

Relationship of coral distribution with bottom flow speed and soil particle quantity in Sakiyama Bay, Iriomote Island, Japan

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This study was conducted to clarify the relation between coral distributions and physical variables in Sakiyama Bay, Iriomote Island, Japan. First, distributions of coral coverage by the colony shapes and coral areas by the community types were investigated at 72 points around the bay. Next, results of numerical simulations for the physical variables such as oceanic flow and soil particle numbers under average summer and winter conditions in the region were analyzed and compared with the obtained coral distribution.

The results are summarized as follows: 1) Coral coverages show a direct relation with bottom flows in the region, and the bottom flows differ with coral community types. 2) Coral coverages show an inverse relation with soil particle numbers in the region. *Enhalus acroides* mainly inhabit the region with a larger number of soil particles.

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