taken on these new specimens correspond roughly with those reported by earlier authors from other parts of Europe. The present finding is the first record, after almost 20 years, of *O. europaeum* in Poland and the first record of the species in north-eastern Europe.

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