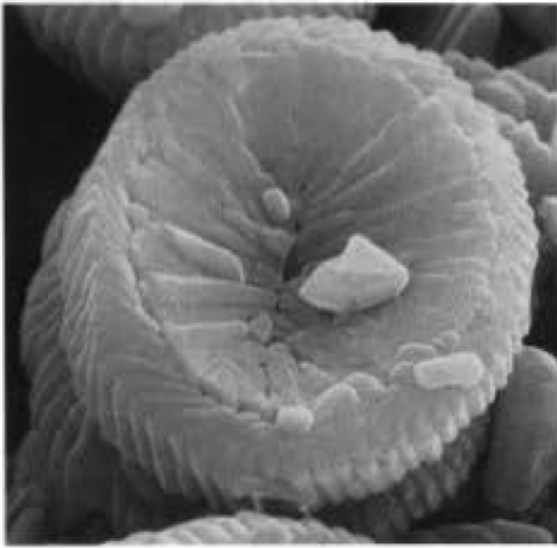


12. *Bicolumnus ovatus* Wei & Wise (1990)



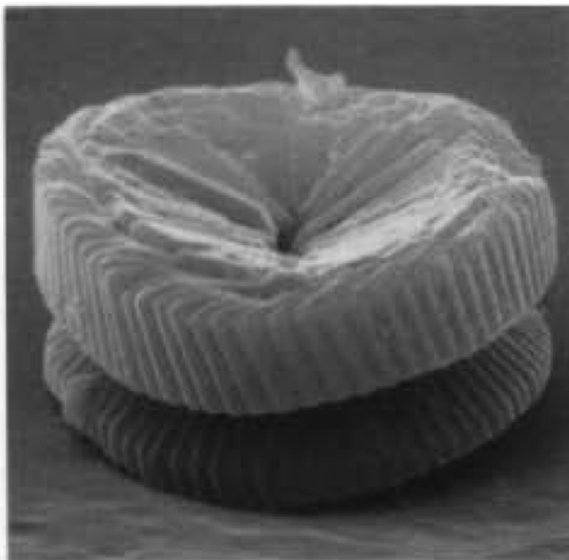
1



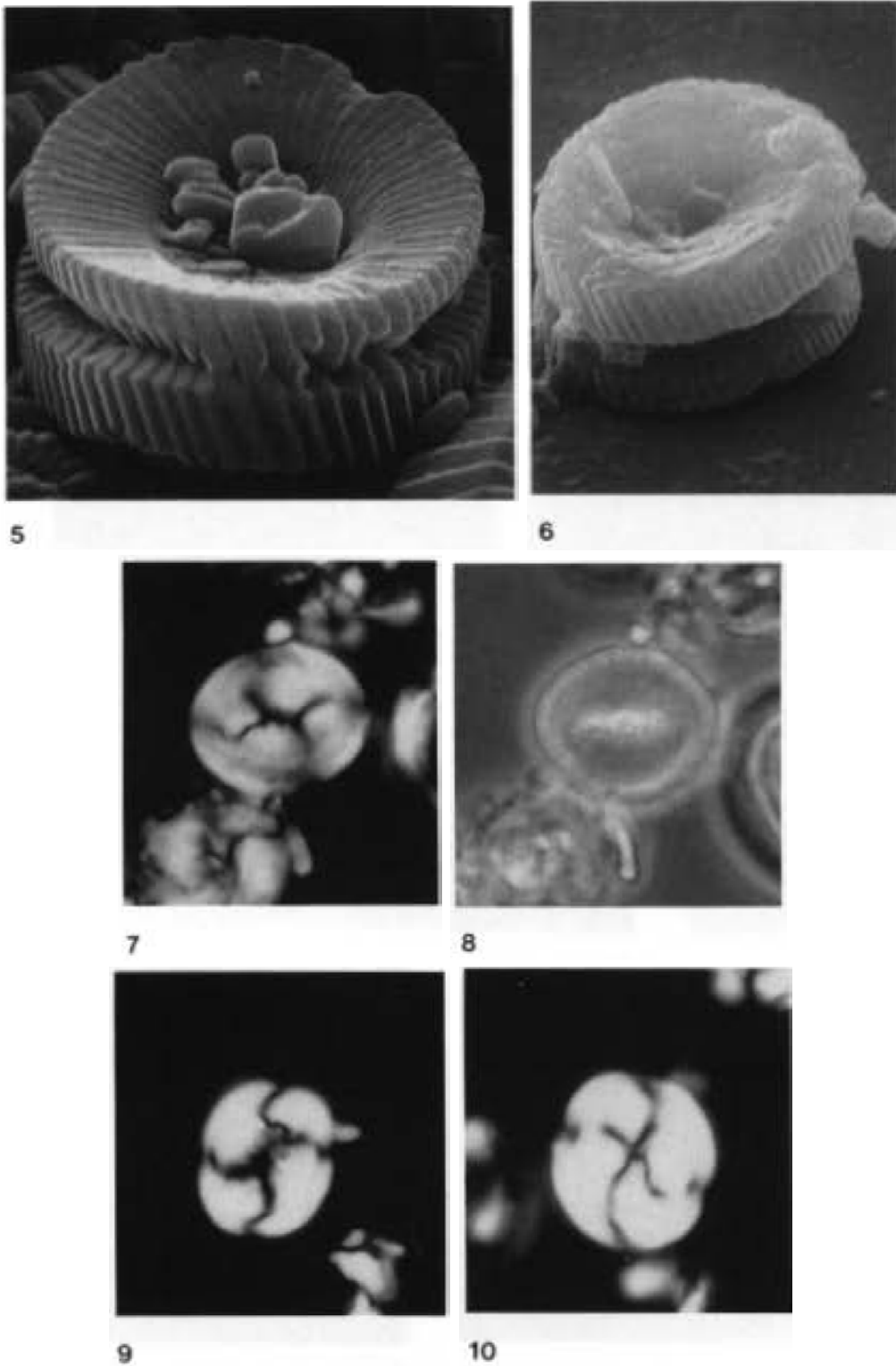
2



3



4



Pl. 1, figs 1-10

Plate 1. *Bicolumnus ovatus* Wei & Wise n. gen., n. sp.

Fig. 1. Holotype, SEM, distal view, x 8,000, Sample 113-689B-15H-3, 131-133 cm.

Figs 2-3. Same specimen (2, distal view, 3, side view), isotype, SEM. x9,500, Sample 113-689B-14H-6, 130-131 cm.

Fig. 4. Isotypes, SEM, oblique and distal view, x8,000, Sample 113-689B-14H-6, 130-132 cm.

Fig. 5. Isotype, SEM, Oblique and proximal view, x9,000, Sample 113-689B-15H-3, 131-133 cm.

Fig. 6. Isotype, SEM, Oblique and proximal view, x9,000, Sample 516F-15-5, 30-31 cm.

Figs. 7-8. Same specimen (7, cross-polarized; 8, phase contrast), isotype, x3,000, Sample 113-689B-15H-2, 131-133 cm.

Fig. 9. Isotype, cross-polarized, x3,500, Sample 113-689B-15H-4, 110-112 cm.

Fig. 10. Isotype, cross-polarized, x3,500, Sample 516F-40-2, 105-106 cm.

Reticulofenestra placomorpha (Kamptner) Stradner and Edwards, 1968, p. 22, pl. 22, fig. 3.

Cyclolithella sp., Martini, 1976, p. 406, pl. 5, figs. 1, 2.

Description: A species of *Bicolumnus* with oval shape in plan view. Laths in the distal shield incline to the center and cover the central area, leaving no central opening. The proximal shield elements also incline to the center, but no additional layer of laths covers the proximal shield. Both shields have the same length and width. Each shield consists of 60-70 elements (holotype = 67).

Remarks: *Bicolumnus ovatus* differs from *Reticulofenestra bisecta* and *Reticulofenestra scrippsae* in having much stronger birefringence because of its two column-like shields, and having two shields forming two opposite "funnels." *Bicolumnus ovatus* differs from species of *Pyrocyclus* (i.e., *P. hermosus*, *P. inversus*, and *P. orangensis*) in having two shields instead of one, and in having no central opening.

Occurrence: Rare to few in upper Eocene and Oligocene material from Maud Rise. Martini (1976, p. 407) figured this species under *Cyclolithella* sp. from the upper Eocene sediment of the Central Pacific Ocean. In addition, rare specimens have been observed in the upper Eocene-Oligocene sediment from Rio Grande Rise and Falkland Plateau in the South Atlantic (Wei, unpubl. data).

Size: Holotype: 6.5 μm x 5 μm ; isotype: 5.5-7 μm x 4.5-5.5 μm .

Holotype: Plate 1, Figure 1.

Isotypes: Plate 1, Figures 2-10.

Type locality: ODP Sample 113-689B-15H-3, 131-132 cm.

Wei, W. & Wise, S. W., Jr., 1990. Middle Eocene to Pleistocene calcareous nannofossils recovered by Ocean Drilling Program Leg 113 in the Weddell Sea. *Proceedings of the Ocean Drilling Program, Scientific Results*, **113**: 639-666.