

SANCTUARY

THE MINISTRY OF DEFENCE SUSTAINABILITY MAGAZINE

Number 46 • 2017



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Studying dolphins of the kelp Falkland Islands



One of the researchers collects photographic identification data of Commerson's dolphins in Port Howard © Maria Garcia, SAERI

In October 2016, researchers from the South Atlantic Environmental Research Institute (SAERI) undertook a two-year research project focusing on cetaceans inhabiting the Falkland Islands' coastal water. The 'Dolphins of the Kelp' project is funded by the UK Darwin Initiative, and is being implemented in collaboration with the Falkland Islands Government, Falklands Conservation, Austral Biodiversity Ltd, Shallow Marine Surveys Group, Oregon State University (USA), and University of St. Andrews (Scotland).

The project aims to gather information on the abundance, distribution, habitat use and genetic diversity of the Commerson's *Cephalorhynchus commersonii* and Peale's *Lagenorhynchus australis* dolphins, whose conservation status is still considered as Data Deficient from the International Union for Conservation of Nature and Natural Resources (IUCN). A boat survey was carried out in summer 2016 and winter 2017 in three different locations to

investigate dolphin presence and group size, and to collect individual photographic identification data. These methods allow the 'capture' and 'recapture' of individuals using pictures (instead of physical handling) and have proven to be a successful way to investigate population parameters such as abundance, survival probability, growth and juvenile recruitment rates as well as residency and movement patterns. Preliminary analysis suggests that the two species only partially overlap, with Commerson's dolphins being distributed in the inner part of the bays/sounds and Peale's in the outer part. During daylight in summer, large groups of Commerson's dolphins have been observed in Port Howard with more than 350 individuals already identified based on the presence of natural markings on their dorsal fin. During winter only a few small groups of Commerson's have been observed in the same area, suggesting a different seasonal distribution.

Researchers also observed a change in the faeces colour from orange-reddish (likely crustaceans) to white (likely fish or squids), suggesting seasonal difference



HMS Enterprise supporting SAERI © Crown

in prey availability might be among the causes of the change in the distribution observed. Peale's dolphins have been primarily observed in Port Williams in both winter and summer and although 19% of the 37 individuals have been re-captured, new animals are continually observed during the surveys indicating that not all the marked dolphins using the area have been identified. Body tissues from both species have also been collected to provide the first genetic characterisation of Commerson's and Peale's dolphins around the Falkland Islands. The project also included an aerial survey carried out in the coastal waters around the Falkland Islands within 10km from the coast. The survey will provide the first data about abundance estimates for the species encountered and information about how the animals' distribution might be driven by environmental variables such as temperature, primary productivity and depth, and by the geography and morphology of the coast.

The dolphin research was carried out in a very remote area, scarcely inhabited, where the importance of safety at sea is still being recognised. Therefore, the support provided by the MOD was essential for the implementation of the study. Commander W. Dawson from the Royal Navy, Queen's Harbour Master at the East Cove Military Port offered the use of the Harbour facilities and to act as the safety body as the country does not have a coastguard. In addition, during the study HMS Enterprise (H88) was displaced at the Falklands for a few months. Commanding Officer Philip Harper and Executive Officer Matthew Warren supported the dolphin project



The Baltic Warrior used for the vessel survey anchored at the East Cove Military Port. Commander W. Dawson of the Royal Navy offered the use of the Harbour facilities and acted as the safety body in place of a coastal guard during the project © Marina Costa, SAERI.

by providing information about depth and tides in the area. They also shared cetacean data collected by the Royal Navy wildlife watch programme.

This information will be added to the overall project findings to deliver a better description of cetacean in the area. Researchers were also invited to join the HMS Enterprise crew for a 10-day trip to South Georgia in order to collect cetacean observations.

The support of the MOD has been very welcome and has been very important in ensuring the continued success of this exciting project.

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www.south-atlantic-research.org/research/current-research/dolphins-of-the-kelp



Commerson's dolphin, photographed off Port Howard, West Falkland © Maria Garcia, SAERI



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