Short notes and reviews

Poecilia kykesis nom. nov., a new name for Mollienesia petenensis Günther, 1866, and redescription, revalidation and the designation of a lectotype for Poecilia petenensis Günther, 1866 (Teleostei: Poeciliidae)

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Keywords: Poecilia kykesis, Poecilia petenensis, nomenclature, taxonomy

Abstract

Poecilia petenensis Günther, 1866 (= Mollienesia gracilis Regan, 1913) is redescribed and is revalidated from synonymy of P. sphenops Valenciennes, 1846 and a lectotype is designated. Mollienesia petenensis Günther, 1866 is renamed as P. kykesis to avoid homonymy with Poecilia petenensis.

Introduction

Günther (1866) used the number of dorsal fin rays as a means of distinction between Poecilia Bloch and Schneider, 1801 and Mollienesia LeSueur, 1821. This is illustrated when he described both Poecilia petenensis Günther, 1866, a relatively large, slender short-finned molly (Fig. 2) and Mollienesia petenensis Günther, 1866, an equally large, but high profile sailfin molly (Fig. 1).

Regan (1913) established the use of the gonopodium as a morphological criterion for generic separations. His major distinction between Poecilia and Mollienesia was based on the shape of the gonopodial tip: smooth in Poecilia; with extrusions in Mollienesia (cf. Hubbs 1926; Miller 1975). Regan, therefore, allocated both species of Günther (1866) to Mollienesia, renaming the slender P. petenensis as M. gracilis.

Rosen and Bailey (1963) did not apply any specific criterion for their genera. They also considered the slender and the sailfin molly from Pétén as congeneric but placed them in Poecilia. Furthermore, Rosen and Bailey synonymized 35 taxa, including M. gracilis, into the single species P. sphenops. This rendered both original names of Günther as synonyms, so Rosen and Bailey (1963) chose the name P. petenensis (although preoccupied by the slender species) for M. petenensis in order to "retain at least one of the names given by the original author." Their action, however, was nomenclaturally erroneous. Together with the resurrection of the slender Pétén molly from synonymy of P. sphenops, this error is corrected in the present paper. Quite unnecessarily, Brett and Turner (1986) renamed M. gracilis Regan, 1913 (= P. petenensis Günther, 1866) as "P. gracilis", i. e., between quotation marks. Re-allocating M. gracilis to Poecilia will render the slender form the name P. petenensis. Instead, the sailfin Pétén molly is renamed herein to avoid homonymy with the slender Pétén molly.

Material examined


Systematic section

Poecilia kykesis nom nov.

Molliesia petenensis Günther, 1866: 348 (Type locality: Guatemala, Lake Petén); Poecilia petenensis (Günther, 1866); Rosen and Bailey, 1963: 55 (pre-occupied by Poecilia petenensis Günther, 1866)

Diagnosis. A = 9; D = 12-16; C = 18-22; LLS = 28-29; CPS = 20. Poecilia kykesis (Fig. 1) has no specific body pigmentation, except for black mar-
gined scales. In males, these black margins can form spots, extending the rows of spots found on the caudal fin. In addition, the dorsal fin in males is spotted. The caudal fin exhibits a slightly produced lower margin in adult males.

The gonopodium (Fig. 3a) is similar to that in _P. petenensis_ (Fig. 3b) but with more unserrated segments distally on ray 4p (modally 12 versus modally 10-11 in _P. petenensis_). The gonopodium has more or less cuboidal segments in rays 4a and 4p, which is rare, if not unique in the subgenus.

**Distribution.** _Poecilia kykses_ occurs from the tributary of Rio Usumacinta and nearby lakes, Pétén, Guatemala to the Yucatan Peninsula, Mexico.

**Etymology.** “Kykses” is Greek for “a mixing”, reflecting the confusing mixture of homonyms, caused by the double recognition _Poecilia petenensis_ and _Molliesesia petenensis_ as congeneric species.

_Poecilia petenensis_ Günther, 1866

_Poecilia petenensis_ Günther, 1866: 342-343 (Type locality: Guatemala, Lake Pétén)
_Molliesesia gracilis_ Regan, 1913: 1012 (replacement name for _Poecilia petenensis_ Günther, 1866);
Poecilia sphenops (non Valenciennes, 1846, in part); Rosen & Bailey, 1963: 52.

Diagnosis. A = 8-9; D = 10-11 (modally 10); CPS = 16; CS = 18 (modally); LLS = 27-30. Largest specimens examined: female: 119.0 mm SL, male: 93.0 mm SL. The sides of P. petenensis (Fig. 2) are spotted, in females more than in males. In large females the spots and a cross-hatched pigment pattern on the dorsum of the body form a diamond pattern. In smaller specimens, the diamond pattern is weaker. The fins have little pigment; no spots or blotches are present. The inner jaw teeth are unicuspid.

The gonopodium (Fig. 3b) is sharp, with both a membranous hook at ray 3 and a spinal hook at ray 5p. The distal 4 to 7 segments on ray 3 are unserrated, as well as all segments on ray 4a. At ray 4p, the terminal 9-12 segments are unserrated, followed by 10-12 dorsally serrated segments. Ray 5a of the gonopodium has 12 unserrated terminal segments, followed by 5 or 6 ventrally serrated segments. Gonopodial ray 5p is unserrated.

Comparisons. Although Günther (1866) stated that “males are higher and shorter than females”, the males in this species are also relatively large. In his description, he mentioned that the dorsal fin begins above the 11th or 12th scale of the lateral line. When this character was checked, it was found above the 10th or 11th scale.

Poecilia petenensis has more dorsal fin rays than most other species of the P. sphenops complex (sensu Miller, 1983), modally 10 or 11 (average 10) versus modally 9 or 10 (average 9.5) in other species. It is large and has a relatively slender body. Greenfield (1990) found that the body of P. petenensis (= his P. “gracilis”, cf. Brett and Turner [1983]) is very similar to P. teresae Greenfield, 1990, but P. teresae had “a shorter head, a more slender and shorter caudal peduncle and a more slender body”. His data also showed that both species differed from P. mexicana (Greenfield, 1990: 451, table 1). Another large and elongated species is P. catemaconis Miller, 1975, which has a tricuspid inner jaw dentition.

The gonopodium of P. petenensis differs in having a larger number of unserrated segments terminally on ray 4p (in P. mexicana modally 8-9). This number approaches the number of unserrated segments found in the P. latipinna group: in P. kykesis (a sympatric species of broad-finned molly, Fig. 1) this number is 12-14 (Fig. 3b).

Distribution. This species appears to be endemic to Lake Pétén, Guatemala.

Acknowledgements

I am grateful to Dr I.J.H. Isbrücker (ZMA) for the provided accommodations, and for his valued suggestions while preparing this manuscript. I thank Dr S.G. Poss (GCRL) for his loan of the specimens under his care, and Dr O. Crimmen (BMNH) for the loan of the type specimens of P. petenensis Günther, 1866 (= M. gracilis Regan, 1913). I also thank my supervisor Prof Dr F.R. Schram for his support. Special thanks are for Kees de Jong, who kindly collected P. kykesis from several locations.

References


Received: 6 November 2001