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Tryphosa schneideri: An Amphipod from Northern Norway new to Science(Family Lysianassidae).

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TRYPHOSA SCHNEIDERI

AN AMPHIPOD FROM NORTHERN NORWAY NEW TO SCIENCE (FAM. LYSIANASSIDÆ)

BY

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In his manuscript «Tromsøsundets Amphipoder, Isopoder og Cumaceer», the late carcinologist Sparre Schneider has the following note on a *Tryphosa* which he designates as n. sp.: «...as unfortunately I am obliged to desist from the use of a microscope I shall have to leave the closer examination and description to the zoologist who will take up my study of the rich and interesting Amphipod-fauna of the Tromsosund».

My friend, Mr. Carl Dons, of the Trondhjem Museum (formerly in Tromsø), having undertaken the publication of the above named manuscript, has begged me to examine the present material. The result of my examination is stated in this paper.

Tryphosa Schneideri n. sp.

This new species agrees with *T. nanoides* in the form of the 3rd epimeral plate of the metasome, but it differs from it in several good characters. As species name *Schneideri* is proposed, in order to recall the fact that Sparre Schneider was the first to perceive the non-identity of the two species.

Occurence: Grindoen, Tromsø, $^{7}/_{8}$ 1891, 6 m., 1 ♂ ad. 6 mm.; Finnesdypet, Tromso, 1881, 50—60 m., 1 ♀ ovig. 6.5 mm.; Lanes, Tromsø, $^{30}/_{8}$ 1883, 1 ♀ 5 mm., ibid. $^{4}/_{8}$ 1882, 1 ♂ (ad. ?) 6 mm.; Sørfjorden, Kvænangen, June 1881, 15 f., 1 ♀ 6.5 mm.

Description of ♂ ad. (with calceoli on the antennæ), 6 mm., from Grindøen, Tromsø, $^{7}/_{8}$ 1891, 6 m. (type for ♂). Lateral lobes of the head about as in *T. nanoides* (G. O. Sars, Crust. of Norway vol. 1, 1895, p. 79, Pl. 28, fig. 2). Eyes (in spirits) colourless. Each of the pairs of antennæ have calceoli.

Ant. 1: flagellum 12-articulate; accessory flagellum of equal length with the 3 proximal joints in flagellum, 5-articulate. Ant. 2: abt. $1^{1}/_{4}$ time as long as ant. 1, flagellum 18-articulate (the left antenna might seem to have been damaged; it is somewhat shorter and has only 10 joints in the flagellum). The

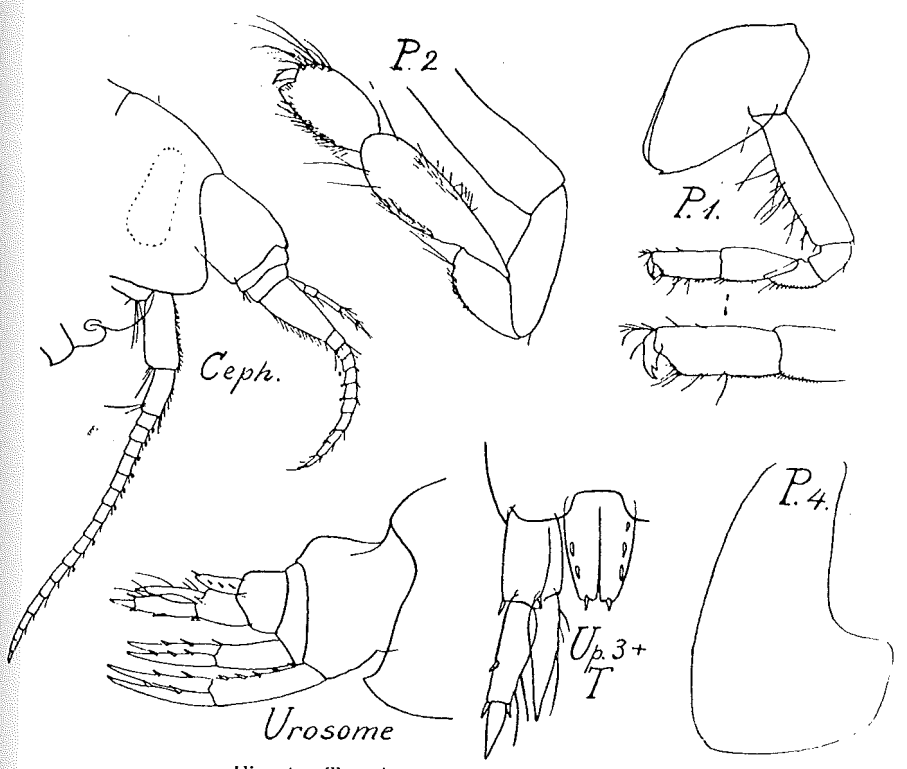

Fig. 1. Tryphosa Schneideri n. sp. ♂

epistomal plate not at all overhanging the upper lip, semicercular. The first pair of legs have the coxal plate broad (much broader than in *T. nanoides*), triangular; metacarpus of equal length with carpus, obliquely truncate. Second pair of legs have the metacarpus ending in a little process; in the 4th pair the coxal plate is somewhat narrower than in the said species.

Inferior edge of epimeral part of 3rd metasome segment is

not almost straight as in *T. nanoides*, but the inferior hind corner is turning somewhat upwards*). Dorsal process of first urosome segment as in *T. nanoides*. Third uropod rather short and stout, inner ramus and proximal joint of outer ramus only a trifle longer than the peduncle, apical joint of outer ramus half as long as the proximal joint. Both rami have a few natatory setæ. Telson abt. as in *T. nanoides*, but with only 2—3 pairs of dorsal spines.

Description of ♀ with ova, 6.5 mm. (from Finnesdypet, Tromsø, 50—60 m., 1887) (type for ♀). Agrees with ♂ except in ant. 2 being only slightly longer than ant. 1. Ant. 1: flagellum 9-articulate, accessory flagellum 4-articulate; ant. 2: flagellum 8-articulate. 3rd uropod as in ♂ .

The specimen has 3 ova (it is not likely that there have been more) ca. 0.4 mm. in diameter.

On the literature and relation to Tryphosa nanoides.

While studying the Amphipoda of the Danish «Ingolf»-Expedition I began to suspect *Tryphosa nanoides* G. O. Sars (Crust. of Norway vol. 1, p. 79, 684, Pl. 28, fig. 2) as possibly not being identical with Lilljeborg's species of the same specific name (described as *Anonyx nanoides* in Nova Acta Soc. Upsal., ser. 3, vol. 6, 1865, p. 25, Pl. 3, figs. 32—34), in as much as the hind corner of 3. epimeral plate in metasome is turned much more strongly upwards in Lilljeborg's drawing than in that of Sars. Lilljeborg's single specimen was from Molde.

In order to state with certainty the relation between the species of the two authors, I applied to the Zoological Museums of Sweden (at Göteborg, Lund, Stockholm and Upsala), requesting the loan of Lilljeborg's type, if it were still to be had in

*) In several specimens much more strongly than in the figured here.

any of the Museums, but I regret to say that the result was negative. From all parts the answer was that the type might probably be found in any of the other Museums. I seize the opportunity to express my best thanks for the promptness with which I was answered from every Museum, I feel specially indebted to the Museum of Upsala, where there was the greatest chance of the animal being found, and where no less than 4 scientists (Prof. Dr. Nils von Hofsten, Fil. Mag. O. Lundblad, Amanuensis G. Gustavsson and Konservator A. Wästfelt) — unfortunately in vain — strived to procure the type.

Lilljeborg (l. c. 1865) having given but very few figures (only three in all), it is natural that later authors (— and among these, first Boeck 1870 and 1873—76 —) have laid particular stress on the character by which the species most distinctly differs from all other known Northern *Tryphosa*-species, that is, the projecting hind corner of epimeral part of 3. metasome segment, as it seems to have been taken for granted that in the boreo-Arctic seas there was only one species of this character. G. O. Sars (l. c. 1891—95), — indeed starting from the same supposition — gives a description with excellent figures, and thus has made it possible for us to have this matter cleared up.

Although Lilljeborg's species possibly is identical with that of Sars, there is no possibility as yet of answering this question with certainty, therefore the species ought to be called *Tryphosa nanoides* (Lilljeb.?) G. O. Sars.

Tryphosa nanoides is distinctly differing from *T. Schneideri* and thus cannot be identical with this latter. A list of the most important characteristics is given below:

	T. nanoides (Sars l. c. p. 79, Pl. 28. fig. 2)	T. Schneideri
epistomal plate	«a narrow rounded lobe overhanging the anterior lip in front.»	almost not at all overhanging the anterior lip semicercular, very broad.
distal end of metacarpus in 1. pair of legs	«transversely truncated at the tip, inferior corner rectangular.»	obliquely truncated.
epimeral part of 3. metasome segment	«at the infero-lateral corners produced to a short and blunt point,» inferior edge almost straight.	inferior edge in the posterior part as a rule turned sharply upwards, forming a short and blunt point.
inner ramus of 3. pair of uropoda	almost twice as long as the peduncle.	only a trifle longer than the peduncle.

According to descriptions in the literature, it is altogether impossible to decide which of the two (or eventually nearly related species) the author in question has had for examination, as Sars is the only one who mentions a character of so much importance as epistomal plate; on the other hand, it is possible that the localities may furnish us with some information.

As mentioned above, *T. Schneideri* has been found in some places near Tromso, 5—60 m. The Zoological Museum of Copenhagen possesses several specimens from the littoral zone of Greenland, 5—37 (100) m. (all these specimens have formerly been determined as *T. nanoides*). *T. nanoides* hardly ever was found at Greenland; whereas the Zoological Museum of Copenhagen possesses some specimens from localities at S. Iceland (to 326 m.), from N.E. off Shetland (160 m.) and from Skagerrak (660 m.).

According to these facts, it seems evident that *T. nanoides* is not only found in deeper water but also in more southern localities than *T. Schneideri*. In order to determine the northern limit of *T. nanoides* in Norway, I begged the Museums of Christiania, Bergen and Trondhjem to lend me the specimens they possibly had of the species, and I hereby express my thanks for their obliging answers. The result was that the species is not found in the Museum of Trondhjem; the Museum of Christiania has a great many specimens from Norway, but unfortunately all without indication of special locality. From the Museum of Bergen I received all the material of this species, including, however, only two localities of which only one is from Norway: in the middle of Karmsundet off Kopervik (S. of Haugesund) 108 m., 1 spec. («Michael Sars» St. 115, $^3/_7$ 1908). (The other locality is the Noth-Sea 55° 55′ N 1° 17′ E, 80 m., temp. 6.7°, 1 spec. [«Michael Sars» St. 264, $^1/_7$ 1904]).

G. O. Sars (l. c. 1891—95, p. 80) states the distribution at Norway as follows: «I have met with this species in several places off the west coast of Norway, as also in Lofoten and off the Finmark coast, in depths varying from 50 to 100 fathoms. Quite recently I collected a great number of specimens in the Trondhjemsfjord from the back of a living skate (*Raja batis*) just brought up by a fishing line from a depth of about 80 fathoms.» It seems, however, most probable that the locality of Finmark ought to be referred to *T. Schneideri*.

A. Boeck (Crustacea Amphipoda borealia et arctica, 1870, p. 118 [38], and De Skandinaviske og Arktiske Amphipoder, 1873—76, p. 87) most likely has had both species for examination. He namely states that on the 1st pair of legs «the hand ... is obliquely truncate at the apex» in which it agrees with *T. Schneideri* (this is, however, the only character of importance to the question in hand stated by the above author). On the

other hand, the locality of Haugesund seems to indicate that he has had *T. nanoides* for examination.

It is besides hardly possible to determine the distribution on the basis of the existing literature; but a further account of this statement will be found subsequently in my paper on the Amphipoda of the «Ingolf»-Expedition.

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