

Book review

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(in collaboration with P. Moerdijk and F.A.D. van Nieulande)

**The Neogene Amphineura and Bivalvia
(Protobranchia and Pteriomorpha)
from Kallo and Doel (Oost-Vlaanderen, Belgium)**

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Marquet, R., 2002. The Neogene Amphineura and Bivalvia (Protobranchia and Pteriomorpha) from Kallo and Doel (Oost-Vlaanderen, Belgium). *Palaeontos* 2, 1-99, 3 tables, 16 figures, 34 plates. Palaeo Publishing and Library vzw, Antwerpen (ISSN 1377-4654), € 57.

With this attractive volume, Marquet continues his studies of Neogene (mostly Pliocene) molluscan faunas from temporary outcrops near Antwerp. Flicking through the pages, it is a pleasure to note how much progress has been made in recent years, and how well known these faunas have become by now. Amongst the sixty species treated, a mere six are recognised for the first time in these faunas, and three of these are described as new.

Following 'Introduction' is a chapter on 'New stratigraphical observations', supplying data on temporary outcrops between Kallo and Doel. No complete sections are measured, merely comparisons with previously described ones are made, but the author occasionally is rather careless in his terminology. For instance, when referring to the *Petalococonchus* level of the Kattendijk Formation (p. 2), he states that 'This formation disappeared completely to the north-east', where he obviously means 'This level disappeared ...'. Of special interest is the occurrence of the Luchtbal Sand Member (Lillo Formation), noted for the first time from the left bank of the Schelde River. Text-figures 1 and 2 summarise the stratigraphy, and in the former it is amazing to see that local nomenclature (e.g. Kattendijkian, Scaldisian, Merxemian) has vanished completely, and that only the international units are used. However, the correlation between these is not discussed anywhere. In text-figure 2, illustrating the Deurganckdok outcrop, no formation or member names are used, which is a pity. Note the use of the word 'criss-cross layered sand', a non-existent term in English. Indeed, there are more instances where a native speaker of English might have helped. In the 'Descriptive terminology of the shells', the author uses illustrations

from the literature to demonstrate the morphology of chitons and bivalves, an improvement on the earlier volume on gastropods. In text-figures 7 and 9, left and right valves of *Chlamys* and *Anomia*, respectively, are illustrated, but the caption does not say which of these figures represents the left and which the right valve. In both, however, the right valve actually is on the left, and the left on the right. For Anomiidae it is stated that muscle scar arrangement is of high importance for identification, but illustrations of such are not given.

The most extensive portion of the work deals with 'Systematics', following Moore's bivalve systematics (1964, 1969). Still, in places, superfamily names have the correct -oidea ending, whereas in most cases the outdated ending -acea is maintained. For each species-level taxon there is a list of selected synonyms, followed by *Locus typicus*, *Stratum typicum* and dimensions of illustrated specimen(s). One reference (p. 17) is to A. Ringelé's unpublished PhD thesis, not included in the 'References'; neither is Wienrich's 1999 paper (cited with *Limopsis aurita*, p. 28). Descriptions are followed by a subheading 'Occurrence' and occasionally by 'Discussion'. Usually the geographical/stratigraphical distribution is extensively described, fortunately also outside the North Sea Basin. Hidden through the text are a few lectotype designations. The discussion of the new subspecies, *Yoldiella philippiana wesselinghi*, is confusing; why cannot this be a form of *Y. pygmaea*? The main difference with the nominal subspecies is stated to be 'a smaller diameter and height at the same length', but in the two illustrations of the new taxon (pl. 5, figs 1, 2) the variation of these features clearly includes *Y. p. philippiana* (pl. 5, fig. 3).

Adding to the confusion are different magnifications here. For *Yoldia heeringi* (newly described by Marquet & Moerdijk), it is noted that 'margin of the resilifer in most specimens regularly rounded', but in the specimen illustrated in pl. 6, fig. 2d that margin is clearly excavated. In addition, for the new subspecies *Glycymeris radiolyrata pseudodeshayesi* (erected by van Nieulande & Moerdijk), a name originally introduced as a forma, the shell illustrated probably is a paratype, although in the text the original type specimen is not indicated as the holotype, but merely as 'type material'. For *Modiolula phaseolina* two valves are illustrated (pl. 17, fig. 2), both showing the external view; to be certain of this identification, especially of the one in fig. 2a, I would much like to have seen the internal view. How difficult it is to orientate bivalves in SEM imaging is clearly demonstrated for *Similipecten similis* (pl. 25, fig. 1), where figures 1b and 1d represent the same shell but with markedly different H/W ratios. This goes for more illustrations. Following 'Systematics' are 'Acknowledgements' and 'Distribution of the species in the Kallo and Doel sections', with a table illustrating vertical distribution of

taxa. On pp. 71-85, translations into Dutch are given of descriptions of taxa that either represent new species or new records for the Belgian Pliocene. A list of references (pp. 86-90), an alphabetic index (pp. 91-94), and a list of captions (pp. 95-99) conclude the text. All taxa are illustrated in 34 b/w plates, usually of excellent quality (but see the remark on some SEM images above), many of which giving useful shell details. These illustrations give only the taxon name, all other data (provenance, magnification) are dispersed through the text.

Type setting is in Times New Roman, printed mainly in two columns, with first and second order headings in Arial, on glossy paper, which may prove irritating to the eyes. Perhaps a more solid cover should have been used; after all, handbooks such as this are bound to be frequently consulted. Moreover, proof reading should be more careful, as the number of typos is considerable. These critical remarks detract very little from the merits of this work. I congratulate the author on its publication; it will be appreciated by many, both professional and non-professional.