

## BIOLOGY OF PELAGIC-STAGE LOGGERHEADS IN THE ATLANTIC

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We reviewed our recent research on the pelagic stage of the loggerhead sea turtle (*Caretta caretta*) in the eastern Atlantic. This pelagic-stage population is believed to be an early life history stage of the nesting population of the southeastern USA. This relationship is based on complementary size distributions (Bolten et al. 1993a) and mitochondrial DNA analyses (Bolten, Bjorndal, Bowen, and Martins, unpublished data). Predicted movement patterns of pelagic-stage turtles with respect to the North Atlantic Gyre (including the Gulf Stream Current and Azorean Current) are substantiated by recaptures of tagged turtles (Eckert and Martins 1989; Bolten and Martins 1990; Bolten et al. 1992a, b; Bjorndal et al. 1994). The pelagic stage is characterized by turtles 5 to 65 cm straight carapace length. The duration of the pelagic stage is estimated from both recaptures of tagged turtles and length frequency analysis. Length frequency analyses have been demonstrated to be a successful method to estimate growth rates in juvenile sea turtles (Bjorndal et al., in press; Bjorndal and Bolten, in press).

Longline fisheries have an impact on the pelagic-stage loggerheads in the eastern Atlantic. The largest size classes of loggerheads present in the eastern Atlantic are most frequently caught in this fishery (Bolten et al. 1993b). This source of mortality could have major demographic implications as indicated by Crouse et al. (1987).

This work has been supported by the Marine Entanglement Research Program of National Marine Fisheries Service.

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NOAA Technical Memorandum NMFS-SEFSC-351

**PROCEEDINGS OF THE FOURTEENTH ANNUAL SYMPOSIUM  
ON SEA TURTLE BIOLOGY AND CONSERVATION**

**1 - 5 March 1994  
Hilton Head, South Carolina**

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**August 1994**



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