

The genus *Phasianema* in the Pliocene of Western Europe

by

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The genus *Phasianema* was described by S. V. WOOD in 1842 (for references see the synonymies at the end of this paper). He included two species in it, but described only one, *Ph. sulcata*; the other, *Ph. lineolata*, remained a nomen nudum. Consequently *Ph. sulcata* Wood, 1842, is the type of the genus by monotypy. In 1848 WOOD transferred this species to the genus *Fossarus* Philippi, and redescribed it as *Fossarus sulcatus*, together with a variety *lineolata*. Specimens belonging to the variety were distinguished from those of the forma typica by having a greater number of spiral ridges on the last whorl, viz. 15 instead of 8 to 10. Unfortunately, however, the specimen figured with WOOD's description of *Phasianema sulcata* in 1842 clearly shows about 15 spiral ridges, and consequently belongs to WOOD's var. *lineolata* of 1848.

Dr. L. R. Cox has kindly informed me that the British Museum possesses a series of specimens from WOOD's collection, which was acquired many years after 1842. This series or part of it may, therefore, have been collected subsequent to 1842, so that these specimens cannot be considered syntypes of WOOD's species. The only specimen which was certainly in WOOD's possession when he wrote his paper published in 1842, is the shell figured on pl. 5 fig. 15 of that paper. Consequently this should be selected as the lectotype of *Phasianema sulcata*, and the var. *lineolata* Wood, 1848, becomes a synonym of *Ph. sulcata* Wood, 1842.

HARMER considered the two forms to be separate species of the genus *Fossarus*. Although he was evidently not aware of the nomenclatorial implications of WOOD's figure of 1842, he interchanged the names used by WOOD in 1848, and thus rightly called the species with a great number of spiral ridges *sulcatus*. He wrongly used the name *lineolatus* for the other species, which is still in need of a valid name.

As these species do not fit into the genus *Fossarus* Philippi, WOOD's generic name should be retained for them. THIELE placed *Phasianema* Wood in the family Pyramidellidae, but he wrongly cited *P. costatum* (Brocchi) as the type species, and stated that a columellar fold is lacking in this group. WOOD, however, found an incipient columellar fold in the type species of *Phasianema*. Though this columellar fold is a strong argument for placing *Phasianema* in

the Pyramidellidae, I hesitated to follow THIELE because the specimens of *Phasianema* in my possession did not show a heterostrophic apex. Dr. H. A. REHDER (Washington), however, who examined one of my specimens, kindly informed me that some species of *Odostomia* have a quite similar apical nucleus.

Amauopsis zelandica Bloklander, 1949, appears to be a third species of *Phasianema* from the Pliocene of Western Europe. This species was based on specimens from the Westerschelde, Netherlands. It occurs as a derivative fossil in Holocene shell beds on the bottom of this estuary of the river Scheldt, among shells which are for the greater part of Plio-Pleistocene age. BLOKLANDER placed his species in the genus *Amauopsis*, but only tentatively, because it possesses a columellar fold not mentioned in the description of that genus. The species was recorded by Mrs. VAN BENTHEM JUTTING under the name *Acrybia zelandica* from Upper Pliocene (Scaldisien) deposits at a depth of 143-183 m below Ordnance Datum near Oosterhout, in the province of Noord-Brabant, Netherlands.

In 1955 I had an opportunity to examine some small shells from the Westerschelde which had been labelled *Fossarus sulcatus* (Wood) by the Rotterdam branch of our Malacological Society, whose members make a special study of these derivative fossils from the Westerschelde. On showing these specimens to Mr. BLOKLANDER he recognised them as the young of his *Amauopsis zelandica*.

As, on the other hand, they showed a striking resemblance to HARMER's figure of *Fossarus sulcatus*, I asked Dr. L. R. COX to be so kind as to compare these small shells with WOOD's specimens of *Phasianema sulcata*, preserved in the Palaeontological Department of the British Museum (Natural History). Dr. COX found that our specimens differ from WOOD's species among other things by being larger and possessing a greater number of spiral ridges. His final conclusion reads: 'The two species are undoubtedly distinct, but their apical whorls and apertures are similar, so that I think that they are congeneric.' I agree with this conclusion and consequently I have transferred BLOKLANDER's species to the genus *Phasianema*.

Our knowledge of *Phasianema* in the Pliocene of Western Europe can be summarized as follows.

Family Pyramidellidae

Genus *Phasianema*

1842, S. V. Wood, Ann. Mag. Nat. Hist., vol. 9, p. 535.

1929, Thiele, Handb. Syst. Weichtierk., vol. 1, p. 233.

Type species by monotypy: *Pb. sulcata* Wood, 1842.

Key to the species from the Pliocene of Western Europe:

- 1a. Altitude less than 5 mm, number of spiral ridges on the last whorl less than 16 2
 1b. Altitude up to $7\frac{1}{2}$ mm, about 20 spiral ridges on the last whorl 3. *zelandica*
 2a. Spiral ridges on the last whorl about 15 1. *sulcata*
 2b. About 8 — 10 spiral ridges on the last whorl 2. *woodi*

1. *Phasianema sulcata* Wood

- 1842 *Phasianema sulcata* S. V. Wood, Ann. Mag. Nat. Hist., vol. 9, p. 535, pl. 5 fig. 15.
 1848 *Fossarus sulcatus* var. *lineolatus* S. V. Wood, Mon. Crag Moll., vol. 1, p. 121, pl. 8, figs. 23a, 23b, 23aa.
 1878 *Fossarus sulcatus* Nyst, Ann. Mus. R. Hist. Nat. Belgique, vol. 3, atlas, pl. 6, figs. 20a, 20b, 20c.
 1882 *Fossarus sulcatus* var. *lineolata* Nyst, Op. cit., vol. 3, p. 91.
 1921 *Fossarus sulcatus* Harmer, Plioc. Moll., vol. 2, p. 670, pl. 53 fig. 35.
 Lectotype (here selected): the shell figured by WOOD, 1842, pl. 5 fig. 15.

Pliocene (Coralline Crag): Sutton; (Scaldisien): Antwerp.

2. *Phasianema woodi* nom. nov.

- 1848 *Fossarus sulcatus* S. V. Wood, Mon. Crag Moll., vol. 1, p. 121, pl. 8 figs. 23a, 23b.
 1921 *Fossarus lineolatus* Harmer, Plioc. Moll., vol. 2, p. 671, pl. 53 fig. 36.
 Holotype: the shell figured by WOOD, 1848, pl. 8 fig. 23a [= No. G. 72967 in the collection of the British Museum (Natural History)].
 Pliocene (Coralline Crag): Sutton.

3. *Phasianema zelandica* (Bloklander)

- 1949 *Amauropsis zelandica* Bloklander, Basteria, vol. 13, p. 37, figs. 1, 2.
 1953 *Acrybia zelandica* Van Benthem Jutting, Meded. Geol. Sticht. (N. S.), no. 7, table 2 (p. 31), and chart.
 Holotype figured by BLOKLANDER, 1949, fig. 1.
 Pliocene (Scaldisien): Oosterhout, and derivative in the Westerschelde, Netherlands.