[ENV04]
Ecology of scleractinian corals in the waters of Port Dickson and their tolerance to sedimentation

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The objectives of the study are to estimate the sediment tolerance levels of *Porites lutea* and *Favites abdita* as well as determine the sedimentation rates of the waters of Port Dickson. Twelve specimens of *Porites lutea* and *Favites abdita* respectively were subjected to suspended sediment and burial experiments. Their ability to withstand sediment stress was estimated by measuring their growth rates throughout the experiments using the buoyant weighing technique. Sedimentation rates were monitored and coral reef areas surveyed in the four stations selected along the coastline of Port Dickson, Negeri Sembilan, Malaysia. Sediment traps were deployed at Batu 7, 8, 9 and Tanjung Tuan. Sediment samples were dried, weighed and subjected to particle size and X-ray diffraction analysis. Results from SSE conducted on *Porites lutea* and *Favites abdita* specimens showed that the coral growth rates of experimental corals were significantly lower than control specimens with mean growth rate of 0.89 ± 7.38 mg per gram body weight per 10 days against 2.15 ± 2.17 mg per gram body weight per 10 days of the control specimens. *Favites abdita* was observed to actively remove sediment during burial experiments. *Porites lutea* specimens succumbed to burial. Sedimentation rates in Port Dickson and Tanjung Tuan ranged from 59.61 ± 17.57 mg cm^{-2} day^{-1} to 220.61 ± 145.52 mg cm^{-2} day^{-1}. Sediment samples have clay fractions between 18.72 ± 4.45 % and 33.81 ± 7.19 %. Silt fraction ranged from 12.28 ± 9.95 % to 41.17 ± 4.46 %. Coral reef surveys conducted on the reef flat of Tanjung Tuan have found *Porites* spp. to be the most abundant coral type with a percentage cover of 42.57 %, *Goniastrea* spp. at 20.87%, *Favites* spp. at 9.81% and *Favia* spp. at 7.84%. Live coral cover for all four stations ranged from 11.7 % to 16.8 % while dead coral cover was between 4 % and 20.25 %. Macroalgae cover ranged from 27.3% to 57.3%. Silt and clay minerals such as quartz, illite and kaolinite were found to be present in most of the sediments collected in traps analyzed using XRD.