

## Mating and calving of the Sperm Whale in the central Mediterranean Sea

Antonio Di Natale and Antonia Mangano

Dipartimento di Biologia Animale ed Ecologia Marina dell'Università 98100 Messina, Italia

### Abstract

This note reports some information, collected by Project Cetacea, concerning the breeding season of the Sperm Whale in the central Mediterranean Sea, which seem to take place in spring and autumn. Other data have been collected about the calving period, which seems very long; calves have been reported during eleven months; a probable couple of twins has been reported also in the southern Tyrrhenian Sea. The Authors think that the Mediterranean Sea could be considered as a 'special area' for the Sperm Whale reproduction.

During the researches carried on by Project Cetacea\* (Di Natale 1979a, 1979b; Di Natale & Mangano 1982; Cagnolaro *et al.* 1983) since 1978 in the central Mediterranean Sea (Figure 1), new data concerning the reproductive biology of the Sperm Whale (*Physeter macrocephalus* L.) have been reported, both by sightings and by strandings (Di Natale & Mangano 1979, 1983).

Sightings at sea, made by vessels or aircraft, show two main mating seasons (Mangano 1984): the first

one during March, April, May and June (spring season) and the second one during September and November (autumn season). Of course, the number of the reports concerning mating Sperm whales is very low, due to the difficulties of the observation of such behaviour at sea and to the high costs of the observation made from aircraft; all the data are shown in Figure 2.

Mating specimens represent 3% of the total amount of the specimens sighted in the area (464), and the concerning reports are 3.6% of the total amount of the collected reports (195).

Our information is partially in contrast with the breeding seasons until now reported for the Sperm whale, because, in the North Atlantic, mating season is known from January to July (Clarke 1956), with a maximum during April and May (Duguay & Robineau 1982) and, in the Southern Hemisphere, it takes place from November to January (Gambell 1972). Probably, a more long breeding season happens in the Mediterranean Sea, mainly due to the hydrological conditions,

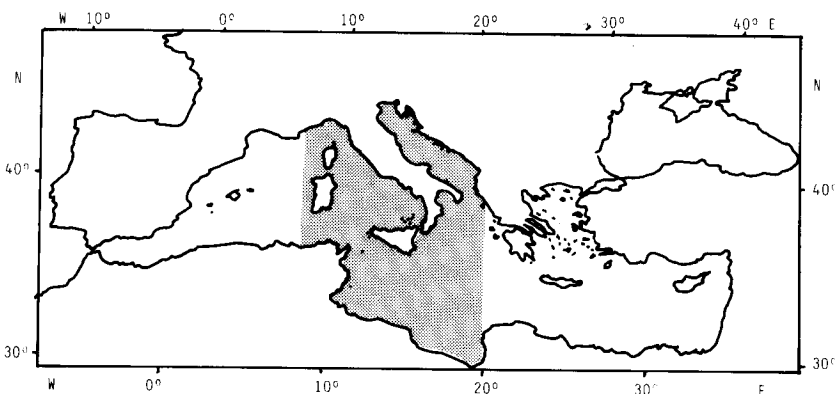


Figure 1. Area of the research.

\*Project Cetacea is a research carried on with the financial help of the World Wildlife Fund.

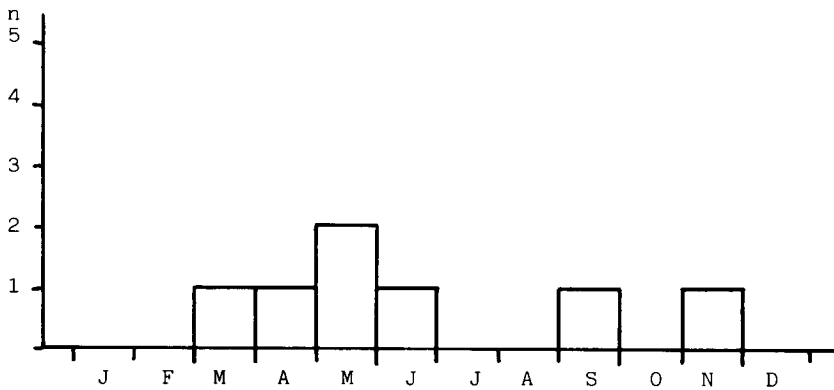


Figure 2. Monthly frequency of coupling specimens (as number of reports).

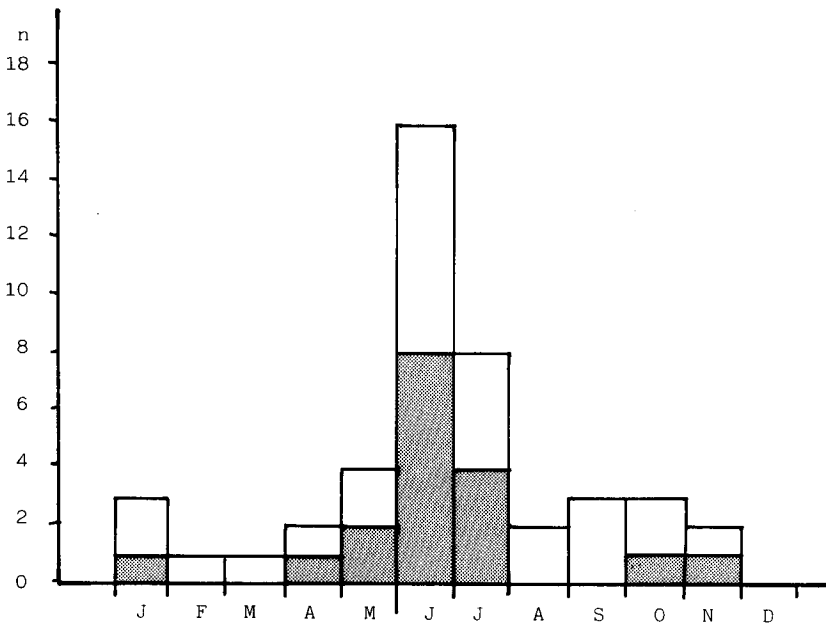


Figure 3. Monthly frequency of calves in the central Mediterranean Sea. Dark area shows stranded or caught specimens.

which causes temperate waters, and so with a more favourable environment for the reproduction of the Sperm whale.

Other information concerns the presence of Sperm whale calves in the same area. Calves represents 8.6% of the total amount of reported specimens in the area (524) and 30% of the stranded specimens (60).

A monthly frequency graph is shown in Figure 3; it is possible to note a great peak during June and July, with a high number of calves. But the most important data concern the presence of the Sperm whale calves during eleven months of the year, with the only exclusion of December, in partial contrast

with Clarke (1956), who reported calves in the Azores from May to November, mostly between July and September.

Such information seems to confirm the hypothesis that the Mediterranean Sea could be considered like a natural nursery for a certain rate of the Sperm whale stock, both for the specimens migrating seasonally from the Atlantic or living for more longer times inside the Mediterranean Sea.

During our research on Sperm whale calves, a probable couple of twins have been found on the rocky shore of the Isle of Salina (Eolian Islands, southern Tyrrhenian Sea), on 27 June, 1983. The two calves and an adult female (probably the

mother) have been incidentally caught by a surface drifting net and they were in advanced decomposition; the total length of each calf was 3.90 m. Of course, there isn't any certain proof that the couple of calves were really twins, but we think that all the elements could support such hypothesis.

So, all the data collected during the activity of Project Cetacea seem to indicate that the central Mediterranean Sea (and, probably, the whole of the Mediterranean) is a very particular area for the Sperm Whale, in which it is possible to collect new interesting information about its biology and where we hope that other researches will be carried on, in order to know something more about the giant of the sea and to prepare a more accurate conservation strategy in the Mediterranean.

### References

- Cagnolaro L., Di Natale A. & Notarbartolo di Sciarra G. (1983) Cetacei. 9. *Guide per il riconoscimento delle specie animali delle acque costiere e lagunari italiane*, C.N.R., AQ/1/224, 185 pp.
- Clarke M. R. (1956) A biologia dos Cachalotes capturados nos Açores. *Notas e Estudos, Inst. Biol. Mar.* **10**, 1–11.
- Di Natale A. (1979a) Progetto Cetacei. Rapporto annuale. I: attività 1978–1979. *Mem. Biol. mar. Ocean.* **9(1)**, 1–23.
- Di Natale A. (1979b) Progress of research relating to Mediterranean Cetacea. Project Cetacea. Spec. rep. annex to: *Mem. Biol. mar. Ocean.* **9(12)**, 50 pp.
- Di Natale A. & Mangano A. (1979) Project Cetacea. III: strandings and accidental catches of Sperm Whale (*Physeter catodon* L.) in the Italian seas. *CIESM, Tunis, miméo*, 3 pp.
- Di Natale A. & Mangano A. (1982) Report on the progress of Project Cetacea. VI: July 1978–October 1981. *Mem. Biol. mar. Ocean., Suppl. spec.*, 49 pp.
- Di Natale A. & Mangano A. (1983) Biological and distribution new data on the Sperm Whale, *Physeter macrocephalus* L., in the central Mediterranean Sea. *Rapp. Comm. Int. Médit.* **28(5)**, 183–184
- Duguy R. & Robineau D. (1982) Guide des Mammifères marins d'Europe. *Delachaux & Niestlé ed.*, 200 pp.
- Mangano A. (1984) *Physeter macrocephalus* Linneo, 1758, nel Mediterraneo centrale: ricerche eto-ecologiche. Tesi del corso di laurea in Scienze Biologiche, Facoltà di Scienza, Università di Messina, 136 pp.