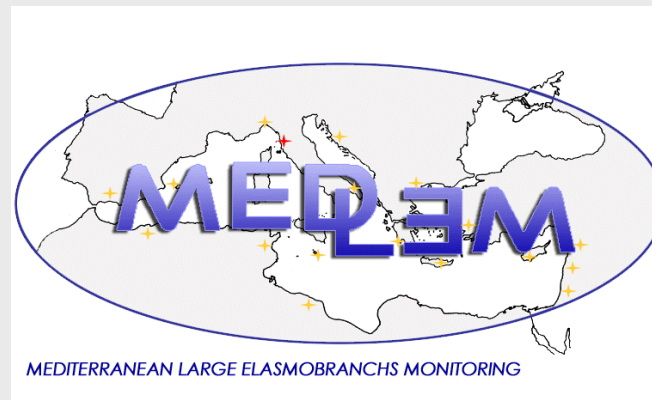




16th annual conference of European Elasmobranchs Association
23-24th November 2012 Milan, Italy



The data collection on large cartilaginous fishes in the Mediterranean basin: an update of the MEDLEM database



R. Baino, C. Mancusi, M. Barone, G. Morey, M. Vacchi, L. Gil de Sola, M. N. Bradai, E. Sperone, A. Kallianotis, F. Hemida, A. A. Saad, M. Dimech, P. Peristeraki, M. Bariche, G. Cavlan, S. Clò, E. De Sabata, L. Castellano, F. Garibaldi, F. Tinti, A. Pais, C. Follesa, P. Micarelli, F. Poisson, R. Carlucci, A. Soldo, M. Bottaro, D. Cebrian, C. Fortuna, B. Seret, F. Ferretti, Alaa El-Far, I. Saygu, E. A. Shakman, A. Bartolí, J. Guallart, D. Damalas, P. Megalofonou, G. Notarbartolo di Sciara, R. Cannas, **F. Serena**



We present here an update of the analyses on the database that, up to now, reports more than 1800 records and 2000 individuals of Large Elasmobranchs in the Mediterranean.


- MEDLEM officially was started in **1985**
- In **2009** the amount of the records in the database was **964**
- grown to **1390** in **2011**
- up to the **1855** by now


SHARKS
<i>Hepranchias perlo</i> (Bonnaterre, 1788)
<i>Hexanchus griseus</i> (Bonnaterre, 1788)
<i>Hexanchus nakamurai</i> Teng, 1962
<i>Echinorhinus brucus</i> (Bonnaterre, 1788)
<i>Squatina aculeata</i> Cuvier, 1829
<i>Squatina oculata</i> Bonaparte, 1840
<i>Squatina squatina</i> (Linnaeus, 1758)
<i>Carcharias taurus</i> Rafinesque, 1810
<i>Odontaspis ferox</i> (Risso, 1810)
<i>Alopias superciliosus</i> (Lowe, 1839)
<i>Alopias vulpinus</i> (Bonnaterre, 1788)
<i>Cetorhinus maximus</i> (Gunnerus, 1765)
<i>Carcharodon carcharias</i> (Linnaeus, 1758)
<i>Isurus oxyrinchus</i> Rafinesque, 1810
<i>Isurus paucus</i> Guitart Manday, 1966
<i>Lamna nasus</i> (Bonnaterre, 1788)
<i>Carcharhinus altimus</i> (Springer, 1950)
<i>Carcharhinus brachyurus</i> (Günther, 1870)
<i>Carcharhinus brevipinna</i> (Müller & Henle, 1839)
<i>Carcharhinus falciformis</i> (Bibron, 1839)
<i>Carcharhinus limbatus</i> (Valenciennes, 1839)
<i>Carcharhinus melanopterus</i> (Quoy & Gaimard, 1824)
<i>Carcharhinus obscurus</i> (Lesueur, 1818)
<i>Carcharhinus plumbeus</i> (Nardo, 1827)
<i>Prionace glauca</i> (Linnaeus, 1758)
<i>Rhizoprionodon acutus</i> (Rüppell, 1837)
<i>Sphyrna (Mesozygaena) tudes</i> (Valenciennes, 1822)
<i>Sphyrna (Sphyrna) lewini</i> (Griffith & Smith, 1834)
<i>Sphyrna (Sphyrna) mokarran</i> (Rüppell, 1837)
<i>Sphyrna (Sphyrna) zygaena</i> (Linnaeus, 1758)
BATOIDS
<i>Pristis pectinata</i> Latham, 1794
<i>Pristis pristis</i> (Linnaeus, 1758)
<i>Rhinobatos (Glaucostegus) cemiculus</i> E. Geoffroy Saint-Hilaire, 1817
<i>Rhinobatos (Rhinobatos) rhinobatos</i> (Linnaeus, 1758)
<i>Dipturus batis</i> complex Linnaeus, 1758
<i>Rostroraja alba</i> Lacépède, 1803
<i>Dasyatis centroura</i> (Mitchill, 1815)
<i>Himantura uarnak</i> (Forsskål, 1775)
<i>Taeniura grabata</i> (E. Geoffroy Saint-Hilaire, 1817)
<i>Gymnura altavela</i> (Linnaeus, 1758)
<i>Pteromylaeus bovinus</i> (E. Geoffroy Saint-Hilaire, 1817)
<i>Rhinoptera marginata</i> (E. Geoffroy Saint-Hilaire, 1817)
<i>Mobula mobular</i> (Bonnaterre, 1788)

The elasmobranchs considered in MEDLEM correspond to those species which could achieve total length greater than one meter.


30 Sharks

13 Batoids





Mediterranean Large Elasmobranchs Monitoring
<http://www.arpat.toscana.it/medlem>



Data collection field sheet

ARPAT **ISPRA**

Date (dd/mm/yyyy) Time (hh:mm)

Locality Country

Latitude Longitude

Depth (m) Total length (approx) Weight (approx)

Photo YES NO Video YES NO

If you don't know the coordinates:
Direction from locality (N, S, E, W, NE, NW, SE, SW) Distance from coast (NM)

Type of report:

Sighting → Number of sharks sighted

Accidental catch → Gear

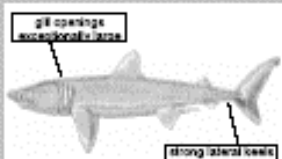
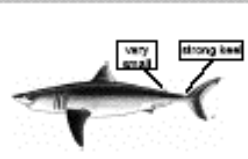

Stranding


Species:

Scientific name

Common name

The most threatened species:

 <p>gill openings occasionally large</p> <p>strong lateral keels</p> <p>Basking shark <i>Cetorhinus maximus</i> Appendix 2 of Berna Convention; Appendix 2 of Barcelona Convention; Appendix II of CITES.</p>	 <p>very small</p> <p>strong keel</p> <p>Great white shark <i>Carcharodon carcharias</i> Appendix 2 of Berna Convention; Appendix 2 of Barcelona Convention; Proposed for CITES listing on Appendix I and II</p>	 <p>Separate vertical lobe in front of head (hamul)</p> <p>Devil fish <i>Mobula mobular</i> Appendix 2 of Berna Convention; Appendix 2 of Barcelona Convention.</p>
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 Guardia Costiera

MEDLEM

Is an official programme adopted by FAO-GFCM in **2005** and by UNEP-RAC/SPA in the **2009**.

IUCN-SSG and EEA are the main partners

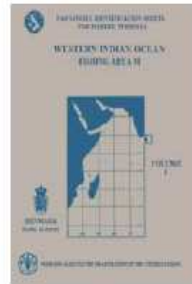
MEDLEM

Is a shared tool for study the conservation and exploitation status of the elasmobranchs in Med. Is closely linked to IPOA-Sharks

REGIONAL GUIDES EXCERPTS



Eastern Central Atlantic
1981



Western Indian Ocean
1984



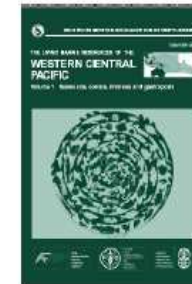
Southern Ocean
1985



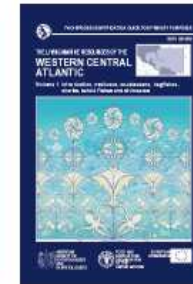
Mediterranean and
Black Sea
1987



Eastern Central Pacific
1995



Western Central Pacific
1998-2001



Western Central
Atlantic 2002

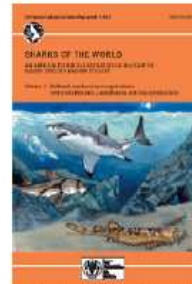
WORLD CATALOGUES



Sharks of the World
part I 1984



Sharks of the World
part II 1984



Sharks of the World
vol 2 2001

SHARKS, RAYS and CHIMAERAS

Excerpts from
FAO Species Identification publications
as of 2007

FIELD GUIDES



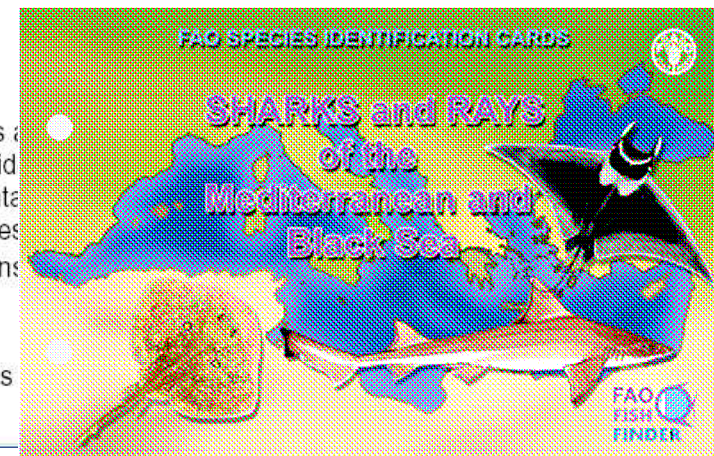
Red Sea and
Gulf of Aden
2004



Mediterranean and
Black Sea
2005

**IPOA
SHARKS**

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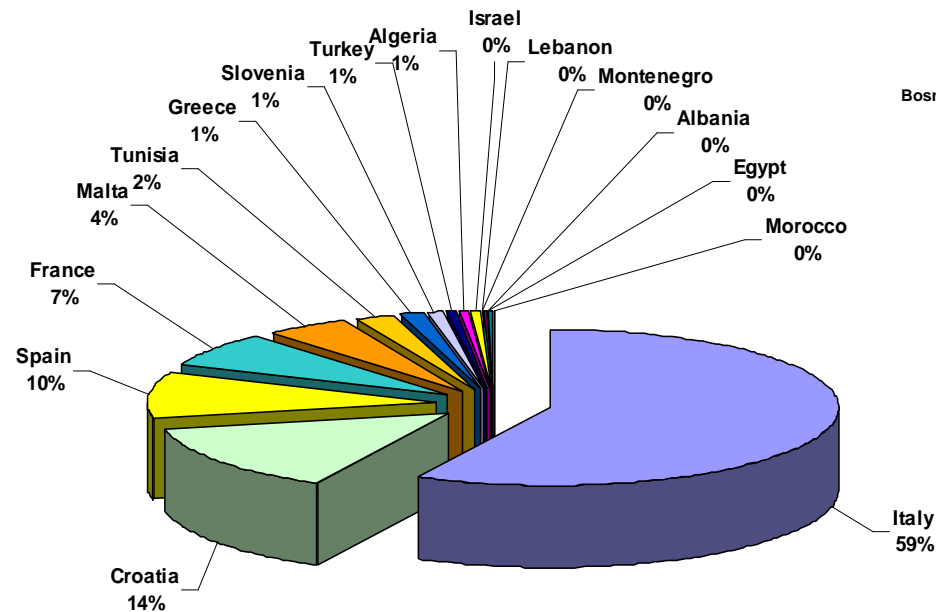


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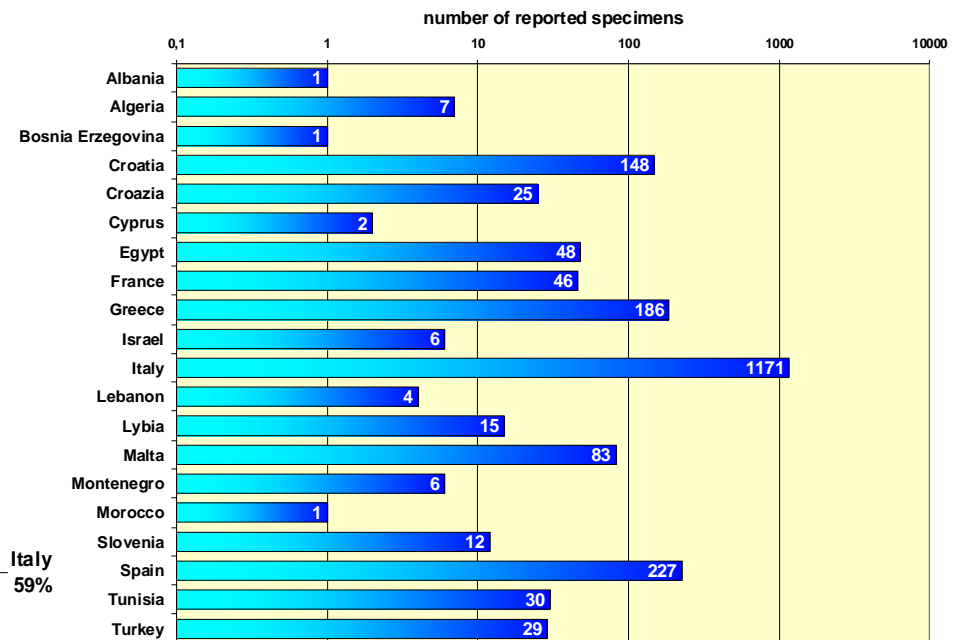
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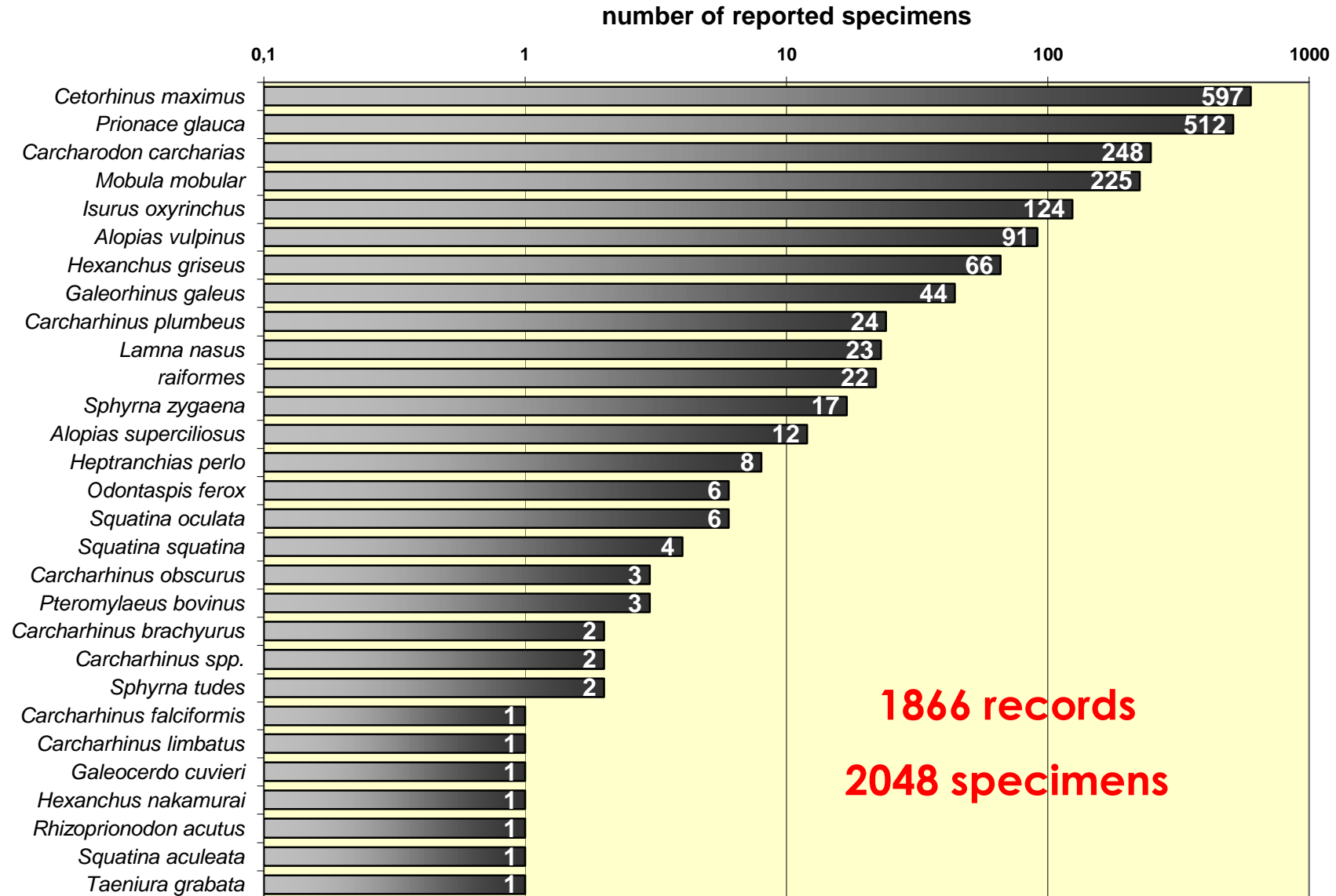
Country of origin of the specimens recorded in the Medlem database.

2009
16 countries

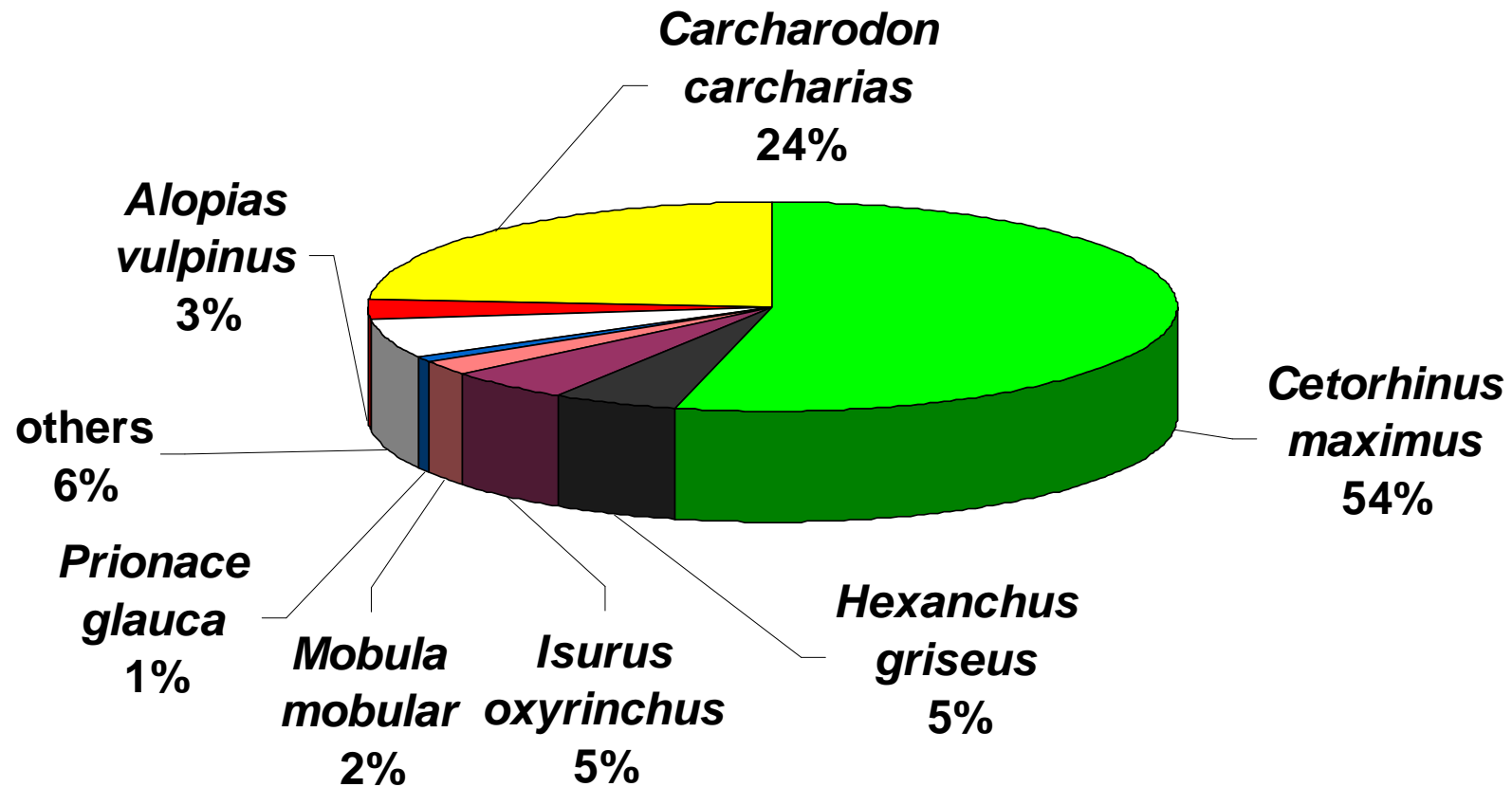


2012
20 countries

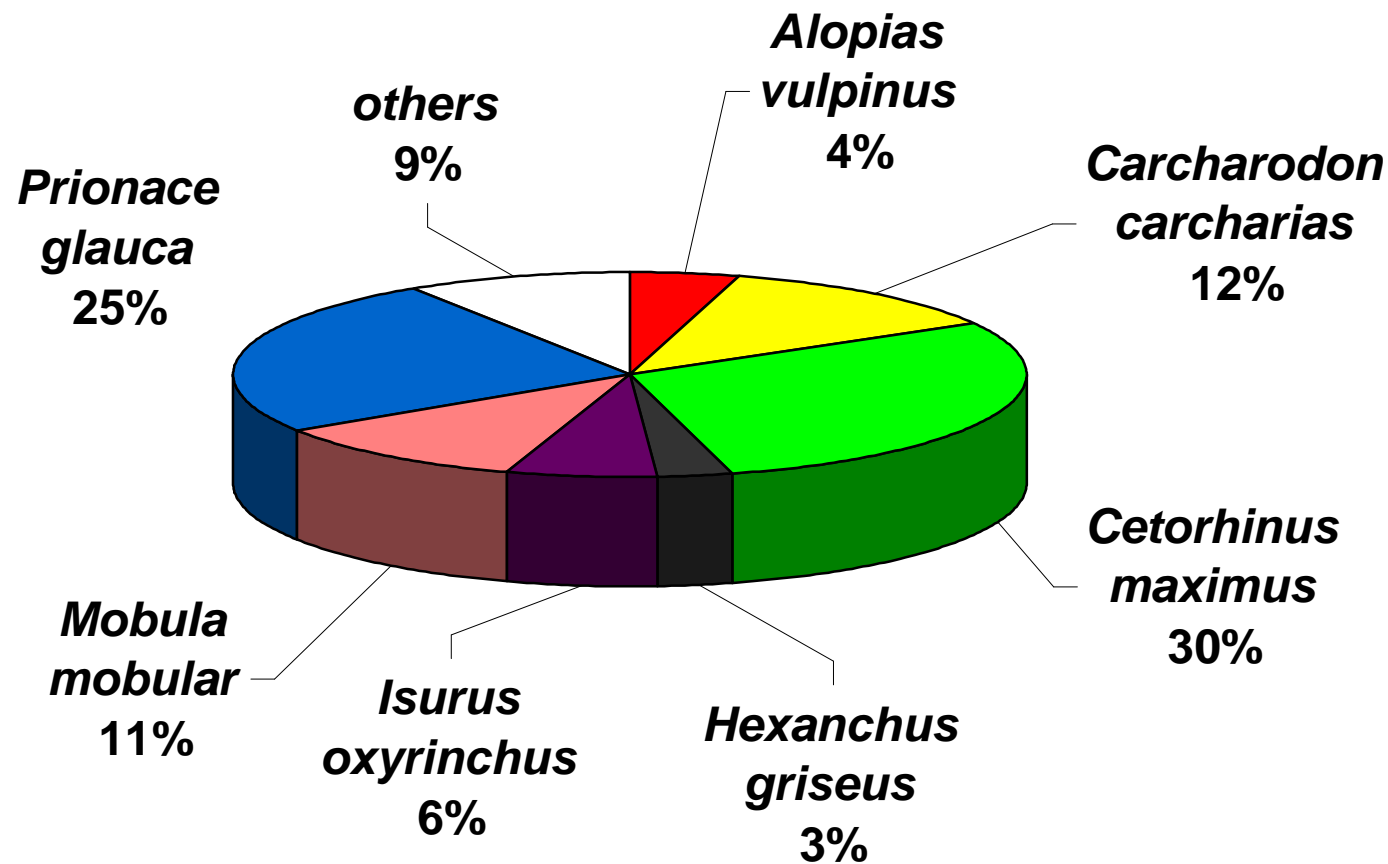




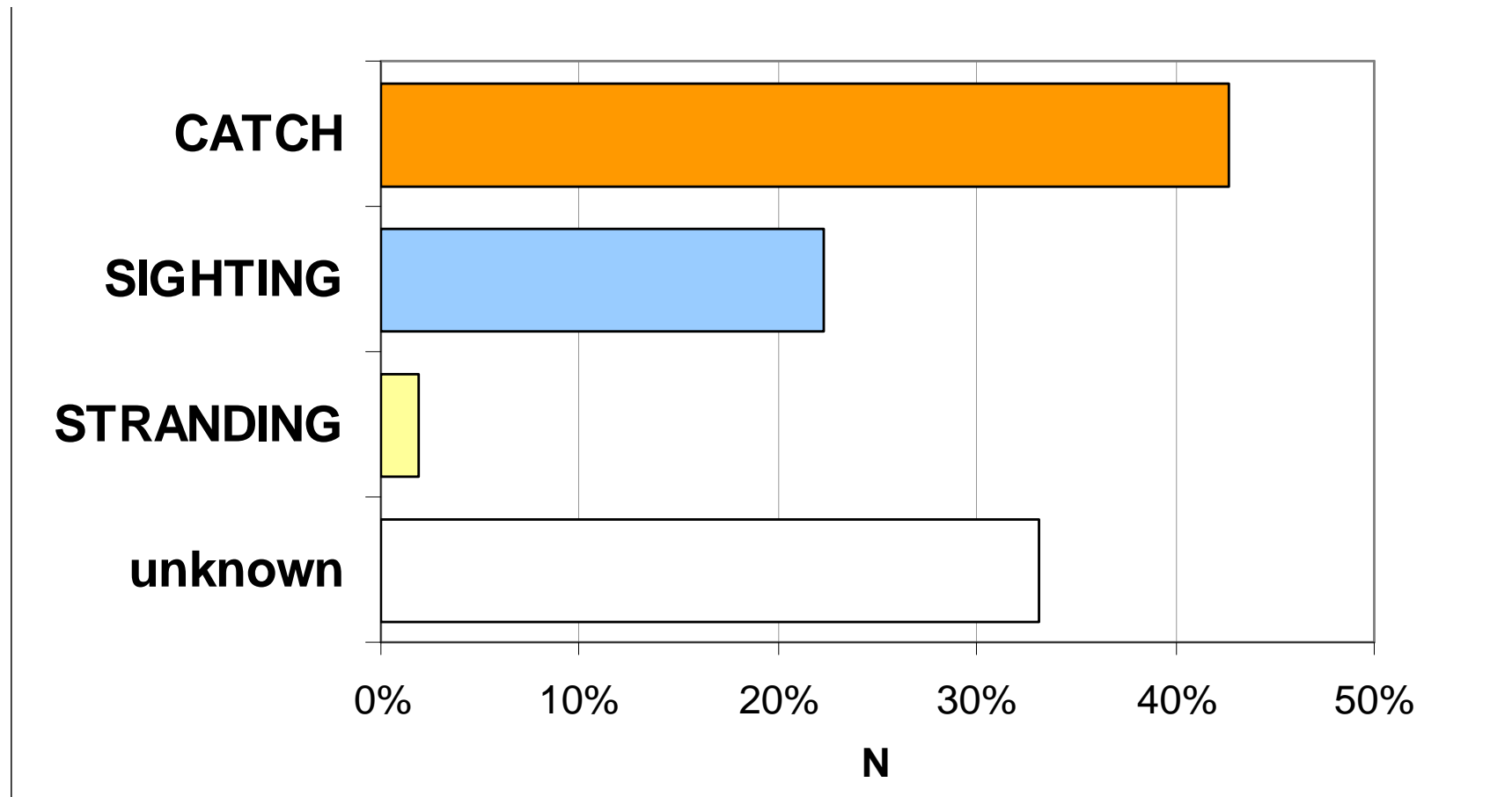
number of reported specimens 2000



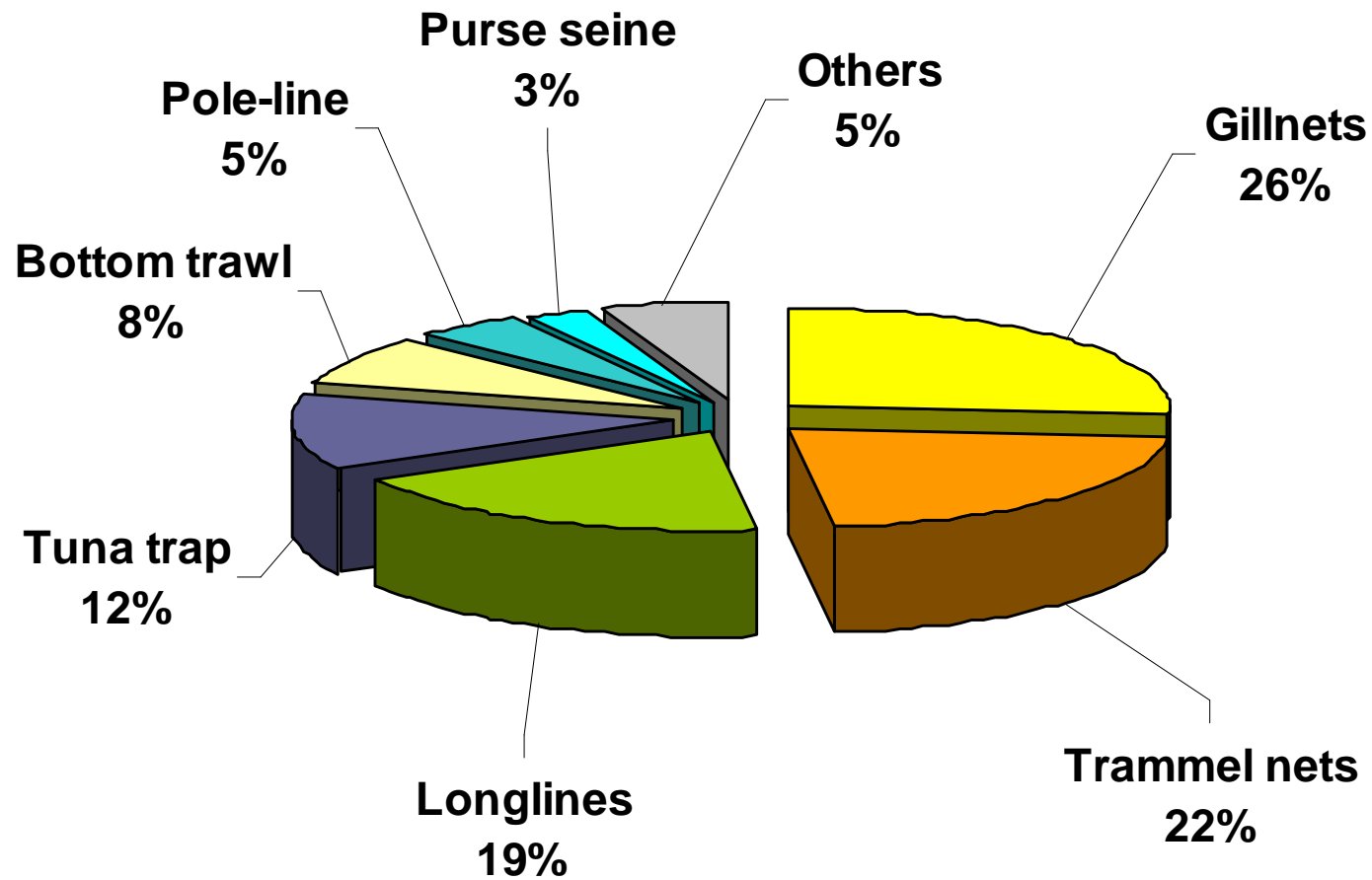
number of reported specimens 2012



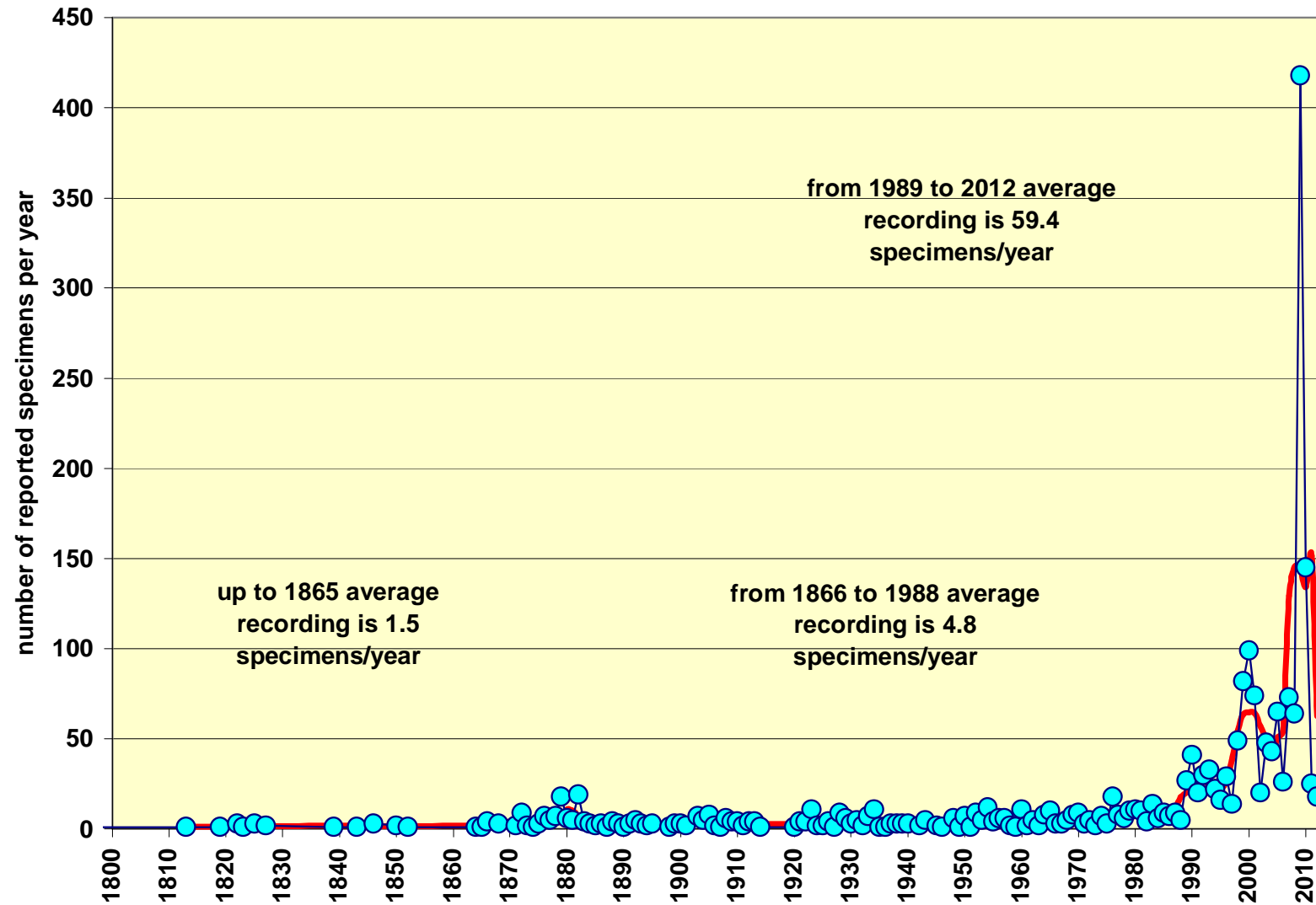
Provenience of report of the specimen recorded in the Medlem database



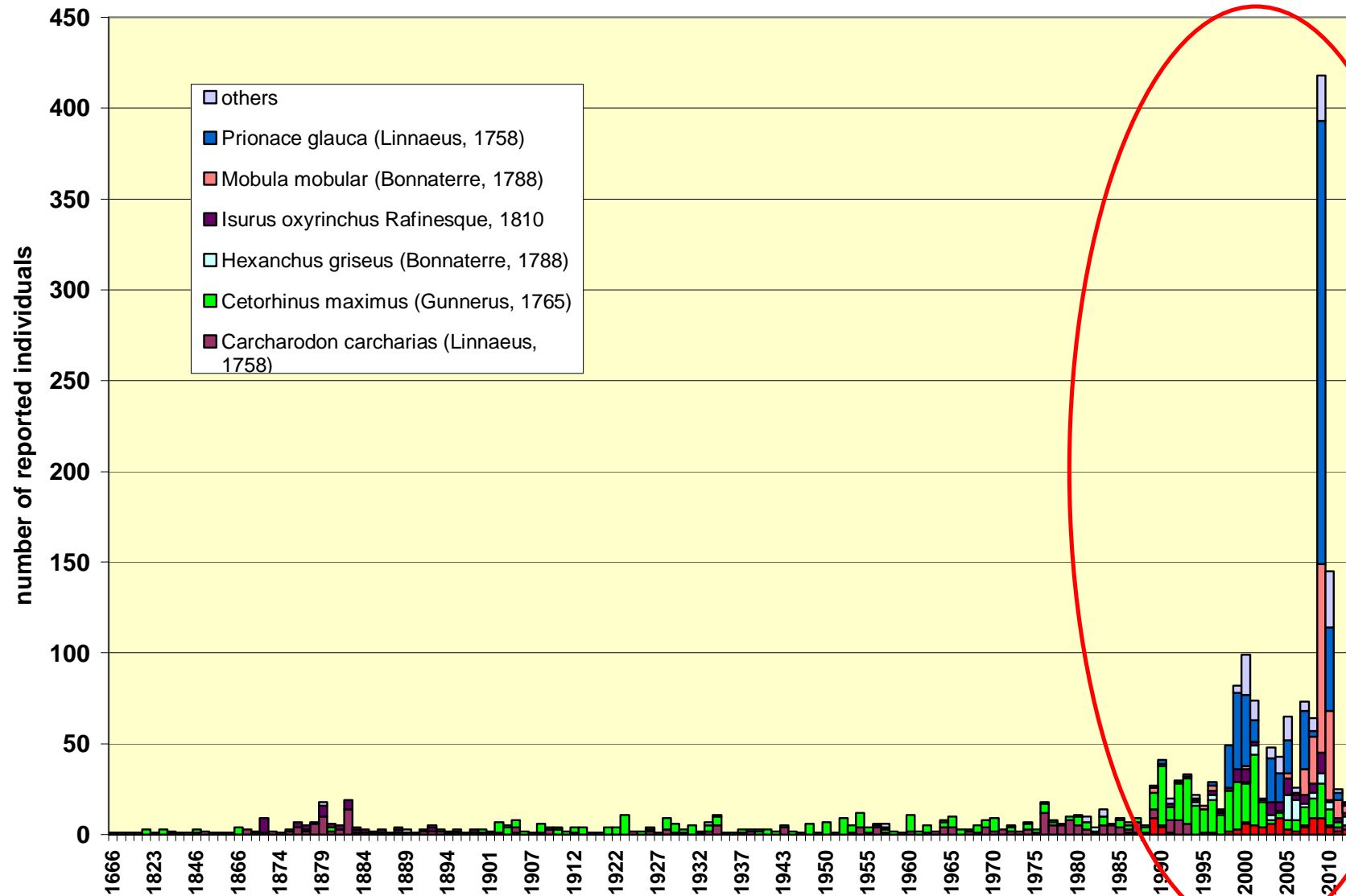
Type of gear used to catch the fished specimen recorded in the Medlem database



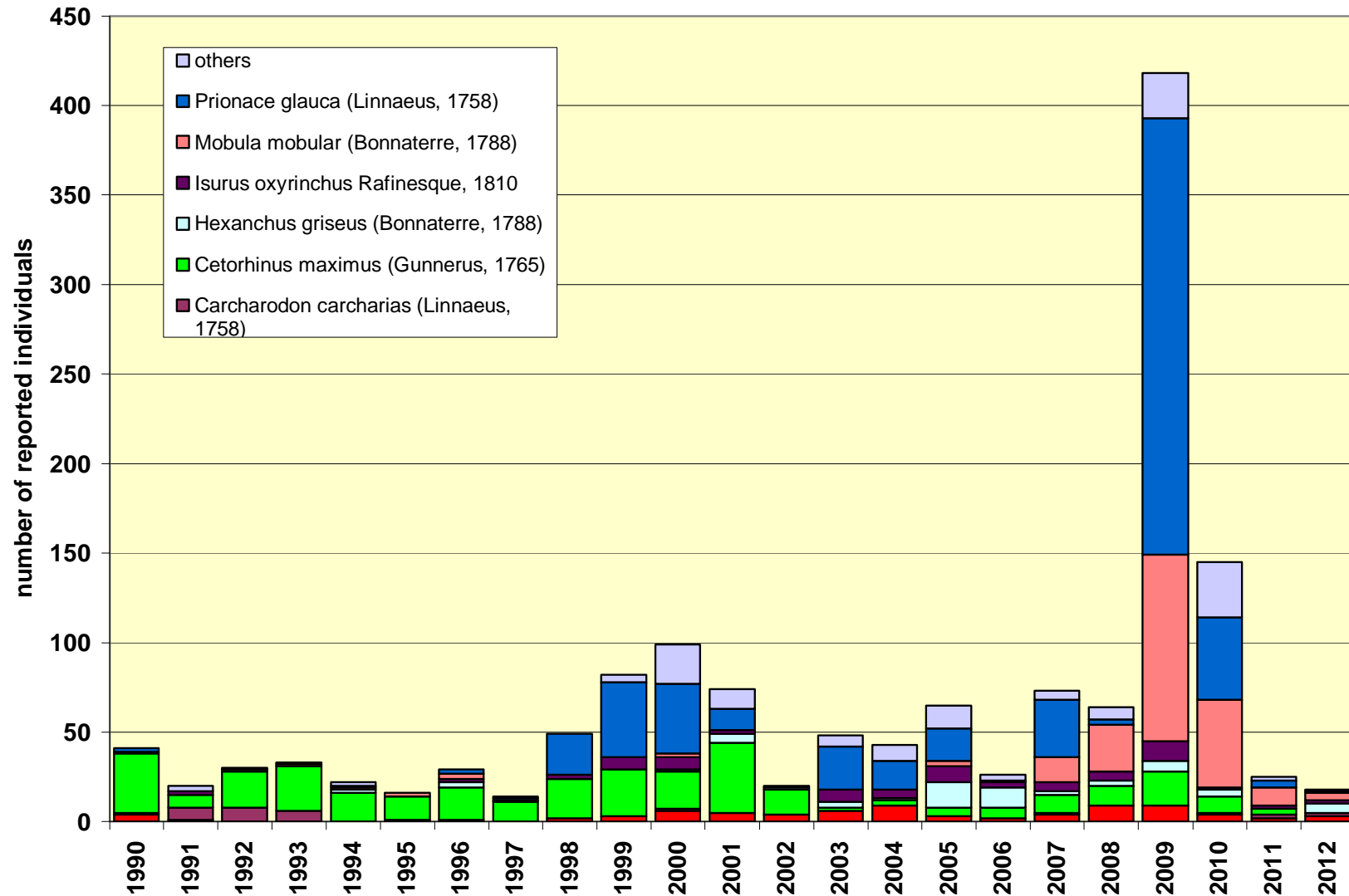
Number of specimens recorded



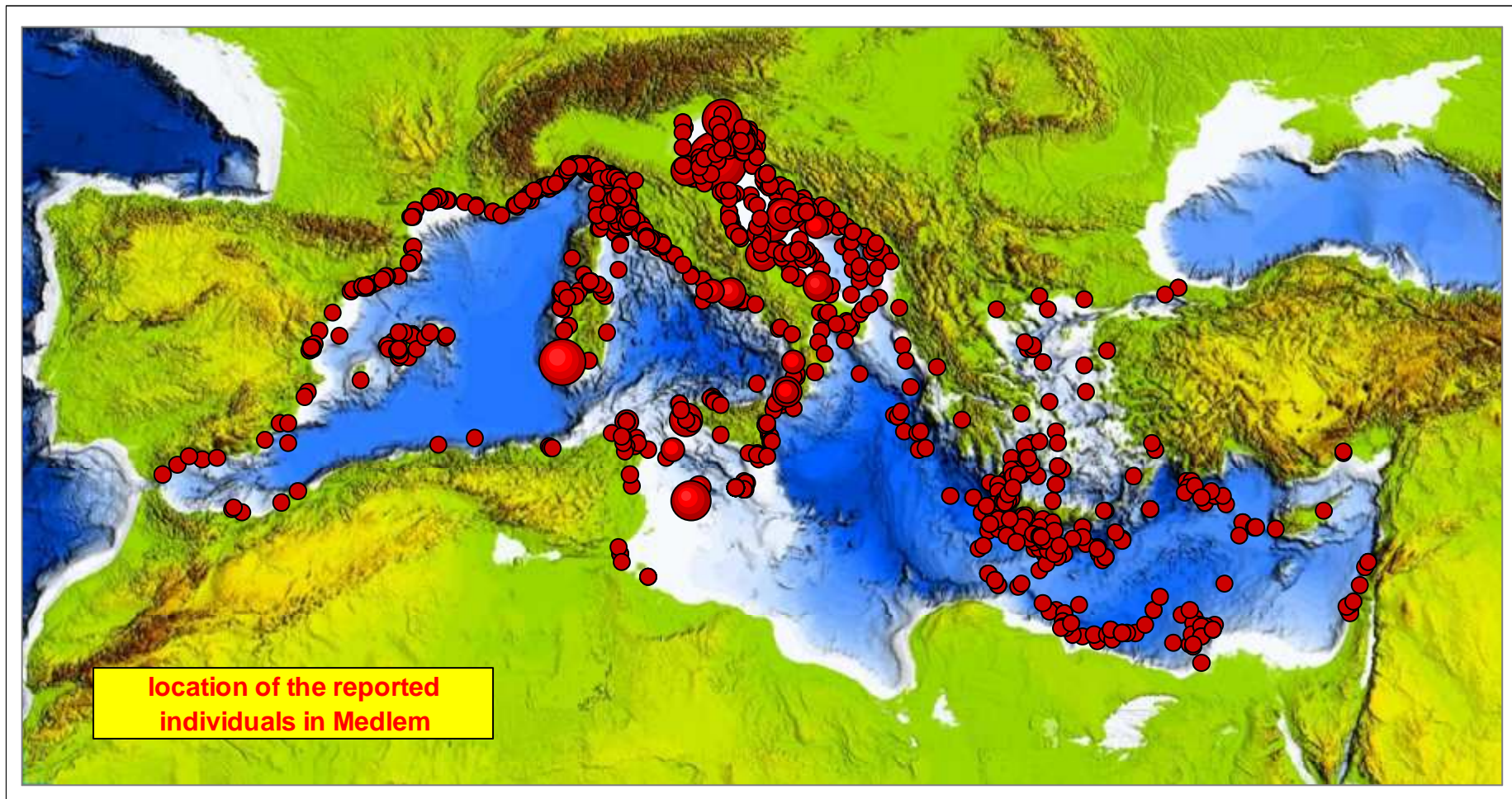
Number of specimens recorded for the main species



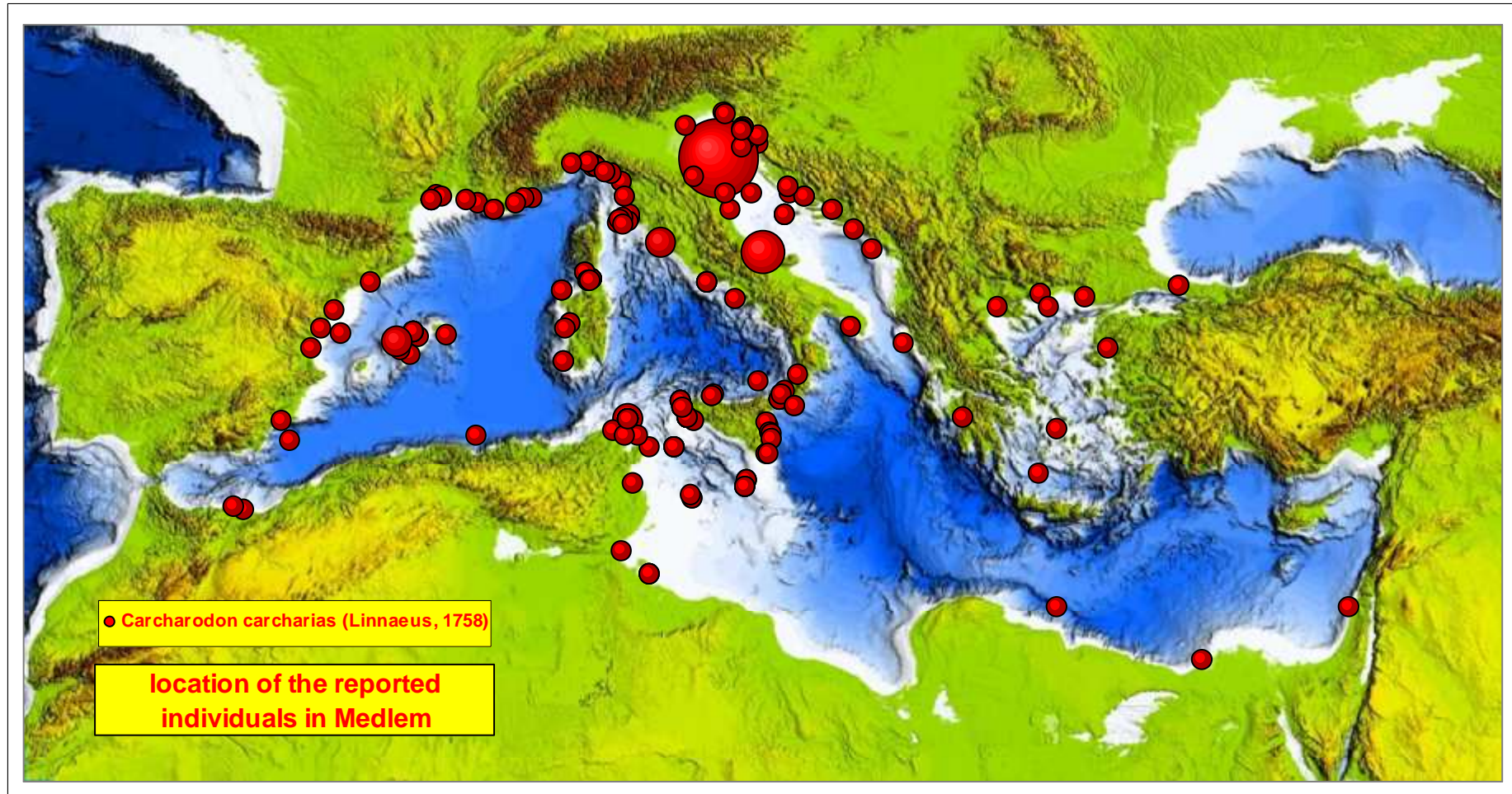
Number of specimens recorded for the main species



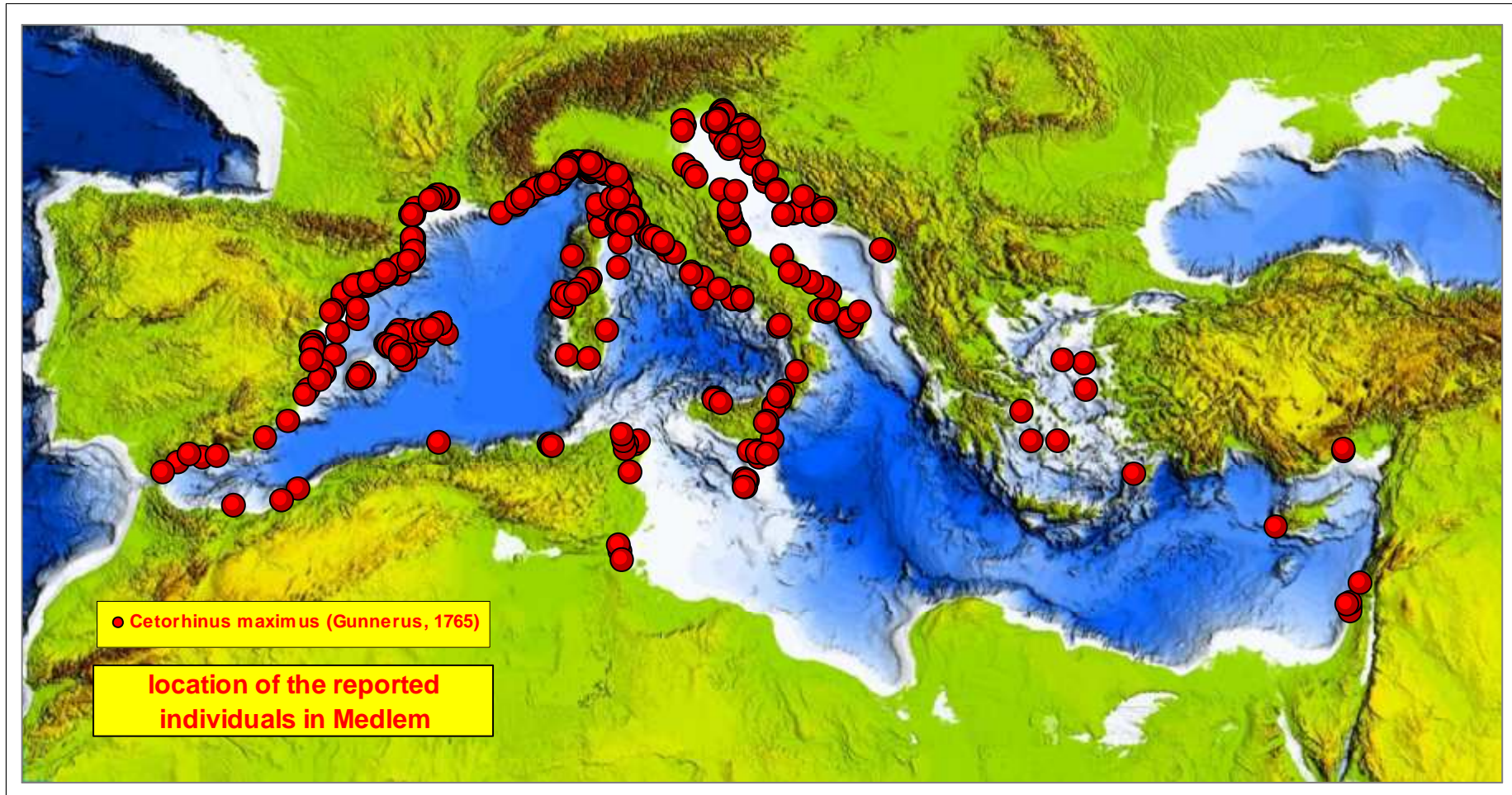
2048 specimens recorded in the Medlem database



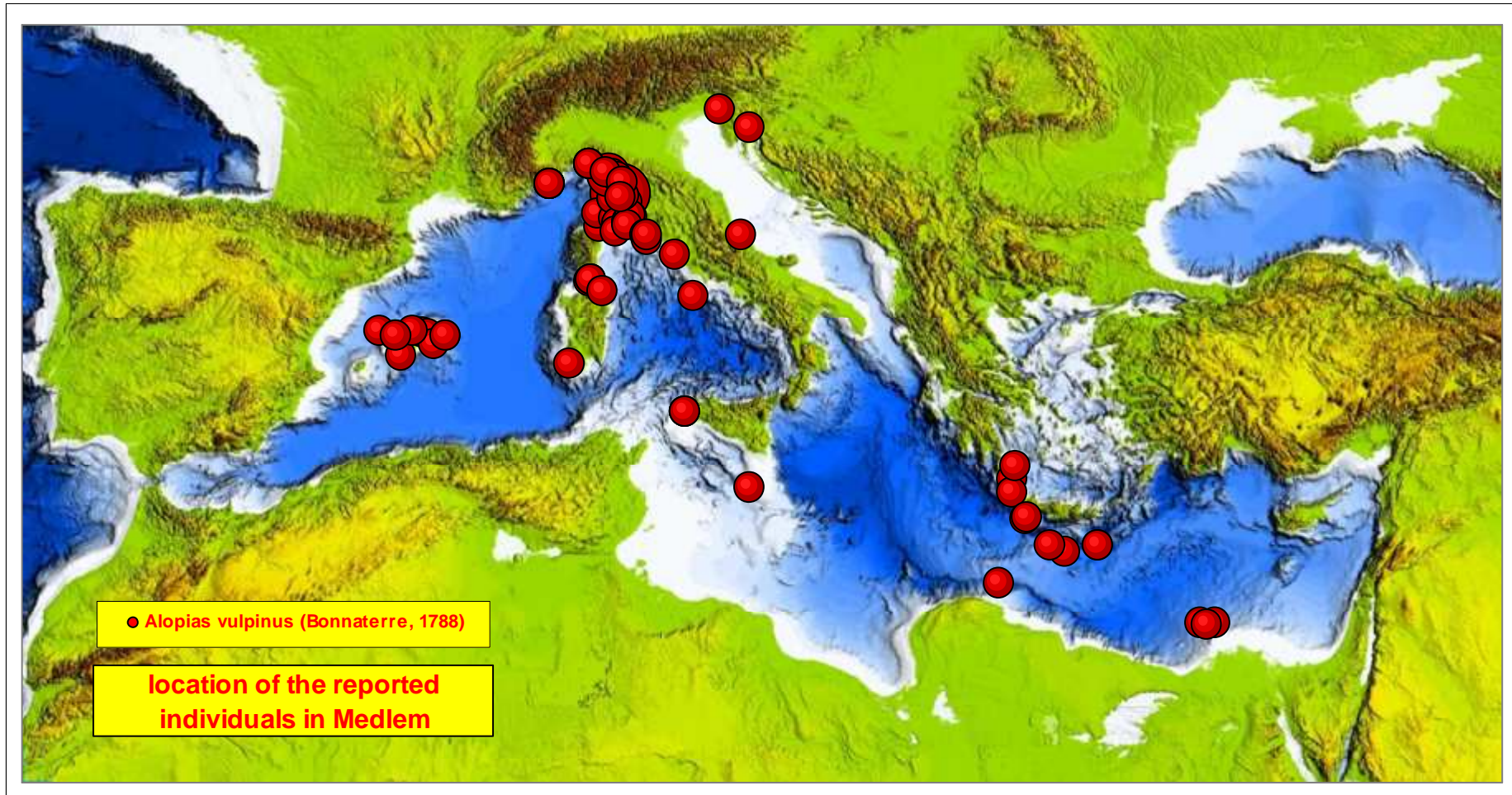
Carcharodon carcharias



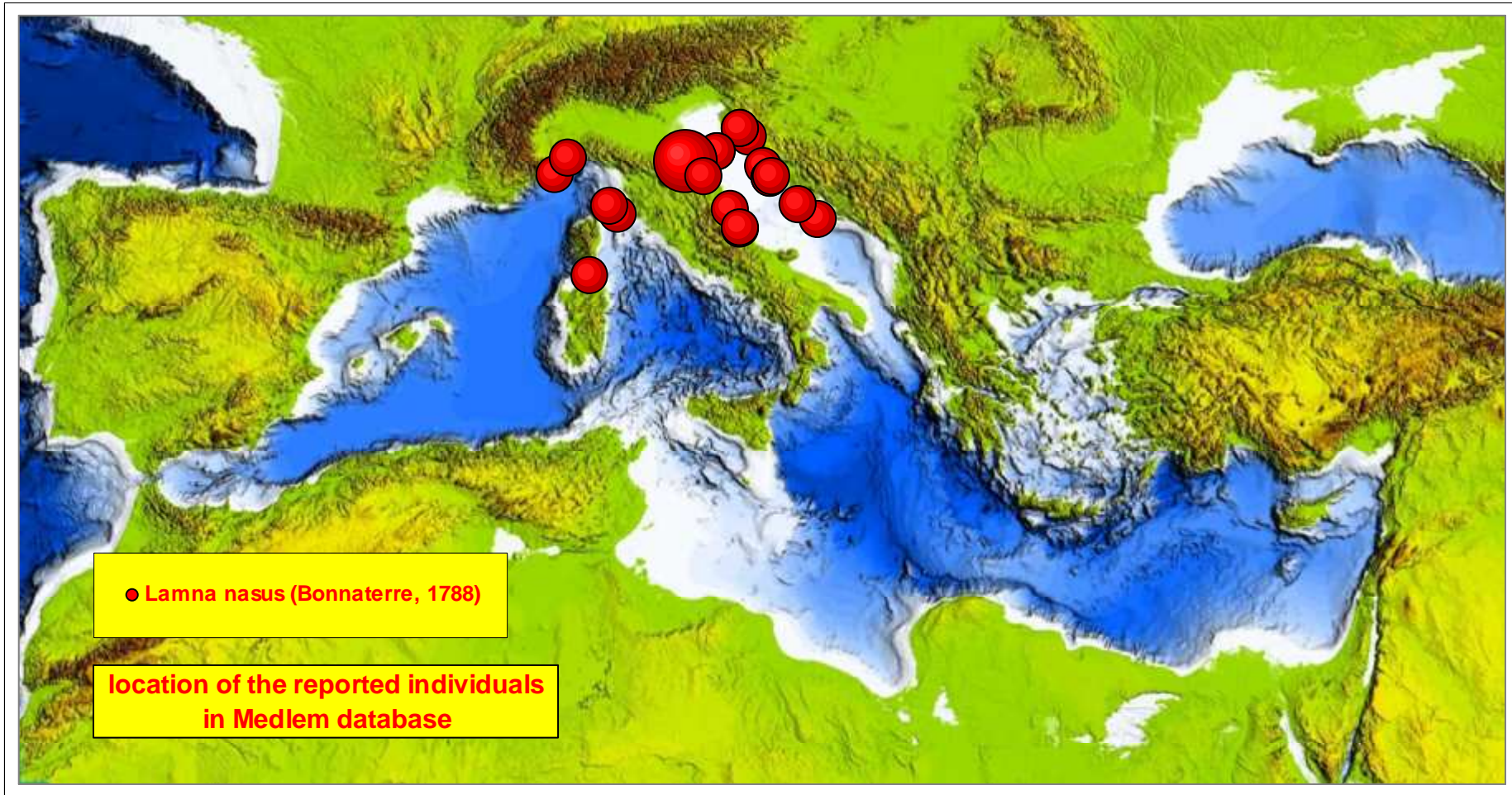
Cetorhinus maximus



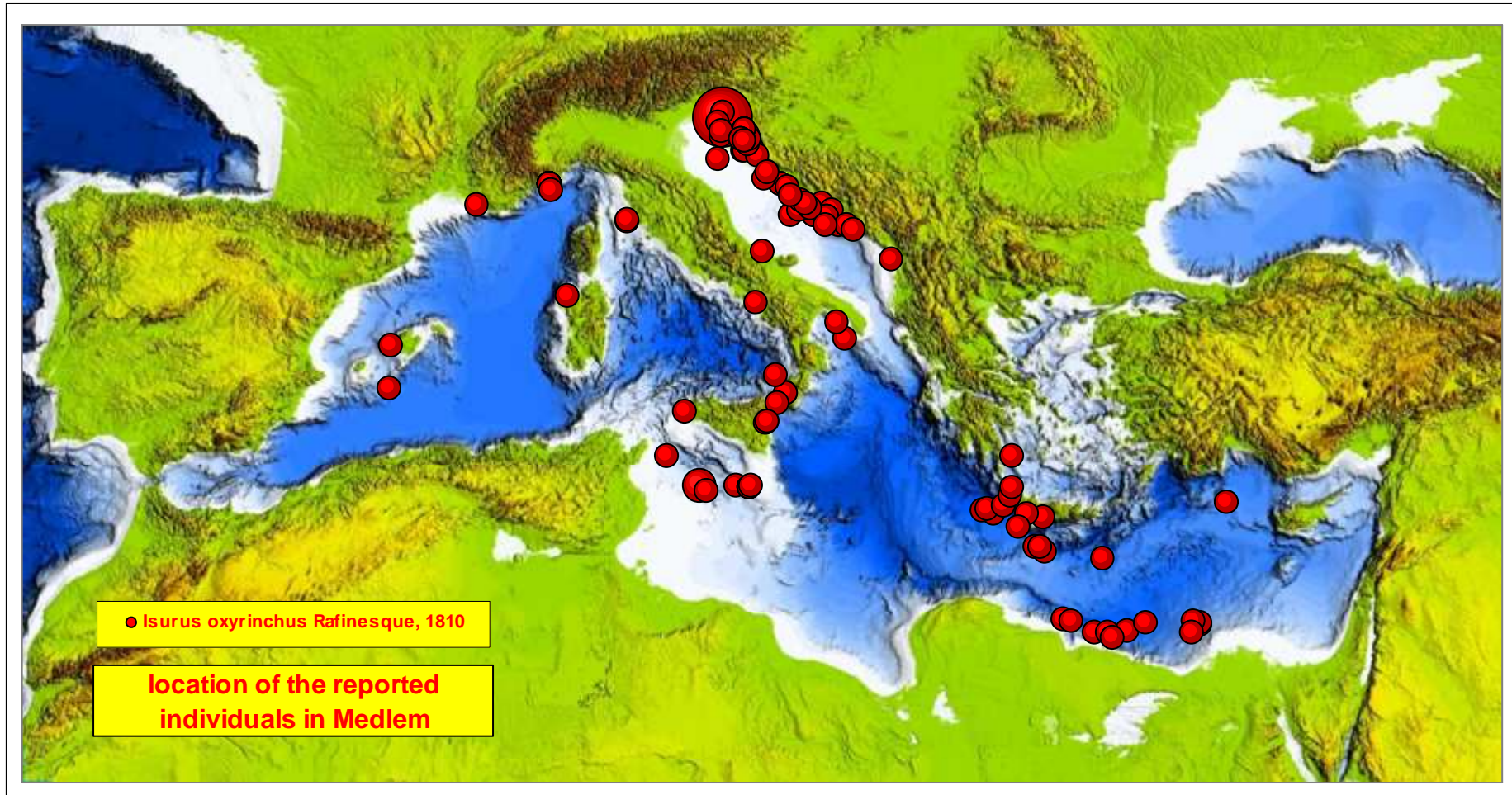
Alopias vulpinus



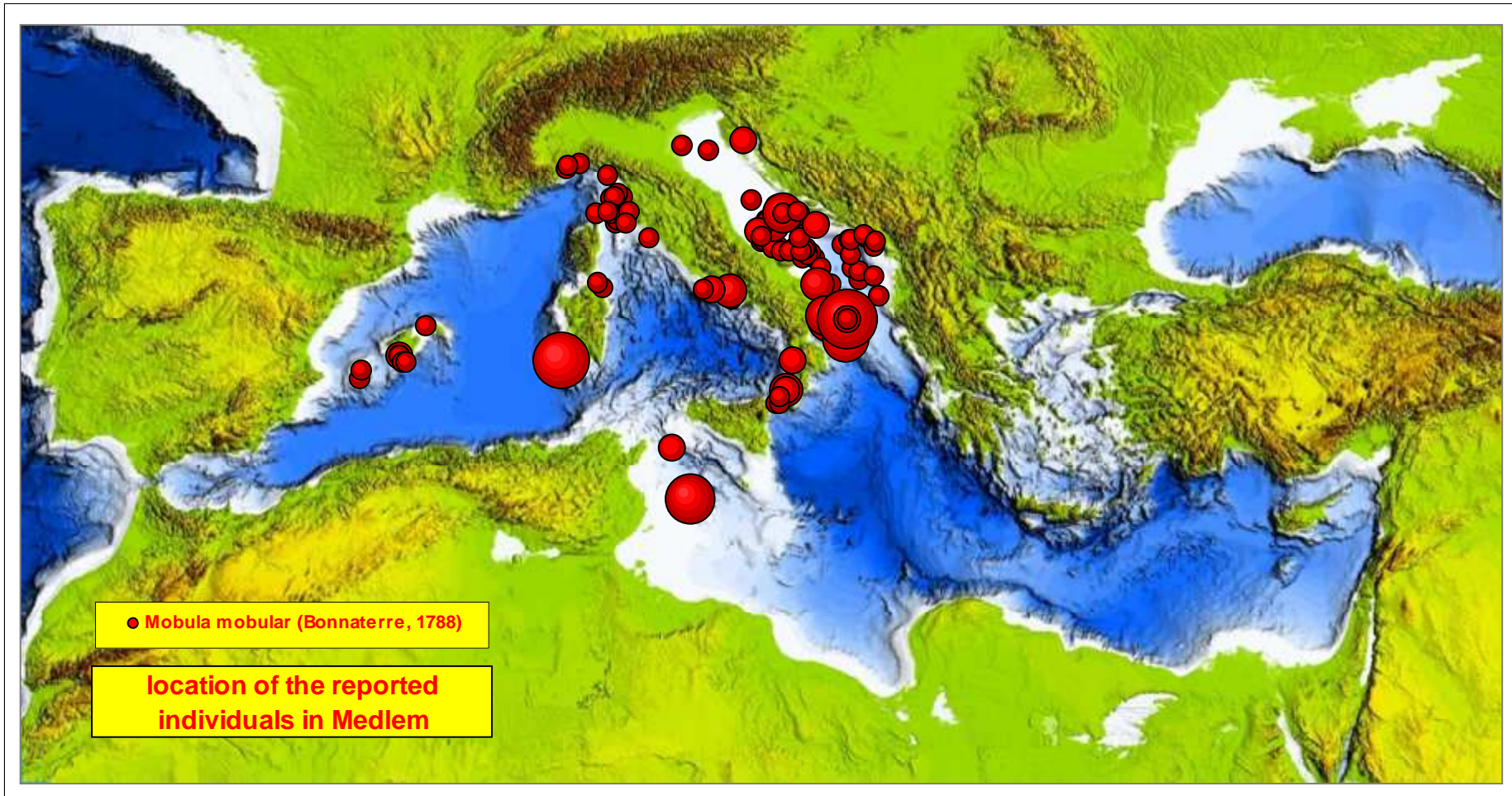
Lamna nasus



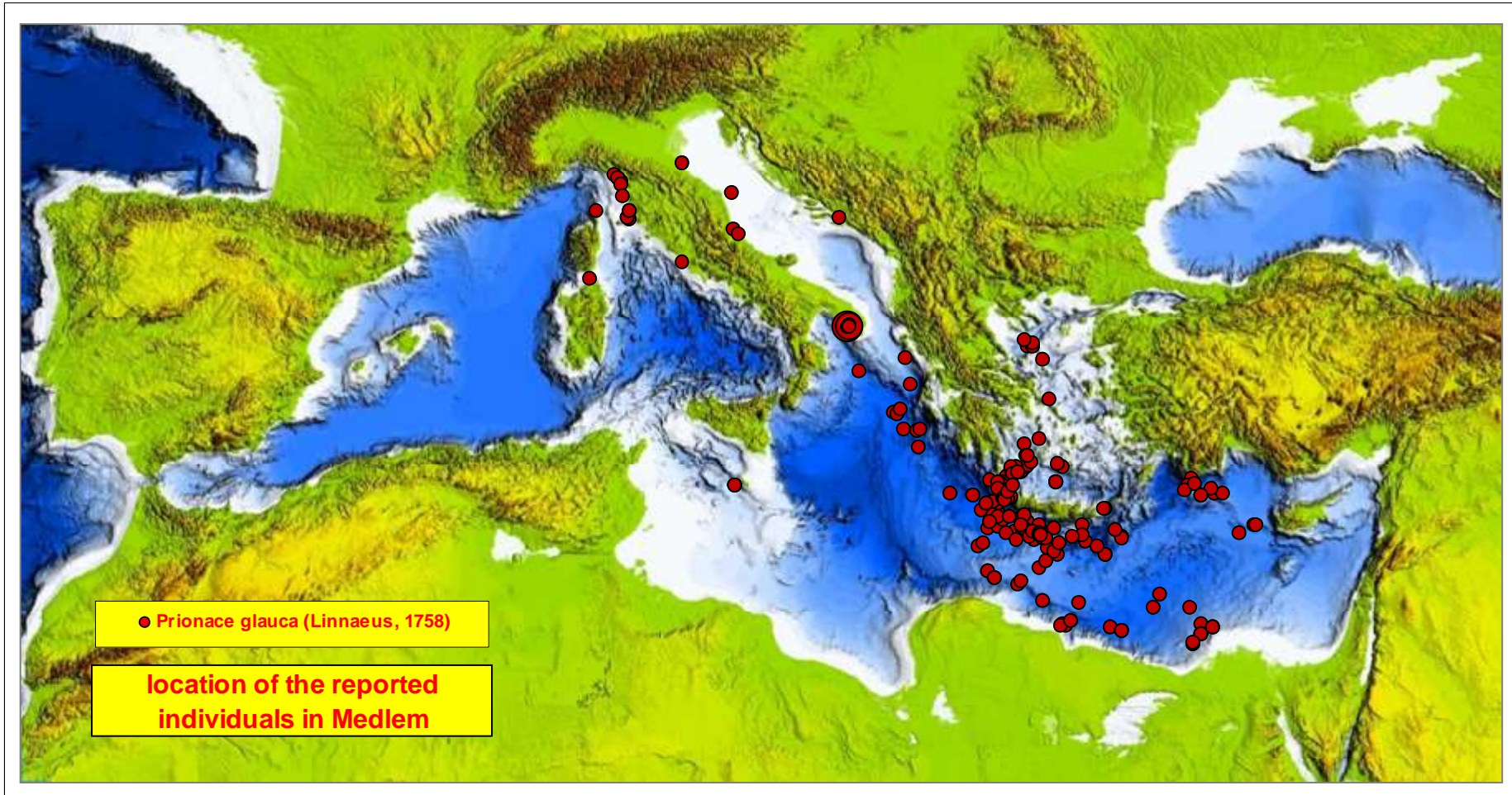
Isurus oxyrinchus



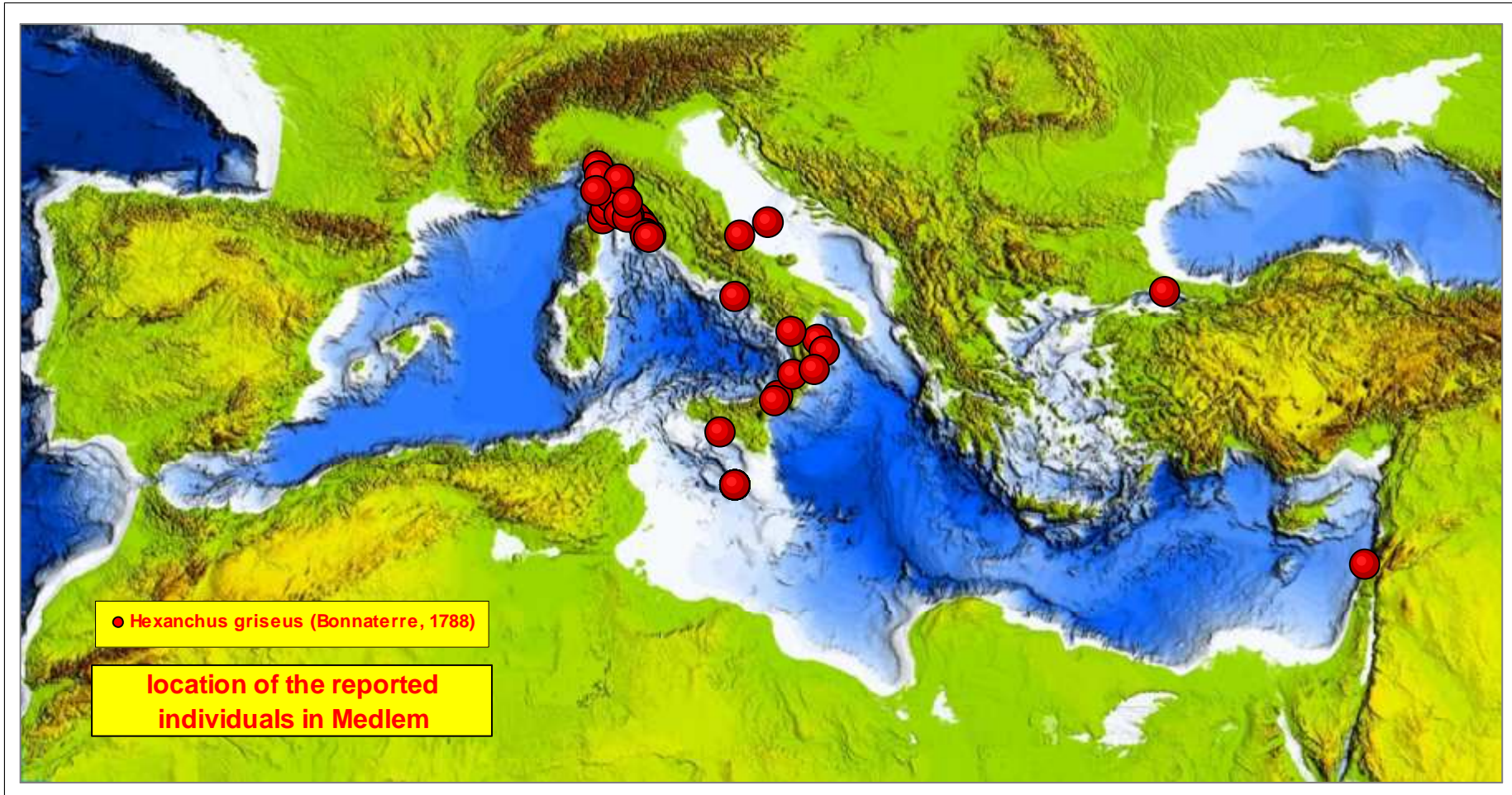
Mobula mobular

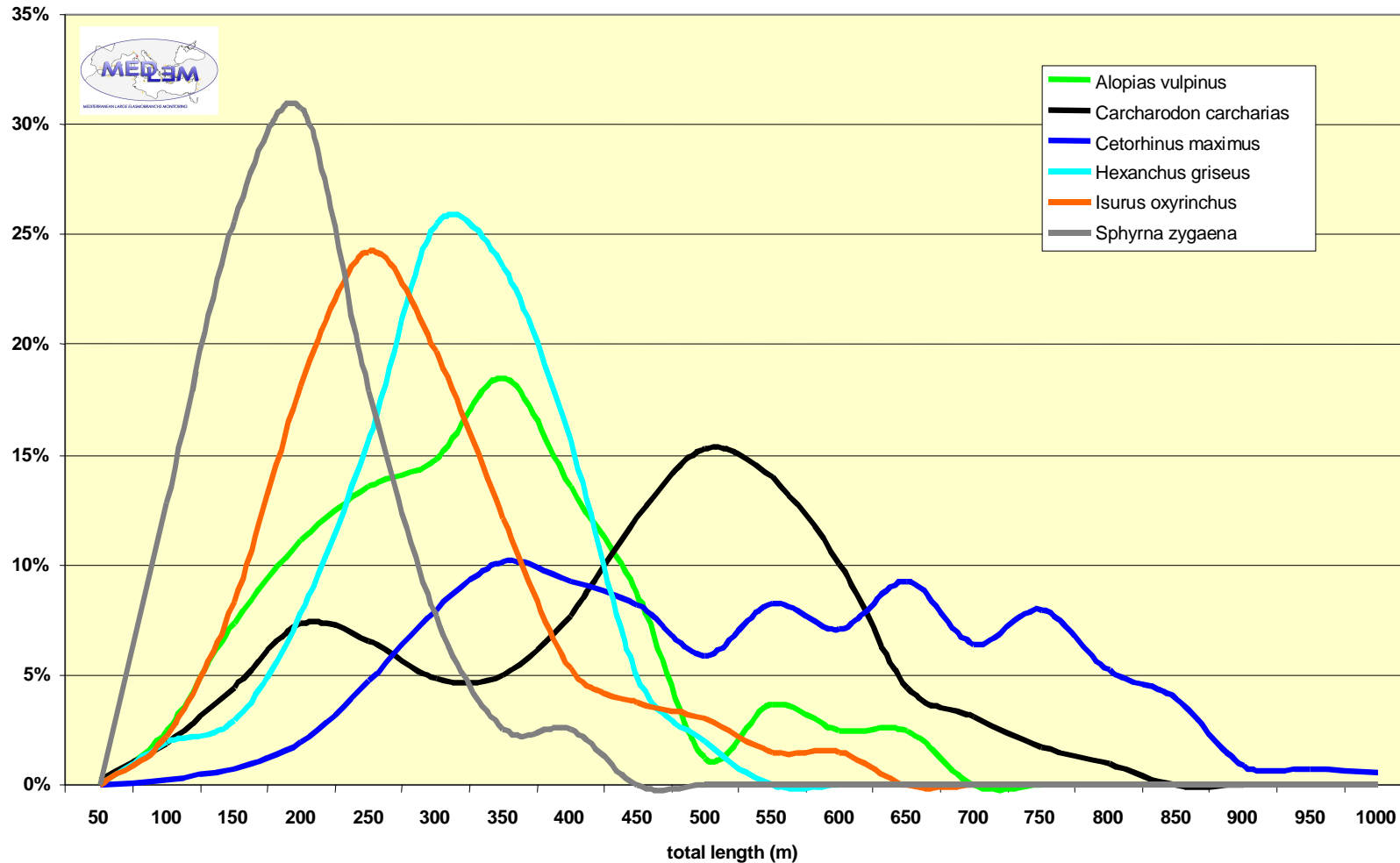


Prionace glauca



Hexanchus griseus

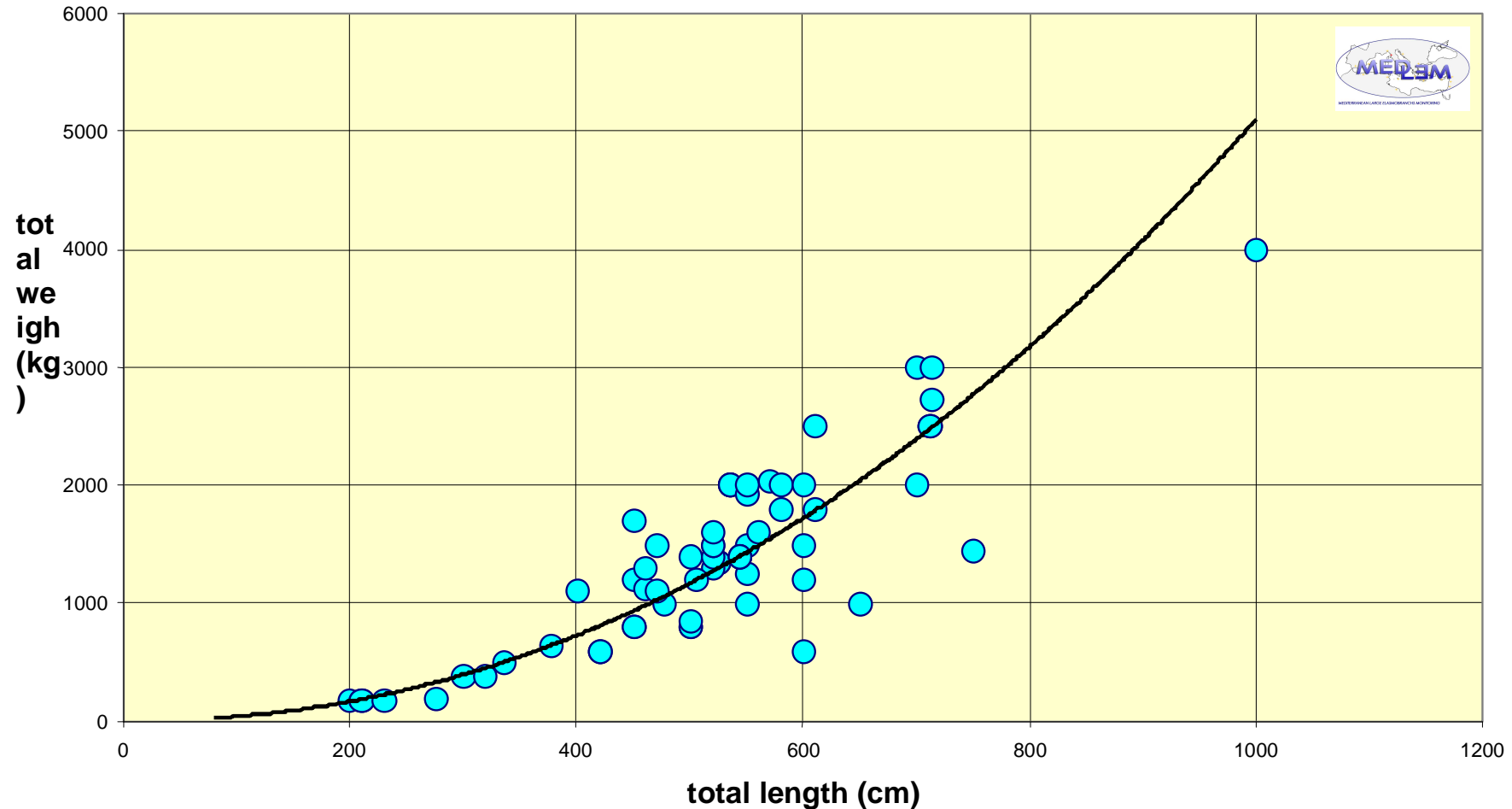




Length frequency distribution for the main species
(total length in cm)

Carcharodon carcharias

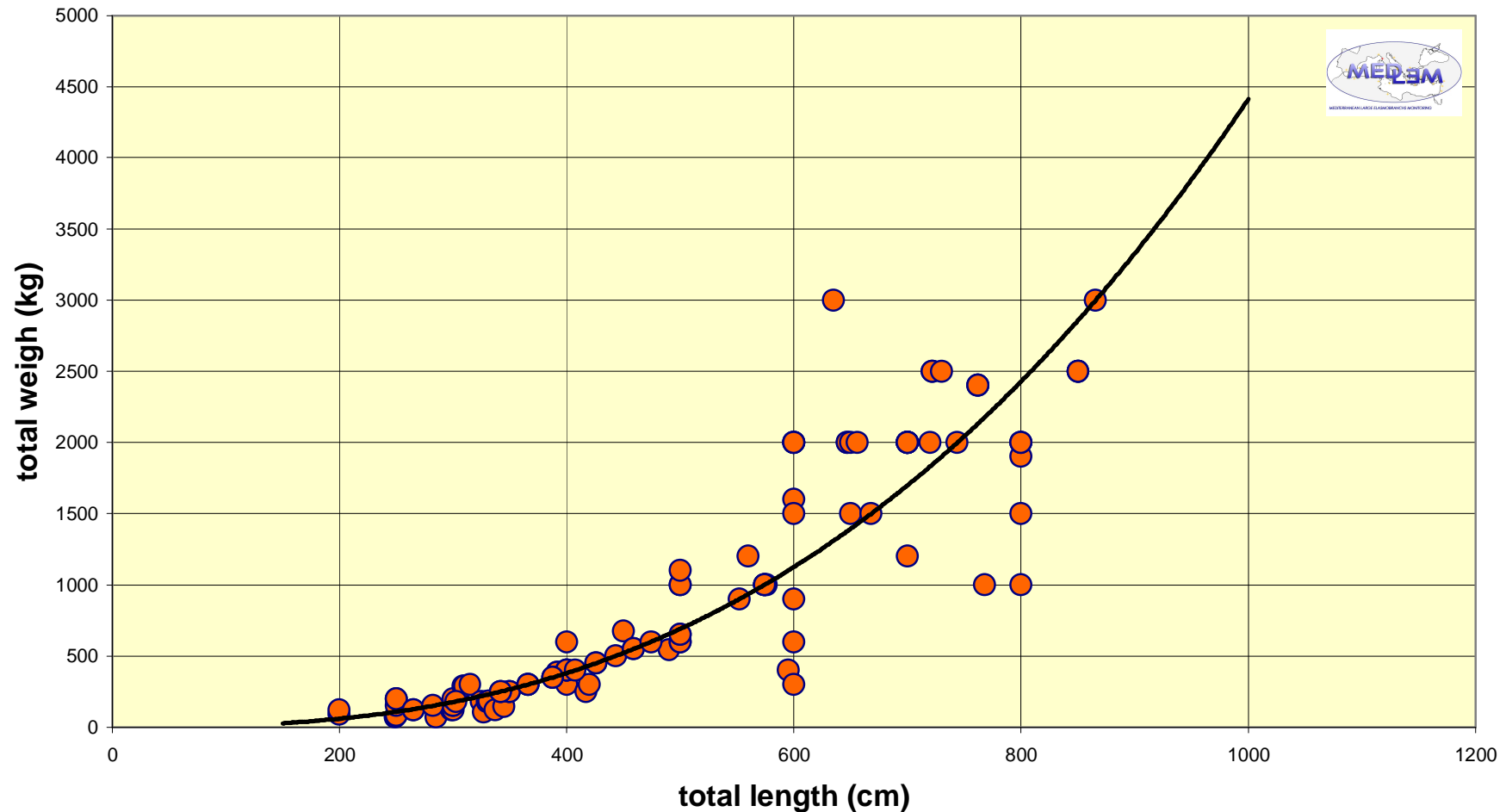
$$y = 0,0020788x^{2,1299574}$$
$$R^2 = 0,8343377$$



Length-weight relationship
for the great white shark in the Mediterranean Sea

Cetorhinus maximus

$$y = 0,0000414x^{2,6760034}$$
$$R^2 = 0,8887615$$



Length-weight relationship
for the basking shark in the Mediterranean Sea

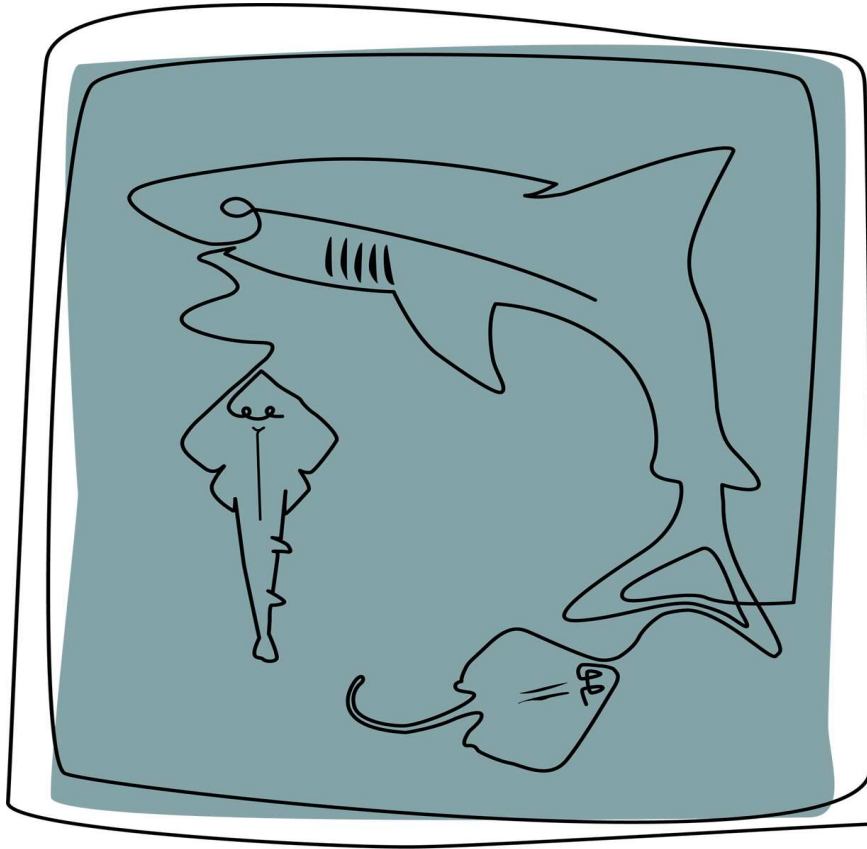
The most important aspect for succeed of the MEDLEM programme is the collaboration among colleagues

Password requested	Number	
Today	92	
Delivered	53	
To assess	19	
Discarded	20	

However the information in some areas are still lacking, mainly in the south-western Mediterranean Sea, but also the most investigated areas are not covered in an uniform way.

Some data from new scientific projects have been recently added into the database, but a greater effort is needed to retrieve the historic information available in the governmental or scientific institutions and transfer them into the MEDLEM database

<http://sira.arp.at.toscana.it/medlem/>



many thanks!



EEA 2012