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Three new cichlids from Lake Malawi

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Illustration by Kathie Chwals

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During the past several months, I have been fortunate to receive from African Fish Imports, Verona, NJ, a selection of fishes from Lake Malawi. In among these specimens were several which appeared unusual. Further research has convinced me that these are indeed new species and they are described here for the first time. I extend TA's appreciation — and that of our readers — to Jack Freiberg and John Lombardo of African Fish Imports for their unselfish assistance in helping us catalog the fishes of Lake Malawi. Such cooperation brings us closer to the day when the taxonomic confusion surrounding many of these fishes will be removed.

Pseudotropheus modestus sp. n.

Type: Female. Deposited in the U.S. National Museum (Smithsonian) Museum of Natural History, Washington, DC.

Collecting data: Collected by Peter Davies et al from waters off Makanjila Island, Lake Malawi, Malawi.

Description: Standard length 63.5mm. Dorsal XVIII, 8; anal III, 8. Head length 3.1; least depth of caudal peduncle 8.4. Body depth 3.9; dorsal length 4.7, all in standard length. Snout length 2.2, eye width 3.07, upper jaw 5.3; lower jaw 5.7 all in head length. Gill rakers: 12 on first arch. Lateral series: 10, 22. Caudal covered with fine scales. Teeth: Anterior row bicuspid, second row tricuspid. Four rows in lower jaw. Anterior teeth small, fairly uniformly bicuspid. Color as shown in the accompanying

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illustration of the living type. Mode of reproduction: As are all known members of the genus *Pseudotropheus*, *P. modestus* is a mouthbrooder. The type specimen was found to have 8-10 fairly well-developed young in her buccal cavity.

Remarks: At first glance, this appears to be a color morph of *P. elongatus* Fryer. Closer examination shows that *P. modestus* has a much smaller mouth. Also, the jaws are of almost equal length and the characteristic small mouth and equal jaws readily serve to identify the species. Other differences are noticed in that *P. modestus* has a slightly deeper body than *P. elongatus*; and also a slightly larger eye than *P. elongatus*.

***Trematocranus jacobfreibergi* sp.n.**

Type: Male. Paratype: Male. Deposited in the U.S. National Museum (Smithsonian) Museum of Natural History, Washington, DC.

Collecting data: Collected off Makanjila Island, Lake Malawi, Malawi, by Jacob Freiberg and Trevor Davies.

Description: Type male, 110mm standard length. Paratype, male, 100mm standard length. (Paratype in parentheses where different.) Dorsal: XVI, 10 with rays 3-6 greatly extended. Anal: III, 9 with rays greatly extended. Body depth 2.6 (2.7); head length 2.7 (2.9); dorsal length 1.7 (1.8); least depth of caudal peduncle 8.1 (8.0), all in standard length. Gill rakers: 16 on outer arch (type). Eye width: 3.4 (3.5); snout length 2.3, both in head. Four rows of scales on cheeks. Caudal thickly covered with minute scales. Lateral series 13,26. Color in preservative: purplish brown with seven dark vertical bars; white edging on fins.

Remarks: *Trematocranus jacobfreibergi* is readily recognized by the extreme shortness of the snout, (2.3 in head length compared to 3.4-3.5 for *T. brevirostris* Trewavas). *Trematocranus jacobfreibergi* superficially resembles *T. peterdaviesi* Axelrod. However, *T. jacobfreibergi* differs in having more scales in the lateral series (13,26 vs. 31-32), a smaller eye diameter (3.4-3.5 vs. 4.0); a narrower caudal peduncle (8.1-8.0 vs. 8.8) and a shorter snout length (2.3 vs. 2.4-2.7).

Named for the collector, Jacob Freiberg, of African Fish Imports, Verona, NJ.

***Pseudotropheus socolofi* sp. n.**

Type: Female. Deposited in the U.S. National Museum (Smithsonian) Museum of Natural History, Washington, DC.

Collecting data: Collected by Peter Davies et al from waters off Likoma Island, Lake Malawi, Malawi.

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Description: Standard length 61.5mm. Dorsal XVIII, 8; Anal III, 7. Head length 3.4; dorsal length 1.4; body depth 3.2; least depth of caudal peduncle 8.2, all in standard length. Snout length 2.6; eye width 3, both in head length. Gill rakers: 12 on first arch. Lateral series: 9, 20. Teeth in lower jaw as illustrated in figure 1 (based on jawbone of dissected specimen).

Color as shown in accompanying illustration of living type. Color is a beautiful deep blue with white edging on dorsal, anal and ventral fins. Black submarginal band on dorsal, ventral and anal fins. Caudal with black interradiar markings. Two gold spots on anal fin. Immature fish exhibit 8-10 vertical blue-black bars. These are also exhibited as a stress pattern on most mature specimens.

Remarks: Like *P. elongatus* Fryer, *Pseudotropheus socolofi* has an elongated body compared with maximum depth. However, they are readily differentiated by *P. socolofi*'s larger eye ($33\frac{1}{3}\%$ of head length to 27-29% for *P. elongatus*) and fewer scales in the lateral series (29 for *P. socolofi* vs. 33 for *P. elongatus* according to Fryer's description.).

P. socolofi, unlike most members of the genus, does not exhibit sexual dimorphism. Males and females look alike, although males tend to be slightly larger and more brightly colored, similar to the case of the cobalt blue morph of *P. zebra*. *P. socolofi* is readily distinguished from *P. zebra* (cobalt) by its color pattern, the latter lacking *P. socolofi*'s white fin edging and black submarginal and interradiar markings. Finally, the fact that *P. socolofi*'s anterior teeth meet in a uniform row sets it apart from any known similar species.

I take pleasure in naming this fish in honor of Ross Socolof who has contributed so much to knowledge of aquarium fishes over the years.

Special thanks to Dr. A. Dean Stock of the University of Texas for his comments.

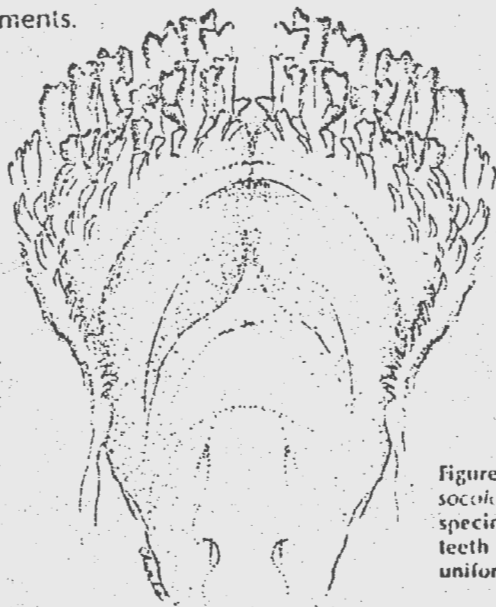


Figure 1. Lower jaw of *P. socolofi* from dissected specimen. (Several anterior teeth missing.) Note uniformity of anterior row.