
**Text-fig. 8**. Morphology and evolutionary relationships within the tiered placolith rim structure group (Family Mazaganellaceae).
Diagnosis. A species of *Mazaganella* possessing a narrow rim with a vertically extended distal shield, a distinct inner wall, and a well-developed central area cross bearing a hollow spine.

Description. A large normally elliptical coccolith with a narrow three-shielded rim and a well-developed central cross. The distal shield is approximately twice the height of the lower two shields and its elements rise subvertically before flaring out to form a horizontal distal surface. The central area is correspondingly deep and steeply sloping, lined by the extended elements of the distal shield and lower down by an inner cycle of
near vertical elements which represents the inner edge of the lower two shields. The distal shield is constructed from around thirty elements, vertically arranged and joined along radial sutures. The intermediate shield is thin and made up of approximately thirty flat, non-imbricating elements. The proximal shield is thin, closely fitted to the intermediate shield, and consists of thirty-five non-imbricating elements joined along kinked sutures which are initially radial but bend in a clockwise direction, halfway along their length. The large central area of the proximal shield is spanned by a prominent cross which is domed and bears a central, hollow spine. In proximal view the cross is formed from granular crystal growth with grooves running along the centre of each bar, leading into a central depression surrounding a central hole. The distal surface of the crossbars are formed by more elongate crystal growth and additional inner cycle elements ('feet') mark the contact of the bars and the inner edge of the central area.

**LM description.** The coccolith is dark in p-c but displays a bright inner ring to the rim in c-p.

**Dimensions.** L: 5.4-6.8 (6.5) µm, W: 4.2-5.7 (4.7) µm, RH: 0.9-1.7 (1.1) µm, SH: ~3.0 µm.

**Derivation of name.** From Latin *protensus*, extended.

**Holotype.** UCL-2007-32, UCL-2007-31 (Pl. 9, figs. 1 and 2).


**Type locality.** DSDP Site 547-15-1, 24 cm, north-west Morocco continental edge.

**Type level.** Lower Pliensbachian.

**Range.** Lower Pliensbachian (15-1).