

Marine Turtle Newsletter

Carapace Lesions of *Chelonia mydas* Breeding in Yap State are Diagnosed to Be Fibropapilloma

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Twelve of 702 (1.7%) adult green turtles (*Chelonia mydas*) tagged at selected rookeries in Yap State, Federated States of Micronesia, between 1990 and 1993 were observed to have from one to five gross lesions arising from carapace tissue corresponding to areas of adjacent vertebral and/or costal scutes. None of the lesions observed was restricted to growth from suture lines between adjacent scutes, as seems generally to be the case with fibropapillomas of the carapace (Balazs and Pooley 1991). Each affected area appeared as a large cluster of raised verrucose, papillary-like projections with numerous and generally rigid nodules and crevices. One of the gross lesions encompassed an area of carapace approximately 136 cm in circumference, and was approximately 10 cm from the highest point to what was estimated would have otherwise been the normal curvature of the carapace.

Biopsy samples of carapace lesion and normal-appearing skin overlying the humerus were collected during the 1992 nesting season from a single affected green turtle observed nesting at Meseran Island, Ngulu Atoll (8°33'N, 137°34'E) and a single affected green turtle observed nesting at Falipi Island, Elato Atoll (7°27'N, 146°09'E), and were submitted (via G. Balazs, U. S. National Marine Fisheries Service) to Dr. John C. Harshbarger at the Registry of Tumors in Lower Animals, National Museum of Natural History, Smithsonian Institution for histological analysis. No local anesthetic was used around the biopsy sites. Biopsy specimens were fixed in 10% formalin. Lesion samples from both the Ngulu (RTLA Accession No. 5566) and Elato (RTLA 5567) turtles were subsequently diagnosed as fibropapilloma, with several trematode eggs (species of trematode not identified) apparent in the Elato, but not the Ngulu lesion sections (Dr. J. C. Harshbarger, RTLA 5566 and 5567 Evaluations, Registry of Tumors in Lower Animals, National Museum of Natural History, Smithsonian Institution, 8 June 1993). In addition, skin overlying the humerus (which showed no obvious external signs of abnormal growth when biopsied) from the Ngulu turtle was diagnosed as undergoing fibropapillary changes, and a trematode ovum was observed in one of the sections (Dr. John C. Harshbarger, RTLA 5566 Evaluation, Registry of Tumors in Lower Animals, National Museum of Natural History, Smithsonian Institution, 8 June 1993).

The extent to which turtle colonies which breed within Yap State are affected with fibropapillary growths is presently unknown. Confirmed reports of turtles with carapace lesions (as described above) have come from personnel of turtle tagging and monitoring

programs at Gielop Island (9°56'N, 139°54'E) in 1991, Elato Atoll in 1992, and Ngulu Atoll in 1992 and 1993. Additional reports of turtles with gross carapace lesions have come from fisherman at Yap proper (9°32'N, 138°10'E) in 1992 and 1993, Faraulep Atoll (8°36'N, 144°33'E) in 1993, and Elato Atoll in 1993.

Various forms of lesions (presently unclassified) on the skin of turtle axillary regions have also been noted on green turtles nesting at Gielop Island (1991) and Meseran Island (1993). Biopsy samples from three such lesions have been collected from two affected turtles at Meseran Island, Ngulu Atoll and were sent to the Registry of Tumors in Lower Animals for histological analysis. We presently look forward to receiving evaluations of these samples.

Balazs, G. H. and S. G. Pooley (Editors). 1991. Research Plan for Marine Turtle Fibropapilloma: Results of a December 1990 Workshop. NOAA Tech. Memo. NMFS-SWFSC-156. U. S. Dept. Commerce. 113 pp.