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Some notes on *Notodelphys rufescens* THORELL, 1860, new to the Dutch Fauna

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In September and October 1950, Mr. C. SWANEVELD, of Zierikzee, and Mr. Jac. VIERGEVER, of Serooskerke, collected some rich samples of Copepods, found alive in the branchial sac of certain species of Tunicates. The greater part of the Tunicates belonged to the Ascidian-species *Ascidiella aspersa* (O. F. MÜLLER.)

The peculiar little commensal lives in the branchial cavity, often in considerable numbers, with their posterior antenna fixed to the body wall of the Ascidian. The species of the genus *Notodelphys* stand lowest in the scale of species adapted to this curious mode of life: I observed them moving quickly through the water outside the Tunicate, in a jumping way. Especially when the water contains little oxygen, the animals leave their host through the ingestion opening. They do not swim for longer than a few seconds, then settling again on some object, often the outer wall of the Ascidian.

The collections of Mr. SWANEVELD and VIERGEVER contain one species only, viz. *Notodelphys rufescens* THORELL, 1860. The greater part (70%) consisted of females, which did not bear eggs in their incubatory pouch, during this part of the year.

Our animals agree in most details with the excellent descriptions and figures by SARS, 1921, except for some slight differences in the hairing of the legs and in the shape of the mandibular palpus. A remarkable difference exists, however, between the opinion of SARS, SCHELLENBERG, and several others — regarding the first trunkal segment — and mine. Nearly all European workers consider the first segment fused with the cephalic segment; but I observed that this segment is not fused at all. Perhaps it has not been so fully developed as the other segments, but there cannot be any doubt as to its being free (fig. 1a, 1b). I observed this fact in the following species of the genus *Notodelphys*: *N. rufescens* THORELL, *N. agilis* THORELL, *N. elegans* THORELL, *N. weberi* STOCK.

*) Paper received October 28, 1950.

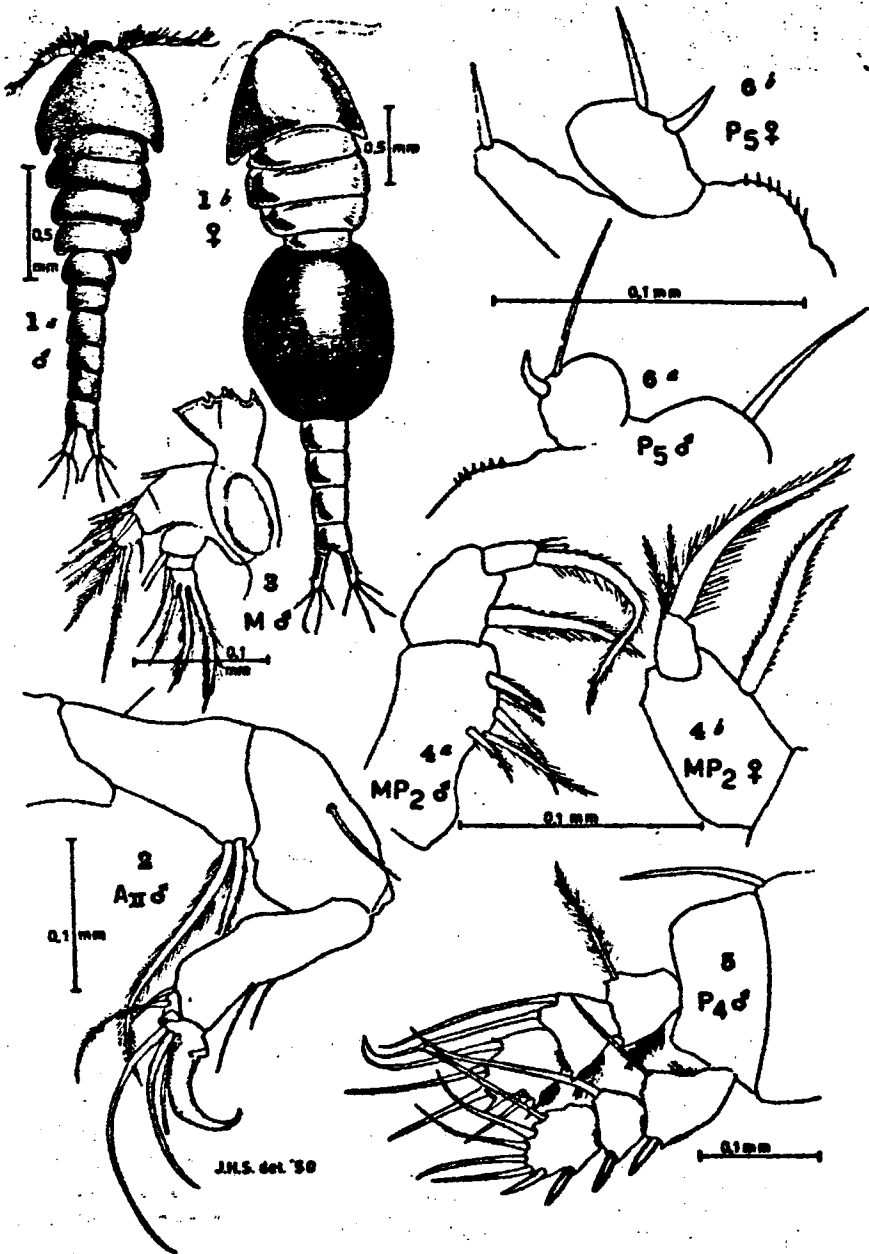


Fig. 1. Entire animal, dorsal view; a. male, b. female; fig. 2. Posterior antenna of male; fig. 3. Mandible of male; fig. 4. Posterior maxilliped; a. male, b. female; fig. 5. Fourth leg of male; fig. 6. Fifth leg; a. male, b. female.

SARS did not see the male of this species. Having a considerable material I am able to state that the appendages of the male are built in the very same way as those of the female.

The only secondary sexual differences are found in the shape of the 5th pair of legs, and in the, only slightly different, length of the apical setae on the posterior maxillipeds.

I agree with SARS and others, that it is very difficult to identify the species of the genus *Notodelphys*. It proved not to be easy to find the limits between *N. allmani* THORELL, *N. rufescens* THORELL, and *N. caerulea* THORELL.

The relative length of the furca cannot be used as a specific character, as in adult specimens it varies considerably. The position of the outer-edge bristle of the furca, however, seems to be a reliable character.

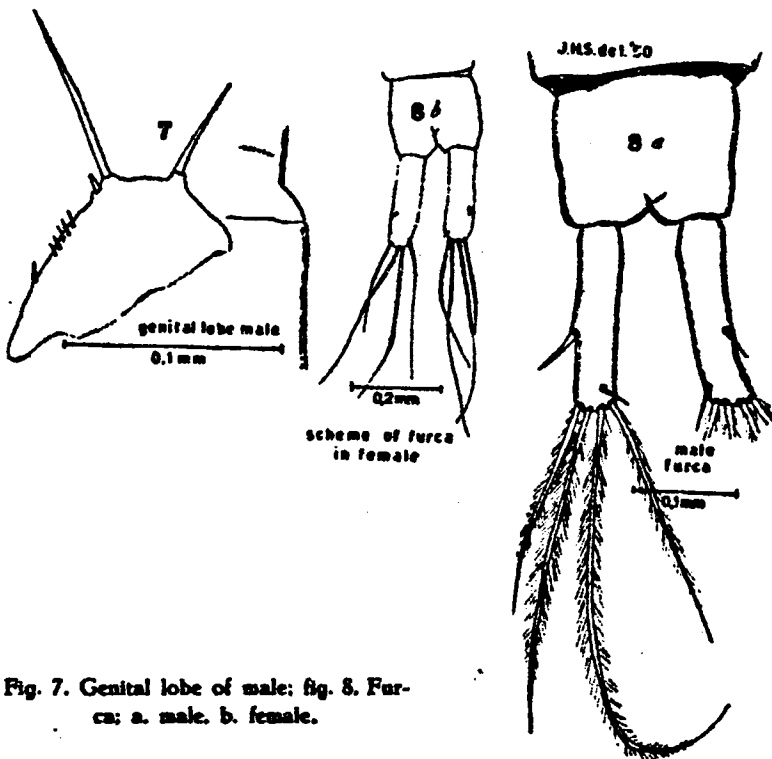


Fig. 7. Genital lobe of male; fig. 8. Furca: a. male. b. female.

Moreover, the shape of the incubatory pouch offers an easily observable character for distinguishing the females of our species from *N. allmani*.

N. caerulea may be distinguished from *N. rufescens* by the position of the outer-edge bristle, and by the shape of the 5th pair of legs. SCHELLENBERG states, that in the posterior antenna of *N. rufescens* the claw is half as long as the concave edge of the third joint, in *N. caerulea* $\frac{1}{3}$ as long.

The colour of the living animal is withish, pellucid. Ripe ova, according to THORELL, pale reddish.

LITERATURE.

A complete list of literature on Notodelphyoidea (until 1922) is to be found in SCHELLENBERG, 1922.

SARS, G. O.

1921 An Account of the Crustacea of Norway. Vol. VIII.

SCHELLENBERG, A.

1922 Neue Notodelphyiden des Berliner und Hamburger Museums mit einer Uebersicht der ascidienbewohnenden Gattungen und Arten. Mitt. Zool. Mus. Berlin. 10. Band, 2. Heft. 1. Teil.

THORELL, T.

1860 Bidrag til Kännedomen om Krustaceer som lefva i Arter af Slägtet Ascidia. K. Sv. Vetensk. Akad. Handl. Vol. III.