

A new species of *Trichodina* Ehrenberg, 1830 (Ciliophora: Trichodinidae) from *Rhamdia quelen* (Siluriformes: Heptapteridae) and *Gymnotus* sp. (Teleostei: Gymnotidae) in Brazil

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Abstract

The present study describes a new species of *Trichodina* found in the mucus of the body surface of 137 farmed and wild silver catfish (*Rhamdia quelen*) located in southern Brazil and in the gills of 99 banded knife fish (*Gymnotus* sp.) captured in the basin of Pantanal. Smears of the body surface mucus and gills were air dried at room temperature and impregnated with silver nitrate and stained with Giemsa for analysis of the adhesive disc, denticles and macronucleus. Characterized as a medium trichodinid, *Trichodina quelenii* n. sp. resembles *T. heterodontata* and *T. acuta*. It differs from *T. heterodontata* by the shape of the blade and from *T. acuta* by the lack of central circle. Furthermore, the distinct shape of the blade of *T. quelenii* n. sp. differs from all previously described species for the genus, leaving no doubt it is a new species.

Keywords

Silurid fish, gymnotid fish, parasitology, *Trichodina*, description, prevalence

Introduction

Aquaculture in Brazil has experienced a rapid development, especially concerning intensive culture systems. However it is well known that such type of system may result in poor water quality, nutritional deficiencies and/or infectious and parasitic diseases which therefore can unbalance the system host/parasite/environment, resulting in significant economic losses (Jerônimo *et al.* 2011).

Ciliated protozoan of Trichodinidae are among the main etiological agents of mortality in farmed fish (Martins *et al.* 2015). They can be considered opportunistic ectoparasites and are present in both marine and continental fish species. Because of their direct transmission trichodinid ciliates are able to invade their hosts within a short period, especially fish that are kept under less than optimal conditions (Lom 1995).

There are some reports of trichodinids parasitizing Siluri-

formes. When Wellborn Jr. (1967) analyzed several fishes from the southeastern United States, it was registered *Trichodina discoidea* Davis, 1947 in the gills of *Ictalurus punctatus* besides *Trichodina noturi* sp. n. in the body and gills of *Noturus leptacanthus* and *Trichodina vallata* Davis, 1947, also present in *I. punctatus*. Asmat (2001) described *Trichodina canningensis* sp. n. from the gills of *Mystus gulio* (Long Whiskered) in India. Asmat *et al.* (2003), in turn, reported *Trichodina gulshae* in *Mystus cavasisus* and Pinto *et al.* (2009) described *Tripartiella pseudoplatystomae* in the pimelodid fish *Pseudoplatystoma corruscans*.

The silver catfish *Rhamdia quelen* (Siluriformes: Heptapteridae) is a native freshwater, omnivorous catfish, with wide geographic distribution. It can withstand large variations in dissolved oxygen, pH and temperature. It prefers to live in lakes and river wells in calm water hidden among the rocks and driftwood. Despite its low production, it can be consid-

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