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LEADER: EIGIL KNUTH

CUMACEA
FROM JØRGEN BRØNLUND FJORD,
NORTH GREENLAND

BY

JEAN JUST

WITH 10 FIGURES IN THE TEXT

KØBENHAVN

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BIANCO LUNOS BOGTRYKKERI A/S

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Abstract

From Jørgen Brønlund Fjord, North Greenland (82°10' N, 30°30' W) 11 species of Cumacea are listed as the result of investigations during the Fourth Peary Land Expedition in the summer of 1966.

One species is new to science, viz. *Campylaspis stephenseni*. The male of *Leucon spinulosus* H. J. HANSEN is recorded and described for the first time. A possibly new species of the genus *Eudorella* is described, but in view of recent papers it is referred to as *Eudorella* sp. only.

Notes on breeding biology are made where possible.

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INTRODUCTION

During the Fourth Peary Land Expedition in the summer of 1966 marine investigations of Jørgen Brønlund Fjord (82°10' N, 30°30' W) were for the first time carried out on a larger scale.

Among other Crustacea eleven species of Cumacea were found, one of which is new to science, viz. *Campylaspis stephenseni*. Special interest is attached to a single male of *Leucon spinulosus* H. J. HANSEN which is recorded and described for the first time. Also the find of large numbers of *Brachydiastylis nimia* H. J. HANSEN is of interest, as that species, though obviously circumpolar, has hitherto been found very scattered and in small numbers only.

In view of the urgent need of a revision of the genus *Eudorella* the single species of that genus found in Jørgen Brønlund Fjord is recorded as *Eudorella* sp.

A survey of marine biological investigations in Jørgen Brønlund Fjord, including notes on hydrography, bottom-types, vegetation of algae, etc., and lists of stations, has been given by the present author, (JUST 1970).

All measurements of animals refer to the distance between the tip of the pseudo-rostrum (front edge of the carapace) and the tip of the telson.

The material is kept in the Zoological Museum, University of Copenhagen.

SYNOPSIS OF THE SPECIES

Fam. Diastylidae

Genus *Diastylis* SAY, 1818

1. *Diastylis goodsiri* (BELL) (fig. 1-2)

Diastylis goodsiri G. O. Sars 1900, p. 54 Pl. XLI.

Diastylis sp. ZIMMER 1926, p. 82 fig. 96.

— — — 1934, p. 36 no. 10 (new record).

— — STEPHENSEN 1943, p. 31 (quoting ZIMMER 1934).

Diastylis goodsiri — ibid. p. 20-23 fig. 3 (map of distribution).

— — LOMAKINA 1958, p. 146 fig. 84.

Material:

Dredge haul: St. 43, 20 m., clay with some gravel.

— 51, 18 m., clay.

— 52, 160-180 m., fine red-brown clay.

— 58, 20 m., clay with gravel.

— 60, 20 m., clay.

— 61, 5 m., sandy clay with gravel.

— 62, 10 m., clay and gravel.

— 67, 40-50 m., clay.

— 66, 10 m., clay with gravel.

— 68, 10-15 m., clay, gravel, and empty shells.

— 70, 40-45 m., fine red-brown clay.

— 71, 30 m., clay.

Remarks:

Of a total 33 specimens only two very small ones were found in the inner basin and on the threshold (7.5 and 10 mm. from St. 43 and 51, respectively), and one small specimen of 7.5 mm. was taken at St. 52 off the mouth of Jørgen Brønlund Fjord. All the rest were taken in the outer basin and at moderate depths around Kap Harald Moltke and Kap Knud Rasmussen.

Of the 9 males in the material none were found to be adult. Four of the males measured 20-21 mm. with no natatory setae on the exopods of the third and fourth pereopods, and the abdominal appendages being either absent or developed into budlike structures only.

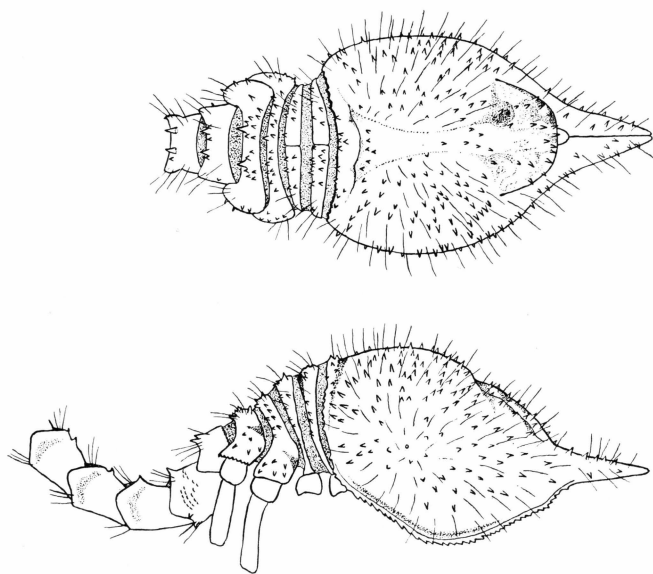


Fig. 1. *Diastylis goodsiri*, female manca of 7,5 mm.

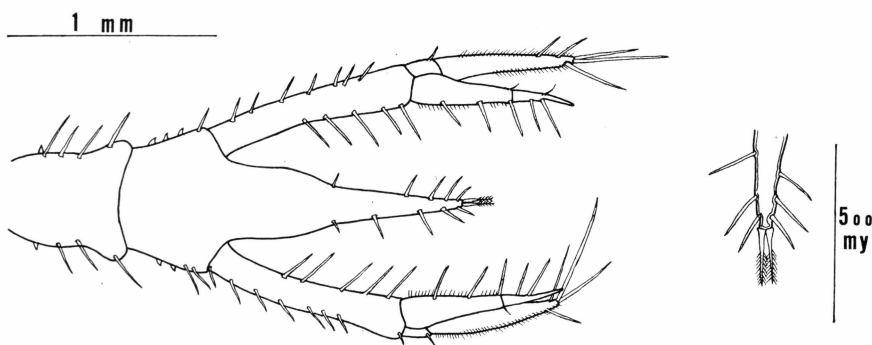


Fig. 2. *Diastylis goodsiri*, same specimen as fig. 1, urosome and tip of telson.

Of the 24 females one of 21 mm. was found to be ovigerous (St. 70, August 4th). In addition to this the 5 largest females measured 20, 20.5, 24, 25, and 25.5 mm. They were all taken at earlier dates than the ovigerous female mentioned above and none of them had developed a marsupium. This may indicate that the breeding period does not start until late July, (cf. STEPHENSEN 1943, p. 23 "... spawning season seems to be July to September, ...").

In the list of references to the present species I have included two specimens recorded by ZIMMER (*loc. cit.*) as "*Diastylis* sp. (nov. sp.)" both taken at the east coast of Greenland. I have not examined ZIMMER's specimens, but they are hardly anything but young *D. goodsiri*.

ZIMMER (1926) writes: "Vorn ist er in ein spitzes Rostrum ausgezogen, dessen länge fast $\frac{1}{3}$ der ganzen Carapaxlänge ausmacht. Die Carapaxoberfläche ist regelmässig netzförmig skulpturiert und trägt eine grössere Zahl von mittelgrossen Zähnchen, ..." and further on "Das Telson hat am Ende zwei lange borstenförmige Dornen, die im distalen Teile dicht befiedert sind."

ZIMMER's specimens are 5–6 mm. long. Fig. 1–2 show a specimen of 7.5 mm. from Jørgen Brønlund Fjord. Apart from the uropods and the telson being slightly more setose than shown by ZIMMER it seems to agree perfectly with his description (the reticulation of the surface is omitted in fig. 1). — The urosomal parts of a specimen of 5.5 mm. from Jørgen Brønlund Fjord turned out to be identical with ZIMMER's drawing.

The relative length of the pseudorostrum compared with the total length of the carapace changes greatly with increasing growth of the animal, ranging from about $\frac{1}{3}$ in the manca (cf., ZIMMER *loc. cit.*, and fig. 1) to $\frac{1}{5}$ – $\frac{1}{6}$ in the adult. Furthermore the reticulation, the denticles of the carapace, and the plumose apical spines of the telson do not increase in size with increasing growth, and thus become less and less conspicuous.

2. *Diastylis spinulosa* HELLER

Diastylis spinulosa G. O. SARS 1900, p. 55 Pl. 42.

— — OHLIN 1901, p. 47 fig. 10 a–d.

— — STEPHENSEN 1943, p. 30.

— — LOMAKINA 1958, p. 135 fig. 75.

Material:

Dredge haul: St. 51, 18 m., clay.

— 56, 190–200 m., fine red-brown clay.

— 70, 40–45 m., fine red-brown clay.

Remarks:

The material includes four specimens, viz. three females of 16 mm. (with well developed but empty marsupium), 12 mm., and 9.5 mm. together with one male of 12 mm. The carapace of the male is armed as in the females, the exopods on the third and fourth thoracic legs are moderately developed only (adult male see LOMAKINA, fig. 75).

The various drawings in the literature give the number of dorsal spines on the five thoracic segments as 2, 2, 2, 2, 1(3), counting from the first to the fifth segment. The specimens from Jørgen Brønlund Fjord, together with all the material from West and East Greenland and the Kara Sea which I have examined show the following numbers 0, 2, 4, 2, 3.

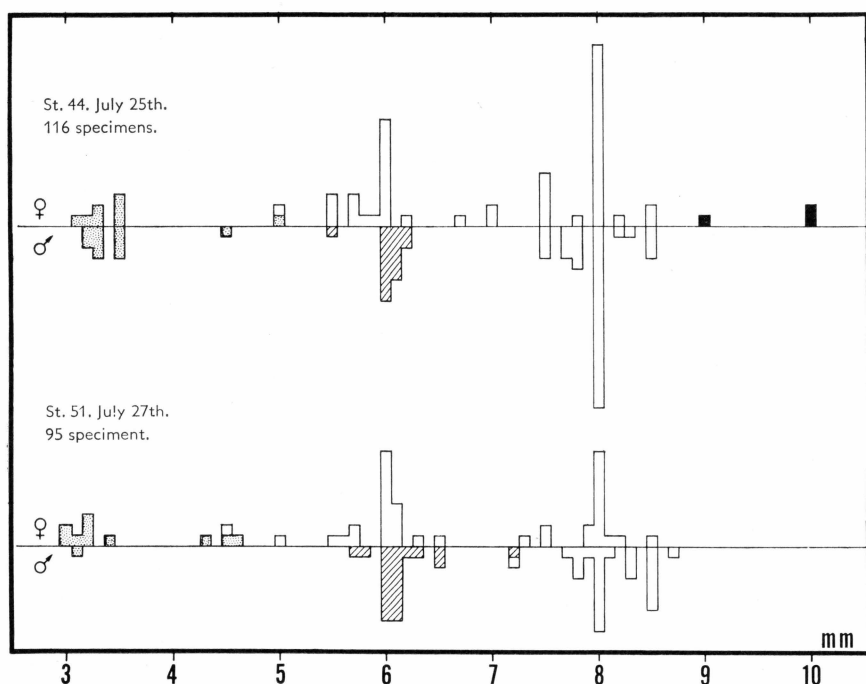


Fig. 3. *Diastylis edwardsi*, dotted: manca; hatched: juvenile males; open: juvenile or subadult females and subadult males; black: ovigerous females and females having recently bred.

The *scorpioides* group

ZIMMER 1926, p. 26–33 figs. 21–28 (revision of the group).

3. *Diastylis edwardsi* (KRÖYER) (fig. 3)

Diastylis edwardsi ZIMMER 1926, p. 35 Table 1 fig. 3 and Table 2 fig. 4.

- (non *D. scorpioides* LEPECHIN) STEPHENSEN 1943, p. 23 fig. 4 (distribution in Greenland).
- LOMAKINA 1958, p. 119 fig. 63.

Material:

Bottom grab:

- St. 8, 11.5 m., clay with sand and stones. — 3 specimens.
- 13, 7.5 m., sandy clay and gravel. — 1 sp.
- 14, 22 m., clay. — 5 sp.
- 15, 22 m., clay. — 1 sp.
- 17, 16 m., sandy clay. — 1 sp.
- 22, 11.5 m., clay with a little sand. — 12 sp.
- 23, 5.5 m., clay and sand. — 1 sp.
- 28, 19 m., clay. — 15 sp.
- 29, 19 m., clay. — 4 sp.

Dredge haul:

- St. 31, 8-9 m., clay with algae. — 14 sp.
- 40, 30 m., clay with sand. — 4 sp.
- 43, 20 m., clay with a little sand. — 11 sp.
- 44, 17-18 m., clay. — about 125 sp.
- 45, 10 m., clay. — 27 sp.
- 50, 10 m., clay. — 4 sp.
- 51, 18 m., clay. — 95 sp.
- 53, 8 m., clay and gravel. — 1 sp.
- 57, 8-10 m., sand, clay, and some gravel. — 2 sp.
- 61, 25-30 m., sandy clay and gravel. — 1 sp.
- 63, 5 m., clay and gravel. — 1 sp.

Remarks:

D. edwardsi is found all over the fiord, but never below 25-30 m.

Compared with ZIMMER's figures (*loc. cit.*, p. 27) *D. edwardsi* in Jørgen Brønlund Fjord seems to be somewhat smaller. ZIMMER gives the average size of females at the state of breeding as 11.6 mm. and the average size of adult females as 10.9 mm. The corresponding figures from Jørgen Brønlund Fjord are 9.5-10 mm. and 8 mm. Adult males were not found in the material. The large number of specimens from St. 44 and 51 have been measured as shown in fig. 3.

A single embryo-bearing female of 9.5 mm. was taken on May 25th, and a few manca occur in the samples throughout June and July, but the main breeding period seems to be in the latter half of July.

4. *Diastylis scorpioides* (LEPECHIN)

Diastylis scorpioides ZIMMER 1926, p. 33 Table 1 fig. 1 and 2.

- - (non *D. edwardsi* (KRÖYER)) STEPHENSEN 1943, p. 27 fig. 5.
(distribution in Greenland).
- - LOMAKINA 1958, p. 121 fig. 64.

Material:

Bottom grab:

- St. 27, 19 m., clay. — 2 specimens.
- 28, 19 m., clay. — 3 sp.
- 29, 19 m., clay. — 4 sp.

Dredge haul:

- St. 31, 8-9 m., clay with algae. — 1 sp.
- 44, 17-18 m., clay. — 15 sp.
- 45, 10 m., clay. — 1 sp.
- 50, 18 m., clay. — 2 sp.
- 51, 18 m., clay. — 21 sp.

- St. 53, 8 m., clay with gravel. — 1 sp.
– 60, 20 m., clay with some gravel. — 2 sp.
– 61, 25–30 m., sandy clay and gravel. — 3 sp.
– 62, 10 m., clay and gravel. — 5 sp.
– 63, 5 m., clay and gravel. — 2 sp.
– 68, 10–15 m., clay, gravel, and empty shells. — 6 sp.
– 71, 30 m., clay. — 2 sp.
– 72, 10 m., clay, gravel, many red algae. — 1 sp.

Remarks:

Generally *D. scorpioides* occurs in the same samples as *D. edwardsi* and strictly within the same range of depth. On the threshold where both species have their maximum occurrence the ratio between them is about 1:5–1:6. Further out towards the mouth of the fiord and around Kap Harald Moltke and Kap Knud Rasmussen the number of specimens caught is much smaller and the ratio seems to be around 1:1.

A single ovigerous female was taken on August 2nd. It measured 15.5 mm., (ZIMMER, *loc. cit.*, p. 27, averagely 17.9 mm.). Adult females average 14.5 mm., (ZIMMER, 16.3 mm.).

Mancas of 4–6 mm. occurred in the last third of July.

Genus *Brachydiastylis* STEBBING, 1912

5. *Brachydiastylis nimia* H. J. HANSEN

Brachydiastylis nimia HANSEN 1920, p. 69 Pl. IV fig. 8 a–g.

- – STEPHENSEN 1943, p. 32.
– – GORBUNOV 1946, p. 42 and 76.
– – LOMAKINA 1958, p. 164 fig. 97.

Material:

Bottom grab:

St. 29, 19 m., clay. — 8 specimens.

Dredge haul:

- St. 44, 17–18 m., clay. — About 70 sp.
– 51, 18 m., clay. — 107 sp.
– 52, 160–180 m., fine red-brown clay. — 6 sp.
– 55, 80–90 m., fine red-brown clay. — About 30 sp.
– 69, 40–45 m., fine red-brown clay. — 9 sp.

Remarks:

Some 225 specimens in all were secured from the threshold, the outer basin, and off the mouth of the fiord, whereas the species was not taken in the inner basin.

The material agrees well with HANSEN's description and drawings, even if the small denticles dorsally and laterally on the front of the carapace often occur somewhat more scattered. Few specimens carry the "ideal" pattern of dentition as shown by HANSEN. None of the specimens have any mushroom-shaped teeth as mentioned by HART (1939) on specimens from Dease Strait, 69° N, 106°25' W, arctic Canada.

The armation of the second joint of the first thoracic leg seems to be due to some variation. Specimens identical with HANSEN's drawing (*loc. cit.* fig. 8 d) are present, but often the small denticles are absent, while other specimens have two strong spiniform projections.

Ovigerous females and females with recently emptied marsupia are 3.5–4 mm. Ovigerous females were found from July 25th and females with emptied marsupia from July 27th. Adult males measured 3.5 mm. except one of 4 mm.

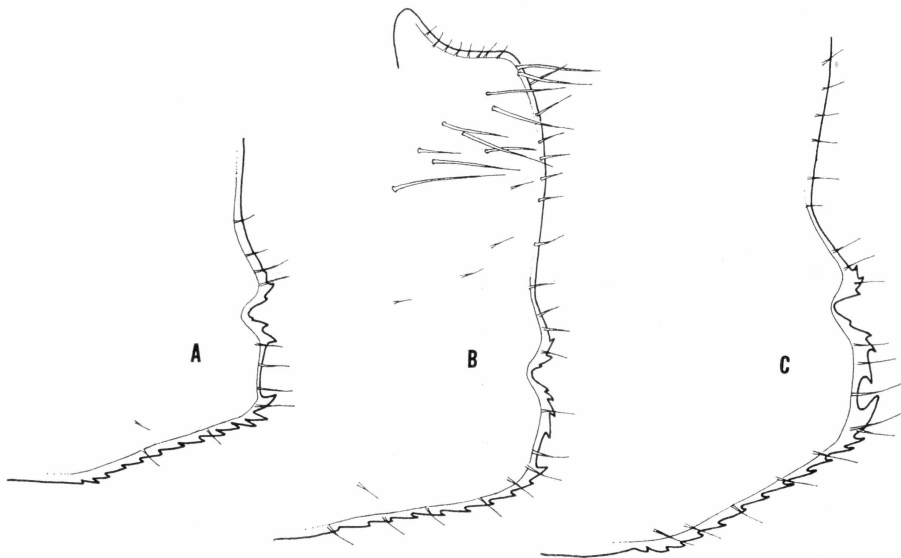


Fig. 4. *Eudorella* sp., females, right front edge of carapace. A: specimen of 5 mm. B: described specimen of 5 mm (St. 51). C: specimen of 5.5 mm (not ovig. St. 27).

Fam. Leuconidae

Genus ***Eudorella*** NORMAN, 1868

6. *Eudorella* sp. (figs. 4–7)

Material:

Bottom grab:

St. 27, 19 m., clay. — 2 specimens.

– 28, 19 m., clay. — 1 sp.

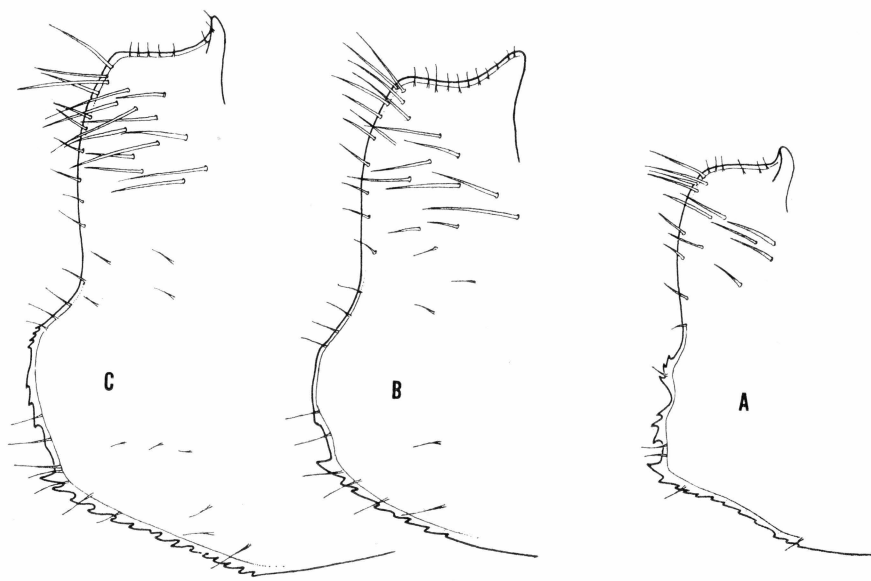


Fig. 5. *Eudorella* sp., males, left front edge of carapace. A: juv. of 3.5 mm (St. 51).
B: subadult of 5 mm, (St. 27). C: adult of 5 mm, (St. 27).

Dredge haul:

- St. 44, 17–18 m., clay. — 6 sp.
- 51, 18 m., clay. — 22 sp.
- 52, 160–180 m., fine redbrown clay. — 2 sp.
- 61, 25–30 m., sandy clay and gravel. — 1 sp.
- 69, 40–45 m., fine red-brown clay. — 1 sp.

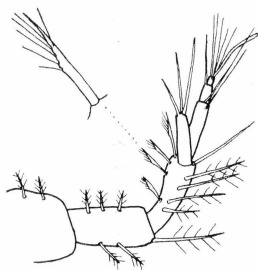


Fig. 6. *Eudorella* sp., first antenna of female of 5.5 mm.

The material thus includes 35 specimens all of which seem to belong to the same species, which at the present state can not be referred to any of the known species of *Eudorella*.

BARNARD and GIVEN (1961) have, however, strongly questioned the classical approach to species within the present genus by demonstrating

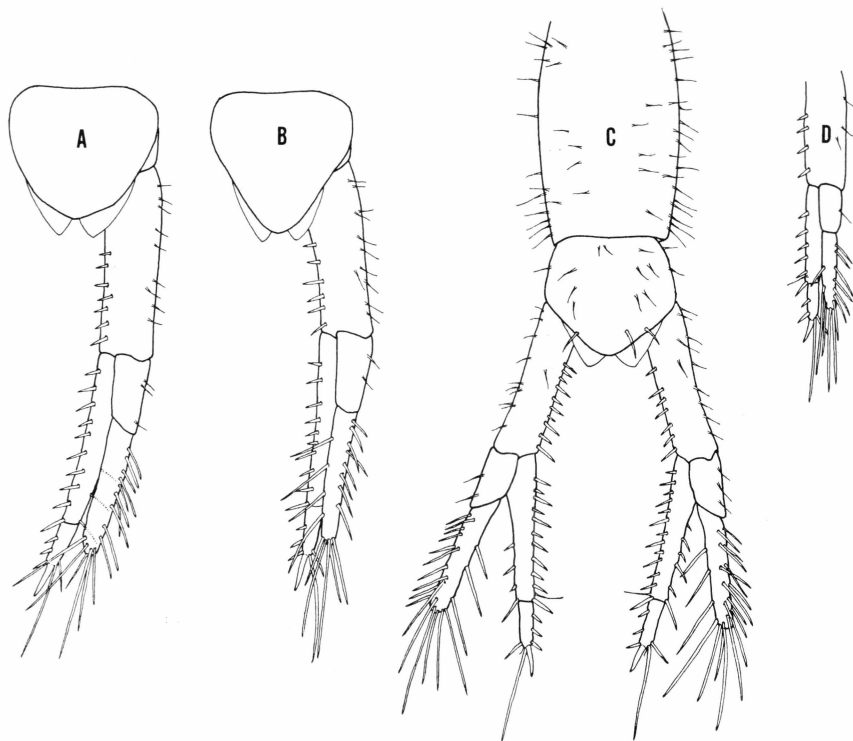


Fig. 7. *Eudorella* sp., A: uropod of female of 5.5 mm. B: uropod of adult male of 5 mm. C: urosome of subadult male of 5 mm. D: uropod of juv. male of 3.5 mm.

a hitherto unknown variability and interspecific overlapping of some major "key" characters. In view of that paper I find it of no use and potentially confusing to establish a new species, before a thorough revision of the genus, also called for by GIVEN (1965), has been made.

In order to facilitate such a revision a description with drawings of the Peary Land material is presented.

Description: (Ovigerous female of 5 mm., St. 51).

Body very slender and covered with setae. The depth of the carapace is subequal to (sometimes slightly larger than) the length, which again equals the first three thoracic joints. The front edge and the anterior part of the lower edge of the carapace form a more or less conspicuous wide angle. The serrate part of the lower edge is half as long as the whole front edge. The armation of the front edge is closely related to that of *E. hispida* G. O. SARS (1871, Table XVIII, 95-96) but differs distinctly in that the antero-lateral tooth is never straight and horizontally pointed, but more or less upwardly curved. Also this tooth is often not much larger than the preceeding one. (In a single large female of 5.5 mm. the antero-lateral tooth has grown strongly upward, fig. 4 C).

The subrostral part consists of a distinct notch, the angle of which is always less than 90° . Below the notch are (3)–4 downward pointing teeth and above the notch 3 upward pointing teeth. The two teeth closest to the notch may be very inconspicuous. The space between the antero-lateral tooth and the first downward pointing tooth is always slightly concave and beset with one or two setae.

The pseudo-rostral plates bear 15–20 forwardly pointed, hollow setae much longer than the above mentioned body setation.

The first pair of antennae have the ultimate joint of the peduncle somewhat curved, distally widening, and with two rows of different setae, viz. one row with normal plumose setae and one row of four setae plumose on one side only. The inner flagellum does not quite reach the end of the first joint of the outer flagellum.

The uropods are slender, but heavily armed and as long as fourth and fifth abdominal segments together, (somewhat shorter in specimens not fully grown). The inner edge of the peduncle is armed with 6–10 spines, the outer edge bears about 10 short setae. The endopod exceeds the peduncle by $\frac{1}{5}$ not counting the articulated, strong apical spine. The first joint of the endopod is $3\text{--}3\frac{1}{2}$ times as long as the second joint and armed along the inner edge with about 10 spines, the terminal one being the longest. The outer edge have 3–4 more slender spines. The second joint bears three spines along the inner edge and a long and a short spine-like seta on the outer edge close to the apical spine.

The exopod is subequal in length to the peduncle and reaches at least to the middle of the second joint of the endopod. The first joint bears a couple of small setae while the edges and the dorsal side of the second joint bear about 20 long, spiniform, pectinate setae.

Male:

Adult males are 5 mm. The setation of the body as in females. The front edge of the carapace forms a wide angle with the anterior part of the lower edge (fig. 5 C).

The subrostral part of the front edge is strongly prominent, ending below by an antero-lateral tooth shaped as in females. Above a nearly straight undentated space follow three downwardly pointing teeth, which are again followed by 3–4 rather inconspicuous teeth. This stage of serration is reached from the female-like front edge of the juvenile male (the subrostral notch being, however, wideangled) via an undentated subrostral prominence in subadult males (fig. 5 A–B).

Remarks:

BARNARD and GIVEN (1961) present a key to the species of the genus *Eudorella* based mainly on two characters the taxonomic value of which

have not yet been confirmed, viz. the anterior carapace tooth formula and the fusion or articulation of the apical endopodal spine of the uropod.

When using their key the species from Jørgen Brønlund Fjord must be placed in key no. 12 together with five other species two of which lack the long frontal setation while the tooth formula of all five differ from that of the present species.

Genus *Leucon* KRÖYER, 1846

7. *Leucon spinulosus* H. J. HANSEN (fig. 8)

Leucon spinulosus HANSEN 1920, p. 8 Pl. I fig. 1.

— — GORBUNOV 1946, pp. 42 and 122.

— — LOMAKINA 1958, p. 246 fig. 161 (no new records).

Material:

Dredge haul:

St. 55, 80–90 m., fine red-brown clay, one adult male of 3.7 mm.

Remarks:

Since HANSEN (*loc. cit.*) described *L. spinulosus*, having at hand 8 specimens from the Davis Strait and 2 from the Norwegian Sea south of Jan Mayen, 2 additional specimens only have been found in the northernmost part of the Kara Sea off Sewernaja-Zemlja (GORBUNOV, *loc. cit.*).

All 10 specimens were taken at depths between 698 and 2702 m. and they were all females.

The male is thus recorded for the first time and the species is new to Greenland coastal waters.

Description: (adult male, 3.7 mm. — Zoological Museum, University of Copenhagen).

In general appearance the male differs very little from the adult female.

The lower edge of the carapace is slightly more convex in the male and serrated along the anterior half only. Together with the front edge below the pseudo-rostrum it forms an evenly rounded curve.

The antennal notch is nearly straight and very low. Immediately above the notch the front edge is armed with two strong teeth. Otherwise the front edge is unarmed.

The pseudo-rostrum is apically beset with 8–10 very long setae, and along the proximal half of the upper edge it bears 4 curved teeth.

The dorsal edge of the carapace is serrated along the anterior third only, and the teeth are placed in three distinct groups, with two strong teeth in front followed by three plus two smaller denticles. — A pair of spines are present on the carapace below the frontal lobes.

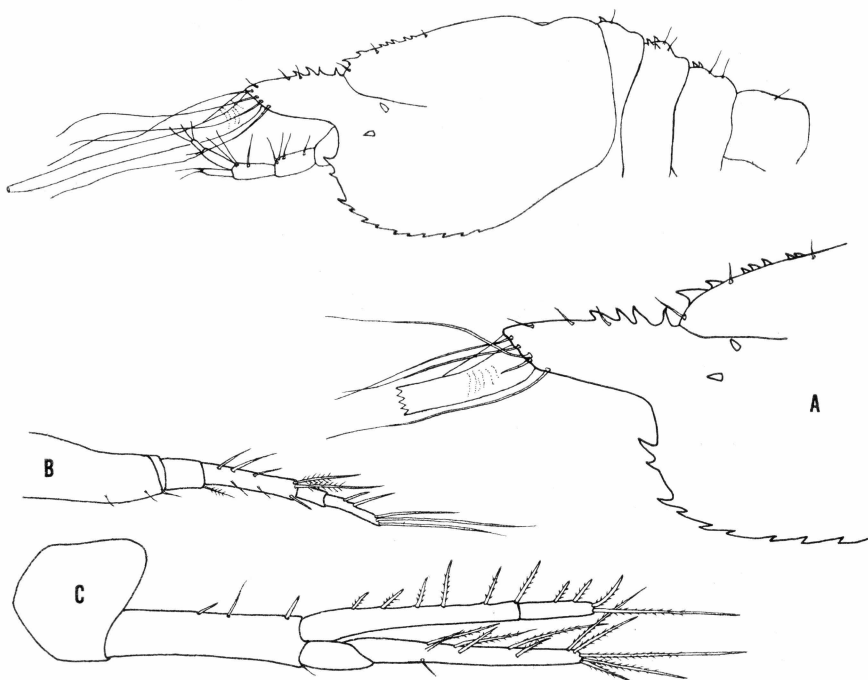


Fig. 8. *Leucon spinulosus*, ano-type, male. A: front of carapace. B: pereopod 2. C: left uropod.

First, second, and third free thoracic segments bear 2-4 denticles near the dorsal front edge.

The first pair of antennae are identical with those of the female. — The second pair of antennae reach to the end of the fifth thoracic segment.

In his description of the species HANSEN calls special attention to the second pereopod (*loc. cit.*, fig. 1 c). The present male has that leg somewhat more robust (fig. 8 B), but the ratio between the merus and the carpus is still very characteristic (female 1:3, male 1:2.5).

The uropods are slightly longer than the fifth abdominal segment. The peduncle is subequal in length to the first joint of the endopod and bears two setae and a spine on the inner edge.

The first joint of the endopod is barely 3 times as long as the second joint and armed with 6 pectinate spines along the inner edge. The second joint bears 2 pectinate spines on the inner edge and 2 apical spines, one of which is twice as long as the joint and the other strongly curved.

The exopod is but very little shorter than the endopod. The second joint bears one small seta on the outer edge and about 6 long spines scattered along the inner edge and on the dorsal surface, together with 5 long spines apically. All the spines are pectinate.

8. *Leucon nasiconoides typicus* LILLJEBORG

Leucon nasiconoides G. O. Sars 1900, p. 31-32 Pl. XXIII.

— — STEPHENSEN 1943, p. 18.

— — *typicus* LOMAKINA 1958, p. 232-34 fig. 148.

Material:

Bottom grab:

- St. 8, 11.5 m., clay with sand and stones.
- 13, 7.5 m., sandy clay.
- 22, 11.5 m., clay with some sand.
- 28, 19 m., clay.
- 29, 19 m., clay.

Dredge haul:

- St. 31, 8-9 m., clay with dense vegetation.
- 43, 20 m., clay with some sand.
- 44, 17-18 m., clay.
- 50, 10 m., clay.
- 51, 18 m., clay.
- 61, 25-30 m., clay and gravel.

Remarks:

More than 150 specimens were found (107 at St. 31) very often together with *L. pallidus* G. O. Sars (see below), and it was taken all over the fiord at moderate depths.

The 10 largest females measured 5 mm. (G. O. Sars, *loc. cit.*, 5 mm. and LOMAKINA, *loc. cit.*, 6 mm.), and the five males found in the material measured 4, 4.5, 5, 5, and 6 mm. (Sars, 5.5 mm. and LOMAKINA, 6 mm.). No ovigerous females and only two females with well developed marsupia were found.

9. *Leucon pallidus* G. O. Sars

Leucon pallidus G. O. Sars 1900, p. 33 Pl. XXV.

— — HANSEN 1920, p. 17-18.

— — STEPHENSEN 1943, p. 17.

— — LOMAKINA 1958, p. 244 fig. 159.

Material:

Bottom grab:

- St. 27, 19 m., clay.
- 28, 19 m., clay.

Dredge haul:

- St. 43, 20 m., clay with some sand.
- 44, 17-18 m., clay.
- 50, 10 m., clay.
- 51, 18 m., clay.
- 57, 8-10 m., clay, sand, and some gravel.

Remarks:

L. pallidus was collected throughout the investigated parts of the fiord at depths ranging from 8 to 20 m. In all 10 specimens were found, preferably at depths between 15 and 20 m.

Although *L. pallidus* very often occurs together with *L. nasicooides typicus* its range of distribution in the fiord does obviously not include the vegetation belt between 5 and 8-9 m. This is especially clearly seen at St. 31, where *L. nasicooides typicus* is present in large numbers (see above).

HANSEN (1920) says: "In female specimens from 10 and 6 fathoms the pseudorostrum is a little shorter and more obtuse than in specimens from deeper water, ...". This is also the case with all specimens from Jørgen Brønlund Fjord.

Fam. Nannastacidea

Genus *Campylaspis* G. O. SARS, 1864

10. *Campylaspis rubicunda* (LILLJEBORG)

- Campylaspis rubicunda* G. O. SARS 1900, p. 84 Pl. LVI.
- - HANSEN 1920, p. 36-38 Pl. III fig. 1 a.
- sp. STEPHENSEN 1943, p. 18 (partim).
- *rubicunda* LOMAKINA 1958, p. 258 fig. 172.

Material:

Dredge haul:

St. 43, 20 m., clay with some sand, one juv. female of 3 mm., and one adult male of 5 mm.

Remarks:

STEPHENSEN records two specimens, viz. one male and one female from the Scoresbysund area, as *Campylaspis* sp. The female will be dealt with under *C. stephenseni* nov. sp. (see below) while the male ("Godthaab" St. 31, Hurry Inlet, the mouth, 55 m., clayish sand, 30-VI-1933.) is identical with the above mentioned male from Jørgen Brønlund Fjord and belongs to *C. rubicunda*.

All three specimens of the present species are of the type mentioned by HANSEN (*loc. cit.*) with many oblong, oval pigment spots scattered over the reddish carapace.

C. rubicunda has not been recorded from East Greenland before.

11. *Campylaspis stephenseni* nov. sp. (fig. 9-10)

Campylaspis sp. STEPHENSEN 1943, p. 18 (partim).

Material:

Dredge haul:

St. 69, 40-45 m., fine red-brown clay, one subadult male of 4.5 mm.

Remarks:

STEPHENSEN (*loc. cit.*) records two specimens as *Campylaspis* sp. believing that they were the male and female of the same species "... close to *C. verrucosa* G. O. SARS and *C. horrida* G. O. SARS".

The male is treated above under *C. rubicunda* (LILLJEBORG), while the female ("Godthaab" St. 43, Hurry Inlet, the mouth, 57 m., sandy clay, 30-VI-1933. One adult female of 5.5 mm.) belongs to the present species.

Description: (Holotype, subadult male of 4.5 mm. — Zoological Museum, University of Copenhagen).

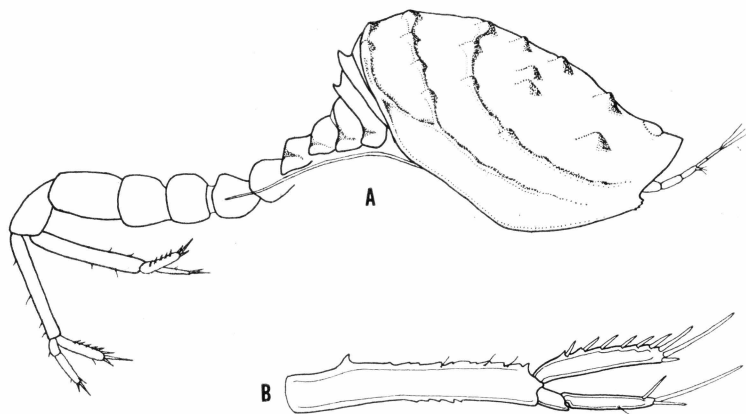


Fig. 9. *Campylaspis stephenseni* nov. sp., A: type-specimen. B: left uropod of the same.

The carapace is evenly rounded, not flattened at the sides, and covered with distinct tubercles. At the posterior half of the carapace the tubercles are arranged in rows and connected by three low but conspicuous keels. The anterior keel runs half way down the side of the carapace until the third tubercle where it bends forward and runs in the direction of and nearly reaches the quadridentate subrostral corner of the carapace. The middle and hind keels fuse together half way down

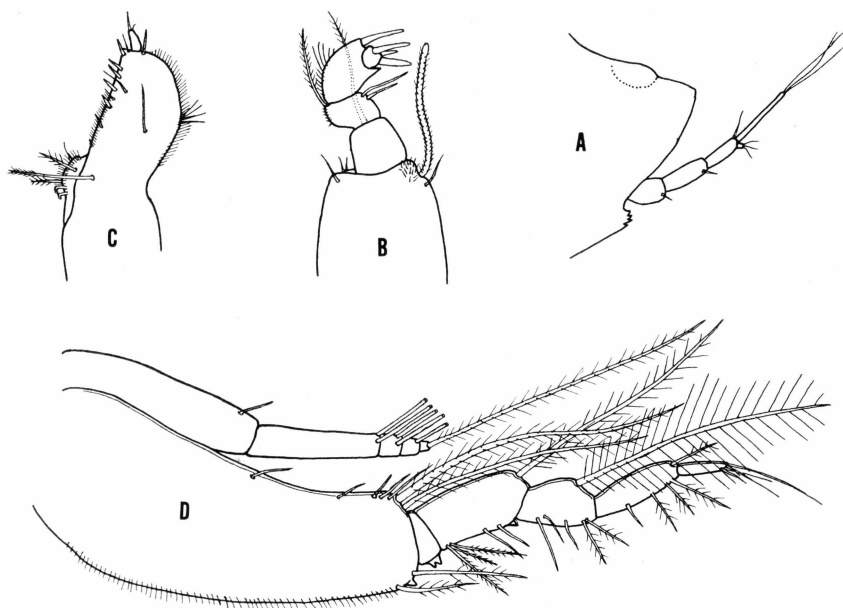


Fig. 10. *Campylaspis stephenseni* nov. sp., A: front of head (type-specimen).
 B: maxilliped 1 (cotype-specimen). C: maxilliped 2 (cotype-specimen).
 D: maxilliped 3 (type-specimen).

the carapace and proceed as a single keel running parallel to the first, but not quite as far.

The mouth-parts are normal.

The first two thoracic segments are elevated into transverse keels along the posterior dorsal edges. Otherwise the thoracic and abdominal segments are nearly smooth.

The peduncle of the uropods is irregularly serrated along the edges and twice as long as the endopod, which is unarmed along the outer edge and bears six pectinate spines on the inner edge, plus three apical spines of uneven length.

The second joint of the exopod is two and a half times as long as the first joint and bearing terminally three spines, one of which is as long as the entire second joint.

The colour of the live animal is bright red-brown. When fixed in formalin and preserved in alcohol the colour will last very long especially on the tubercles and the keels of the carapace, on the posterior half of each abdominal segment, and on the peduncles of the uropods.

Female: (Cotype, adult, 5.5 mm. — Zoological Museum, University of Copenhagen).

STEPHENSEN's female is much damaged but, apart from the carapace being more inflated than in the holotype, the arrangement of tubercles and keels is identical with the description above.

Remarks:

Considering the arrangement of tubercles and keels on the carapace *C. stephensi* nov. sp. could not be confused with any other known species.

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