

SOUTH PACIFIC COMMISSION

FOURTH TECHNICAL MEETING ON FISHERIES

Noumea, New Caledonia

(21 - 29 October 1970)

DEPARTMENT OF AGRICULTURE
DIVISION OF FISH AND WILDLIFE

STATUS OF THE CROWN-OF-THORNS STARFISH
ERADICATION AND CONTROL PROGRAM ON GUAM

In late September of 1969, a Memorandum of Agreement regarding the eradication and control work of the Crown-of-Thorns starfish (Acanthaster planci) was signed between the Bioscience Division of the University of Guam and the Division of Fish and Wildlife of the Department of Agriculture. It was agreed that out of a total of \$27,000 appropriated by the Guam Legislature for the Crown-of-Thorns program, the University would retain \$7,000 for the research part of the program and that \$20,000 would be allocated to the Department of Agriculture to conduct the eradication and control program.

Four full-time scuba divers were recruited by early October 1969 and also a bounty payment of 10 cents per starfish was instituted to encourage volunteer divers to assist in the eradication work. By the end of June 1970, a total of 20,664 Crown-of-Thorns starfish was killed either by pick-up or by formalin injection in situ.

A large concentration of starfish was located off the Northeast coastline of Guam which generally stayed in deeper waters (130 feet or deeper) and occasionally forayed off into shallow waters (about 40-80 feet). The horde is generally moving along underwater ridges but they can and will go over sandy areas also.

A large concentration appeared to have entered the shallow inner reef in the Asan-Piti area (central-western coastline). Our preliminary kill information indicate that at least 9,208 starfish have been removed from this area and are presently still coming through the channels leading into the inner reef areas.

The starfish that have settled in the shallow areas are generally hiding in crevices, sand and sea weeds during the day and are moving out to forage during the evening and at night. Contrary to reports that the Crown-of-Thorns starfish cannot negotiate crossing over sandy areas, they have been observed moving along, hiding in sand partly buried, and were also found in areas completely isolated by sand patches.

As of July 1, 1970, \$28,000 was allocated to the Division of Fish and Wildlife to continue with the Crown-of-Thorns eradication and control work. The 4-men team of full-time divers will be retained and volunteer divers have been organized and will be coordinated by a diver-supervisor to carry on the eradication work. These volunteer divers will be compensated through bounty payments for each starfish picked-up.

The starfish kills are being made either by picking them up out of the water or by injecting them with approximately 20 cc of formalin. In the shallow areas, pick-ups are made; while in the deeper areas where the diving time is limited, each starfish is given 4 separate injections of 5 cc each of 40 percent formalin. Previously, too many of the starfish injected with only one 5 cc shot of formalin were seen still moving around either dragging portions of the disintegrating body, or even completely healed half starfish have been seen in areas where formalin injection kills had been made.

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