



## The first case of aggressive mimicry among lamprologines in a new species of *Lepidiolamprologus* (Perciformes: Cichlidae) from Lake Tanganyika

ROBERT SCHELLY<sup>1</sup>, TETSUMI TAKAHASHI<sup>2</sup>, ROGER BILLS<sup>3</sup> & MICHIO HORI<sup>2</sup>

<sup>1</sup>Department of Ichthyology, American Museum of Natural History, Central Park West at 79<sup>th</sup> St., New York, NY 10024, USA.

E-mail: schelly@amnh.org

<sup>2</sup>Department of Zoology, Graduate School of Science, Kyoto University, Kitashirakawa-Oiwakecho, Sakyo, Kyoto 606-8502, Japan.

E-mail: tetsumi@terra.zool.kyoto-u.ac.jp; hori@terra.zool.kyoto-u.ac.jp

<sup>3</sup>South African Institute for Aquatic Biodiversity, Private Bag 1015, Grahamstown 6140, South Africa. E-mail: r.bills@ru.ac.za

### Abstract

*Lepidiolamprologus mimicus* **n. sp.** is described from material collected along the Zambian coast of Lake Tanganyika. It is distinguished from congeners by its unique color pattern of bright yellow fins, a brownish-tan flank coloration and large, dark brown spots along the flanks, in addition to a series of meristic and morphometric characters. *Lepidiolamprologus mimicus* **n. sp.** exhibits an interesting feeding ecology, in which individuals blend into schools of their prey, yellow-finned cyprichromines, with the aid of similar coloration. This is the first instance of aggressive mimicry reported for lamprologines.

**Key words:** *Lepidiolamprologus mimicus* new species; Lamprologini; taxonomy; Lake Tanganyika; aggressive mimicry

### Introduction

Lamprologine cichlids, recognized by Takahashi (2003) as one of 16 tribes constituting the Lake Tanganyika cichlid fauna, exhibit a broad range of morphological, ecological, and behavioral diversity (Stiassny 1997). New species of lamprologines from Tanganyika and associated rivers continue to be discovered (Hanssens & Snoeks 2003; Schelly *et al.* 2003; Aibara *et al.* 2005). With about 80 described lacustrine species, lamprologines comprise roughly half of the cichlid species in Lake Tanganyika, where the group is most species rich. In addition to those of Lake Tanganyika, eight lamprologine species are known from the Congo River to the west, and one from the Malagarasi River to the east. Lamprologines are not known from outside of the greater Congo Drainage. Various lamprologine classifications (e.g. Pellegrin 1904; Regan 1920; Colombe & Allgayer 1985; Poll 1986) have dealt with mostly superficial anatomy, and the group is in need of a classification based on a thorough phylogenetic analysis. Lamprologines are currently assigned to eight genera: *Altolamprologus* Poll 1986, *Chalinochromis* Poll 1974, *Julidochromis* Boulenger 1898, *Lamprologus* Schilthuis 1891, *Lepidiolamprologus* Pellegrin 1904, *Neolamprologus* Colombe and Allgayer 1985, *Telmatochromis* Boulenger 1898, and *Variabilichromis* Colombe and Allgayer 1985. This paper deals with a new species in the genus *Lepidiolamprologus*, considered by Poll (1986) to comprise the following superficially similar, elongate, predatory fishes characterized by high lateral line scale counts: *L. elongatus* (Boulenger 1898), *L. cunningtoni* (Boulenger 1906), *L. attenuatus* (Steindachner 1909), *L. profundicola* (Poll 1949), *L. kendalli* (Poll & Stewart 1977), and *L. nkambae* (Staeck 1978). More recently, analyses based on molecular data (Sturmbauer *et al.* 1994; Schelly *et al.* 2006) and morphology (Stiassny 1997; Schelly, in press) have provided evidence that *L. cunningtoni* is not closely related to the remaining species assigned to *Lepidiolamprologus*.