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Lichomolgus longicauda (Claus, 1860), Copepod parasite of *Sepia*, in the North Sea*)

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CLAUS described as early as 1860 a small Copepod parasite from the gills of *Sepia officinalis*, captured in the neighbourhood of Nizza (Nice), French Riviera. A special genus, *Sepicola*, has been created by CLAUS for the conception of his species, which he called *Sepicola longicauda*. Several years afterwards (1875) CLAUS came to the conclusion that his genus *Sepicola* was identical with the genus *Lichomolgus*, described by THORELL in the very same year as *Sepicola* (1860). It is hard to decide which of the two names has priority, but MONOD & DOLLFUS (1932) give sound arguments in favour of *Lichomolgus*. Apart from that, CLAUS himself also classified *Sepicola* in his 1875 paper among the synonyms of *Lichomolgus*, and re-named the copepod from the gills of *Sepia* as *Lichomolgus sepicola*, instead of naming it (as would have been advisable according to the present rules) *Lichomolgus longicauda*. Still, no good description or figures had been published. It is the merit of WIERZEJSKI (1877) to have given the first detailed notes and fine figures of the species, under the name of *Lichomolgus sepicola*. WIERZEJSKI obtained his specimens likewise from *Sepia officinalis*, taken near Trieste, Adriatic Sea. Also PESTA (1909) records *Lichomolgus sepicola* from the same host and locality. CUÉNOT (1927) seems to have been the first to find the species in the Atlantic, viz., in the Basin of Arcachon, southwestern France. At the same time, he was the first using the nomenclaturally correct name, *Lichomolgus longicauda*. As hosts, CUÉNOT recorded *Sepia officinalis* and *S. filliuxi*.

Summarizing, *Lichomolgus longicauda* has been recorded in literature from 3 localities only: 2 in the Mediterranean (Nizza, Trieste), and 1 in the Atlantic (Basin of Arcachon). There are no published records north of Arcachon (44°40' N.).

It is of particular interest, therefore, that I recently found *Lichomolgus longicauda* in large numbers on the gills and in the mantle cavity of *Sepia officinalis*, captured on various occasions in June and July, 1955.

*) Received November 8, 1955.

in the stake nets of fishermen of the Isle of Texel, Netherlands. These stake nets are placed in a small fair way, called "de Laan", their Dutch name being, accordingly, "Kom van de Laan". The exact locality is near 't Horntje, Texel, (Dutch Waddensea, 53°00'13"N. -04°47'30"E.). The copepods have been preserved in the Zoological Museum, Amsterdam, Z.M.A. coll. no. Co. 100,291.

Though the parasite is fairly small (adult females are between 1.2 and 1.5 mm in length), it is easily to be seen on the gills of *Sepia*, because of its contrasting colour. The body is colourless, but the intestine, ovaries, and ovisacs are bright white, the small eye is red. Several hundreds of specimens, of both sexes, have been found on practically every example of *Sepia* examined, clinging with their second antennae to the tissues of the host. Oviparous females were abundant in the first weeks of July, 1955.

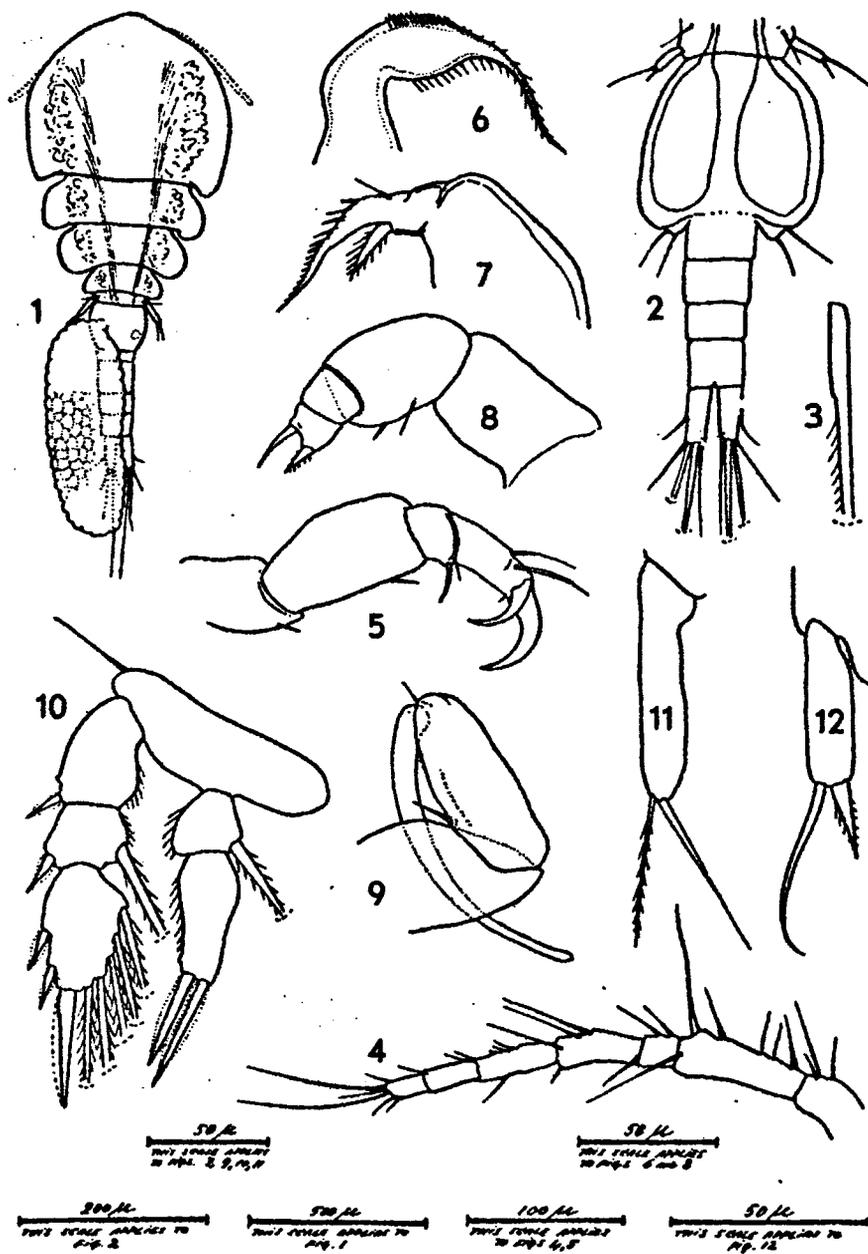
In order to ascertain whether the parasite is of regular occurrence in Dutch waters, and has hitherto been overlooked, or whether it has become abundant during the last few years only, I examined a number of older specimens of *Sepia officinalis* from our Museum collections to look for the presence of *Lichomolgus*. As a result, the species was found in four different lots of *Sepia*, originating from the following localities and dates:

- (a) Scheveningen. Collected by MAITLAND¹). Z.M.A. coll. no. Co. 100,293.
- (b) Brought in by fishermen to the Zoological Station, Den Helder. June 9, 1910. Z.M.A. coll. no. Co. 100,294.
- (c) Brought in by fishermen to the Zoological Station, Den Helder. July 14, 1910. Z.M.A. coll. no. Co. 100,295.
- (d) North Sea, 10 miles N.W. of lightship „Haaks". June 1938. Collected by J. SCHOUTE. Z.M.A. coll. no. Co. 100,296.

From these records it is not only clear that *Lichomolgus longicauda*, at least in certain years, is fairly common along the Dutch coast, but also that the parasite has been frequently overlooked. Since this copepod, even in a preserved state, possesses a colour contrasting against the tissues of its host, and since *Sepia* is one of the most frequently dissected invertebrates on undergraduate courses, it is very striking, indeed, that it has never been found before.

In addition to the more than three quarters of a century old figures of WIERZEJSKI, which, however, are still excellent by their accuracy, I give here a number of drawings of the species (fig. 1), which in most of its characters is a typical member of the large genus *Lichomolgus*. Only the female maxilliped is deviating, since it terminates in two small joints, armed with 2 strong spines, instead of in a claw, as in *Lichomolgus s.str.* Instead, the ♀ maxilliped of *L. longicauda* resembles much more the corresponding appendage of *L. agilis* (LEYDIG). With the latter species the present parasite of *Sepia* also agrees in the fairly long 5th legs, and in the rather widened basal part of the mandible lappet.

¹) R. T. MAITLAND, born ?, † Dec. 8, 1904, was appointed curator of the the Zoological Museum, Amsterdam, in charge of the malacological collections, from April 1856 till March 1864, and again from 1880 till May 1893. Probably the *Sepia* from Scheveningen mentioned above has been collected during this last period of his curatorship (verbal communication Mrs. W.S.S. VAN DER FEEN).



FIGURES 1—12. *Lichomolgus longicauda* (CLAUS). 1, Female in dorsal view; 2, urosome of male; 3, basal part of one of the furcal setae of male; 4, first antenna of male; 5, second antenna of male; 6, mandible of female; 7, second maxilla of female; 8, maxilliped of female; 9, maxilliped of male; 10, fourth leg of female; 11, fifth leg of female; 12, fifth leg of male.

A further curious character of *L. longicauda* is to be found in the structure of the furcal setae, which possess a smooth basal part ("like the grip of a whip", term employed by CANU, 1894, in characterizing another species).

SUMMARY

Lichomolgus longicauda (CLAUS, 1860), is recorded from the gills of *Sepia officinalis*, captured on 5 different occasions in the North Sea and the Dutch Waddensea. This means a northward extension of the range of this species of more than 8 degrees of latitude. Figures of the parasite have been provided, and the literature bearing on the species has been reviewed.

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