Opusc. Zool. Budapest, 2004 (2006), 35: 85-87

A new record of an interesting parasitic rotifer *Balatro calvus* CLAPARÉDE, 1867 in Hungary

K. SCHÖLL[1] & K. DÓZSA-FARKAS[2]

Abstract. Although widely distributed the parasitic rotifer *Balatro calvus* CLAPARÉDE, 1867 has only been sporadically observed. Here we document the presence of this species in enchytraeid (Annelida) specimens from different regions of Hungary.

Members of phylum Rotifera are microscopic aquatic invertebrates. Because of their adaptability, these opportunistic organisms are widely distributed in freshwater, marine, and limno-terrestrial habitats (WALLACE et al. 2006). Most of the approximately 1800 species are consumers of algae, bacteria and organic materials; some of them are predators, but only a few species are parasitic. Among this rare trophic type are members of the genera *Albertia*, *Balatro* and *Claria,* which are endoparasites of annelids. Here we describe the presence of *Balatro calvus* in annelid specimens from three regions in Hungary.

Balatro calvus CLAPARÉDE, 1867 is an endoparasitic rotifer that attaches to the intestinal epithelium of members of two annelid families (Fig. 1). In Lumbriculidae it has been found in *Trichodrilus* sp. However, in Enchytraeidae it has been found in five species: *Henlea ventriculosa* (D'UDEKEM, 1854)*, H. perpusilla* FRIEND, 1911*, Fridericia bulbosa* (ROSA, 1887), *Buchholzia appendiculata* (BUCHHOLZ, 1862), *Enchytraeus buchholzi* (VEJDOVSKY, 1879). The type locality is in the Seime rivulet, canton of Geneva, Switzerland (CLAPARÉDE, 1867). In central Europe it has been found only in Slovakia (KOSEL 1973). It also has been observed sporadically in South America and Australia (DE SMET & POURRIOT 1997).

Balatro calvus has a small head characterized by an annulated proboscis with a suction ring (Fig. 3-4). The posterior end of the foot has three lobes (Fig. 6). At the distal end of trunk is a fishtail shaped dorsal appendage (Fig. 5). This species has three salivary glands, and a very large vitellarium that contains eight nuclei. Its total length is 170–253 µm, and the appendage width is 45–80 µm. The dimensions of the trophi are as follows: 16–18 µm, with a 7 µm ramus, fulcrum of 5–6 µm, uncus of 3–5 µm, and manubrium of 14–17 µm (DE SMET & POURRIOT 1997).

METHODS

The photos were taken pending a process of Enchytraeidae samples, of a prepared, living specimen. Enchytraeids were extracted from the soil with the O'Connor's wet funnel method (O'CONNOR 1962) and identified by light microscope. For the investigation of microscopic internal characters, the living worms were put on a slide in a few drops of water and covered with cover slip. The rotifers were dissected out of the worms alive (Fig. 2). The morphology and size of the animals fit the type description (DE SMET & POURRIOT 1997).

[1]*Károly Schöll*, MTA ÖBKI Dunakutató Állomás (Hungarian Danube Research Station of the Hungarian Academy of Sciences), Vácrátót H-2163, Alkotmány u. 2-4. Hungary. E-mail: scholl.karoly@index.hu
[2]*Klára Dózsa-Farkas*, ELTE Biológiai Intézet, Állatrendszertani és Ökológiai Tanszék (Department of Systematic Zoology and Ecology, Biol. Institute of Eötvös Loránd University), Budapest H-1117, Pázmány Péter sétány 1/C, Hungary.
E-mail:dfk@elte.hu

Figure 1. *Balatro calvus* in intestine of *Buchholzia appendiculata* juvenil.

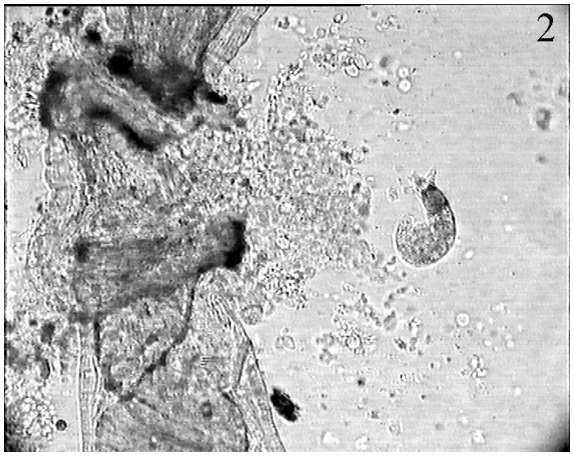

Figure 2. *Balatro calvus* dissecting out from the enchytraeids

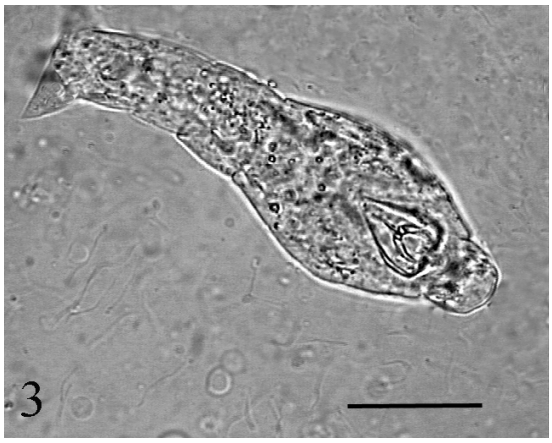

Figure 3-4. Micrograph of *Balatro calvus* (dorsal view). The figure 3 is sized with a black line, representing 40µm length.

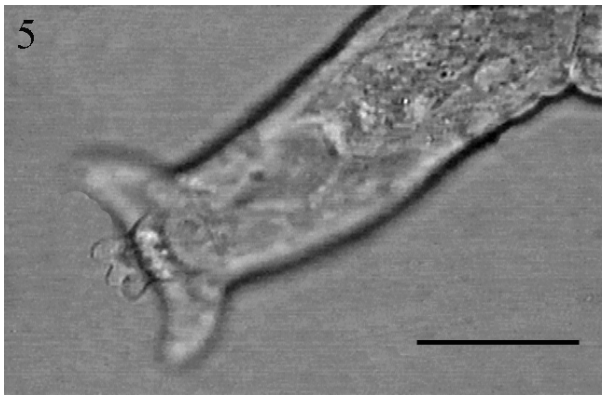

Figure 5. Micrograph of posterior end of *Balatro calvus* (dorsal view), by K. DÓZSA-FARKAS. The figure is sized with a black line, representing 40µm length.

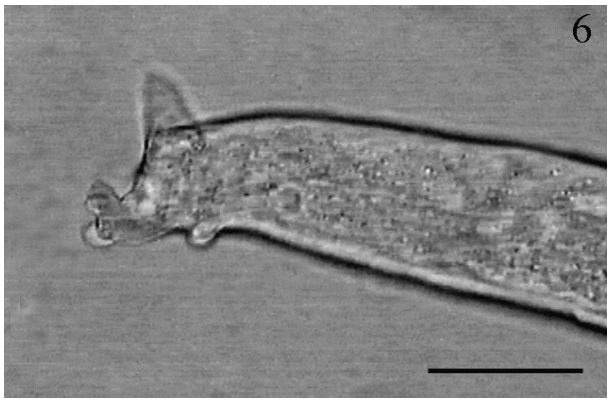

Figure 6. Micrograph of posterior end of *Balatro calvus* (lateral view), by K. DÓZSA-FARKAS. The figure is sized with a black line, representing 40µm length.

RESULTS

Balatro calvus is new to the Hungarian fauna. It was found at the three sites listed below.

(1) Balatonberény, 16.12.1997; host, *Buchholzia appendiculata* juvenile; number of individuals = 1.

(2) Kis-Balaton, Island between Feketesziget and Nagyrada, 11.12.1997; host, *Buchholzia appendiculata* juvenile; number of individuals = 6;

(3) Mátra, N 47º 50' 45" E 20º 03' 32", 03.11.2004; rotten wood in the oak forest next to Markaz village, 378 m; host, *Buchholzia appendiculata*; number of individuals = 1.

Acknowledgement. The authors are grateful to DR. ROBERT LEE WALLACE (Department of Biology, Ripon College, USA) for his suggestions and correcting the text.

REFERENCES

CLAPARÉDE E. (1867): Miscellanées zoologiques. – *Ann. Sci. Nat. Paris Zool*. ser. 5., 8: 5-36.

DE SMET & POURRIOT (1997): Rotifera: the Dicranophoridae (Monogononta) and the Ituridae (Monogononta). Guides to the Identification of the Microinvertebrates of the Continental Waters of the World 12 (NOGRADY, T., ed.). *SPB Academic Publishing, Amsterdam*. 1-344.

KOSEL, V. (1973): Nové poznatky o virniku *Balatro Calvus* Claparéde, 1867 (Rotatoria) z územia Slovenska. – *Biológia Bratislava* 28, 8: 691-695

O'CONNOR, F: B. (1962): The extraction of Enchytraeidae from soil. – In: MURPHY, P. W. (ed.) *Progress in Soil Zoology, London*: 279-285

WALLACE, R.L. T.W. SNELL, C. RICCI, & T. NOGRADY. 2006. Rotifera: Volume 1 Biology, Ecology and Systematics (2nd ed.). Guides to the Identification of the Microinvertebrates of the Continental Waters of the World 23 (SEGERS, H., ed.). *Kenobi Productions, Ghent, and Backhuys Publishers, Leiden*. 1–299.

INDEX

ÁGOSTON-SZABÓ, E. & DINKA, M.: Changes in sediment and sediment interstitial water characteristics in Lake Fertő/Neusiedler See..... 3

CSUZDI, CS.: Annotierter Katalog der Benhamiinae Arten in der Sammlung des Zoologischen Instituts und Museums von Hamburg (Oligochaeta: Acanthodrilidae)... 19

DÁNYI, L.: Über Calciphilie bei *Lithobius nodulipes* LATZEL, 1880 (Chilopoda, Lithobiomorpha) sowie die Beurteilung von *L. nodulipes scarabanciae* LOKSA, 1947 in Ungarn..... 35

KISS, A.: The effects of *Najas marina* on the zooplankton species composition and water chemistry in a small, shallow lake (Fehér-tó, Fertő-Hanság National Park, Hungary)..... 41

KONTSCHÁN, J.: Uropodina mites of East-Africa (Acari: Mesostigmata) I..... 53

MAHUNKA, S.: Oribatids from the Carpathian Basin with zoogeographical and taxonomical notes (Acari: Oribatida)..... 63

MURÁNYI, D.: Comparison of *Leuctra kisi* STEINMANN, 1968 with *Leuctra quadrimaculata* KIS, 1963 (Plecoptera: Leuctridae), and the first record of *L. quadrimaculata* from Ukraine..... 73

SCHÖLL, K.: Changes in rotifer communities regarding to the water-level fluctuations in the floodplain Gemenc, Danube (Hungary)..... 77

Communicationes Breves

GUTI, G.: First record of Racer Goby *Neogobius gymnotrachelus* (PALLAS, 1811) in the Hungarian section of the Danube..... 83

SCHÖLL, K. & DÓZSA-FARKAS, K.: A new record of an interesting parasitic rotifer *Balatro calvus* CLAPARÉDE, 1867 in Hungary..... 85