

# ICELAND. PROGRESS REPORT ON CETACEAN RESEARCH, MARCH 2001 TO MARCH 2002 WITH STATISTICAL DATA FOR THE CALENDAR YEAR 2001.

COMPILED BY

GÍSLI A. VÍKINGSSON AND DROPLAUG ÓLAFSDÓTTIR

MARINE RESEARCH INSTITUTE, SKÚLAGATA 4, 101-REYKJAVÍK, ICELAND

This report summarises information obtained from: the Marine Research Institute (MRI), Reykjavík, Iceland and cooperating institutes.

## 1. SPECIES AND STOCKS STUDIED

Common name	Scientific name	Area/stock(s)	Items referred to
Blue whale	<i>Balaenoptera musculus</i>	Icelandic and adjacent waters	2.1.1; 3.1.1; 9;
Fin whale	<i>Balaenoptera physalus</i>	Icelandic and adjacent waters	2.1.1; 3.1.2; 5;
Sei whale	<i>Balaenoptera borealis</i>	Icelandic and adjacent waters	2.1.1; 5;
Minke whale	<i>Balaenoptera acutorostrata</i>	Icelandic and adjacent waters	2.1.1; 3.1.2; 3.2; 4.2; 4.3;
Humpback whale	<i>Megaptera novaeangliae</i>	Icelandic and adjacent waters	2.1.1; 3.1.1; 9;
Sperm whale	<i>Physeter macrocephalus</i>	Icelandic and adjacent waters	2.1.1;
Northern Bottlenose	<i>Hyperoodon ampullatus</i>	Icelandic and adjacent waters	2.1.1; 4.2; 4.3;
Long-finned pilot whale	<i>Globicephala melas</i>	Icelandic and adjacent waters	2.1.1;
Killer whale	<i>Orcinus orca</i>	Icelandic and adjacent waters	2.1.1; 3.1.1; 9;
Atlantic white-sided dolphins	<i>Lagenorhynchus acutus</i>	Icelandic and adjacent waters	2.1.1;
White-beaked dolphins	<i>Lagenorhynchus albirostris</i>	Icelandic and adjacent waters	2.1.1; 4.3; 9;
Bottlenose dolphins	<i>Tursiops truncatus</i>	Icelandic and adjacent waters	2.1.1;
Harbour porpoise	<i>Phocoena phocoena</i>	Icelandic waters	2.1.1; 4.3; 5; 9;

## 2. SIGHTINGS DATA

### 2.1 Field work

#### 2.1.1 Systematic

A shipboard and aerial sighting survey was conducted by three research vessels and one aircraft in Icelandic and adjacent waters in the period 20. June to 29. July 2001 (SC/54/O10). The survey was a part of a joint North Atlantic sightings survey (NASS-2001) with Faroe Islands and Norway as cooperating nations. The survey was co-ordinated through the Scientific Committee of the North Atlantic Marine Mammal Commission, NAMMCO (Nammco 2002). 14 cetacean species were identified during a total effort of 7470.5 nautical miles in the Icelandic part of the shipboard survey. A minimum of 9 species of cetaceans were identified during 110 searching hours in the aerial survey in the Icelandic coastal area (SC/54/O12).

#### 2.1.2 *Opportunistic, platforms of opportunity*

MRI and several whale watching companies co-operated in reporting and compiling sightings data during whale watching excursions. The MRI also has a cooperation arrangement, including exchange of sightings data, for with the Ocean Futures Society (OF).

### 2.2 Analyses/development of techniques

Analysis of data collected during the NASS-2001 sightings survey is being coordinated through a special working group under the Scientific Committee of NAMMCO. Some preliminary estimates of abundance and trends have been presented to the working group, some of which will be presented to the Scientific Committee of the IWC in 2002 (SC/54/O8, SC/54/O9, SC/54/O10, SC/54/O12, SC/54/H2, SC/54/H6, SC/54/H10).

## 3. MARKING DATA

### 3.1 Field work

#### 3.1.1 *Natural marking data*

No dedicated surveys for collection of photographs for individual identification were conducted by the MRI in 2001, as most of the field resources (funds and manpower) were used for the large scale sightings survey (NASS-2001). Some photographs were collected from platforms of opportunity by MRI's co-operative partners (Icelandic whale watching companies and OF) for ongoing long-term studies on blue, humpback and killer whales, but these have not as yet been analysed.

#### 3.1.2 *Telemetry data*

Attempts were made to instrument three fin whales with satellite tags in July 2001 during the sightings survey NASS-2001. Signals were received from only one of the three tags and only for one day. Two minke whales were marked with the same type of satellite tags north off Iceland 12. and 15. August 2001. The transmitting duration from the two transmitters was 16 and 60 days respectively.

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact institute
Fin whale	Satellite	3	1 day	MRI
Minke whale	Satellite	2	60 days	MRI

### 3.2 Analyses/development of techniques

To our knowledge minke whales have not previously been tracked via satellite for 60 days or more. A preliminary analysis of the two tracked minke whales indicates a surprisingly little movement during the tracking period (12/8-18/10 2001).

## 4. TISSUE/BIOLOGICAL SAMPLES COLLECTED

### 4.1 Biopsy samples

In 2001 no special cruises were conducted by the MRI for skin biopsy sampling. 17 biopsy samples (skin and blubber) of killer whales were obtained from MRI's cooperative partner OF, around Vestmannaeyjar, south Iceland. .

## 4.2 Samples from stranded animals

Sampling of stranded cetaceans in 2001 is indicated in the following table:

Species	Area	Calendar year/ season no. collected	Archived (Y/N)	Tissue types*	Contact institute
White beaked dolphin	W-Iceland	2001/March/ 2002/January 2 animals	Y	Te, go, st, mu, bl, sk**, blo**, he**, li**, ki**	MRI
Minke whale	SW-Iceland	2001/September 1 animal	Y	Ear plug, st, mu, bl, sk, blo, ki	MRI
Northern bottlenose whale	W-Iceland	2001/September 1 animal	Y	go, st, mu, bl, sk, blo	MRI

\* Te=teeth, go=gonads, st=stomach, mu=muscle, bl=blubber, sk=skin, blo=blood, he=heart, li=liver, ki=kidney

\*\* Samples from one animal

## 4.3 Analyses/development of techniques

Blood samples from stranded animals have been screened for morbillivirus antibodies at Institute for Pathology, University of Iceland. Other samples were stored at the MRI.

## 5. POLLUTION STUDIES

Various tissue samples for pollution studies have been routinely collected during dissections of stranded or bycaught cetaceans in recent years. These are stored frozen at the MRI as well as substantial amounts of tissue samples from various organs of fin and sei whales sampled during 1986-1989. A comparative study is ongoing in cooperation with German and Norwegian scientists on pollutant levels and pathology of harbour porpoises (Vossen *et al.* 2001).

## 6. STATISTICS FOR LARGE CETACEANS

### 6.1 Direct catches (commercial, aboriginal and scientific permits) for the calendar year 2001

No directed takes of large cetaceans took place in Icelandic waters in 2001.

### 6.2 Other none-natural mortality for the calendar year 2001

None such non-natural mortality of large cetaceans was reported in 2001.

## 8. STRANDINGS

Information on stranded whales in Iceland are compiled by MRI in cooperation with the Institute of Natural History.

## 9. OTHER STUDIES AND ANALYSES

An analysis of relative abundance of humpback whales, based on a series of recent (1986-2001) aerial surveys in coastal Icelandic waters indicates an increase of 11.4% (S.E. 2.1%) per year (SC/53/H6). This high rate of increase is in accordance with previous studies based on sightings data collected onboard whaling vessels during 1970-1988 (Sigurjkónsson and Gunnlaugsson 1990), but higher than increase rates reported for other areas.

A large research project on the biology of harbour porpoises in Icelandic waters, based on sampling of bycaught animals during 1992-1997 is at a final stage. The project includes the first systematic investigations on various aspects of the biology of harbour porpoises in Icelandic waters, such as feeding ecology, reproductive biology, growth, parasites and energetics. A large part of the results will be published in a special volume of *NAMMCO Scientific Publications* in late 2002. Similar studies on white-beaked dolphins are ongoing, although with much smaller sample sizes.

Photo-id studies on killer, humpback and blue whales were continued in co-operation with the following partners: MICS (Canada), Wild Idea (Norway), OF and Icelandic whale watching companies.

Systematic monitoring of marine mammal bycatch in fishing gear was initiated in January 2002.

## 10. Literature cited

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## 11. PUBLICATIONS

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