Out of the doldrums: Campylaspis stephenseni Just, 1970 revived (Crustacea, Cumacea, Nannastacidae)

JEAN JUST

INTRODUCTION

Species of the nannastacid genus Campylaspis G.O. Sars, with approximately 130 species, are found throughout the world from shallow water to abyssal depths (Watling, 2005), but they are scarce in arctic waters. Up until 1970 only four specimens had been reported from East Greenland: Campylaspis intermedia Hansen, 1920 by Zimmer (1934, Dusenfjord, Franz Joseph Fjord area, 75–185 m, -1.2°C, 2 specimens; material not seen by me) and Campylaspis sp., (Stephensen, 1943, Hurry Inlet, Scoresby Sund area, 2 specimens). Just (1970) described a new species, Campylaspis stephenseni, from Jørgen Brønlund Fjord, Northeast Greenland. At the same time Stephensen’s specimens were re-examined. One was found to belong to Campylaspis rubicundum G.O. Sars, a species also reported from Jørgen Brønlund Fjord (Just, 1970). The second specimen belonged to Campylaspis stephenseni.

Muradian-Ciamician (1980) reported Campylaspis intermedia from off Beaufort, North Carolina, eastern U.S.A at 344 and 692 m depth. In a very brief and ambiguous note Campylaspis stephenseni Just was, without any explanation, placed in synonymy of Campylaspis intermedia Hansen.

In several of the proliferating web based regional check lists the names Campylaspis stephenseni and C. intermedia are used indiscriminately, presumably as a result of Muradian-Ciamician’s (1980) synonymisation. The purpose of this note, therefore, is to document, in the simplest way, the differences between Campylaspis intermedia and C. stephenseni, and confirm the latter as a distinctive arctic species so far known from around Greenland only. The distribution of the two species is discussed in a separate section.

IDENTIFICATION

In Fig. 1 Campylaspis stephenseni is documented from north eastern, central eastern, southernmost, and north western Greenland. Apart from the paratype female (Fig. 1B) all specimens are previously unreported, (the specimens are kept in the Zoological Museum, Copenhagen). Collecting data are as follows:

Fig. 1A, Jørgen Brønlund Fjord, Peary Land, Northeast Greenland, W of Mundingsholm, 52 m, grey-brown clay, detritus-dredge, Just &
Fig. 1. *Campylaspis stephensi* Just, 1970. A. Subadult male, Jørgen Brønlund Fjord, lateral and dorsal view. B. Female, paratype, Hurry Inlet, East Greenland. C. Subadult male, Kap Seddon, Northwest Greenland. D. Adult male, Kap Farvel, South Greenland, lateral and dorsal views. – Scale = 2 mm.

Schiotte, st. PL16, 14 August 1983.

Fig. 1B (paratype), Hurry Inlet, East Greenland, the mouth, 57 m, sandy clay, 30 June 1933 ‘Godthaab’ st. 43.

Fig. 1C, Bay at Kap Seddon, Melville Bay, Northwest Greenland, 75º20.8’N 58º38.6’W, 38–25 m, clay, some sand and gravel, detritus-dredge, H. & J. Just, RNV ‘Ingolf’ st. 5, 4 August
1980.

Fig. 1D, Nua, Kap Farvel area, South Greenland, 59°53.5’N 44°22.3’W, 140 m, stones, gravel, polychaete tubes, triangular dredge, J. Just, Kap Farvel Expedition st. 88, 9 August 1970.

The illustrations document a consistent pattern of dorsal and lateral carapace sculpture throughout the known distribution of the species. In females and subadult males there are four dorsolateral keels, (including the dorsoposterior ridge which runs onto the carapace laterally), which merge two-and-two laterally to continue as two single, parallel keels to the ventral front margin. The keels are beset with irregularly spaced rounded knobs. Dorsally, in front of the keels, there are two larger lateral knobs and more medially four smaller knobs in a square. Posteriorly on the dorsal side there are another four smaller knobs arranged in a similar square. The pattern is slightly modified in adult and near adult males (Fig. 1D, and Just 1970, fig. 9a of holotype): the entire carapace is moderately elongate and less deep. The upper posterior branch of the upper lateral keel system is more weakly developed than in the other specimens shown and does not quite connect with the main branch. Younger males (see Fig. 1A) are similar to females.

Fig. 2 shows a female and a subadult male of Hansen’s syntypes of *Campylaspis intermedia* (material in the Zoological Museum, Natural
Fig. 3. Records of *Campylaspis stephenseni* (circles, T = type locality, holotype) and *C. intermedia* (squares, S = type localities, syntypes). Black: material seen by the author in preparing this study; open: material not seen. – 1, Zimmer 1934; 2, Jones 1984; 3, Vassilenko & Brandt 1996; 4, Gerken & Watling 1999; ?, Lomakina 1958.
History Museum of Denmark, Copenhagen). The lower lateral keel system is similar to \textit{C. stephenseni}, but the upper keel does not have a two-pronged posterior part. In addition, there is a vertical, broad keel anteriorly between the upper and lower lateral keels, which is not found in \textit{C. stephenseni}. The carapace space between the upper and lower keels and behind the vertical keel is broader and deeper than in \textit{C. stephenseni}. \textit{Campylaspis intermedia} has the same large dorsolateral knobs but lacks the corresponding four smaller anterior knobs in a square.

**DISCUSSION**

Based on the differences in carapace sculpture the two species are easily separated. Consequently \textit{Campylaspis stephenseni} Just is removed from synonymy with \textit{C. intermedia} Hansen and re-instated as a valid species.

One question remains: what did Muradian-Ciamician (1980) have to hand when reporting \textit{Campylaspis intermedia} from off Beaufort, eastern U.S.A.? Muradian-Ciamician (1980: 75; no illustrations provided; no indication that the type materials were examined) writes “Although mostly preadult, our specimens certainly belong to this species. As to the whole picture, the one drawn by Just (1970) is more consistent with reality: in Hansen’s drawing, the tubercles figured in square section lead to errors [my italics].” Comparison of my illustrations of syntypes of \textit{Campylaspis intermedia} with Hansen’s illustrations (1920, plate III, fig.6) shows that Hansen’s rather dark figures, are resonably correct and should not easily lead to error in identification. Hence the Beaufort specimens cannot be \textit{Campylaspis intermedia}. The reference to Hansen’s drawing ‘in square section’ is uninterpretable. Hansen illustrated a subadult female in lateral and dorsal views, as in my Fig.2A. As to the illustration by Just (1970, fig.9 A) being ‘more consistent with reality’, this subjective statement appears to convey only that the Beaufort specimens looked more like \textit{Campylaspis stephenseni} than \textit{C. intermedia}. Did Muradian-Ciamician have \textit{Campylaspis stephenseni} before him? The specimens were collected at 344 and 692 meters depth, so it is marginally possible that this high arctic species could be found on the mid-slope of the western Atlantic. With the difficulties in identification encountered by Muradian-Ciamician, leading to an unjustified synonymization, it is more likely, however, that the Beaufort specimens represent an undescribed species. It is hoped that this short note may provide help in resolving the issue through a re-evaluation of Muradian-Ciamician’s material.
REFERENCES


Brandt, A. 1997. Biodiversity of peracarid crustaceans (Malacostraca) from the shelf down to the deep Arctic Ocean. – Biodiversity and Conservation 6: 1533–1556.


