

SWEDEN. PROGRESS REPORT ON CETACEAN RESEARCH, APRIL 2002 TO APRIL 2003, WITH STATISTICAL DATA FOR THE CALENDAR YEAR 2002

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This report summarises information obtained from: Stockholm University (SU), Department of Zoology, S-106 91 Stockholm, Gothenburg Natural History Museum, Box 7283, S-402 35 Göteborg and Swedish Museum of Natural History, S-104 05 Stockholm.

1. Species and stocks studied

Common name	Scientific name	Area/stock(s)	Items referred to
Harbour porpoise	<i>Phocoena phocoena</i>	Skagerrak, Kattegat, Öresund and Baltic	2.1.1, 4.2, 4.3, 7.1, 8
Indo-Pacific bottlenose dolphin	<i>Tursiops aduncus</i>	Zanzibar, Tanzania	2.1.1, 3.1.1, 4.1, 4.2, 7.1
Bottlenose dolphin	<i>Tursiops truncatus</i>	Zanzibar, Tanzania	4.2, 7.1
Indo-Pacific humpback dolphin	<i>Sousa chinensis</i>	Zanzibar, Tanzania	2.1.1, 3.1.1, 4.1, 4.2, 7.1
Humpback whale	<i>Megaptera novaeangliae</i>	Zanzibar, Tanzania	2.1.1, 3.1.1, 4.1, 4.2, 6, 8
Sperm whale	<i>Physeter macrocephalus</i>	Zanzibar, Tanzania	8

2. Sightings data

2.1 Field work

2.1.1 Systematic

An aerial abundance survey of harbour porpoises was conducted in the Baltic Sea in July 2002. The western boundaries of the survey area were the Darss to Gedser underwater ridge and the southern entrance to Öresund, and the eastern boundary of the survey area was from 57° 07' N, 17° 00' E to 54° 22' N, 19° 16' E. The survey was conducted along seven replicate zig-zag tracks, which were designed, by using a random start point, to give a non-zero probability of covering any point in the survey area. One porpoise pod was seen on each of two of the tracks. An abundance estimate is being generated from the survey and will be reported at next year's Scientific Committee meeting.

A boat-based pilot study of humpback whales, using photo-identification and biopsy sampling, was conducted round Zanzibar, Tanzania in September 2002 (SU).

Photo-identification and biopsy sampling of bottlenose dolphins and humpback dolphins was conducted in Menai Bay, Zanzibar, Tanzania, January – March 2003 (SU).

3. Marking data

3.1 Field work

3.1.1 Natural marking data

Six humpback whales were identified round Zanzibar using photo-identification of which four were mom/calf pairs.

Analyses of photo-identification data collected 1999 – 2003 of Indo-Pacific bottlenose dolphins and humpback dolphins in Menai Bay, Zanzibar, Tanzania. The photo-identification catalogue contains 170 bottlenose and 60 humpback dolphins and the accompanying data indicate that the dolphins are resident in Menai Bay.

Species	Feature	Area /stock (s)	Calendar year / season No. photographed	Catalogued Y/N	Catalogue total	Contact person/ institute
Humpback whale	Flukes/dorsal fin	Zanzibar	6	Y	6	P. Berggren, SU
Bottlenose dolphin	Dorsal fin/body	Zanzibar	>50	Y	170	P. Berggren, SU
Humpback dolphin	Dorsal fin/body	Zanzibar	>25	Y	60	P. Berggren, SU

4. Tissue/biological samples collected

4.1 Biopsy samples

Common name	Area/stock(s)	Calendar Year / season No. collected	Archived Y/N	No. analysed	Total holdings	Contact person/ institute
Humpback whale	Zanzibar	3	Y	0	3	P. Berggren, SU
Bottlenose dolphin	Zanzibar	33	Y	-	33	P. Berggren, SU
Humpback dolphin	Zanzibar	6	Y	-	6	P. Berggren, SU

4.2 Samples from by-catches

Swedish legislation demand that harbour porpoises bycaught or found stranded in the Baltic Sea should be retrieved and submitted to the Swedish Museum of Natural History in Stockholm whereas porpoises from other areas only need to be reported.

Bycaught and stranded cetaceans around Zanzibar, Tanzania were collected by the Institute of Marine Sciences (IMS), University of Dar es Salaam. This work is part of a collaborative project between Stockholm University and IMS and funded through the Swedish International Development Agency (Sida). The project was initiated in 1998 and is aimed at assessing the status of marine mammals in Zanzibar and Tanzania. For more information on this project contact Per Berggren.

Common name	Area/stock(s)	2002 Jan-Dec No. collected	Archived Y/N	Tissue Type (s)	Contact person/ institute
Harbour porpoise	Swedish Skagerrak Sea	2	Y	Dorsal fin & teeth	A. Nilsson, GNM
Harbour porpoise	Baltic Sea	1	Y	All tissues	I. Carlén, NRM
<i>Tursiops aduncus</i>	Zanzibar, Tanzania	11	Y	All tissues	P. Berggren, SU
<i>Tursiops truncatus</i>	Zanzibar, Tanzania	1	Y	All tissues	P. Berggren, SU
Humpback dolphin	Zanzibar, Tanzania	1	Y	All tissues	P. Berggren, SU
Humpback whale	Zanzibar, Tanzania	1	N	-	P. Berggren, SU

4.3 Samples from stranded animals

Common name	Area/stock(s)	2002 Jan-Dec No. collected	Archived Y/N	Tissue Type (s)	Contact person/ institute
Harbour porpoise	Skagerrak and Kattegat and Öresund	18	Y	Dorsal fin & teeth	A. Nilsson, GNM
Harbour porpoise	Baltic Sea	1	Y	Skull	I. Carlén, NRM

5. Pollution studies

None

6. Statistics for large cetaceans

6.1 Directed catches (commercial, aboriginal and scientific permits) for the calendar year 2002.

None.

6.2 Other non-natural mortality for the calendar year 2002

Common name	Area/stock(s)	Males	Females	Total	Cause
Humpback whale	Zanzibar	-	1	1	Bycatch in driftnet

7. Statistics for small cetaceans

7.1 For the calendar year 2002

None directed catch or live capture.

Common name	Area/stock(s)	Incidental mortality		
		Reported*	Est. total	Source
Harbour porpoise	Baltic Sea	1	Unknown	Gillnet
Harbour porpoise	Skagerrak and Kattegat Seas, and Öresund	2	Unknown	Fishing gear
<i>Tursiops aduncus</i>	Zanzibar	11	Unknown	Gillnet
<i>Tursiops truncatus</i>	Zanzibar	1	Unknown	Gillnet
Humpback dolphin	Zanzibar	1	Unknown	Gillnet

*Incidental reports. No independent observer programmes were operating in 2002.

7.2 Earlier years' statistics

No amendments

8. Strandings

Common name	Area/stock(s)	No. of strandings	No. animals
Harbour porpoise	Swedish Skagerrak, Kattegat and Öresund	18	18
Harbour porpoise	Baltic Sea	1	1
Humpback whale	Zanzibar	1	1
Sperm whale	Zanzibar	1	1

11. Publications

11.1 Published or 'In Press' papers only

Berggren, P., Wade, P., Carlström, C. and Read, A.J. 2002. Potential limits to anthropogenic mortality for harbour porpoises in the Baltic region. *Biol. Conservation*. 103:313-322.

Carlström, J. Berggren, P., Dinnézt, F. and Börjesson, P. 2002. A field experiment of acoustic alarms pingers) to reduce harbour porpoise by-catch in bottom set gill-nets. *ICES J. Mar. Sci.* 59:816-824.

Hammond, P. S., Berggren, P., Benke, H., Borchers, D. L., Buckland, S. T., Collet, A., Heide-Jørgensen, M. P., Heimlich-Boran, S., Hiby, A. R., Leopold, M. P. and Øien. 2002. Distribution and abundance of harbour porpoises and other cetaceans in the North Sea and adjacent waters. *J. Appl. Ecology* 39: 361-376

Amir, O.A., Berggren, P. and Jiddawi, N.S. 2002. The incidental catch of dolphins in gillnet fisheries in Zanzibar, Tanzania. *Western Indian Ocean J. Mar. Sci.* 1: 155-162.

Börjesson, P. Berggren, P. and Ganning, B. 2003. Diet of harbour porpoises in the Kattegat and Skagerrak Seas: Accounting for individual variation and sample size. *Mar. Mam. Sci.* 19:38-58.

Clapham, P.J., Berggren, P., Childerhouse, S., Friday, N.A., Kasuya, T., Kell, L., Kock, K-H., Manzanilla, S., di Sciara, G., Perrin, W.F., Read, A.J., Reeves, R.R., Rogan, E., Rojas-Bracho, L., Smith, T.D., Stachowitsch, M., Taylor, B.L., Thiele, D., Wade, P.R. and Brownell, R.L. Jr. 2003. Viewpoint: Whaling as science. *Bioscience* 53: 210-212.