

**REDESCRIPTION
OF *ACANTHOCHONDRIA ATELEOPI* CAPART, 1959
(COPEPODA : POECILOSTOMATOIDA) PARASITIC ON
THE DEMERSAL FISH, *ATELEOPUS LOPPEI*
FROM THE EASTERN GULF OF MEXICO**

by

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ABSTRACT

Acanthochondria ateleopi CAPART, 1959 is redescribed from two female and two male specimens. The male is described for the first time. *Acanthochondria ateleopi* is characterized by, and distinguished from its congeners, by an elongate, cylindrical, and distinctly segmented first antenna. This is the first report of this copepod from the western Atlantic.

Key Words : parasitic copepod, *Acanthochondria ateleopi*, redescription.

INTRODUCTION

CAPART (1959) described a new species of parasitic copepod from the demersal fish, *Ateleopus banardi*, POLL, 1953 collected off the west coast of Africa. This new species, *Acanthochondria ateleopi* was not described in sufficient detail. Only habitus figures and brief descriptions of the appendages were included in the original work. CAPART (1959) did, however, mention a few features which serve to distinguish *A. ateleopi* from its congeners : shape of the body and structure of the antenna. The original description was based on only one adult female (a male was also found but not described). During a recent examination of the branchial chambers of *Ateleopus loppei*, ROULE, 1922 collected off Florida, 4 specimens of *A. ateleopi* (2 females, 2 males) were found. In this paper *A. ateleopi* is redescribed in detail based on this new material.

MATERIAL AND METHODS

The host *Ateleopus loppei* (1011 mm, total length) was collected at a depth of 307 m off the west Florida coast on 6 February, 1989. (The host specimen is catalogued (GSBC No. 85376) as *Ijimaia loppei* in the family Ateleopidae). This family is currently under study by K. J. SULAK. SULAK (pers. comm.) indicates that *Ijimaia* is a junior synonym of *Ateleopus*, and *A. loppei* is probably synonymous with *A. barbardi*, from which CAPART's specimens of *Acanthochondria ateleopi* were obtained). The host was fixed whole at sea in 10 % formalin and later transferred to 50 % isopropanol. The parasites were recovered from the branchial chambers and retained in isopropanol. One adult female, with attached male was retained intact, the other female and male was dissected. Appendages from these specimens were removed and mounted in Turtox CMC-S stain-mountant or 85 % lactic acid. Line drawings were made with the aid of a camera lucida (dissecting scope) or drawing tube (compound scope) at magnifications up to 900X. Terminology of morphological structures follows that of KABATA (1979).

Acanthochondria ateleopi Capart, 1959

(Fig. 1 and 2)

Host : *Ateleopus loppei* (University of Florida, Cat. No. 85376)*Site of Infection* : branchial chamber (dorsal portion)*Locality* : off southwest coast of Florida, Gulf of Mexico (26°25'N-84°45'W)*Specimens* : two adult females, two adult males ; Atlantic Reference Centre, St. Andrews, New Brunswick*Redescription* (based on four specimens)

Adult female : Cephalosome (Fig. 1, 1a-1 b) about as wide as long, posterior lateral margin protruding, rounded. Dorsal surface (Fig. 1, 1a) with medial bisecting ridge, raised slightly from surface. Oral area (Fig. 1, 1b) on ventral posterior surface of cephalosome. Trunk with anterior neck mass formed from first two thoracic leg-bearing segments ; dorsal posterior margin of each with shall, transverse wrinkles. Trunk many times larger than cephalosome with roughly parallel lateral margins ; pronounced transverse indentations in body wall at mid-length. Posterolateral processes distinct, rounded at ends and curving inwards toward genito-abdomen. Genito-abdomen (Fig. 1, 2) at central posterior margin of trunk ; small, curving ventrad. Genital segment (Fig. 1, 2) with medial groove on dorsal surface and striated lacunae on either side. Abdomen (Fig. 1, 2) clavate, with uropods at mid-length on lateral margins. Uropods (Fig. 1, 3) with swollen base and single seta at apex. Distal part divided into two portion ; basal portion clavate, with two large setae at tip (on either side of terminus), terminal portion tapering to digitiform tip, surface armed with fine spinules. Total length of parasites 7.8 and

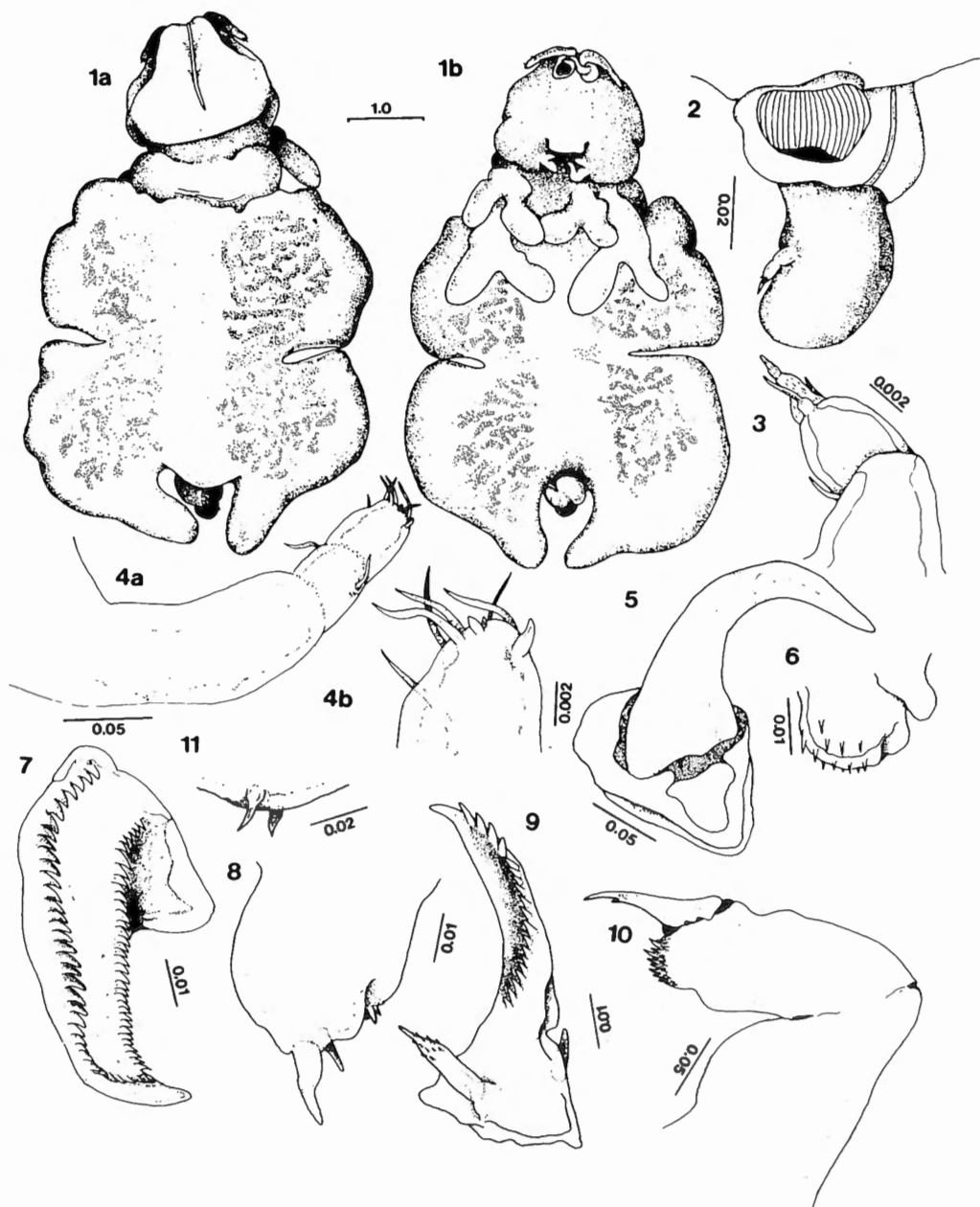


Fig. 1. — *Acanthocondria ateleopi* Capart, 1959, adult female; 1a : habitus, dorsal; 1b : habitus, ventral; 2 : genito-abdominal complex, dorsolateral; 3 : uropod, lateral; 4 : first antenna; a. entire appendage, dorsal, b. apical armature, dorsal; 5 : second antenna, ventral; 6 : paragnath, ventral; 7 : Mandible, dorsal; 8 : first axilla, ventral; 9 : claw of second maxilla, dorsolateral; 10 : maxilliped, ventral; 11 : tip of endopod of second leg, ventral.

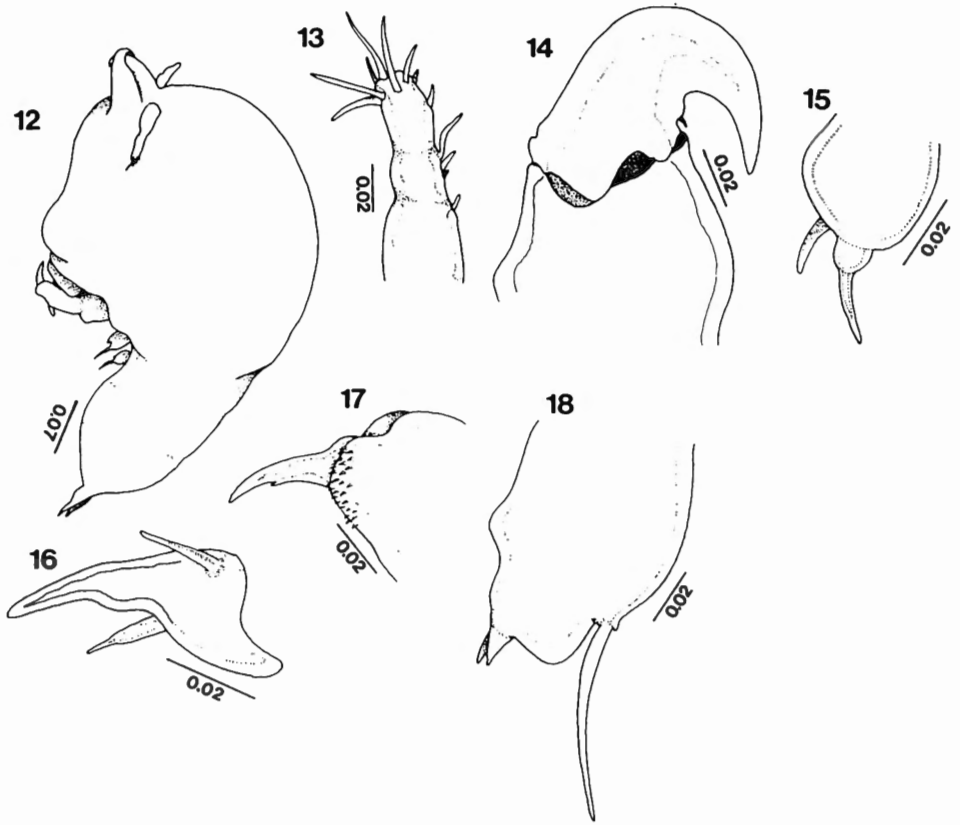


Fig. 2. — *Acanthocondria ateleopi* Capart, 1959. 12 : adult male, lateral; 13 : first antenna, lateral; 14 : second antenna, lateral; 15 : first maxilla, ventral; 16 : claw of second maxilla, ventral; 17 : claw and brachium of maxilliped, ventral; 18 : first thoracic leg, lateral. (Scale bars are in millimeters).

8.0 mm, respectively. First antenna (Fig. 1, 4a) elongate, cylindrical; distinctly three-segmented, basal segment pedunculate, comprising two-thirds length of appendage, unarmed. Penultimate segment shorter, cylindrical, with two spiniform setae on dorsal surface. Terminal segment slightly longer than penultimate, cylindrical; apical armature (Fig. 1, 4b) consisting of eight setae: five spiniform, three much shorter, papilliform. Second antenna (Fig. 1, 5) with sub-quadrangular, flattened basal plate and elongate, recurved distal hook Paragnath (Fig. 1, 6) with rounded end and distinct lateral process; end armed with minute denticles on ventral surface. Labrum (Fig. 1, 1b) truncate, flap-like, with rounded posteriolateral corners, no discernable armature. Mandible (Fig. 1, 7) falcate, curved inward at tip; with 35 teeth on outer margin and 34 teeth on inner margin. First maxilla (Fig. 1, 8) globular with one large and one small seta at terminal end, two small spines and cleft on medial surface. Second maxilla with slightly curved claw (Fig. 1,

8), armed with 19 teeth on outer margin; auxiliary process with tapering tip, provided with several spinules; single blunt seta on dorsal surface of second maxilla at base. Maxilliped (Fig. 1, 10) with large thorn-like spines on brachium; claw with secondary tooth on inner margin, near tip. First thoracic leg (see Fig. 1, 1b) bilobate, ends rounded, unarmed. Second thoracic leg (Fig. 1, 1b) twice size of first, bilobate with rounded ends. Terminus of endopod armed with two sub-triangular setae (Fig. 1, 11).

Adult male: cephalosome (Fig. 2, 12) globular, inflated. Posterior trunk conical, pseudosegmented. Uropods like those of female, but lacking large seta at base. First antenna (Fig. 2, 12) three-segmented; basal segment broad, cylindrical, comprising one-half length of appendage; armed on anterolateral corner with one short, spiniform seta. Penultimate segment cylindrical, one-half length of first, provided with three spiniform setae on anterior lateral margin. Terminal segment slightly longer than second, armed with eight spiniform setae of various lengths. Second antenna (Fig. 2, 12) with short, stout base; claw (terminal segment) with broad base and stout recurved tip, short seta at base on posterior inner margin. Mandible not clearly observable, similar in shape to that of female. First maxilla (Fig. 2, 15) globular, armed with one large terminal seta and one shorter, sub-terminal seta. Claw of second maxilla (Fig. 2, 16) with expanded base and tapering tip; two auxiliary processes on either side at base. Maxilliped (Fig. 2, 17) similar to that of female, but with proportionally smaller spines on brachium. First thoracic leg (Fig. 2, 18) with two short triangular setae on posterior inner corner and one long, flagelliform seta on other outer corner. Second leg similar to first, slightly smaller.

DISCUSSION

Given the identity of the host, the shape of the body and the morphology of the appendages, there is little doubt that the specimens described herein belong to *A. ateleopi* as described by CAPART (1959). *Acanthochondria ateleopi* is unique among its congeners in possessing an elongate, cylindrical, and segmented first antenna. CAPART (1959) described his specimen from *Ateleopus* as having long and narrow first antennae. Within *Acanthochondria* OAKLEY, 1930 (50 nominal species), the predominant form for this appendage is short and subcircular with little or no discernable segmentation. *Acanthochondria ateleopi* most closely resembles *A. cornuta* (MULLER, 1776), a parasite of flatfishes in the north Atlantic, noted for its morphological plasticity (the specimens described herein resemble most closely the cornuta-form (c.f. HO, 1970)). However, *A. ateleopi* exhibits a trunk and neck which is broader, longer and relatively more massive than that characteristic of *A. cornuta*, and a mandible with fewer teeth. KABATA (1984) considered the shape of the first antenna to be useful in distinguishing species of *Acanthochondria*; given the structure of this appendage, (belonging in the type A group (see KABATA, 1984): digitiform and simple, broadest at base, tapering gradually to tip), *A. ateleopi* can be considered a valid species. This is the first report of this parasite from the west Atlantic, and the first since the original description.

ACKNOWLEDGEMENTS

I thank Dr. Ju-shey Ho for advice on the validity of *A. ateleopi*, Dr. Mark Leiby (Flor. Mar. Res. Instit.) for providing the host specimen, Dr. K. J. Sulak for advice on host nomenclature, Dr. Z. Kabata for reviewing a draft of this paper and Cheryl Winchester for typing the manuscript.

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