

Book review

MARQUET, R. (in collaboration with P. MOERDIJK & F.A.D. VAN NIEULANDE), 2002. The Neogene Amphineura and Bivalvia (Protobranchia and Pteriomorpha) from Kallo and Doel (Oost-Vlaanderen, Belgium). – *Palaeontos*, 2: 99 pp., 3 tables, 16 figs, 34 pls. Palaeo Publishing and Library vzw, Antwerpen, Belgium. ISSN 1377-4654. Price € 57.—.

This attractive book continues Marquet's studies on the predominantly Pliocene mollusc faunas from various temporary excavations W and NW of Antwerp. In the first part (published 1998) the gastropods were treated, now we see the chitons and the first part of the bivalves and it is a pleasure to see what progress was made, and how well-known these fauna's in fact are already: among the 60 species found (4 chitons, 56 bivalves) just 6 are new for the fauna, 3 of which are introduced as new taxa (2 species, 1 subspecies).

After the "Introduction" there is a chapter on "New stratigraphical observations", giving information on the temporary exposures in between Kallo and Doel. No complete sections are measured, the author restricts himself mainly to comparisons with earlier described outcrops, but is sometimes rather careless in his terminology. For instance, when talking about the *Petalocochnus* level of the Kattendijk Formation (p. 2) he writes that "This formation disappeared completely to the north-east", where he obviously means 'this level disappeared ...'.

Very interesting is the occurrence of the Luchtbal Sand Member of the Lillo Formation, the first observation on the Schelde river left bank. Figures 1 and 2 summarize the stratigraphy. Fig. 1 gives the chronostratigraphy, and it is amazing to see that the local nomenclature (Kattendijkian, Scaldisian, Merxemian) has disappeared completely, only the international units are mentioned, but the correlation of these is discussed nowhere in this paper. Fig. 2 gives only the lithostratigraphy of the Deurganckdok-exposure, unfortunately without any formation or member names. In this illustration "criss-cross layered sand" is a non-existing straight-forward translation into English for 'cross bedding' of the Dutch word 'kriskrasgelaagdheid'. Indeed, at more places in this book a native English-speaking reviser could have improved the quality of the English (e.g.: "...could more likely be a synonym from *N. trigonula*", p. 17).

The following chapter gives the "Descriptive terminology of the shells". Here the author used existing illustrations from the literature (Wood, Moore, Tebble) to demonstrate the morphology of chitons and bivalves, a much better idea than the illustrations he used in his book on the gastropods. In figs 7 and 9 left and right valves of respectively *Chlamys* and *Anomia* are illustrated, but the explanation does not say which figure is the left and which is the right valve. In both figures, however, the right valve is on the left, and the left valve is on the right. For the Anomiidae it is stated that the arrangement of the muscle scars is highly important for identification, but illustrations of these arrangements are not given.

The most extensive part of this book, of course, is "Systematics", which for the bivalves follows Moore's systematics of 1964 and 1969. Still, in places, we see the superfamily names correctly ending on -oidea (e.g. Pectinoidea, p. 44; Anomioidea, p. 59), whereas in most cases the outdated ending -acea is maintained (Nuculacea, p. 13; Arcacea, p. 23, etc.). For each taxon of the species level a list of selected synonyms is given (with bold printing of the first valid description), followed by *Locus typicus*, *Stratum typicum*, and the dimensions of the illustrated specimen(s). One reference (p. 17) is from the never published PhD thesis of A. Ringelé, a paper not mentioned in the references. Also the paper of Wienrich (1999), cited for *Limopsis aurita* (p. 28), is not listed in the references. The descriptions are followed by a subheading "Occurrence" and sometimes a "Discussion". Usually the geographical/stratigraphical distribution is extensively described, fortunately also outside the North Sea Basin. Some lectotype designations occur quite hidden in the text.

From the rather confusing discussion of the new taxon *Yoldiella philippiana wesselinghi* it is not clear to me why this cannot be a form of *Y. pygmaea*. Also, the main differences with the nominal subspecies are 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 variability of these characters clearly includes *Y. p. philippiana* (pl. 5, fig. 3). The fact that all photographs have different magnifications is very confusing.

In the description of the new taxon *Yoldia heeringi* (by Marquet & Moerdijk) it says "margin of the resiliifer in most specimens regularly rounded", but in the specimen illustrated in pl. 6, fig. 2d that margin is clearly excavated. In the description of the new subspecies *Glycymeris radiolyrata pseudodeshayesi* (by Van Nieulande & Moerdijk), a name originally introduced as a forma, the illustrated specimen 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 in external view. I should rather like to see the inner sides to be certain of their identification, especially the one in fig. 2a. How difficult it is to properly orientate bivalve specimens for SEM-images is clearly demonstrated in the illustrations of *Similipecten similis* (pl. 25, fig. 1): figs. 1b and 1d represent the same specimen but show strongly different height/width ratio's, and this goes for several more illustrations.

The chapter "Systematics" is followed by acknowledgements and "Distribution of the species in the Kallo and Doel sections" (p. 69), the latter being a table summarizing the vertical distribution of the taxa. On pp. 71-85 complete translations into Dutch are given of descriptions of taxa that are new or new 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 described taxa are illustrated on 34 b/w plates, usually of excellent quality (but see the remark on some SEM-images above), many of which give useful details of the shells. These illustrations are only accompanied by the name of the fossil in question, but all other information (such as origin, status, dimensions/magnification) has to be found elsewhere in the text.

Type setting is in Times New Roman, printed mainly in two columns, with first and second order headings in Arial. The book is printed on very glossy paper, which is unpleasant to the eyes. The limp cover bears a nice illustration of one of the temporary exposures. We advise the editors to use a more solid cover for next issues, as these handbooks are frequently consulted. Also proof reading should be more careful, as the number of type errors is considerable.

These few critical remarks detract nothing from the merits of this book. I admire the author for all his continuous work. The book is another welcome and recommendable contribution to the knowledge of North Sea Basin faunas, and will be appreciated by many, professionals and non-professionals! Congratulations, Robert!

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