Abstract
Coral reef status was surveyed in three south Pacific coral reefs of Costa Rica, one in Caño Island and two in Golfo Dulce, and the density, richness and distribution of non-colonial macro borers (>1 mm) was determined in dead and live coral fragments from these reefs. Based upon traditional indicators of degradation such as high particulate suspended matter and low live coral cover, the reefs at Caño Island are in better condition than those at Golfo Dulce. Reef degradation in Golfo Dulce is mainly due to high loads of terrestrial sediments as a consequence of watersheds deforestation. In this study, 36 coral boring species are reported for the eastern Pacific. At the family level, there is high endemism (10%) and greater affinity with the Indo-Pacific (34%), as compared with the eastern Atlantic and Mediterranean (29%) and western Atlantic and Caribbean (27%). The dominant non-colonial macro boring families at the study reefs are mytilid bivalves, eunicid polychaetes and aspidosiphonid sipunculans, with the bivalves considered the main internal bioeroders due to their greater body size and abundances. The level of mortality of the coral colonies and the general level of reef degradation influenced the composition of non-colonial macro-borers. Diversity and total macro-borer density, especially aspidosiphonid density, is higher in corals with greatest dead than live cover. In the healthiest coral colonies (less than 50% of partial mortality), mytilids domination, macro-borer diversity and total density, is higher in Golfo Dulce, where reefs are more degraded. In the most affected coral colonies (more than 50% dead), macro-borers total density, especially aspidosiphonids density, is higher, of the healthiest reef of this study, Platanillo. Bivalve relative abundance increases and sipunculan relative abundance decreases with increasing site degradation. In conclusion bioeroder variables can also be used as reef health indicators.

Keywords
Borers, bioerosion, coral reef, Costa Rica, Caño Island, Golfo Dulce, eastern Pacific, sediment.