

# BULLETIN ZOOLOGISCH MUSEUM



Vol. 3 no. 12 30-VIII-1973

## WHALE-LICE (AMPHIPODA: CYAMIDAE) IN DUTCH WATERS

Jan H. Stock

### ABSTRACT

Three species of whale-lice are recorded from Dutch waters: *Platycyamus thompsoni* (Gosse, 1855), *Cyamus catodontis* Margolis, 1954, and *Isocyamus delphinii* (Guérin-Méneville, 1836). *Cyamus catodontis* is recorded moreover for the first time from several subantarctic localities. *Isocyamus delphinii* is recorded from a new host, *Phocoena phocoena* (Linnaeus, 1758). The records for *C. catodontis* and *I. delphinii* constitute considerable extensions of the known range.

### INTRODUCTION

Two Harbour Porpoises, *Phocoena phocoena* (Linnaeus, 1758), caught in the last few months in Dutch waters, yielded a number of whale-lice. This find stimulated me to check the whale-lice samples from the Netherlands, preserved in the two large natural history museums in the country, the Rijksmuseum van Natuurlijke Historie, Leiden (RMNH) and the Zoölogisch Museum, Amsterdam

(ZMA). As a result of this study, the occurrence in our waters could be ascertained of three species of Cyamidae, which are reported upon below.

- 1) *Platycyamus thompsoni* (Gosse, 1855)

References.- See Wolff, 1958: 2-3, and Leung, 1967: 288.

Material.- Clinging to a Bottlenose Whale, *Hyperoodon ampullatus* (Forster, 1770), stranded near Waarde (province of Zeeland) on Nov. 18, 1931. Two specimens in ZMA, two others in RMNH. The ZMA specimens have been mentioned in a paper by Stock & Bloklander, 1952: 8.

Remarks.- Although Wolff, 1958: 12, does not refer to the Dutch record, it is clear from his paper that the Netherlands fall well within the known range of *P. thompsoni*: from England to Spitzbergen. *Hyperoodon ampullatus* is the normal host for this species of cyamid.

2) *Cyamus catodontis* Margolis, 1954

*C. catodontis* Margolis, 1954: 320-324, figs. I-II; Margolis, 1955: 127-129, figs. 13-19; Leung, 1967: 287, fig. 5c.  
*C. boopis* var. *physeteris* Pouchet, 1892: 99 (non *C. physeteris* Pouchet, 1888: 698-699).  
*C. boopis* - Boschma, 1938: 33 (non *C. boopis* Lütken, 1870: 280).

Material.- More than 100 specimens secured from a Sperm Whale, *Physeter macrocephala* Linnaeus, 1758 (= *P. catodon*), stranded near Terneuzen (province of Zeeland) on Feb. 27, 1937 (RMNH).

Remarks.- The Dutch record is published in a somewhat obscure way, in the annual report of the Director of the Leiden Museum (Boschma, 1938: 33) under the name of *Cyamus boopis* Lütken, 1870. Later studies (Margolis, 1955) of the whale-lice on *Physeter* have shown that most if not all records of "*C. boopis*" from Sperm Whales are referable to *C. boopis* var. *physeteris* Pouchet, 1892, and that this taxon deserves full specific rank. Since the name *physeteris* Pouchet, 1892 is, however, preoccupied for a different species of cyamid (*C. physeteris* Pouchet, 1888), Margolis (1954) proposed the name *C. catodontis* for the Sperm Whale parasites.

*C. catodontis* is a rarely recorded species. Pouchet's material came from the island of Flores (Azores); Barnard's record (1932: 312, as *C. boopis*, but according to Margolis, 1955: 128 possibly referable to *C. catodontis*) is from the Indian Ocean off Durban. Margolis based his descriptions on material from British Columbia.

The accessory gills of *C. catodontis*, which are one of the salient identification characters, are clearly illustrated for the male sex only (Margolis, 1955, fig. 19; Leung, 1967, fig. 5c). Those of the female are briefly but correctly described by Margolis (1954: 321), who calls the posterior ramus "leaf-shaped". The accessory gills of ♂ and ♀ of *C. catodontis* are figured in the present paper (figs. 12-13); that of the female is wider than long, asymmetrical, and its distal margin is irregularly toothed or crenulated.

Leung, 1967: 283 (in a key to the species, couplet 11) calls the posterior ramus "biramous" for ♀ *C. catodontis*, and "simple" for ♀ *C. bahamondei* Buzeta, 1963. This must be due to confusion, since this appendage is simple ("leaf-

shaped") in *C. catodontis*, whereas in *C. bahamondei* it is stated (Buzeta, 1963: 131) to be "not transformed, but wider than in the male" (translation mine), which appears to mean that it is bicuspidate as in the male. However, Buzeta's figure 1, wanting in details as it is, seems to indicate a leaf-shaped structure, very similar to that found in *C. catodontis*. If this proves to be the fact, *C. bahamondei* would almost certainly be reduced to a junior synonym of *C. catodontis*.

For the present study, I have examined material of *C. catodontis* from the Netherlands, mentioned above, and moreover four samples secured from Sperm Whales caught by the whaler "Willem Barendsz" at the following positions:

- 56° 33' S 04° 48' E, Dec. 3, 1947, some 50 specimens (ZMA);
- 55° 20' S 16° 30' E, Nov. 18, 1947, some 50 specimens (ZMA);
- 54° 58' S 16° 53.5' E, Nov. 16, 1947, 2♂, 1♀ (ZMA).
- 61° 00' S 42° 46' W, Mar. 11, 1959, some 40 specimens (ZMA).

These records from a considerable extension of the known range of *C. catodontis*, to the North Sea in the North and to subantarctic waters in the South.

3) *IsoCyamus delphini* (Guérin-Méneville, 1836)

Refs.: cf. Leung, 1967: 288.

Material.- 101 specimens (ZMA), secured from a female Harbour Porpoise, *Phocoena phocoena* (Linnaeus, 1758), caught between Petten and Callantsoog (province of North-Holland) in the period of 24 to 31 August 1972. The whale-lice were predominantly located in old, partly healed wounds, but also in the mouth, the genital aperture, and at the implantation of the pectoral fins.

2♂, 1♀, from a male Harbour Porpoise, stranded in Het Zwin, Zeeuws-Vlaanderen (province of Zeeland), April 3, 1973 (ZMA).

Remarks.- *I. delphini* (syn. *Cyamus globicipitis* Lütken, 1873) is known from a score of different smaller Odontoceti, but not yet from *Phocoena*. It has been recorded from "dolphins" in general (a rather vague indication, under which various different species of whales may hide), furthermore from *Delphinus delphis* Linnaeus, 1758, from *Pseudorca crassidens* (Owen, 1846), from *Grampus griseus* G. Cuvier, 1812, and from *Globicephala*

*melaena* (Traill, 1809) (references in Bowman, 1955: 318). The occurrence on these hosts was established in several localities (Azores, Cape Verde Islands, western part of the Mediterranean region, Caribbean, Gulf of Mexico), all situated in the tropical to warm-temperate parts of the Atlantic Ocean and Mediterranean Sea. In addition, there is one record from Japan (Hiro, 1938: 77), from *Globicephala macrorhynchus* Gray, 1846 (= *scammoni* Cope).

The present finds from the Netherlands thus constitute a new host record and a considerable northward extension of the known range of the parasite.

Although hundreds of Harbour Porpoises have been examined at the various zoology departments of the University of Amsterdam during the last decade, for anatomical and systematic studies, no whale-lice were ever found on them before. It is rather surprising, therefore, that on two animals obtained in the last few months these parasites were found. It is known that several other marine animals from southern origin have invaded the Boreal zone in recent years, but it is premature to assume a similar invasion for *Isocyamus* on the basis of the present two records.

Since I am not aware of the existence of detailed figures of the mouth parts of *Isocyamus delphinii*, a number of illustrations showing the salient features of the species, is incorporated in the present paper (figs. 1-11).

#### ACKNOWLEDGEMENTS

The author is indebted to Dr. P.J.H. van Bree, of the Zoologisch Museum Amsterdam, who brought the parasites of the Harbour Porpoise under his notice, and who provided the correct scientific names for the various cetacean hosts recorded in the literature. Thanks are also due to Professor Dr. L.B. Holthuis, of the Rijksmuseum van Natuurlijke Historie, Leiden, for arranging the loan of

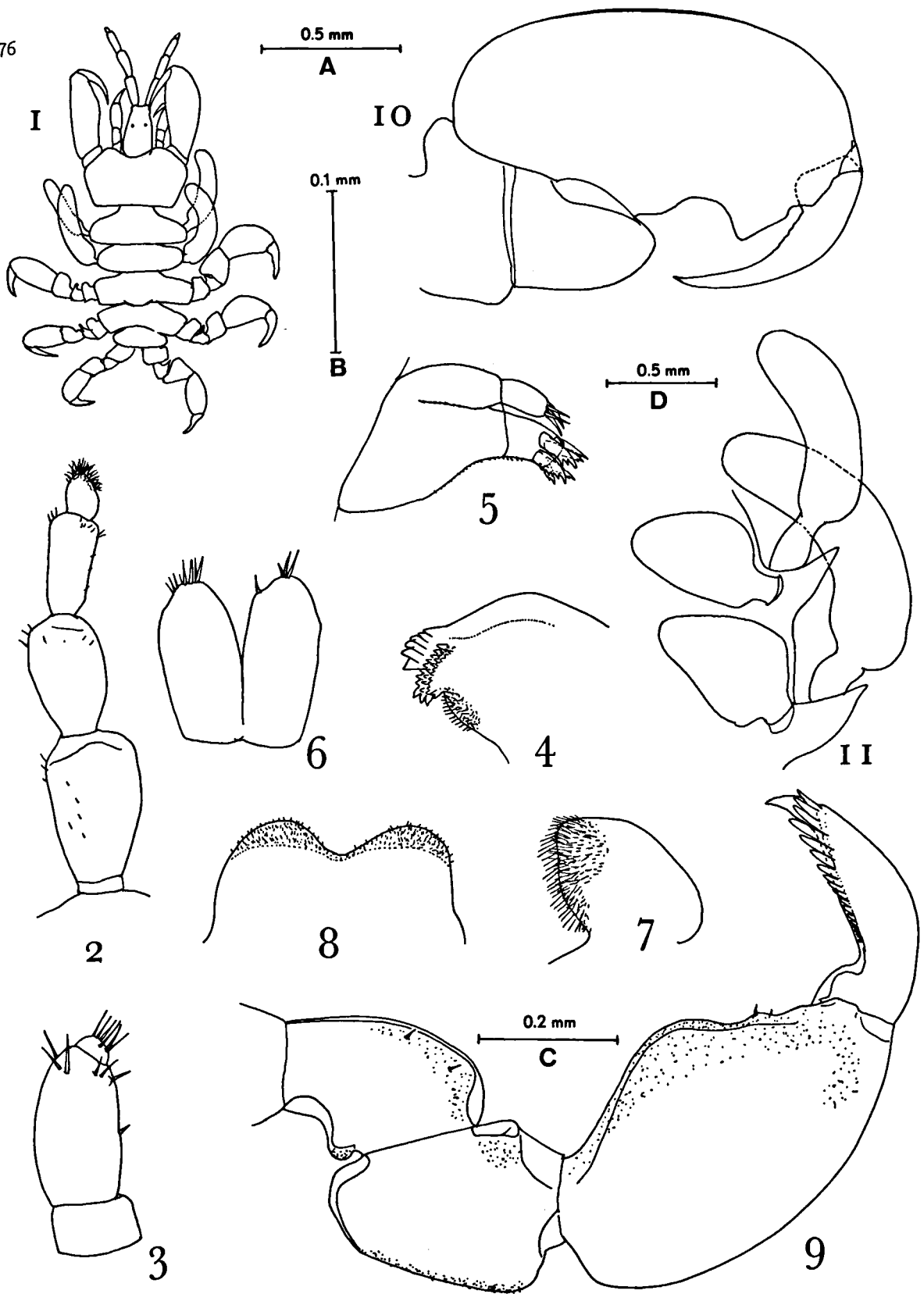
the Dutch specimens of *Cyamus catodontis*, and to Dr. W.L. van Utrecht, of the Zoologisch Laboratorium, Amsterdam, for the cyamid material from the whaler "Willem Barendsz".

#### REFERENCES

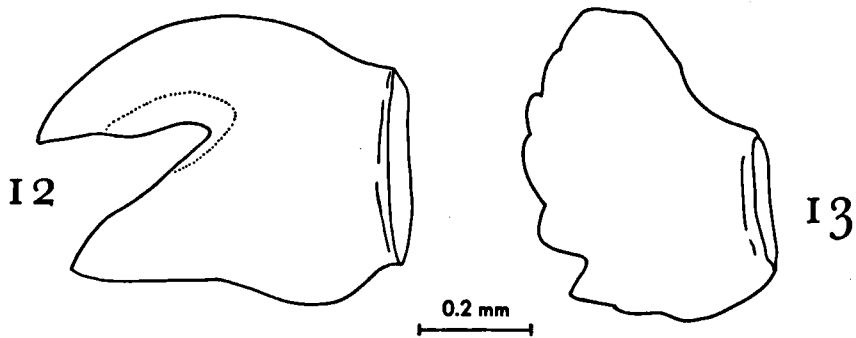
- BARNARD, K.H., 1932. Amphipoda. Discovery Reps., 5: 1-326.
- BUZETA, B., Ramon, 1963. Cyamidae (Crustacea: Amphipoda) en Physeter catodon L. capturados en Chile con descripción de una nueva especie *Cyamus bahamondei*. Montemar, 11: 126-135.
- BOSCHMA, H., 1938. Verslag omtrent het Rijksmuseum van Natuurlijke Historie te Leiden over de jaren 1936 en 1937 .....: 1-42 (Brill, Leiden).
- BOWMAN, Thomas E., 1955. A new genus and species of Whale-lice (Amphipoda: Cyamidae) from the False Killer Whale. Bull. mar. sci. Gulf Caribbean, 2 (4): 315-320.
- HIRO, Fujio, 1938. *Cyamus elongatus* n. sp., a new Whale-lice from Japan. Annot. zool. Japon., 17 (1): 71-77.
- LEUNG, Yuk-Maan, 1967. An illustrated key to the species of Whale-lice (Amphipoda: Cyamidae), ectoparasites of Cetacea, with a guide to the literature. Crustaceana, 12 (3): 279-291.
- LUTKEN, Chr.Fr., 1870. Conspectus Cyamidarum borealium hujusque cognitarum. Vidensk. Selsk. Forhandl. Christiania, 13: 279-280.
- , 1873. Bidrag til kundskab om arterne af slægten *Cyamus* Latr. eller hvallusene. Skr. vidensk. Selsk. Kjøbenhavn, (5) (naturvid. math. Afd.) 10 B (III): 231-284, i-iii, pls. I-IV.
- MARGOLIS, Leo, 1954. Three kinds of Whale-lice (Cyamidae: Amphipoda) from the Pacific coast of Canada, including a new species. Journ. Fish. Res. Bd. Canada, 11 (3): 319-325.
- , 1955. Notes on the morphology, taxonomy and synonymy of several species of Whale-lice (Cyamidae: Amphipoda). Journ. Fish. Res. Bd. Canada, 12 (1): 121-133.
- POUCHET, Georges, 1888. Sur un nouveau *Cyamus* parasite du Cachalot. C.R. Acad. Sci., Paris, 107: 698-699.
- , Contribution à l'histoire des Cyames. Journ. Anat. Physiol. norm. path. Homme Animaux, 28: 99-108, pls. VI-VIII.
- STOCK, Jan H., & A.E.M.H. BLOKLANDER, 1952. Notes on adventive Amphipoda (Crustacea, Malacostraca) on the Dutch coast. Beaufortia, 1 (10): 1-9.
- WOLFF, Torben, 1958. On the rare Whale-lice *Platycyamus thompsoni* (Gosse) (Amphipoda, Cyamidae). Vidensk. Medd. Dansk naturh. Foren., 120: 1-14, pls. I-II.

Dr. Jan H. STOCK  
 Professor in Systematic and Geographic Zoology  
 Institute of Taxonomic Zoology, University of Amsterdam  
 Plantage Middenlaan 53  
 Amsterdam - C. -- The Netherlands

Received: 17 April 1973.



Figs. 1-11. *Isocyamus delphinii* (Guérin, 1836), ♂ (from a Harbour Porpoise, caught between Petten and Callantsoog, The Netherlands). 1, entire animal, dorsal (natural size, 5 mm long); 2, first antenna (scale A); 3, second antenna (B); 4, mandible (B); 5, first maxilla (B); 6, second maxilla (B); 7, labial lobe (B); 8, maxillipeds (B); 9, first leg (C); 10, second leg (A); 11, gills and accessory gills (D).



Figs. 12-13. *Cyamus catodontis* Margolis, 1954 (from a Sperm Whale caught at 55° 20' S 16° 30' E).  
12, accessory gill of 4th trunk segment, ♂; 13, same of ♀ (both figures to the same scale).