

# BEAUFORTIA

SERIES OF MISCELLANEOUS PUBLICATIONS

ZOOLOGICAL MUSEUM - AMSTERDAM

No. 80

Volume 7

June, 28 1958

## On *Choniostoma* and *Heptalobus*\*) (Copepoda, Choniostomatidae)

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In the course of a study of prawns infected by epicarid isopods, I observed some specimens of *Spirontocaris lilljeborgi* (Dan.) showing deformations of the carapax very similar to those caused by parasitic isopods (fig. 1). In this case, however, the swellings of the carapax were not caused by epicarids, but by parasitic copepods of the family Choniostomatidae, lodged in the branchial cavity of the prawn. After painstaking dissection and examination of the appendages, I believe that my material belongs to a new species of the genus *Choniostoma*, for which the name *Ch. rotundatum* is proposed.

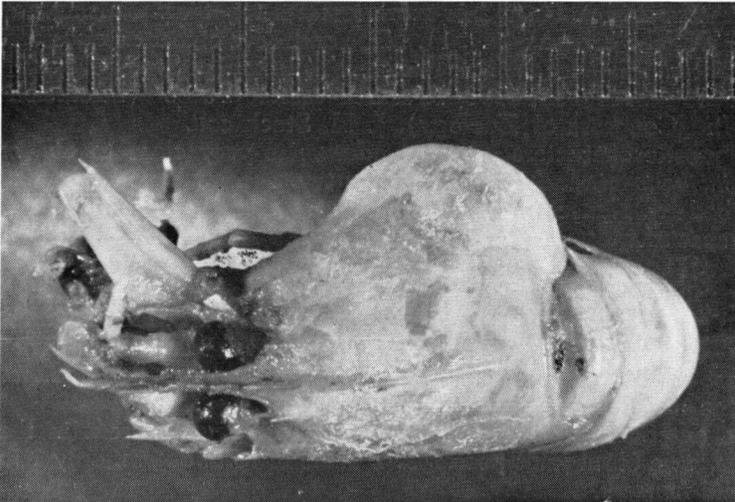


FIGURE 1. A specimen of the prawn *Spirontocaris lilljeborgi* (DAN.) bearing in the right branchial cavity two specimens of the copepod *Choniostoma rotundatum* n.sp. The scale is in mm.

Photograph by J. J. HOEDEMAN

\*) Received February 12, 1958

[11]

Hitherto, 2 species only have been referred to the genus *Choniostoma*: *Ch. mirabile* Hansen, and *Ch. hanseni* Giard & Bonnier. These two species have been described in a very satisfactory way by Hansen (1897). In comparing the literature on the subject, I discovered that Nierstrasz & Brender à Brandis (1930) created a new genus which they called *Heptalobus*, but which obviously is synonymous with *Choniostoma*. The opinion of Nierstrasz & Brender à Brandis that "the systematic position of this organism is quite unknown. Its characters furnish no clue as to its relationships" (1930, p. 5) is easily understood in the light of the astonishing superficiality of their study, which was strictly limited to what could be seen through a hand-lens.

The type-species of *Heptalobus*, *H. paradoxa*, though very incompletely known, probably represents a good species within the genus *Choniostoma*, judging at least from the lateral lobes of the body which are more strongly developed than in the other species of the genus. As regards the shape of the chitinous frame of the head, *Ch. paradoxum* (Nierstr. & B. à B.) may be close to *Ch. mirabile* Hansen.

All species of the genus have been found parasitic in the branchial cavity of prawns of the genus *Spirontocaris*: *Ch. mirabile* and *Ch. hanseni* in *S. gaimardi* (H.M. Edw.) and *S. polaris* (Sab.), *Ch. paradoxum* in *S. biunguis* Rathbun and *S. suckleyi* (Stimpson), *Ch. rotundatum* in *S. lilljeborgi* (Dan.). The differences between the various *Choniostoma*-species are very slight, and I would not be greatly surprised if a comparative study of a more abundant material would show that the supposed "specific" differences are merely infraspecific variations.

#### *Choniostoma rotundatum* n sp

Female: parasitic in the branchial cavity of *Spirontocaris lilljeborgi* (Danielssen). Sometimes 2 or more females together. Causing a marked swelling of the carapax (fig. 1). Male and development stages unknown.

Locality: 26 miles W of Hirtshals (Jutland). Sigsbee trawl, depth about 400 m. Aug. 13, 1953, Research-vessel "Faros" (Excursion of the XIV Int. Congress of Zoology). J. H. Stock coll.

Diagnostic characters. *Ch. rotundatum* is very close to *Ch. mirabile* and *Ch. hanseni*, and since the latter two species have been excellently described by Hansen, 1897, it suffices to mention the differences with these species.

The chitinous frame of the head in *rotundatum* (fig. 3a—b) is regularly rounded in outline, with a projecting rod at the right and left frontal side. In *mirabile* these rods extend backward, in *rotundatum* they extend laterally and forward. The frame of the head in *hanseni* has its greatest width at the frontal end, that of *mirabile* and *rotundatum* have it in the middle.

The anterior antennae (fig. 3g) are not very different in the three species. The basal joint possesses 2 setae in *rotundatum*, only 1 in *mirabile* and *hanseni*.

The posterior antennae (fig. 3d) are more reduced in *rotundatum* than in the other species. The 3 segments are only imperfectly articulated, and the entire appendage is hidden under the large sucker. In *mirabile* and *hanseni*, the posterior antennae, though small, are perfectly jointed and not hidden.

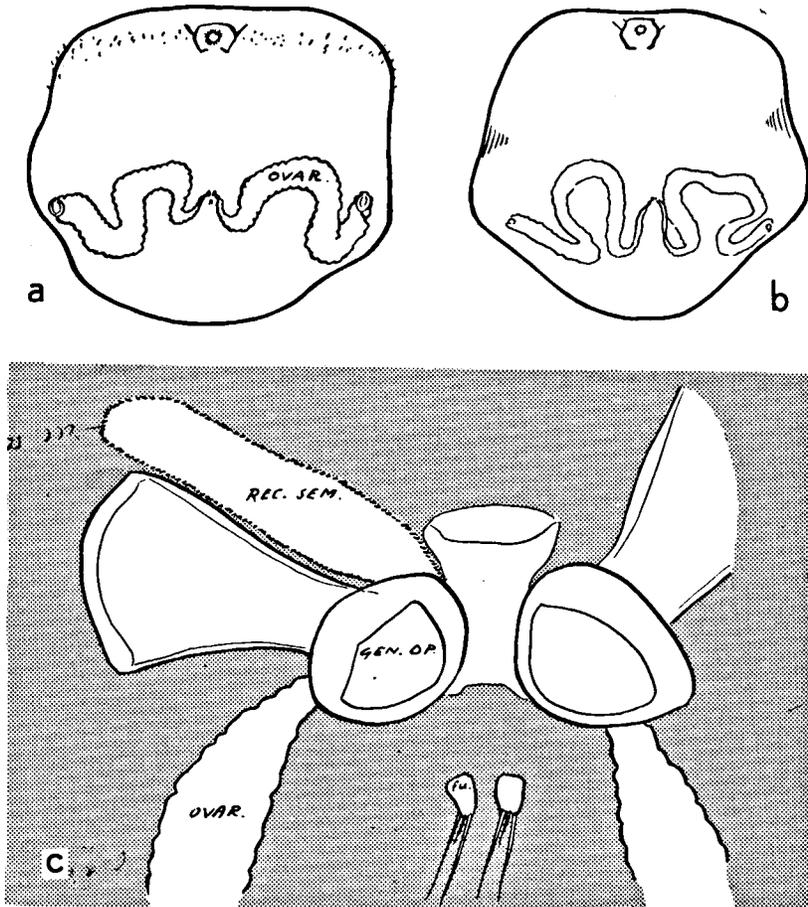


FIGURE 2. *Choniostoma rotundatum* n.sp. ♀  
a, b, different specimens seen from the ventral side; c, genital area. (ovar. = ovarium; rec. sem. = receptaculum seminis; gen. op. = genital opening; fu. = caudal stylets).

Mandible (fig. 3c) and anterior maxillae (fig. 3f) identical in all species.

Posterior maxillae (fig. 3e) built as in the other species, but placed more backward: in *mirabile* and *hanseni* they are implanted at a level with the posterior margin of the sucker, in *rotundatum* they are implanted far behind the sucker.

Maxillipeds apparently lacking in *rotundatum*, vestigial in the other two species.

The genital area (fig. 2c) differs from that of the other two species in the absence of a forked chitinous structure between the genital apertures and the caudal stylets.

The caudal stylets are fairly well-developed (fig. 3c), and provided with 3 apical setae.

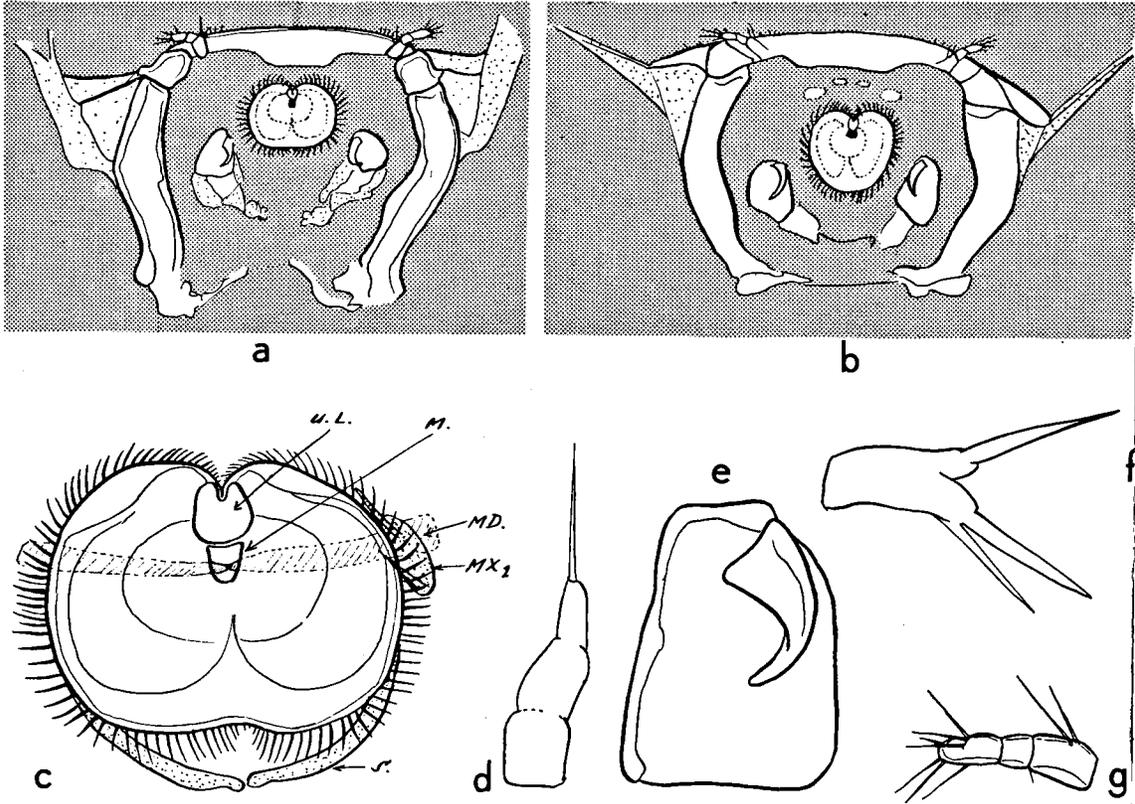


FIGURE 3. *Choniostoma rotundatum* n.sp. ♀  
*a, b*, chitinous frame of the head of different specimens; *c*, sucker; *d*, posterior antenna; *e*, posterior maxilla; *f*, anterior maxilla; *g*, anterior antenna. (*u.l.* = upper lip; *md.* = mandible; *m.* = mouth; *mx. 1* = anterior maxilla; *s.* = chitinous skeleton).

The holotype (Zool. Mus. Amsterdam Co. 100.349) has length and width subequal: 3.4 mm. In other specimens, the width may slightly exceed the length. Some specimens have a zone of short setae extending on the ventral side of the body from the head to the anterior angles of the body; other specimens are completely bald.

#### LITERATURE CITED.

- HANSEN, H. J.  
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 NIERTSRASZ, H. F. & G. A. BRENDER à BRANDIS  
 1930 Three new genera and five new species of parasitic Crustacea. — Proc. U.S. Nation. Mus. vol. 77, no. 2832.