GALEOIDES GÜNTHER, 1860, A MONOTYPIC GENUS OF THE FAMILY POLYNEMIDAE (PERCIFORMES)

by

Hiroyuki MOTOMURA (1), Ernst MIKSCHI (2) & Yukio IWATSUKI (3)

ABSTRACT. To date, the genus *Galeoides* Günther, 1860 has been considered to comprise two species, *G. decadactylus* (type species of the genus) and *G. microps* Steindachner, 1869. However, examination of the holotype of *G. microps* showed it belongs to the genus *Polynemus*, being a junior synonym of *P. melanochir* Valenciennes *in* Cuvier and Valenciennes, 1831. Accordingly, *Galeoides* represents a monotypic genus of the family Polynemidae.

RÉSUMÉ. *Galeoides* Günther, 1860, genre monotypique de la famille des Polynemidae (Perciformes).

On considérait jusqu'à présent que le genre *Galeoides* Günther, 1860 comprenait deux espèces, *G. decadactylus* (espèce type du genre) et *G. microps* Steindachner, 1869. Cependant, l'examen de l'holotype de *G. microps* a montré qu'il appartient au genre *Polynemus*, et qu'il est un synonyme plus récent de *P. melanochir* Valenciennes *in* Cuvier et Valenciennes, 1831. En conséquence, *Galeoides* représente un genre monotypique de la famille des Polynemidae.

Key Words. Polynemidae - *Galeoides decadactylus* - *Galeoides microps* - *Polynemus melanochir* - Synonymy.

To date the genus *Galeoides* Günther, 1860, originally proposed for a West African species, *Polynemus decadactylus* Bloch, 1795, has been considered to comprise two species, *G. decadactylus* (type species of the genus) and *G. microps* Steindachner, 1869 (e.g., Fowler, 1935; Myers, 1936; Springer, 1982; Hureau, 1986), the latter being poorly known threadfin originally described by Steindachner (1869a) on the basis of a single specimen from China and later described in more detail (Steindachner, 1869b).

There is no indication in the literature that the holotype of *G. microps* has been re-examined since Steindachner's (1869a, 1869b) descriptions (Springer, 1982). Our examination of the holotype clearly showed it belongs to the genus *Polynemus* Linnaeus, 1758, as defined by Feltes (1993). Furthermore, the black pectoral fin of the holotype of *G. microps* was found to be consistent with a diagnostic character [proposed by Feltes (1991)] of *P. melanochir* Valenciennes *in* Cuvier and Valenciennes, 1831.

A redescription of the holotype of *G. microps* is given here and its status as a junior synonym of *P. melanochir* confirmed. By virtue of the generic position of the latter, *Galeoides* can now be seen to represent a monotypic genus.

---

(1) Miyazaki University, the United Graduate School of Agricultural Sciences, Kagoshima University, 1-1 Gakuen-kibanadai-nishi, Miyazaki 889-2192, JAPAN. [a02113u@cc.miyazaki-u.ac.jp]

(2) Naturhistorisches Museum Wien, Fischsammlung, Burgring 7, A-1014 Wien, AUSTRIA.

(3) Division of Fisheries Sciences, Faculty of Agriculture, Miyazaki University, 1-1 Gakuen-kibanadai-nishi, Miyazaki 889-2192, JAPAN.

Cybium 2001, 25(3): 269-272.

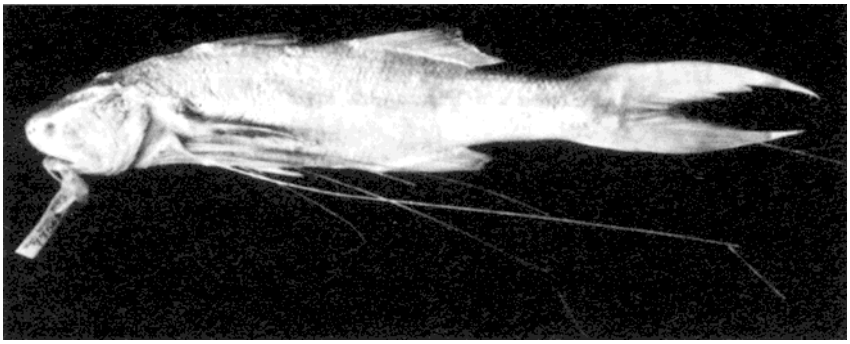

Fig. 1. Holotype (NMW 77568, 171 mm SL) of *Galeoides microps* Steindachner, 1869.

Counts and measurements generally followed Hubbs and Lagler (1947) and Feltes (1991), with some modifications following Motomura *et al*. (2000). Proportional measurements are expressed as percentage of standard length (SL). Institutional codes follow Leviton *et al*. (1985).

RESULTS AND DISCUSSION

The following counts and measurements (expressed as percentage of SL) are based on the holotype (NMW 77568, 171 mm SL, China; Fig. 1) of *Galeoides microps* Steindachner, 1869: dorsal fin rays, VIII-I, 16; anal fin rays, III, 12; pectoral fin rays, 15; pectoral filaments, 7; pelvic fin rays, I, 5; pored lateral line scales, 71; gill rakers, 11 (upper) + 16 (lower) = 27 (total); total length, 136; fork length, 111; head length, 24; body depth at 1st dorsal fin origin, 19; second body depth at 2nd dorsal fin origin, 21; body width at pectoral fin base, 11; snout length, 5; dermal eye opening, 2; orbit diameter, 2; interorbital width, 7; postorbital length, 17; upper jaw length, 13; pre-1st dorsal fin length, 33; pre-2nd dorsal fin length, 55; pre-anal fin length, 61; 1st dorsal fin base to anal fin base, 35; pelvic fin base to anal fin base, 29; 2nd dorsal fin base length, 21; anal fin base length, 15; longest pectoral filament length, ca. 140 (all broken); pectoral fin base including pectoral filaments base, 12; longest pelvic fin length (2nd), 15; longest 1st dorsal fin spine length (3rd), 19; 2nd dorsal fin spine length, 7; longest 2nd dorsal fin ray length, 17; longest anal fin spine length (3rd), 7; longest anal fin ray length, 15; caudal peduncle length, 27; caudal peduncle depth, 10; upper caudal fin lobe length, 35; lower caudal fin lobe length, 32. Furthermore, the holotype of *G. microps* had the following diagnostic characters (Fig. 1): pectoral fin insertion near midline of lateral body surface; pectoral fin black; posterior margin of preopercle serrated; 7 pectoral filaments; longest pectoral filament length greater than total length in spite of filament being broken.

The genus *Galeoides* is characterized by the following diagnostic characters: pectoral fin insertion well below midline of lateral body surface; posterior margin of preopercle serrated; eye diameter approximately equal to snout length; pectoral fin base including pectoral filaments greater than or equal to upper jaw length; a black spot present below anterior part of lateral line in fresh specimens; swimbladder extending beyond anal fin origin (all described by Feltes, 1993); lateral line unbranched, extending to lower end of upper caudal fin lobe; only a single supraneural bone present (Motomura *et al*., 2001). The characters of the holotype of *G. microps* were not consistent with the above generic diagnostic characters of *Galeoides*, but were fully consistent with the following diagnostic characters of *Polynemus*, as defined by

Feltes (1993): viz. pectoral fin insertion near midline of lateral body surface; posterior margin of preopercle serrated; eye diameter twice or more in snout length; longest pectoral filament length greater than total length.

Polynemus melanochir Valenciennes *in* Cuvier and Valenciennes, 1831, originally described on the basis of a drawing sent by M. Finlayson from Sumatra, Indonesia (see Feltes, 1991, fig. 1), was stated as having a very black pectoral fin. This has since been recognized as diagnostic for that species among *Polynemus* (Feltes, 1991). Because the holotype of *G. microps* also has a black pectoral fin, we are of the opinion that *G. microps* should be regarded as a junior synonym of *P. melanochir*, with *Galeoides* becoming a monotypic genus.

Comparative material examined

Specimens (*n*=32, 99-201 mm SL) of *Galeoides decadactylus*, including the holotype of *Polynemus decadactylus*, were listed in Motomura *et al.* (2001). *Polynemus dubius*: URM-P 13930, 138 mm SL, Samyan market, Bangkok, Thailand. *P. hornadayi*: USNM 100632 (holotype), 193 mm SL, Sadong River, Sarawak, Malaysia. *P. melanochir*: UMMZ 232762, 136 mm SL, Phnom Penh, Mekong River, Cambodia. *P. multifilis*: RMNH 436 (holotype), 137 mm SL, near Bandjermasin, Borneo, Indonesia. *P. paradiseus*: URM-P 10847, 165 mm SL, Hooghly River, Calcutta, India.

Acknowledgments. We appreciate specimen loans from: M.J.P. van Oijen and J. van Egmond (RMNH); T. Yoshino (URM-P); D.W. Nelson (UMMZ); S.L. Jewett, L. Palmer, S.J. Raredon, S. Smith and J.T. Williams (USNM); H.-J. Paepke (ZMB). We thank Y. Motomura (Miyazaki, Japan) for her assistance, G.S. Hardy (Thames, New Zealand), who read the initial manuscript and offered helpful comments and C. Soliveres (Wien, Austria) for French translation of the abstract. This study was supported in part by grants awarded to the first author by Research Fellowships (no. 123) of the Japan Society for the Promotion of Science for Young Scientists (Tokyo, Japan).

REFERENCES

CUVIER G. & A. VALENCIENNES, 1831. Histoire naturelle des Poissons, Vol. 7. xxix+531 p. Paris: Levrault.

FELTES R.M., 1991. Revision of the polynemid fish genus *Filimanus*, with the description of two new species. *Copeia*, 1991: 302-322.

FELTES R.M., 1993. *Parapolynemus*, a new genus for the polynemid fish previously known as *Polynemus verekeri*. *Copeia*, 1993: 207-215.

FOWLER H.W., 1935. A synopsis of the fishes of China. *Hong Kong Nat.*, 6: 276-284.

GÜNTHER A., 1860. Catalogue of the acanthopterygian Fishes in the Collection of the British Museum (Natural History). Vol. 2, Squamipinnes, Cirrhitidae, Triglidae, Trachinidae, Sciaenidae, Polynemidae, Sphyraenidae, Trichiuridae, Scombridae, Carangidae, Xiphiidae. xxi+548 p. London: British Museum.

HUBBS C.L. & K.F. LAGLER, 1947. Fishes of the Great Lakes region. *Bull. Cranbrook Inst. Sci.*, (26): 1-186.

HUREAU J.-C., 1986. Polynemidae. *In:* Fishes of the north-eastern Atlantic and the Mediterranean, Vol. 3 (Whitehead P.J.P., Bauchot M.-L., Hureau J.-C., Nielsen J. & E. Tortonese, eds), pp. 1205-1206. Paris: UNESCO.

LEVITON A.E., GIBBS R.H. Jr., HEAL E. & C.E. DAWSON, 1985. Standards in herpetology and ichthyology: Part I. Standard symbolic codes for institutional resource collections in herpetology and ichthyology. *Copeia*, 1985: 802-832.

MOTOMURA H., IWATSUKI Y. & S. KIMURA, 2001. A poorly known polynemid fish, *Polynemus astrolabi* Sauvage, 1881, a junior synonym of *Galeoides decadactylus* (Bloch, 1795). *Ichthyol. Res.*, 48: 197-202.

MOTOMURA H., IWATSUKI Y., KIMURA S. & T. YOSHINO, 2000. Redescription of *Polydactylus macrochir* (Günther, 1867), a senior synonym of *P. sheridani* (Macleay, 1884) (Perciformes: Polynemidae). *Ichthyol. Res.*, 47: 327-333.

MYERS G.S., 1936. A new polynemid fish collected in the Sadong River, Sarawak by Dr. William T. Hornaday. *J. Wash. Acad. Sci.*, 26: 376-382.

SPRINGER V.G., 1982. Pacific plate biogeography, with special reference to shorefishes. *Smithson. Contrib. Zool.*, 367: 1-182.

STEINDACHNER F., 1869a. Eine Abhandlung über neue oder seltene Fische des Wiener-Museums. *Anz. Akad. Wiss. Wien*, 6: 125-126.

STEINDACHNER F., 1869b. Ichthyologische Notizen (VIII). *Sitzungsber. Akad. Wiss. Wien*, 60: 120-139.

Reçu le 04.05.2001.
Accepté pour publication le 07.09.2001.