

Marine Turtle Newsletter

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PELAGIC FEEDING HABITS OF TURTLES IN THE EASTERN PACIFIC

In the course of analyzing field notes of J.R. Slevin made during the expedition of the California Academy of Sciences (CAS) to Galapagos 1905-1906, I discovered a reference to two specimens of loggerheads (later confirmed as Lepidochelys olivacea by examining specimens at CAS) captured in the vicinity of Galapagos which contained fish eggs in the stomachs. According to Slevin, a female captured 25nm south of Isla Espanola 11 June 1906 had the stomach and intestine filled with fish eggs which showed no sign of digestion. A female collected 175 nm south of Isla Espanola on 18 June 1906 was also found to have the stomach filled with fish eggs. Slevin provided no other description of the eggs.

On 8 March 1980 I was present when two Lepidochelys olivacea and one Chelonia mydas captured approximately 40nm offshore from Manta, Provincia Manabi, Ecuador were butchered. The stomachs and intestines of the Lepidochelys were nearly empty, except for a brown to greenish brown liquid and few clumps of medusae. The stomach of the Chelonia contained an estimated 0.75-1.0 liters of fish eggs. The eggs were approximately 1-2mm in diameter and in large clumps. Some clumps were attached to small pieces of sargassum, but the volume of the fish eggs exceeded that of the sargassum by 10:1. Although the eggs appeared to have been attached to the sargassum prior to ingestion, the sargassum appears to have been ingested incidental to the fish eggs rather than the opposite situation expected from a turtle considered to be predominately an herbivore. The green turtle was probably an immature female and had a curved carapace length of 71cm. The fisherman that caught these and other turtles captured them on hooks suspended near the surface and baited with a small fish locally known as gato. They reported that both species of marine turtle (Lepidochelys and Chelonia) were often caught on hooks at a distance of 1-2 hours from shore by outboard launch. According to the fisherman who butchered the turtles, the eggs were those of the aguja (needlefish). A sample of the eggs removed from the green turtles was examined by E. Peter H. Wilkens, National Marine Fisheries Service, Southeastern Fisheries Center, Galveston Laboratory. According to Wilkens the eggs are most likely those of halfbeaks (Exocoetidae) or needlefishes (Belonidae). The size of the eggs, the number and placement of the filaments most closely resemble descriptions of halfbeak eggs.

In December 1979 Ms. Coppelia Hays recounted having observed fish eggs in the stomach of an immature green turtle from Peruvian waters. Hays was informed by a local fisheries biologist that the eggs were from flying fish, a close relative of the halfbeak.

The significance of marine turtles feeding on clumps of fish eggs in pelagic situations is as yet unclear. However such a food item offers a potentially important nutritional source to immature or nonreproductive individuals.

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