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Notes and Comments

First occurrence of *Filinia longiseta* (Ehrenberg, 1834) from low-orders streams in a protected area at Cerrado-Amazon boundary, central Brazil

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Headwaters originated in boundary areas naturally flow towards the basins, most of the time forming ecological corridors for many aquatic species. Based on the potential of the surveying the fauna in these connection areas to become an important strategy to reduce gaps related to geographical distribution of aquatic species, this study was developed in streams of a protected area in Cerrado-Amazon boundary.

This study was developed in the Parque Estadual da Serra de Ricardo Franco, Mato Grosso state, central Brazil (between parallels 14°50'17.02" and 14°55'34.00" S; between meridians 60°1'9.98" and 60°11'35.02" W), on March 2014, in headwater streams of a protected area in Cerrado-Amazon boundary. The state Park, with an area of 158,620 ha, is located on the Brazilian Shield in a transition zone between the Amazonian rain forest and the dry forest and Cerrado savannas. In the uplands of the park the streams flow into the upper course of the Guaporé river, from Madeira river basin, Amazon. The cliffs of the serra de Ricardo Franco rise up 200 m tall and many locations have waterfalls. This study presents the first record of rotiferan *Filinia longiseta* (Ehrenberg, 1834).

Identification was based on Koste (1978) and Koste and Robertson (1983). Nomenclature and taxonomy were based by Segers (2007). Rotiferans were evaluated with a stereomicroscope at 25x magnification. *Filinia longiseta* specimens were measured at the longest part of the animal's body and two spines – the lateral and also the caudal seta were measured separately. Specimens were deposited in the Laboratory of Limnology at the University of Brasília (UnB-DF), Federal District, Brazil (sample CZ 0114).

Specimens dimensions: Body length: 177±3 µm; Lateral setae length: 520±15 µm; caudal setae length: 300±8 µm. Type of habitat: low-order streams.

Filinia longiseta has a broad distribution, including Paleartic and Neartic, Afrotropical and Neotropical, Oriental and Australian regions (Segers, 2007). Despite countless records by *Filinia longiseta* in Brazilian inland waters (Garraffoni and Lourenço, 2012), there are few registers of this species in Mato Grosso state, local where this study was done. Four studies were conducted in the region, and from these, only Turner and Silva (1992) and Neves et al. (2003) reported *Filinia longiseta*.

Filinia longiseta has been registered in many types of Brazilian water bodies. In Amazon region, this species may be founded in varzea lakes (Koste and Robertson, 1983), in rivers (Koste and Hardy, 1984), in flooded lakes-river (Bozelli, 1992), natural and meander lakes (Keppeler, 2003; Keppeler and Hardy, 2004), as also in artificial reservoir (Espíndola et al., 2000).

Its widespread distribution has been also reported for other areas in Brazil: northeastern small lakes (Reid and Turner, 1988), marginal lakes of a river in the central region (Neves et al., 2003), southeastern coastal lagoons (Branco et al., 2002), streams, reservoirs and fish ponds from southeastern region (Sampaio et al., 2002; Lucinda et al., 2004; Sipaúba-Tavares et al., 2017), south lagoons of the river floodplain (Rossa and Bonecker, 2003), and riverine rotifers (Serafim-Júnior et al., 2016). For more details on the distribution of *Filinia longiseta* in Brazil, see Garraffoni and Lourenço (2012).

This interface may represent endemic nucleus for aquatic species and priority areas for aquatic conservation in Brazil (Brasil, 2007). Headwaters originated in this transition naturally flow towards the basins, most of the time forming ecological corridors for many aquatic species. These features may enable harbour a higher and endemic biodiversity (Leibowitz, 2003), especially in protected areas with a pristine condition.

The new record of rotiferan *Filinia longiseta* reinforce the importance to do surveying in headwaters of low-order streams located in the Cerrado drainage systems. Especially if these small watercourses are originally protected by a dense riparian vegetation. According to review done by Padovesi-Fonseca et al. (2015), under natural conditions, their waters are poor in nutrients, slightly acid and have low electric conductivity (up to 10µS/cm); and the water temperature remains between 17 and 20 °C. Effects of environmental quality in headwaters of Cerrado domain have been evaluated and alterations derived by antropic impacts can influence on aquatic assemblages, as view by Machado et al. (2011).

The fisrt occurrence of *Filinia longiseta* presented by this study enhanced its geographic distribution in a transition area between the two major Brazilian biomes: Amazon and Cerrado. In this context, headwaters of the Amazon basin are situated in Cerrado, forming ecotone areas between the

two biomes. The new record of rotiferan *Filinia longiseta* reinforce the importance to do surveying in headwaters of low-order streams located in the Cerrado drainage systems. The knowledge on habitat and ecological aspects of aquatic species may be enlarged due to new records of their geographic distribution in these areas of Brazil.

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