

# First records of hooded seals (*Cystophora cristata*) in the Mediterranean Sea

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Between the years 1996 and 2006 the Threatened Marine Species Recovery Center (CREMA) detected 14 strandings and sightings of hooded seals in the coasts surrounding the Strait of Gibraltar. Five strandings and the only three sightings occurred on the Spanish coasts of the Mediterranean Sea. CREMA or its stranding report network did not deal directly with the stranded or sighted individuals but there were good descriptions and photographs to confirm identification. The frequency of stranding and sighting of hooded seal individuals on the southern coast of Spain indicate that the migratory movements of this species are performed by groups of young animals less than one year old.

The hooded seal (*Cystophora cristata*, Erxleben 1777) lives in the Atlantic region of the Arctic Ocean and in high latitudes of the North Atlantic Ocean. Its range extends from the Bear Islands, off the west coast of Norway, to the Labrador Peninsula, including Iceland, Jan Mayen Island and Greenland. The limits of its distribution area are related to the thickness of the Arctic ice layer and usually coincide with the limit of the sub-arctic waters (Kovacs & Lavigne, 1986; Jefferson et al 1993).

Hooded seals pass most part of the year in solitary and they group only for reproduction (Nowak, 1991). Young hooded seals are born between March and April. The breast-feeding period for this species is the shortest of all mammals, going on for only four days (Jefferson et al., 1993). In this brief period of time the young hooded seals gain 20 kg, doubling their weight at the end of the breast-feeding period. After weaning, the young hooded seals spread out, although information on their behaviour and destination is scarce.

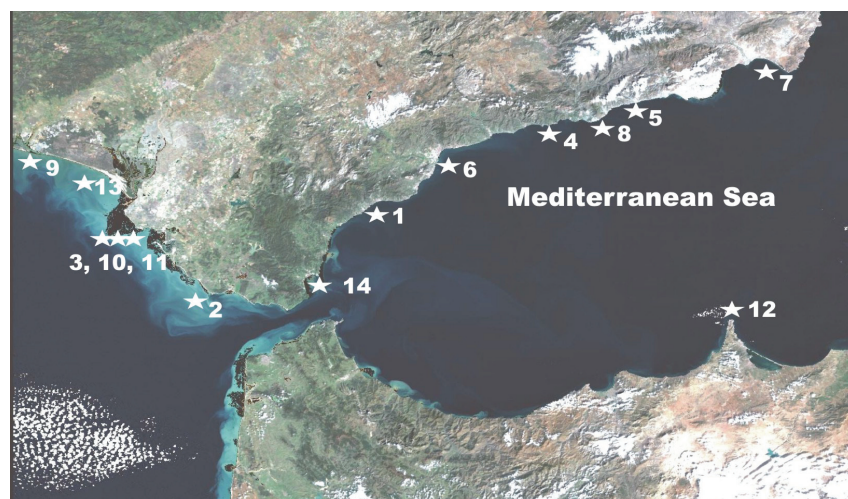
This species carries out long migratory movements, usually inside the above mentioned range limits, to moult, feed, reproduce and give birth. However, there are diverse data about individuals observed in remote areas such as Alaska, California, or the Canary Islands (Nowak, 1991; Jefferson et al., 1993).

Van Bree (1997a,b) reported an important increase in the number of hooded seal stranded on the western coast of Europe (from the north of Denmark to the south of Spain) since the 1970s. Although 34 individuals have been registered in this area between the years 1978 and 1996 (Van

**Table 1.** List of individuals of hooded seal detected on the Andalusian coast and Melilla between 1996 and 2006. We show the type of event (stranding or sighting) and the institution which detected and took care of the individual. In cases 1, 8 and 14 there is no specific date because the individuals were sighted several times during the indicated month.

No.	Locality	Province	Date	Type of Event	Condition	Institution
1	Estepona	Málaga	14 November 1996	Stranding	Dead	CREMA
2	Barbate	Cádiz	06 September 1999	Stranding	Dead	CREMA
3	Chipiona	Cádiz	25 September 1999	Stranding	Dead	CREMA
4	Almuñecar	Granada	23 August 2001	Stranding	Alive	CREMA
5	Castell de Ferro	Granada	28 October 2001	Stranding	Alive	CREMA
6	Torremolinos	Málaga	06 August 2006	Sighting	Alive	Civil protection
7	Cabo de Gata	Almería	09 August 2006	Stranding	Alive	CREMA
8	Salobreña-Motril	Granada	August 2006	Sighting	Alive	CREMA/Stranding network
9	Punta Umbría	Huelva	06 August 2006	Stranding	Dead	Stranding network
10	Chipiona	Cádiz	07 August 2006	Stranding	Alive	CREMA
11	Chipiona	Cádiz	12 August 2006	Stranding	Alive	CREMA
12	Melilla	Melilla	13 August 2006	Stranding	Alive	CREMA
13	Almonte	Huelva	15 August 2006	Stranding	Dead	EBDI
14	Algeciras	Cádiz	September 2006	Sighting	Alive	Private individual

EBDI, Estación Biológica de Doñana.



**Figure 1.** Distribution of strandings and sightings of hooded seal individuals detected by CREMA between 1996 and 2006. The numbers coincide with the data shown in Table 1.

Bree, 1997a), the presence of this species on the western European coast is a rare phenomenon, especially in the case of adults (Derix & Van Bree, 1997). In the Iberian Peninsula some hooded seals have been detected in Portugal, Galicia (Castells & Mayo, 1993), Huelva (Ibáñez et al., 1988; Avellá et al., 1993), Cádiz (Avellá et al., 1993), and some areas near the Straits of Gibraltar. However, there is no previous report of the presence of this species in the Mediterranean Sea.

Between the years 1996 and 2006 the Threatened Marine Species Recovery Center (CREMA) detected 14 strandings and sightings of hooded seals on the coasts surrounding the Strait of Gibraltar (Table 1, Figure 1). Five strandings and the only three sightings occurred on the Spanish coasts of the Mediterranean Sea.

All the reported data were confirmed. When CREMA or its stranding report network did not deal directly with the stranded or sighted individuals, there were good descriptions and photographs that allowed us to identify the species.

Figure 1 shows that the species has been detected in different regions of the Spanish Mediterranean coast. There is no report of stranding or sighting of hooded seals east of the Gata cape. That is why we think that the Alboran Sea is the present limit of the sporadic incursion of this species in the Mediterranean Sea.

The finding of an individual in Melilla suggests that the species is likely distributed in a similar way on both coasts of the Alboran Sea, though there are no data to confirm this point.

In every case, the body length of the registered individuals was around 1 m and the body weight fluctuated between 20 and 25 kg, that is to say, they were young individuals born in the same year. This fact was confirmed by their fur colour, with grey and blue back and light abdomen (Castells & Mayo, 1993) (Figure 2).

Most of the individuals previously detected near the Strait of Gibraltar were young. Only an adult pregnant female was detected in Huelva (Ibáñez et al., 1988).

The frequency of stranding and sighting of hooded seal individuals on the southern coast of Spain indicate that the migratory movements of this species are performed by groups of young animals less than one year old. In addition, the detection of individuals in this area followed a discontinuous temporal pattern; reports of the species occurred in 1983 (Ibáñez et al., 1988, Avellá et al., 1993), 1990 (Avellá et al., 1993, Van Bree, 1997a), and in 1996, 1999, 2001 and 2006 (CREMA). This suggests that an unknown reason periodically contributes to the arrival of young hooded seals to these latitudes.

## REFERENCES

- Avella, F., Castells, A. & Mayo, M., 1993. Los pinnípedos de las costas atlánticas y cantábricas de la península Ibérica. *Quercus*, **85**, 29–34.
- Castells, A. & Mayo, M., 1993. *Guía de los mamíferos en libertad de España y Portugal*. Madrid: Ediciones Pirámide.
- Derix, R.R.W.M. & Van Bree, P.J.H., 1997. On two recent life-strandings of adult hooded seals (*Cystophora cristata* Erxleben, 1777) on the West European continental coast. *Mammalia*, **61**, 631–633.
- Ibáñez C., Delibes J., Martín R. & Beltrán J.F., 1988. An unusual record of hooded seal (*Cystophora cristata*) in SW Spain. *Zeitschrift für Säugetierkunde*, **53**, 189–190.
- Jefferson T., Leatherwood S. & Webber M., 1993. *Marine mammals of the world*. FAO Species Identification Guide. United Nations Programme Food and Agriculture Organization of the United Nations.
- Kovacs K.M. & Lavigne D.M., 1986. *Cystophora cristata*. *Mammalian Species*, **258**, 1–9.
- Nowak R. 1991. *Mammals of the World. Fifth Edition. Volume II*. Baltimore and London: Johns Hopkins University Press.
- Van Bree, P.J.H., 1997a. On extralimital records of Hooded seals, *Cystophora cristata* (Erxleben, 1777), on the western European continental coast. *Zeitschrift für Säugetierkunde*, **62**, 182–186.
- Van Bree, P.J.H., 1997b. On extralimital records of Arctic seals (Mammalia, Pinnipedia) on the western European continental coast in the past and in the present—a summary. *Beaufortia*, **47**, No. 5.



Figure 2. Young individual of a hooded seal admitted to CREMA.

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