

Tumors Continue To Spread In Hawaiian Green Turtles

by George H. Balazs,
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The incidence of fibropapillomas, a life-threatening tumor, has substantially increased in an important aggregation of the Hawaiian green turtle, *Chelonia mydas*, which resides along the southern coast of the Island of Molokai. Prior to 1985 there were no known cases of the tumors in this area. Tag and recapture work performed in July 1989 indicates that 14 of 143 turtles (9.8%) captured off Molokai had tumors, compared with 6 of 125 turtles (4.8%) during the same period in 1988. The etiology of this disease, its mode of transmission, and its impact to the biological recovery of the green turtle population in Hawaii are presently unknown. Scientists also have yet to pinpoint why the disease has spread simultaneously at certain sites in Hawaii and Florida during the past few years.

The tag and recapture work off Molokai was conducted at Palaau, a shallow reef area adjacent to undeveloped land. For many years, this area has been substantially subjected to silt desposition due to erosion at higher elevations. Its coastline consists of the nearly continuous stand of the red mangrove, *Rhizophora mangle*, which was intentionally introduced to the Hawaiian Islands from Florida in 1902.

The periodic monitoring and tagging of immature and adult green turtles at Palaau has been under way since May 1982, in cooperation with Bill Puleloa, an Aquatic Biologist with the State of Hawaii, and Ed Medeiros, a

local fisherman who is well versed in the capture of sea turtles. During 1982-85, approximately 300 turtles were captured, examined, tagged, and released without any cases of tumors being seen. However, one of the turtles captured in October 1985 was heavily afflicted with these debilitating epithelial growths; the second diseased turtle was captured in June 1987.

Increased effort will be directed at monitoring the incidence of tumors at other coastal habitats preferred by turtles in the Hawaiian Islands. In addition, cooperative studies were initiated in Hawaii with researchers at the Universities of Florida and Chicago in concordance with the priority position assigned to this problem in the Recovery Plan for Hawaiian Sea Turtles.

Pepeopae Boardwalk Extended

by Ed Misaki,
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Phase 3 of the Pepeopae trail board walk project was completed by the Molokai staff this summer. The third phase begins at the Pepeopae bog and ends at the summit rim of Pelekunu valley, often referred to as the "Pelekunu overlook". The overlook offers an incredible panoramic view of the upper valleys of Pelekunu and Wailau, and the Olokui and Kamakou mountain summits.

Phase 3 took four weeks to complete and extends the boardwalk trail another 1/2 mile. The entire length to the boardwalk trail is now just over a mile beginning at the Pepeopae trail-head and ending at the overlook. The Pepeopae bog is the original part of the boardwalk trail and

was first constructed in the summer of 1985. In 1987, the boardwalk was constructed on the trail leading to the bog.

The Division of Forestry and Wildlife assisted in the project and provided much needed manpower and equipment to transport the boards to the helicopter pickup site at the Waikolu picnic grove. About 3000 feet of the 2" x 8' boards were transported up the dirt road to Waikolu where they were picked up by helicopter and distributed along the trail.

We are seeing continual recovery of the native vegetation along the trail of the first two phases and anticipate the same for the phase 3 portions. People are now able to enjoy more of this ancient trail system without impacting results.

Mahalo to all who contributed to the success of this trail system. Please call the Molokai office at 567-6680 for information concerning the boardwalk trail at Pepeopae.

Environmental Education Initiative

by Ron Walker,
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As part of a major effort to accelerate active management of the State's Natural Area Reserves, Governor John Waihee asked the 1989 State Legislature to include funding for environmental education. A total of \$160,000 was appropriated to open a small "central bureau" within the Division of Forestry and Wildlife to coordinate educational efforts focusing on the reserves and plant wildlife sanctuaries. It also included funding for grants to