

Short notes and reviews

## A *Storthyngura* (Crustacea, Isopoda) from the Bellingshausen Sea, Antarctica

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### Abstract

During the expedition ANT XI/3 with RV *Polarstern* 17 multiple corers were taken in the Bellingshausen Sea. From this material only a single, immature isopod was sorted. This specimen is a manca II of a presumably new species of the genus *Storthyngura*. However, as it is immature and only a single specimen was sampled, more material of this species will have to be collected prior to the description of a new species.

### Introduction

In 1994 an expedition with RV *Polarstern* aimed to investigate an area of the Antarctic and Southern Ocean which was not very well known biologically and geologically: the Bellingshausen and the Amundsen Sea. During this expedition a variety of different gear on board RV *Polarstern* was used and analysed (Miller & Grobe, 1996). Seventeen cores of the multiple corer (MUC) and a surface area of 10x10cm<sup>2</sup> from giant-box corer samples were sorted for peracarid crustaceans but only a single isopod was found. It is a specimen belonging to the genus *Storthyngura* (Vanhöffen, 1914) which occurs primarily in the deep sea, and was also reported from the Southern Ocean with several species. The species, which seems to be most closely related to the specimen sampled with the MUC is *Storthyngura fragilis* (Beddard, 1885), which was found off Marion Island, but has a distribution extending to Yokohama, Japan.

### Material and methods

During the expedition ANT XI/3 with RV *Polarstern* in 1994, the specimen illustrated in the present paper was collected by Dr. Franz Gingele by means of a MUC at station 2540-1 at 70°03.8'S 87°55.9'W, in 1822 m depth (17.2.1994) (Miller & Grobe, 1996). The surface sediment consisted of foraminiferal mud (24% CaCO<sub>3</sub>, 28 % sand, 42 % silt; an 30 % clay). Moreover, the station was characterized by strong current velocities close to the bottom (Miller & Grobe, 1996).

On board the vessel the animals were fixed in formalin (4%) and later transferred into ethanol (70%). The drawings were prepared with the help of a camera lucida. The specimen is deposited in the Zoological Museum of Hamburg under the catalogue number ZMH 39506.

### Results and discussion

From the expedition ANT XI/3 only a single isopod specimen was sampled by means of the MUC in 17 hauls, indicating that Isopoda are either quite rare in the Bellingshausen Sea or that they occur very patchily and were therefore only collected as a single individual in that area of the Southern Ocean. The specimen is a member of *Storthyngura*, a typical deep-sea genus of the Munnopsidae (Eurycopinae), which usually occur deeper than 1500 m depth, often deeper than 4000. *Storthyngura* is distributed world wide and is reported with 10 species from the Southern Ocean until now. The presumed new species is illustrated in dorsal and lateral view (Fig. 2). Until now, many other species have been reported from the Southern Ocean by Pfeffer, 1887, Brandt, 1991, and Winkler, 1994. However, of all species of *Storthyngura* only *S.*

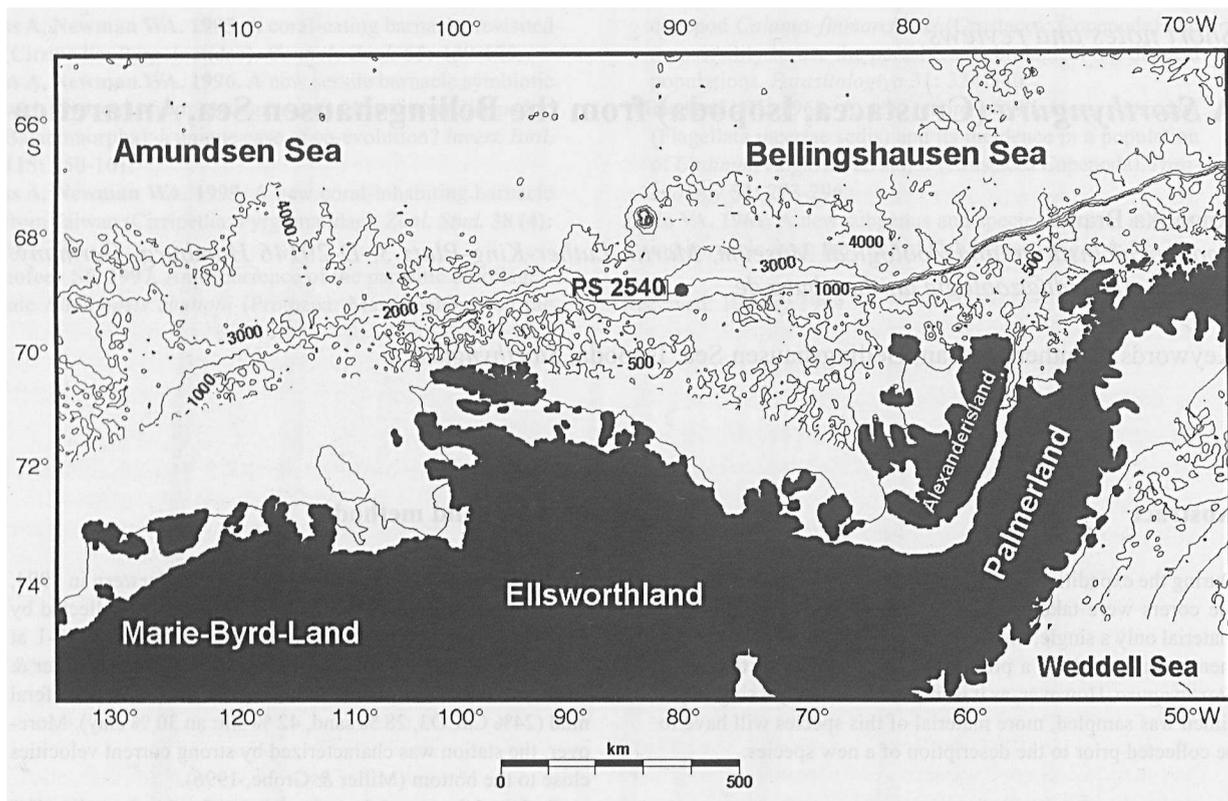


Fig. 1. Map of the Bellingshausen Sea with location of the MUC station PS 2540; no depth data are available close to the coastline due to heavy sea ice.

*robustissima* Monod, 1925, has been sampled in the Bellingshausen Sea in 400–1455 m depth and *S. praegrandis* George & Menzies, 1968, is known from the Drake Passage in the vicinity of the Bellingshausen Sea. However, both of these species differ from the species illustrated here, in bearing two strong acute spines on the head, and a narrower and shorter pleotelson, with a shorter and broader acute distal apex.

The new species from the Bellingshausen Sea, resembles most closely *S. fragilis* (Beddard, 1885). This species was first sampled off Marion Island, Subantarctic, but has also been reported from Yokohama, Japan, in 3429 m depth (Wolff, 1962). Both, Beddard (1885) and Wolff (1962) have not presented a complete description of all appendages. For that reason the immature (manca II) *Storothyngura* specimen from the Bellingshausen Sea was compared with the paratypes of *S. fragilis* (Natural History Museum, London, 1958.10.14:4–5). The pleotelson of the Bellingshausen Sea

*Storothyngura* is much longer, the frontolateral, and caudolateral spines are longer and more acute, and also the caudal acuminating tip of the pleotelson is slightly more elongated. The first peduncular article of the antennula is distally more slender than in *S. fragilis*, it is more acuminate distally and extends to the tip of the second peduncular article; of the 10 flagellar articles the last one bears two long aesthetascs, a feather-like seta and a simple one. The left mandible bears a pars incisiva with 4 teeth, a lacinia mobilis with 3 teeth, and a spine row of 8, mostly setulated setae. The fifth pereopod of the Bellingshausen Sea specimen bears 6 long feather-like setae dorsally on the basis, whereas *S. fragilis* bears only a single seta.

Even if the differences concerning the pleotelson and the antennula between *S. fragilis* and the manca II from the Bellingshausen Sea would be due to allometry, it is quite unlikely that an immature would bear more feather-like setae on the basis of pereopod five than an adult. Therefore it is quite

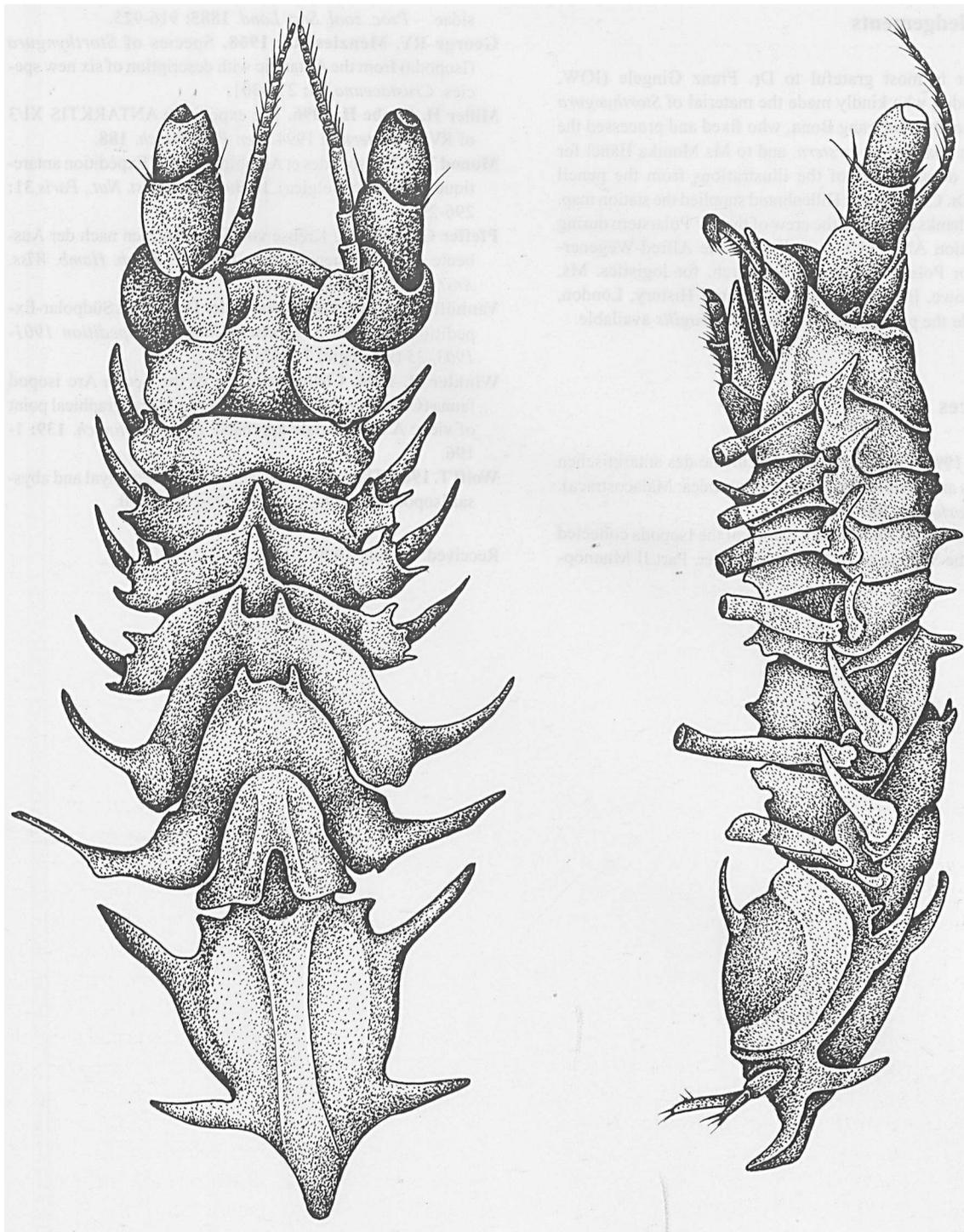


Fig. 2. Manca II of *Storthyngura* sp. ZMH 39506

likely that the immature specimen illustrated here only in dorsal and lateral views is a new species. However, as only a single immature specimen is

available, we will have to await the collection of further specimens, before a complete description of this presumably new species will be possible.

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