



## Rediscovery and phylogenetic placement of the endemic Malagasy cichlid *Ptychochromoides itasy* (Teleostei: Cichlidae: Ptychochrominae)

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### Abstract

*Ptychochromoides itasy* Sparks, 2004, known locally in Madagascar as the *trondro mainty* or *marakely à bosse*, a robust jet black cichlid with a pronounced nuchal hump in both sexes, had not been collected in the wild for several decades and was presumed to be extinct. Recently, a relict population of *P. itasy* was discovered in a tributary of the Tsiribihina River in the central highlands, to the west of the capital, Antananarivo. We report on the rediscovery, and present DNA sequence evidence to both confirm the identity of the species as a member of *Ptychochromoides* and to resolve the placement of *P. itasy* within the genus.

**Key words:** extinct, Lake Itasy, Madagascar, phylogeny, Trondro Mainty, Tsiribihina River

### Introduction

The endemic Malagasy cichlid genus *Ptychochromoides* Kiener & Mauge 1966 currently comprises three valid species, *P. betsileanus* (Boulenger 1899), *P. vondrozo* Sparks & Reinthal 2001, and *P. itasy* Sparks 2004. *Ptychochromoides katria* Reinthal and Stiassny 1997 was recently rediagnosed and placed within its own genus, *Katria* (Stiassny & Sparks 2006), which is recovered as the sister taxon to *Ptychochromis* (Sparks 2003, 2004b; Sparks & Smith 2004; Stiassny & Sparks 2006). Members of *Ptychochromoides* are robust, deep-bodied cichlids, with drab speckled white and gray, blotchy grayish-black, or jet-black pigmentation. Both *P. betsileanus* and *P. vondrozo* are endemic to southern Madagascar, the former to western flowing basins draining the southern central highlands and the latter to the eastward draining Mananara basin in the region of Vevembe and Vondrozo (Fig. 1). Neither of these two species is common within their restricted highland ranges, and only a handful of specimens have been collected despite considerable effort over the past two decades.

*Ptychochromoides itasy* is known only from the Tsiribihina River drainage basin, including Lake Itasy and environs, located in the central highlands to the southwest of the capital, Antananarivo (Fig. 1). The species had not been collected in the wild for several decades and was presumed extinct, despite recurring attempts by various research groups (Reinthal & Stiassny 1991, 1997; de Rham & Nourissat 2002) and reports of its persistence in the upper reaches of the Tsiribihina and Betsiboka drainages by local residents (P. Loiseau, pers. comm.). Although repeated efforts to collect additional material of *P. itasy* over the past two decades had proven unsuccessful, unexpectedly, this past year the species was rediscovered in a tributary of the Tsiribihina River, located approximately 100 km to the west of, and only about an hour and a half drive from, the capital, Antananarivo (Figs. 1 & 2A). Here we report on the rediscovery of *P. itasy*, provide a revised diagnosis for the genus *Ptychochromoides*, and present the results of a phylogenetic analysis to place the species within Ptychochrominae.