

Population Levels of *Acanthaster planci* in the Mariana and Caroline Islands, 1969-1972¹

JAMES A. MARSH, JR.² and ROY T. TSUDA²

Abstract

The presence of large numbers of the crown-of-thorns starfish, *Acanthaster planci*, and its devastating effect on live coral reefs around some Micronesian islands was first documented by a large-scale survey conducted in July and August, 1969. Eight of the 17 islands surveyed at that time had large populations or aggregations of starfish which were causing extensive reef damage. During the period from June, 1970, to May 1972, second surveys were made of Guam and 13 of the 16 Trust Territory islands originally surveyed in 1969. Four of these islands (Guam, Palau, Truk, and Ponape) still had large populations of *Acanthaster*. Third surveys, approximately a year after the second surveys, indicated the continued presence of large numbers of starfish on two (Truk and Ponape) of the seven islands visited. New surveys in 1971 on a small high island (Aguijan) in the Marianas and eight small atolls in the Carolines revealed significant numbers of starfish and extensive coral damage only on Aguijan; these starfish disappeared a year later. There was a definite overall decline in *Acanthaster planci* populations from 1969 to 1972. There were no new outbreaks except for the case of Aguijan cited above. We attribute the decrease in starfish numbers partly to control efforts. As of May, 1972, *Acanthaster* posed no serious additional threat to the reefs of the Mariana and Caroline Islands.

¹ Abstract of paper presented at a Symposium on the "Biology and ecology of the crown-of-thorns starfish, *Acanthaster planci* (L.)", Pacific Science Association Second Inter-Congress, University of Guam, May 23-24, 1973.

² The Marine Laboratory, University of Guam, P. O. EK, Agana, Guam 96910.