



Review of the Lake Malaŵi genus *Melanochromis* (Teleostei: Cichlidae) with a description of a new species

ADRIANUS F. KONINGS¹ & JAY R. STAUFFER, JR.²

¹Cichlid Press, PO Box 13608, El Paso, TX 79913, USA; E-mail: info@cichlidpress.com

²School of Forest Resources, Penn State University, University Park, PA 16802, USA; E-mail: vc5@psu.edu

Abstract

The Lake Malaŵi genus *Melanochromis* included five species at its inception and was originally distinguished from *Pseudotropheus* on the basis of morphology, including the arrangement of teeth on the lower pharyngeal bone. The diagnosis has been extended twice, first to include all elongate mbuna that possess horizontal stripes and U-shaped tooth bands and later to exclude mbuna that do not exhibit a sex-related reversal in their colour pattern. Recently, the diagnosis of the genus was refined on the basis of the melanin pattern. The genus now includes only species with a basic melanin pattern, which consists of two black horizontal lateral stripes on a light background. Most adult members of the genus, thus defined, have a sex-related reversal of pigmentation pattern. Here we describe *Melanochromis mpoto* n. sp. from the northwestern part of Lake Malawi, synonymize *M. parallelus* Burgess & Axelrod 1976 with *M. loriae* Johnson 1975, redescribe *M. chipokae* Johnson 1975 and *M. robustus* Johnson 1985, and reclassify and designate a lectotype for *M. brevis* Trewavas, 1935.

Key words: Cichlid, mbuna, melanin pattern

Introduction

The small, rock-dwelling haplochromine cichlid fishes in Lake Malaŵi, Africa, are commonly referred to as mbuna. The genus *Melanochromis* Trewavas 1935—one of thirteen genera currently recognized within the mbuna—was recently redefined by Tawil (2002) and Konings-Dudin *et al.* (2009). The diagnosis is based mainly on the basic melanin pattern, which consists of two black horizontal lateral stripes on a light background; the mid-lateral stripe, which is always solid in appearance, straddles the lower branch of the lateral-line system, and the dorso-lateral stripe, which can be fragmented, lies between the dorsal-fin base and the mid-lateral stripe. The solid, mid-lateral stripe is often wider, approximately 2–3 scales, than the dorso-lateral one which is 1–2 scales wide. The second diagnostic character refers to the reversal in colour pattern in breeding males: in many species there is a redistribution of the melanic areas (reversal) in dominant individuals (males and, perhaps, old females) (Tawil 2002). In nine species, including the type species *M. melanopterus*, the basic pattern, always visible in juveniles and females, becomes reversed in adult males, i.e. the entire body of the breeding male first becomes (very) dark—blue, brown, or black—and, secondly, in the former position of the two black stripes there are then two light-coloured solid stripes—white, yellow, or blue. This sex-related reversed pigmentation pattern is unique among Malaŵi cichlids. In four species, *M. lepidiadaptus*, *M. wochepa*, *M. kaskazini*, and the new species, *M. mpoto*, this reversal is incomplete. The basic melanin pattern is present in females and juveniles, but in male breeding colouration, which is entirely sky-blue for all four species, the background colour becomes darker (sky-blue), and the black stripes disappear, although these are not converted to a lighter, contrasting colour.

The genus *Melanochromis* consists of both predatory and herbivorous species. The predatory group of species is characterized by slender bodies, long snouts, and long lower jaws, while the herbivorous group exhibits stockier bodies, shorter snouts, and shorter lower jaws. Some species, e.g. *Melanochromis loriae*, share characteristics of both groups.