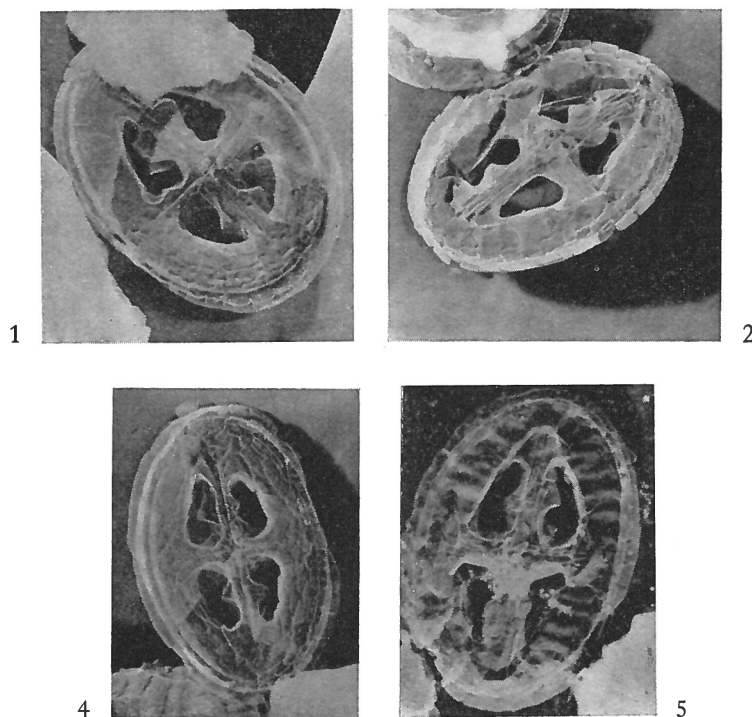


**Acaenolithus undatus** BLACK, 1973



Figs. 1, 2, 4, 5 — *Acaenolithus undatus* sp. nov., x 6,900. 1) Proximal view. Gault 0 ft 6 in above base, Botanic Gardens, Cambridge (H.799). SM 31038. 2) Holotype, distal view. Lower Gault, Bed I, Folkestone (H.1008). SM 29076. 4) Proximal view. Lower Gault, Bed I, Folkestone (H.1008). SM 29077. 5) Distal view. Lower Gault, Bed I, Folkestone (H.1009). SM 30977.

**Description:**

Diagnosis: A species of *Acaenolithus* with one or two triangular expansions on either side of the long arms of the cross.

Description: An outer ring of apparently rectangular elements lies at a level below the surface of the distal shield and projects slightly outside it. The distal surface is often fluted and has a complicated structure. A small number of large plates surround the central opening, and tongues from these extend outwards across the full width of the shield; near the outer margin smaller elements are inserted between the tongues, so that the number counted at the circumference is about three times the number countable at the inner margin. The arms of the cross are boldly striated, and at the centre is a short multi-crystalline spine. One or two triangular fin-like plates extend into the windows from the long arms of the cross. The proximal surface has a floor of variously-shaped, often lenticular, elements. It is marked by two narrow grooves at right angles, tracing the position of the distal cross. In each quadrant is a large window through which the fin-like expansions from the cross can be seen.

Measurements (in microns):

				d	d'	p	p'	c	c'	n	
Holotype:	H.1008	29076	distal	view	5.9	4.0	—	—	2.9	1.7	38
	H.799	31038	proximal	»	6.4	4.8	5.6	4.2	3.4	2.3	42
	H.1005	29110	»	»	5.7	4.3	5.3	4.0	3.0	2.2	38
	H.1008	29077	»	»	6.0	4.0	5.2	3.2	2.9	1.7	38
	H.1009	30977	distal	»	6.3	4.4	—	—	3.6	2.0	36
	»	31003	»	»	6.9	5.0	—	—	4.4	2.6	44
	H.1010	30759	»	»	5.5	4.0	—	—	3.0	1.7	34

d, d' = major and minor diameters respectively of the distal shield or distal surface.

p, p' = major and minor diameters of the proximal shield or proximal surface.

c, c' = major and minor diameters of the central area.

n = number of component elements in the distal shield, loxolith-ring or other marginal structure.

**Type level:**

Lower Gault.

Occurrence: Middle Albian. At Folkestone confined to the lowest 10 ft (3 m) of the Gault (Bed I), and at Cambridge 0 ft 6 in (15 cm) above the base; always within the *Hoplites dentatus* Zone.

**Type locality:**

Folkestone (Southeastern England).

**Depository:**

Collection of electron micrographs at the Sedgwick Museum, Cambridge.

Holotype: SM 29076; fig. 2; from the Lower Gault (Bed I) at Folkestone (H.1008).

**Author:**

Black M., 1973, p. 58; pl. 21, figs. 1, 2, 4, 5.

**Reference:**

British Lower Cretaceous Coccoliths. I. Gault Clay. Palaeontogr. Soc. Monogr.: (2), pp. 49-112, pls. 17-33, text-figs. 39-51.