

- Eckert, S. A., D. Crouse, L. B. Crowder, M. Maceina and A. Shah. 1994. Review of the Kemp's ridley sea turtle headstart program. NOAA Tech. Memo. NMFS-OPR-3. U. S. Dept. Commerce. 10 pp.
- Fontaine, C. T., D. B. Revera, T. D. Williams and C. W. Caillouet, Jr. 1993. Detection, verification and decoding of tags and marks in head started Kemp's ridley sea turtles, *Lepidochelys kempii*. NOAA Tech. Memo. NMFS-SEFC-334. U. S. Dept. Commerce. iii plus 40 pp.
- Heppell, S. S. and L. B. Crowder. 1996. Models to evaluate headstarting as a management tool for long-lived turtles. *Ecological Applications* 6:556-565.
- Shaver, D. J. 1996a. A note about Kemp's ridleys nesting in Texas. *Marine Turtle Newsletter* 75:25-26.
- Shaver, D. J. 1996b. Head-started Kemp's ridley turtles nest in Texas. *Marine Turtle Newsletter* 74:5-7.
- Williams, P. 1993. NMFS to concentrate on measuring survivorship, fecundity of head-started Kemp's ridleys in the wild. *Marine Turtle Newsletter* 63:3-4.
- Woody, J. B. 1989. International efforts in the conservation and management of Kemp's ridley sea turtles (*Lepidochelys kempi*), p. 1-6. In: Caillouet, C. W., Jr. and A. M. Landry, Jr. (Editors), *Proceedings of the First International Symposium on Kemp's Ridley Sea Turtle Biology, Conservation and Management*, Texas A&M University, Sea Grant College Program. TAMU-SG-89-105. 260 pp.
- CHARLES W. CAILLOUET, JR., NOAA National Marine Fisheries Service, Southeast Fisheries Science Center, Galveston Laboratory, 4700 Avenue U, Galveston, Texas 77551 USA.

HAWKSBILL TAGGED IN THE BAHAMAS RECAPTURED IN CUBA

In recent years, there has been increased interest in the degree to which hawksbill turtles (*Eretmochelys imbricata*) in Cuban waters are isolated from other populations in the Greater Caribbean and the extent to which hawksbills move into and out of Cuban waters (Moncada Gavilan, 1994; Bowen et al., 1996; Heppell and Crowder, 1996). We have just received a tag return from Cuba for a hawksbill that we tagged at Union Creek, Great Inagua, Bahamas (21°07'N, 73°34'W). The hawksbill, which had a straight carapace length (SCL, from nuchal notch to tip of posterior marginal) of 51.6 cm, was tagged on 1 October 1992 with four plastic tags (Dalton Jumbo-Roto). We did not see it again after release. In August 1997, Luis Alfredo Diaz Alavarez, a Cuban fisherman from Banes, Cuba, captured the turtle over a reef about 1 km offshore from Puerto Rico Beach, Banes, Holguín, Cuba. He reported that all tags were still attached to the turtle. This recapture represents a minimum distance of approximately 200 km over water depths of more than 3000 m.

Although our long-term studies at Great Inagua focus on immature green turtles, we also tag hawksbills whenever they are encountered. Since 1975, we have tagged 46 hawksbills with a range of SCL from 24.3 to 71.3 cm. The recapture of only one other hawksbill tagged at Inagua has been reported to us. In September 1983, an immature hawksbill (46.9 cm SCL) tagged at Inagua on 10 September 1982 was recaptured on Providenciales, Turks and Caicos (Bjorndal et

al., 1985). This recovery was in the opposite direction and represented a minimum distance of about 150 km over waters at least 3500 m in depth.

Acknowledgements: Our research program at Inagua has been supported by the Caribbean Conservation Corporation, the U. S. National Marine Fisheries Service, the Bahamas National Trust (BNT), Morton Bahamas, Ltd., and the U. S. Coast Guard. Our work would not be possible without the assistance of BNT wardens James, Samuel and Henry Nixon and Randolph Burrows.

Bjorndal, K. A., A. Carr, A. B. Meylan and J. A. Mortimer. 1985. Reproductive biology of the hawksbill, *Eretmochelys imbricata*, at Tortuguero, Costa Rica, with notes on the ecology of the species in the Caribbean. *Biological Conservation* 34:353-368.

Bowen, B. W., A. L. Bass, A. Garcia-Rodriguez, C. E. Diez, R. van Dam, A. B. Bolten, K. A. Bjorndal, M. M. Miyamoto and R. J. Ferl. 1996. Origin of hawksbill turtles in a Caribbean feeding area as indicated by genetic markers. *Ecological Appl.* 6:566-572.

Heppell, S. S. and L. B. Crowder. 1996. Analysis of a fisheries model for harvest of hawksbill sea turtles (*Eretmochelys imbricata*). *Conservation Biology* 10:874-880.

Moncada Gavilan, F. G. 1994. Migration of hawksbill turtle (*Eretmochelys imbricata*) in the Cuban platform, p.1-8. In: Study of the hawksbill turtle in Cuba (I). Ministry of Fishing Industry, Cuba.

KAREN A. BJORNDAL and ALAN B. BOLTEN, Archie Carr Center for Sea Turtle Research and Department of Zoology, University of Florida, Gainesville, Florida 32611 USA.

TURTLE VOYAGES FROM PAKISTAN TO AFRICA

A green sea turtle (*Chelonia mydas*) was tagged on 12 December 1995 at Hawkes Bay, Karachi, Pakistan, with a monel metal tag W4801 on the right front flipper and W4802 on the left front flipper. Curved carapace length and width were 98 and 83 cm, respectively. At the time of tagging, egg-laying was unsuccessful due to cement debris in the nest cavity. The turtle was tagged as she returned to the sea.

One year later, in December 1996, the turtle was recovered at Beraisole near Askoma Hill off the South Central coast of Eritrea, northeast Africa (13°39'00' N, 42°08'05' E) by a fisherman named Adem Mahammad Hamadu living in Beraisole village. Data from the recovery were contained in a letter penned by Dr. J. C. Hillman, Marine Resources Advisor, Resources and Environment Division, Ministry of Marine Resources, Massawa, Eritrea. The fisherman reported that he removed the tag after capturing the sleeping turtle from shallow (2 m) water. No mention was made of the tag placed on the left front flipper. The turtle was released alive. A T-shirt was forwarded to the fisherman as a thank you for his efforts.

This is only the second long-distance recovery of a turtle tagged in Pakistan. In 1990, a tagged green turtle was reported from Gajarat, India.

FEHMIDA F. ASRAR, Marine Turtle Project, Wildlife Department, Government of Sindh, Karachi, PAKISTAN.