

**Recurrent Large-Scale Disturbances, Recovery Trajectories, And Resilience Of Coral Assemblages On A Coral Reef in The South-Central Pacific**

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Temporal variability in coral community structure on the outer reef at Tiahura, Moorea (French Polynesia) was investigated between 1991 and 2006 to test for the effects of major disturbances. During the study, the reef was impacted by one cyclone (1991) and four bleaching events (1991, 1994, 2002, 2003). The cyclone and bleaching of 1991 had the greatest impact, and caused a rapid decline in coral cover from 51.0 % in 1991 to 24.2 % in 1992. In contrast, the three successive bleaching events had little effect on coral cover, even though the thermal anomalies causing these events were similar to the conditions leading to the 1991 bleaching. By 2001, coral cover returned to the 'pre-disturbance' levels of early 1991, but the trajectories of change differed among genera. *Acropora* was affected by the disturbances of 1991, but subsequently showed a high rate of recovery; *Montipora* was affected by most disturbances and showed no sign of recovery; *Pocillopora* was affected by the disturbances of 1991, and showed a partial recovery by 1995; and *Porites* was not affected by any disturbances, but increased in cover throughout the study. Our results demonstrate that large-scale disturbances are not always associated with a phase-shift from coral- to algal-dominated communities, but instead show that coral cover can recover rapidly after dramatic declines. To our knowledge, our study is the first contemporary analysis to demonstrate rapid recovery of coral cover, despite the effects of ongoing disturbances, although importantly this trend was achieved through a shift in the relative abundance of coral genera. Thus, coral communities at Tiahura appear to be characterized by ecological resilience to disturbances in terms of coral cover, but fragility in terms of generic composition.