

ON THE IDENTITY OF *GONILIA MIOGLYPTA* NORDSIECK, 1972
(MOLLUSCA, BIVALVIA) FROM THE MIOCENE (HEMMOORIAN) OF
WINTERSWIJK-MISTE, THE NETHERLANDS

by

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Janssen, A.W. On the identity of *Gonilia mioglypta* Nordsieck, 1972 (Mollusca, Bivalvia) from the Miocene (Hemmoorian) of Winterswijk-Miste, The Netherlands. — Meded. Werkgr. Tert. Kwart. Geol., 23(1): 43-45, 2 figs. March 1986.

The bivalve species *Gonilia mioglypta* Nordsieck, 1972, described from the Middle Miocene (Hemmoorian, Oxlundian; Aalten Member, Miste Bed; *Hiatella arctica* Acme Zone or basal part of *Astarte radiata* Acme Zone) of Winterswijk-Miste, The Netherlands, is according to its author mainly characterized by the occurrence of a colour pattern of dark undulating lines on the outer surface of the shell. The taxon was based on a single valve. Some recently isolated additional specimens prove the identity of *G. mioglypta* with the well-known Miocene to Recent species *Gouldia* (*Gouldia*) *minima* (Montagu, 1803).

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In his book on the Winterswijk-Miste mollusc fauna F. Nordsieck (1972, p. 31, pl. 5, fig. 33) introduced a new bivalve species sub nomen *Gonilia mioglypta*. This species is mainly characterized, according to its author, by the presence of a peculiar pattern on the outer shell surface, consisting of dark undulating lines curving in umbonal direction on the middle part of the shell. This feature is well-illustrated in the drawing accompanying the description. As the genus *Gonilia* belongs to the Astartacea some other characteristics of *G. mioglypta* are quite enigmatic. The outline of the shell and the construction of the hinge resemble more closely a representative of the Veneracea, although the absence of a pallial sinus seems to put Nordsieck in the right.

In my paper on the Miste mollusc fauna (Janssen, 1984, p. 80, pl. 30, fig. 6) I was forced to give a translation of Nordsieck's description, together with a copy of his drawing, as no material of this species was available to me. The taxon was based on one right valve only, kept in the Nordsieck collection.

Quite recently Messrs C. Karnekamp (Diemen) and A.F.J. Jansen (Bovenkarspel) showed me a second specimen of *G. mioglypta*, also collected from the Winterswijk-Miste locality, clearly dem-

onstrating all the features mentioned by Nordsieck, inclusive of the conspicuous colour pattern. As this species had puzzled me for a long time I eagerly took the occasion to study this shell and I am grateful to both gentlemen for this possibility. A quick look at the shell indeed acknowledged its identity with Nordsieck's species, but at the same time the specimen was recognized as a representative of the well-known Miocene to Recent bivalve species *Gouldia* (*Gouldia*) *minima* (Montagu, 1803), in which however a colour pattern as present in the Miste form was unknown to me.

A large sample of *Gouldia minima* from Winterswijk-Miste, comprising several thousands of specimens, is present in the RGM-collection. This material was inspected and indeed some similar specimens could be isolated. Usually the colour pattern on the outer side of the shell is rather inconspicuous, but becomes more contrasting after wetting the shell. Most shells show no colour pattern at all, but in about 5% of the available specimens such a pattern is present or can be produced. A

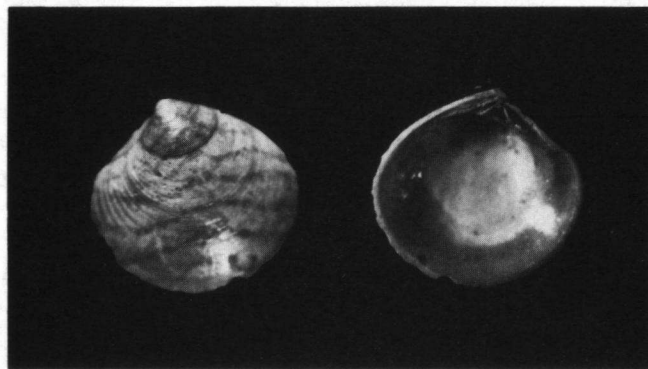


Fig. 1a-b. *Gouldia* (*Gouldia*) *minima* (Montagu, 1803), magnification $\times 10$. Winterswijk-Miste (Netherlands). Miocene, Hemmoorian (Oxlundian), Aalten Member, Miste Bed, *Hiatella artica* Acme Zone or base of *Astarte radiata* Acme Zone. Collection C. Karnekamp, Diemen. Specimen with undulating colour pattern.

(Photograph: P.H.M. van den Berg, RGM).

pattern as described for *G. mioglypta* is extremely rare and could only be observed in two valves (and the holotype). Much more frequent is a pattern consisting of two dark maculae on either side of the vertical midline of the shell, which in the various available specimens greatly vary in size. They may occupy a large part of the shell or be reduced to two small spots in the middle part of the shell (fig. 2). A photograph of the specimen in coll. C. Karnekamp (Diemen) is given in fig. 1. Also shells are present with a concentric colour pattern.

The Nordsieck collection is now incorporated in the Senckenberg Museum at Frankfurt/Main (F.R.G.), where the sorting and registration procedure has only just started. Yet, Dr. R. Janssen, curator of the mollusc department, succeeded in locating the holotype of *Gonilia mioglypta*. A comparison of this shell with *Gouldia minima* acknowledged the identity of both taxa. The hinge of the type specimen is slightly damaged, which might account for the fact that Nordsieck's drawing of the hinge didn't lead to an earlier recognition.

Gouldia minima is one of the very few veneracean species in which the pallial sinus is poorly developed. This too, of course, has enabled the confusion.

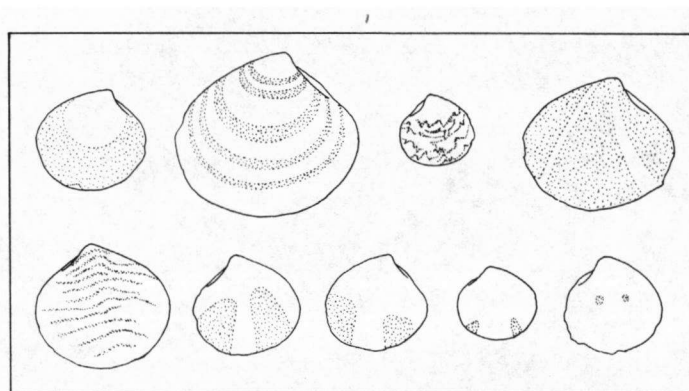


Fig. 2. *Gouldia (Gouldia) minima* (Montagu, 1803), magnification $\times 4$. Same provenance as in text-fig. 1 Coll. RGM 229.248. Schematic drawings indicating various colour patterns.

SAMENVATTING

Over de identiteit van *Gonilia mioglypta* Nordsieck, 1972 (Mollusca, Bivalvia) uit het Mioceen van Winterswijk-Miste, Nederland.

De tweekleppige mollusk *Gonilia mioglypta* Nordsieck, 1972, beschreven uit het Midden Mioceen (Hemmoorien, Oxlundien, Afzetting van Aalten, Laag van Miste, *Hiatella arctica* Acme Zone of basis *Astarte radiata* Acme Zone) van Winterswijk-Miste, is volgens de oorspronkelijke beschrijving gekenmerkt door het voorkomen van een kleurpatroon bestaande uit donkere golvende lijntjes op het buitenoppervlak van de schelp. Dit taxon werd gebaseerd op slechts één losse klep. Enkele onlangs uitgesorteerde aanvullende exemplaren bewijzen de identiteit van *Gonilia mioglypta* met de goed bekende soort *Gouldia (Gouldia) minima* (Montagu, 1803), die voorkomt van Mioceen tot recent.

REFERENCES

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- Nordsieck, F., 1972. Die miozäne Molluskenfauna von Miste-Winterswijk NL (Hemmoor). Stuttgart (Fischer Verlag), 187 pp., 33 pls.