

## Hawksbill Turtle Tagged in Brazil Captured in Gabon, Africa

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On the 2nd of April, 1999, a fisherman of Cap Esterias, Gabon, turned in a tag (number BR15415) to sea turtle researchers working on a genetics project in West and Central Africa. The number was traced back to Projeto TAMAR-IBAMA (National Sea Turtle Conservation Program of Brazil), which has been tagging turtles as part of its conservation programme since its inception in 1980. This particular tag came from a sub-adult hawksbill turtle (*Eretmochelys imbricata*) first captured and tagged on 26th of November, 1994, in Sueste Bay on the archipelago of Fernando de Noronha, Brazil. Since 1987, members of Projeto TAMAR-IBAMA in Fernando de Noronha have been conducting a mark and recapture study of free swimming marine turtles - hawksbill and green (*Chelonia mydas*)- on their feeding grounds in order to collect biometric data and study patterns of growth (Sanches & Bellini 1999). In 1994 the curved carapace length (CCL) of this turtle was recorded as 74 cm, and curved carapace width (CCW) as 65 cm. The turtle was recapture 6 times in the same bay, the last being on August 20, 1995, when its CCL measured 75.5 cm and its CCW 65.5 cm, with a total weight of 40 kg. The original tags were replaced with BR15415 during the last recapture of this turtle in the waters of the archipelago. All tags were made from inconel, and the tag recovered in Gabon was clean and in good shape. The fisherman in Gabon suggested that the turtle was female. The minimum straight line distance between its feeding grounds in Fernando de Noronha and the site of capture in Gabon is 4669 km.

Cap Esterias is at the south end of the Bay of Corisco, which covers an area of approximately 1570 square kilometers between Equatorial Guinea and Gabon. This bay has been identified as a foraging ground for the green turtle, common here throughout the year, along with occasional hawksbill, leatherbacks (*Dermochelys coriacea*) and olive ridleys (*Lepidochelys olivacea*). Unfortunately, all species suffer heavy exploitation from local fishermen who use special nets, harpoons and underwater guns to capture them. Every year, hundreds of Corisco's turtles are sold in the markets of big cities such as Libreville (Gabon) and Bata (Equatorial Guinea). The hawksbill bearing the TAMAR tag was captured near an islet in the bay, known as Mbaye, by a fishermen belonging to the Benga tribe, which relies on turtles as a source of income. Hawksbill nesting has not been confirmed at the beaches around the Bay of Corisco, but more extensive surveys are still needed. Confirmed hawksbill nesting sites in the region include: Pointe Pongara, Gabon (approximately 70 km from the capture site) (Sounguet pers. comm.), São Tomé and Príncipe (250-300 km), southern Bioko Island, Equatorial Guinea (280 km) (Aguirre 1998) and the region of Gamba, Gabon (400 km) (Fretey 1997).

In Gabon and Equatorial Guinea, efforts are being made to increase awareness of the fishermen

of the importance of tag recoveries and to encourage them to turn tags over to researchers. In addition, several small local projects, with the co-ordination of PROTOMAC (Protection de Tortues Marines d'Afrique Centrale), have begun to implement sea turtle protection programmes throughout the Gulf of Guinea. It is recognized that conservation efforts in one region could be rendered useless by exploitation in another part of the range and that only through the concerted efforts of all nations within a population's range can protection be fully effective.

In 1990, another subadult hawksbill turtle (CCL 74 cm; 40 kg) which had been tagged by Projeto TAMAR was captured and killed in Dakar, Senegal. The turtle had been marked in Atol das Rocas, which lies some 80 miles from Fernando de Noronha, and is another important Atlantic island feeding area monitored by Projeto TAMAR. The minimum distance between Atol das Rocas and Dakar is 2735 km (Marcovaldi & Filippini 1991).

Conservation programmes on both sides of the Atlantic must collaborate in order to improve their knowledge of turtle distribution and movements and to protect their shared natural resources.

Projeto TAMAR-IBAMA is currently collaborating with the researchers at the University of Florida in a study of the mtDNA haplotype frequency and distribution of the population of hawksbill turtles in Fernando de Noronha. The results will help discover which nesting populations are contributing individuals which feed but do not nest in on the archipelago. A similar study is in progress at Cardiff University, to determine the genetic structure of the feeding and nesting populations in West and Central Africa.

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