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BRIEF OVERVIEW OF MARINE TURTLE RESEARCH AT THE
SOUTHWEST FISHERIES CENTER HONOLULU LABORATORY
January 1985

Research of threatened and endangered Pacific sea turtles started at the Southwest Fisheries Center (SWFC) Honolulu Laboratory in June of 1980 following a planning meeting convened in Honolulu (Shomura 1979) and joint sponsorship of a sea turtle workshop held in New Caledonia (South Pacific Commission 1980). Prior to 1980 and dating back to 1972, studies of sea turtles in Hawaii were primarily conducted by the Hawaii Institute of Marine Biology with funding from the University of Hawaii Sea Grant College Program and the State of Hawaii. Before 1972 work on sea turtles was limited to occasional tagging by various State and Federal biologists visiting the remote Northwestern Hawaiian Islands. A complete history of tagging and other sea turtle research efforts in Hawaii can be found in Balazs (1980b, 1983b). Since June of 1979, work on sea turtles has occurred within the Marine Mammals and Endangered Species Program of the SWFC Honolulu Laboratory. There is currently one full-time staff member (GS-11) working on sea turtles and several field technicians devoting portions of their time to sea turtles.

The major accomplishments made to date in the program are listed as follows. The publications resulting directly or in part from this research have been listed at the end of this overview.

Major accomplishments:

1. Radio telemetry conducted of the movements and diving frequencies of adult male and female green turtles at the French Frigate Shoals (Hawaiian) breeding colony.
2. Population assessment of the green turtle stock nesting at East Island, French Frigate Shoals.
3. Continuation of annual systematic tagging and monitoring of the green turtle breeding colony at French Frigate Shoals and other sites in the Northwestern Hawaiian Islands where low level nesting occurs.
4. Investigation of the status and traditional usage of sea turtles in the Tokelāu Islands.
5. Assessment of the status and ecology of sea turtles at Johnston Atoll.
6. Preliminary assessments of sea turtles at Rose Atoll and the Manua group of American Samoa.
7. Improved tagging techniques with flipper tags and experimental contracted research of "living tags" for hatchlings.

8. Major nesting habitat clean-up of man-made debris at French Frigate Shoals.
9. Major contribution of biological and cultural data for the National Marine Fisheries Service 5-year Endangered Species Act status review of sea turtles and concomitant review of the subsistence use of sea turtles by certain Pacific Islanders.
10. Developed a response capability for the stranding of sea turtles throughout the Hawaiian Islands.
11. Provided research expertise, tags, and educational materials to government efforts in Western Samoa, Guam, the Trust Territory, and the Solomon Islands.
12. Contributed a paper on sea turtles to the Workshop on the Fate and Impact of Marine Debris.
13. Conducted cooperative studies with the University of Hawaii Sea Grant College Program on immature green turtles residing in nearshore foraging pastures on the Island of Hawaii.

Work planned or underway for FY 1985.

1. Continuation of 2, 3, 5, 7, 10, and 11 of the above.
2. Characterize different types of foraging and resting habitat on the Islands of Maui, Molokai, Lanai, and Oahu.
3. Initiate formal recovery efforts through the recovery team/recovery plan process.

PUBLICATIONS ON TURTLE RESEARCH AT SWFC HL

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- 1980a. A review of basic biological data on the green turtle in the Northwestern Hawaiian Islands. In R. W. Grigg and R. T. Pfund (editors), Proceedings of the Symposium on Status of Resource Investigations in the Northwestern Hawaiian Islands, April 24-25, 1980, University of Hawaii, Honolulu, Hawaii, p. 42-54. UNIHI-SEAGRANT-MR-80-04.
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- 1982a. Factors affecting the retention of metal tags on sea turtles. Mar. Turtle Newsl. 20:11-14.
- 1982b. Hawaii's fishermen help sea turtles. Hawaii Fish. News 7(11):8-9.
- 1982c. Sea turtles: A shared resource of the Pacific Islands. South Pac. Comm. Fish. Newsl. 232:22-24
- 1983a. Hawaiian turtles in Canada. Kilo i'a, Waikiki Aquarium Newsl. 27:2.
- 1983b. Recovery records of adult green turtles observed or originally tagged at French Frigate Shoals, Northwestern Hawaiian Islands. U.S. Dep. Commer., NOAA Tech. Memo. NMFS, NOAA-TM-NMFS-SWFC-36, 42 p. Also as UNIHI-SEAGRANT-CR-83-03.
- 1983c. Sea turtles and their traditional usage in Tokelau. Atoll Res. Bull. 279:1-29.
- X 1983d. Status review document for Pacific sea turtles. Southwest Fish. Cent. Admin. Rep. H-83-15, 16 p.
- X 1983e. Subsistence use of sea turtles at Pacific Islands under the jurisdiction of the United States. Southwest Fish. Cent. Admin. Rep. H-83-17, 6 p.
- 1984a. A baseline assessment of marine turtles at Johnston Atoll. Contract report to the U.S. Army Corps of Engineers, Honolulu, 62 p.
- X 1984b. History of sea turtles at Polihua Beach, northern Lanai. Southwest Fish. Cent. Admin. Rep. H-84-15, 8 p.
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