BULLETIN
BOOKI IN ACTION
BOOKI MEANS LEATHERBACK FOR OUR CARIBBEAN PEOPLE
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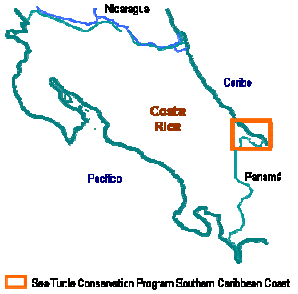
Sea Turtles & Talamanca

Sea turtles are migratory reptiles that grow slowly, needing more than 10 years to reach sexual maturity. They face very high levels of mortality during their early years. Sea turtles live in a number of different marine and coastal ecosystems throughout their life cycle. Developing management strategies for these animals is consequently very challenging. Most sea turtle populations are declining on a global scale. The two main species of sea turtles which nest on Talamancan beaches, the Leatherback and Hawksbill sea turtles (*Dermochelys coriacea* and *Eretmochelys imbricata* respectively) are categorized by the IUCN as critically endangered.

Products derived from killing sea turtles remain a source of income for many people around the coastal zone of Talamanca. Sea turtles also face threats such as:

- Destruction and loss of critical habitats for nesting, feeding and migration.
- Contamination from terrestrial sources (drainage, sewage, and pesticide run-off).
- Uncontrolled coastal development, even within the protected areas where these animals are found such as Cahuita National Park and Gandoca – Manzanillo National Wildlife Refuge (REGAMA).

Products derived form killing remain a source of income for many people around the coastal zone of Talamanca.
In the present we work with the coastal communities to make alive sea turtles and economical alternative. This brings more benefit and gives them the choice to protect the turtles.



Evolution of the Gandoca Sea Turtle Project

1976. ANAI initiated work in Gandoca, with a focus on integrally improving local food production, income generating activities, community organization and conservation of natural ecosystems. At that time, it was common for local inhabitants to poach sea turtle eggs for use at home or for sale in the black market.

1984. A Tropical Science Centre report concluded what all local people knew: almost 100% of the turtle eggs laid on Gandoca beach and the neighboring beaches were being poached. ANAI began a program to establish a community managed protected area covering the coastal forests and wetlands, the turtle nesting beaches, and the other marine habitats between Puerto Viejo and the border with Panama.

1985. As a result of the collaborative effort between ANAI and the Costa Rican Wildlife Authorities, the Costa Rican Government created the 10,000 hectare Gandoca – Manzanillo National Wildlife Refuge.

1986 – 1989. ANAI began in-situ conservation actions, including patrolling the beach to protect nesting turtles, reporting illegal poaching on the beaches and participating in legal processes against poachers.

1990. Environmental education and conservation techniques on the beach were carried out for the entire nesting season for the first time, working with local volunteers.

1991. Research on different hatchery systems was carried out, boosting hatchling survival. A 7.4 Richter scale earthquake significantly modified the beach ecosystem.

1992. Beginning of the International Volunteer Program. Tagging activities started.

1993. Work began to help local families develop food, lodging, guide service and other related small businesses, establishing a positive link between local economic development and the conservation activities. An ecotourism training program and a small loan program were initiated.

1996. Results from the project began to be presented in scientific papers. The project director, Didiher Chacón-Chaverri, won the Girolame Family Award from the Tropical Biology Journal for the best scientific publication of the year. Local organizations began to participate in the design and management of the project.

1997 – 1999. The project plays a leadership role in the formation of the Costa Rican Sea Turtle Conservation Network and the Central American Sea Turtle Conservation Network. ANAI began to extend efforts to the San San beach across the border in Panama. The project begins to train biologists and conservationists from other countries in turtle beach conservation methodologies and management.

2000. Monitoring and protection of Leatherback and Hawksbill nesting starts in Cahuita National Park.

2002. ANAI's **Talamanca Initiative** received the prestigious **U.N. Equator Prize** at the World Summit for Sustainable Development in Johannesburg. Referred to as the "Oscar of Sustainable Development," this prize recognizes "extraordinary accomplishment in reducing poverty in the tropics through the conservation and sustainable use of biodiversity." The Sea Turtle Conservation Program was an outstanding example of this

2005. The project director, Didiher Chacón-Chaverri, was honored with a Whitley Award, for his work with Sea Turtle Conservation.

2006. The poaching rate in Cahuita is down to 22% and in Gandoca is less than 3%.

Gandoca Project

During the 2006 nesting season in Gandoca, a total of 419 Leatherback nests, 32 Hawksbill nests and 24 Green turtle nests were recorded.

Leatherbacks lay their nests on several beaches, even within one nesting season, a behavioral strategy used to maximize their reproductive success.

The population that nests at Gandoca tends to use several different beaches along the Costa Rican and Panamanian coasts. They lay eggs at intervals of 2 and 3 years, which is typically the period of time needed to migrate to feeding grounds and return to the nesting beaches, where each turtle deposits up to 10 different clutches at 10 day intervals.

A total of 140 Leatherback females were identified during the 2006 season. Of these, 106 had either an external metallic identification tag or an internal PIT electronic tag; 18 had evidence of an external tag that had fallen off; and 16 had not been previously tagged, suggesting they may have been nesting for the first time. Of the 106 females with tags, 60 had been originally tagged at Gandoca Beach, 27 were from Panamanian Beaches, and 19 were first tagged at other Caribbean beaches of Costa Rica. Project personnel were able to tag all first time nesters and those turtles lacking either metal or internal tags.

The results of the conservation efforts used since the beginning of the program are evident. Illegal poaching of eggs in Gandoca has been reduced to less than 3%. This year, a total of 20,453 Leatherback hatchlings were safely released at sea to continue their life cycle, fulfill their role in the ecosystem, and one day return to nest on our beaches. Our conservation efforts are therefore helping to increase population numbers not only on Gandoca Beach but also on other beaches in Costa Rica and in other countries.

Black Beach and Cahuita Projects

In the 2006 nesting season, a total of 92 Leatherback nests, 40 Hawksbill nests and 6 Green turtle nests were recorded from Black Beach and Cahuita Beach. The researchers were able to identify 30 different Leatherback females; half of them appeared to be first time nesters and were marked for the first time on these beaches.

Despite Cahuita beach being located inside a National Park, illegal poaching of eggs is still a significant problem. Before the start of conservation efforts in the year 2000, almost 90% of the eggs laid each year were taken. The introduction of the conservation program has reduced the number of eggs poached to less than 22%. The number of hatchlings that are now reaching the ocean has increased dramatically, which helps to restore the overall sea turtle population. This year, 4,000 Leatherback hatchlings were released to the sea.

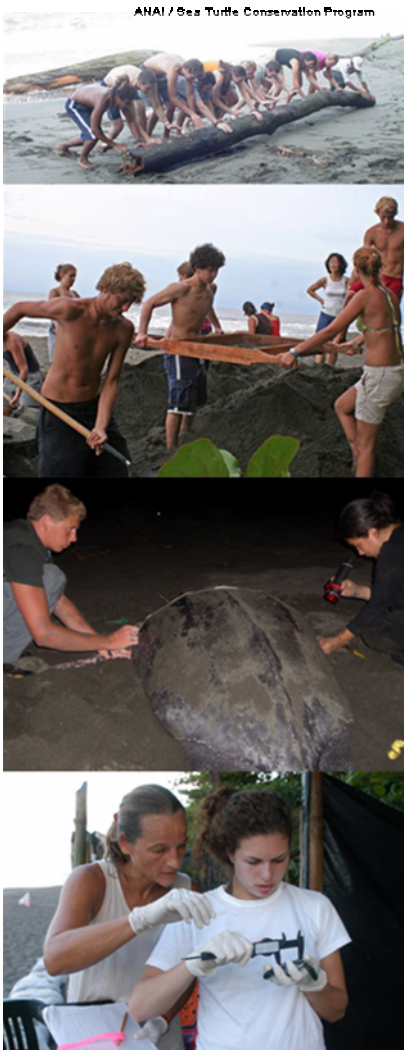
The continuance of current conservation measures on these beaches is very important in order to keep increasing the numbers of sea turtles and enhance the chance of long-term survival for these magnificent creatures.

Once the turtle lays her eggs, she immediately returns to the sea and does not provide any parental care to her offspring. Even before the eggs hatch they face many dangers (poachers, predators, erosion and others threats).

Remember that extinction is FOREVER - Join our sea turtle conservation actions.

Volunteer Program:

Historical background and current situation



The volunteer based conservation and research program was established in 1992, with the principle that volunteers would be an integral element of the program, making it possible to increase the scope and quality of the monitoring and conservation activities. The program was designed so that the international volunteers participating in the program became an alternative source of income for the local families of Gandoca. This led to the active participation of the local population in the program.

For example, local families provide food and lodging for the volunteers who, in turn, receive a unique and culturally rich experience. The socio-economic benefits brought about by the program are manifested through the locals' current efforts to protect the turtles. Conservation generates far more income compared to killing turtles, poaching eggs or destroying the environment. This new economic alternative helped to construct a community with stronger ethics and sensitivity for environmental issues.

Additionally, the annual participation of international volunteers in Gandoca and Cahuita helps to increase awareness of conservation issues and improve ethical conduct with the environment throughout the world. Through our training and seminars, volunteers, who have come from over 25 countries, become ambassadors of our message and our philosophy.

Our program is the oldest Leatherback conservation project in Costa Rica and is world renowned for its successful strategy of community-based conservation of marine turtles.

Conservation Commitment

In conjunction with the research and conservation activities going on in Cahuita National Park, Black Beach and Gandoca in 2006, the program has contributed and participated actively in:

The National Network for Marine Turtle Conservation in Costa Rica.

Supporting other projects in:

- Costa Rica (San Francisco de Tortuguero).
- Panama (San San – Sixaola, EWT – Soropta, "Asociación de Amigos y Vecinos de la Costa y la Naturaleza" AAMVECONA, CCC – Chiriqui);
- Nicaragua ("Proyecto de zonas Costeras", Carazo, Nicaragua).

Providing international expertise to agencies such as WIDECAST, The National Aquarium in Baltimore, WWF, and SEA TURTLE Inc.

Assisting the Costa Rican government in initiatives like the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) and the Inter-American Convention for the Protection and Conservation of Marine Turtles (CIT).

Creating the hatchery management manual for the National System of Conservation Areas (SINAC).

Tutoring post-graduate students in their thesis research.

Editing, printing and promoting educational material.

Providing MINAE personnel with training and qualifications to seize illegal marine turtle products.

Taking action related to the agenda of the Alliance for Leatherbacks in the Caribbean.

National and International exchange of community members with the objective of promoting the success of the community based conservation model in Gandoca and elsewhere.

Participating in the XXVI International Symposium on Sea Turtle Biology and Conservation, Athens 2006.

SEIZURE OF ILLEGAL MARINE TURTLE PRODUCTS

ANAI / Sea Turtle Conservation Program

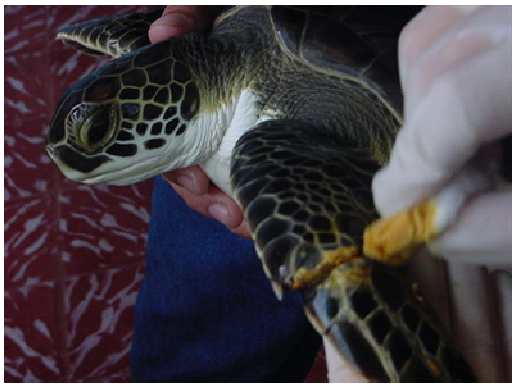
The illegal trade of the sea turtles products is a serious threat. Anywhere in the world, it is illegal to sell, purchase or possess any sea turtle products.

Puntarenas is a tourist area on the Pacific Coast of Costa Rica. On the 1st of August, a joint operation by 6 agencies (the Marine Turtle Conservation Program, MINAE, the police, the National Network for Marine Turtle Conservation, PRETOMA, and WIDECAST) led to the seizure of 435 illegal hawksbill pieces, such as earrings, bracelets, rings and guitar picks.

These activities were part of several operations that the project has carried out within Costa Rica and throughout Central America over the last six years. This operation also served as a demonstrative example for the students in the International Course of Marine Veterinary Medicine (MARVET), which was held that week in the Marine Park of the Pacific.

Rescuing Turtles

Over the last two years, the project has collaborated with the Caribbean Marine Turtle Rescue and Rehabilitation Centre to rescue and release back into the wild 6 Green turtles and 30 Hawksbills. These animals had been kept in tanks as pets or were victims of oil spills and boat collisions.



ANAI / Sea Turtle Conservation Program

The Sea Turtle Conservation Program has reported the first scientifically validated sightings and nesting for Loogerhead turtles in Cahuita since 26 years.

ANAI / Sea Turtle Conservation Program

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Loggerhead Sea Turtles in Cahuita National Park

During 2005 and 2006, entanglement nets were put on the reefs to monitor the occurrence and the feeding behaviors of the sea turtles in the park. It appears that at least two juvenile individuals use the reef as a feeding ground and possibly reside there. This year, one adult male was captured and tagged, and another individual, possibly a female was observed near the capture area. One of the captured turtles had tags that were placed in 2005 in Pearls Cays, Nicaragua.

Expansion of Conservation Efforts

The conservation program in Gandoca has been protecting and monitoring marine turtles since 1990. Our work over this period has made it possible to provide continuous protection in Gandoca and to directly support work on other beaches in Northern Caribbean Panama such as San-San Sixaola, Changuinola and Soropta. Research and tagging efforts have shown that females who nest in Gandoca frequently deposit other clutches on these adjacent beaches.

The Sixaola River separates Gandoca beach and the beach of San San – Sixaola, and also acts as the border between Costa Rica and Panama. Evaluations over the past years have shown that the beach in San San recorded high rates of egg poaching, as well as some cases of slaughtered nesting females. Since March of 2006, with the help of the Endangered Wildlife Trust (EWT), daily monitoring of nesting marine turtles on the beach was initiated, as well as other activities to help their protection. To date, a part of the community is willing to participate in the activities and show positive attitudes towards the program; they are helping to support the police and the Environmental Authority of Panama (ANAM) working to protect the turtles. A total of 135 Leatherback nests, 6 Hawksbill nests and 12 Green turtle nests were recorded.


ANAI / Sea Turtle Conservation

Cases of slaughtered adult females on nesting beaches show the necessity to expand the work with local communities to help conserve these animals that ar e facing extinction.

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The funds received through the "Adoption" program are channeled directly to support our conservation activities and helps to sustain our sea turtle conservation projects.