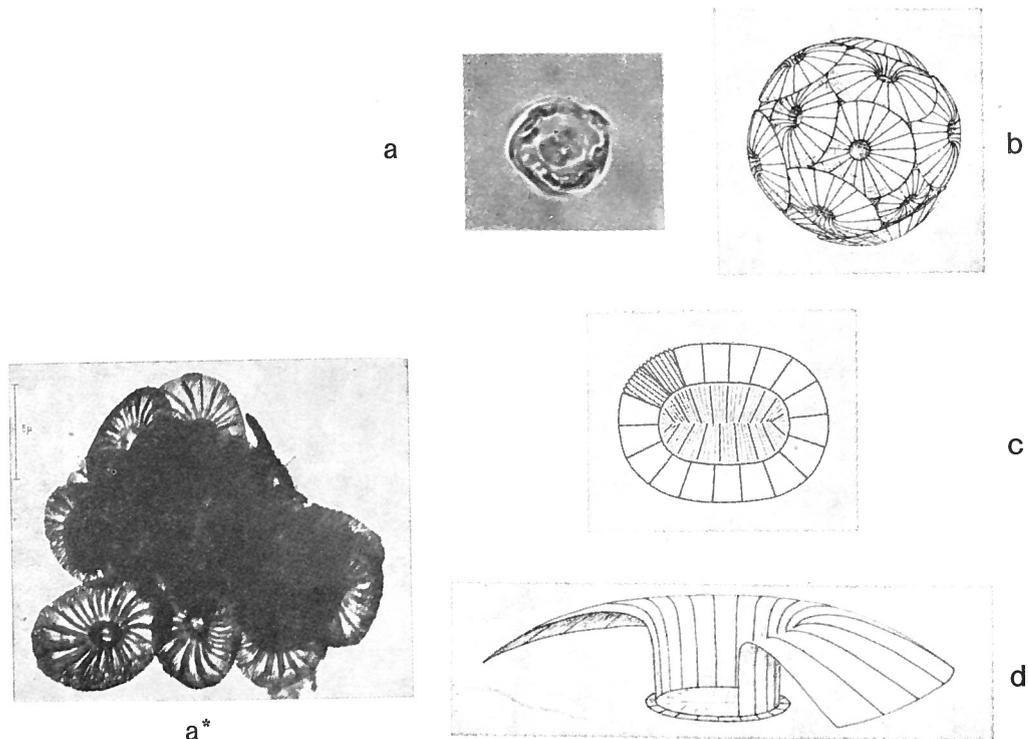


*Umbellosphaera
tenuis*

***Umbellosphaera tenuis* (KAMPTNER) emend. PAASCHE, 1955**

1937, *Coccolithus tenuis* KAMPTNER, p. 311; pl. 17, figs. 41, 42a-c. Arch. Protistenk, vol. 89.



Figs. a, b, c, d, a* — *Umbellosphaera tenuis* n. sp. a) Microphotograph 1000 \times , focused at middle level. b) Sketch of coccolithophorid. c) Sketch of micro-coccolith from above. Micro-structure suggested in central area and two peripheral sections. d) Sketch of macro-coccolith; a number of sections in upper part removed. a*) Electron micrographs. Disintegrated coccolithophorid.

Description:

Diameter of protoplast 7-10 μ ; of complete organism 10-16 μ . Outer surface rather smooth, due to partly overlapping, curved upper brims of macro-coccoliths. Micro-coccolith, seen from above, elliptical (ratio 1,5), its main axis 2.6-3 μ . Lower disk elliptical (ratio 1.6) with main axis 1.6-1.8 μ and width of brim 0.1 μ or less. Central area divided into 0.1 μ -wide, approximately rectangular, delicately striated ribs protruding from the periphery and meeting half-way, forming a mainly transversal structure. Upper part presumably very low; its brim 0.5-0.6 μ in width. Number of segments about twenty. Micro-structure present of fine parallel radial elements. Entire coccolith very fragile in appearance.

Macro-coccolith slightly elliptical when seen from above (ratio about 1.25). Main axis ranging from 4.4 to 8.1 μ (average length 6 μ). Lower disk almost circular.

Diameter 2 μ ; width of periphery 0.2 μ . Structure of central area as described above for macro-coccolith. Upper part broadly funnel-shaped, height never exceeding one fourth of its diameter. Tubular part gradually widening, passing into the convex, umbrella-like outer brim. Radial stripes about twenty-five, straight or slightly curved, often irregular, and sometimes disappearing before reaching the edge. Micro-structure very coarse, made up of more or less parallel stripes, often running at angles to the radii, their ends protruding at the edge of the coccolith.

Remarks:

The two species of the new genus *Umbellosphaera*, *U. irregularis* and *U. tenuis*, evidently are closely related. The morphological features of the funnel-shaped upper parts of the macro-coccoliths are the only significant marks of distinction. In the light microscope, the peculiarities in shape of these coccoliths, so distinctive to the exterior appearance of the coccolithophorid as a whole, are recognized readily. In the electron microscope, the much coarser and more irregular micro-structure of *U. tenuis* may serve as a distinction from *U. irregularis*.

Type level:

Recent.

Type locality:

Sample from the Gulf Stream (38° N, 70° W), collected on November 11, 1953.

Depository:

Not given.

Author:

Paasche E. in Paasche E. & Markali J., 1955, p. 96; pls. 1, 2.

Reference:

On Two Species of *Umbellosphaera*, a New Marine Coccolithophorid Genus. *Nytt Magasin for Botanikk*, vol. 4, pp. 95-100, 6 pls.