



## Two new species of *Sciadicleithrum* (Monogenea: Dactylogyridae), gill parasites of *Geophagus proximus* (Castelnau) (Teleostei: Cichlidae), from the upper Paraná River floodplain, Brazil

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### Abstract

*Sciadicleithrum kritskyi* **n. sp.** and *Sciadicleithrum paranaensis* **n. sp.** are described from the gills of the acará tinga, *Geophagus proximus* (Cichlidae), from the upper Paraná River floodplain, Brazil. The most distinctive feature of *Sciadicleithrum kritskyi* **n. sp.** that distinguishes it from other members of *Sciadicleithrum* is the presence of the dorsal bar with a delicate anteromedial projection. *Sciadicleithrum paranaensis* **n. sp.** differs from other congeners by having the accessory piece composed of a variable sheath with a ring in the medial portion enclosing the distal shaft of the male copulatory organ. *Sciadicleithrum paranaensis* **n. sp.** can be differentiated easily from *S. kritskyi* **n. sp.** by having a vaginal aperture on the ventral body surface, and anchors that are similar in size.

**Key words:** acará tinga; Brazil; Cichlidae; *Geophagus proximus*; Perciformes; monogeneans; *Sciadicleithrum kritskyi* **n. sp.**; *Sciadicleithrum paranaensis* **n. sp.**

### Introduction

Since *Sciadicleithrum* Kritsky, Thatcher & Boeger, 1989 was erected, 12 additional species of *Sciadicleithrum* have been described to date, totalling 21 species from Neotropical cichlids (see Bellay *et al.* 2008; Carvalho *et al.* 2008; Yamada *et al.* 2009). Species of *Sciadicleithrum* were registered for 32 species of cichlids from 18 genera (*Aequidens* Eigenmann & Bray; *Amatitlania* Schmitter-Soto; *Amphilophus* Agassiz; *Cichla* Block & Schneider; *Cichlasoma* Swainson; *Crenicichla* Heckel; *Geophagus* Heckel; *Parachromis* Agassiz; *Petenia* Günther; *Pterophyllum* Heckel; *Rocio* Schmitter-Soto; *Satanoperca* Günther; *Symphisodon* Heckel; *Theraps* Günther; *Thorichthys* Meek; *Tomocichla* Regan; *Uaru* Heckel; and *Vieja* Fernandez-Yepe) (Mendoza-Franco & Vidal-Martínez 2005; Mendoza-Franco *et al.* 2007; Bellay *et al.* 2008; Carvalho *et al.* 2008; Yamada *et al.* 2009). For hosts in *Geophagus*, three species of *Sciadicleithrum* were described: *Sciadicleithrum geophagi* Kritsky, Thatcher & Boeger, 1989 from *Geophagus surinamensis* (Block); *Sciadicleithrum frequens* Bellay, Takemoto, Yamada & Pavanelli, 2008, and *Sciadicleithrum guanduensis* Carvalho, Tavares & Luque, 2008 from *Geophagus brasiliensis* (Quoy & Gaimard).

During a helminthological study on the freshwater cichlid fish locally known as acará tinga, *Geophagus proximus* (Castelnau), in Brazil, two new species of *Sciadicleithrum* were found on the gills. These new species are described herein. *Geophagus proximus* occurs naturally in the Basins of the Amazon River and