

# ITALY. PROGRESS REPORT ON CETACEAN RESEARCH, JANUARY TO DECEMBER 2002.

*Compiled by*

*Giancarlo Lauriano and Caterina Maria Fortuna*

Istituto centrale per la ricerca Scientifica e Tecnologica applicata al Mare (ICRAM) -Via di Casalotti 300,  
00166 Rome Italy

This report summarises the activities carried out by: Central Institute for Applied Marine Research (ICRAM), University of Siena, Riserva Naturale Marina di Miramare (RNMM) and University of Siena (US) and other information have been reported as known to be carried out by Centro Studi Cetacei (CSC) and Italian Tissue Bank (BIT).

## 1. Species and stocks studied

Common name	Scientific name	Area/stock(s)	Items referred to
Bottlenose dolphin	<i>Tursiops truncatus</i>	Asinara National Park - Sardinia	2.1.1,3.1.1,9
Bottlenose dolphin	<i>Tursiops truncatus</i>	Aeolian Island, Sicily	2.1.1,3.1.1,9
Bottlenose dolphin	<i>Tursiops truncatus</i>	Northern Adriatic sea	2.1.1,9
Common dolphin	<i>Delphinus delphis</i>	Aeolian Island, Sicily	2.1.1
Striped dolphin	<i>Stenella coeruleoalba</i>	Aeolian Island, Sicily	2.1.1,5
Fin whale	<i>Balaenoptera physalus</i>	Ligurian Sea	3.1.3
Bottlenose dolphin	<i>Tursiops truncatus</i>	Messina Strait, Sicily	2.1.2
Common dolphin	<i>Delphinus delphis</i>	Messina Strait, Sicily	2.1.2
Striped dolphin	<i>Stenella coeruleoalba</i>	Messina Strait, Sicily	2.1.2
Risso's dolphin	<i>Grampus griseus</i>	Messina Strait, Sicily	2.1.2
Sperm whale	<i>Physeter catodon</i>	Messina Strait, Sicily	2.1.2
Fin whale	<i>Balaenoptera physalus</i>	Messina Strait, Sicily	2.1.2

## 2. Sightings data

### 2.1 Field work

#### 2.1.1 SYSTEMATIC

ICRAM. Data of Cetacean species collected in Ligurian sea and Aeolian Archipelago, are stored into a GIS and linked with oceanographic features. During the year 2002, three seasonal transect line survey were conducted around the Aeolian Islands.

#### 2.1.2 OPPORTUNISTIC, PLATFORMS OF OPPORTUNITY

ICRAM. During the Summer 2002, we then assessed the possibility to conduct a study on presence and distribution of Cetaceans from very particular platform of opportunity. Surveys were conducted from a feluca which is a swordfish fishing boat characterised by a sighting platform (antenna), 25 m above the sea level.

RNMM. Cetacean sightings are carried out and reported from opportunistic survey conducted in north Adriatic Sea in order to study marine birds.

## 3. Marking data

### 3.1 Field work

#### 3.1.1 NATURAL MARKING DATA

Species	Feature	Area/stock	Calendar year/season/ no. photographed	Catalogued (Y/N)	Catalogue total	Contact person/institute
<i>Bottlenose dolphin</i>	Dorsal fin	Corsican sea, Asinara National Park - Sardinia	9	Y	39	ICRAM
<i>Bottlenose dolphin</i>	Dorsal fin		2	Y	II	ICRAM

### 3.1.3 TELEMETRY DATA

**ICRAM.** During summer 2001 ICRAM started a pilot project aimed at studying habitat use and migration patterns of the Mediterranean Fin whale. This study was carried out by using a Argos satellite tags coupled with VHF radio transmitters attached by means of an 8 cm stainless steel dart. The fin whale was tagged on July 7.4th in the Ligurian Sea. Active acoustic data were also collected in the 0-250 meter depth range to verify the presence of potential prey items, by using a scientific echosounder (Simrad EY500) equipped with a 120 KHz transducer split-beam ES 120- 7G.

## 5. Pollution studies

**US.** In this study, a non-lethal approach (skin biopsy) was applied to investigate bioaccumulation of OCs, including polychlorodibenzo-p-dioxins (PCDDs), polychlorodibenzofurans (PCDFs) and trace elements (Hg, Cd, Pb) and mixed function oxidase activity (BPMO). Ten striped dolphins were sampled with a biopsy pole during a survey of the Aeolian archipelago during the summer 2002. Correlations were investigated between BPMO activities and OC, concentrations in the different Mediterranean groups.

## 8. Stranding

**CSC.** A network to monitor cetacean stranding along the Italian coasts has been operating since 1986 by CSC, resulting in annual stranding reports as well as scientific output. 2002 stranding report is still in preparation.

**BIT.** An Italian Tissue Bank (BIT) containing organ samples from stranded cetaceans was set up by the Department of Experimental Veterinary Sciences of the University of Padova, in collaboration with ICRAM. The bank was formally established in January 2002 although it already contains samples from cetaceans stranded and sampled before the date of establishment.

## 9. Other studies and analyses

**ICRAM.** In 2001, ICRAM started a monitoring survey on dolphin fishery interaction on trammels net in North Adriatic and in South Tyrrhenian Sea. Catch analyses were conducted in order to estimate level of interaction, fish species involved and the consequent economic loss due to the catch reduction and to fishing gear damages. Work is in progress and will terminate this year.

## 11. Publications

### 11.1 Published or 'In Press' papers only

- Lauriano G., Fortuna C.M., Molledo G., Mackelworth, P. Notarbartolo di Sciara G. (In press). Presenza e Distribuzione dei Cetacei nell'area del Parco Nazionale dell' Asinara. *Biol. Mar. Medit.*
- Lauriano G., Mackelworth P., Fortuna C.M., Molledo G., Notarbartolo Di Sciara G. (In press). Bottlenose dolphin (*tursiops truncatus*) density and abundance in the Asinara national park, Sardinia. *Biol. Mar. Medit.*

### 11.2 Unpublished literature

- Canese, S., Giusti, M., Cardinali, A., Greco, S., Borsani, J.F. 2002. Behaviour of a fin whale in relation to prey availability. ICRAM Technical Report (Italian).
- Fossi, M.C., Marsili, L., Lauriano, G., Fortuna, C., Canese, S., Neri, G., Ancora, S., Leonzio, C., Romeo, T., Jimenez, B. 2003. Preliminary assessment of ecotoxicological status of a SW Mediterranean segment population of striped dolphin (*Stenella coeruleoalba*) using skin biopsy. PRIMO (Pollution Responses In Marine Organisms) 12, Florida, 2-12 May 2003.
- Mackelworth, P., G. Lauriano, Fortuna C.M. Abundance Estimation of Bottlenose Dolphins (*Tursiops truncatus*) Frequenting The Asinara National Park, Sardinia. 16th European Cetacean Society Conference, Liege, Belgium 2002
- Pascucci, D., Lauriano G. and Fortuna C. M. Incidental Dolphin-Fishery Interaction Along Italian Coasts: Data Review Through Reports On Stranding. Does This Problem Exist? 16th European Cetacean Society Conference, Liege, Belgium 2002