



MARINE TURTLES



Information Sheet 1.B. HAWKSBILL TURTLES

GENERAL BIOLOGY

BIOLOGICAL TAXONOMY

Family: Cheloniidae

Scientific Name: *Eretmochelys imbricata*

Common English Name: Hawksbill turtle

Samoan Name: Laumei ulumanu/Laumei fai una/Laumei gutu maai/Laumei gutu umi

PHYSICAL FEATURES

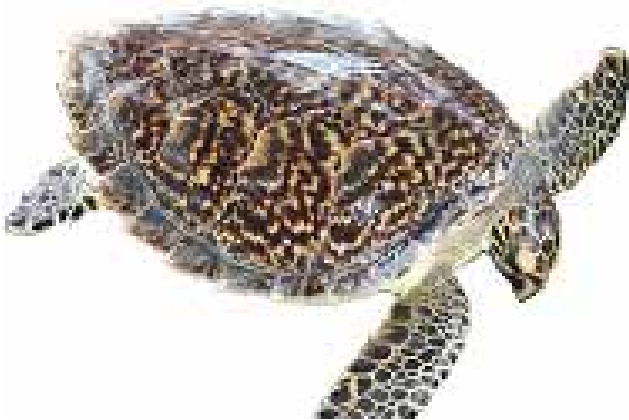


Plate 1: Hawksbill turtle

The hawksbill turtle gets its common English name from its sharp beak-like mouth which distinguishes it from other turtle species. An adult usually weighs up to about 270 pounds with a carapace length of around 3-feet. The carapace is mainly mottled brown with dark and light spots and streaks. It is also low domed with upturned edges, and usually has 4 or more pairs of costal scales (large scales on both the outer sides). The thick scales overlap each other. The animal's underside is light yellow and white. This counter-shading helps camouflage the turtle from potential predators.

Males can be distinguished from females by their longer, thicker tails that extend well beyond the posterior part of the carapace.

DISTRIBUTION AND HABITATS

Hawksbills concentrate around tropical reef areas in the Atlantic, Pacific, and Indian Oceans. It is the only turtle species which nests in Samoa.

Hawksbill turtles generally inhabit rich marine areas where coral reefs exist. They also prefer

shallow waters, lagoons, and bays, with seagrass and algal meadows. The ledges and caves of reefs can also provide resting areas for the turtles.

REPRODUCTION

Sexual maturity varies among populations depending on environmental factors such as the habitat temperature, feeding regimes and natural selection (Hirth, 1993). Females are thought to be sexually matured within 20-50 years of age. Mating occurs mainly in shallow waters near nesting beaches. During copulation which may last for several hours, males use their heavy claws and tails to hold onto the carapace of female turtles.

FEEDING

Juvenile, sub-adult and adult hawksbill turtles are omnivorous scavengers, feeding primarily on sponges found on the solid substrate of coral reefs. Sea anemones and a variety of small invertebrates are sometimes eaten. Unfortunately, other human discarded materials such as styrofoam and plastics have also been mistaken as food. The hawksbill's narrow, sharp beak is an excellent tool for foraging among coral crevices.

MIGRATION

Hawksbills are considered the least migratory of all turtle species. Unlike the green turtles that often migrate several hundred miles between feeding and nesting grounds, hawksbills tend to travel around or close to areas which are near nesting grounds all year-round.

NESTING ACTIVITIES

Nesting intervals of hawksbills falls within the range of 2-3 years with the nesting season usually from October to June, but most nesting activities occur in January and February. At night, nesting females will come ashore on small, isolated beaches to lay eggs. Choosing a site beyond the high tide line and often underneath vegetation, solitary females will dig a body pit using their fore and hind flippers to excavate an egg chamber. After the last egg has been extruded,



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the female will cover the egg cavity with sand and immediately return to sea.

Females only nest every 2 to 3 years, but can lay up to six clutches of eggs within one breeding season, at an average 15-21 day interval. Re-nesting females will often return to the same beach, sometimes within meters of previous nests. Each clutch contains from a few up to 230 small eggs (the average being about 130).

HATCHLINGS

Incubation occurs within 50 to 70 days. Hatchlings then begin to emerge usually at night when the sand temperature is cool, and predators (e.g. crabs, rats, fish) pose less of a threat. These immediately head towards the sea, and upon reaching the water safely, hatchlings disappear to the open ocean. At this stage, they are less likely to be seen by humans until they reappear as juveniles in coastal waters.

NESTING AREAS

Some key localities and important sites in and around Samoa where they are generally found foraging and nesting are around the coastal areas of Tafua/Faala peninsula, Gataivai, Falealupo, Falelima, Papa Sataua, Vailoa Palauli and Fo'a (Asau) on Savaii Island. Nesting areas on Upolu Island include Luatuanuu, Saanapu and Salamumu coastal stretch and the Aleipata offshore islands of Nu'ulua, Nu'utele and occasionally on Namu'a,

THREATS TO HAWKSBILLS

Other than natural predation, historically, humans have been the greatest threat to this turtle species. Killing it mainly for its highly prized "tortoise shell" led it to near extinction. Today, most nesting populations are declining due to the exploitation and destruction of their nesting habitats. Beach development, shoreline and dune erosion, unregulated fishing and reef

damaging activities have significant impacts on hawksbills and their hatchlings.

POPULATION STATUS

Worldwide, the hawksbill turtle species is critically endangered and has been red-listed by

the International Union for the Conservation of Nature (IUCN). Similarly, it is listed in Appendix 1 of the Convention of the International Trade of Endangered Species of flora and fauna (CITES), simply indicating the need to control or protect the trade of such species.

The status of survival of hawksbill turtles within and around the waters of Samoa is said to be endangered and owes to much protection. This being the main reason for the hawksbill turtle farming initiative of the Fisheries Division in early 1980s which aimed at augmenting hawksbills population in the country.

HOW WE CAN HELP SAVE THIS TURTLE SPECIES

The Hawksbill turtle is the only turtle which has established rookeries or nesting grounds in Samoa. We can help save, protect and manage this endangered marine turtle by:

- reporting turtle tracks, nesting activities, turtles basking on land, or injured or dead marine turtles.
- Avoiding walking through sand dunes and nesting beaches especially during the nesting seasons as this disturbs nests and can cause dune erosion, etc.
- Observing the Regulations regarding turtles at all times

REFERENCES

Bell, L.A.J. and A. Mulipola. 1994. Western Samoa Fisheries Resources Profile. Fisheries Division. Apia, Samoa.

Hirth, H. F. 1993. Marine Turtles In: Wright, A. & L. Hill (eds): Nearshore Marine Resources of the South Pacific: Information for Fisheries Development and Management. ISP, Suva., FFA, Honiara., ICOD, Canada. p. 329-370.