

**UROCLEIDOIDES ASTYANACIS N. SP. (MONOGENEA  
ANCYROCEPHALINAE) FROM FRESHWATER CHARACIDIANS  
OF THE GENUS ASTYANAX**

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*A new species of Urocleidoides, U. astyanacis (Monogenea, Ancyrocephalinae) is described from the "lambari" Astyanax scabripinnis (Jenyns, 1842) and A. fasciatus (Cuvier, 1819). Hosts were collected in Atibaia and Jaguari Rivers near Campinas, São Paulo State, Brazil.*

Key words: Monogenea – Ancyrocephalinae – Urocleidoides – Astyanax – gill parasite

The known Latin America species of *Urocleidoides* Mizelle & Price, 1964 from characidian hosts of the genus *Astyanax* Baird & Girard, 1854 are: *U. costaricensis* (Price & Bussing, 1967) Kritsky & Leiby, 1972; *U. heteroancistrum* (Price & Bussing, 1967) Kritsky & Leiby, 1972 and *U. strombicirrus* (Price & Bussing, 1967) Kritsky & Thatcher, 1974 from gills of *A. fasciatus* (Cuvier, 1819) in Colombia; *U. kabatai* Molnar, Hanek & Fernando, 1974 and *U. trinidadensis* Molnar, Hanek & Fernando, 1974 from gills of *A. bimaculatus* (L.) in Trinidad. The purpose of this investigation was to determine the monogenean fauna of fresh-water fishes in Campinas, São Paulo State, Brazil. In our study *Urocleidoides astyanacis* n. sp. is described and figured.

**MATERIALS AND METHODS**

Fish hosts were collected from Atibaia and Jaguari Rivers, and tributaries near Campinas, São Paulo State, Brazil. The gills were immediately separated in water. Ancyrocephalids collected with the aid of a glass capillary tube (Mizelle & Kuckla, 1953) were transferred to formalin 1:4000 (Putz & Hoffman, 1963) and after one hour formalin was added to make a 5% solution. The parasites were observed alive under phase-contrast microscope and mounted unstained in glycerin-gelatin medium (Price & Mizelle, 1964) for study of sclerotized structures. Some specimens stained with acetocarmim were used to determine internal features. Holotype was mounted in Canada balsam and paratypes in glycerin-gelatin medium. Measurements

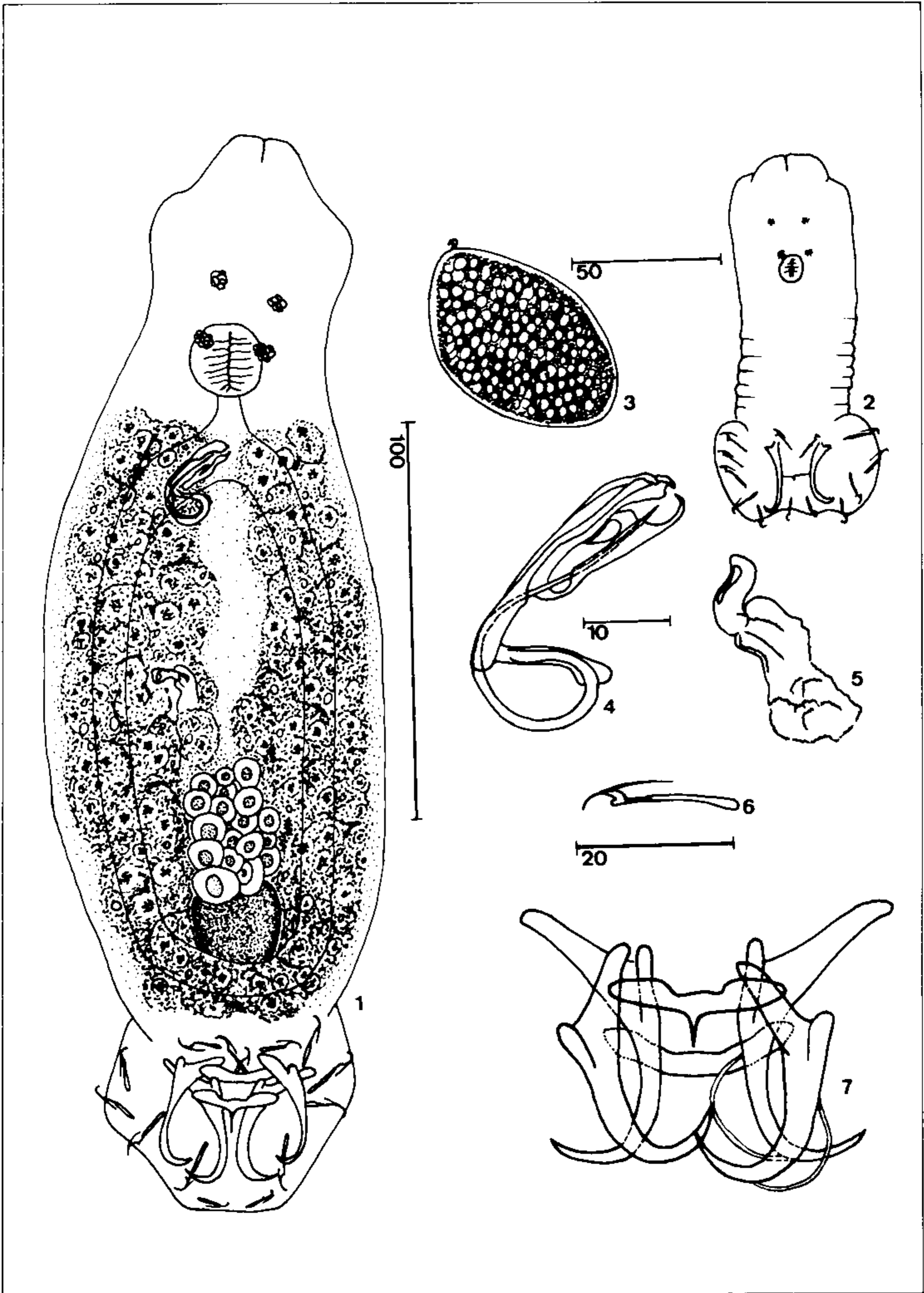
are expressed in micrometers, with the average followed by range in parenthesis, and were made from live specimens. Illustrations were prepared with the aid of a camera lucida and color photographs. Five hosts, 3 *A. scabripinnis* and 2 *A. fasciatus*, were fixed in formol 10% and preserved in acohol 70° for further reference.

**RESULTS**

*Urocleidoides astyanacis* n. sp.

(Figs. 1 to 7)

Description (based on 60 live specimens): Dactylogyridae, Ancyrocephalinae; relative small dactylogyrid. Tegument thin, smooth. Length 290.3 (227 to 366), greatest width 100.4 (82 to 133) usually near midlength. Cephalic region with conspicuous two apical and two lateral lobes. Cephalic glands, head organs indistinct. Eyespots: four, posterior pair larger, about same distance apart. Pharynx spherical 23.7 (18 to 25); gut indefinite. Intestinal crura without lateral diverticula and confluent on proximal part of peduncle. Haptor variable in shape (subpentagonal in outline) 51.8 (48 to 66) long, 61.4 (51 to 63) wide. One pair of dorsal and one pair of ventral anchors, bases of members of each pair connected by an individual bar. Bars not articulated with each other. Dorsal and ventral anchors similar in shape; dissimilar in size, dorsal longer, both with well developed roots, sharply curved points. Length: dorsal anchor 25.3 (24 to 27), basal part 18.4 (13 to 20); ventral anchor 22.7 (20 to 25), base part 15.7 (14 to 18). Anchor filament dual, well developed. Dorsal bar curved anteriorly 23.8 (21 to 26) long, 2.8



Figs. 1 to 7: *Urocleidoides astyanacis* n. sp. 1. Adult, ventral view. 2. Young. 3. Egg. 4. Cirrus and accessory piece. 5. Vagina. 6. Hook. 7. Anchors and bars, right anchors represented with filaments. (Numbers in bars = micrometers).

(1.8 to 3.5) wide. Ventral bar straight and slightly curved, expanded ends with prominent posteromedian process. 20.6 (16 to 24) long, 9.1 (8.5 to 11) greatest width. Hooks similar in shape 17.5 (7.5 to 21). Cirrus shaft coil of one open ring, diameter of the coil 8.2 (6 to 11) long. Accessory piece composed of large cirrus guide and supporting process 32.4 (28 to 36) long, 8.5 (7.5 to 9), wide. Vagina sinistroventral, with sclerotized duct. Testis postovarian. Vitellaria dense in two lateral bands confluent in posterior trunk. Large eggs, pale brown, 74.6 (66 to 85) long, 48.5 (40 to 53) wide. Young with 14 complete hooks and with anchors and bars in developing stage.

*Holotype*: Slide n<sup>o</sup> 4018 deposited on Depto. Zoologia IB, UNICAMP, paratypes, n<sup>os</sup> 4019, 4020, 4021 and 4022 in author's collection.

*Type host and locality*: *Astyanax scabripinnis* (Jenyns, 1842) (Osteichthyes, Characidae) from Atibaia and Jaguari Rivers, Campinas, São Paulo State, Brazil.

*Other host*: *Astyanax fasciatus* (Cuvier, 1819), same locality.

*Location on host*: Gills.

#### DISCUSSION

*Urocleidoides astyanacis* n. sp. may be distinguished by the shape of its copulatory complex and by the structure of the anchors and bars. The ventral bar with prominent posteromedian process appears to be most closely related to *U. margolisi* described by Molnar, Hanek & Fernando, 1974, from *Corydoras aeneus* (Gill) and resembles *U. travassosi* (= *Cleidodiscus travassosi* Price, 1938) Molnar, Hanek & Fernando, 1974 from *Rhamdia rogersi* (Regan) and *Rhamdia quelen* (Quoy & Gaimard). *U. margolisi* has conspicuous enlarge ends in ventral bar and *U. travassosi* V-shaped and thin ventral bar without enlarge ends. The structure of cirrus, accessory piece and vagina, however is quite different in three above species. The cirrus with shaft coil of 2 rings may be used to separate *U. kabatai* from *U. astyanacis*; and the two open supporting processes and vaginal tube with round enlarged ends from *U. trinidadensis*. *U. astyanacis* n. sp. differs from *U. costaricensis* (= *Cleidodiscus*

*costaricensis*) and from *U. heteroancistrum* (= *Palombitrema heteroancistrum*) in the following aspects: (1) number of turns of the cirrus coil and accessory piece shape, (2) morphology of anchors and bars, (3) adult size. *U. strombicirrus* (= *Cleidodiscus strombicirrus*) is not similar to *U. astyanacis* n. sp. by the presence of a cirrus with one complete turn and accessory piece articulated with the cirrus base; the externolateral root on the ventral anchor appears to be similar in both species.

Findings of *Urocleidoides astyanacis* n. sp. from *Astyanax scabripinnis* and *A. fasciatus* and their similarities with *Urocleidoides* of other host genus indicates that strict host specificity is not as strong as revealed by other species of the genus.

The species is named after the generic name of the host.

#### RESUMO

*Urocleidoides astyanacis* n. sp. (Monogenea, Ancyrocephalinae) de caracídeos de água doce do gênero *Astyanax* — Uma nova espécie de *Urocleidoides*, *U. astyanacis* (Monogenea, Ancyrocephalinae) é descrita dos lambaris *Astyanax scabripinnis* (Jenyns, 1842) e de *A. fasciatus* (Cuvier, 1819). Os hospedeiros foram coletados nos rios Atibaia e Jaguari, próximo a Campinas, Estado de São Paulo, Brasil.

Palavras-chave: Monogenea — Ancyrocephalinae — *Urocleidoides* — *Astyanax* — parasita de brânquia

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