

First Record of Fibropapilloma on an Olive Ridley Turtle in Nicaragua

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A nesting female olive ridley sea turtle (*Lepidochelys olivacea*) was found on 23 September 1996 with extensive tumor-like lesions at Playa La Flor Wildlife Refuge, Rivas, Nicaragua, approximately 10 km north of the Costa Rican border on the Pacific coast. Lawrence H. Herbst (Institute for Animal Studies, Albert Einstein College of Medicine, Bronx, NY) confirmed from photographs (Fig. 1) that the tumors were fibropapillomas. This is the first record of fibropapilloma for an olive ridley sea turtle in Nicaragua.

Fibropapillomas were first reported in green sea turtles, (*Chelonia mydas*) over 50 years ago (Smith and Coates, 1938), and the frequency of disease appears to be increasing in many populations (Balazs, 1991; Balazs and Pooley, 1991; Herbst, 1994; Herbst and Jacobson, 1995). In the past ten years, this disease has also been reported in loggerhead (*Caretta caretta*), flatback (*Natator depressus*) and olive ridley sea turtles (Herbst, 1994).

The female at Playa La Flor had extensive tumors on her head, neck, throat, both front limbs near the carapace, and around both eyes, resulting in an apparent partial



Figure 1. Nesting female *Lepidochelys olivacea* with fibropapilloma at Playa La Flor, Nicaragua.

impairment of vision. The largest tumors (two distinct but connected masses) occurred on her right limb next to the carapace and were each approximately 10–15 cm in diameter. Despite the tumors, the turtle nested successfully and appeared unencumbered. After discovering the lesions, an informal survey of approximately 100 additional nesting turtles uncovered no additional cases. This turtle was one of approximately 5600 turtles that nested during the *arribada* (mass nesting) at Playa La Flor in September.

On a subsequent *arribada* in December 1996, 496 turtles were examined for the presence of tumors. Five individuals (1.01%) had tumors, four with several small “marble” size tumors and one with a “tennis ball” sized tumor. All five of these turtles nested successfully.

Lesions have previously been reported on olive ridley turtles from both *arribada* nesting beaches on the Pacific coast of Guanacaste, Costa Rica: Ballester and Segura (1994) documented cases at Ostional and Herbst (1994) published a photograph taken by Pamela Plotkin of an olive ridley with fibropapillomas at Playa Nancite.

We will continue to monitor sea turtles at Playa La Flor for papillomas, which will allow us to determine if the disease is increasing in frequency in this nesting population.

Literature Cited

- BALAZS, G.H. 1991. Current status of fibropapillomas in the Hawaiian green turtle, *Chelonia mydas*. In: Balazs, G.H., and Pooley, S.G. (Eds.). Research plan for marine turtle fibropapilloma. NOAA Tech. Memo. NMFS-SEFSC-341, pp. 205-208.
- BALAZS, G.H., AND POOLEY, S.G. (Eds.). 1991. Research plan for marine turtle fibropapilloma. NOAA Tech. Memo. NMFS-SEFSC-341, 113 pp.
- BALLESTERO, J., AND SEGURA, A. 1994. Observation of the incidence of five external lesion types in 506 olive ridley *Lepidochelys olivacea* (Eschscholtz) nesters in the Ostional Wildlife Refuge, Guanacaste, Costa Rica. Proc. 14th Ann. Symp. Sea Turtle Biol. and Cons. NOAA Tech. Memo. NMFS-SEFSC-351, pp. 14-15.
- HERBST, L.H.. 1994. Fibropapillomatosis of marine turtles. Ann. Rev. Fish Diseases 4:389-425.
- HERBST, L.H., AND JACOBSON, E.R. 1995. Diseases of marine turtles. In: Bjorndal, K.A. (Ed.). Biology and Conservation of Sea Turtles. Revised Edition. Washington, DC: Smithsonian Institution Press, pp. 593-596.
- SMITH, G.M.A., AND COATES, C. 1938. Fibroepithelial growths of the skin in large marine turtles, *Chelonia mydas* (Linnaeus). Zoologica (N.Y.) 23:93-98.

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