

RESEARCH ACTIVITIES REPORT

MONITORING OF SEA TURTLES AND THEIR HABITATS IN KANEOHE BAY, OAHU

DECEMBER 29, 1989

by

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Marine Turtle Research Task

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On December 29, 1989 George H. Balazs and visiting former staff member Ensign Barry K. Choy snorkeled from a small boat in Kaneohe Bay to hand-capture, tag, measure, and assess the health status of green turtles in their benthic "resting" habitats. Efforts were focused on two adjacent patch reefs in the northern portion of the bay. This location had not been previously studied, but was nevertheless recognized (by BKC) as a preferred site for green turtles to aggregate. The two patch reefs, informally designated by local fishermen as Deep Reef #1 and #2, have minimum estimated depths of four feet in their centers, dropping off abruptly to 25-30 feet along the perimeters. Reef #1 has several small wire enclosures, presumably placed there by researchers from the Hawaii Institute of Marine Biology located on Coconut Island.

A total of six turtles ranging from 49.7 to 77.5 cm in straight-line carapace length were captured during two hours of snorkeling (Table 1). All were found to be afflicted with fibropapillomas (tumors) ranging from a moderate to a severe extent. Approximately nine other turtles were sighted during this time, but not captured. At least four of these were noted to have tumors, although observations were difficult due to the brief

time available to inspect them as they quickly swam away. The four noted to have tumors should therefore be considered as a minimum count.

The finding of high incidence of turtles with tumors during this study is consistent with results of recent stranded turtle reports, and with work conducted elsewhere in Kaneohe Bay by GHB and BKC earlier in 1989.

An additional significant finding was made during this short assessment. At an 8-10 foot depth along the seaward perimeter of Reef #2, a large freshly dead green turtle (ca 75-85 cm) was found trapped under a fractured block of Porites coral. This large piece had separated and fallen from the patch reef at a time when the turtle was resting on the bottom directly under it. Mortality of this nature would likely be an uncommon event, except possibly during earthquakes or periods of high wave energy that impose undue stress to the reef structure. The collapse of this coral block onto the turtle is the first such case encountered during many years of diving by GHB and BKC in the Hawaiian Islands.

Tagging and measurement data for six green turtles  
 captured in Kaneohe Bay on 29 December 1989  
 by  
 George H. Balazs and Barry K. Choy

Tag No.	<u>Carapace length (cm)</u>		Comments
	Straight	Curved	
<u>Deep Reef #1</u>			
Y-265,66,67,68	73.2	77.5	Tumors on both eyes, neck, shoulder and groin.
Y-269,70	53.7	57.5	Tumors on both eyes and massive one on right jaw.
Y-271,72	49.7	53.0	Tumors on both eyes, front flippers and groin. Burrowing barnacles.
<u>Deep Reef #2</u>			
Y-273,74	50.9	54.5	Tumor on right eye and ruptured left eye. Emaciated.
Y-275,76,77	56.4	60.0	Tumors on neck, left eye, groin, and tail. Vigorous and strong.
Y-278,79,80,81	77.5	84.5	Tumors on both eyes, neck, and right shoulder. Vigorous and strong.