

Marine Turtle Newsletter

Loggerhead Released in Brazil Recaptured in Azores

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On 17 June 1989, a tagged, juvenile loggerhead sea turtle (*Caretta caretta*), 17.25 kg and 46.0 cm standard straight carapace length (SCL), was dip-netted by a fisherman north of Graciosa island in the central group of the Azores Archipelago (39°24'N, 28°08'W). The turtle had hatched on 27 February 1985 (22 g, 4.6 cm SCL) at the Biological Reserve of Comboios, Espírito Santo, Brazil, and was raised in captivity for one year. When the turtle was released on 26 February 1986 off the beach of the Biological Reserve, it weighed 4.55 kg and was 29.0 cm SCL.

Prior to release as a yearling, the turtle was tagged in Brazil with a style 681 Monel tag from National Band and Tag Company (Newport, Kentucky, USA). When the turtle was recaptured in the Azores, the tag was still in good condition with no signs of deterioration. The original tag was left on the turtle and plastic tags (Jumbo tags from Dalton Supplies Ltd., Oxfordshire, England) were added.

Growth rates calculated for the 40 month interval from the time of release off Brazil to recapture in the Azores are 3.81 kg/yr and 5.1 cm SCL/yr. These rates are slower than those reported by Bjorndal and Bolten (1988) for loggerheads of similar size in the southern Bahamas. The SCL growth rate was also slower than that predicted by the growth equation presented by Frazer (1987). Because this turtle was reared in captivity for its first year prior to release, its subsequent growth rates may not be representative of natural populations.

Carr (1986) suggested that the juvenile loggerhead population in the waters around the Azores (part of the north Atlantic gyre system) belonged to the southeastern U.S. nesting population. Although Carr was referring to hatchlings leaving the southeastern U.S., the connection between the U.S. and Azores turtle populations has been supported by recaptures in the Azores of larger turtles tagged in Florida (Witham, 1980; Eckert and Martins, 1989). Does the recapture of the Brazilian turtle suggest that Azorean waters are also juvenile habitat for the population that nests in Brazil? Or, is this

recapture a result of abnormal migratory behavior because the turtle was reared in captivity and released at an unnatural site for that age class? Hatchlings from Brazil may typically become part of the south Atlantic gyre system and never reach the Azores. The recaptured turtle may have stayed close to shore after being released, migrated north into the Caribbean and then found itself in the Gulf Stream on its way eventually to the Azores.

This recapture does raise questions as to the relationship of the juvenile loggerheads in Azorean waters to nesting populations in the north and south Atlantic as well as to those of the Mediterranean. Genetic and biotelemetry studies are planned to begin in the summer of 1990 to elucidate these relationships.

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Eckert, S. A. and Martins, H. R. 1989. Transatlantic travel by juvenile loggerhead turtle. *Marine Turtle Newsletter* 45:15.

Frazer, N. B. 1987. Preliminary estimates of survivorship for wild juvenile loggerhead sea turtles (*Caretta caretta*). *J. Herpetol.* 21:232-235.

Witham, R. 1980. The "lost year" question in young sea turtles. *Am. Zool.* 20:525-530.