

2. *Alisphaera Heimdal (1973) emend. Kleijne et al. (2002)*

References: Heimdal (1973, p. 34; 1993, p. 192); Jordan & Chamberlain (1993, p. 377, as *Alisphaera Heimdal emend.*).

Generitype: *Alisphaera ordinata* (Kamptner 1941) Heimdal 1973.

Coccosphere monothecate. There are no circumflagellar coccoliths of deviating morphology. The elliptical coccoliths consist of a short tube, a proximal flange, and a distal flange, both flanges being asymmetrical in outline. The coccoliths are arranged in approximately regular meridian rows, with the wider part of each flange directed toward the apical pole. The narrow elongate side of the distal flange usually bears regularly placed nodules along the inner periphery. Coccoliths are either monomorphic, in which case an additional structure is present on the wide elongate side of the distal flange in all coccoliths, or dimorphic, when only some of the coccoliths bear such a structure. Dimorphism may also be reflected in the presence or absence of an additional tooth-like protrusion on the distal flange extension.

Part of the coccolith tube consists of interlocking elements, where the D- and P-crystal units alternate. The D-units form the distal flange, the nodules, and the upper part of the tube. The P-units form the lower part of the tube and the proximal flange. The central area is partly closed by centripetal, plate-like extensions of the P-elements, and an additional cycle of plate-like elements may cover the remaining part. If the additional elements are absent, the central area has a median longitudinal slit, which takes the form of a characteristic S-shaped fissure; this may have jagged zigzag borders.

Kleijne, A., Jordan, R.W., Heimdal, B.R., Samtleben, C., Chamberlain, A.H.L. & Cros, L. (2002). Five new species of the coccolithophorid genus *Alisphaera* (Haptophyta), with notes on their distribution, coccolith structure and taxonomy. *Phycologia*, **40(6)**: 583-601.