



## A new species of *Ptychochromis* from northeastern Madagascar (Teleostei: Cichlidae), with an updated phylogeny and revised diagnosis for the genus

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### Abstract

A new species belonging to the endemic Malagasy cichlid genus *Ptychochromis* is described. *Ptychochromis ernestmagnusi* is known only from the middle to lower reaches of the Mananara River in northeastern Madagascar. Based on a unique configuration of the palatine, the new species is placed among the species of *Ptychochromis* considered to have an eastern-type palatine morphology by Stiassny and Sparks (2006). The new species is further distinguished from members of the “western clade” of *Ptychochromis* by anterior displacement of the first supraneural such that it overlies the dorsoposterior margin of the supraoccipital. Among species of *Ptychochromis* with eastern-type palatine morphology, *P. ernestmagnusi* shares with *P. makira* the possession of supraneurals with a characteristically flattened dorsal profile. Although *P. makira* and *P. ernestmagnusi* both possess paired lateral barring pigmentation patterns, the lateral flank bars in *P. makira* are distinctively V-shaped, whereas in *P. ernestmagnusi* they are oriented vertically. *Ptychochromis ernestmagnusi* is further distinguished from *P. makira* by prominent iridescent spangling on the flank and dorsal fin near its base, dusky grayish-green base coloration (vs. whitish), four laterosensory foramina on the lachrymal (vs. three), and a series of seven (vs. six) infraorbital bones. In addition, an updated phylogeny and diagnosis for *Ptychochromis* is presented, including anatomical data for the new species and novel anatomical data for the genus.

**Key words:** *Ptychochromis ernestmagnusi*, Ptychochrominae

### Introduction

*Ptychochromis* is endemic to fresh- and brackish-water habitats in northwestern, northern, and eastern Madagascar and currently comprises eight valid species (Stiassny & Sparks, 2006). Historically, members of the genus also occurred within the Onilahy River drainage basin in southwestern Madagascar (*P. onilahy*), as well as other western basins, however, those populations are now presumed extinct (JSS, pers. obs.). Shortly after the publication of a phylogenetic analysis and taxonomic revision of *Ptychochromis* (Stiassny & Sparks, 2006) additional specimens of an undescribed species collected from the middle to lower reaches of the Mananara (du nord) River in northeastern Madagascar became available for study. The Mananara River is located in a poorly sampled region of the island situated between the known geographic ranges of *Ptychochromis makira* to the north and the widespread east coast species, *P. grandidieri*, to the south. The presence there of a new species of *Ptychochromis* was not unanticipated given the inaccessibility and consequent difficulty of conducting ichthyofaunal survey work in the region, which still contains intact tracts of lowland rainforest (Rham & Nourissat, 2002; Stiassny & Sparks, 2006), and the new taxon is formally described herein. Based on unique features of palatine morphology, the new species is placed among species that have an eastern-type palatine (Stiassny & Sparks, 2006), which we refer to as the “eastern group” of *Ptychochromis*, an assemblage comprised of *Ptychochromis grandidieri* Sauvage, 1882, *P. makira* Stiassny and Sparks, 2006, *P. loisellei* Stiassny and Sparks, 2006, and *P. curvidens* Stiassny and Sparks, 2006. Resolution of the intrarelationships of *Ptychochromis* is limited and no unambiguously derived anatomical features have been identified to support monophyly of the “eastern group” of Stiassny and Sparks (2006: Fig.