

JOB PROGRESS REPORT RESEARCH PROJECT SEGMENT

STATE: Territory of Guam

JOB TITLE: Sea Turtle Recovery Program

GRANTOR: National Marine Fisheries Service (NMFS), Pacific Island Area Office (PIAO)

PERIOD COVERED: October 1, 1999 to September 30, 2000

SUMMARY

Guam's Division of Aquatic and Wildlife Resources (DAWR) Sea Turtle Recovery Program (STRP) is funded in part by the NMFS Honolulu, PIAO to determine the extent of Guam's resident/nesting sea turtle populations and nesting habitats by conducting beach surveys and satellite tracking. ComNavMarianas has funded part of the satellite telemetry portion of the project through the purchase of satellite tags and satellite time.

The acquisition of satellite tagging materials and training was completed in March and April 2000. On June 28, 2000, an approximately 250-300 pound Green sea turtle (*Chelonia mydas*) was Argos™ satellite-tagged and tracked after making a false crawl on Explosive Ordnance Disposal (EOD) Beach, Andersen Air Force Base (AAFB). A poaching arrest was also made on the following morning concerning a 22 lb. *C. mydas* that was illegally speared in the Tumon Bay Marine Preserve Area (MPA).

BACKGROUND

Harvest of sea turtle eggs was a common occurrence on Guam prior to World War II. The Green sea turtle (*Chelonia mydas*) was harvested legally on Guam prior to August 1978, when it was listed as threatened under the Endangered Species Act. The Hawksbill sea turtle (*Eretmochelys imbricata*) has been on the endangered list since 1970. In an effort to ensure protection of sea turtles on Guam, routine sightings are counted during aerial surveys and nest sites are recorded and monitored for hatchlings (DAWR 1992-93).

Program objectives were established during a Recovery Plan Implementation Workshop held August 3-5, 1998 in Honolulu, HI and July 1999 in Volcanoes, HI. Federal and local government biologists, managers, enforcement officials, and educators from the Western Pacific participated and developed the following objectives:

- 1) To begin development of implementation plans based on the Recovery Plan's actions for each political jurisdiction.
- 2) Assist in identifying potential funding sources for high priority projects or activities.

As a result of the first workshop, a project was cooperatively developed between the Guam Division of Aquatic and Wildlife Resources (DAWR) and the National Marine Fisheries Service to fulfill federal objectives under the STRP.

OBJECTIVES

- 1) To collect baseline population size-structure (age and size) and genetic information for sea turtles in and about Guam.
- 2) To survey Guam's beaches for sea turtle nesting activity for both green turtle (*Chelonia mydas*) and hawksbill (*Eretmochelys imbricata*) throughout the nesting period in order to determine the size of the nesting population of sea turtles on Guam and to employ a variety of tagging techniques to determine movement, residency and further define population dynamics.
- 3) To establish a Guam based sea turtle-working group consisting of natural resource stakeholders and involve them in the refinement of the implementation plan.

RESULTS

Satellite Tagging

An approximately 250-300 pound nesting *Chelonia mydas* was tagged with a satellite transmitter on 28 June 2000 after she made a false crawl on EOD Beach, AAFB. Her movements were tracked for the next 4-5 weeks to the Sulu Sea, Philippines where reception was eventually lost in November 2000. FY00 beach surveys for nesting activity on Guam included Cocos (Lagoon side), EOD (AAFB), and Ritidian.

Weekly beach nesting surveys at Sella Bay between January and April 2000 resulted in no reported Hawksbills nests. In addition, weekly nesting surveys at Cocos Island, Cetti Bay, EOD, and Ritidian between April and July recorded 51 green turtle nests for FY00.

ComNavMarianas funded telemetry tagging for 6 sea turtles to include: 1) Guam (2 Greens, 2 Hawksbills) and 2) Tinian (2 Greens) in cooperation with the Commonwealth of the Northern Marianas. NMFS, Honolulu Lab provided telemetry training on 2 occasions, funded by PIAO.

Supplies/Monitoring

The acquisition of satellite tagging materials from the Navy (ComNavMarianas) occurred in March 2000 and respective training was completed in April 2000. ComNavMarianas has also allotted future funding for the purchase of satellite tags for FY01. Satellite tagging training was completed in November 1999.

Nets were ordered for in-water capturing and anticipated to arrive in June 2000. Unfortunately, they did not arrive in time and delayed the in-water testing and capture phase of the STRP. The Air Force (AAFB Conservation Officers) and USFWS (Ritidian Refuge) have offered assistance to monitor sea turtle nesting activities within their respective areas. Aerial survey observation counts of sea turtles along Guam’s coastline occurred in FY00 and will continue in FY01.

Sea Turtle Nesting

The number of nests found for both *Chelonia mydas* and *Eretmochelys imbricata* found between FY75-00 ranges from 0 to 67 (Figure 1). Most of the nesting occurred at EOD (AAFB) and Cocos Island (Lagoon Side).

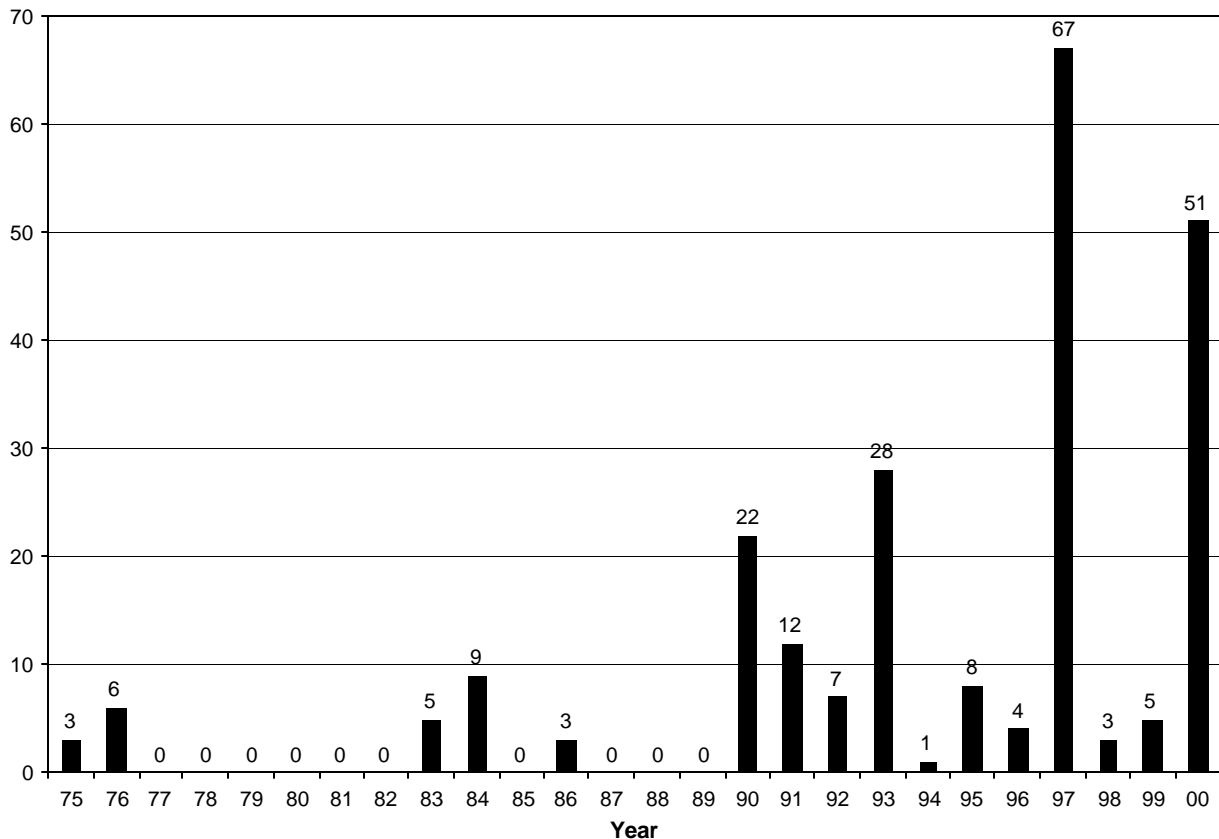


Figure 1. Guam sea turtle nesting activity from 1975-2000 for green (*Chelonia mydas*) and hawksbill (*Eretmochelys imbricata*) turtles. Years with zero nests recorded most likely reflect a lack of

surveys rather than a lack of nests. Information from 1975-1999 obtained by G. Davis. Information for 2000-1 was obtained by V. Cummings.

Mortality

Several sea turtle deaths were reported in FY00. Records of unauthorized take of sea turtles are listed in Table 1 from FY75-00.

Table 1. All accounts of unauthorized take of Green (*Chelonia mydas*) and Hawksbill (*Eretmochelys imbricata*) sea turtles on Guam from FY75-00. Information was obtained by: G. Davis (FY75-99) and V. Cummings (FY00).

Species/Sex	Date	#	Location	Details	Result	Suspects
Green	01/30/1987	1	No suspect found	Speared in one flipper	Released in good condition	No suspect found
Hawksbill, Hatchling	08/25/1988	1	Airport	Confiscated at airport	Returned to Palau	No available information
Green	02/29/1992	5	Ritidian	Oiled, blocked glottis	1 died, 2 released	No available information
Green	1990	5	No available information	Possession	No available information	2 arrested
Green	02/29/1992	1	Pago Bay	Oiled, blocked glottis	Released	No available information
Green	02/29/1992	1	Ipan	Oiled, blocked glottis	Released	No available information
Green	09/07/98	1	Sinajana	Roving	Released in good health	No available information
Green, Male	09/15/98	1	Cocos	Speared, Dead	N/A	No available information
Green	03/06/1999	1	Pago Bay	Oiled offshore and floated into Pago	Nostrils and glottis closed	No available information
Green	12/09/1999	2	UOG Marine Lab	Turned into marine lab by 2 people who found the turtles in the forest and kept them for 2 weeks	Tagged and released in good health	Identity of the 2 people unknown
Green	06/28/2000	1	Tumon Bay	Speared in Tumon Bay MPA.	Died	1 arrested
Green	07/05/2000	1	Cocos Lagoon	Speared and found dead	No available information	No available information

RECOMMENDATIONS

Traditional harvests of sea turtles were primarily for local consumption at fiestas, weddings, funerals, and christenings. In recent times, poaching of sea turtles have been known to occur on Guam, due to the traditional demand for its meat. However, capture of the responsible parties

has been difficult, although arrests have been made in the past for unauthorized take (Table 1). Effective conservation and enforcement will be critical to the recovery efforts of this project.

DAWR will continue to give sea turtle presentations for community awareness, especially through the elementary-secondary school system and University of Guam. In addition, the recommendation to produce and distribute sea turtle posters and pamphlets would help to enhance conservation and recovery awareness within the local community.

An official meeting of the Guam Sea Turtle Recovery Coordination Working Group is tentatively scheduled for December 11, 2000. The working group will discuss important issues concerning sea turtle conservation and establish a plan to improve their protection on Guam. Informal discussions with several members of the working group have led to increased awareness and cooperation in various capacities.

PROJECT COSTS

The estimated cost of this project was \$7,000

This report was prepared by: Veronica Cummings, Fisheries Biologist I.

LITERATURE CITED

Division of Aquatic and Wildlife Resources (DAWR). 1992-93. Job Progress Reports.
Federal Aid to Fish and Wildlife Restoration. Guam Dept. of Agriculture.