From March-April to July 1991, an important bleaching event occurred in most reefs of Society Islands. Severity of the bleaching and mortality of scleractinian corals varied according to genera. Among the dominant (Pocillopora, Acropora, Montipora, Porites), Acropora was the most sensitive: in some areas of Moorea and Tahiti, many of its colonies bleached and a quarter died, then were covered by macroalgae (2). The succession of algal populations did not show any specific character linked to bleaching. A turf of indistinct flora set up first, followed one month later by a turf with dominant filamentous or calcareous red algae mainly Florids and brown algae, that roughly maintained until July (C. Payri, personal communication).

MATERIALS AND METHODS

The populations of the dinoflagellates Gambierdiscus toxicus associated to these macrophytes were quantitatively monitored in May, July and September 1991 in a few samples of dead branching Acropora and Pocillopora from Tahiti (Pirae pass, Arue fringing reef) and Moorea (Tiahura outer reef slope), using our routine method of sampling and counting (1).

RESULTS

The presence of G. toxicus was noted in all the samples. The densities of the dinoflagellate per gram of algae (GTD) ranged from 250 to 800 without significant variation in the same area from a sample to another during the coral bleaching event. In some Tahitian Acropora samples from May 1991, GTD was higher on bleached dead corals than on the other dead Acropora from the neighbourhood. One year later, GTD decreased under 50 in surveyed Acropora and none difference was pointed out with the neighbour and coral colonies.

REFERENCES