

Skeletogenesis of newly settled planulae of the hermatypic coral *Porites lutea*

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Acta Palaeontologica Polonica 25 (3-4), 1980: 311-320

The early development of the exoskeleton of the hermatypic scleractinian coral *Porites lutea* has been established by scanning electron microscopy for 1 hour to 21 day old corallites. The initial deposits are dispersed small grain-like crystallites of calcium carbonate up to 6 micrometers in length and 0.5 to 3 micrometers in maximum width. These crystallites enlarge by syntaxial growth and in addition new ones may be nucleated on their surfaces to produce rosette-like aggregations. After 6 hours these aggregates fuse laterally to form the primary layer of the basal plate. At this stage the initial tufts of crystallites of the septal trabeculae are deposited in radial rows on the primary layer of the basal plate. In 24 hour old corallites the trabeculae are well developed and traces of I, 2 or 3 orders of septa can be recognized. Subsequently (1-7 days), the trabeculae coalesce generating the radially arranged, septa and the secondary layer of the basal plate is deposited in the interseptal areas. With further growth some trabeculae diverge laterally from the median plane of the septum to produce vepreculae which may fuse with those of adjacent septa to form synapticulae. After several orders of septa have been established, the basal plate may develop a peripheral epitheca.

Key words: Scleractinia, development of exoskeleton, Recent.

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