
Description:

Testa coccolithica subsphaerica, dimorpha, longitudine 5.5-8.0 μm, latitudine 5.5-6.0 μm, area flagellaris ad 3 μm lata. Coccolithi ordinarii calyptrolithi, parte proximali anulo fundi tubum se in exteriorem partem dilatantem ferente constante; pars centralis alte convexa, in basi anulis tubi crystallorum distantibus circumdata; longitudine 1.3-2.3 μm, longitudine: latitudine 1.3-1.4, altitudine summam 0.6-1.2 μm. Anulus proximalis, tubus parsque centralis una microcrystallorum lamina ordine hexagonalis usitato formata consistunt, crystallorum anulo secundo a margine tubi distante cum foraminum serie regulari, facilime e distante visu. Coccolithi stomatales zygozolithi cum ponte alto acuminato axi longo coccolithico directo, longitudine 1.1-1.6 μm, altitudine summam 1.5-1.8 μm.

Coccolith case subspherical, dimorphic, length 5.5-8.0 μm, breadth 5.5-6.0 μm, flagellar area about 3.0 μm wide. Ordinary coccoliths calyptroliths, proximal part consisting of a basal ring which bears a tube widening distally; central part highly vaulted, surrounded at base by the distal crystal rings of the tube; length 1.3-2.3 μm, length/breadth ratio 1.3-1.4, total height 0.6-1.2 μm. Proximal ring, tube and central part formed by a single layer of microcrystals arranged in the usual hexagonal pattern, second crystal ring from distal margin of tube with a regular row of holes, most easily seen in distal view. Stomatal coccoliths zygoliths with high, pointed bridge normal to long axis of coccolith, length 1.1-1.6 μm, total height 1.5-1.8 μm.
Remarks:

The generic name *Zygosphaera* was introduced by Kamptner (1936, p. 244) in a paper in which no species was named. In 1937 (p. 305) he included three species in the genus without choosing any type species. In 1963 (p. 194) Loeblich and Tappan designated *Z. bellenica* as the type. Since this species shows a coccolith microstructure distinct from that of *Zygosphaera* and all other known genera, and has therefore been transferred to a new genus, *Laminolithus*, in the present paper (p. 8), *Z. divergens* is designated as the new type of *Zygosphaera*.

According to the original description (Kamptner 1937, p. 305) the genus *Zygosphaera* is characterized by having disciform ordinary holococcoliths and zygoform stomatal holococcoliths. Halldal and Markali (1955) and Okada and McIntyre (1977) have also described the ordinary coccoliths in this species as disciform holococcoliths. After close examination of micrographs of specimens identified as *Z. divergens* by the above authors and of specimens in the present material we find, however, that the ordinary coccoliths are better characterized as calyptroliths, and that the species has calyproform ordinary coccoliths and zygoform stomatal coccoliths unlike any other genus known to us. Until more species with this combination of coccoliths have been recorded, it seems advisable not to establish a new genus.

Type level:

Recent.

Type locality:

Norwegian Sea (66° N, 2° E).

Depository:

Central Institute of Industrial Research, Oslo.
Lectotype: Negative CIR, 1474A (fig. 1, pl. 2 in Halldal & Markali 1955).

Author:


Reference: