

SMITHSONIAN MISCELLANEOUS COLLECTIONS
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REPORTS ON THE COLLECTIONS OBTAINED BY THE FIRST
JOHNSON-SMITHSONIAN DEEP-SEA EXPEDITION
TO THE PUERTO RICAN DEEP

NEW MONOGENETIC TREMATODES FROM MARINE FISHES

(WITH ONE PLATE)

BY

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Among the several lots of monogenetic trematodes collected from marine fishes by the first Johnson-Smithsonian Deep-Sea Expedition were two species which appear to be new; these are described below.

Family CAPSALIDAE

Subfamily BENEDENIINAE

ANCYROCOTYLE BARTSCHI, n. sp.¹

Plate 1, figs. 1, 2

Description.—Body elongate, rectangular, 826 to 970 μ long by 255 to 270 μ wide (immature specimens). Anterior haptors or attaching organs suckerlike, 80 μ in diameter, situated toward posterior ends of fleshy pads. Posterior haptor suckerlike, subsessile, surrounded by narrow, delicate, marginal membrane, armed with three pairs of hooks and 14 marginal hooklets. Hooks of first pair straight, 20 to 23 μ long, directed forward and outward; hooks of second pair strongly recurved, immediately posterior to those of first pair, 68 to 76 μ long from proximal end to height of curve, directed backward and outward, tips directed forward; hooks of third pair relatively broad and flat, lateral to hooks of second pair, 25 to 28 μ long, tips slender and recurved; marginal hooklets 10 μ long. Oral aperture somewhat triangular, about 150 μ from anterior end of body; pharynx subglobular, 100 μ long by 120 μ wide; esophagus very short or absent; intestinal branches simple, without lateral or median diverticula, not united posteriorly. Common genital aperture sinistral, at level of equator of pharynx. Cirrus pouch 160 μ long by 40 μ wide, its base posterior to pharynx and slightly to right of median line. Testes elongate oval, 180 μ long by 80 μ wide, equatorial. Ovary oval, immediately pre-

¹ Named in honor of Dr. Paul Bartsch, director of the expedition.

testicular. Ootype oval, median, immediately anterior to ovary. Vagina short, opening near inner limit of left cecum about $57\ \mu$ posterior to level of base of pharynx.

Host.—*Naucrates ductor* (Linn.).

Location.—Gills.

Distribution.—Station 86 (lat. $19^{\circ}30'30''$ N., long. $65^{\circ}14'00''$ W.).

Type Specimen.—U.S.N.M. Helm. Coll. no. 8804; paratype no. 8805.

The above description is based on two specimens, both of which were immature.

Parona and Perugia (1895) described a monogenetic trematode, *Placuncella vallei*, collected in 1894 by A. Valle from *Naucrates ductor* at Trieste, which may be the same species as that described here as *Ancyrocotyle bartschi*. Their description of *P. vallei* was incomplete and except for the relative size and distribution of the large hooks of the posterior haptor might apply equally well to a number of species of the related genus *Benedenia*. Later Parona and Monticelli (1903) redescribed *P. vallei* and made it the type of the genus *Ancyrocotyle*; the redescription was based apparently on the original specimens. Parts of their description check well with that of *A. bartschi*, but in other respects there are notable differences. In the redescription only two pairs of hooks are reported, but in their discussion it was stated that they were unable to find the others, suggesting that they might have become lost. They also described and showed in their illustrations only a single, preovarial testis; however, as the specimens were old and not in good condition, it is conceivable that an error was made in interpreting the various structures. The presence of a single preovarial testis, assuming that no mistake was made, distinguishes *A. bartschi* from *A. vallei*. There is a difference also in the morphology of the hooks of the second pair, but more material is required before it can definitely be stated that this difference is valid.

Family DACTYLOGYRIDAE

Subfamily TETRAONCHINAE

ANCYROCEPHALUS ATHERINAE, n. sp.

Plate 1, figs. 3, 4

Description.—Body more or less fusiform in outline, $325\ \mu$ long by $95\ \mu$ wide, anterior end more attenuated than posterior end. Cephalic glands few in number, lying on each side near posterior end of pharynx, and opening to exterior through three pairs of prominent

head organs located at anterior end of body. Posterior haptor about $57\ \mu$ wide, with two pairs of large hooks supported by two transverse, heavily cuticularized bars, and with 14 marginal hooklets; hooks of anterior pair $30\ \mu$ long, those of posterior pair $25\ \mu$ long; anterior transverse bar almost straight, $34\ \mu$ long, posterior bar bow-shaped, $20\ \mu$ long; marginal hooklets varying from 8 to $25\ \mu$ long, the three most anterior pairs much longer than the others (pl. 1, fig. 4c). Oral opening ventral, $75\ \mu$ from anterior end; pharynx oval, $35\ \mu$ long by $20\ \mu$ wide; esophagus very short; intestinal branches slender, their tips approaching near posterior end of body proper. Brain antero-dorsal to oral opening; eyes present, anterior pair smaller and less pigmented than posterior pair. Genital aperture median, about $120\ \mu$ from anterior end of body. Cirrus about $20\ \mu$ long, its morphology not ascertainable. Testis elongate, about $75\ \mu$ long by $30\ \mu$ wide, postequatorial. Ovary linguiform, about $75\ \mu$ long by $30\ \mu$ wide at anterior end, overlapping testis. Vitelline follicles relatively large and extending from level of posterior end of pharynx to posterior end of body proper. Vagina short, opening at left margin of body about $133\ \mu$ from posterior end, communicating proximally with a large globular seminal receptacle. Ootype oval, median, its posterior end surrounded by relatively large unicellular glands. No eggs observed.

Host.—*Atherina araea* Jordan and Gilbert.

Location.—Gills.

Distribution.—Samaná Bay, near Santa Barbara de Samaná, Dominican Republic.

Type specimen.—U.S.N.M. Helm. Coll. no. 8806; paratypes no. 8807.

This small delicate species was found on the gills of about one-third of the specimens of *Atherina araea* examined; they were not abundant, only two or three individuals being found on each infested fish.

Ancyrocephalus atherinae may be easily distinguished from all other species of the genus by the unequal length of the marginal hooklets of the posterior haptor; these hooklets in the other species are approximately equal in length.

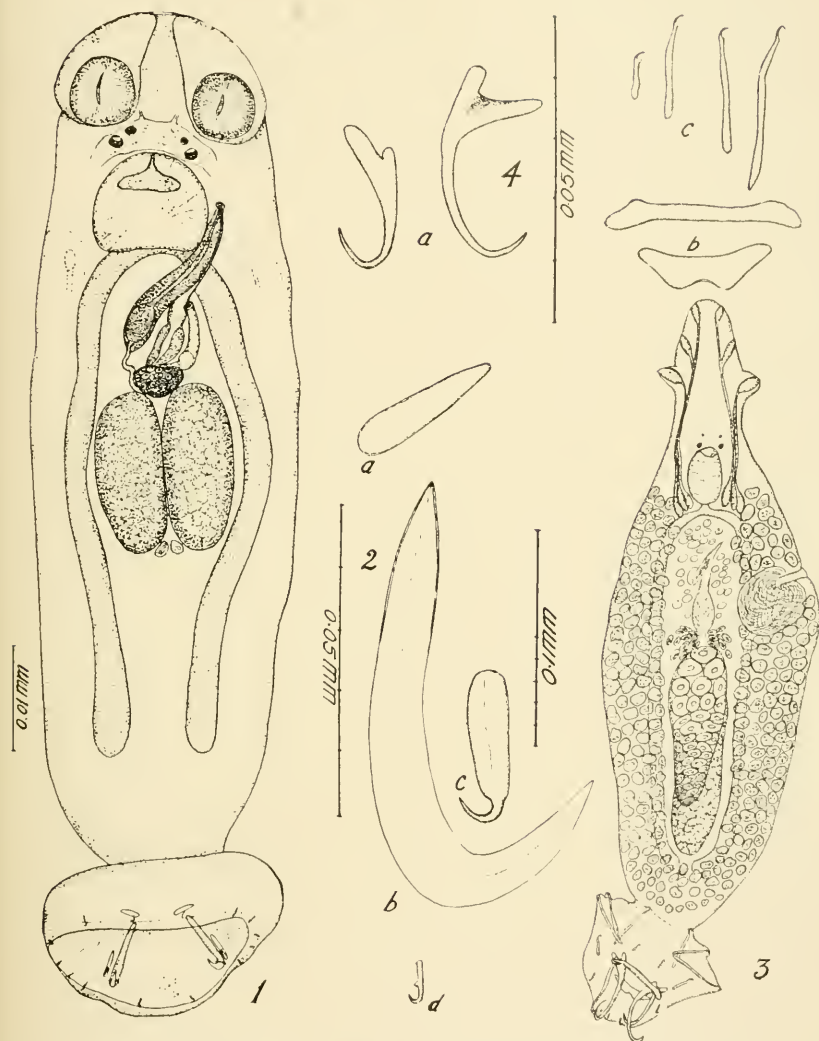
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1. *Ancyrocotyle bartschi*, n. sp., complete worm, ventral view.
2. *Ancyrocotyle bartschi*, n. sp., hooks of posterior haptor: a, hook of first pair; b, hook of second pair; c, hook of third pair; d, marginal hooklets.
3. *Ancyrocephalus atherinae*, n. sp., complete worm, ventral view.
4. *Ancyrocephalus atherinae*, n. sp., armature of posterior haptor: a, large hooks; b, cuticular supporting bars; c, marginal hooklets.