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Ostroumovia inkermanica in the Netherlands *)

by

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During an examination of the Hydromedusae from the Netherlands and adjacent waters present in the collections of the Rijksmuseum van Natuurlijke Historie at Leiden, the Zoological Museum at Amsterdam, and the Zoological Station at Den Helder, some specimens of a medusa were found that proved to belong to *Ostroumovia inkermanica* (PALTSCHIKOWA-OSTROUMOWA, 1925), a species not previously reported from the region.

As the collections, mentioned above, did not contain specimens identified with this name, some of the medusae were sent to Dr. P. L. KRAMP, Zoological Museum, Copenhagen, who kindly examined them and confirmed the identification.

The specimens were collected on September 23, 1959, in the Grote Sluis (large lock) of the North Sea Canal at IJmuiden, in surface plankton, salinity 7.00‰, by Dr. J. H. STOCK of the Zoological Museum at Amsterdam, and are preserved in formaline 4%.

***Ostroumovia inkermanica* (PALTSCHIKOWA-OSTROUMOWA, 1925).**

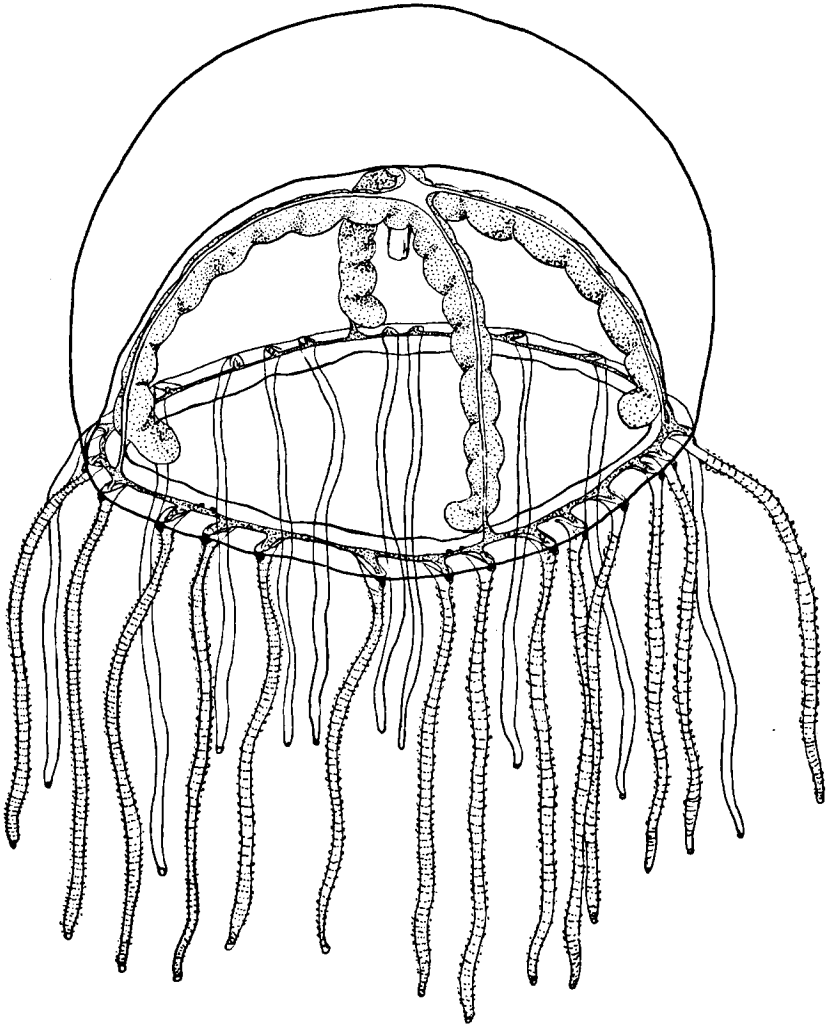
Moerisia inkermanica PALTSCHIKOWA-OSTROUMOWA, 1925, p. 273, figs. 1-3; *Ostroumovia inkermanica*, HADŽI, 1928, p. 39; *Thaumantias maeotica*, VALKANOV, 1935, pp. 277-279 (part); VALKANOV, 1936, pp. 84-88, figs. 20-23 (part); *Ostroumovia inkermanica*, VALKANOV, 1938, p. 309, figs. 2, 5, 18, 23, 25, 28; PASPALEFF, 1938, pp. 29-40, figs. 1-15; KRAMP, 1938, pp. 103-108, figs. 1-6; PICARD, 1951, p. 7.

Description of the specimens (see figure): Medusa dome-shaped, about 6 mm wide and 5 mm high, with very thick jelly.

Manubrium small, prismatic, mouth quadrate, without distinct lips.

Stomach cruciform, with long perradial lobes containing the gonads.

*) Received January 8, 1962



Ostroumovia inkermanica (PALT.-OSTR.) from the North Sea Canal near IJmuiden, the Netherlands. Mature specimen in lateral view ($\times 15$).

Gonads in perradial lobes continuous from stomach to almost the margin of the bell, distal portions sack-like, freely suspended.

24 tentacles (according to KRAMP, 1959, p. 171: "Up to 36"), adnate to the exumbrella, proximal part of the tentacles narrow, each tentacle with a central, longitudinal canal connected with the ring canal.

On the abaxial side of the basis of the free part of each tentacle there is an ocellus, placed on a small conical projection.

Nematocysts knob-like, in distinct rings throughout the length of the tentacle.

Statocysts, visible in some specimens, very small, internal.

Occurrence and notes on biology: *Ostroumovia inkermanica* has originally been described from the Bay of Sewastopol. Mouth of the Tschornaja Retschka PALT-SCHIKOWA-OSTROUMOWA, 1925, pp. 273-284), later it has been found in great abundance in the brackish water swamps on the Bulgarian coast of the Black Sea; moreover in a locality, presumably with brackish water, viz., the Visagapatam Channel on the east coast of India (KRAMP, 1958, p. 365), and now it has been found in the North Sea Canal, in the Netherlands.

According to Dr. KRAMP (in litt.) its occurrence here and in the Visagapatam Channel is probably due to transportation by a ship.

There are reasons for the suggestion that the species has been introduced into the Netherlands in the polyp phase (e.g., in the crust of organisms covering the bottom of a ship), and that the conditions in the North Sea Canal, in 1959, have afforded opportunities for development of the medusae:

1. The medusae found in the North Sea Canal are quite undamaged.

2. Many Limnomedusae (e.g., *Craspedacusta sowerbii* LANKESTER) have a much reduced polyp phase, which easily escapes detection and which is able to reproduce asexually. Usually the medusae develop under conditions widely different from those under which the polyps are able to grow. As a result, the area of distribution of the polyps is fairly large, much larger than the area where the medusae normally occur, and in certain parts of the area of distribution of the polyps the medusae only occur after exceptional conditions have prevailed for some time (as, e.g., a prolonged period of high temperatures).

The polyp of *Ostroumovia inkermanica* is about 0.5-44 mm long (PALT-SCHIKOWA-OSTROUMOWA, 1925, pp. 277, 283).

3. PALT-SCHIKOWA-OSTROUMOWA succeeded in cultivating the polyps of *Ostroumovia inkermanica* and in rearing the young medusae from those polyps, at a temperature of about 27 °C and a salinity of 0.45—1.5% (1925, pp. 273—285).

It is possible that in a salinity above 1.5% the polyps are able to develop, to reproduce asexually, and to survive the voyage from the Black Sea to the North Sea Canal.

The salinity in the water of the Black Sea varies from 0.45-0.7% in the swamps, to about 1.5% in the Bay of Sewastopol, and to about 2% in the open sea.

It is probable that the very hot summer in 1959 in the Netherlands, provided such a favourable temperature in the North Sea Canal that the conditions close to IJmuiden (salinity 7.00‰) have approached those prevailing in the swamps of the Black Sea, and thereby afforded opportunities for development of the medusae.

It seems likely, therefore, that *Ostroumovia inkermanica* has been introduced into the Netherlands in this way.

I want to express my sincerest thanks to Dr. P. L. KRAMP (Zoological Museum, Copenhagen) for examining my specimens, and to Dr. W. VERVOORT (Rijksmuseum van Natuurlijke Historie, Leiden) for advice during my studies of Hydromedusae.

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