Species Fact Sheets

Eretmochelys imbricata (Linnaeus, 1766)

Synonyms

- Chelone imbricata Brongniart, 1805
- Chelone imbricata Strauch, 1862
- Chelonia imbricata Schweiger, 1812
- Caretta imbricata Merrem, 1820
- Chelonia pseudo-midas Lesson, 1834
- Chelonia pseudo-caretta Lesson, 1834
- Caretta bissa Rüppel, 1835
- Eretmochelys imbricata Fitzinger, 1843
- Eretmochelys squamata Agassiz, 1857
- Caretta squamosa Girard, 1858
- Herpysmostes imbricata Gistel, 1868
- Onychochelys kraussi Gray, 1873

Subspecies: See remarks under genus

FAO Names

En - Hawksbill turtle, Fr - Tortue caret, Sp - Tortuga carey.
3Alpha Code: TTH Taxonomic Code: 5310701701

Scientific Name with Original Description


Diagnostic Features

Carapace in adults cardiform or elliptical, with imbricated dorsal scutes, its width 70 to 79% of its total length (mean 74.1% SCL). Head medium-sized, narrow, with a pointed beak, its length 21 to 33% of the straight carapace length (mean 27.6% SCL); 2 pairs of prefrontal and 3 or 4 postorbital scales; tomium not serrated on the cutting edge, but hooked at the tip. The narrow and elongated snout and the thick scutes of the carapace are
adaptations to cope with waves and to obtain food from between corals and rocky substrates.

The scutes are most strongly imbricated at maturity, but in older animals the overlapping character is frequently lost. The scutelation of the carapace is similar to that of Chelonia, with 5 costal, 4 pairs of lateral (the first not touching the precentral scute), 11 pairs of marginal plus one pair of postcentral or pigal scutes. The plastron is covered by 5 pairs of scutes, plus one or two intergular and sometimes one small interanal. There are 4 poreless inframarginal scutes covering each bridge. Each rear and fore flipper bears 2 claws on its anterior border. As in other species of sea turtles, males have stronger and more curved claws and longer tails than females. Hatchlings and juveniles have a wider carapace than adults, the mean carapace width usually exceeding 76% of its length. They also have three keels of spines along the carapace which disappear with growth. Young adults sometimes have a remnant of the dorsal central keel, without spines. In juveniles and subadults, the scutes of the carapace are indented on the rear third of the carapace margin. Colour: this species is the most colourful among sea turtles. The pattern shows a large range of variation, from very bright colours to the heavy melanistic forms in the Eastern Pacific. The scales of the head have creamy or yellow margins, more apparent at the sides or cheeks than on the roof. The colour of the thick, horny scutes of the carapace is important in relation to the quality of the "carey" which is determined by its degree of transparency, the intensity of the amber ground colour and the quantity and arrangement, in spots or stripes, of the complementary colours: brown, red, black and yellow. The colour spots and stripes are usually arranged in a fan-like pattern. Underneath, the scutes are rather thin and amber-coloured, in juveniles there are brown spots in the rear part of each scute. The dorsal sides of head and flippers are darker and less variable; in the eastern Pacific population, the coloration is sometimes nearly black- Hatchlings are more homogeneous in colour, mostly brown, with paler blotches on the scutes of the rear part of the carapace, and also small pale spots on the "tip" of each scute along the 2 keels of the plastron.

**Geographical Distribution**
Eretmochelys is the most tropical of all sea turtles. It is distributed throughout the central Atlantic and Indo-Pacific regions. The population density is lower than that of Lepidochelys olivacea; also nesting is performed in a more widespread pattern, with very few major nesting places. The hawksbill is more common where reef formations are present; it is also observed in shallow waters with seagrass or algal meadows, including coastal lagoons and bays. Nesting is confined between the 25° N and 35°S, mostly within the tropical region, with very few isolated records outside these latitudes. There are some records of non-nesting turtles outside the abovementioned range, e.g. in the northern hemisphere: western Atlantic, up to Cape Cod, USA; eastern Atlantic, the English Channel; western Pacific, China, up to the Yellow Sea, Shangtung region, and southern Japan - Archipelago of Ryukyu; eastern Pacific to Cedros Island, Baja California, Mexico. In the southern hemisphere: western Atlantic, up to southern Brazil, but no data from Uruguay; eastern Atlantic, often observed in northern Namibia, but sporadically down to the west coast of South Africa; Western Indian Ocean, Red Sea as the northernmost record (nesting ground) and South Africa (Natal) as the southern most record; south-central Pacific, up to New Zealand; eastern Pacific, up to southern Peru, no records available from Chile; islands of the Central Pacific, mainly reports of nesting grounds.

This is one of the sea turtles whose juvenile stages have most often been sighted, especially from intentional or incidental catches in commercial fishing gears used in coastal shallow waters, and from captures by scuba-divers. There are reports of multiple recapture of the same young individual at the same place. This would suggest that at least part of the population has residential or non-migratory behaviour.

Habitat and Biology

Hawksbill turtles live in clear, littoral waters of mainland and island shelves; they perform migratory movements that cause variations of population density in certain areas and seasons. Frequently, individuals of several year classes are found together on the same feeding grounds. Another feature of this species is that up to now, it has not been observed travelling in "flotillas". Studies on migrations have revealed short as well as long distance movements, at least for parts of the population; during the breeding period, the most common are short displacements between the nesting beach and the nearest offshore (feeding) bank, as in Tortuguero, Costa Rica, or slightly longer travels, i.e. from the same nesting beach to Miskito Cays in Nicaragua, from the nesting place on Isla Mujeres, Mexico, to Bani in the Dominican Republic (presumably the feeding ground), from
Yucatan, Mexico to southern Cuba, from Nicaragua to Jamaica, and from northern Australia to Papua New Guinea. Migrations among the islands in Philippines, Indonesia, Java, or along Malaysia and Sarawak are probably performed by solitary turtles or by small groups, but no data are available. It is suspected that migrations also occur among the groups of islands of Oceania.

The hawksbill turtle repeatedly has been considered a solitary nester; although it does not form real "arribazones", there are few nesting beaches where females arrive in larger groups. As in other sea turtles, the hawksbill shows nesting site fixity, which is more frequently observed among older individuals. However, subsequent nesting on beaches other than the original one also seems to be possible. Nesting occurs during the warm and rainy season, principally in summer, but it generally starts at the end of spring. This turtle has a nesting cycle of 2 or 3 years, with a mean around 2.6 years.

Most hawksbills nest at night, but there are reports of day-time nesting, as well as basking behaviour, principally on uninhabited or low-inhabited beaches, such as those on Western Indian Ocean islands. In the Atlantic, there are several major nesting grounds, often located in the proximity of coral reefs, e.g. on the Yucatan Peninsula: Isla Aguada and Rio Lagartos, with at least 500 nests per year in each site. Other nesting areas are in southern Cuba, with several hundred nests; some islands of the Caribbean, such as: Jamaica, Dominican Republic, Turks and Caicos, and Grenada, each one with about 100 females nesting per year. The nesting grounds in northeastern Brazil are visited by about the same number of females each year. Some islands of the Indian Ocean, e.g., Seychelles, with over 600 nests or 300 turtles each year, British Indian Ocean Territory, with over 200 turtles, Comoro islands, with less than 100 turtles; Aldabra, with about 25 turtles, Amirantes, with about 150 turtles, Providence, with about 40 turtles, La Réunion, with about 50 turtles, Sri Lanka, with a few dozen turtles, southeast India (Tamil Nadu) with a few dozen turtles, and also the Maldives/Laccadives. In certain places, the presence of hawksbills is reported as "common", e.g., Iran, Somalia, Kenya, Tanzania, Madagascar and northern Mozambique. In the Eastern Indian Ocean, nesting occurs on the Andaman and Nicobar Islands and eastern Malaysia. Nesting apparently is more dispersed elsewhere, e.g. in the Indonesian Archipelago, with small concentrations quoted for southern Sumatra, Java, Bali, Sumbawa, and Celebes; in the Philippines (southern part of the Sulu Sea, on the "Philippine Turtle Islands", etc.); along Irian Jaya, Papua New Guinea, Solomon Islands, Fiji Islands, northern Australia and on the Leeward islands in the north of the Great Barrier Reef. Nesting has also been reported from the Pacific islands of Micronesia and Polynesia, but rarely from Hawaii. In the eastern Pacific, from Mexico to Panama, nesting is spread thinly, or rarely with small concentrations in the latter country and on the Mexican Pacific Islands.

The nesting season occurs mostly toward the end of spring and throughout summer, usually before the peak of the green turtle season, sometimes another peak for the hawksbill appears after that of green turtle, e.g. in Tortuguero, Costa Rica. Some examples of timing of the nesting season are the following: Western Atlantic: coast of Mexico, from April to August, with a peak in May-June; Belize and Cuba same season as in Mexico, with a peak in June-August; Puerto Rico, from March to November; Jamaica, from May to September; Guatemala, from May to November, with a peak in June-August; Honduras, from June to September; Nicaragua, from May to October; in Costa Rica, from May to November, with a peak in May-June; US Virgin Islands, from June to December, with a peak in August-September; Turks and Caicos from April to August; Dominica Islands, from April to October; Guyana, Surinam and French Guiana, from May to August, with a peak in June-July; Colombia, from April to August (very few turtles today); Brazil, from December to March. Eastern Atlantic - Cabo Verde, from May to August. Western Indo-Pacific: Oman, from February to April; South Africa, from April to July; Comoro Islands, from October to June, with a peak in January-March; Seychelles, from September to January; Laccadives Islands, in October; India (Tamil Nadu), from September to February; Andaman islands, from October to December; Burma, from June to September; Philippines, from May to August; China, from March to April; Japan, from June to October; Palau, from July to August; New Hebrides, from September to January; New Caledonia, from November to March; Solomon Islands, from March to August; Irian Jaya, from May to September; Papua New Guinea, from March to September; Austral Islands, from December to February. Central Pacific Islands: Tokelau, from September-October;
Micronesia, from May to September; Western Samoa, from September to February, with the peak in January to February; Fiji, from November to February. Eastern Pacific: Mexico, from May to October; El Salvador, from July to December; Honduras, from August to November; Panama, from May to December; Ecuador Mainland, from December to May.

Some reports quote renesting intervals of around two weeks, others of nearly three weeks. It is possible that both intervals are correct and that such periodicity depends of unknown internal and external factors. Also, in succeeding nesting periods, females may shift from one type of interval to another or show irregularities during the same nesting season. The interval most frequently quoted is the one extending for 2 weeks. For this species five or more subsequent nestings, with an average number of 2.3 clutches per season have been recorded.

Judging from the total number of eggs per clutch, the hawksbill has the highest mean individual fecundity among sea turtles. When taking into account the number of times each female nests per season, together with the nesting cycle of 2-3 years, the fecundity of the hawksbill is comparable to that of the Kemp's ridley, which in average nests only 1.5 times per season but has a shorter nesting cycle of nearly every year. Pressure from predation probably has influenced the evolution of this feature; it is possible that mortality during incubation is higher in the hawksbill nests due to hazardous conditions of the nesting places, usually among bushes and farther from the surf zone, and hence, the increase in mortality must be compensated by higher fecundity. Also the leatherback lays fewer eggs, but the nesting place is very near to the surf zone. A comparative study is needed to clarify such parameters, but there is no doubt that higher fecundity is a biological compensation for high mortality. In hawksbills, the number of eggs per clutch is highly variable, and the data are also sometimes biased by the presence of small and yolkless eggs, but never in substantial quantities as in the leatherback turtle.

Egg diameters are often reported in the literature (range: 30 to 45 mm), but data on egg mass or weight of the clutch are relatively scarce (range: 20 to 31.6 g).

The duration of the incubation in days varies among separated nesting beaches and also along the season. It may last from 47 to 75 days, depending on the place and time.

Data on size and body mass of hatchlings range from 38 to 46 mm, and from 8 to 17.9 g; respectively.

Hatchlings emerge mainly during the first hours of the night, when sand temperature is below 28°C, above this temperature their activity is inhibited. As in the other species, the small turtles run rapidly to the surf zone; after reaching the sea they disappear for an unknown period and are again observed when approaching coastal shallow waters at sizes usually over 20 cm of carapace length (SCL). Age at sexual maturity is uncertain; old reports quote ages from 3 to 4.5 years, but these figures were obtained from turtles reared in captivity, and it is assumed that for wild stocks they must be much higher. Furthermore, the figures for age at first maturity should be different if they are correlated to the mean carapace lengths observed on nesting beaches and if all size data are obtained from measurements of straight carapace lengths. Under such circumstances, the first maturity of females should be reached at sizes between 68 and 80 cm (SCL) and at body weights from 40 to 56 kg.
depending on the locality. It is suggested that males reach maturity at similar sizes but no data are available to confirm this assumption.

There are few reports on courtship and mating; both have been observed in shallow waters. During mating, the male holds the female by using its claws and tail, and this operation may last several hours. It has been observed that females are more receptive after nesting and that they commonly receive attention from several males without having preference for any special partner. Hence, polygamy is the normal pattern.

The optimal incubation temperatures recorded on Campbell Island, Australia range from 27.3°-31.8°C (at 50 cm depth, at the bottom of the nest) and from 28.9° - 32.4°C (at 30 cm depth, at the side of the egg mass). Figures from Eastern Samoa showed an increase of 3.6° (range 2.7-5°C) above the sand temperature at equal depth. On Isla Aguada, Mexico, ambient temperature and sand egg mass temperature were closely correlated, the changes in temperature of the egg mass normally dephasing by several hours; however, abrupt temperature decreases were observed during rainfall. The incubation temperature in translocated nests ranged from 27.20 to 33.5°C (n a 54 clutches) throughout the 1985 season, and from 28.5° to 30.5°C (n a 32 clutches) for the second third of the incubation period in 1986.

Studies on sex determination related to incubation temperature are currently in progress on the Isla Aguada nesting beach (Mexico); no data are available for other nesting beaches. The critical, pivotal or threshold temperature and time at which the sex of the hatchling is determined apparently is one or two degrees lower than for other sea turtles (29° or 30° C), because the hawksbill is prone to nest in shadowy places; to balance the sex-ratio, mechanisms other than temperature must be brought into play.

As the other sea turtles, this species is subjected to predation throughout its life-cycle. The eggs and embryos are consumed by several species of ghost crabs (*Ocypode* sp.), nearly throughout the nesting range, on the mainland as well as on insular beaches; predation also affects the hatchlings in and outside the nest. Mammals like genets and mongooses are reported as predators of eggs in the Indian Pacific Islands, South Africa and also in the US Virgin Islands, Barbados and Guadaloupe, the introduced mongoose (*Herpestes* sp.) is one of the main causes of predation; skunks and raccoons are common on beaches of Mexico and are quoted as predators of nests and hatchlings. Iguanas are reported on beaches of Cuba, and although direct predation has not been observed, it is possible that these reptiles eat the rest of the nest following the predation by other animals such as raccoons. In some areas, rats are reported as potential predators (the Polynesian rat - *Rattus exulans*). Jackals, pigs and feral dogs also dig out nests, the latter two in connection with the presence of human dwellings in the neighbourhood of the nesting beaches. Monitor lizards (*Varanus* sp.) are important nest predators on mainland Africa, India, Cambodia, northern Australia, the Philippines, and Andaman/Nicobar Islands. Birds such as frigates, herons, vultures, kites, crows, etc., eat hatchlings when they emerge in day-time. The barn owl (*Tyto alba*) is quoted as a crepuscular predator of hatchlings in the Comoro Archipelago. In the water, hatchlings are captured by sea birds (frigates, gulls, etc.), and carnivore fishes, e.g., tunas, dolphin-fish and jacks, or sharks as was documented for Sarawak and Samoa. Because of its occurrence around coral reefs, where big carnivore fishes remain in ambush, this turtle is continuously exposed to heavy predation, and not only hatchlings, but also juveniles and adults are attacked by those big carnivores, principally sharks (e.g. the tiger shark *Galeocerdo cuvier*). Apart from predation, no other kinds of natural mortality have been documented, and there are no reports on dermic papillomae. Commonly these turtles are covered by epibiotic organisms, e.g., green algae sometimes form a rug over the carapace in old individuals; also leeches, barnacles, small pelagic crabs, other crustacea and nudibranchs are often observed. This is a carnivorous turtle, commonly poking in crevices between rocks and corals, so the diet often is highly variable. Up to around 10 cm of SCL the hawksbill apparently is a nectonic animal, and when it approaches coastal areas, it changes over to benthic feeding, and becomes a regular inhabitant of hard substrata where its diet consists principally of corals, tunicates, algae, and sponges. Some data on stomach contents from several studies are the following: a) Juveniles: for Salvage Island (Canary Archipelago), coelenterates (*Anemonia, hydroids, siphonophora*, especially *Velella, hydromedusae*), algae (*Stypodium, Sargassum, Dyctiota, cyanophytes*), gastropods (*Littorina, Amyclina, Janthina*), cephalopods (*Taonius, Histiotheithus, Oegopsida*), sponges (2 species), spider crabs (*inachus*), sea urchins, stones, and plastic materials; for Taiwan Island, algae, shells, and bark. b)
Subadults: for Magdalena Bay, Mexico, crustaceans and red lobsterets (*Pleuroncodes*); for Australia (subadults and adults), ascidians, encrusting animals and algae; for French Guiana, sponges, tunicates, coelenterates, molluscs, algae, and angiospermes; for Ascension Islands, Costa Rica (Tortuguero), Hawaii (3 samples), Seychelles, Aldabra, Oman, Cousin Islands, mainly sponges (Demospongia group); for Honduras: mangrove leaves and fruits, bark and wood; for New Zealand, barnacles, cephalopods, siphonophores (*Velella*), and tunicates (*Salpa*); for the Philippines, seagrass and sponges, (*Echeuma*, *Codium*); for Sri Lanka, algae, corals, gastropods, and ascidians; for the Seychelles, sargassum weeds, sponges and algae; for South Yemen, green algae. Comprehensive studies of the diet were made by Carr and Stancyk (1975), and their conclusion for the Tortuguero hawksbill’s population was that it consists mainly of sponges of the group Demospongia, and that competition with other species within this niche is rare; in fact, *Eretmochelys* is the only known spongivore marine reptile (Meylan, 1988); and strictly spongivore vertebrates include only a small number of teleostean fishes.

**Size**

Size: The mean straight carapace length (SCL) in adult females of this species ranges from 53 to 114 cm, but has been reported to be highly variable.

Data for carapace length of males, range from 16 to 85 cm (Juveniles, adults).

The body mass of turtles on nesting beaches, feeding grounds or in markets is difficult to obtain.

**Interest to Fisheries**

Interest to Fisheries: The hawksbill is a unique species, because in addition to all the products commonly obtained from other sea turtles, it also yields the brightly-coloured, thick scutes covering the carapace, which are of high value in the international market. These flexible scutes, the so-called "carey" or "tortoise-shell" are mainly used in jewellery. The term "tortoise-shell" applies to the raw material of scutes, while "carey" refers to the worked tortoise-shell. In the old world, this species has been exploited since the pharaonic period, and in China its exploitation dates back to still more ancient times. From China it was introduced to Japan in the Nara Period (A.D. 745-784) in the form of ornamental articles reserved exclusively for the aristocracy to symbolize a high status of nobility. Handicrafts made of tortoise-shell appear to have flourished in many ancient cultures, in places like Ceylon, India, Rome, Oceania, etc.

In many other cultures, the hawksbill and other sea turtles, were exploited only for their meat and eggs. Up to the sixties and seventies of this century, the commerce of the tortoise-shell, raw and worked, showed an extraordinary increase, and many countries were engaged in the export-market to Hong Kong, Japan, Singapore, China and Korea, in Asia, and to Italy, West Germany, France, the UK and Spain, in Europe. Also the market for stuffed turtles had increased to incredible numbers up to recent years. In the presence of such a global market it is actually surprising that there are still hawksbill turtles left in the tropical seas of the world. No precise figures are available for the huge quantities of raw and worked tortoise-shell and of stuffed hawksbill turtles commercialized in the past two decades (60's and 70's), but it is known that about 90% of the products were imported by Japan; part of this is documented by the Japanese Custom Statistics. The internal market in each country is difficult to evaluate because of the dispersed nature of the handicraft industry.

Tortoise-shell and carey are processed in small-scale indigenous industries of Southeast Asia, the Caribbean, the Seychelles, Micronesia (Oceania), and elsewhere; they produce low-quality souvenir trinkets, carved directly on the backshell scutes. But the bekko Japanese craftsmen elaborately shape the scutes, hooves and plastron pieces and blend the natural colours, using a technique combining water, steam, heat and pressure. Only the French and Italian artisans are known to employ similar techniques to produce high-quality products. Historically, the bekko jewellery was dedicated to the hair ornament of Japanese brides. Today, a huge variety...
of designs of jewellery, eyeglass frames, inlay boxes, combs, pins, etc., are produced and used nearly exclusively for domestic consumption in Japan.

Because of the peculiarity of the hawksbill market, any size of turtles are captured, the smaller ones for stuffing and the big ones for the scutes, and in many places also for the meat and the eggs. Today, the commerce with eggs is prohibited in many of the countries. With the CITES restrictions, the exports of carey scutes, particularly since 1979, have decreased substantially, and only few countries retain a reservation effective for the hawksbill, and hence continue importing its products. In the majority of the former exporter countries, the commerce today is reduced to the internal demand mainly for meat and tortoise-shell. Complete and up-to-date statistics for each country are not available, but the importation of hawksbill scutes by Japan in 1987 and 1988 was published in the newsletter of Traffic (USA) in January 1989, and according to that the most important exporter was Cuba with 13 905 kg for both years, followed by Haiti, with 7 641 kg, the Maldives, with 7 436 kg, the Solomon Islands, with 7 369 kg, Jamaica, with 6 827 kg, the Comoro Islands, with 4 566 kg, Fiji, with 2 837 kg, Singapore, with 1 009 kg. All the other countries trading in hawksbill scutes were exporting less than one metric ton per year, e.g. St. Vincent, Ethiopia, Dominican Republic, Grenada, Antigua - Barbuda and Brunei. In 1987, other very important former exporters became parties of CITES: Indonesia, Philippines, Singapore the Dominican Republic. The total imports by Japan, of carey scutes, for these two years were: 29 808 kg in 1987 and 25 043 kg in 1988 (up to November only).

A very important market for stuffed hawksbills was developed during the seventies. The importation of stuffed turtles by Japan was increasing from 9 329 kg in 1970 to a maximum of 85 843 kg in 1983; after that year, the imports steadily decreased, down to 8 855 in 1986, and a total ban is expected during 1989. The principal exporters between 1970 and 1986 were: Indonesia, Singapore (until 1984), China (Taiwan Island), Philippines (until 1980) and Hong Kong.

The size of stuffed turtles is highly variable, usually juveniles are used for this purpose, but often also big adults appear on the market. Since the ratio for converting dry weights (stuffed turtles) to live weights is not yet available, the total number of turtles used for this market is still unknown. For statistical purposes, the stuffed hawksbill is called in Japan "worked bekko" to distinguish it from the "worked tortoise-shell", which includes all the stuffed species except the hawksbill.

In the FAO Yearbook of Fishery Statistics, catches of *Eretmochelys imbricata* are reported only for the Western Central Atlantic (Fishing Area 31), totalling 318 metric tons in 1987 mostly by Cuba (277 metric tons) and the Dominican Republic, 41 metric tons. These data refer to entire animals. If we compare the statistics of hawksbill imports reported by Japan, with the data reported by FAO, the latter appear to be very incomplete. It is possible that hawksbill catches are included under the item "Marine turtles n.e.i." (unidentified species) but it is not possible, at present, to calculate the proportion of hawksbills in the catches.

As with other species of sea turtles, the hawksbill is usually captured by turning over the females when they crawl onto the beach to nest. This method is widely used by riparian people nearly everywhere the hawksbill nests. The harpoon is another common method to capture turtles, but nowadays, entangling nets of different mesh-sizes, made of natural fibres or monofilament-nylon, are becoming a more effective and less time-consuming fishing gear. Not withstanding their great diversity, these nets have some common features, especially the large mesh-size and the light bottom-lines that allow the captured turtles to reach the water surface and breathe. Length and depth are variable and usually several nets are joined to enlarge the area covered; also floating decoys are used in the head line to attract males. Seines with finer mesh are set to surround the turtles in forageing areas. Scuba-diving is of special importance in the capture of this species, but the use of spear-guns is more popular and productive around reefs; harpoons, hooks and ropes are used also by divers. Remoras were used by Caribbean people even before the discovery of America, and this fish, known as "pega-pega" on the Spanish-speaking islands of the Caribbean, was or still is, used in other places such as Sri Lanka, Kenya, Yemen, Somalia, Madagascar and northern Australia.
Eggs are collected directly on the nesting beaches, while the meat comes from overturned females or turtles captured at sea. The skin is of lower quality than that of the olive ridley.

Among coral-reef organisms consumed by man, a small number is considered to be toxic, and one of these is the hawksbill turtle. In some places, these turtles are avoided as food because of the high risk of intoxication. Apparently, a high percentage of fatalities resulting from the consumption of hawksbill meat has occurred in the Indo-Pacific region, Oceania; two fatal cases were quoted for the Caribbean in 1967, but the species of turtle that caused them was not identified. In some of the reported cases, the other species implicated is Chelonia mydas.

Poisoning by hawksbills has been quoted by several authors and in some cases, a great number of deaths were reported, mainly in India, Sri Lanka, China (Taiwan Island), Philippines, Indonesia, Papua/New Guinea, northern Australia (Torres Strait), Central Pacific (Arorue, Gilbert Islands), and Caribbean (Windward Islands). Intoxications were also produced by the green turtle Chelonia mydas, and some other cases were caused by unidentified species. In a short paper produced in Australia by Limpus (1987), general information is offered on the toxine, the medical aspects of the intoxication, treatment and prevention, and it is recommended not to eat hawksbill turtle meat in areas where toxicity has been reported.

The total catch reported for this species to FAO for 1999 was 15 t. The countries with the largest catches were Cuba (8 t), Grenada (5 t) and Fiji Islands (2 t)

### Local Names

**ALDABRA ISLANDS**: Caret.

**AUSTRALIA**: Gounam (Queensland), Unawa (Torres Strait), Unuwa (Torres Strait).

**BANGLADESH**: Samudrik kasim.

**BRAZIL**: Tartaruga de pente, Tartaruga imbricada, Tartaruga verdadeira.

**CARIBBEAN REGION**: Krayoea, Kulalashli.

**CAYMAN ISLANDS**: Hawksbill turtle (Hybrids), McQuankie, McQueggie.

**COLOMBIA**: Carey, Tortuga fina.

**COMORO ISLANDS**: Nayamba (male).
COSTA RICA: Carey.
CUBA: Carey.
ECUADOR: Carey (Peinilla).
EL SALVADOR: Carey.
ESPANA: Carey.
GUATEMALA: Carey.
MEXICO: Carey.
PANAMA: Carey.
PERU: Carey.
PUERTO RICO: Carey.
VENEZUELA: Carey.
CHINA: Kou pi, Tai mei.
EGYPT: Sagi, Sugr.
ETIOPIA - (Eritrea Red Sea): Bissa (males), Baga (females).
FRANCE: Caret, Tortue d'écaillle, Tortue imbriquée.
FIJI: Taku.
FRENCH GUIANA: Kala-luwa.
GOLD COAST: Ayikploto (Ga), Halapatadzi, Apuhuru (Nzima).
GERMANY: Echte Karettschi ldk rote.
HAWAII: Ea.
INDIA: Alungamai (Tamil Nadu), Kangha kac-chua (Andaman Islands), Tau-da.
INDOCHINA: Doi-moi (BURMA, THAILAND, MALAYSIA, VIET NAM, etc.), Sat kras (BURMA, THAILAND, MALAYSIA, VIET NAM, etc.).
INDONESIA: Penyu sisik, Sisila pagal.
IRIAN-JAYA: Wau mis.
ITALY: Imbricata.
JAPAN: Tai-mai.
LEEWARD ISLAND: Caret.
MALAYSIA: Penyu karah, Penyu sisek.
MEXICO: Morrocoy (hybrids).
MICRONESIA: Wounlele (Truk Dist.), Ngasech (Palau), Sapake (Panape), Jebake (Marshall Islands), Darau (Yap Dist), Mu winichen.
MOZAMBIQUE: Ingappa.
NAMIBIA: Fanohara, Inhama, Taha.
PHILIPPINES: Sisikan.
PAPUA NEW GUINEA: Era, Fung, Gela, Hara, Lappi, Mahana, Musana, Maia, Purai, Ololo, Opapei, Unawa, Veu.
PORTUGAL: Tartaruga de pente.
SABAH: Tottongan, Sisipangal.

Sir: EnEGAL: Tortue à écailles, Tortue tuille.

SOUTH AFRICA: Valkbekseeskilpad (Africaans).

SRI LANKA: Potu kasvaba, Alunk amai.

SUDAN: Abu gudr, Shukert.

SURINAM: Kar’et.

THAILAND: Tao-kra, Con doi-moi (Siam Gulf).

TONGA: Fonu koloa.

UK: Hawkbill, Hawksbill, Hawk's bill, Tortoise-shell.

USA: Hawkbill, Hawksbill, Hawk's bill, Tortoise-shell.

VENEZUELA: Parape.

YEMEN: Sugr.

Source of Information

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