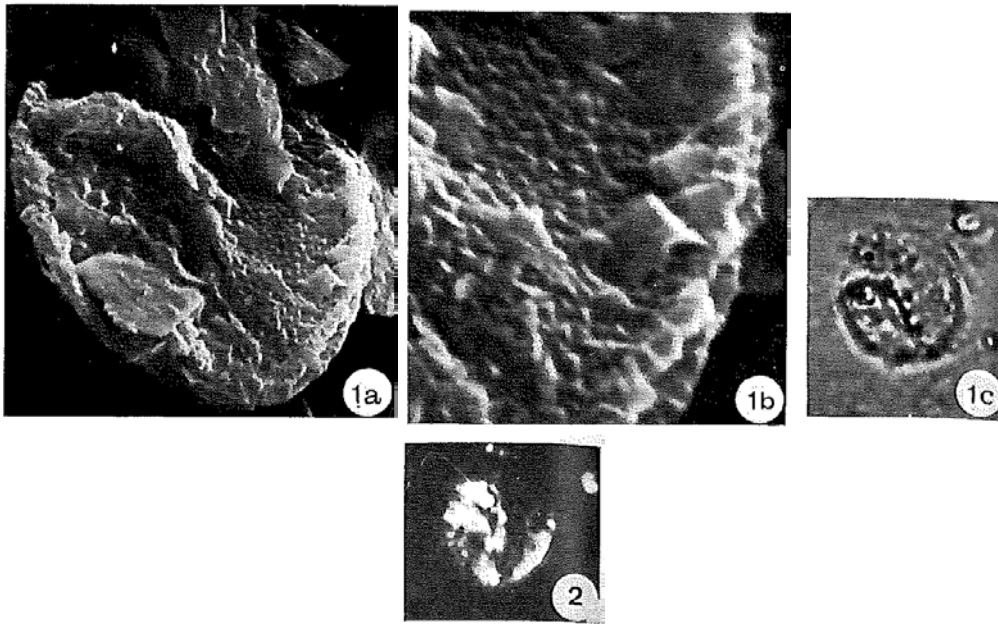


15. *Archaeopontosphaera primitiva* Jafar (1983)



Figs 11-1, 11-2

Holotype: Figs. 11-1a-c; negative number: 65198/3553.

Paratype: Figs. 11-10a-b; coordinates: 77.1/16.2 (slide: Geissau).

Type level: "Kössener Schichten", Rhaetian = *Ch. marshi* ammonite zone (sample: Geissau).

Type locality: "Kössener Schichten", Geissau, Austria.

Specific description: The nannofossils exhibit broadly elliptical to semicircular outlines.

Under crossed nicols, only a thin marginal zone remains bright. Certain ridge-like structures observed on a few specimens as illustrated by the holotype and the paratype, and other foreign particles remain also bright. Due to the presence of ridge-like features, these nannofossils can be readily mistaken for spore grains, but the ultrastructural evidence suggests that the basic morphology is produced by closely stacked calcite rhombohedra. Under the electron microscope, the holotype shows a distinct marginal zone consisting of double rows of slightly larger calcite rhombohedra displaying a different axis orientation than the one in the central area. The tiny calcite rhombohedra occupying the central part show close geometric packing with a uniform c-axis orientation perpendicular to the plane of the nannofossil. It is on account of this feature that the central part remains dark, while the marginal zone shows birefringence under crossed nicols. Since only one view of the specimen was available for observation the double nature of the marginal zone makes me wonder if this nannofossil consists of two closely appressed shields.

Dimensions: Major diameter: 9.0 microns.

Remarks: The affinity of this species with known nannofossils is rather difficult to establish. However, some resemblance is indicated with an elliptical nannofossil of much larger size (35 microns) described as *Coccolithites impletus* n. sp., from the Silurian-Devonian of the Sahara by DEFLANDRE (1970, p. 2920, Pl. I, Figs. 7-9). It is quite likely that this form did already exist in Paleozoic but DEFLANDRE'S material needs re-examination under the electron microscope. This form was only rarely recorded and the oldest sample to yield this species was of early Carnian age (= "Cassianer Schichten", Dolomites).

Jafar, S.A., 1983. Significance of Late Triassic calcareous nanoplankton from Austria and Southern Germany. *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen*, **166(2)**: 218-259.