

MARINE TURTLES

Atlantic loggerhead turtle, *Caretta caretta*

Status: *State:* Endangered *Federal:* Threatened

Atlantic leatherback turtle, *Dermochelys coriacea*

Status: *State:* Endangered *Federal:* Endangered

Kemp's ridley turtle, *Lepidochelys kempii*

Status: *State:* Endangered *Federal:* Endangered

Atlantic green turtle, *Chelonia mydas*

Status: *State:* Threatened

Federal: Threatened/Florida and Mexico breeding populations endangered

Atlantic hawksbill turtle, *Eretmochelys imbricata*

Status: *State:* Endangered *Federal:* Endangered

Identification:

Loggerhead: The loggerhead sea turtle's carapace (upper shell) is a distinguishing reddish-brown for both adults and sub-adults. Scales on the top and sides of the head and top of the flippers are also reddish-brown, but have yellow borders. The scutes (scale-like, horny layers) on the carapace are thin, but very hard and very rough, and often covered with barnacles. The neck, shoulders and limb bases are dull



Photo by Ryan Haggerty, courtesy US FWS

brown on top and medium yellow on the sides and bottom. The plastron (underneath shell) is also medium yellow. The very strong horny beak is comparatively thicker than other sea turtles. The foreflippers are relatively short and thick, with two visible claws; rear flippers have two to three claws.

Generally, the mean straight carapace length of mature females is between 81.5 and 105.3 cm (32.6 in. to 42.12 in.), with a mean weight near 75 kg (65.7 to 101.4 kg) or 165 lbs. (144 to 223 lbs.) (FAO 1990).

Hatchlings are dark brown, with flippers that are pale brown on their edges and underneath, and with a plastron that usually is much paler. The hatchlings and juveniles have blunt spines on the scutes on their carapace; the spines disappear during the juvenile stage (Unless otherwise noted, all physical descriptions in this section rely upon FAO 1990).

Leatherback: The largest of all sea turtles, the leatherback is one of the largest living reptiles; only some species of crocodiles are larger. It is easily distinguished by its black, leathery skin, huge, spindle- or barrel-shaped bodies and long flippers. As Archie Carr wrote, "This extraordinary turtle ... could be confused with nothing else" (Carr 1995). Rather than horny shields, the body is covered with a layer of rubbery skin that has seven longitudinal ridges (keels) on the back and five underneath.



Photo courtesy US FWS

The dorsal or upper side of adults is predominantly black. Scattered white blotches arranged along the keels become more numerous along the sides and even more so underneath, with the ventral side primarily whitish. Pinkish blotches on the neck, shoulders and groin intensify when the turtle is out of the water.

The head and neck are black or dark brown, mottled with white or pink blotches. Each side of the upper jaw has a tooth-like cusp, giving the turtle a W-shaped beak. Paddle-like, clawless limbs are black with white margins, and might have white spots. Males can be distinguished from females by their much longer tails and narrower and less deep bodies.

Hatchlings are dark brown or black, with white or yellow carapace keels and flipper margins. Their skin is covered with small scales that become thinner with each molt, which starts about three weeks after hatching. Claws may be visible in hatchlings, but they vanish in subadults and adults.

Adults generally weigh between 290 and 590 kg (638-1298 lbs.), but can weigh up to 2,000 pounds; its average carapace length is 155 cm, or 62 inches (US FWS 1980a, US FWS 1998).

Kemp's ridley: This is the smallest of all sea turtles. From above, the short, chunky shell appears broadly heart-shaped to nearly round, with high vertebral projections and serrated edges. The turtle has a moderate-sized sub-triangular head and a somewhat hooked beak with large crushing surfaces. The plastron has several small pores on each side, which lead to Rathke's glands (secretory structures that release an odiferous substance that may play a pheromonal role when females mass together off their nesting beaches). Each foreflipper has one visible claw, with one or two claws on the rear clippers.



Photo courtesy US FWS

Dorsally, the color of the adult skin and shell is plain olive-gray above, and white or yellowish underneath.

When wet, hatchlings are jet black on both sides, with two visible flipper claws. As the turtle matures, the hingeless plastron changes to white, then yellow while the carapace changes to gray, then olive green.

Adults weigh between 35 and 42 kg (77-92 lbs.) and have a carapace length of 56 to 70 cm (22.4-28 in.) (US FWS 1980d).

Green sea turtle: This is the largest cheloniid sea turtle, with a low, broadly oval carapace and small head with one pair of pre-frontal scales that are unique to green turtles. Single-clawed flippers are paddle-shaped. Color varies widely. Adults have a smooth carapace that ranges from pale to very dark and from plain colors to brilliant mixtures of yellows, browns and yellows that radiate in stripes or are splattered with dark splotches.



Photo by David Vogel, courtesy US FWS

The plastron is whitish to light yellow. The upper surface of the head is light brown with yellow markings; sides of the head are brown with broad yellow margins. The neck is dusky above and yellow near the shell below. The tail and flippers are colored like the carapace and plastron. Each flipper has one visible claw.

Hatchlings are dark brown or nearly black on the upper side, with white plastrons and white margins on the shell and limbs. In juveniles, the carapace has radiant patterning similar to hawksbills, and the scales of the head and upper side of the flippers are fringed by a narrow, clear yellowish margin.

Adults weigh between 100 and 200 kg (220 to 440 lbs.) and range between 91 and 122 cm (36.4 and 48.8 in.) (US FWS 1980b).

The most colorful sea turtle, the medium-sized **hawksbill turtle** has an elongated, oval shell distinguished by overlapping scutes on the carapace. The overlapping is most pronounced at maturity, but often disappears in older individuals. Barnacles are often found on the carapace and plastron. Its medium-sized head is narrow, with a pointed beak. There are two claws on each fore and rear flipper. As is true of other sea turtles, males have stronger, more curved claws and longer tails than the females.



Photo by Anja G. Burns, courtesy US FWS

Color varies widely, from very bright colors to heavy dark brown (in the eastern Pacific). The scales of the head have creamy or yellow margins, while the carapace has an amber "ground" color overlaid with spots or stripes of brown, red black and yellow usually arranged in a radiant, fan-shaped pattern. Underneath, the plastron is amber colored. The dorsal, or upper, part of the head and flippers are darker, with less variation in color.

The carapace of hatchlings and juveniles is wider than the shell of adults, with three keels of spines along the carapace which disappear with age. Hatchlings are mostly brown, with paler blotches on the rear part of the carapace, with small pale spots on the top of each scute along the plastron's two keels (FAO 1990). Juveniles, though, are the most vibrantly colored, with bold amber/brown/greenish/gold variegation (Cheryl Ryder, pers. comm. 2001).

Adults are 76 to 89 cm long (30.4 to 35.6 in.) and weigh between 43 and 75 kg (94.6 and 165 lbs. (94.6 and 165 lbs.))

Habitat

Unlike land turtles from which they evolved more than 150 million years ago, sea turtles spend almost their entire lives in the sea. When active, they often come to the surface to breathe, but can remain underwater for several hours at a time while resting. Leatherbacks can dive to more than 3,000 feet below sea level (US FWS sea turtles). Preferred estuarine habitat of sea turtles--deeper or shallower water--directly relates to their preferred diet. Adult green turtles are herbivores, or plant eaters. All the other sea turtles are either carnivores (meat-eaters) or omnivores that eat both plant matter and meat.

Status and Conservation

Overharvesting of eggs for food, intentional killing of adults and immatures for their shells and skin and incidental drowning in commercial fishing gear are primarily responsible for the worldwide decline in sea turtle populations. Coastal residential and resort development has also degraded nesting habitat, and pollution of oceans threatens foraging habitats.

In one striking case, the number of Kemp's ridley females at the species' primary nesting site, a beach on the Gulf of Mexico near Ranch Nuevo, Mexico, plummeted from 40,000 in 1947 to just 200 by 1978 (US FWS 1980d). As a result of such declines, the federal government listed the Kemp's ridley as endangered in 1970, the same year it also listed hawksbill and leatherback turtles as endangered. In 1978, it listed loggerheads as threatened and green turtles as threatened and, in the case of the green turtle's Florida and Mexico breeding populations, as endangered. In response, in 1979 the state of New Jersey classified the Atlantic hawksbill, loggerhead, ridley and leatherback turtles as endangered and listed the Atlantic green turtle as threatened.