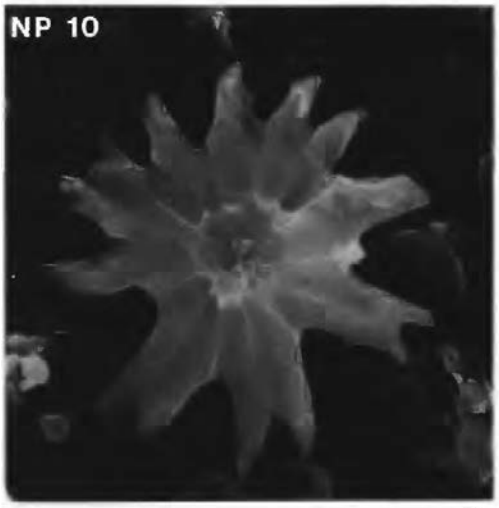
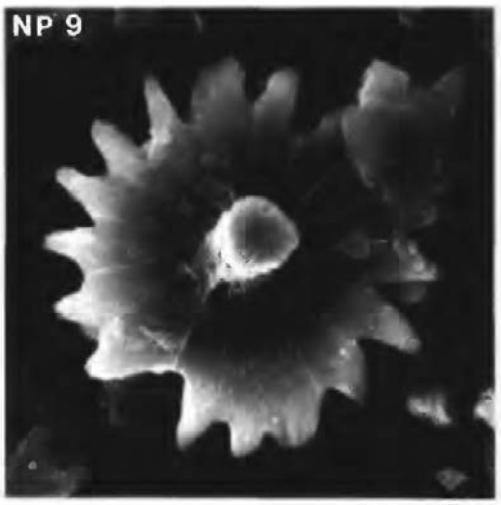
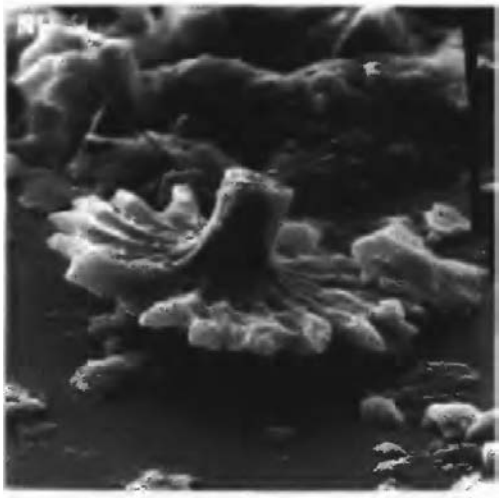
25. Discoaster anartios Bybell & Self-Trail (1995)



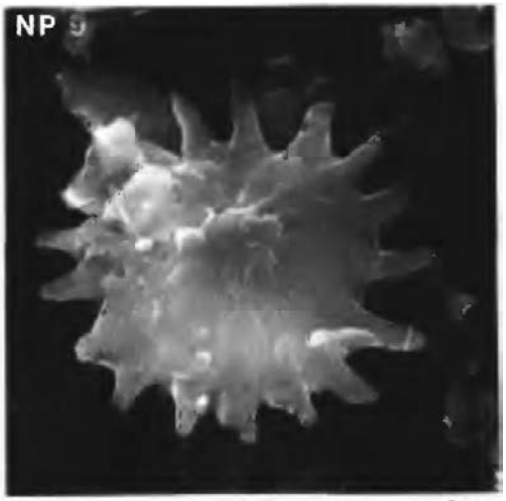
4



5a

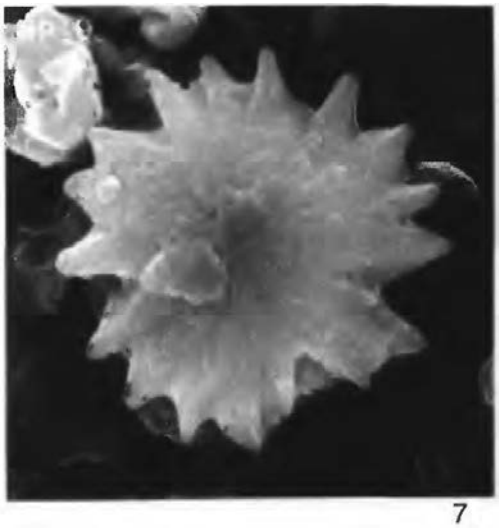


5b

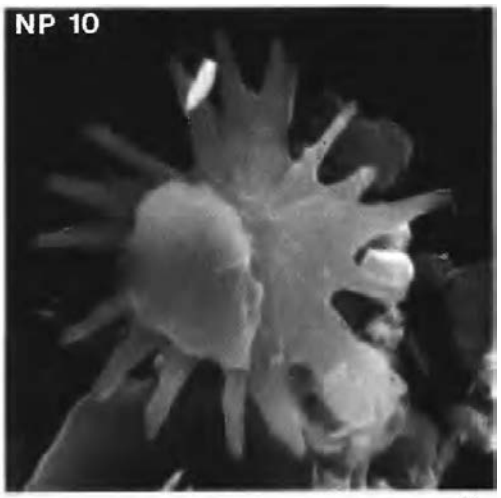


6a

6b

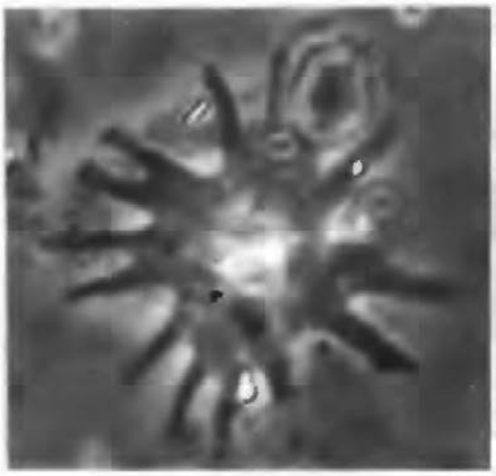


7

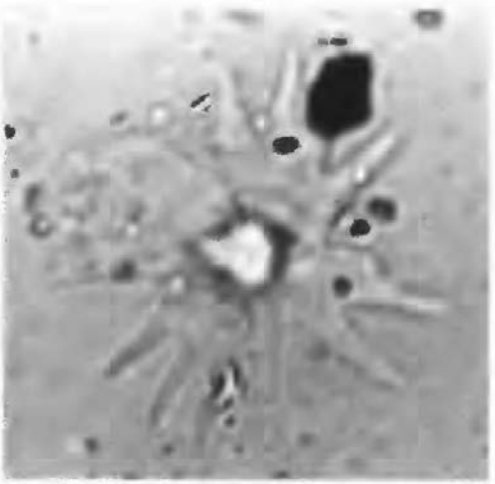


8

Pl. 5, figs 4-8

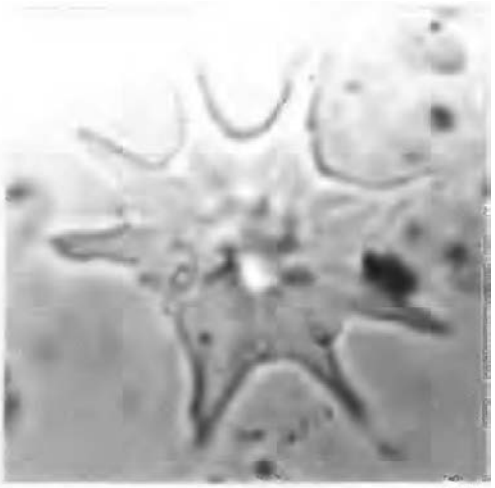


21a

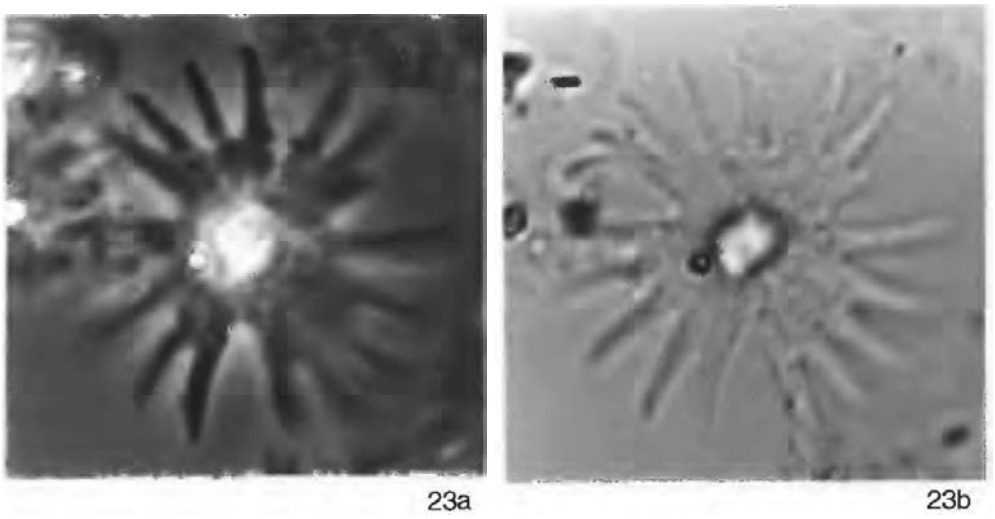


21b

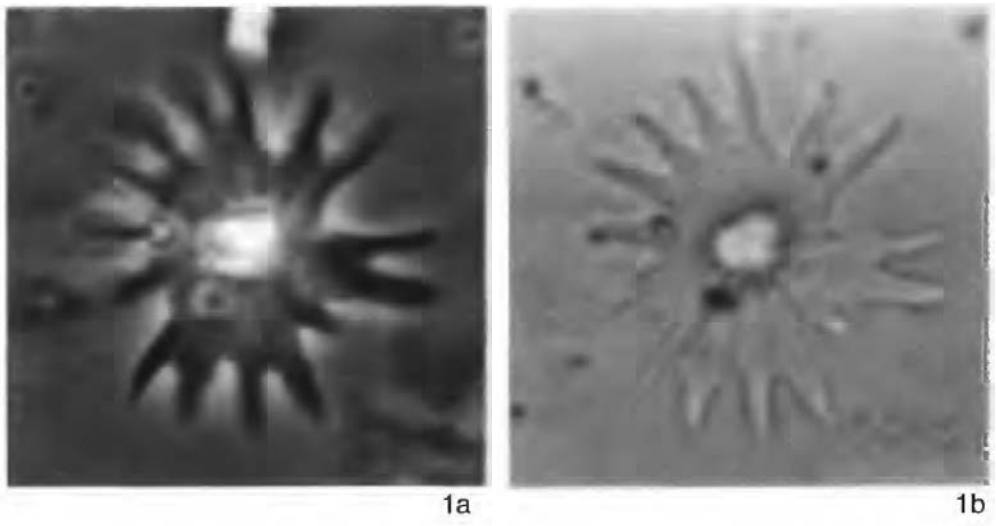
22a



22b



Pl. 32, figs 21-23



Pl. 33, fig. 1

Diagnosis: *A* fairly large discoaster with 15-20 irregularly shaped curving rays and a tall narrow stem on one side.

Description: *Discoaster anartios* n. sp. ranges from 13-18 μm in size. One side (side 1) is slightly concave and has a tall narrow stem (pl. 5, figs. 4, 5). There is no distinct stem on the opposite, slightly convex side (side 2, pl. 5, figs. 6-8), although there is a central area that is raised somewhat above the level of the rays (pl. 5, fig. 6b). The rays curve sinistrally on the side without a stem and curve dextrally on the concave side with a stem. The most diagnostic feature for *D. anartios* n. sp. is the irregularity in the shape of the rays. This irregularity is the result of a large variation both in ray width and in the amount of indentation between each ray; the latter may be partially a result of dissolution. On an individual specimen, the distance between rays can vary considerably (pl. 5, fig. 4). On well-preserved specimens, the sutures on the

concave side (side 1) are thickened slightly (pl. 5, fig. 5b). On the convex side (side 2), the sutures are depressed (pl. 5, fig. 7). The outer third of the rays are free, and on well-preserved specimens the rays terminate in fairly sharp points.

Remarks: *Discoaster anartios* n. sp. most closely resembles *D. araneus* Bukry, 1971, which also has irregularly shaped rays and a prominent stem. However, *D. araneus* has fewer rays (7-10), and one-third to two-thirds of the total ray length is free.

Holotype: Plate 5, figures 5a, 5b, SEM photomicrograph numbers 447-1A, 447-1B.

Paratypes: Plate 5, figures 4, 8, SEM photomicrograph numbers 464-23, 464-15.

Type locality: Holotype: New Jersey, Clayton core, 307.2 ft, Zone NP 9, Manasquan Formation. Paratypes: New Jersey, Clayton core, 298.5 ft, Zone NP 10, Manasquan Formation.

Occurrence: Late Paleocene into early Eocene. This species was observed only in the upper part of Zone NP 9 and the lower part of Zone NP 10 in New Jersey.

Depository: The original scanning electron photomicrographs and negatives are stored at the U.S. Geological Survey in Reston, Va.

Bybell, L. & Self-Trail, J.M., 1995. Evolutionary, Biostratigraphic, and Taxonomic Study of Calcareous Nannofossils from a Continuous Paleocene-Eocene Boundary Section in New Jersey. *U.S. Geological Survey Professional Paper*, **1554:** 36pp.