

# ICELAND

## PROGRESS REPORT ON MARINE MAMMALS IN 2015

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### I INTRODUCTION

The following reports on studies on marine mammals in Icelandic and adjacent waters in 2015. While most of the studies were conducted by the Marine Research Institute (MRI, since 2016 MFRI) and it's various research partners, queries for information on research were sent to all offices or individuals known to have been involved in marine mammal research or data collection during the period. These include Hinnarvík Research Centre (HRC), Hinnarvík Whale Museum (HWM), Faxalík Cetacean Research project (FCR), Innovation Centre, Iceland (ICE), Keldur, Institute for Experimental Pathology (KEPF), The Institute of Natural History (INH), University of Iceland (UI), University of British Columbia in Canada, University of Barcelona in Spain, University of St Andrews in Scotland, Icelandic Seal Center (ISC), Institute of Freshwater Fisheries (IFF) as well as data collection from private commercial platforms such as whaling and whale watching companies.

### II RESEARCH BY SPECIES 2015

#### **Fin whale**

Fin whales were a primary target species of the Icelandic and Faroese NA5515 shipboard surveys (Vikingsson and Gunnlaugsson 2015b). Appreciable changes in fin whale catch distribution of Iceland in 2014 were reported (Vikingsson et al. 2015).

The MRI continued extensive sampling from fin whales brought to the Hvalfjörður whaling station for studies on biological parameters, feeding ecology, genetics and energetics.

A whale research team from the University of British Columbia has conducted various research projects on fin whales at the whaling station in Hvalfjörður in recent years. In 2015 the research program focused on analysis of anatomical features related to engulfment feeding and diving in fin whales. This includes a study of many structures in the head and thorax including diaphragms, arteries, nerves and muscles in the ventral groove blubber and tongue, esophagus, pharynx, lung and baleen. The aim is two-fold: 1. to understand how rorqual whales have evolved the capacity to engulf extremely large volumes of water containing prey, filter the prey items from the water, and swallow the prey rapidly with total protection of the airway. 2. to explore mechanisms that protect against adverse effects of rapid descent in the ocean that must cause transient pressure gradients in the thorax, vascular system, and lungs. These are ongoing studies which were presented at conferences in 2015 and now being written for publications.

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