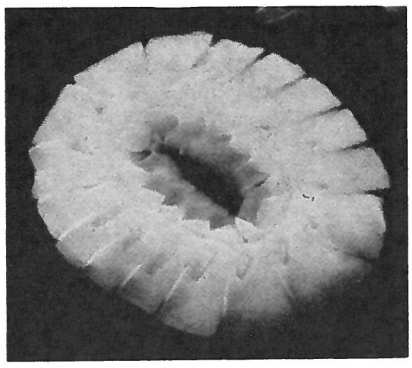
Biscutum magnum WIND & WISE, 1976



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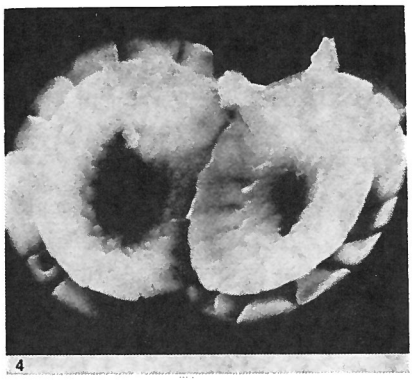

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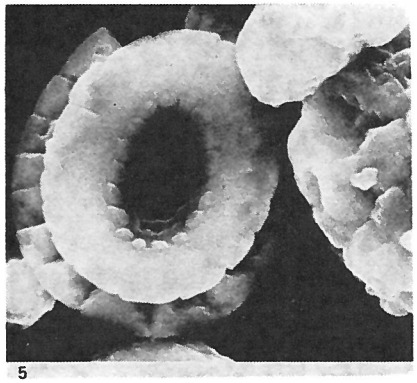

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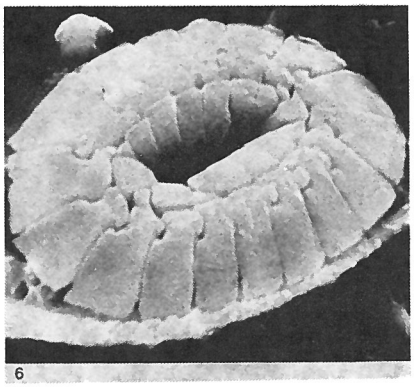

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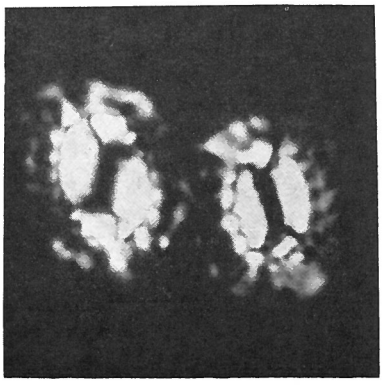
Figs. 2, 4, 5, 6 — *Biscutum magnum* n. sp. 2) Holotype USNM 239476 distal view, Sample 327A-12, CC, × 5800. 4) Paratype USNM 239473, proximal view of two attached coccoliths, Sample 327A-12, CC, × 4700. 5) Paratype USNM 239474, proximal view showing proximally-projecting inner extensions of distal shield, Sample 327A-13-2, 45 cm, × 5800. 6) Paratype USNM 239475, distal-lateral view of slightly overgrown specimen, Sample 327A-10-3, 14 cm, × 6000.



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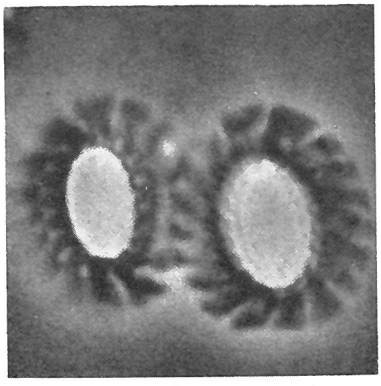

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Figs. 1, 2 — *Biscutum magnum* n. sp., paratype USNM 239489, crossed-polarized light and phase contrast, Sample 312A-12, CC, × 3700. (Polarizing directions for crossed-polarized light are parallel to the plate margin).

Description:

Diagnosis: Large form of *Biscutum* with shields constructed of about 17 elements surrounding a central area representing 20% to 30% of area of placolith.

Description: Distal shield larger than proximal. Each shield usually consists of 17 elements; the largest elements are situated along the long axis. Distal shield elements oriented slightly dextrally; proximal shield elements radial and nonimbricate. Imbrication of the distal shield elements forms broad dovetail extensions on the counterclock wise edge of each element; these are positioned over corresponding depressions on adjacent elements. These tabs are broadest (longest radial length) on the narrowest elements.

The central area is occupied by approximately 15 inwardly projecting elements; most of these elements give the appearance of being a continuation of distal rim elements; however, along the long axis, elements of the ends of the central area vary in shape and size, probably due to crowding. In well-preserved specimens, central area elements have pronounced outer thickening and centralmost area thinning. During early diagenesis, the thin central area is dissolved and the outer area becomes overgrown.

Size: holotype 8.4 μm; paratypes 8.1 μm to 9.0 μm.

Remarks:

The large size of this species exceeds that of all other species of *Biscutum* characterized by similar symmetry, with the exception of some specimens of *B. coronum*. The holotype of *B. castorum* BLACK (= *B. constans*) is 4.1 μm. The holotype of *B. testudinarium* BLACK (= *B. constans*) is 3.7 μm, and the holotype of *B. blacki* GARTNER (= *B. constans*) is 0.5 μm. Bukry (1969, p. 29) states that *B. testudinarium* BLACK has a maximum diameter of 6.6 μm, but according to the micrograph dimensions and magnifications given, his specimens range in size from 4.5 to 7.7 μm.

Coccolithites polycingulatus REINHARDT (1965, p. 39-40, pl. 3, fig. 4) has a central area similar to that of *B. magnum*, but has a size range of 5 to 7 μm. Distal shield element tabs are radically different in construction, being more similar in their design to species of *Seribiscutum*.

Cribrosphaerella tectiforma REINHARDT (1964, p. 758, pl. 2, fig. 4) has a maximum diameter of 6 μm.

Type level:

Maastrichtian.

Type locality:

Falkland Plateau. DSDP Leg 36. Sample 327A-12, CC.

Depository:

U.S. National Museum, Washington D.C.

Holotype: USNM 239476; paratypes: USNM 239473-239475, 239489, 239512, 239527.

Author:

Wise S. W. and Wind F. H., 1976, p. 298; pl. 20, figs. 4-6; pl. 21, fig. 2; pl. 24, figs. 1, 2; pl. 30, fig. 1; pl. 50, fig. 1.

Reference:

Mesozoic and Cenozoic calcareous nannofossils recovered by DSDP Leg 36 drilling on the Falkland Plateau, southwest Atlantic sector of the southern ocean. Initial Reports of the Deep Sea Drilling Project, vol. 36, pp. 269-491, 89 pls., 3 figs., 7 tbs.