E Mālama i Na Honu

Care for the sea turtles

National Park Service
U.S. Department of the Interior

Kaloko-Honokōhau
National Historical Park

Hanau ka po ia honu kua nanaka

From the darkness of time came the sea turtle with its plated back

- *Kumulipo:* A Hawaiian creation chant

150 million years before the fiery birth of the Hawaiian Islands, even before there was a Pacific Ocean, the first *honu* (green sea turtle, *Chelonia mydas*) raised its head from the water to breathe. Looking into the teary eyes of a basking turtle, we are literally looking at a survivor of the age of dinosaurs. From ancient reverence and utility to modern wonder, the turtle has fed our bodies and spirits. Modern scientific studies of sea turtles underscore the links that bind our fate to that of the *honu*. Kaloko-Honokōhau provides a rare opportunity to see healthy sea turtles in their natural habitat. Many turtles haul out onto the beach to bask, but this leaves them vulnerable to curious visitors. Please respect the *honu* and observe at a distance this great ambassador to the seas.

Honu & Culture

Turtle petroglyph pecked into lava

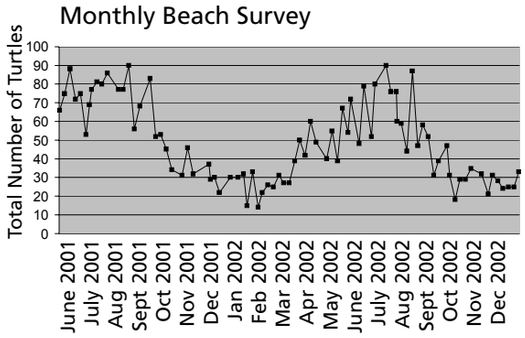
The *honu* is a powerful metaphor of the connection between people, land, and ocean. Hawaiian legend holds that the hero Aiai created *honu* by drawing marks upon a rock near the water turning it into a turtle. Because it is part earth, the creatures must return to land to lay their eggs. The *honu* has a place in myth and legend as a messenger, a monster sent to attack enemies, a living canoe that transports lovers to each other, and even as the foundation of some of the islands. A famous hula imitates the thrashing and digging motions of a turtle laying her eggs. Turtle imagery appears in rock art, tapa patterns, and in string games. Encounters with the creature are counted as the highlight of many visitor's trip to the park. The ancient connection between land and sea that the *honu* represents is still strong today.

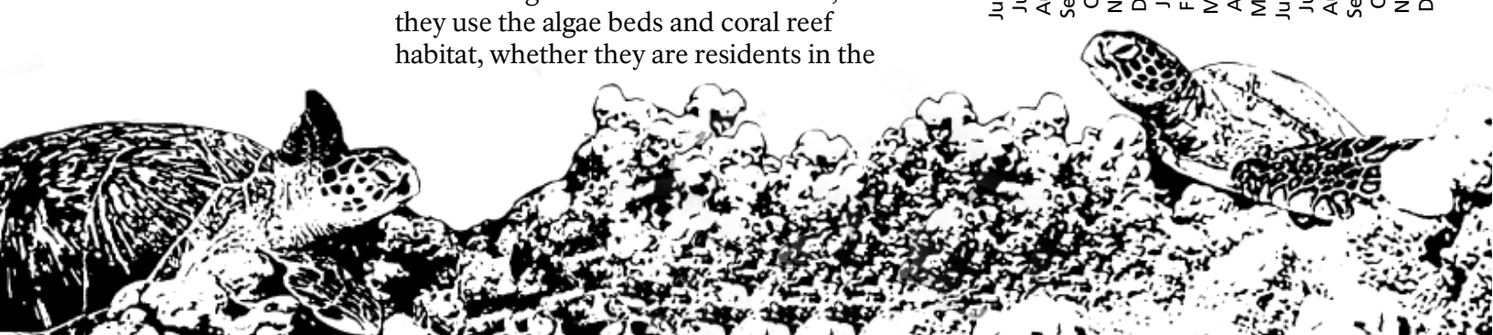
Research and the Honu

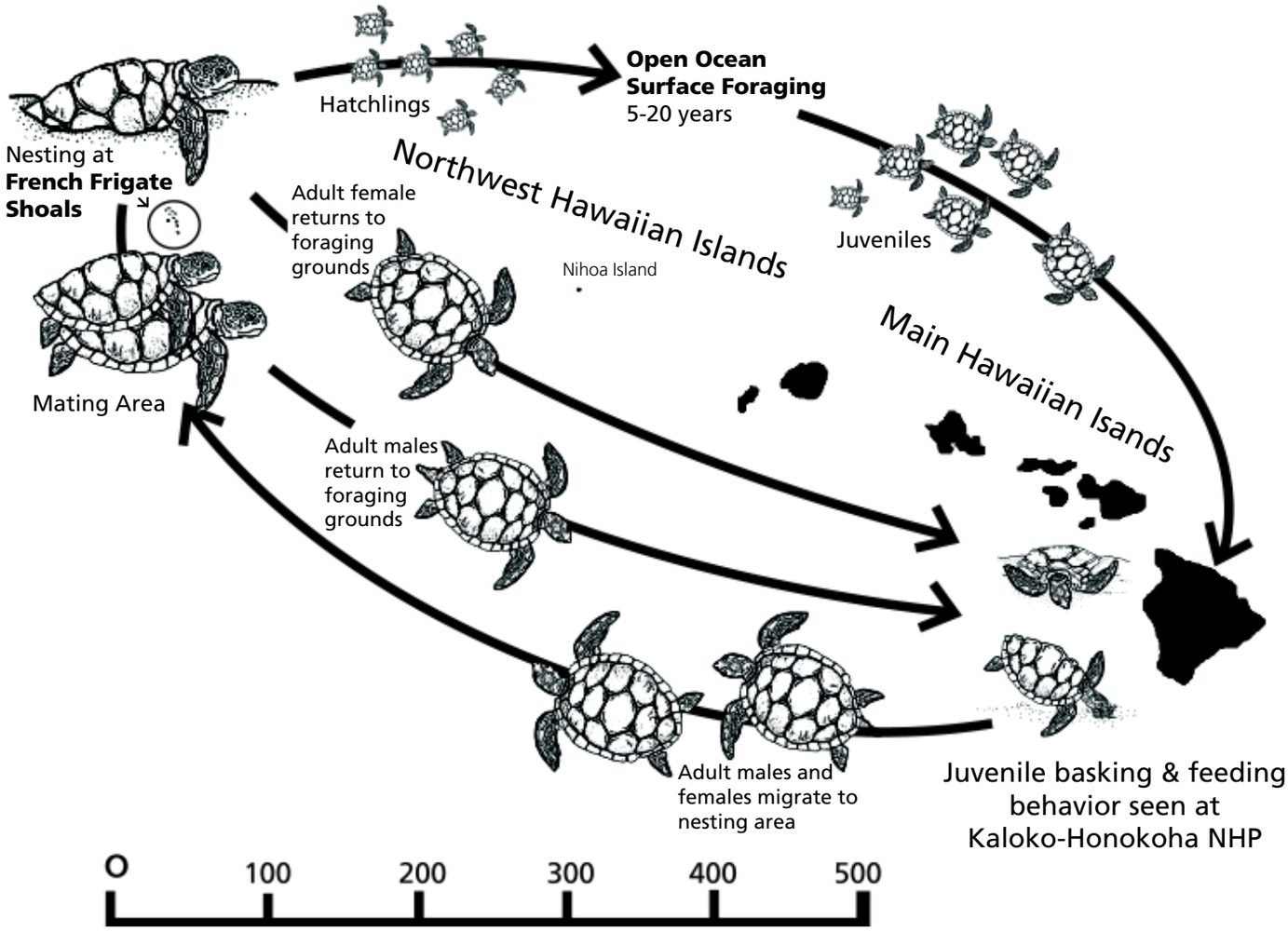
In July of 1978, green sea turtles were listed as threatened species. Four months later, Kaloko-Honokōhau was designated a National Historical Park. In the refuge of the shallow waters modified by people to raise fish hundreds of years ago, the turtle has flourished. Currently more than 136 turtles use the park on a regular basis and are likely long-term residents. However, they are all juvenile or sub-adults weighing only 19-138 pounds as opposed to the 200-400 of a full-grown animal. It is most likely that this young population was born after the federal listing of the honu and is a direct result of their protection. They never have known hunting. Recently in the main Hawaiian Islands, turtles have begun exhibiting "basking behavior" where they "haul-out" on shore to rest. This behavior is a relatively new phenomenon here and is believed to be a result of the protection offered in the park.

The park has an active turtle research program in cooperation with the Marine Turtle Research Program of the National Marine Fisheries Service (NMFS). The park and the NMFS are investigating the health and growth rates of the turtles, how they use the algae beds and coral reef habitat, whether they are residents in the park or migrating through, and their seasonal abundance within the park (see Monthly Beach Survey Figure).

Preliminary results lead to more questions. A major concern regarding the entire Hawaiian green turtle population is a disease called green turtle fibropapillomatosis. Infected turtles have lesions and tumors that erupt externally and internally. Its cause is not known, but it appears to be fatal. It primarily strikes juvenile turtles, the same age group that resides in Kaloko Honokohau. Thankfully, west coast Hawaii Island turtles do not yet have this problem. Why? We continue to be vigilant for signs of the disease.







Lifecycle of the Honu

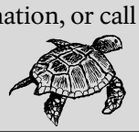
A marine reptile, the honu breathes air with lungs, has scales, and lays eggs on land. Its life cycle encompasses many different habitats and behaviors at different stages of growth. This makes the honu a good indicator of oceanic health, but also subjects it to a wide range of human and natural threats.

Born in a scurry of flippers and scratching to dig up through the sandy nest to reach the flowing tide, the hatchling turtle is threatened before it ever meets the ocean. Throughout the world predators, egg harvesters, coastal development, housing and hotel lights, and polluted water all kill baby turtles. If they make it, they swim to the open ocean to eat jellyfish and other floating animals. Often discarded plastic bags, balloons, and bits of trash are mistaken for food and constrict the digestive tract and kill the turtle. As juveniles, the *honu* gravitate to the coastal waters of Hawaii, grazing like cows on patches of *limu* or algae. Here they are vulnerable to speeding boats, entanglement in nets and other shore-fishing gear, and pollutants poisoning the algae and reef beds. When they have fattened and reached maturity at around 25 years, they make the 800-mile journey to French Frigate Shoals in the Northwest Hawaiian Island chain. Here they mate. Drift nets and long-lines are a threat during migration, and sharks are attracted to the numerous turtles during mating. Finally the eggs are laid and the cycle is renewed. The lifespan of a *honu* is not known, but they could live up to 100 years. The sex of the turtle depends on the temperature conditions in the nest. Ironically global warming could affect the population by fostering only one sex.

Kaloko-Honokōhau is witnessing a revival of turtles. The population is increasing, and the animals appear healthy. We are observing them in the equivalent of their "teen years" eating and resting on the shore until they are mature. As time progresses, we hope to see more age distribution. The *honu* is not out of danger yet, but they are a classic example of the power of conservation and preservation.

Additional Information

The National Park Service has specific information about the sea turtles of Kaloko-Honokōhau NHP. Inquire at the visitor reception desk for more detailed information, or call 808-329-6881



Books

The biology of sea turtles. Edited by P.L. Lutz & J.A. Musick

Decline of the sea turtles:Causes and prevention. by The National Research Council

Fire in the turtle house: The green sea turtle and the fate of the ocean. by Osha Gray Davidson

Sea turtles of Hawaii. by Patrick Ching

Video

Red Turtle Rising. Artifact Studios in association with the Honu Project (1999)

Fall of the Ancients, Hawaii's Green Sea Turtles in Crisis. Earthtrust Production in Association with the Honu Project, Kailua, Hawaii (1992).

Internet:

http://www.nmfs.noaa.gov/prot_res/PR3/Turtles/turtles.html

http://www.turtles.org

http://www.hpa.edu/TurtleTagging/TurtleTagging.html

http://www.nmfs.hawaii.edu/psi/pubs94.html

http://www.nature.nps.gov/hottopics/greenturtle.htm

http://www.reef.org/data/haw/nmfs_turtleform.pdf

http://www.earthtrust.org/wlcurric/turtles.html

http://www.environment-hawaii.org/archive.htm do a search on turtle