

# Olive Ridley Sea Turtle

*Lepidochelys olivacea*



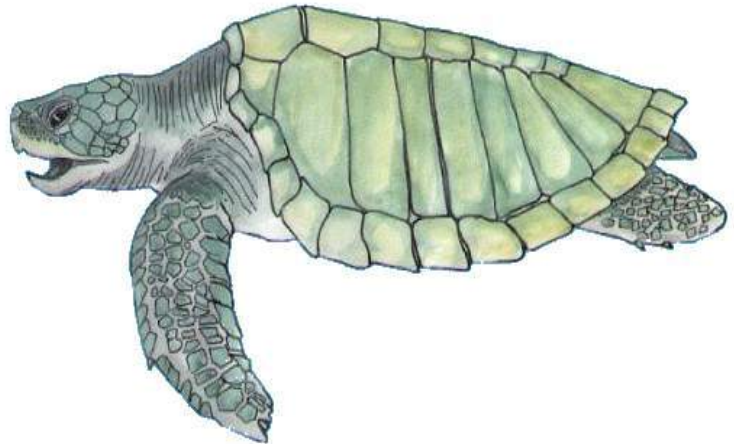
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## Picture

English - Olive Ridley turtle

French - Tortue olivâtre

Spanish - Tortuga golfina

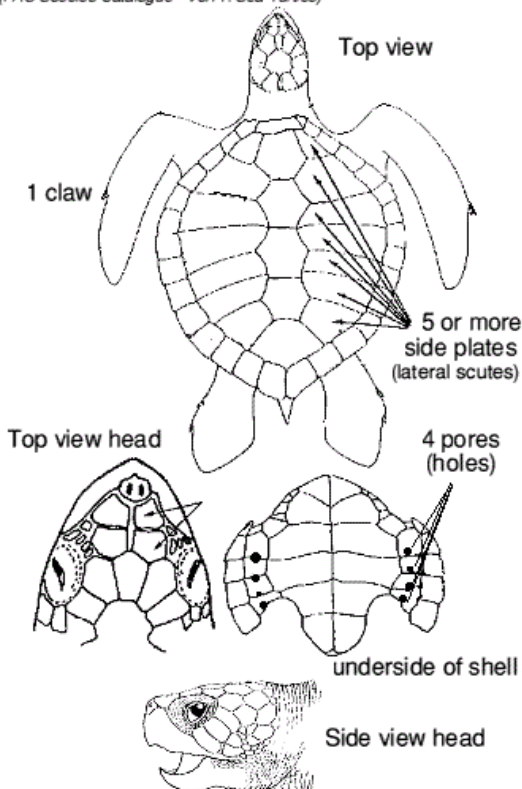


## Size and Body Mass

Smallest of the sea turtles

- Carapace length (SCL) mean 67.6 cm; range 51 to 75 cm
- mean mass 38.1 kg; 33 - 43 kg
- Females tend to be heavier (by 2 kg) but shorter (by 3 cm)

(FAO Species Catalogue - Vol11. Sea Turtles)



## Diagnostic Features

- Carapace : nearly round heart shaped with upturned lateral margins
- Rathkes Gland : pores open on rear part of each inframarginal scute
- Flippers: Fore and rear carry 2 claws
- Colour: adult, plain olive - grey carapace but cream or white below with grey margins

## Geographical Distribution

- Geographic Distribution: Probably the most abundant of the marine turtles
- Mexico and Costa Rica : 200,000 each year
- Nicaragua : 20,000 per year
- Madras and Orissa States (India) 300,000 per year

- Pantropical, living mostly in the Northern hemispheres
- Major breeding and feeding grounds are in the Eastern Pacific and Indian Oceans
- Major concentrations for breeding are Mexico to Costa Rica, North Eastern coast of India and Surinam

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## Habitat and Biology



illustration: M. Demma © ICRAM

### Typical habitats:

- Neritic, floating and feeding at the surface but also reported diving to 200m.

### Migrations:

- Along continental shelves, in some populations for several thousand miles between feeding and breeding grounds

Photo: Bates (Mexico )

### Nesting areas:

- Beaches chosen have slight slopes, are isolated, often beyond protective lagoons.

### Nesting periods:

- Year round in Mexico but principally in summer to late Autumn



illustration: M. Demma © ICRAM

### Nesting behaviour:

- Females congregate in huge numbers 5,000 - 150,000 offshore, to nest during the final quarter of each moon, a phenomenon known as *arribazones*, *arribada*, *morrinas* or *flotas*.
- Most turtles nest during the night.
- On land, foreflippers moved alternately: hind flippers moved together or alternately.
- Advantages of arribazones:

The saturation strategy of producing vast numbers of eggs and hatchlings at one time overwhelms predators, but leads to severe mortality because of disturbance of nests by other females : this is heaviest of short beaches.

- Most (60%) nest every year and lay more than once during the season.
- Average 1.5 times per year.
- Females show site fidelity (return to the same beach)

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## Egg number, size and weight:

- Clutch-size mean 109; range 20-155 with regional differences.
- Egg size : mean diameter 32.1-44.7 mm; mean mass : 30-38 g



illustration: M. Demma © ICRAM

## Size and weight of hatchlings:

- Length SCL 34.7-44.6 mm
- Mass 12-22.3 g

## Incubation time:

- 45-65 days being slower where the temperature and humidity vary from 30C and 14% respectively. Also varies with location, month and beach conditions.



illustration: M. Demma © ICRAM

## Maturity:

- Age uncertain; size as little as 49 cm SCL



illustration: M. Demma  
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## Courtship and Mating:

- No data

## Sex determination:

- 1:1 male to female at 30C
- bias to males at 28C
- bias to females at 32C

## Hatching:

- No data

## Hatchling mortality and predation:

- Affected by human activity, weather conditions, predation and disease.
- They suffer heavy casualties following emergence, particularly if this occurs during the day.
- Eaten by a wide range of predators, from frigate birds to racoons, from ghost crabs to dogs.
- At sea, smaller turtles eaten by fish, particularly by sharks.

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## Feeding:



Fish



Molluscs



Crustaceans

ascidians

coelenterates

bryozoans

All illustrations (except first left): M. Demma © ICRAM

- Mostly in shallow water on a wide range of animal prey.
- Facultative carnivores, perhaps specialising where one prey species is easily available eg red lobsterets (*Pleuroncodes planipes*) on West Coast of California.
- Studies off Mexico show a very wide diet including fish, molluscs, crustaceans, ascidians, coelenterates and bryozoans.
- Some of these are benthic others nectonic.

## Threats to Survival



Accidental capture by fishing activities



Pollution



Human predation



Animal predation

Illustrations: M. Demma © ICRAM

## 2. Human predation

- Due to fishing, for both for food and leather -it is a rich source of protein and oil.
- Harvesting of eggs : many millions taken each year. In some areas this is strictly controlled and based on a quota system. (Malaysia, Surinam and Honduras). It is illegal in Mexico, Costa Rica and India. Since the clutches of early arribada may well be destroyed by later layings, there is a case for harvesting them.
- Leather: Antonio Suarez estimates 130,000 per year in three Mexican States (1996-1977).