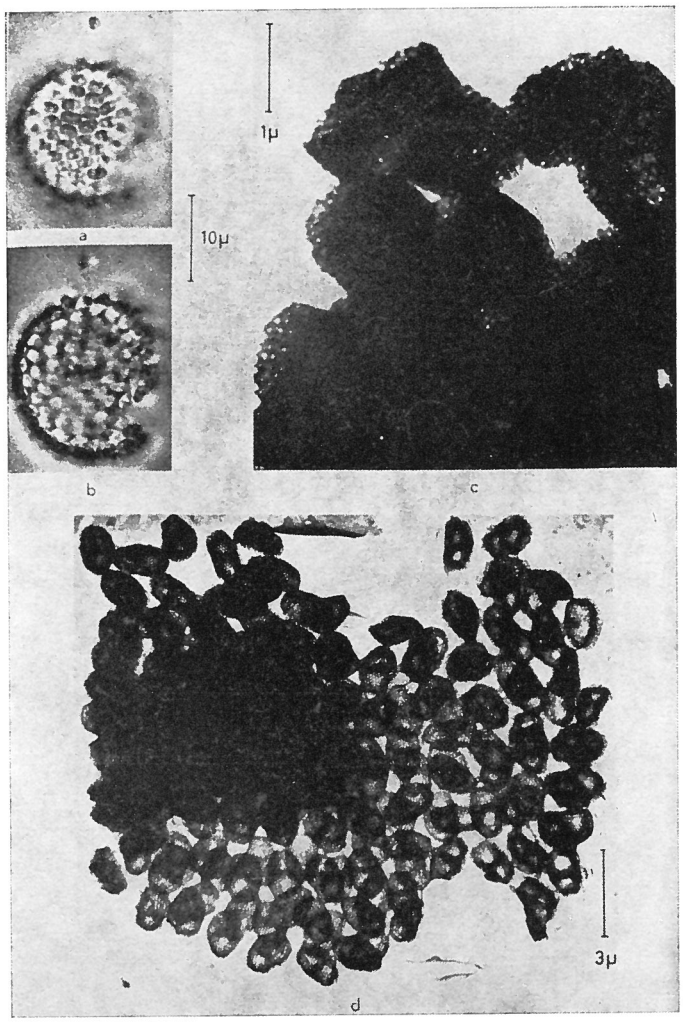
Corisphaera hasleana GAARDER, 1962



Figs. a-d — *Corisphaera hasleana* n. sp. a, b) Photomicrographs of slightly defect cell. c) Detached coccoliths. d) Disintegrated cell, decalcified. (From the Equatorial Pacific.).

Description:

Diagnosis: Observations in the light microscope: Crust ellipsoidal, length 17-19 µ, breadth 15-17 µ; ordinary coccoliths touching each other, normal-elliptical zigoliths, length about 2 µ, breadth about 1.5 µ, bridge only slightly elevated above tube; stomatal coccoliths with somewhat higher bridge, total height about 1.5 µ, one flagellum (haptonema?) observed.
Observations in the electron microscope: Coccoliths of holococcolith type; microcrystals (apparently) regular calcite rhombohedrons, edge length about 600 Å; basal tube of about 8 coaxial

rings of microcrystals which form a regular network continued in a slightly vaulted roof; reinforcement in a « bridge » normal to long axis of coccolith; stomatal coccoliths of similar construction with somewhat higher bridge.
Per microscopum ordinarium observatum: Testa ellipsoidea, longa 17-19 μ, lata 15-17 μ; coccolithi ordinarii zygolithi, circa 2 μ longi, circa 1.5 μ lati, jugum paulum supra tubulum basis ascensum; jugum coccolithorum oris eorum altitudinem ad circa 1.5 μ augens; unum flagellum (haptonema?) observatum.
Per microscopum electronicum observatum: Coccolithi holococcolithi; microcrystalli rhombohedrae ordinariae calciti, margo circa 600 Å longa; tubulus basis circa octo anulis crystallinis formatus, tectum paulum curvum, crystalli in tubo tectoque reticulum formantes; jugum tecto superpositum.

Remarks:

The structure of the coccoliths resembles that found in *Sphaerocalyptra papillifera* (HALLDAL) DEFL. (Halldal and Markali 1954), differing mainly in the occurrence of a bridge, presumably superposed on the roof network; the electron micrographs do not give sufficient evidence as to whether this bridge extends downwards in the coccoliths or not. It also shows resemblance to the structure of the coccoliths of *Calyptrosphaera* (*Syracosphaera*) *catillifera* (KPT.) n. comb. (p. 36) where only the central part of the roof has a superposition of microcrystals.
The species differs from *Corisphaera gracilis* KPT. in its greater dimensions and in having a bridge superposed on a compact coccolith roof instead of perforations at both narrow ends. It is questionable whether these coccoliths should be regarded as zygoliths or calyptroliths. However, until more material is available it seems most reasonable to use the generic name *Corisphaera*.
In material from the Equatorial Pacific studied by Hasle a few specimens (not recorded in Hasle's lists) belonging to the genus *Corisphaera* occurred, but they were not identical with any earlier known species. A specimen slightly cracked under the cover glass was photographed (pl. V, a, b) and afterwards examined under the electron microscope. In photo a some of the ordinary coccoliths show a distinct « bridge » normal to the long axis of the elliptical coccoliths and in b some coccoliths surrounding the flagellar area obviously exhibit a somewhat higher bridge.

Type level:

Recent.

Type locality:

Equatorial Pacific Ocean.

Depository:

Not given.

Author:

Gaarder K.R., 1962, pp. 42, pl. 5, figs. a-d.

Reference:

Electron Microscope Studies on Holococcolithophorids. Nytt Mag. Bot., vol. 10, pp. 35-52, pls. 1-12, 2 text-figs.