

Theme 3

POSTER PRESENTATION

Origins of coral diversity in Southeast Asia

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Southeast Asia hosts the maximum centre of coral diversity. Evidence from palaeontological and molecular studies suggests that the Miocene was an important period for diversification in the region. However, the fossil record is markedly undersampled. Of the ~200 species of azooxanthellate corals present in the region, only 49 species are known in the fossil record. As part of the Throughflow ITN project, we are collecting new data to document the Miocene diversity of zooxanthellate and azooxanthellate scleractinians from shallow and deep-water habitats preserved in outcrops of East Kalimantan (5-20 Million years old). This project has completed two five-week long field seasons and is currently processing samples. So far, we have identified the azooxanthellate taxa *Caryophyllia*, *Stephanocyathus*, *Flabellum*, *Heterocyathus*, and *Madrepora*. Preservation can be excellent allowing geochemical analysis to understand the paleoenvironmental conditions in which these species were living. In combination with parallel studies on shallow water ecosystems, these new data provide insights to the origins of the high diversity in this region.