

# I CETACEI E LE **TARTARUGHE MARINE** DEL MEDITERRANEO: CHIAVI DI IDENTIFICAZIONE DI SPECIE

Marco Ballardini

IZS del Piemonte, Liguria e Valle d'Aosta  
S.S. Sezione di Imperia

Evento ECM "Sorveglianza sanitaria dei Cetacei e tartarughe marine spiaggiate lungo le coste italiane. Aggiornamento sulle attività delle reti regionali del Lazio"

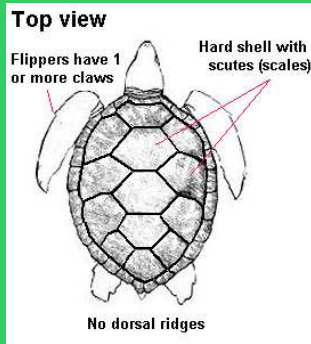
IZS Lazio e Toscana - Roma, 13 Dicembre 2013



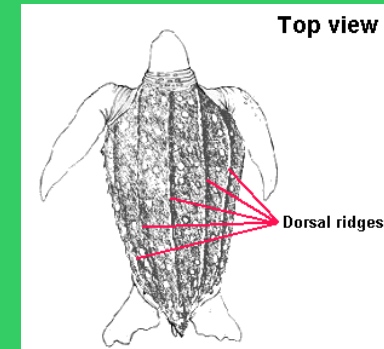
# Tartarughe marine

Classe: Reptilia

Ordine: Testudines



Famiglia Cheloniidae



Famiglia Dermochelidae

1) **Tartaruga comune** *Caretta caretta*

3) **Tartaruga liuto** *Dermochelys coriacea*

2) **Tartaruga verde** *Chelonia mydas* *mydas*  
*agassizii*

4) **Tartaruga embricata** *Eretmochelys imbricata*

5) **Tartaruga di Kemp** *Lepidochelys kempii*

6) **Tartaruga olivacea** *Lepidochelys olivacea*

7) **Tartaruga a dorso piatto** *Natator depressus*

**Tot. 7 specie riconosciute**

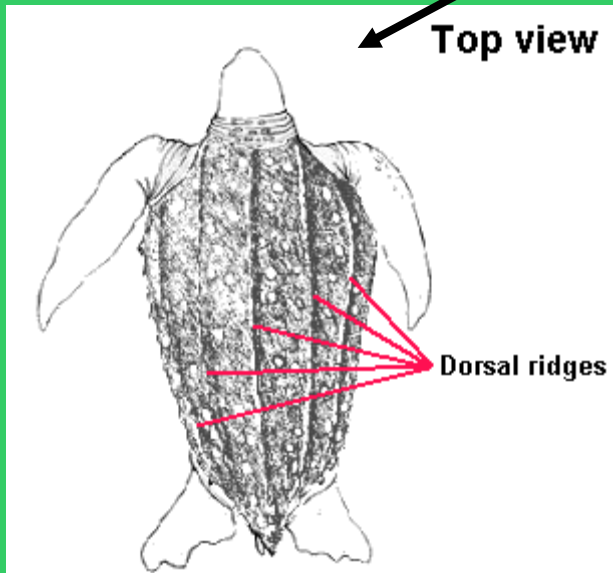
# Tartarughe marine



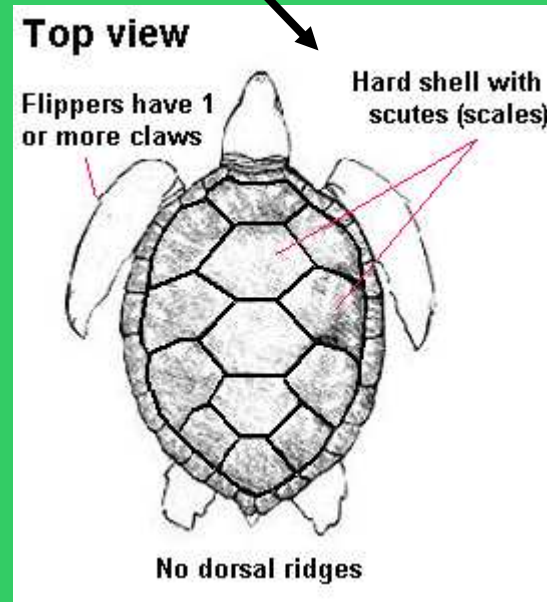
# Tartarughe marine

<http://www.conserveturtles.org>

A

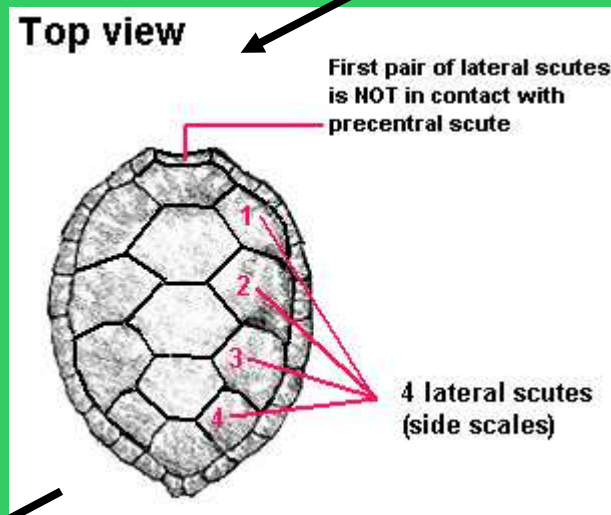


B

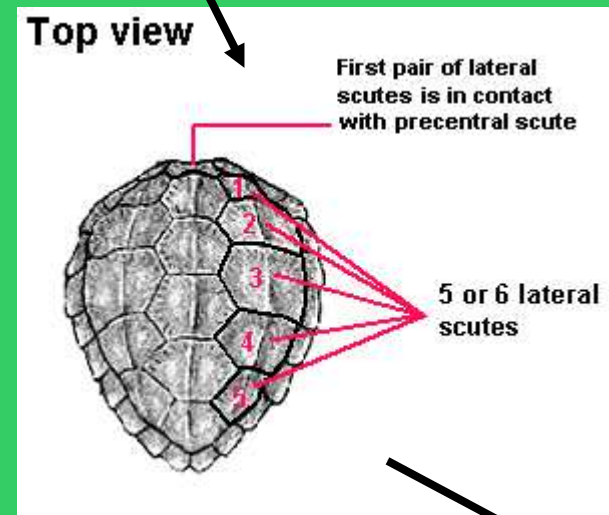


**Tartaruga liuto**  
**(*Dermochelys coriacea*)**

B1



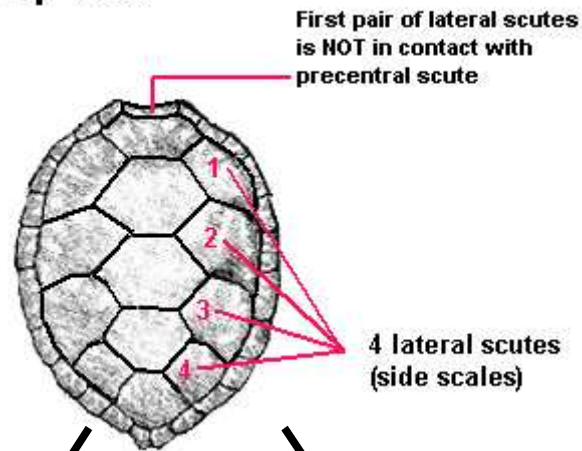
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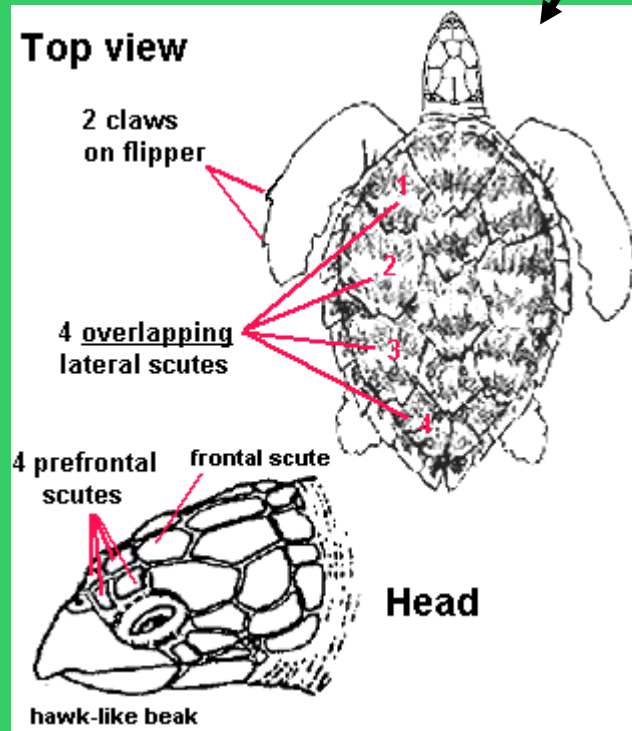


B1

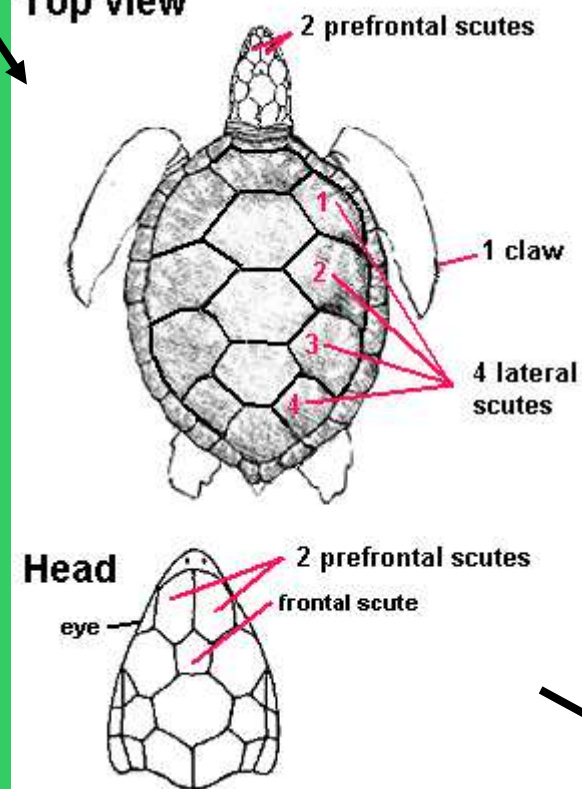
### Top view



### Top view

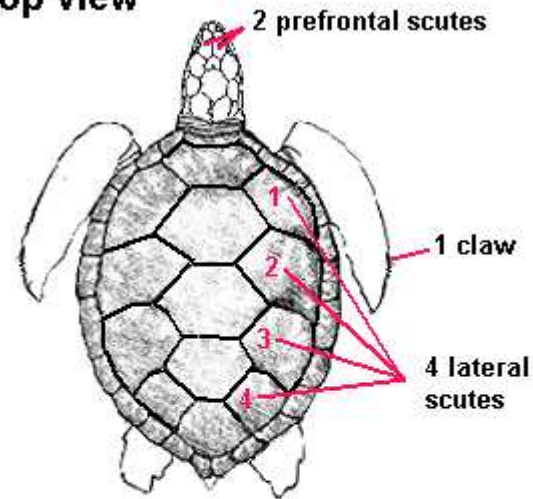


### Top view

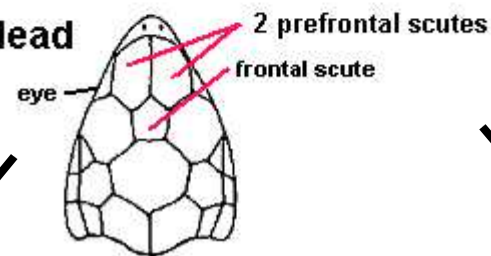


**Tartaruga imbricata**  
**(*Eretmochelys imbricata*)**

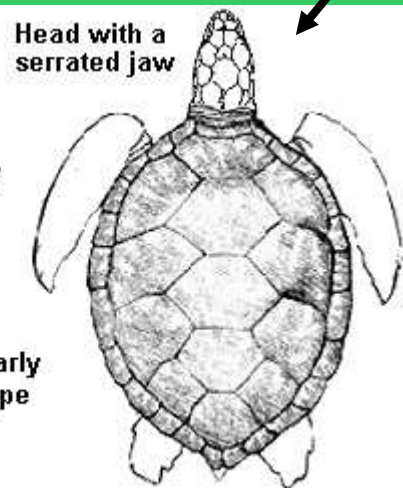
**Top view**



**Head**



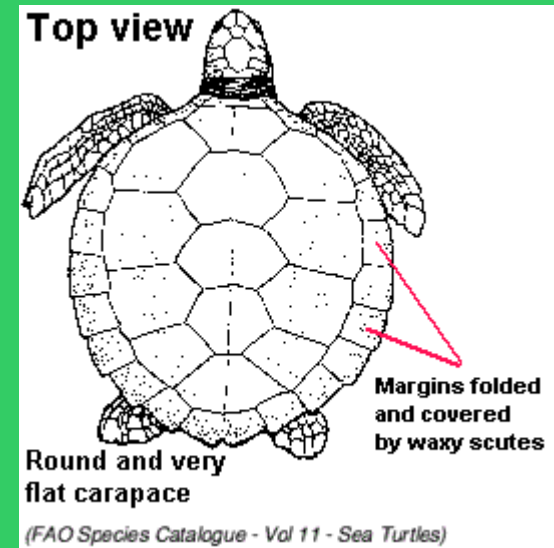
**Top view**



**Tartaruga verde**  
(*Chelonia mydas mydas*)

**Tartaruga nera**  
(*Chelonia mydas agassizii*)

**Top view**

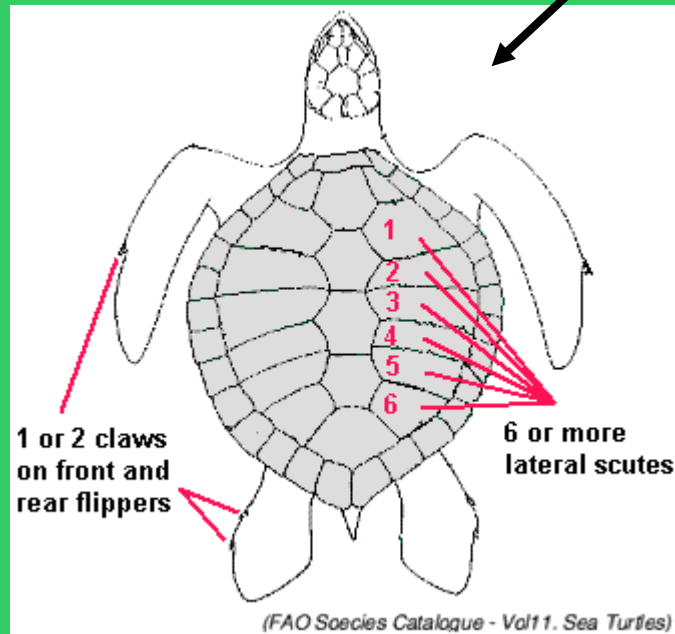
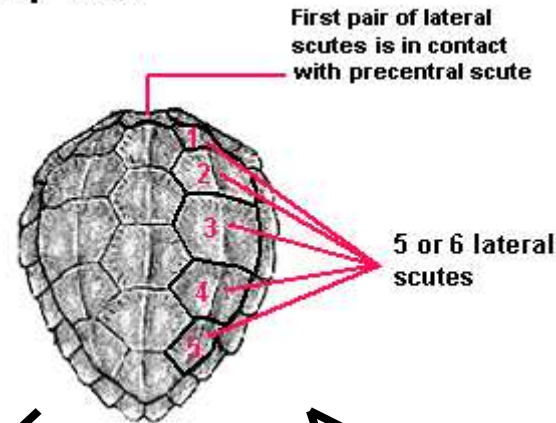


**Tartaruga dal dorso piatto**  
(*Natator depressus*)



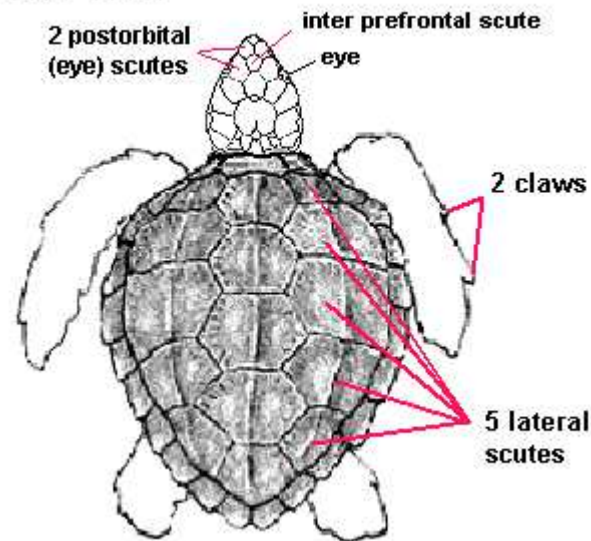
B2

Top view



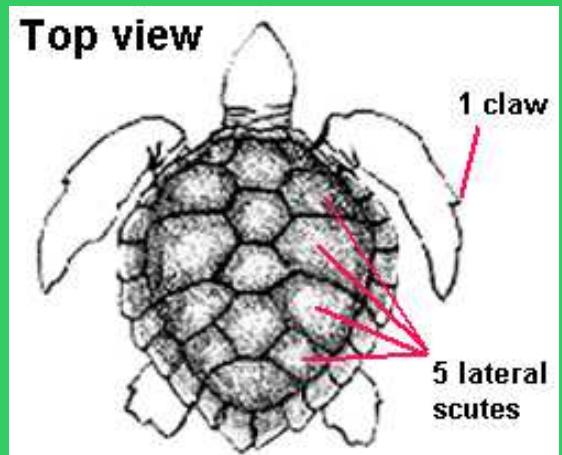
**Tartaruga olivacea**  
**(*Lepidochelys olivacea*)**

Top view



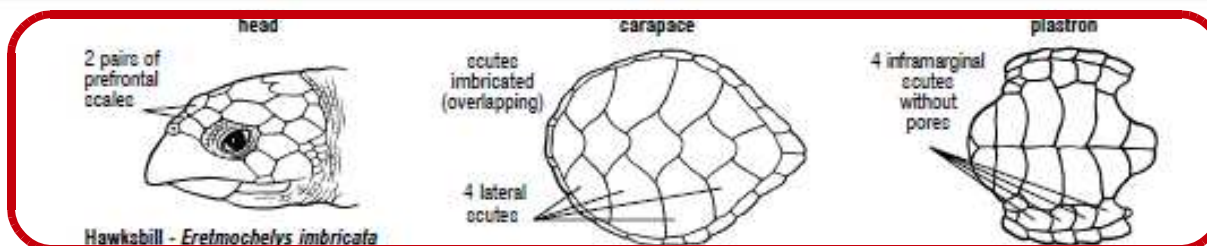
**Tartaruga comune**  
**(*Caretta caretta*)**

Top view

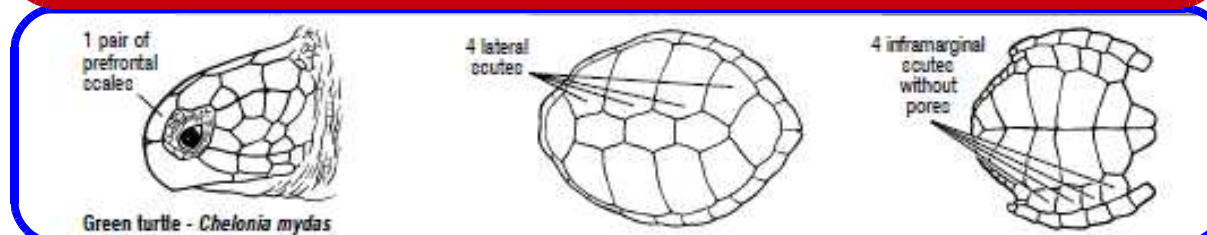


**Tartaruga di Kemp**  
**(*Lepidochelys kempii*)**

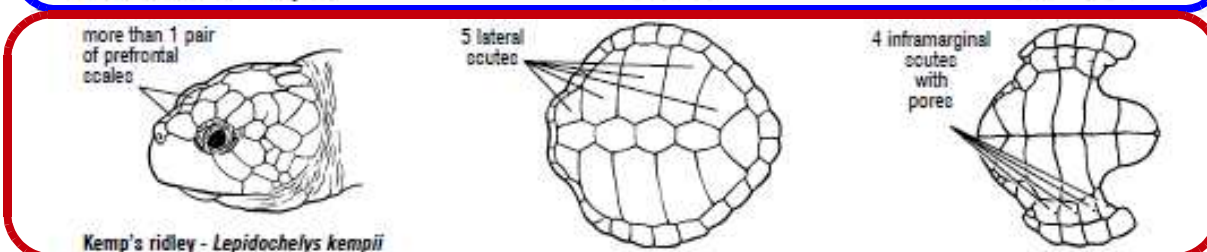
Tartaruga imbricata



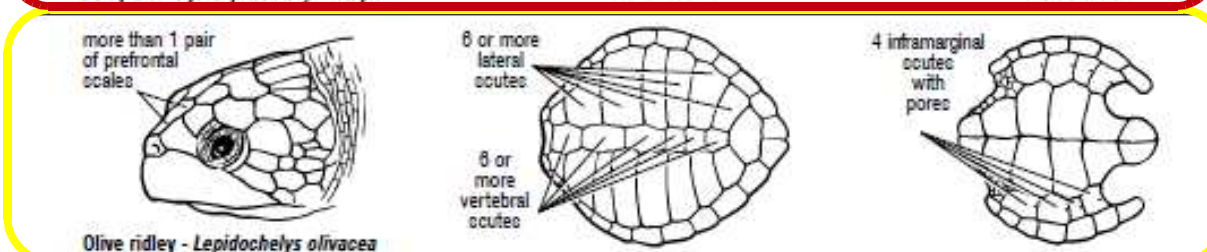
Tartaruga verde



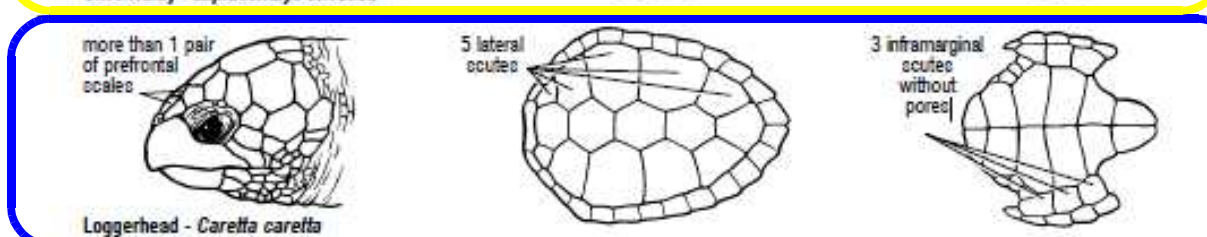
Tartaruga di Kemp



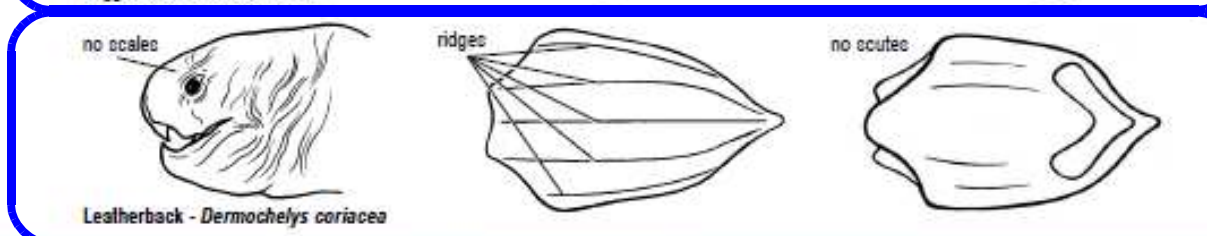
Tartaruga olivacea



Tartaruga comune



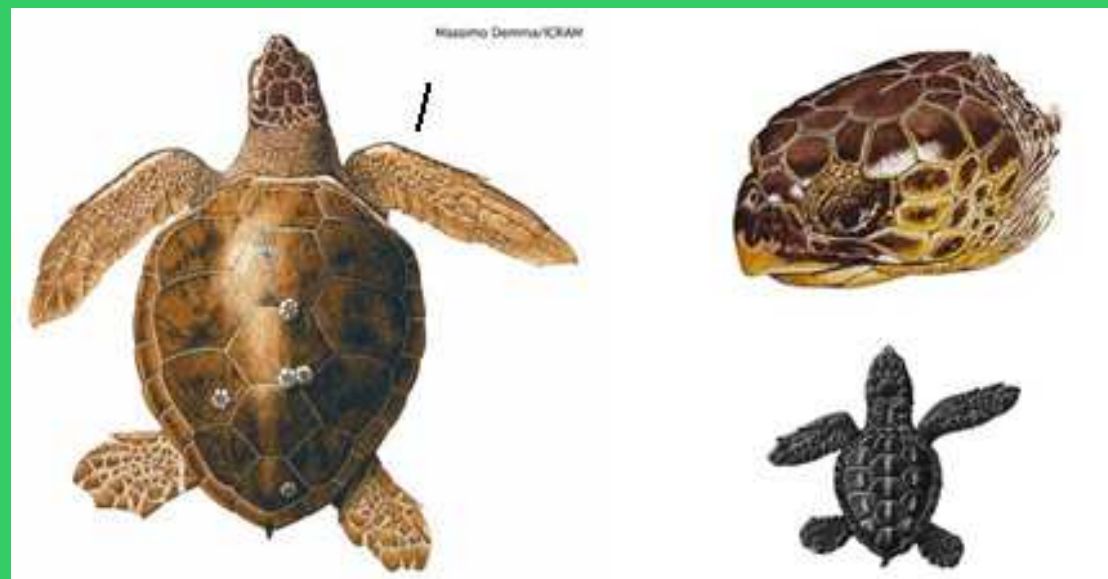
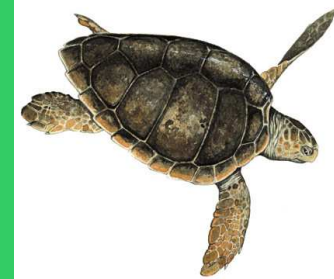
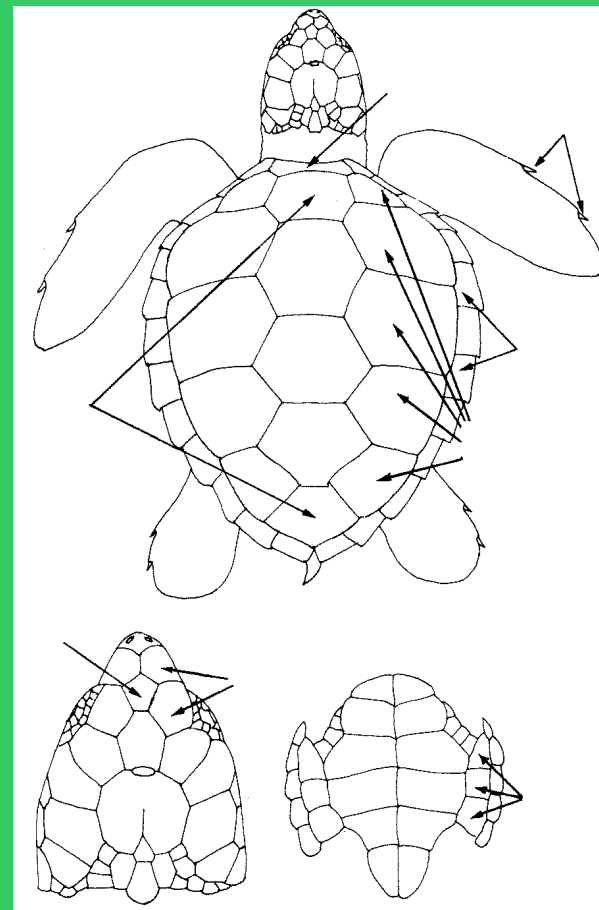
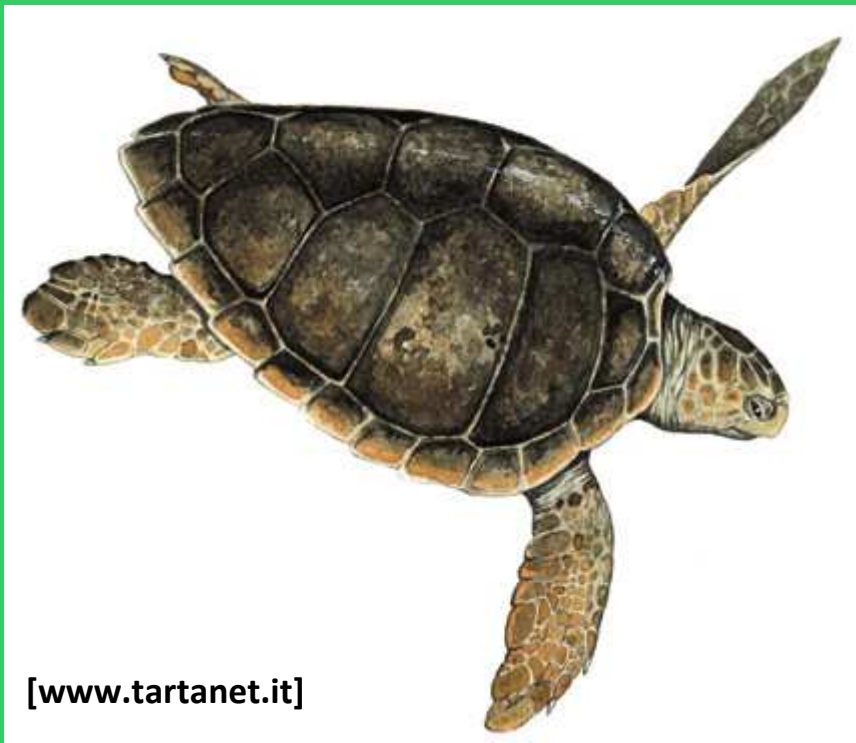
Tartaruga liuto



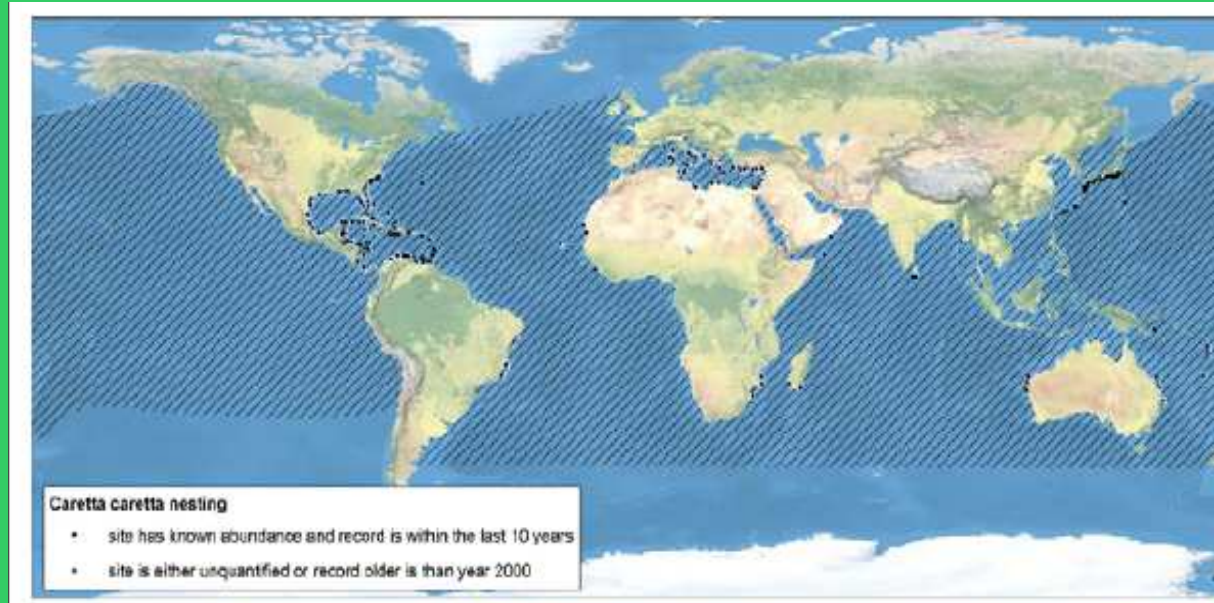
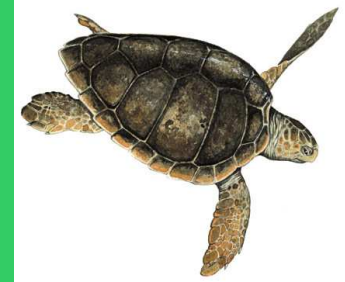


# 1) Tartaruga comune *Caretta caretta*

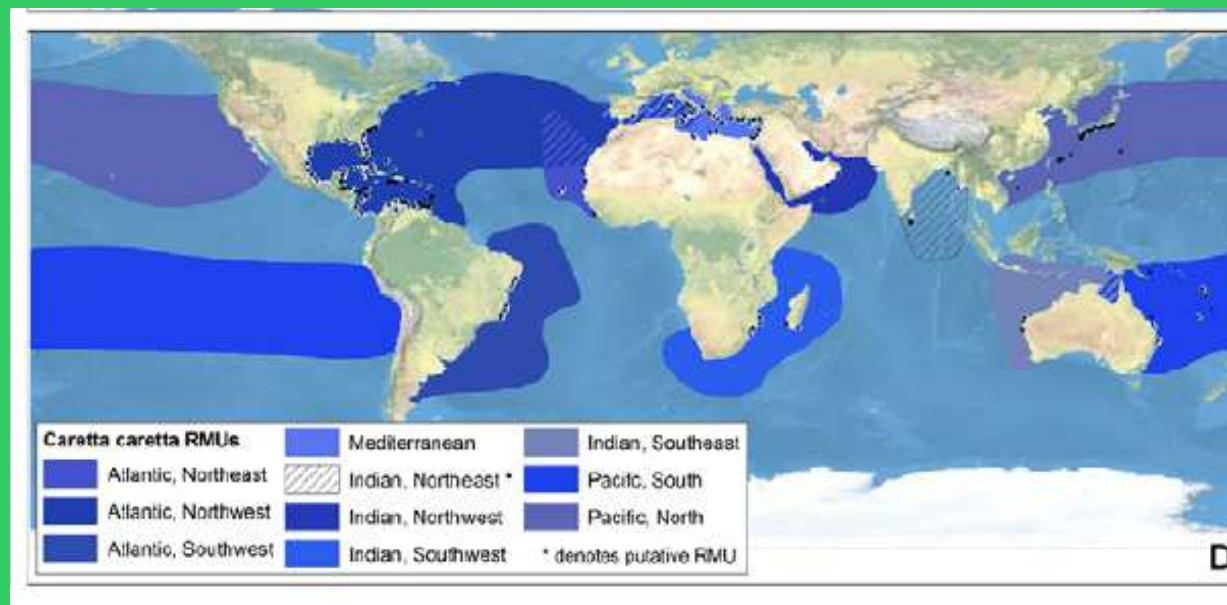
Lunghezza media carapace (adulti): 80-110 cm  
Peso medio (adulti): 70-170 kg



# 1) Tartaruga comune *Caretta caretta*



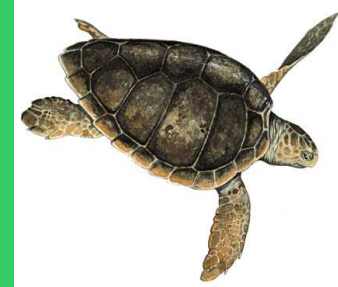
[Wallace et al. 2010. PLoS ONE 5(12)]



Si riproduce anche in Mediterraneo, dove è la specie più diffusa



# 1) Tartaruga comune (*Caretta caretta*)





# 1) Tartaruga comune (*Caretta caretta*)

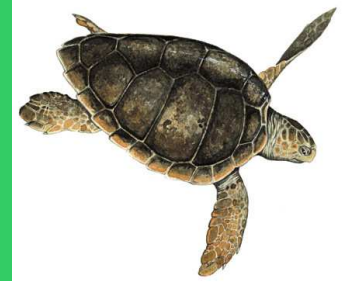


Figure 7.  
A stranded juvenile  
loggerhead entangled in a  
plastic sack. The turtle  
suffering from a friction  
in the humerus, was  
released after medical  
care and rehabilitation in  
The Israeli Sea Turtle  
Rescue Center  
(Photo: Y. Levy).





# 1) Tartaruga comune (*Caretta caretta*)

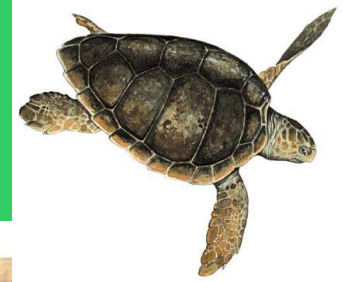
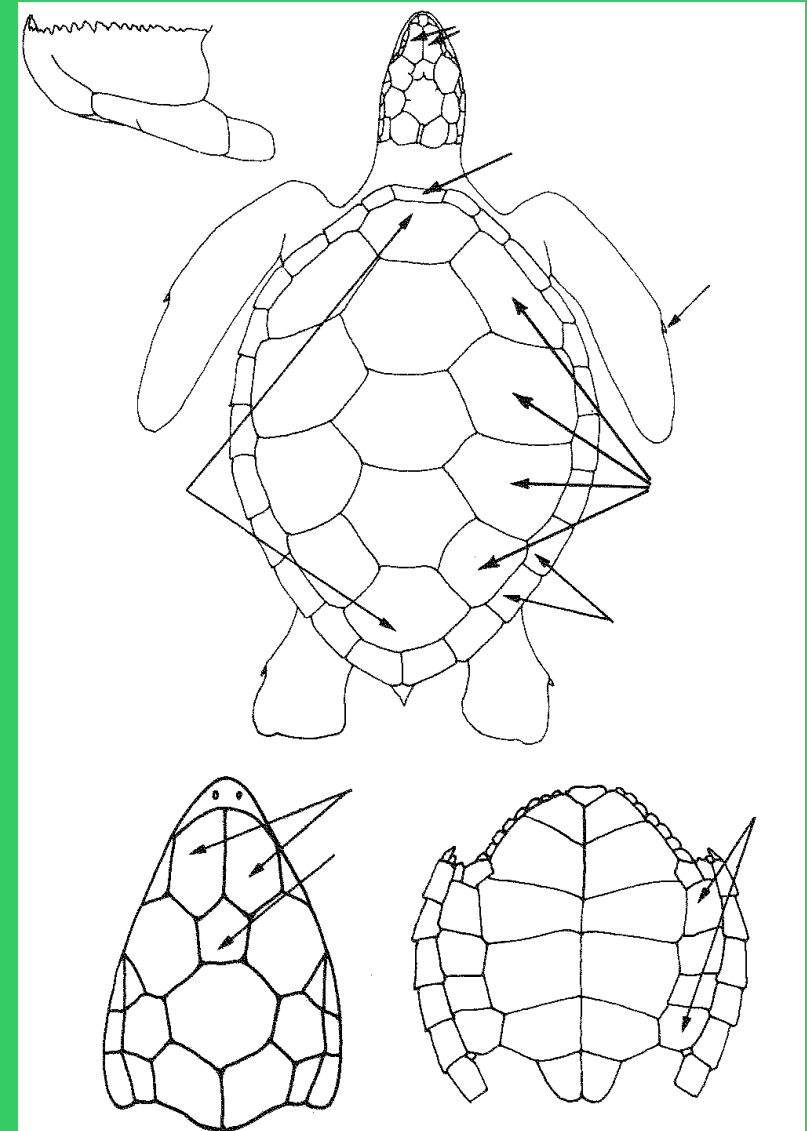
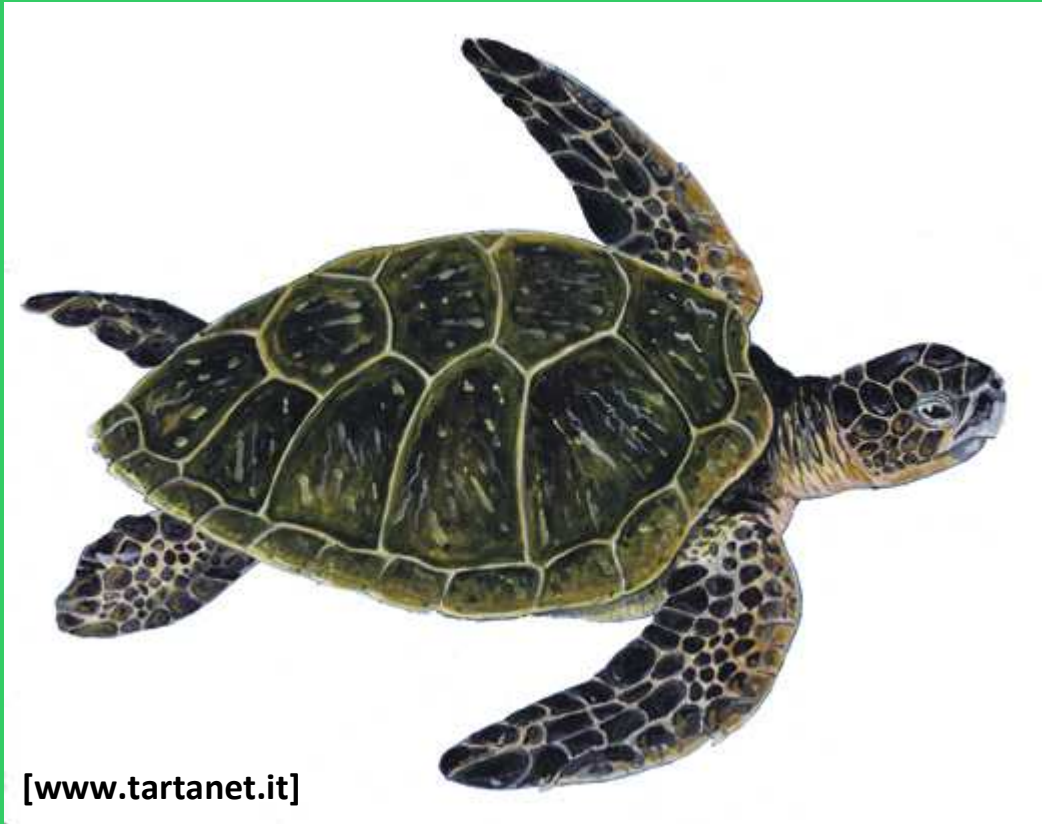


Figure 2.  
A loggerhead turtle  
with crude oil, treated  
at the Rehabilitation  
Centre, San Lucjan,  
Malta (Photo: C.  
Sammut).



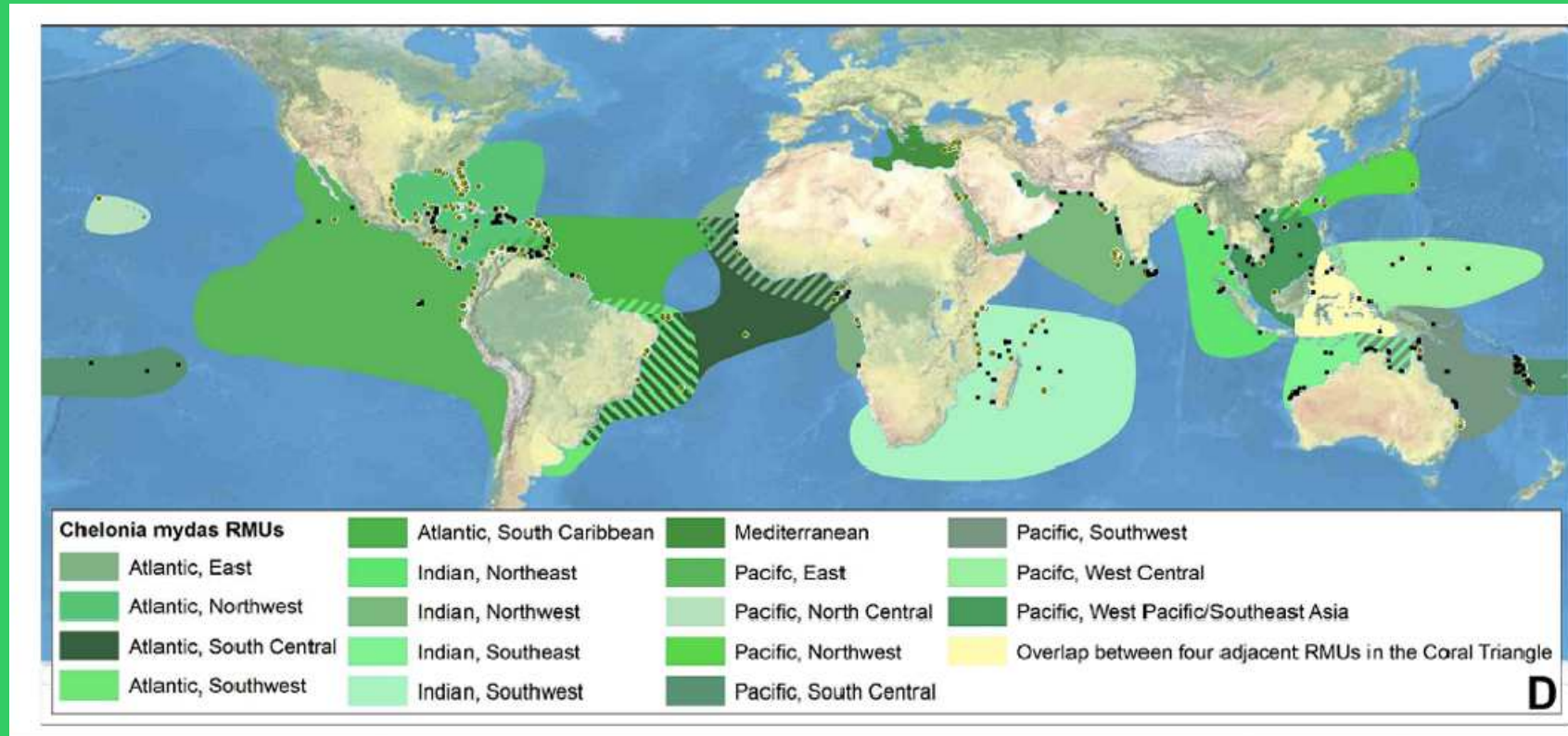
## 2) Tartaruga verde (*Chelonia mydas*)

Lunghezza media carapace (adulti): 80-115 cm  
Peso medio (adulti): 110-190 kg





## 2) Tartaruga verde (*Chelonia mydas*)



[Wallace et al. 2010. PLoS ONE 5(12)]

**Si riproduce nel Mediterraneo orientale**

## 2) Tartaruga verde (*Chelonia mydas*)

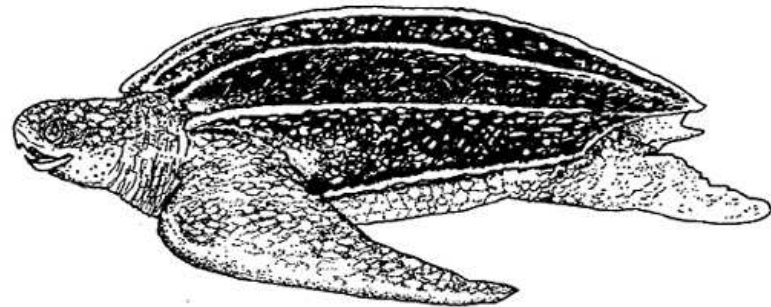


[Wyneken. 2001. NOAA Tech. Memor. NMFS-SEFSC-470]

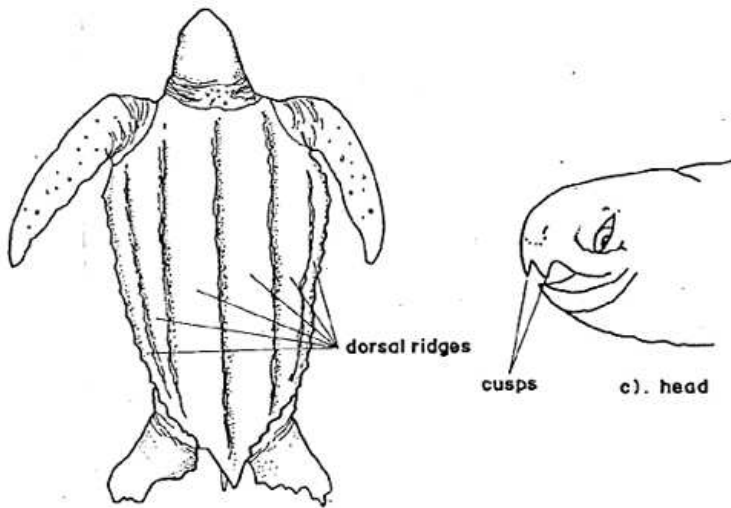




### 3) Tartaruga liuto (*Dermochelys coriacea*)



a). lateral view



b). dorsal view

c). head

The leatherback turtle, *Dermochelys coriacea*



*Dermochelys coriacea*



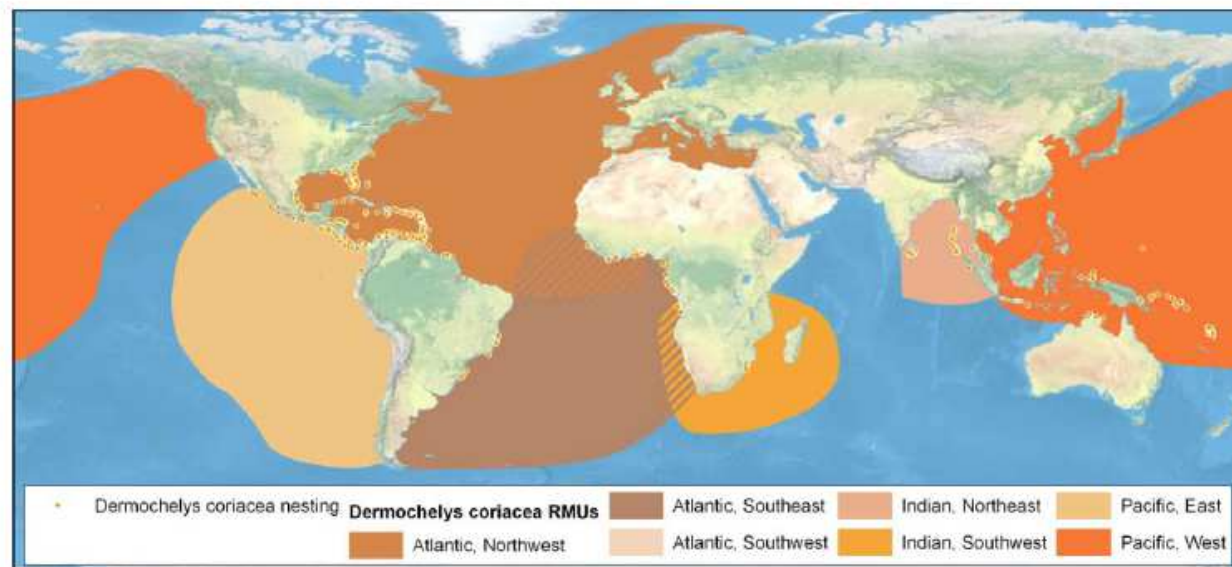
**Fig 95.** Dermal ossicles are bony plates that reside deep to the skin in the leatherback carapace.

Lunghezza media carapace (adulti): 165-190 cm  
Peso max (adulti): 400-500 kg

### 3) Tartaruga liuto (*Dermochelys coriacea*)



**Figure 1.** Global distribution and nesting sites for the Leatherback Turtle.



**Figure 2.** Global map of the seven subpopulations (RMUs) of Leatherbacks and their nesting sites.

[Wallace et al. 2010. PLoS ONE 5(12)]



### 3) Tartaruga liuto (*Dermochelys coriacea*)



<http://www.seaturtleinc.org/>

[Wyneken. 2001. NOAA Tech. Memor. NMFS-SEFSC-470]



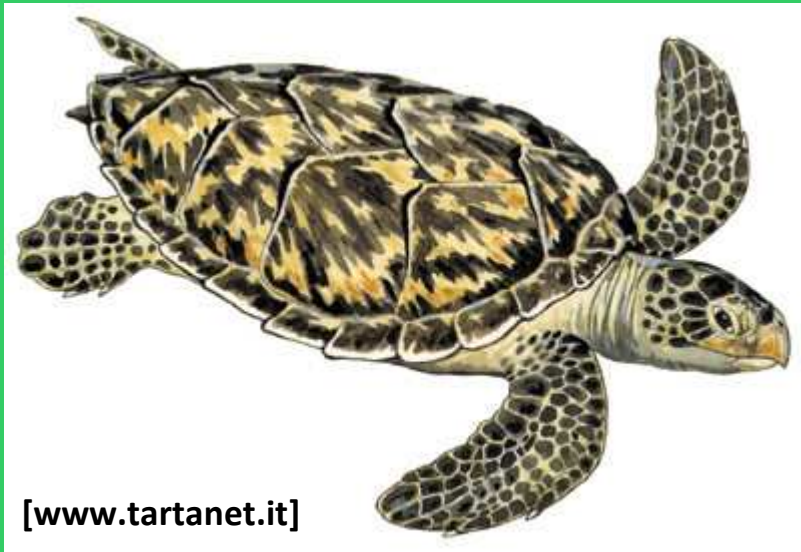
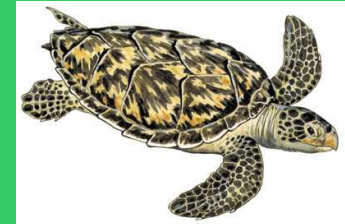
### 3) Tartaruga liuto (*Dermochelys coriacea*)



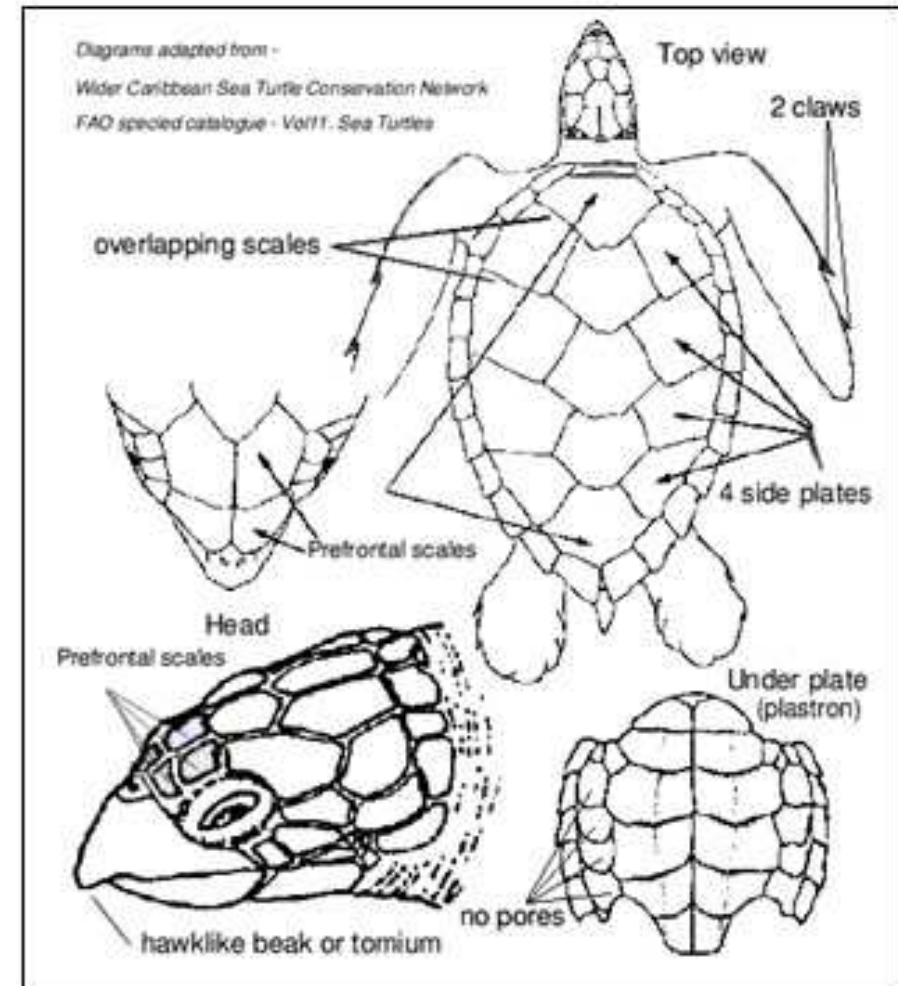
Figure 8.  
Leatherback turtle  
stranded dead after  
entanglement with a  
static long-line  
(Photo: Y. Levy).



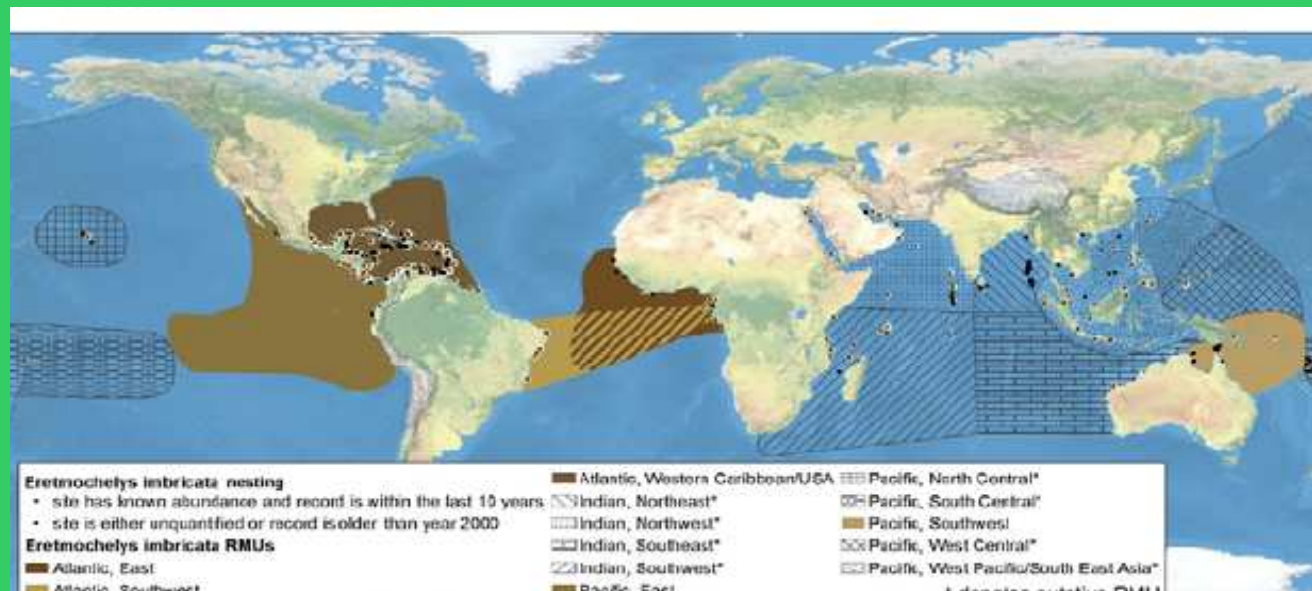
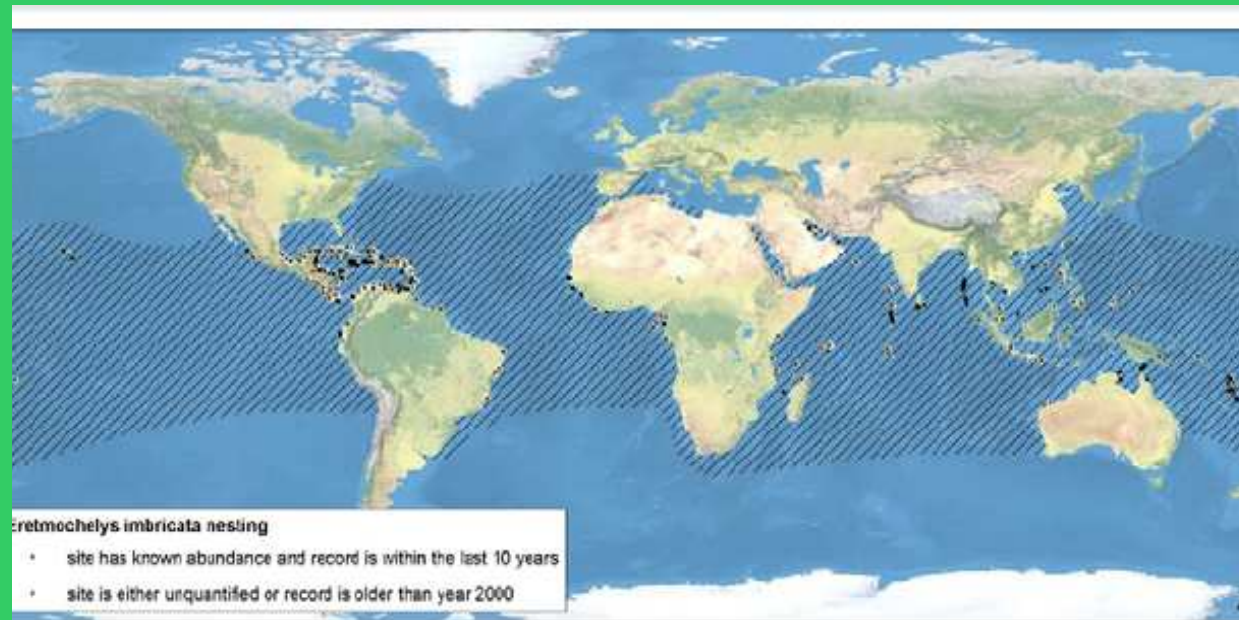
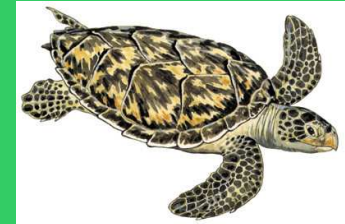
## 5) *Tartaruga imbricata* (*Eretmochelys imbricata*)



Lunghezza media carapace (adulti): 71-89 cm  
Peso max (adulti): 80 kg



## 5) *Tartaruga imbricata* (*Eretmochelys imbricata*)



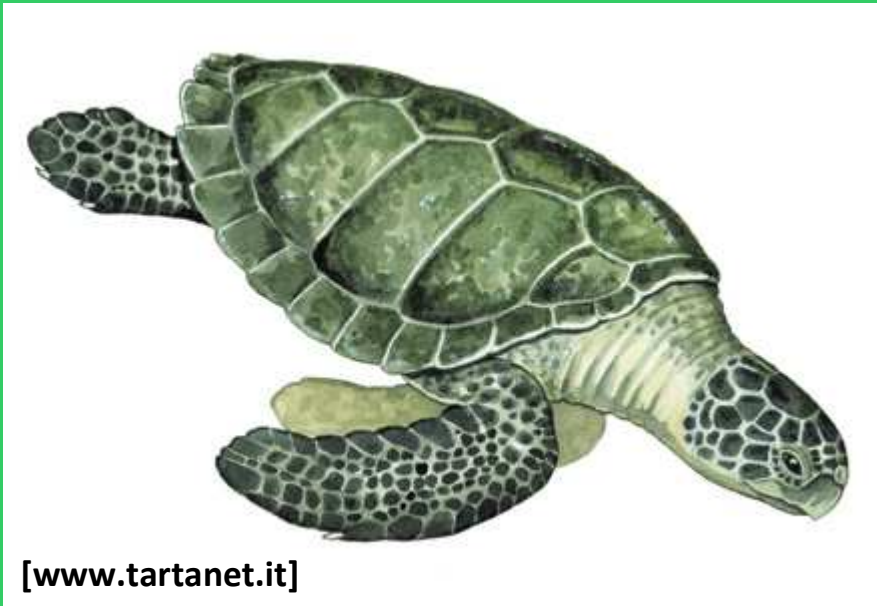
[Wallace et al. 2010. PLoS ONE 5(12)]



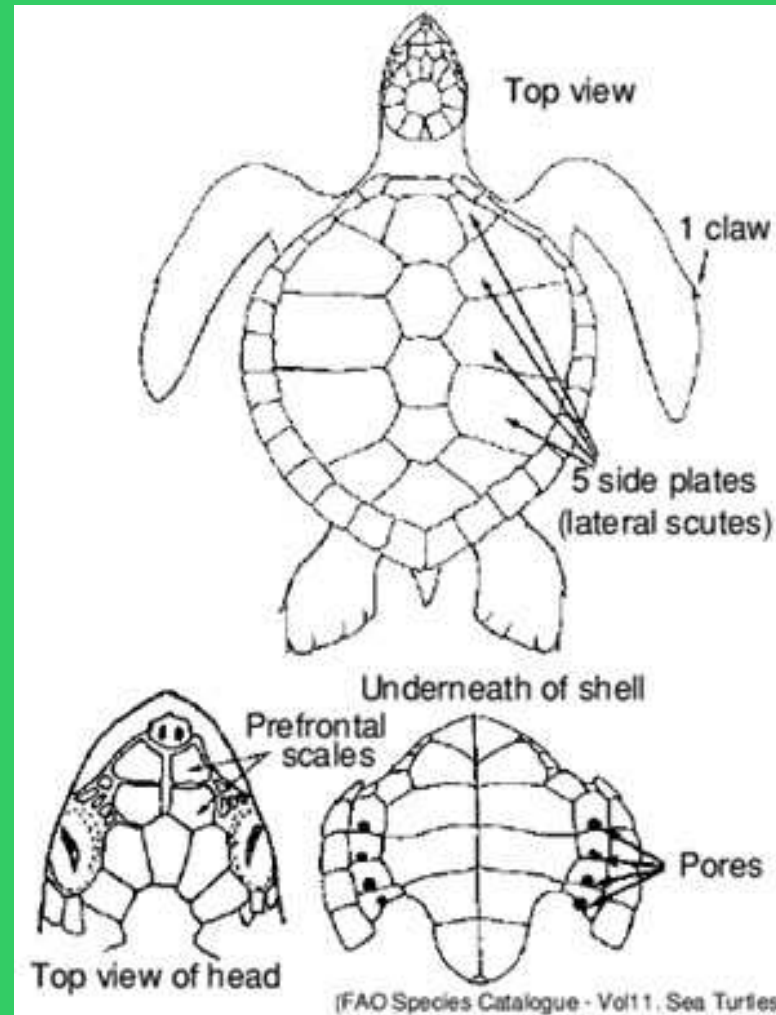
5) *Tartaruga imbricata*  
(*Eretmochelys imbricata*)



#### 4) Tartaruga di Kemp (*Lepidochelys kempii*)

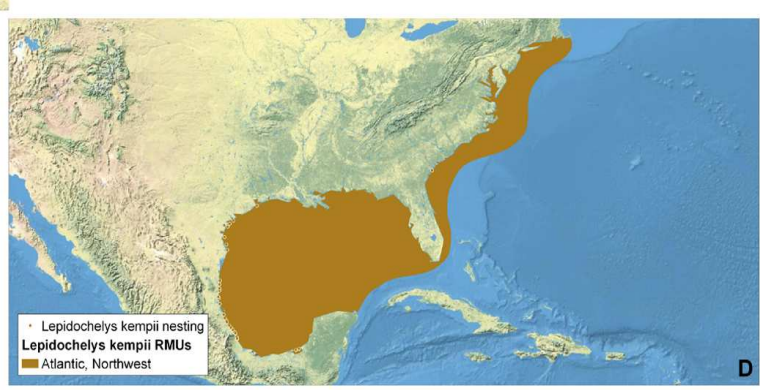


Lunghezza max carapace (adulti): 70 cm  
Peso max (adulti): 40-50 kg

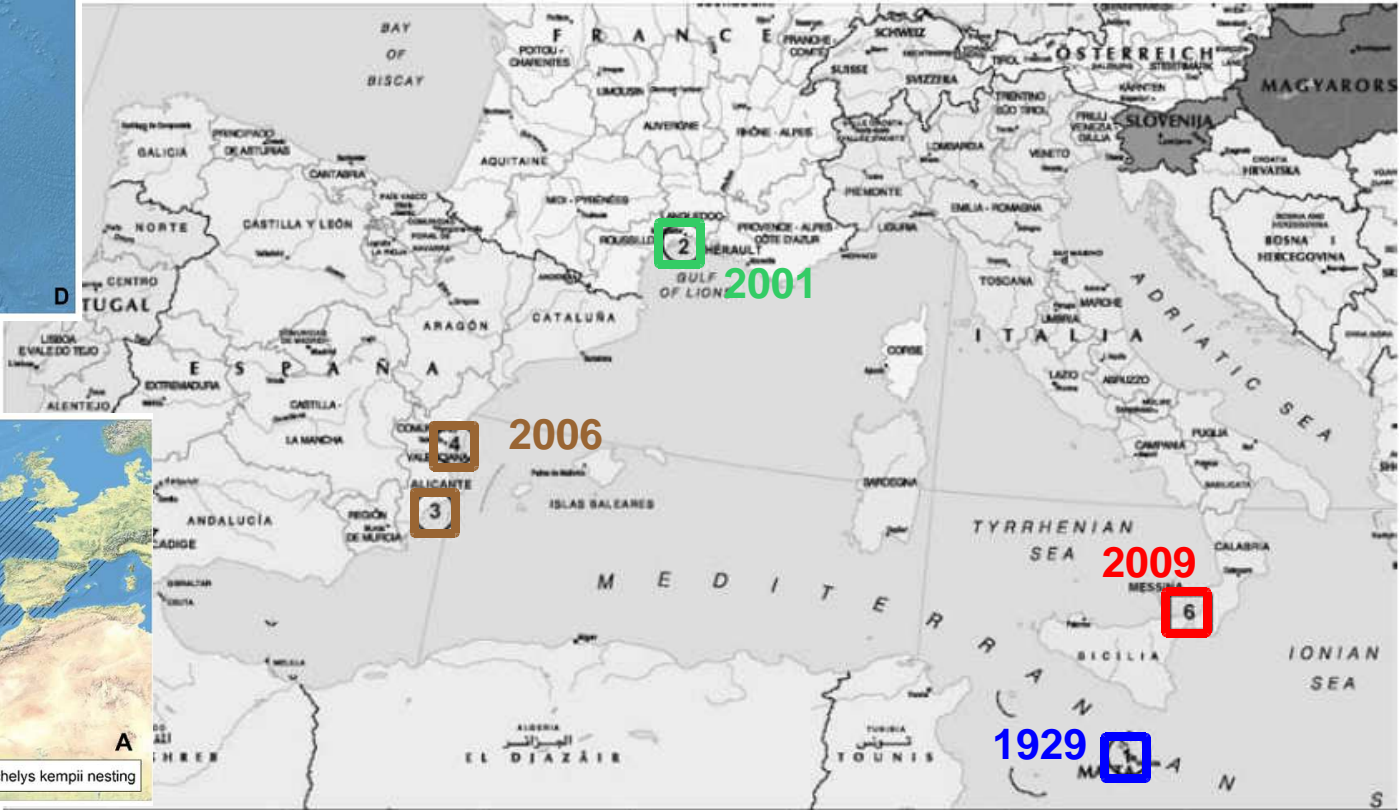
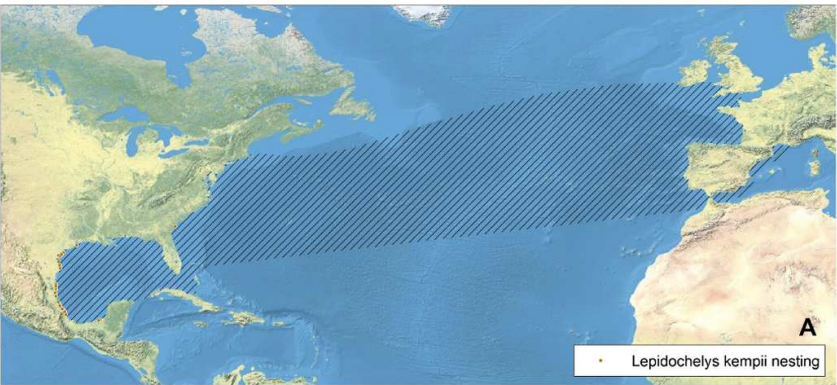




# 4) Tartaruga di Kemp (Lepidochelys kempii)



[Wallace et al. 2010. PLoS ONE 5(12)]



AUTOR	COUNTRY	YEAR	MONTH	LENGTH cm	WIDTH cm	WEIGHT Kg
Brongersma et al.	Malta	1929	October	SCL 29.4	SCW 28.2	----
Oliver et al.	France	2001	July	SCL 33.4	SCW 32.3	----
Tomás et al.	Spain	2001	October	CCL 32.3	CCW 31.9	4.60
Tomás et al.	Spain	2006	July	CCL 28.1	CCW 28.0	2.43
Insacco et al.	Italy	2009	August	SCL 27.8	SCW 25.2	2,85

[Da: Insacco & Spadola. 2010. Acta Herpetologica 5, modificato]  
Fig. 1. Locality records for the Kemps' ridley turtle.

#### 4) Tartaruga di Kemp (*Lepidochelys kempii*)

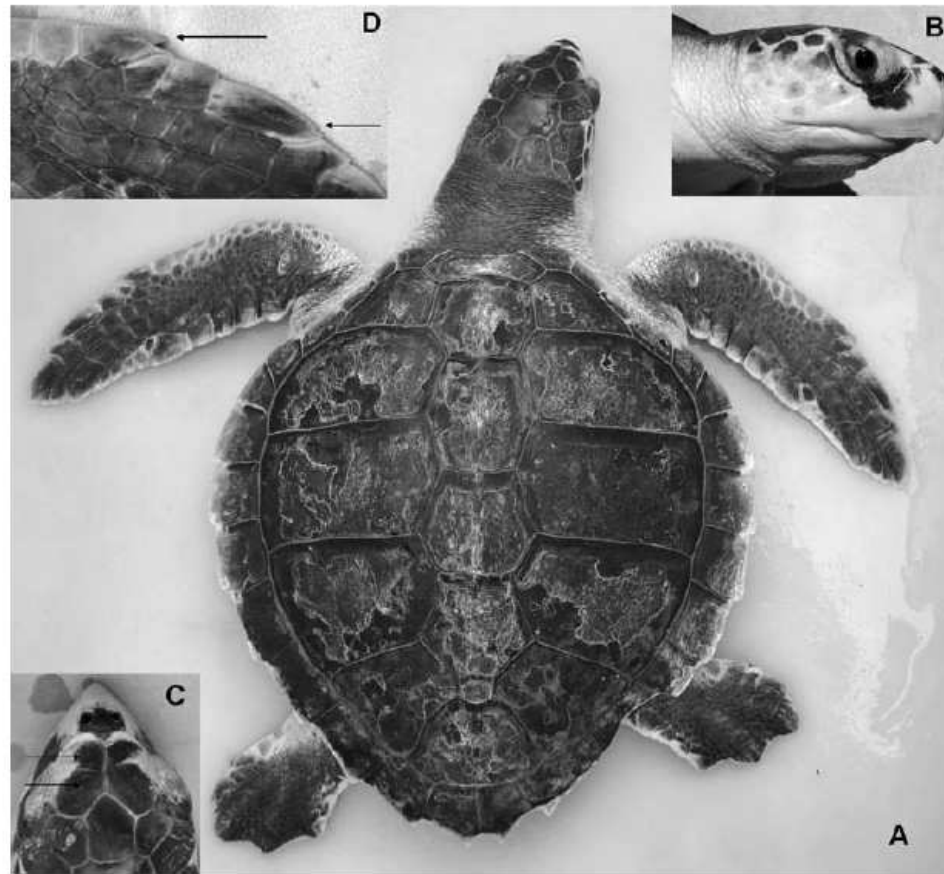


Fig. 2. *Lepidochelys kempii* specimen (see text for explanation to figure).



[Insacco & Spadola. 2010. Acta Herpetologica 5]



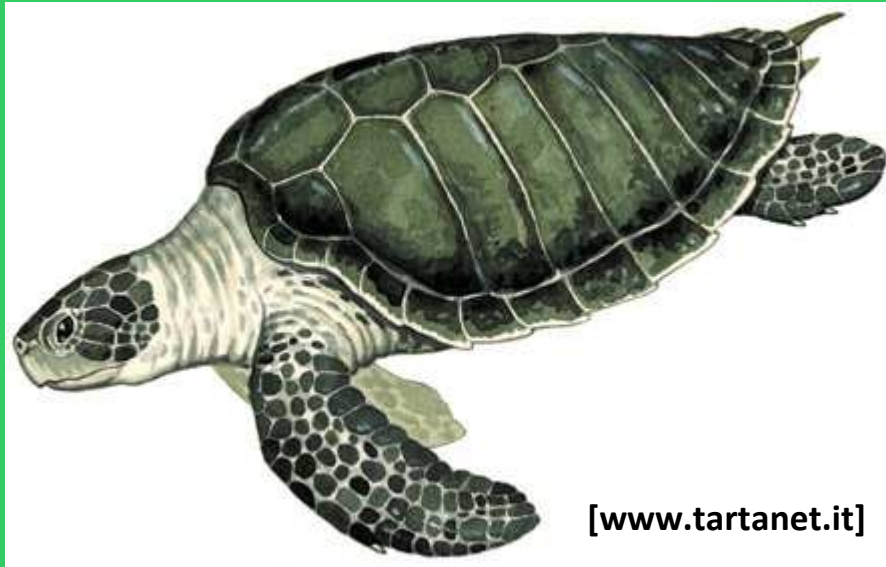
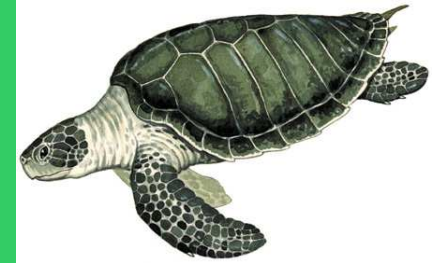
Fig. 3. Position of the Rathke scent glands pores



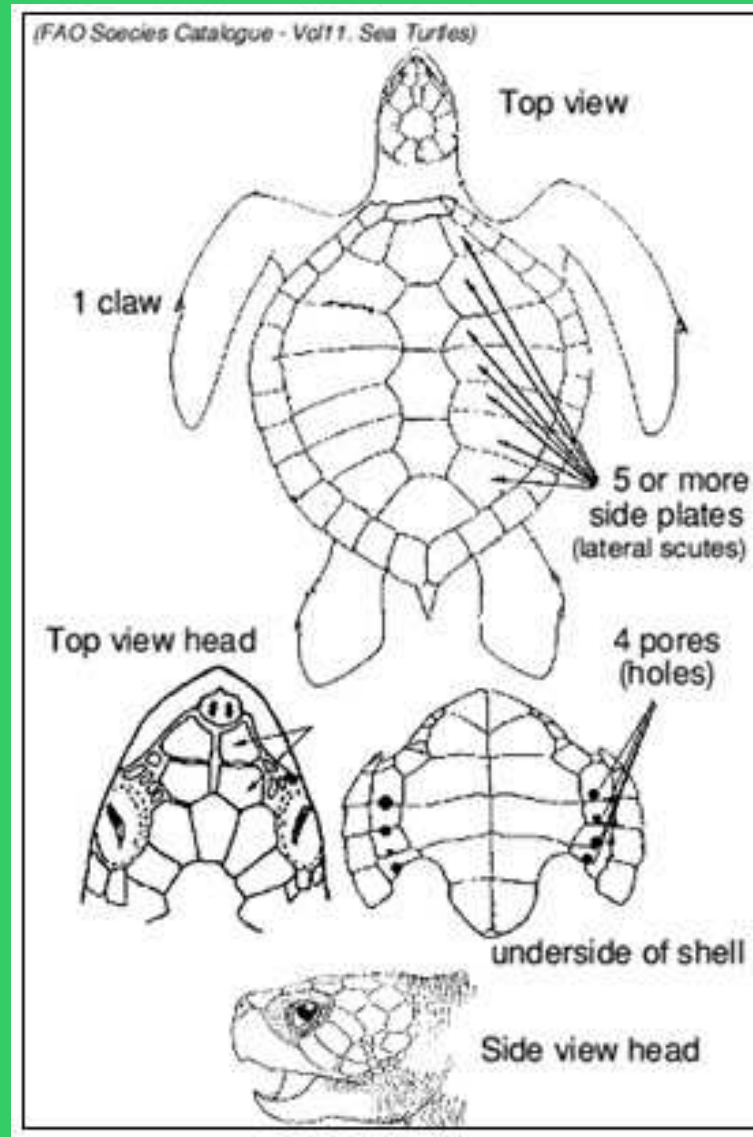
4) Tartaruga di Kemp  
(*Lepidochelys kempii*)



6) *Tartaruga olivacea*  
(*Lepidochelys olivacea*)

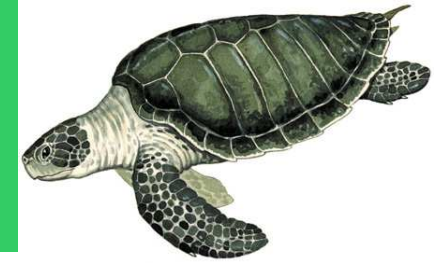


Lunghezza max carapace (adulti): 60-70 cm  
Peso medio (adulti): 35-45 kg – max 70 kg





## 6) *Tartaruga olivacea* (*Lepidochelys olivacea*)



**ASSENTE DAL MEDITERRANEO.....PER ORA!**

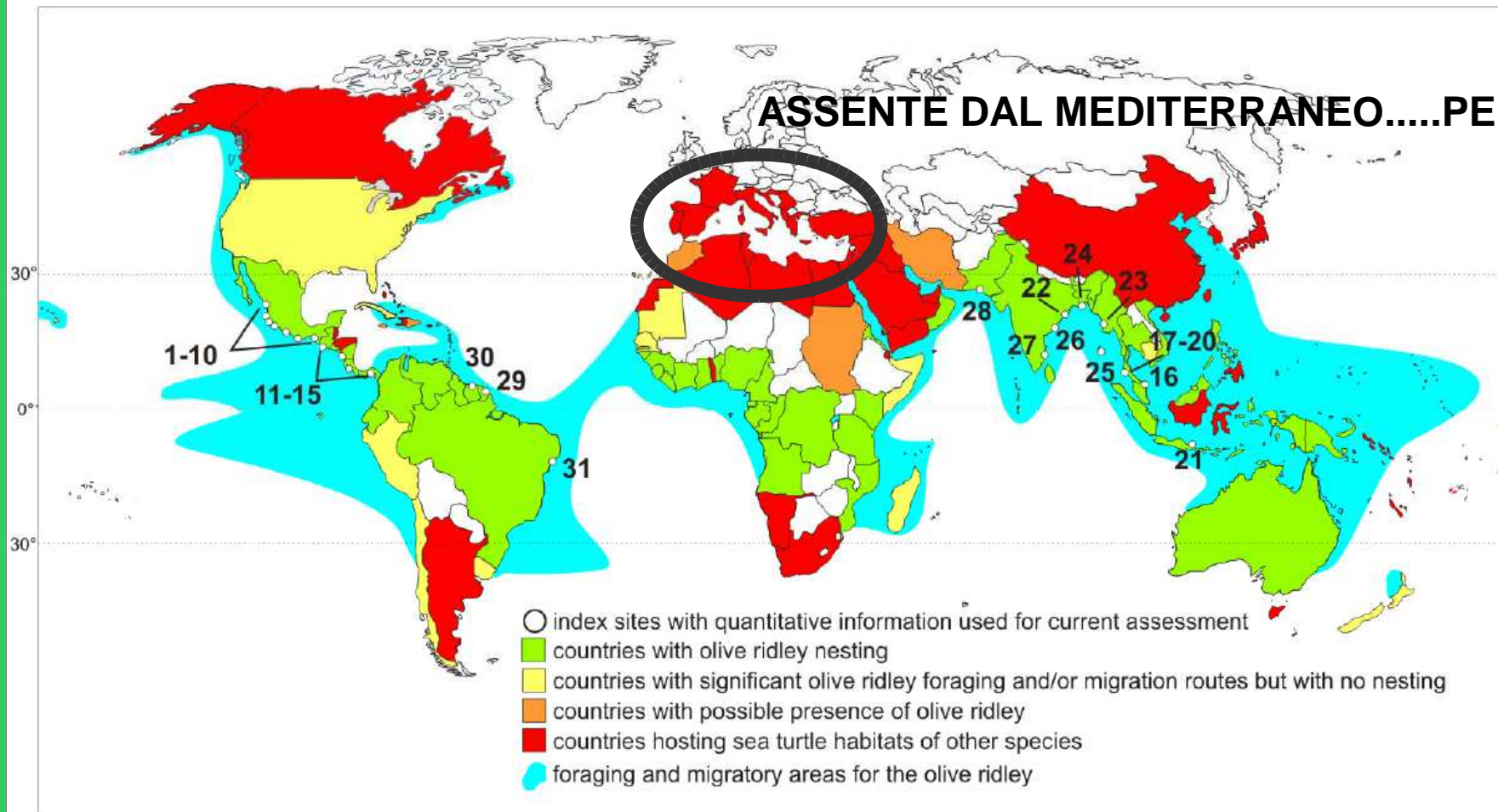
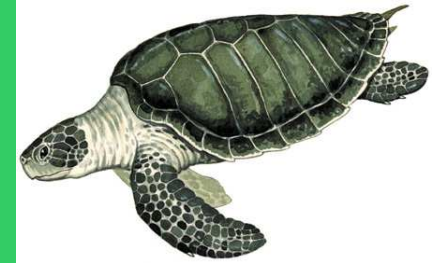


Figure 1. Geographic range of habitats utilized by the Olive Ridley, *Lepidochelys olivacea*, based on data in Table 5.

[IUCN Red List of Threatened Species, 2008]

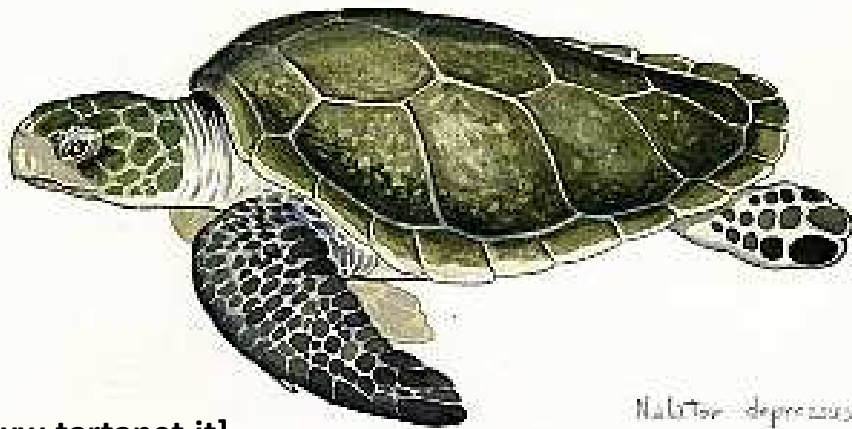
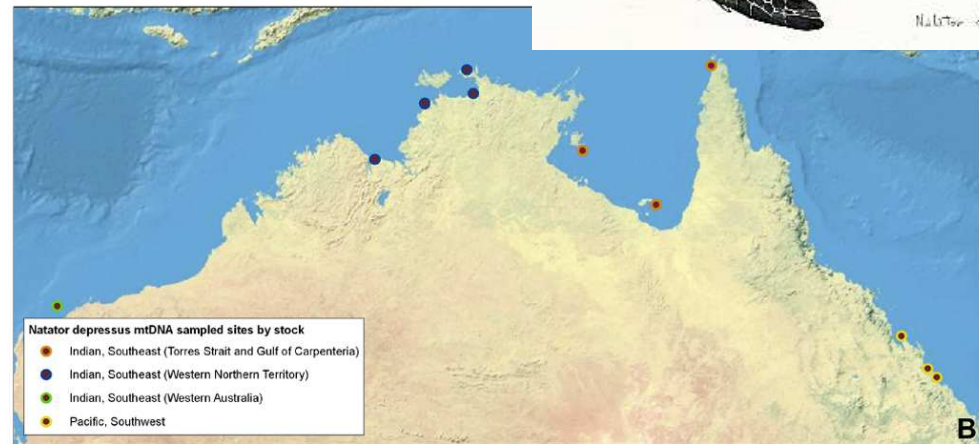
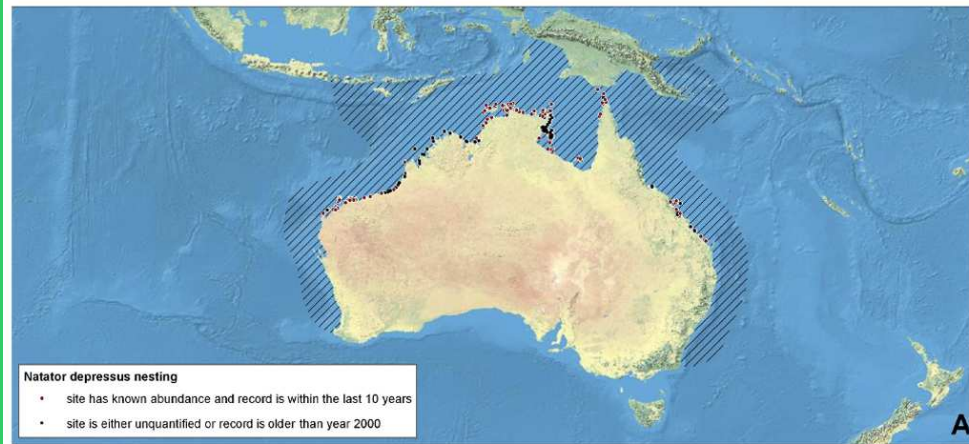
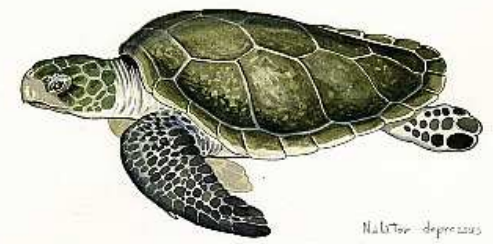
6) *Tartaruga olivacea*  
(*Lepidochelys olivacea*)



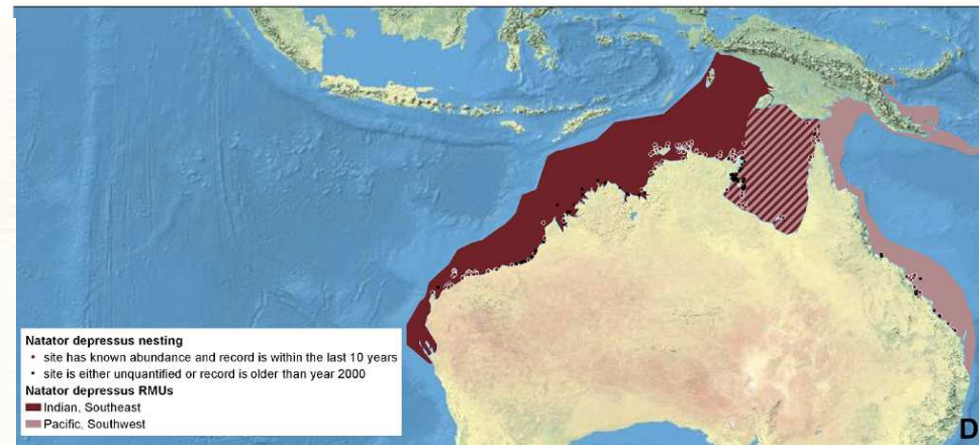
[Wyneken. 2001. NOAA Tech. Memor. NMFS-SEFSC-470]



## 7) Tartaruga a dorso piatto (*Natator depressus*)



[www.tartanet.it]



[Wallace et al. 2010. PLoS ONE 5(12)]

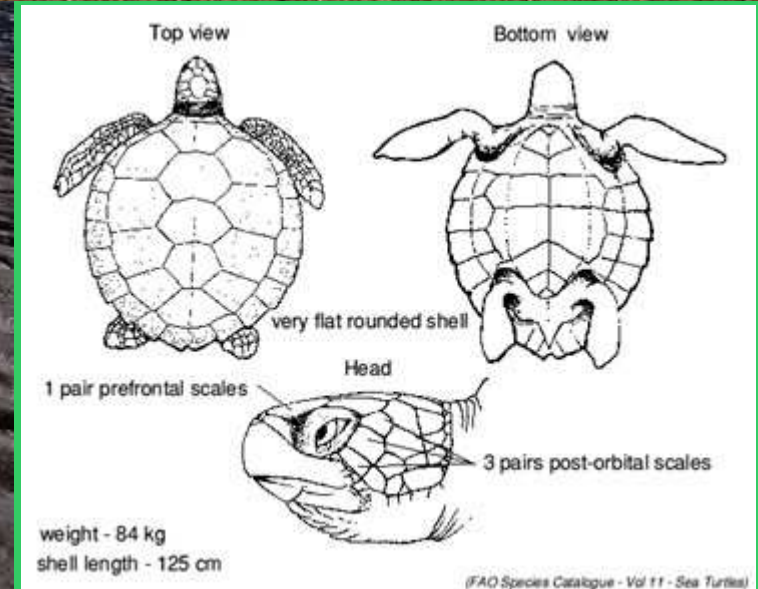
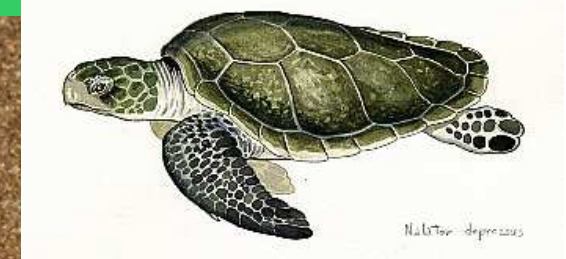
Lunghezza max carapace (adulti): 99 cm  
Peso medio (adulti): 90 kg



**NON E' TRA LE SPECIE DI POSSIBILE PROSSIMO ARRIVO IN MEDITERRANEO**



## 7) Tartaruga dal dorso piatto *Natator depressus*





# Tartarughe marine

## ESERCITAZIONE:



[Wyneken. 2001. NOAA Tech. Memor. NMFS-SEFSC-470]

# Tartarughe marine

## ESERCITAZIONE:

?



?

[Wyneken. 2001. NOAA Tech. Memor. NMFS-SEFSC-470]



# Tartarughe marine

## ESERCITAZIONE:



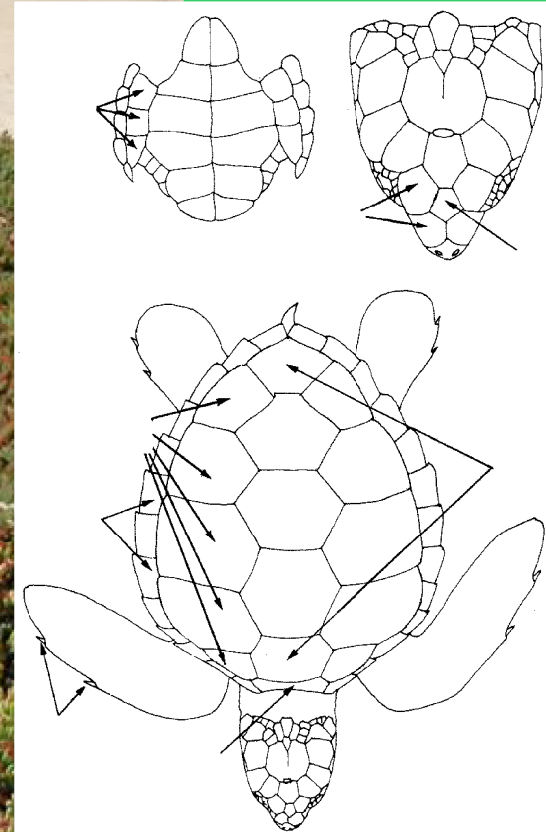
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[IUCN, 2010. Sea turtles in the Mediterranean]



## ESERCITAZIONE:

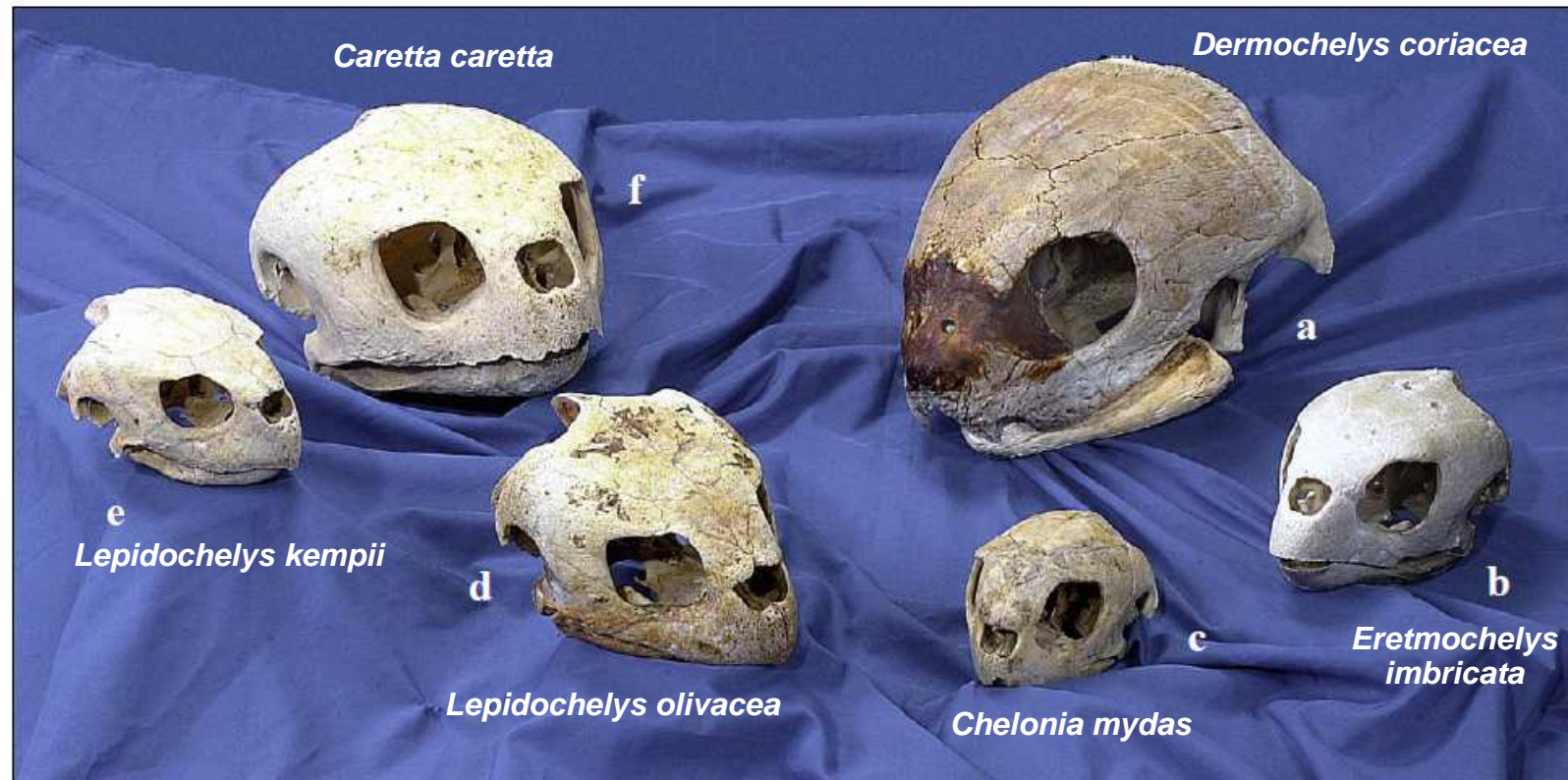
Foto: © Maurizio Sposato & Raffaele Pierani



?



# Tartarughe marine



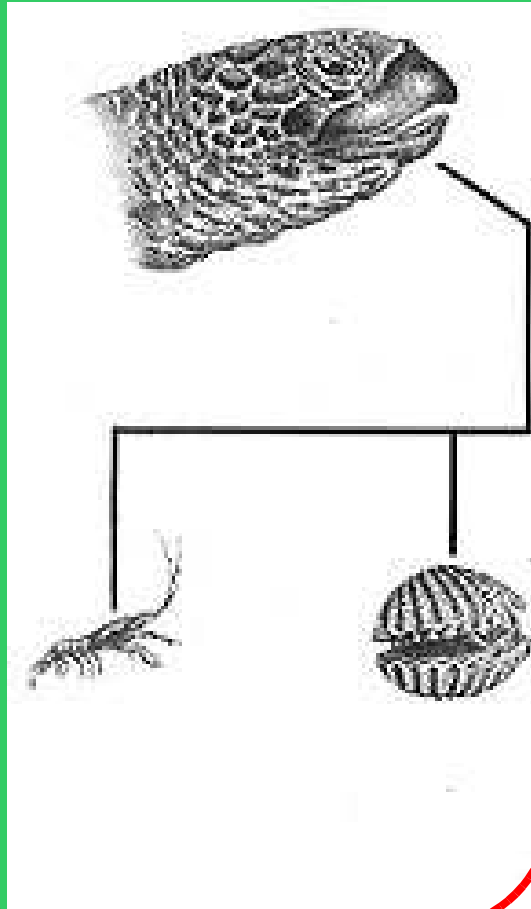
**Fig. 45.** Skulls of all the species found in US waters. Clockwise from top right: Dermochelys coriacea (a), Eretmochelys imbricata (b), Chelonia mydas (c), Lepidochelys olivacea (d), Lepidochelys kempii (e),

Caretta caretta (f). The hawksbill, green turtle and Kemp's ridley skulls are from immature animals, others are from adults.

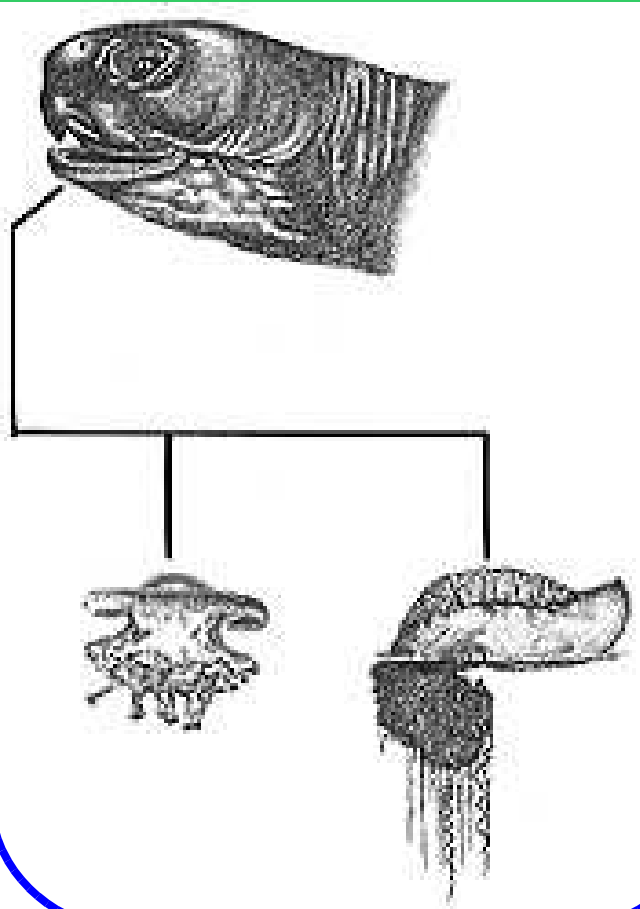
[Wyneken. 2001. NOAA Tech. Memor. NMFS-SEFSC-470]

## Tartarughe marine

*Caretta caretta*



*Dermochelys coriacea*

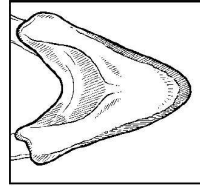
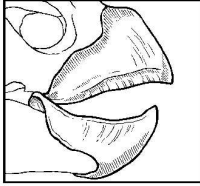


Una morfologia della testa differente riflette una dieta differente



# Tartarughe marine

*Caretta caretta*

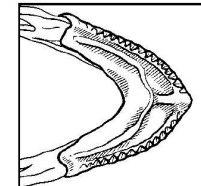
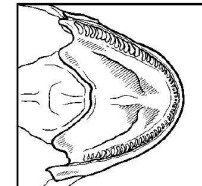


Rhamphotheci

Upper Rhamphotheca

Lower Rhamphotheca

*Chelonia mydas*



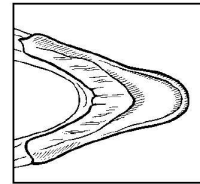
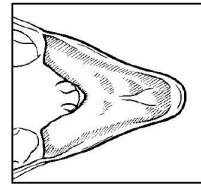
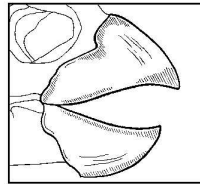
Rhamphotheci

Upper Rhamphotheca

Lower Rhamphotheca

## Ramfoteca:

*Eretmochelys imbricata*

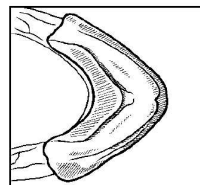
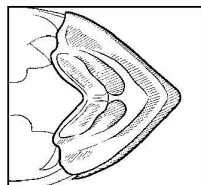
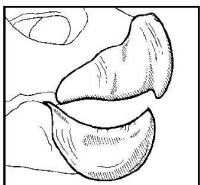


Rhamphotheci

Upper Rhamphotheca

Lower Rhamphotheca

*Lepidochelys kempii*

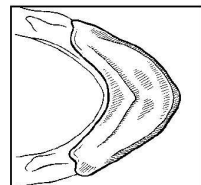
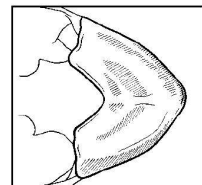
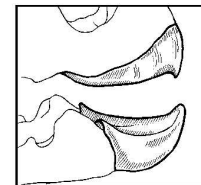


Rhamphotheci

Upper Rhamphotheca

Lower Rhamphotheca

*Lepidochelys olivacea*

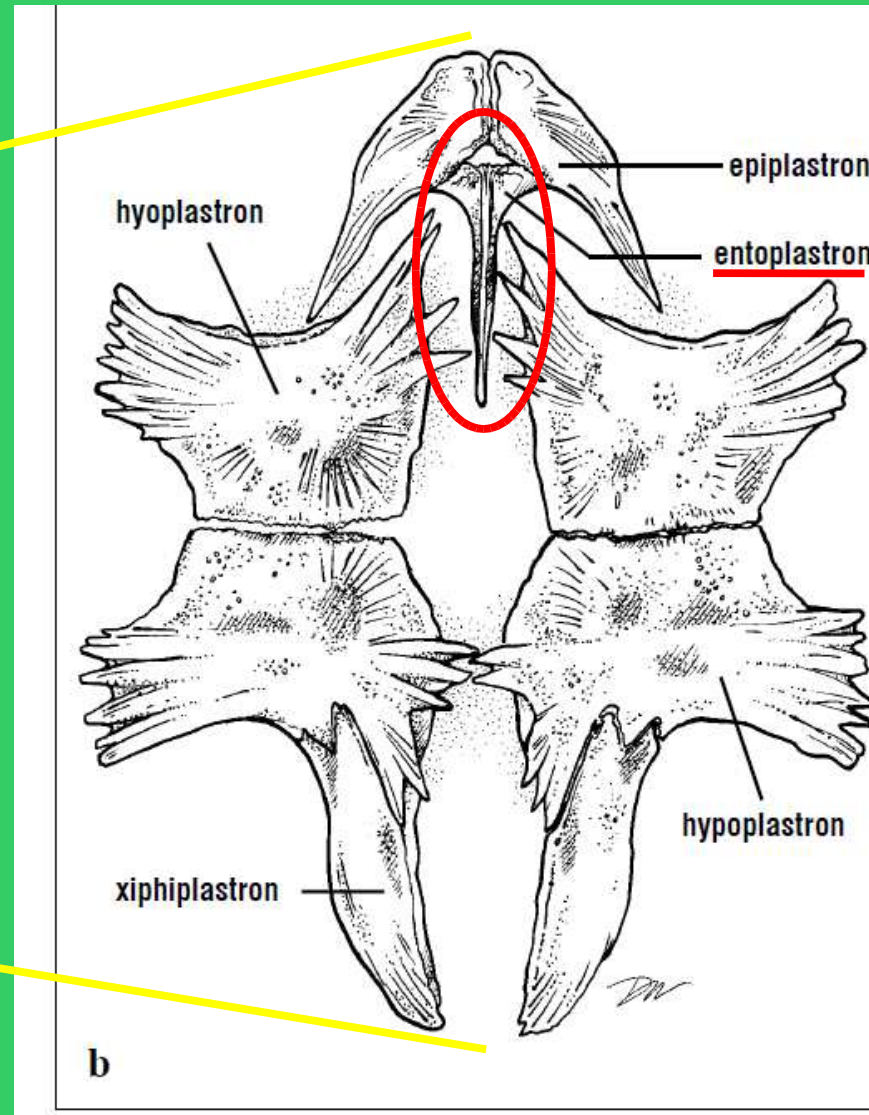
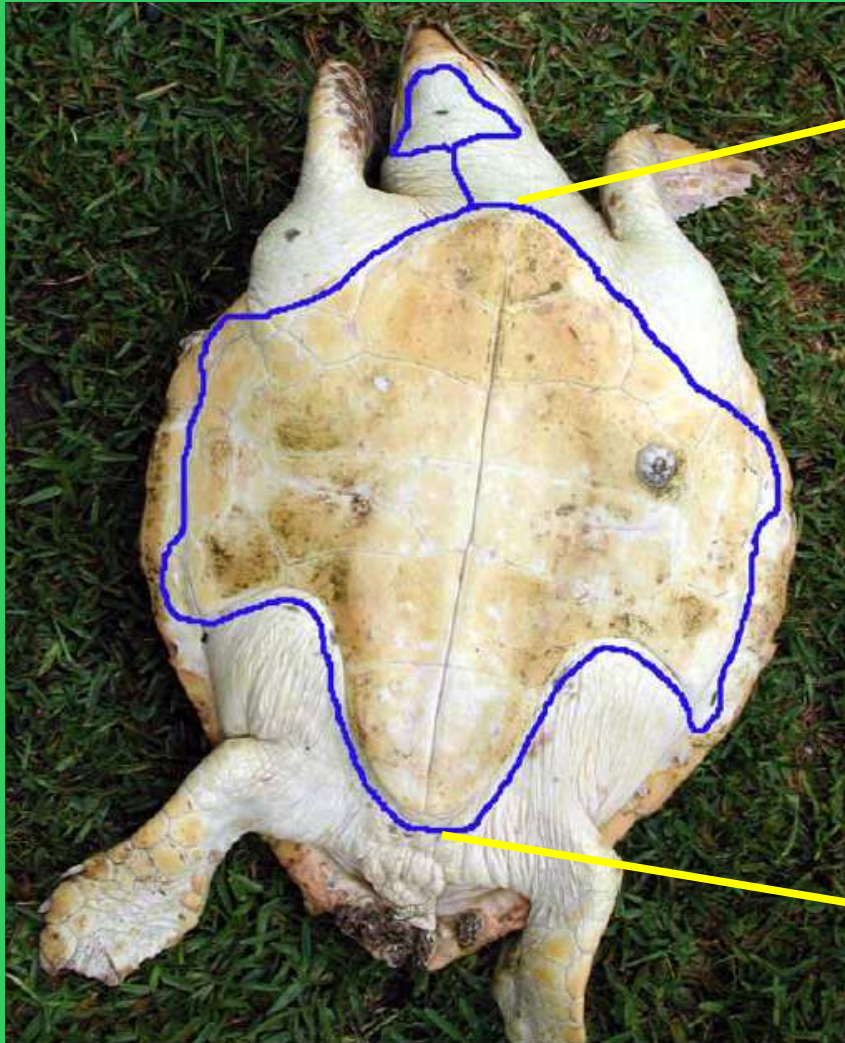


Rhamphotheci

Upper Rhamphotheca

Lower Rhamphotheca

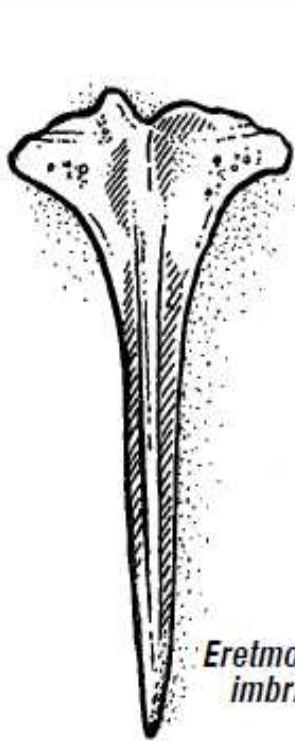
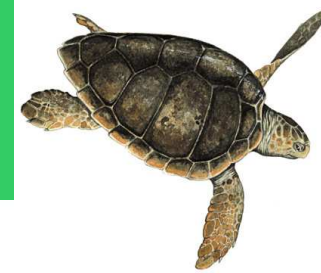
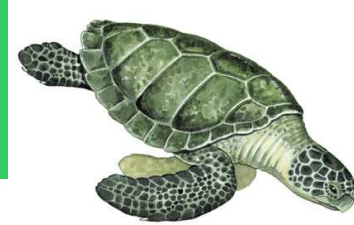
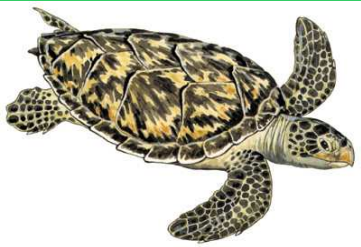
# Tartarughe marine



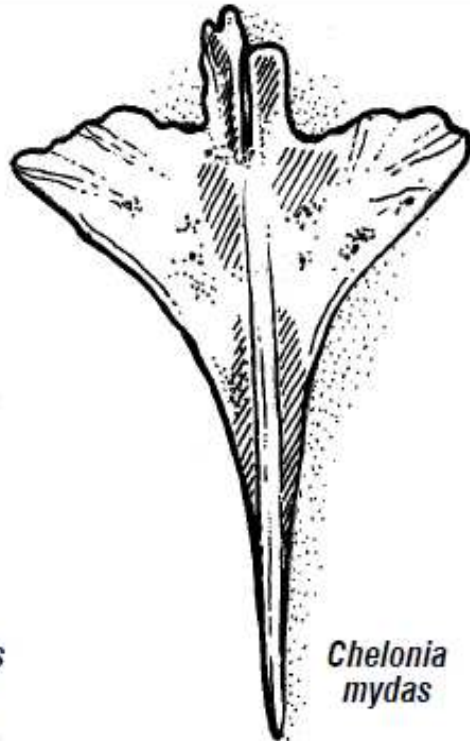
[Wyneken. 2001. NOAA Tech. Memor. NMFS-SEFSC-470]



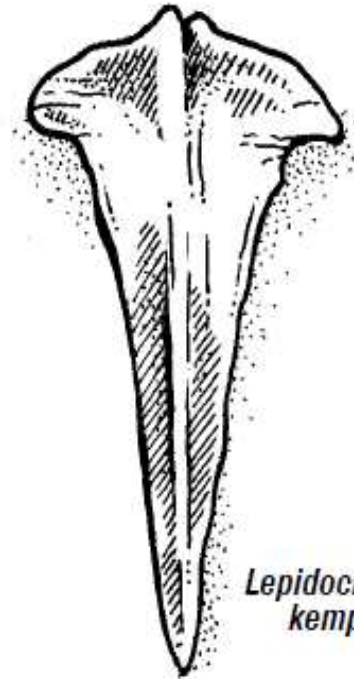
# Tartarughe marine



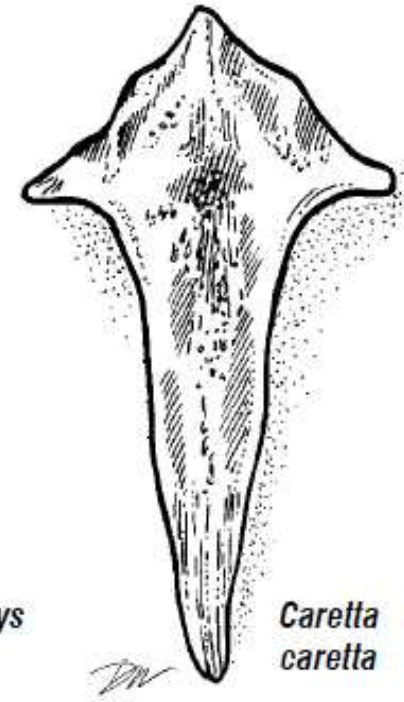
*Eretmochelys  
imbricata*



*Chelonia  
mydas*



*Lepidochelys  
kempii*



*Caretta  
caretta*

Tartaruga imbricata

Tartaruga verde

Tartaruga di Kemp

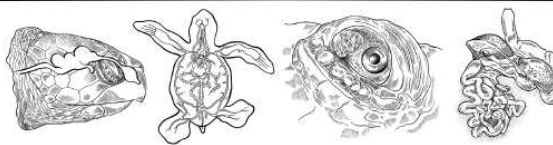
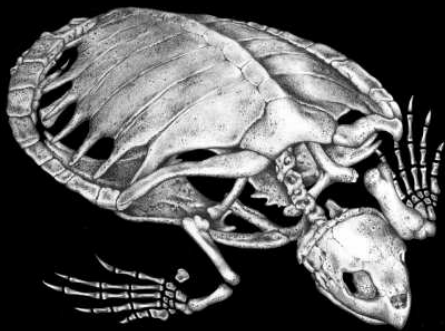
Tartaruga comune

# Tartarughe marine - letture consigliate:



NOAA Technical Memorandum NMFS-SEFSC-470

## The Anatomy of Sea Turtles



**Jeanette Wyneken, Ph.D.**

Illustrated by Dawn Witherington

December 2001

U. S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service

Southeast Fisheries Science Center, 75 Virginia Beach Drive, Miami, FL 33149

<http://www.iucn.org>



## Sea turtles in the Mediterranean

Distribution, threats and conservation priorities

Edited by Paolo Casale and Dimitris Margaritoulis



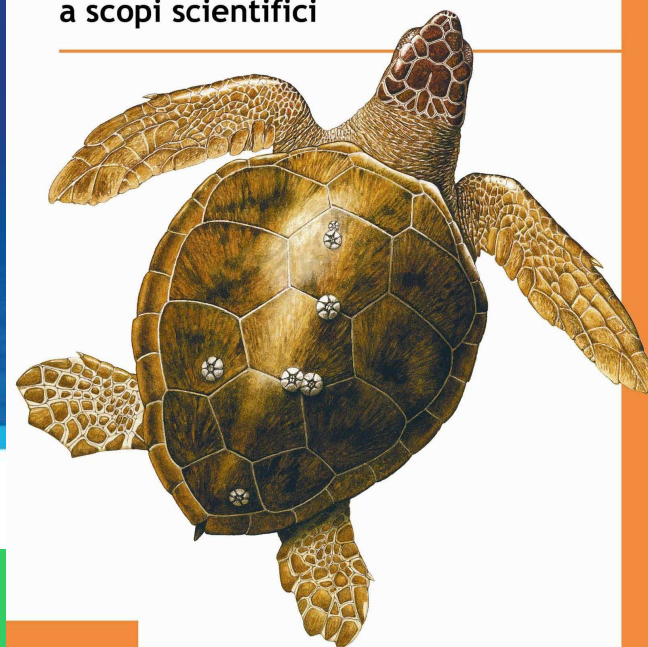
IUCN SSC MARINE TURTLE SPECIALIST GROUP



<http://www.isprambiente.gov.it>



**Linee Guida per il recupero,  
soccorso, affidamento  
e gestione delle tartarughe marine  
ai fini della riabilitazione  
e per la manipolazione  
a scopi scientifici**



MANUALI E LINEE GUIDA

89/2013



**Grazie a tutti per l'attenzione !**