

**Tremalithus barnesae** BLACK, 1959

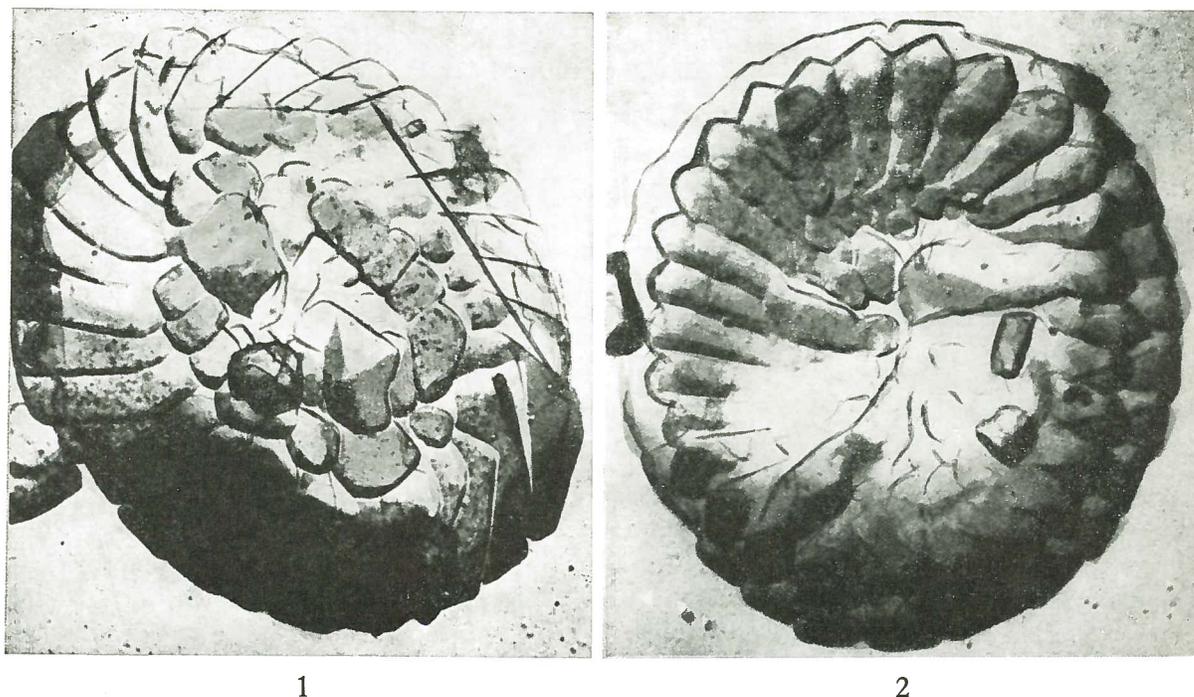


FIG. 1 — *Tremalithus barnesae* sp. nov., external view. *Holaster planus* zone (Turonian), Weston Colville, Cambridgeshire. Direct print x 15,000.

FIG. 2 — *Tremalithus barnesae* sp. nov., internal view of holotype. *Holaster planus* zone (Turonian), Weston Colville, Cambridgeshire. Plate 3068, direct print x 15,000.

**Description:**

Diagnosis — *Tremalithus* with two nearly circular discs, one slightly smaller than the other, and each consisting of 28 rays (exceptionally 27 or 29). Rays of the smaller disc gently curved, filling the centre, and bluntly pointed at the distal end. Rays of the larger disc not reaching the centre, but radiating from an oval central shield, and squarely truncate at their distal ends.

Dimensions of Holotype — 5.5 microns  $\times$  4.8 microns.

**Remarks:**

Specimens of this species are most easily recognized when lying so that the internal surface is exposed to view, as in fig. 2. In this view, the serrated outline of the smaller disc is seen lying just within the smoother margin of the larger disc. With replicas of suitable density, the continuation of the rays of the larger disc may be traced beneath those of the smaller disc, which they cross obliquely. The rays of the external disc slope steeply towards the circumference, thus giving the central part of the coccolith a substantial elevation.

**Type level:**

Extremely abundant in the soft chalk of the *Holaster planus* zone in Cambridgeshire and Essex; occasional specimens seen in the Upper Cenomanian and in the Lower Senonian.

**Type locality:**

Weston Colville, Cambridgeshire (Great Britain).

**Depository:**

Collection of electron micrographs at the Sedgwick Museum, Cambridge. Holotype n° 3068.

**Author:**

Black M. in Black M. and Barnes B., 1959, p. 325; pl. 9, figs. 1, 2.

**Reference:**

The structure of Coccoliths from the English Chalk. Geol. Mag., vol. 96, n° 5, pp. 321-328, pls. 8-12.

**Revised description:**

(by the Author - type species of *Colvillea* BLACK, 1964).

Coccoliths imperforate with two broadly elliptical or nearly circular shields, one slightly smaller than the other, and each consisting of 28 rays (exceptionally 27 or 29). Rays of the smaller shield gently curved, filling the centre, in contact for their whole length but not overlapping, slightly swollen and bluntly pointed at their distal ends. Rays of the larger shield not reaching the centre, but radiating obliquely from an oval ring of quadrate granules, smooth at the external surface, and obliquely truncated at their distal ends.

Distribution and horizon — *C. barnesae* is common in the chalks of Europe, Australia, and North America. It ranges from the Cenomanian to the Maestrichtian, but is not known outside these limits. In the Iberian Seamounts, this species was recorded in the soft chalky limestones dredged at Discovery Stations 3804 and 3809 on Galicia Bank..

Author — Black M., 1964, p. 311.

Reference — Cretaceous and Tertiary coccoliths from Atlantic seamounts. Palaeontology, vol. 7, n° 2, pp. 306-316, pls. 50-53.