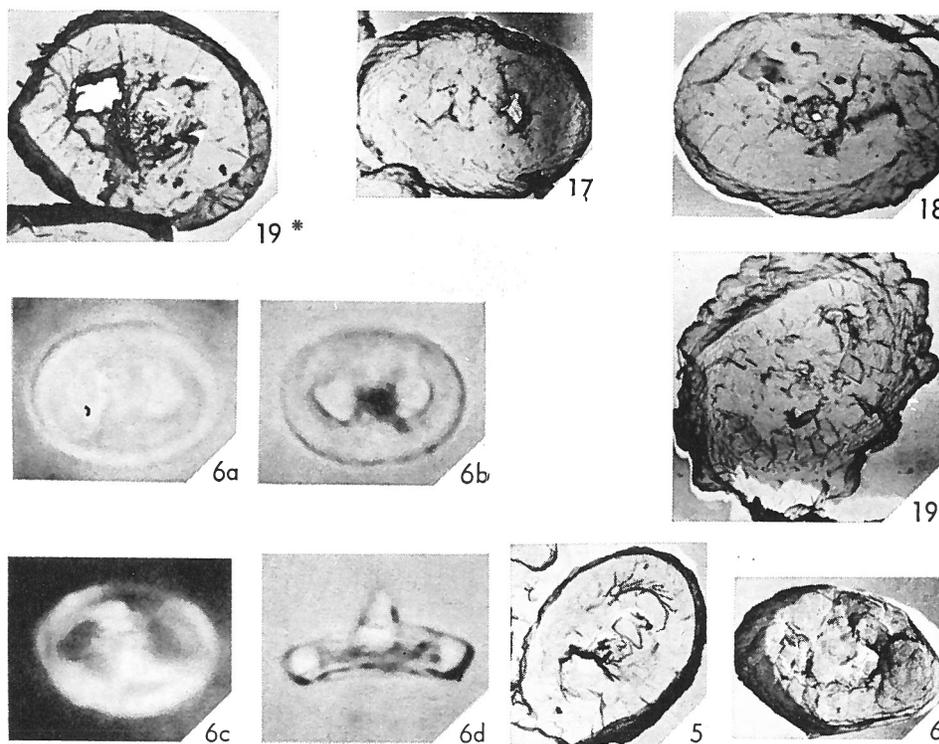


Zygodiscus sisyphus GARTNER, 1968



FIGS. 19*, 17-19, 6a-d, 5, 6 — *Zygodiscus sisyphus* GARTNER, n. sp., specimens from Taylor Marl (19*) and Austin Chalk of Texas; 19*) distal view, electron micrograph, x 5000; 17-19) proximal (17, 19) and distal (18) views, electron micrographs, x 5000; 6a-d) distal (6a-c) and side (6d) views, light micrographs, phase contrast (6a), transmitted light (6b-d), cross-polarized light (6c), x 2500; 5, 6) distal and proximal views, electron micrographs, x 5000.

Description:

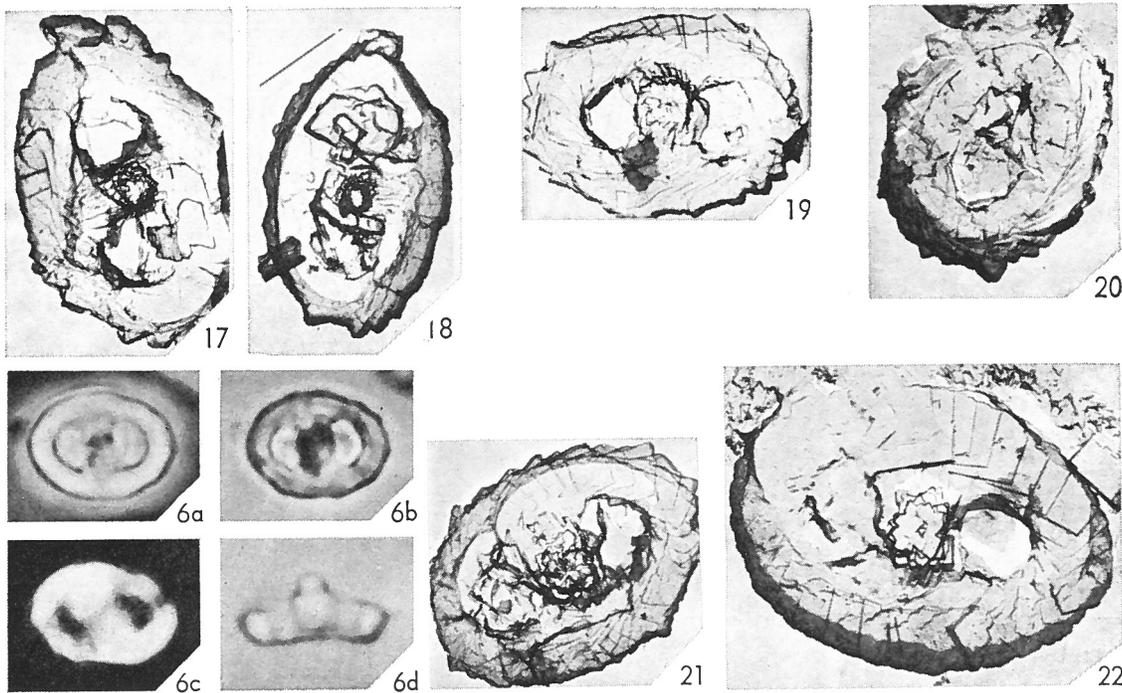
A variably shaped species of *Zygodiscus* with long elliptical outline and slender stem.

Description: The elliptical disc is constructed of 30 to 35 dextrally imbricate elements that form a low, expanding distal rim. The crossbar extending across the elliptical central area is surmounted by a short stem that is constructed of radially arranged calcite rhombs and has discontinuous longitudinal grooves on the surface.

Maximum diameter: 5.5-10.5 μ .

Remarks:

This species contains a hopeless diversity of forms, some with a smooth periphery and others with a strongly serrate outline. In some specimens the stem has an axial canal, whereas others lack such a canal.



FIGS. 17, 18, 19–22, 6a–d — *Zygodiscus sisyphus* GARTNER, n. sp., specimens from Austin Chalk (17, 18) and Eagle Ford Shale of Texas; 17, 18) distal views, electron micrographs, x 5000; 19–22) distal (19, 21, 22) and proximal (20) views, electron micrographs, x 5000; 6a–d) distal (6a–c) and side (6d) views, light micrographs, phase contrast (6a), transmitted light (6b, d), cross-polarized light (6c), x 2500.

All have about the same number of elements in the disc and have a single, though complex, crossbar to which a stem is attached.

The species is similar to *Zygodiscus lacunatus* GARTNER, n. sp., but differs in having a smaller number of elements that are larger and in having a more delicate stem. The two species are easily distinguished in electron micrographs and light micrographs. Between crossed nicols *Z. lacunatus* is divided into 4 unequal parts by the sharp, nearly radial arms of the pseudointerference figure, whereas the arms of the pseudointerference figure in *Z. sisyphus* are diffuse and somewhat indistinct.

Type level:

Upper Cretaceous (Eaglefordian. Other occurrence: Austinian, Tayloran).

Type locality:

Eagle Ford Shale of Texas, U.S.A.; sample 2.

Depository:

Department of Geology, University of Illinois. Holotype: UI-H-2573 (fig. 22).

Author:

Gartner S., Jr., 1969, p. 34; pl. 14, fig. 19; pl. 18, figs. 17–19; pl. 21, figs. 6a–d; pl. 22, figs. 5, 6; pl. 23, figs. 17, 18; pl. 25, figs. 19–22; pl. 26, figs. 6a–d.

Reference:

Coccoliths and related calcareous nannofossils from Upper Cretaceous deposits of Texas and Arkansas. Univ. Kansas Paleont. Contr., Serial n^o 48, Protista, Art. 1, pp. 1–56, pls. 1–28, text-figs. 1–5.