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Source: *Copeia*, No. 129 (May 20, 1924), pp. 41-45

Published by: American Society of Ichthyologists and Herpetologists (ASIH)

Stable URL: <https://www.jstor.org/stable/1436003>

Accessed: 23-01-2022 23:44 UTC

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Number 129

May 20, '24

To Advance the Science of Cold-Blooded Vertebrates.

Published Monthly by the American Society of Ichthyologists and Herpetologists at 12 Bedford Ter., Northampton, Mass. Entered as second-class matter Feb. 11, 1924, at the post office at Northampton, Mass., under the Act of Aug. 24, 1912. Acceptance for mailing at special rate of postage provided for in Sec. 1103, Act of Oct. 3, 1917, authorized Feb. 11, 1924.

NEW GENERA OF AFRICAN PÆCILIID FISHES

IN PREPARING an account of the Pæciliids as aquarium fishes it was found advisable to examine in detail the genera of the sub-family *Fundulinae*. A review of the large and unnatural group until lately assembled by authors under *Haplochilus* has disclosed the following new genera.

Hypsopanchax gen. nov.

Body deep, two and three quarters times in length to base of caudal; extremely compressed; abdomen trenchant, but with a small median series of scales bent in the middle; caudal peduncle slender, its depth nearly six and one-half times in the body length. Head rather narrow, flat above. Mouth small with a downward bend at each side; lower jaw projecting. Snout short, about as long as the diameter of the eye. Upper jaw protractile. Gill membranes united far forward under pupil of eye. Teeth on both jaws in a band composed of several irregular rows; a few teeth on the outer row in the lower jaw enlarged, none enlarged on the upper; no vomerine teeth. Dorsal

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short, its origin behind that of anal. Insertion of pectorals high. Caudal rounded. Ventrals inserted a little forward of halfway between the base of the pectorals and the origin of the anal. Probably no extensive sexual color differences. Air bladder large. Intestine short, three-fifths length of fish. Presumably oviparous.

Type, *Haplochilus platysternus* Nichols & Griscom. The types in the American Museum of Natural History, from Stanleyville on the Congo, examined.

This genus is most nearly related to *Aplocheilichthys* Bleeker, but differs in not having the front row of teeth of the upper jaw and only a few of the lower jaw enlarged*, in the narrower head, very compressed deep body, and the slender caudal peduncle. It approaches *Procatopus* Boulenger in the rather forward position of the ventrals, although this character seems to be exhibited also by *Aplocheilichthys huterzaui* (Boulenger).† The coloration of *Hypsopanchax platysternus* consists of close, narrow, anteriorly curving, vertical black lines, formed by dark bars at the bases of the scales. It is not well shown in the rather crude original figure of the species. This style of coloration is possessed in a lesser degree by *Aplocheilichthys spilauchen* (Dumeril).

Micropanchax gen. nov.

Body elongate, slightly compressed. Head quite narrow. Mouth small, with a downward bend at each side; lower jaw projecting. Snout shorter than eye. Upper jaw protractile. Comparatively large teeth on both jaws in a single series; no teeth on vomer. Gill membranes broadly united. Dorsal insertion behind that of anal. Ventrals comparatively distant from pectorals. Caudal rounded. Slight

*The outer row of both the upper and lower jaws is very perceptibly enlarged in *Aplocheilichthys*.

†I am not sure of the generic position of this species, having seen no specimens.

sexual color differences (in type species at least). Air bladder present. Oviparous.

Type, *Haplochilus schoelleri* Boulenger. The only two specimens of this species available to me are very small, 16 mm. in length, from Ghet-el-Nassara, L. Menzaleh, Egypt, received by the American Museum in an exchange with the British Museum. However, I have examined two apparently adult *H. antinorii* from Nairobi, received by the American Museum from the same source. They quite agree in the generic characters with the others. *H. pumilus* Boulenger, of which I have examined a single adult from the Lukuga River, Tanganyika Territory, belongs to this genus, but seems to differ to such a degree as to require a place in a separate subgenus or section. This section, which may be called *Lacustricola*, is characterized by the somewhat wider, heavier head, slightly stronger dentition, elongate pointed dorsal and anal (these are rounded in a characteristic manner in the others), and the deeper, more *Aplocheilus*-like body form.

Micropanchax also, seems related to *Aplocheilichthys* but differs in the very widely united gill membranes, which in the latter genus are not united until well forward under the pupil of the eye, and in the dentition, which is in a single series on each jaw, and not in bands with the outer row enlarged as in *Aplocheilichthys*. It also differs essentially in the breeding habits, which are stated to be the same as those of the Asiatic *Aplocheilus*, while the breeding of *Aplocheilichthys* is like that of *Panchax*.* These little fishes are smaller than *Aplocheilichthys* (at least the subgenus *Micropanchax* is) and they possess the peculiar translucent quality of the body in life seen in *Aplocheilus* and which is never present in *Panchax*, *Aplocheilichthys*, and the other genera.

*For breeding of *Aplocheilus* and *Panchax*, see B. Sundara Raj. *Rec. Ind. Mus.*, XII, 1916, pp. 268 and 291.

It may be well to point out again the groups of African and Asian Funduline Pœciliids with posterior dorsals, and the proper names to be assigned to them. *Procatopus* Boulenger 1904 needs no comment at present other than that it probably should not be made the type of a special sub-family as Fowler has recently done.* *Lamprichthys* Regan 1911† has priority of three or four months over *Mohanga* Boulenger 1911, contrary to the statement of Jordan, *Genera of Fishes*, iv. This misstatement was doubtless due to an oversight of the fact that there are two volumes of the *Annals and Magazine of Natural History* published every year. Although *Mohanga* was described on p. 261 and *Lamprichthys* appears on p. 325, the latter is of vol. VII, while the former is of vol. VIII.

M'Clelland named the genus *Aplocheilus* in 1839, with two species, *chrysostigmus* (= the earlier *Esox panchax* Hamilton Buchanan) and *melastigma*, new. In 1846 Cuvier and Valenciennes made *panchax* (as *P. buchanani*) the type of their new genus *Panchax*. As M'Clelland named no type this first restriction leaves *melastigma* as the type of *Aplocheilus*, as Bleeker later indicated. How is it possible that so many ichthyologists down to Jordan (*Genera of Fishes*) have declared that *panchax* (*chrysostigmus*) is the type of *Aplocheilus*? Regan,† Sundara Raj,‡ and Chaudhuri** have all indicated the proper nomenclature.

Aplocheilus has no vomerine teeth, broadly united gill membranes, and a non-protractile upper jaw, *Oryzias* Jordan & Snyder is a synonym. *Panchax* has teeth on the vomer, free gill membranes, and a protractile upper jaw. There is another group in Africa, related to *Panchax* by the free gill membrane and protractile upper jaw, but apparently differing in having a smaller mouth, less produced jaws, and no

**Proc. Acad. Nat. Sci.* Phila., 1916.

†*Ann. Mag. Nat. Hist.* (8), VII, 1911.

‡*Rec. Ind. Mus.*, 1916.

***Mem. Ind. Mus.*, 1916.

vomerine teeth. I will discuss this group and the other African and European *Fundulinae* at another time.

I wish to express my thanks to Mr. J. T. Nichols of the American Museum for obtaining specimens for my work and for allowing me to study the collections in that institution. I am also under great obligation to Mr. Arthur W. Henn, who has shipped the entire collection of Old World and a few New World *Fundulinae* from the Carnegie Museum to New York for my study.

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A CASE OF DEATH FROM HELODERMA BITE

I HAVE in my school museum a stuffed Gila Monster, *Heloderma suspectum*, that actually killed a man at Tombstone, Ariz., in the eighties. My uncle, Judge Alexander Freeman, who lived in Tombstone for many years and helped clean out the thugs who gave it that frigid name, sent me this reptile and gave me its history.

It had been tied to a stake in front of a hotel, and a man, Col. Yager, was teasing it by poking his finger at it. It made a sudden spring at him, seized him by the finger, and began to chew. It was finally pried off and killed. The colonel died inside of half an hour.

My uncle also told me that the Indians and Mexicans called the animal "the Spitter" and asserted that it spat its poisonous saliva at its enemies.

This habit has been reported for the Mexican species, *Heloderma horridum*, by Ditmars.

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