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The identity of Altenaeum nortoni Spaink, 1972 (Bivalvia, Condylocardiidae) and its occurrence in the Netherlands

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Spaink (1972) described *Altenaeum nortoni* after (1) one valve from a boring at Brielle, province of Zuid-Holland, The Netherlands, (2) two valves from a boring at Ludham, East Anglia, Great Britain, and (3) many valves from borings and surface samples taken in the southern part of the North Sea by the Geological Survey of The Netherlands. The same species, however, had already been conditionally, but validly (ICZN Art. 15), named and described as *Montacuta dawsoni* by Jeffreys (1864: 216), after a single valve from "the Aberdeenshire coast". Consequently, this single valve should be considered the holotype. Later on, Jeffreys (1869: 178, pl. 31 fig. 7) redescribed and figured the species, with more material available. Some authors (Warén, 1980: 46; Backeljau et al., 1984: 208) incorrectly referred to all Jeffreys' material as syntypes. Warén (1980: pl. 8 figs. 3, 4) figured a specimen of *Montacuta dawsoni* from the Jeffreys collection, from Moray Firth, Scotland; the figures clearly show that *Montacuta dawsoni* and *Altenaeum nortoni* are conspecific. Backeljau et al. (1984: 206, figs. 2D, 3A-D) draw the same conclusion. J.J. van Aartsen (in litt., 1985) has personally studied Jeffreys' material; he agrees with the synonymy mentioned before. G. Spaink (in litt., 1980) informed me that originally he based his opinion concerning *Montacuta dawsoni* on its first, rather vague and partly incorrect ("... the inside is nacrous ... the hinge line is small and straight ...") description.

I agree with Spaink that the species under discussion certainly cannot be classified with *Montacuta*. The genus name *Altenaeum* Spaink, 1972, should be used for it; thus the correct name of the species is *Altenaeum dawsoni* (Jeffreys, 1864). The title page of Jeffreys' book is dated 1863, but according to Von Martens (1866: 232) the ook has been published in 1864.

Many of the shells from the bottom samples taken in the North Sea, mentioned above, are vitreously transparent and very fresh-looking (Spaink, 1972: 143), indicating that the species is still living there. Therefore, Spaink (1973: 64) asked the Dutch conchologists to look for this species on the Dutch coast. I can report the following records concerning specimens washed ashore in the southwestern part of The Netherlands.

Domburg-Westkapelle, 4.VIII.1939 (2 left valves) and 26.IV.1962 (11 left and 12 right valves); Cadzand, Zwin, 23.IV.1962 (1 left and 2 right valves); Ouddorp, Flauwe Werk, 5.VII.1978 (8 left and 3 right valves). The last sample has been collected by the late W.F.A. Guilonard; the material is in the collection of D.F. Hoeksema. The other samples, collected by the author, are in the Rijksmuseum van Natuurlijke Historie, Leiden.

At Domburg-Westkapelle and at Cadzand, Zwin, a high percentage of the shells has a fossil appearance and most probably is of Pliocene-Holocene age. A few valves of our species, however, might be recent. Therefore, the species might be living in our coastal

waters, e.g. in the estuary of the river Scheldt. All the shells from Ouddorp, Flauwe Werk, look distinctly fossil. Formerly, almost no fossils were known from the coast of Goeree (Van Regteren Altena, 1937). However, recently the sea bottom nearby has been greatly disturbed by cutting a gully to make the port of Rotterdam accessible for the biggest oil-tankers. I suppose that the fossils that now are washed ashore near Ouddorp originate from sand dredged from this gully. As the Holocene deposits in this area are over 30 metres thick (Hageman, 1964: fig. 14), it is evident that the age of these specimens can only be Holocene.

Spaink (1972: 147) gave Ludhamian as the age for the valves from East Anglia; this can be correlated with the Dutch Tiglian (Zagwijn & Van Staalduinen, 1975: 123, fig. 4.4.1). For the valve from Brielle he estimated Eemian or somewhat older and for the specimens from the North Sea borings and samples Spaink suggested Eemian, Holocene, and probably also Recent. However, the specimens from the borings in the southern North Sea basin and the shells washed ashore near Cadzand and between Domburg and Westkapelle, should probably be dated as Tiglian, as far as these are not Holocene or Recent. The Tiglian sea occupied the greater part of the present southern North Sea and covered more than the western half of our country. The Eemian sea covered only part of our provinces of Noord-Holland and Utrecht, whereas the coastline in front of the provinces Zuid-Holland and Zeeland was situated considerably more westward than nowadays (Van der Vlerk & Florschütz, 1950: 6, fig. 2; Van Rummelen, 1972: 40-42). Only in the late Eemian period there has been some transgression of a brackish estuarine character in the southwestern part of The Netherlands (Van Rummelen, 1972: 42-43, fig. 24).

Vast building sites in and around Amsterdam have been raised with sand, dredged from the subsoil of the lakes in the western part of our country. This sand has yielded a rich marine Eemian molluscan fauna, but *A. dawsoni* has never been found in it. Therefore I suppose that the valve from Brielle has to be dated considerably older than Eemian; Tiglian is perhaps a better estimate.

Apparently *A. dawsoni* entered the North Sea around Scotland, in or shortly before the Tiglian, when the Strait of Dover was closed. At the end of the Tiglian, under influence of the colder climate, the species vanished from the North Sea and did not reappear during the milder interglacial periods. Probably it re-invaded the North Sea from the south, when the Strait of Dover broke through in the Holocene, separating France and Great Britain.

While this paper was in press, my attention was caught by an interesting paper concerning *A. dawsoni* and its distribution off northern Norway by Backeljau et al. (1984).

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SAMENVATTING

Altenaeum nortoni Spaink, 1972, blijkt identiek te zijn aan *Montacuta dawsoni* Jeffreys, 1864. Daar deze soort zeker niet tot het geslacht *Montacuta* mag worden gerekend, behoort de naam *Altenaeum dawsoni* (Jeffreys, 1864) te zijn. Inmiddels is *A. dawsoni* op drie plaatsen op onze stranden gevonden. Waarschijnlijk verscheen de soort in het Tiglien via de Schotse wateren in de Noordzee, om weer te verdwijnen na het Tiglien, door het kouder wordende klimaat, en vervolgens opnieuw in de Noordzee te verschijnen in het Holoceen, ditmaal via het Nauw van Calais.