CARIB TAILS
An International Citizen Science Project for Yachters

CARIB TAILS is enlisting recreational sailors and cruisers as citizen scientists to help track the movements of humpback whales between their North Atlantic feeding grounds and their breeding grounds in the Wider Caribbean Region. Citizen scientists have the opportunity to take on a special role to assist research by photographing the distinct patterns on the tails of humpback whales in their Caribbean breeding grounds. All that is needed is a camera and knowledge of safe boating around whales. Using photo-identification techniques to help monitor the recovery of this endangered species, the project is an international research collaboration between Stellwagen Bank National Marine Sanctuary (SBNMS) and its Sister Sanctuary Program partners, together with UNEP's Caribbean Environment Programme.


Credit: D. Cholewiak

A Sanctuary Concern

NOAA's Stellwagen Bank National Marine Sanctuary, (SBNMS) located within the U.S. Gulf of Maine, protects a shared population of approximately 1,000 humpback whales. The Stellwagen Bank NMS is a regular summer feeding site for some of the humpback whales that winter in the Caribbean. Wintering areas in the Greater Antilles have been well studied and have formed the basis for a Sister Sanctuary in the waters off the Dominican Republic. Currently there is limited information about specific breeding areas for this population in the Lesser Antilles. Contributions of tail fluke photographs from the Eastern Caribbean region are critical for understanding migratory routes and advancing conservation efforts.

Humpback Whale Flukes (left to right): Tofu, Burst, Seal, Loon and Cardhu. *Photos courtesy of Whale and Dolphin Conservation.*

Flukeprints: Photo-Identification

Individual humpback whales are identified by the black and white patterns on the underside of their (tail) flukes. When humpbacks dive, they often raise their flukes above the water's surface and provide researchers the opportunity to photograph the natural markings on the underside. Photo-identification has allowed researchers to monitor the movements, health and behavior of individual humpbacks since this research began in the 1970's.

INVEST in PROTECTING HUMPACK WHALES — GET INVOLVED: For more information about how to participate in CARIB TAILS, and requirements for submitting your images, please visit the website www.caribtails.org

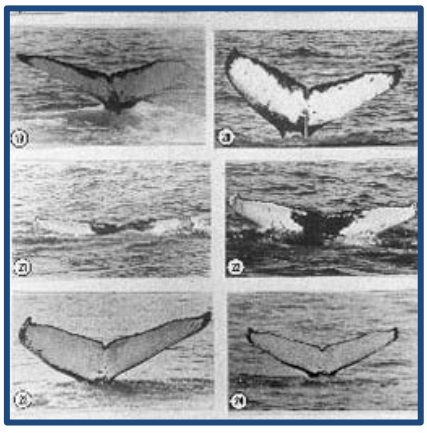
HUMPBACK IDENTIFICATION

CARIBBEAN HUMPBACK TAIL FLUKE photographs are added to the North Atlantic Humpback Whale Catalog, which has been maintained since 1976 by Allied Whale at the College of the Atlantic, Bar Harbor, Maine USA. It is the result of collaboration between scientists, naturalists, citizen scientists and tourists who have contributed photographs of humpbacks from regions including feeding grounds in the United States, Canada, Greenland, Iceland, Norway and the breeding grounds of the Wider Caribbean Region. By cataloguing individual humpback whales, scientists can monitor individual animals and gather valuable information about population sizes and migration patterns. When new photographs of humpback tail flukes are received, they are matched against the 8,000+ photographs in the existing North Atlantic Humpback Whale Catalog. The information submitted is used in mark-recapture studies (i.e. photo-identification) to help monitor the recovery of this endangered species.

Citizen Science Improving the Quality of Marine Mammal Research

Tail fluke photos gathered and analyzed from CARIB Tails and sister sanctuary research partners offer new perspectives to the timing and movement patterns of humpback whales from the southeastern Caribbean. Recent data shows that the whales mating and calving in this region are not a representative subset of those that winter in the Dominican Republic.

The emerging data demonstrates that there is a strong tendency for whales from the southeastern Caribbean to migrate to feeding areas in the eastern North Atlantic, notably to Norway. Therefore, the whales visiting the southeastern Caribbean represent a previously undescribed and behaviorally distinct population segment within the North Atlantic. This novel perspective will help to redefine the West Indian humpback whale breeding stock and provide the opportunity for continued evaluation and caution about changing the conservation status of this population.



In this example from the Catalog, new photographs (right column) are carefully compared and matched to existing photographs (left column).

Photos taken under NOAA Fisheries research permits or Northeast Region whale watching guidelines.

SALT's Flukes

"SALT"
Matriarch of Stellwagen Bank
National Marine Sanctuary Humpbacks

"Salt", the first humpback whale to be given a name, is known as the matriarch of Stellwagen Bank National Marine Sanctuary because she has been seen there in all but one summer since 1976. She was also the first humpback whale to be identified in 1979 by researchers on Silver Bank off the Dominican Republic. Those photos helped scientists confirm the migratory connections that link northern feeding grounds with southern breeding grounds.

Photo-ID data can reveal the milestones of an animal's life. For example, Salt is a great-grandmother. Since 1976 she has escorted 13 of her calves from the mating and calving grounds in the Caribbean back to New England's feeding grounds. She currently has 11 grandchildren, and one great-grandchild, representing the fourth generation of humpbacks in her family group. And she is over 40 years old!

This information helps advance understanding of marine mammal conservation and the vital need of habitat protection beyond national borders.