Type species. *Tremalithus oamaruensis* Deflandre in Deflandre & Fert, 1954.

**SEM description.** The elliptical placolith consists of a distal shield, a double cycled proximal shield, double tube cycles, both being exposed distally and a central area occupied by a complex diagonal cross and central mesh. The double cycled proximal shield is smaller than the distal shield which is composed of dextrally imbricated elements. The inner tube cycle is made up of strongly imbricated elements (pl. 1, fig. 1) but due to diagenetic alteration its elements are usually fused together and appear as a smooth 'blanket' on the outer tube cycle. The overlap of the elements of the inner tube cycle is very strong, appearing as stacks of elements one on top of another in cross section (pl. 1, fig. 2). The outer tube cycle is made up of radial elements which overlap the inner margin of the distal shield (pl. 1, figs 1, 3). The central cross is distally made up of longitudinal elements, and proximally of transverse elements divided into two halves longitudinally. There are net-like structures in the openings between the arms of the central cross in well preserved specimens (*e.g.* pl. 1, fig. 1).

**LM description.** The arms of the diagonal cross are longitudinally divided into two halves under cross-polarised light. The proximal shield and tube cycles are birefringent, while the distal shield and the diagonal cross are non or weakly birefringent, respectively, under cross-polarised light. The tube overlaps the inner margin of the distal shield.