



A new species of *Danakilia* (Teleostei, Cichlidae) from Lake Abaeded in the Danakil Depression of Eritrea (East Africa)

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Abstract

A new species of cichlid fish is described from a small, endorheic lake (Lake Abaeded), situated some 30 m below sea level in the Danakil Depression of Eritrea (East Africa). *Danakilia dinicolai* is readily distinguished from its congener, *D. franchettii*, on the basis of body proportions and in the possession of markedly longer pectoral fins at all sizes. Additionally, oral dentition is more robust than that of its congener, and the lower pharyngeal jaw is markedly hypertrophied and covered with considerably finer and more densely implanted teeth on the posterior field of the jaw.

Key words: Eritrea, East Africa, *Danakilia*, Cichlidae

Introduction

Danakilia, originally described by Vinciguerra (1931) for *D. franchettii*, is a small tilapiine cichlid endemic to Lake Afdera (=Afrera or Giulietti) in the Danakil Depression of northern Ethiopia. Trewavas (1983) provided a list of generic attributes of *Danakilia* including, most notably, the presence of an exclusively tricuspid oral dentition. With the exception of the distantly related *Oreochromis tanganyicae* (Schwarzer *et al.*, 2009), outer row oral dentition in tilapiine cichlids is invariably bicuspid, and the tricuspid dentition of *Danakilia* is herein considered diagnostic for the genus. Trewavas (1983) hypothesized a sister group relationship between *D. franchettii* and the geographically disjunct Iranian cichlid, *Iranocichla hormuzensis* Coad, 1982 and suggested a possible relationship between these two and *Tristramella*, a genus from the Jordan Valley. Subsequent phylogenetic analysis, based on molecular markers, has confirmed a close relationship between *Iranocichla* and *Tristramella*, but was unable to clarify the placement of *Danakilia* due to lack of material for DNA extraction (Schwarzer *et al.*, 2009).

Exploration of Lake Abaeded, an isolated crater lake located in the Danakil Depression of Eritrea, revealed the presence there of two fish species in this otherwise hyper-arid landscape: *Lebias dispar* Rüppell, 1829, a cyprinodontid widespread throughout the scattered water bodies of the region (Getahun & Lazara, 2001), and a cichlid that was initially considered to represent a population of *Danakilia franchettii*, previously known only from Lake Adfera, in the Danakil of Ethiopia some 160 km to the southeast. On closer examination, and after comparison with preserved material of *D. franchettii* including syntypes of the latter, numerous morphometric and morphological differences between the Lake Abaeded specimens and *D. franchettii* were identified. The Lake Abaeded cichlid is herein recognized as diagnosably distinct from its only known congener, *D. franchettii*, and is described below.