2.3 FAMILY DERMOCHELYIDAE

DERMO

Synonyms : Sphargidae; Dermatochelydae, Dermochelidae, Dermochelydidae.

Dermochelys Blainville, 1816

DERMO Dermo

Genus : ***Dermochelys*** Blainville, 1816, Bull.Soc.Philom.Paris, p.119.

Type Species : ***Testudo coriacea*** Vandelli, 1761.

Synonyms : ***Sphargis*** Merrem, 1820; ***Coriudo*** Fleming, 1822**;** ***Siphargis*** Risso, 1822; ***Scytina*** Wagler, 1828; ***Chelonia*** Bory de St. Vincent, 1828; ***Dermochelis*** LeSueur in Cuvier, 1829; ***Dermatochelys*** Wagler, 1830; ***Chelyra*** Rafinesque, 1832; ***Testudo*** Ranzani, 1834; ***Scytena*** Gray, 1844; ***Sphragis*** Agassiz, 1846; ***Seytinia*** Naeve, 1940; ***Dermatochelis*** Romer, 1950; ***Scytine*** Romer, 1956; ***Seytina*** Romer, 1956.

Diagnostic Features : See species.

Dermochelys coriacea (Vandelli, 1761)

figs 40, 41

DERMO Dermo 1

Testudo coriacea Vandelli, 1761, "Epistola de Holoturio et Testudine coriacea ad Celeberrimum Carolum Linnaeaum, Padua:2 (Maris Tyrrheni oram in agro Laurentiano).

Synonyms : ***Testudo coriacea:*** Linnaeus, 1766; ***Testudo coriaceous*** Pennant, 1769; ***Testudo arcuata*** Catesby, 1771; ***Testudo lyra*** Lacépède, 1788; ***Testudo marina*** Wilhelm, 1794; ***Testudo tuberculata*** Pennant in Schoepf, 1801 ; ***Chelone coriacea:*** Brongniart, 1805; ***Chelonia coriacea:*** Schweigger, 1812; ***Chelonia lutaria*** Rafinesque, 1814; ***Dermochelys coriacea:*** Blainville, 1816; ***Sphargis mercurialis*** Merrem, 1820; ***Coriudo coriacea***: Flemming, 1822; ***Chelonia Lyra*** Bory de St. Vincent, 1828; ***Scytina coriacea:*** Wagler, 1828; ***Sphargis tuberculata:*** Gravenhorst, 1829; ***Dermochelis atlantica*** LeSueur in Cuvier, 1829; ***Dermatochelys coriacea:*** Wagler, 1830; Gadow, 1901; ***Dermatochelys porcata*** Wagler, 1830; ***Sphargis coriacea:*** Gray, 1831; ***Chelyra coriacea:*** Rafinesque, 1832; ***Testudo coriacea marina:*** Ranzani, 1834; ***Dermatochelys atlantica:*** Fitzinger, 1836 (1835); ***Testudo (Sphargis) coriacea:*** Voigt, 1837; ***Dermochelydis tuberculata:*** Alessandrini, 1838; ***Chelonia (Dermochelys) coriacea:*** van der Hoeven, 1855; ***Testudo midas*** Hartwig, 1861; ***Sphargis coriacea*** var. ***Schlegelii*** Garman, 1884; ***Dermochely coriacea:*** Boulenger, 1889; ***Sphargis angusta*** Philippi, 1889; ***Dermatochaelis coriacea:*** Oliveira,1896; ***Dermochelys schlegelii:*** Stejneger, 1907; ***Dermatochelys angusta:*** Quijada, 1916; ***Dermochelys coriacea coriacea:*** Gruvel, 1926; ***Dermochelys coriacea schlegeli:*** Mertens and Müller, 1934.

Subspecies : There are two subspecies (Atlantic: ***D.c. coriacea;*** Indo-Pacific: ***D.c. schlegelii***) proposed by several authors, mainly on the basis of different geographical distribution patterns, but also differences in coloration and morphological characters (head and body measurements). It is said, for example, that the number of white blotches covering the body may be significantly different in the 2 populations, although this is a feature subjected to a considerable degree of variability; also, statistical differences have been observed in the mean carapace lengths of Atlantic and Indo-Pacific turtles. However, a detailed statistical and comparative analysis to validate the subspecific status of these populations has not yet been undertaken, and no comparative descriptions of the two subspecies have been published.

FAO Names : **En -** Leatherback turtle; **Fr -** Tortue luth; **Sp -** Tortuga laúd.

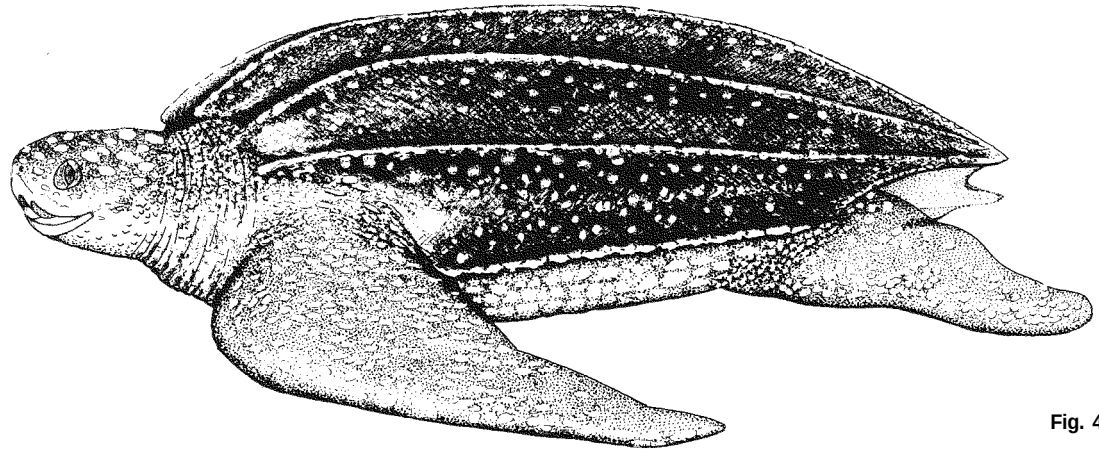

Fig. 40

Diagnostic Features : This is one of the largest living reptiles, surpassed in size only by some species of crocodiles. Adults are easily distinguished from all other species of sea turtles by their spindle-shaped huge bodies and their leathery, unscaled keeled carapaces. Furthermore, their anatomical and physiological features are different from those of other sea turtles, especially the presence of vascularized growth cartilages (chondro-osseus skeleton) and the development of an endothermy similar to that of marine mammals.

The head of the adult leatherback is small, round and scaleless, and equals 17 to 22.3% of the carapace length; beak feeble, but sharp-edged, lacking crushing surfaces, well adapted to grab sluggish pelagic food; upper jaw with two pointed cusps in front; lower jaw with a single, pointed central hook that fits between the upper cusps, when the mouth is closed, giving the appearance of a W in front view; part of mouth cavity and throat covered with rows of posteriorly-directed spine-like horny papillae that prevent the prey from moving outward. Carapace reduced and formed by a mosaic of small, polygonal osteodermic pieces, supported by a thick matrix of cartilaginous, oily dermal tissue, with 7 dorsal and 5 ventral longitudinal keels; dorsal keels (already present in hatchlings) converging posteriorly in a blunt end, much above the tail. The scales that cover the body in juveniles are lost in subadults and adults, which are covered by a rubber-like, leathery skin. Shell bones (such as neural, pleural, and peripheral bones) reduced in number or entirely absent; the preneural bone is well attached to the 8th vertebra and supports the neck elevator muscles; plastral bones reduced to a ring. Ribs apparently free, but embedded in the carapace cartilage. Flippers large and paddle-shaped; in adults, the fore flippers usually equal or exceed half the carapace length and thus are relatively longer than in other sea turtles; in hatchlings, they look enormous and are clearly as long as the carapace; rear flippers connected by a membrane with the tail; claws may be visible in hatchlings, but disappear in subadults and adults. **Colour**: adults show a certain variability in colour pattern. Dorsal side essentially black, with scattered white blotches that are usually arranged along the keels, becoming more numerous laterally and very dense beneath the body and flippers, so that the ventral side is predominantly whitish. Pinkish blotches on neck, shoulders and groin, becoming more intense when the turtle is out of the water, possibly by blood congestion in the skin vessels. Hatchlings and juveniles have more distinct white blotches which are clearly arranged along the keels. The density of the spots and also their size are highly variable among populations, but apparently show a certain constancy within each population.

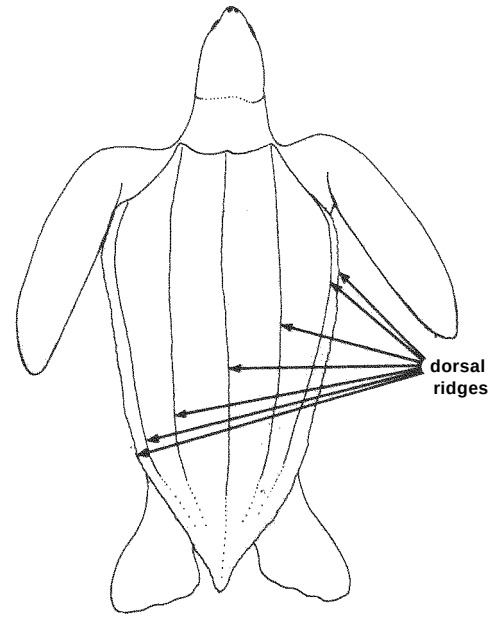

Fig. 41

Males are distinguished from females mainly by their longer tail; they also seem to have a more narrow and less deep body. Apart from their short tail, females have a pink area on the crown of their head.

The eggs are covered by a soft white shell.

Geographical Distribution : Adult leatherbacks are adapted to colder water than other sea turtles, a capability that is due to their protective thick and oily dermis. As a result of this, the leatherback is the most widely distributed of all sea turtles; there are numerous records from higher latitudes, very far from the tropical and subtropical nesting grounds, where the water temperatures are between 10º and 20ºC. The species thus easily reaches the North Sea, Barents Sea, New Foundland and Labrador in the North Atlantic, and Mar del Plata, Argentina, and South Africa, in the South Atlantic; it also occurs throughout the Indian Ocean, in the northern Pacific, to the Gulf of Alaska and south of the Bering Sea, in the southwestern Pacific to Tasmania and New Zealand, and in the southeastern Pacific to Chiloé (Chile) (Fig. 42). In many of the central and south Pacific islands this species is well known, and also nests on some of them. Very little is known about the distribution of the hatchlings after they abandon the nests; juveniles and immatures are also difficult to observe.

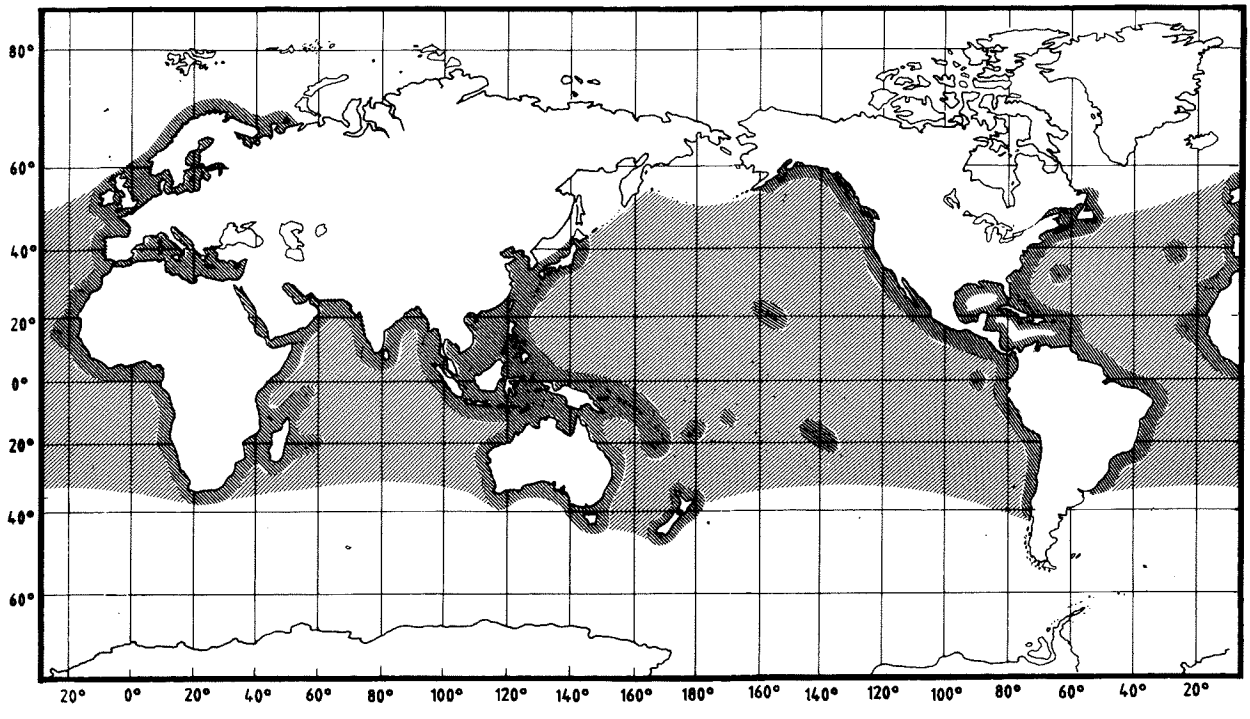

Fig. 42

Habitat and Biology : The leatherback turtle is a highly pelagic species that approaches coastal waters only during the reproduction season; although small groups of individuals have been reported moving in coastal waters in the middle of concentrations of jellyfish and tunicates, it seldom forms large aggregations (flotillas). When travelling, it apparently wanders erratically in search of food, but its migration routes are only recently being traced on the basis of tag-recovery reports. Until recently, this turtle was considered to be strictly epipelagic, but new observations have shown that it frequently descends into deep waters and that it is physiologically well adapted to deep-diving. Feeding behaviour is known for adults and subadults, but not for hatchlings and juveniles. It is assumed that this species is carnivorous throughout its life cycle; the adults feed mainly on jellyfish (Scyphomedusae), tunicates and other epipelagic soft-bodied invertebrates, that are abundant in the epipelagic region, with highest concentrations in upwelling areas and convergence currents.

Unlike most other sea turtles which nest during spring and summer, the leatherback usually nests in autumn and winter when it arrives in large groups at the nesting sites and forms “arribazones”. The rookeries are characterized by approaches of deep water, absence of fringing reefs, and high-sloped beaches that facilitate the landing of these corpulent animals. The nest is usually constructed just across the high tide mark and very often below it; in the latter case, the entire clutch is lost when water invades the nest during spring tides.

The location of the most important breeding grounds is as follows: **Eastern Pacific Ocean**: western coast of Mexico, with over 80 000 nests per year (biggest nesting aggregations in Mexiquillo, Tierra Colorada and Chacahua); scattered nesting occurs from Mexico to Panama, with only several thousand nests per year, most of them in Costa Rica (Playa Naranjo) and Panama; west coast of Colombia, Ecuador and Peru, but with no more than 500 nests per year. **Western Atlantic Ocean**: Caribbean: Trinidad and Tobago, 1 000 nests per year; Windward Islands, Leeward Islands and Virgin Islands (Mona, Culebra, Vieques); east coast of Puerto Rico; Dominican Republic, 500 nests per year; Costa Rica, between Tortuguero and Puerto Limon, with 5 000 nests per year; Panama and Colombia (Gulf of Urabd); between Surinam and French Guiana, 10 000 to 15 000 females are reported every year; other breeding grounds along the Atlantic coast of South America are located in Guyana, with 500 nests per year, and in Brazil (Espiritu Santo, Natal; between Sergipe and Para). **Eastern Atlantic Ocean**: only minor and solitary nesting is recorded from Mauritania, Senegal, Liberia, Ghana, Togo, Zaire and Angola; no nesting has been reported from the Mediterranean Sea in recent times. **Indo-Pacific region**: in the Western Indian Ocean, minor nesting takes place in Tongaland, Natal (100 nests per year) and Mozambique; occasional nesting occurs in Tanzania, Zanzibar, Kenya, the Seychelles, Somalia, South Yemen, Oman and on the Laccadive Islands; along the western coast of India, nesting occurs around Goa and in Kerala; for Sri Lanka, there was an important breeding ground in the past; today, only a few dozen nestings per year are recorded; major breeding sites are known in Malaysia, Terengganu, but with an alarming decline in number of nesting females (1950: 1 800 females; 1987: 100 females); exact figures are available for Irian Jaya, with up to 5 000 nesting females and about 20 000 nests per year; 50 nesting turtles were counted in southeastern Java, and 200 in Western Sumatra, with approximately 1 000 nests each year; negligible breeding occurs in eastern and northeastern

Australia; no nesting activities are known from the Central Pacific islands, but from the South Pacific islands: Papua New Guinea, the Solomon Islands, Vanuatu and Fiji; in China, nesting occurs in the provinces of Kuangtung, Fukien, Chekiang, Kiangsu, Shangtung and Liaoning.

The nesting season varies in extent, according to the latitude and geographical characteristics of the coast: **Eastern Pacific Ocean**: in Mexico, nesting occurs in autumn and winter, from October to February or March of the following year. **Western Atlantic Ocean**: in Colombia, French Guiana and Surinam, the season starts in March and ends in July, in Guyana it goes from January to March; in the Caribbean from spring to autumn (April to October), with a variation in Panama (Isla Cañas), where it lasts from March to June. **Eastern Atlantic Ocean**: for Senegal, nesting is reported from June to August; in South Africa it goes from October to February. **Indian Ocean**: nesting occurs from winter to spring as in the Seychelles (November to February) and the Andaman and Nicobar Islands (December to April), or from spring to summer, as in Sri Lanka (April to June) and India, Tamil Nadu (April to July); in West Malaysia it goes from May to September. **Western Pacific Region**: in China, the season runs from May to June, in Irian Jaya from May to September, in Australia from December to February, and on the Solomon Islands, nesting occurs from November to January.

Dermochelys coriacea has a nesting cycle of 2 or 3 years. Females usually lay 4 or 5 times per season (6 or 7 times on Culebra Island, Puerto Rico), depositing on each occasion from 61 to 126 eggs. Usually, about half of the clutch consists of smaller and yolkless eggs.

The size of the egg clutch varies from place to place, from a minimum of 46 to a maximum of 160 eggs per clutch.

Some examples are the following: **Mexico** - Michoacan, mean values of eggs per clutch are: 59.1 (1982-83, n = 86), 58.4 (1983-84, n=355), 61.5 (1984-85, n = 1 203), 60.6 (1985-86, n =987), 62.4 (1986-87, n =42), 52.9 (1987-88, n =35); in the period 1988-89, a mean of 66.1 normal sized eggs and a mean of 43.4 yolkless eggs per clutch (n = 758) were recorded; **Puerto Rico** - from 60 to 93 normal eggs, with a mean of 78.5 (n = 9), and 6 to 61 yolkless eggs, with a mean of 30.8 (n = 9); **Costa Rica** - Atlantic coast, from 46 to 128 normal eggs, with a mean of 81.6 (n = 47), and 9 to 77 yolkless eggs, with a mean of 29.8 (n = 46); Pacific coast, from 53 to 79 normal eggs per clutch, with a mean of 65.5 (n= 6), and 15 to 66 yolkless eggs, with a mean of 31.5 (n = 6); **Trinidad** - the clutch size ranges from 65 to 130 eggs (no detailed data available); **Surinam** - from 52 to 128 eggs, with a mean of 85.0 (n = 385); yolkless eggs from 1 to 60, with a mean of 23.0 (n = 195); **French Guiana** - in one count, eggs per clutch ranged from 50 to 148 (mean 84.3), in another 51 to 112 (mean 88.1, n = 19); yolkless eggs ranged from 9 to 57, with a mean of 29.1 (n = 19); **South Africa** - in Natal the mean values are 106 normal and 30 yolkless eggs per clutch; Tongaland from 58 to 160 eggs, with a mean of 103.9 (n = 252), and 3 to 57 yolkless eggs, with a mean of 30.0; **Andaman** and **Nicobar Islands** - mean values of 79 normal eggs and 23 yolkless eggs per clutch; **Australia** Queensland from 64 to 100 eggs, with a mean of 82.8 (n = 14) and 18 to 79 yolkless eggs per clutch, with a mean of 46.5 (n = 13); **Malaysia** - Terengganu from 58 to 160 eggs, with a mean of 82.3 eggs (n = 627); Sri Lanka - number of eggs per clutch range from 90 to 130, no other data available; **China** - 90 to 150 eggs per clutch, no other data available.

Together with the flatback of Australia, this species has the largest eggs and hatchlings among sea turtles. Data on egg diameter (range: 51.0 to 54.4 mm) and egg weight (range: 70.0 to 103.6 g) are relatively scarce. Variation in diameter is more marked in yolkless eggs.

Some examples are the following: **Mexico** - Mexiquillo: egg size from 45.6 to 59.2 mm, with a mean of 51.2 (n =420); egg weight from 54.5 to 93.4 g, with a mean of 76.7 g (n = 420); **Costa Rica** - Atlantic coast: egg size from 49.2 to 54.9 mm (20 eggs of 26 different clutches measured); egg weight from 72.6 to 103.6 g (20 eggs of 26 different clutches measured); size of yolkless eggs from 1 to 47 mm (n = 19 clutches); yolkless eggs made up 3 to 23% of the total weight of a clutch; clutch weights range from 4.02 to 13.39 kg, with a mean of 7.4 kg; Pacific coast: mean size of eggs 51.0 mm (n = 6 clutches), with yolkless eggs ranging from 15 to 45 mm; **Colombia** - egg size from 53.5 to 59 mm, with a mean of 56.1 mm (n =9 eggs); egg weight from 80 to 98.9 g, with a mean of 89.4 g (n =9 eggs); **Puerto Rico** - mean size of eggs 54.5 mm (n = 90 eggs); **Trinidad** - egg size range from 52 to 65 mm; **Surinam** - egg size from 50 to 57 mm, with a mean of 53.0 mm; **French Guiana** - mean egg diameter 65 mm; **South Africa** - Tongaland: egg size from 50 to 56 mm, with a mean of 53.1 mm (n = 165); **Andaman** and **Nicobar Islands** - egg size from 48.8 to 51 mm; **India** - egg size from 50 to 55 mm; egg weight from 70 to 80 g; **Sri Lanka** - egg size from 50 to 54 mm; egg weight from 61 to 85 g; **Australia** - Queensland: egg size from 51.1 to 56.2 mm, with a mean of 53.2 mm (n = 120 eggs; 12 clutches); egg weight from 74 to 90.8 g, with a mean of 81.9 g (n = 70 eggs; 7 clutches).

The incubation period varies from a minimum of 50 to a maximum of 78 days, and is correlated with temperature and humidity. In dry and warm weather, the incubation period is shorter, with a lower survival rate.

Mexico-Mexiquillo, 58 to 78 days (1980-81), with a mean of 65.2 days (n = 12 clutches, transfered nests); **Costa Rica** - Atlantic coast, 58 to 66 days for transfered nests, with a mean of 61.5 days; in Saint Croix, the incubation period varied from 60.3 to 63.9 days for undisturbed nests; **Puerto Rico** - 55 to 59 days, with a mean of 57.6 days (n = 9 clutches, transfered nests); **Surinam** - 60 to 70 days, with a mean of 64.1 days (n = 56 clutches); French **Guiana** - 1981: 59 to 74 days; 1982: 69 to 78 days: 1983: 67 to 76 days; 1984: 62 to 72 days; **South Africa** - Tongaland, 56 to 72 days; **Sri Lanka** - 58 to 65 days, with a mean of 60 days; **Malaysia** - 53 to 60 days for transfered nests; **Australia** - 60 to 61 days.

Size and weight of hatchlings vary between nesting sites, seasons and years. The straight carapace length (SCL) ranges from 51 to 68 mm, the mean weight from 37.6 to 48.6 g.

Data on size (SCL) and weight of hatchlings are available for the following places: **Mexico** - Mexiquillo, from 51.0 to 60.0 mm, with a mean of 56.1 mm and a mean weight of 39.4 g (n = 8 clutches, 78 hatchlings); Guerrero, from 57.7 to 65.3 mm, with a mean of 62.1 mm (n = 13); **Costa Rica** - Atlantic coast, from 54 to 63 mm, with a mean of 59.8 mm (n =6 clutches, 120 hatchlings) and a mean weight of 44.6 g (range: 40 to 50 g, n =6 clutches, 120 hatchlings); Saint Crow (Sandy Point), mean size 61 5 mm and body weight from 42.5 to 45.8 g; **Colombia** - from 58.6 to 62 mm, with a mean of 60.4 mm and a mean weight of 48.6 g (range 43.2 to 51.9 g, n = 7); **Trinidad** - 66 and 68 mm (n = 2 hatchlings); **Surinam** - from 57 to 61.3 mm, with a mean of 59.2 mm (n =27 hatchlmgs), **French Guiana** - one hatchling with 67 mm SCL and a weight of 46 g; **South Africa** - Tongaland, from 54.8 to 63.4 mm, with a mean of 58.7 mm (n = 131 turtles) and a mean weight of 37.3 g (range: 27.5 to 41 g, n =47 turtles), **Australia** - Queensland, from 51.4 to 65.2 mm, with a mean of 58.8 mm (n =4 clutches, 29 turtles) and a mean weight of 46.9 g (range: 38.3 to 54.2 g, n =4 clutches, 39 turtles)

There is only one published observation on courtship and mating. According to this report, courtship lasted for 20 minutes. When finally accepted by the female, the male mounted her carapace, embraced her with his flippers, and mating began.

Incubation time ranges from 50 to 70 or more days, in accordance with the weather. The optimal incubation temperature for eggs of this species is around 29ºC. There is evidence that sex determination is male-biased in cool temperatures and vice versa. The "pivotal temperature", defined as the temperature where a 1: 1 sex ratio occurs, ranges between 29.0ºC and 29.95ºC. Incubation experiments on 72 hatchlings and 11 embryos, carried out by the J. Monod Institute, Paris, indicate that an incubation below 28.75ºC results in phenotypic males, while incubation temperatures above 29.75ºC produce females.

Emergence of the hatchlings occurs mostly at night; after having reached the surface of the nest, they remain for some time half exposed, before they run rapidly to the surf zone. Predation occurs throughout the life-cycle, but is highest during incubation and emergence. Predators are the same as for other sea turtles, but the hatchlings of ***Dermochelys coriacea*** are too large for smaller predators. The eggs and embryos are consumed by ghost crabs (***Ocypode*** sp.), throughout the nesting range. in some cases, clutches are destroyed by ants or fungal and bacterial infections. Other predators are vultures (***Coragyps*** sp.), domestic and feral dogs, jackals, pigs and wild boars. Monitor lizards (***Varanus*** sp.) are important nest predators in South Africa (Tongaland), Australia (Queensland) and Sri Lanka. After emergence and while they are running to the surf zone, hatchlings are attacked by birds (vultures, kites, crows, grackles and owls) and mammals (genet cats, mongoose, skunks, racoons, coatis, opossums and jaguars). In the water, hatchlingsare captured by sea birds (frigates, gulls, etc.), carnivor fishes and squids.

Juveniles and adults are attacked by sharks. Bones of the leatherback turtle were recovered from the stomachs of killer whales (Orcinus orca). Plastic wastes are another cause of mortality, since the turtles confuse these materials with jellyfish and swallow them, thus clogging their throat, esophagus and intestines. In some areas, e.g. in French Guiana, high mortality of females is caused by roots and logs of dead mangroves that choke the turtles when they ascend the beach to nest.

Parasites, as trematodes (***Astrorchis renicapite***) and amoebae (***Entamoeba*** sp.), are found in the intestines. Commonly these turtles are covered by epibiontic organisms, e.g. barnacles (***Chelonibia*** sp.**,** ***Conchoderma*** sp.**,** ***Lepas*** sp., ***Stomatolepas*** sp.**,** ***Platylepas*** sp.**,** ***Balanus*** sp.) and parasitic isopods (e.g. ***Excollarana*** sp.). so far, no papillomatosis has been reported.

Dermochelys coriacea feeds mainly on pelagic invertebrates, such as jellyfishes and tunicates, pelagic crustaceans (***Libina*** sp.**,** ***Hyperia*** sp.), juvenile fishes (***Trachurus*** sp.**,** ***Urophycis*** sp.) and marine plants are ingested accidentally.

The feeding behaviour of hatchlings and juveniles is unknown, but is believed to be similar to that of adults. They are assumed to be pelagic, migrating along the borders of warm currents and eddies, in search of food.

Size : This species is not only the largest living sea turtle, but also one of the largest extant reptiles. The largest specimen ever recorded, was a male of 256.5 cm carapace length (CCL) and a body weight of 916 kg, found dead on Harlech Beach in Gwyneed, Wales, in September 1988. Although the exact age at first maturity is unknown, this species is believed to reach sexual maturity after 3 or 4 years, at a size of 1.25 m of straight carapace length. Data obtained from animals in captivity indicate that ***Dermochelys coriacea*** grows faster than any other marine turtle.

If not stated otherwise, the following data on size (SCL and CCL) and body weight refer to nesting females: **Mexico**: Mexiquillo, 1983-84: 129 to 163 cm SCL with a mean of 145.8 cm (n = 85); 1987-88: 124 to 162 cm SCL, with a mean of 144.4 cm (n = 52); 1988-89: 126.5 to 187.5 cm SCL, with a mean of 144.6 cm (n = 395); **Costa Rica:** Atlantic coast, Jalova Beach, 134.6 to 172.7 cm SCL, with a mean of 152.1 cm (n = 76); Pacific coast, 128 to 151 cm SCL with a mean of 141.0 cm (n = 18); in Saint Croix, Sandy Point, the straight carapace length of nesting females ranges from 137 to 176 cm and the body weight from 258 to 506 kg; **Puerto Rico:** 153 to 160 cm SCL (n = 2); **Trinidad:** 135 to 185 cm CCL, with a mean of 156.5 cm (n = 20); **Colombia:** 140 to 170 cm (CCL), with a mean of 155.6 cm (n = 7); **Guyana:** three females of 137.5, 152.5 and 162.5 cm SCL; **Surinam:** 143.3 to 164.5 cm SCL, with a mean of 153.8 cm (n= 16); the smallest female weighted 302 kg; **French Guiana:** 135 to 189 cm CCL, with a mean of 158.5 cm (n = 834); **Senegal:** one female measured 183 cm (SCL ?), the weight of another was calculated between 200 and 250 kg; for **India:** southeastern coast, only three length measurements (SCL ?) of non- nesting females are recorded, 213 cm (body weight 272 kg), 195 cm and 190 cm; **Sri Lanka:** 147.5 to 165 cm CCL, with a mean of 155.9 cm (n =4); the body weight of the smallest specimen was 301 kg, that of the largest 448 kg; **Australia:** Queensland, 150 5 to 174.5 cm CCL, with a mean of 162.4 cm (n = 9).

Data on size and weight of males and non-nesting females are rare.

Some examples are the following: **Canada:** Labrador Peninsula, one male with a carapace length of 165 cm and about 500 kg of body weight, and one female of 147 cm carapace length and 379 kg of body weight, both captured in September 1973; Nova Scotia, 106 to 177 cm carapace length (SCL ?), with a mean of 149 cm (n =9, 1889 to 1966), **USA:** Massachusetts, Cape Cod Bay, 124.5 to 170 cm CCL, with a mean of 144.8 cm (n =25); New Jersey, one stranded female that measured 145 cm (SCL); **Bardados Island;** Cattlewash Beach, one juvenile of 19 cm SCL; **Chile:** two specimens with 137 and 148 cm CCL; the holotype of ***Sphargis angusta*** Philippi, 1899, deposited in the Natural History Museum of Valparaiso, has a carapace length of 186 cm; **Madeira:** one female with a carapace length (CCL) of 166 cm; **Europe** Brongersma (1972) lists 188 records of the leatherback turtle (period: 1901-1970). but only for 11 specimens, all of them caught between June and September, information on size and weight is available, the carapace length ranged from 135 to 162 cm, and body weight from 494 to 1 069 kg, new data are available for **Greece,** where 11 subadults and adults were caught, their carapace length ranging from 123 to 180 cm; **Mauritania:** one female with 150 cm and two males with 143 and 155 cm of carapace length; another male weighed 600 kg; **Egypt,** Red Sea: two males with 168 and 143 cm of carapace length (CCL); **South Africa:**

nine records between 1969 and 1973; a juvenile of 76 cm SCL (body weight 27.3 kg), one male of 162 cm CCL (body weight 320 kg), and seven females with a carapace length (CCL) from 119 to 170 cm (body weight from 150 to 646 kg).

Interest to Fisheries : Adults are caught incidentally by set or drift nets used for pelagic fishing and by longlines used for tuna, sailfish, swordfish, and sharks. Generally speaking, there are no commercial fisheries for this species, although in some places it is used as bait in longline shark fisheries. In many countries, the leatherback population has been threatened by egg-harvesting, i.e. Malaysia and Sarawak, Surinam, the Guianas, Mexico (west coast) and Costa Rica; also in several of the Caribbean islands, where the leatherback was abundant two decades ago. In Terrengganu, Malaysia, the number of nesting females decreased from 1 800 in the fifties to not more than 100 in 1988.

The lack of an organized fishery for the adults of this species is partly due to the fact that they have no valuable scutes as the hawksbill, nor can they be used as a source of leather as the-olive ridley; however, they yield many litres of oil which was used in the past for caulking wooden boats and for oil lamps. The FAO Yearbook of Fishery Statistics does not report leatherback catches, but it is possible that catches are included under the item “Marine turtles n.e.i.” (unidentified species).

Remarks : It is now considered an “endangered species” throughout its distributional range. It is included in Appendix I of the CITES and in the Red Data Book of the IUCN. No official statistics are available on catches of this species. In the majority of countries, this species is fully protected, but in many of them, legal enforcement of these protective measures is difficult. Hence, indiscriminate poaching of eggs on beaches and capture of adults in the sea or in nesting areas is still widespread. Rearing of this turtle in captivity was attempted on several occasions, without success, possibly because of the animal damaging itself by swimming mainly in one direction and hitting its snout against the wall of the container. However, several individuals have been reared for up to four years, before they died or were released.

Local Names : ALDABRA: Carembol; ANDAMAN ISLANDS: Sher-cacchua; BANGLADESH: Samudrik kasim: BRASIL: Canastra, Carepa becerra, Tartaruga de courot, Tartaruga grande encourada; CARIBBEAN REGION: Kawana; CAYMAN ISLANDS: Trunk; COLOMBIA: Bufeadora, Canal, Gaula; CHILE, ECUADOR, PERU: Tartaruga laud, Tortuga siete filos; CHINA: Leng-Pi-Gui; COSTA RICA, EL SALVADOR: Baula, Laúd; CUBA: Tinglado; FRANCE: Tortue luth; FRENCH GUIANA: Kawa-na; GERMANY: Lederschildkrote; GOLD COAST: Bosange, (Swahili): Noa; GUATEMALA: Baule, Licotea; GUYANA: Mata-mata; INDIA (Tamil-Nadu): Eluvarai-amai, Dhoni-amai, Thoni-amai; INDOCHINA (Vietnam): Ba-Tam; INDONESIA: Penyu belimbing, Labi-labi; (Irian Jaya): Kopem; ITALY: Sfargide, Tartaruga de luth, Tartaruga liuto; JAPAN: Osa game; MALAYSIA: Penyu belimbing; MEXICO: Tortuga laúd, Tortuga de cuero, Chalupa siete filos, Tinglada, Machincuepo, Galapago; MICRONESIA (Truk District): Mirang, Wongera; (Yap District-Central Carolines): Wonera; NEW GUINEA: Tonesu, Foakona, Goli, Tinuk, Veu, Epapo, Mabua, Latuk, Pwiri, Kuaurai, Peleleu, Wedara, Manibu, Bolu; NICARAGUA (Pacific): Tora; PANAMA: Tortuga de canal; PHILIPPINES: Pawican; PORTUGAL: Tartaruga; PUERTO RICO: Tinglar; RED SEA, EGYPT (Arabic): Na’ama; SENEGAL: Tortue luth, Tortue de cuir; SEYCHELLES: Torti karambol; SPAIN: Tortuga laúd; SRI LANKA: Dhara kasloave, Dhoni amai; SOUTH AFRICA: Irundu, Inhasa, Ronto, Valozoro; (Afrikaans): Leerrugseeskilpad; (Dutch): Lederschilpad; SURINAM: Aitkanti, Siksikanti: THAILAND: Tao-Ma-Fueung; UK, USA: Leathery, Luth, Leatherback, Leather-trunk turtle; VENEZUELA: Tortuga laud, Tres quillas, Chalupa.

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