

***Epitonium clathratulum* (Kannmacher, 1798) (Gastropoda, Prosobranchia: Epitoniidae), new for the Oosterschelde (The Netherlands), and some remarks on its presence in the Dutch Delta area**

L.P.M.J. WETSTEYN

Gandhistraat 15, 4336 LC Middelburg, The Netherlands

& J. NIEUWENHUIZE

Giessenburg 10, 4385 EM Vlissingen, The Netherlands

Epitonium clathratulum was found alive in the Oosterschelde (The Netherlands). As far as we know, this is the first recording of a live *E. clathratulum* in the Dutch Delta area. In situ finds from several fresh-looking shells suggest *E. clathratulum* living at more locations in this area.

Key words: Gastropoda, Prosobranchia, Epitoniidae, *Epitonium clathratulum*, The Netherlands.

When dredging for mammalian bones on 4 June 1994 with the mussel boat YE82 in the most northern gully of the Oosterschelde (the Hammen, depth ca. 30-35 m, 51°40'27.0"N, 3°50'51.6"E), one of us (JN) discovered a live *Epitonium clathratulum* (Kannmacher, 1798) (shell length 12.5 mm) on a dredged stone.

Former finds, although rare, from Recent, but empty shells are known from the Dutch coast (Entrop, 1965; De Bruyne, 1991), including the Dutch Wadden islands (De Boer & De Bruyne, 1991).

Despite intensive sampling of soft-bottom macrofauna from 1958 until 1970 (Wolff, 1973), live *E. clathratulum* was never found in the Delta area and the adjacent part of the North Sea. Also during monitoring programs in the Dutch coastal zone [ICES-North Sea Benthos Survey (1986), Milzon (1988-1993), Voordelta Research (1984-1994), BIOMON Delta area (1990-1994)] live *E. clathratulum* was never found (personal communication, J.A. Craeymeersch, NIOO-CEMO, Yerseke).

We could trace only three finds of live *E. clathratulum* in Dutch coastal waters. Kaas & Ten Broek (1942) reported a live *E. clathratulum* found in 1938 by A.W. Lacourt on a basket washed ashore in Katwijk aan Zee. In 1941 E. Struyck found a live *E. clathratulum* on an iron ball at Terheide (Bloklander, 1943). The third live *E. clathratulum* was found west of Texel Rough, within 25 miles of the Dutch coast (Eisma, 1966; colln. P. Smit). Only the latter find can be regarded as a record of *E. clathratulum* living in situ. Thus, as far as we know, this is the second in situ observation of live *E. clathratulum* in Dutch waters.

The find raises the question how *E. clathratulum* came into the Oosterschelde. Larval transport and settling of larvae is a realistic possibility. Planktonic veliger larvae may have originated from more southern waters or may have been transported from the British east coast as a consequence of the dominating north-east orientated water transport. Supporting the presence of *E. clathratulum* in nearby southern waters is the record of two live *E. clathratulum* in 1971 in Belgian waters (Backeljau, 1986). Water temperature is also a factor that might be involved. During the period 1990-1994 the mean monthly water temperatures at the location in the Hammen were higher (0.5-2.1°

C) than during the period 1972-1989 (unpublished data Rijksinstituut voor Kust en Zee, Middelburg). A *t*-test of the differences between two means revealed that these higher water temperatures were, as a consequence of large annual variations, not significantly different at a 5 % significance level for every month. Nevertheless, periods with higher water temperatures may have favoured the survival of settled larvae.

In grab samples from four locations (one location c. 15 km west of Westkapelle and three stations c. 20 km west of the entrance to the Oosterschelde), taken in 1993, several fresh-looking adult shells, possibly collected alive, were found by R.H. de Bruyne. These suggest that *E. clathratulum* is not only living in the Oosterschelde, but also that it might be present at more locations in the Dutch Delta area.

We thank Mr. R.H. de Bruyne for bringing the 1941 find to our notice and for permission to use the grab sample data and Mr. J.A. Craeymeersch for providing information from the monitoring programs.

REFERENCES

- BACKELJAU, T., 1986. Lijst van de recente mariene mollusken van België. — Studiedoc. Kon. Belg. Inst. Natuurw. 29: 1-106.
- BLOKLANDER, G., 1943. Drijvend materiaal I. — Het Zeepaard 3(2): 1-6.
- BOER, T.W. DE, & R.H. DE BRUYNE, 1991. Schelpen van de Friese Waddeneilanden: 1-292. Oegstgeest.
- BRUYNE, R.H. DE, 1991. Schelpen van de Nederlandse kust: 1-165. Utrecht.
- EISMA, D., 1966. The distribution of benthic marine molluscs off the main Dutch coast. — Neth. J. Sea Res. 3: 107-163.
- ENTROP, B., 1965. Schelpen vinden en herkennen: 1-320. Zutphen.
- KAAS, P., & A.N.CH. TEN BROEK, 1942. Nederlandse zeemollusken: 1-232. Amsterdam.
- WOLFF, W.J., 1973. The estuary as a habitat. An analysis of data on the soft-bottom macrofauna of the estuarine area of the rivers Rhine, Meuse, and Scheldt. — Zoöl. Verh. Leiden 126: 1-242.

SAMENVATTING

In deze bijdrage wordt de vondst beschreven van een levende Witte Wenteltrap (*Epitonium clathratulum*) op een opgevisste steen uit de Oosterschelde. Voor zover na te gaan, is dit de eerste melding van een levend exemplaar in het Delta-gebied. In situ vondsten van vers uitzijende schelpen doen vermoeden dat deze soort op meer plaatsen in het Delta-gebied voorkomt.