

TWO NEW MONOGENETIC TREMATODES FROM SOUTH AMERICA¹

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ABSTRACT

Two new species of Monogenea, *Cleidodiscus microcirrus* and *Urocleidus aequidens* were recovered from the gills of *Hemiodus semitaeniatus* Kner and *Aequidens maroni* (Steindachner), respectively. The parasites were morphologically described.

INTRODUCTION

Prior to a study by Mizelle and Price (1965), the genus *Cleidodiscus* was known only from North America and the genus *Urocleidus* only from North America, India, and Italy. The paper by Mizelle and Price (*op. cit.*) contained descriptions of two species of *Urocleidus* and three of *Cleidodiscus* from the gills of a South American teleost. Price (1966) described an additional *Urocleidus* species from British Guiana. The present work describes one new member of each of these genera, bringing the total known South American representatives of *Cleidodiscus* and *Urocleidus* to eight.

MATERIALS AND METHODS

The branchial material and recovered parasites were treated as described by Price and Mizelle (1964), and measurements were performed as outlined by Mizelle and Klucka (1953). Measurements and illustrations were made microscopically with the aid of a filar micrometer ocular and a camera lucida, respectively. All measurements are given in microns.

DESCRIPTION OF SPECIES

Cleidodiscus microcirrus n.sp.

Host and Locality: *Hemiodus semitaeniatus* Kner; the Amazon River (Host obtained from the Vertebrate Collection of The Woman's College of Georgia, Mill-edgeville, Georgia).

Specimens Studied: Two.

Types: Holotype deposited in the Helminthological Collection (No. 60890) of the U. S. National Museum, Washington, D. C. Paratype in authors' collections.

Description: An extremely small robust dactylogyrid provided with a thin, smooth cuticle devoid of spines or scales. Length of body 154, greatest width of body 52, near midlength of worm. Anterior cephalic margin deeply cleft, producing conspicuous anterior cephalic lobes; lateral cephalic lobes also present. Two pairs of eyespots, members of the anterior pair larger and closer together than members of other pair. Eyespots show a decided tendency to dissociate (probably due to cover-slip pressure); comprising granules seen scattered in the cephalic region. Head organs difficult to observe. Pharynx subspherical in dorsal view. Peduncle thick but narrow enough to allow haptor to be well set off from body proper. Haptor bilaterally subspherical, with pos-

terior boundary somewhat irregular; length of haptor 41, width 53.

Two pairs of anchors, all members essentially alike morphologically (Figs. 1, 2). Each anchor composed of a solid base with well-defined deep and superficial roots, a solid shaft joining a solid point. Shaft and point join at a definite angle. Ventral anchor length 28, width of base 9; dorsal anchor length 27, width of base 8. Each pair of anchors supported by a haptoral bar. Both bars very much alike in size and shape (Figs. 3, 4); length of ventral bar 20, length of dorsal bar 22.

Haptoral hooks 14 (7 pairs), similar in shape, of typical arrangement (Mizelle and Crane 1964), and with a wide range of sizes, numbers of pairs No. 1 and 5 being much shorter than remaining members (Figs. 5, 6). Each hook composed of an elongate solid base, a solid shaft, and a sickle-shaped termination provided with an opposable piece. Hook lengths: No. 1—9, No. 2—20, No. 3—18, No. 4—17, No. 5—8, No. 6—22, No. 7—16.

Copulatory complex small, composed of a cirrus and basally articulated accessory piece (Figs. 7, 8). Cirrus simple, arises from an expanded base and quickly tapers to a tube of uniform diameter; cirrus length 17. Accessory piece arises as a small solid rod, becoming bifid distally, each ramus of almost equal size; length of accessory piece 14. Pretesticular ovary. Vitellaria sparse, no tendency to form into lateral bands. Intestinal crura confluent posteriorly.

Discussion: Prior to descriptions of new *Cleidodiscus* species from fishes of the Amazon River by Mizelle and Price (1965), the genus *Cleidodiscus* had been reported only from North America. The nearest apparent South American relative of *C. microcirrus* is *C. amazoniensis* Mizelle and Price (1965). There is similarity in the copulatory complexes, haptoral bars, and shape of anchors. There are also hints of affinity between the present form and *C. piranhus* Mizelle and Price (1965).

Urocleidus aequidens n.sp.

Host and Locality: *Aequidens maroni* (Steindachner); British Guiana (Host obtained from the Ichthyology Collection of Mississippi College, Clinton, Miss.).

No. of Specimens Studied: Two.

Types: Holotype deposited in the Helminthological Collection (No. 60894) of the U. S. National Museum, Washington, D. C. Paratype in authors' collections.

Description: A relatively small dactylogyrid provided with a thin, smooth cuticle devoid of scales or spines; length of body 308, greatest width of body 60, near midlength. Eyespots four in number, members of posterior pair much larger; comprising eyespot granules exhibit a tendency to dissociate (probably due to cover-

¹ This work sponsored in part by the faculty research fund of North Texas State University, Denton, Texas.

slip pressure). As both specimens studied present lateral views of the cephalic region, it is impossible to determine spatial relationships of eyespots, nature of head organs and cephalic lobes, or true shape of pharynx. Peduncle thick and quite narrow, setting the haptor off distinctly from the body proper. Haptor much wider than long; length 38, width 62.

Two pairs of anchors, dissimilar in shape and size (Figs. 9, 10). Each anchor is composed of a solid base, a solid shaft, and a solid point. Whereas the smaller dorsal anchor bases are equipped with prominent deep and superficial roots, the ventral anchors possess rudimentary deep roots, and each superficial root exhibits an additional prominence, presenting the appearance of being bilobed. Length of ventral anchor 38, width of base 13; length of dorsal anchor 20, width of base 10. Each pair of anchors supported by a haptoral bar, the bars dissimilar in shape and size (Figs. 11, 12). The longer dorsal bar is of uniform diameter and possessing slightly expanded ends; length 32. The ventral bar is shorter, stouter, and with prominently expanded ends; length 17.

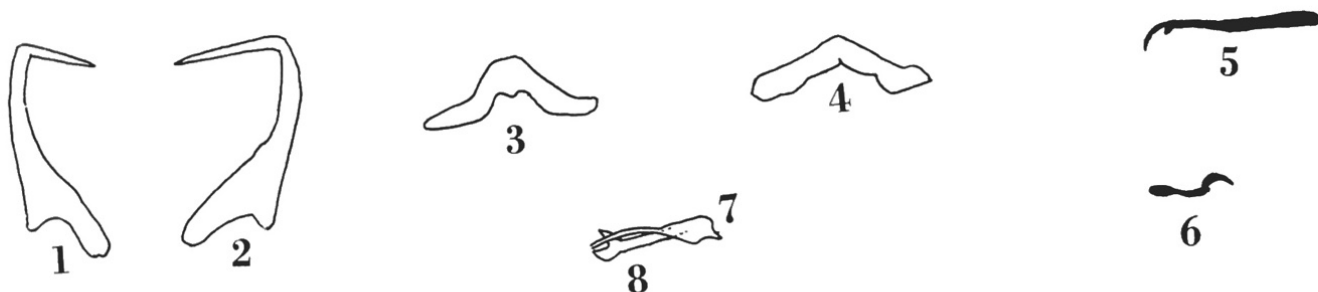
Haptoral hooks 14 (7 pairs) similar in shape and size and normal in arrangement (Mizelle and Crane,

1964) (Figs. 13, 14). Each hook composed of an elongate solid base, a solid shaft, and a solid sickle-shaped termination equipped with an opposable piece. A posteriorly projecting structure arises at a point opposite the opposable piece and projects for a distance of most of the shaft length. Lengths of all hooks 13 or 14.

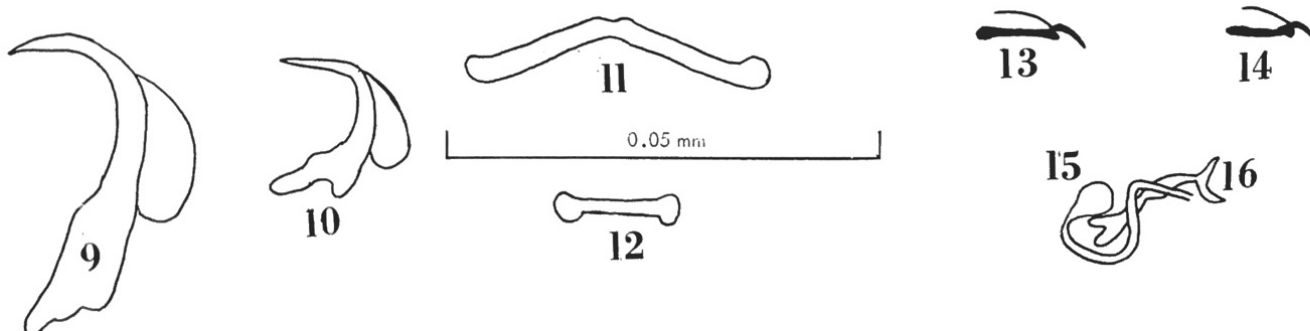
Copulatory complex composed of a cirrus and accessory piece (Figs. 15, 16). Cirrus arises from an expanded base, becoming a tube of roughly sigmoid shape. Accessory piece not articulated to base, a solid shaft enlarged near its midpoint and bifid at either end. Length of cirrus 16, length of accessory piece 14.

Vitellaria extremely dense and uniformly dispersed. Impossible to study gonads and accessory structures. Intestinal crura cannot be observed throughout their entire length but appear to converge upon one another posteriorly, indicating a probable confluency.

Discussion: The closest relative of *Urocleidus aequidens* is apparently *U. cavanaughi* (Price 1966). These two species are similar in morphology of haptoral hooks and anchors. Although the cirrus is not coiled in the present form (as it is in *U. cavanaughi*), the sigmoid shape hints at morphological similarity.



CLEIDODISCUS MICROCIRRUS SP. N.



UROCLEIDUS AEQUIDENS SP. N.

Figs. 1-8 *Cleidodiscus microcirrus* n. sp.
 Fig. 1 ventral anchor
 Fig. 2 dorsal anchor
 Fig. 3 ventral bar
 Fig. 4 dorsal bar
 Fig. 5, 6 hooks
 Fig. 7 cirrus
 Fig. 8 accessory piece

Figs. 9-16 *Urocleidus aequidens* n. sp.
 Fig. 9 ventral anchor
 Fig. 10 dorsal anchor
 Fig. 11 dorsal bar
 Fig. 12 ventral bar
 Figs. 13, 14 hooks
 Fig. 15 cirrus
 Fig. 16 accessory piece

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