

Technical Announcement

MMS

U. S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region

Date: May, 2007

Contact: Caryl Fagot
(504) 736-2590

Cooperative Research to Study Dive Patterns of Sperm Whales in the Atlantic Ocean

[OCS Study MMS 2007-033](#)

The Minerals Management Service (MMS), Gulf of Mexico OCS Region, announces the availability of a new study report, *Cooperative Research to Study Dive Patterns of Sperm Whales in the Atlantic Ocean*.

This report presents the results of a study that collected dive patterns of sperm whales in the Atlantic Ocean to compare with the dive patterns and social structure of sperm whales in the Gulf of Mexico. The study also examined methods of using dive patterns to improve abundance estimates of sperm whales and collected physical and biological habitat data to define habitats of sperm whales in the Atlantic Ocean. During the July 2003 cruise, simultaneous line-transect marine mammal visual, passive acoustic, oceanographic, and plankton surveys were conducted. When concentrations of sperm whales were located, digital tags (DTAGS) were placed on sperm whales to continuously record acoustic reception, hydrostatic pressure, water temperature, and the pitch, roll, and heading of the whale. Photographs were taken for identification and biopsy, and skin samples were collected for genetic analyses.

Atlantic sperm whales followed a foraging and socializing cycle similar to that of the Gulf of Mexico sperm whales; however, foraging dives were significantly deeper for the Atlantic whales. Many of the Atlantic tagged whales breached and dislodged the tag, resulting in a maximum tag attachment of 6 hours (Gulf and Mediterranean attachments had lasted up to 16 hours). The reason for the unusually high breach rate is unknown but tag attachment is obviously a possibility. The tagged sperm whales spent 27 percent (CV=0.46) of their time in surface waters where they could be detected by visual survey methods. Analysis of sperm whale locations and sea-surface temperature/chlorophyll a satellite composites showed a diverse spread of the whales. This could mean that they were not cueing in on these two parameters because they are generalists or because they are cueing into some other factors, such as bottom characteristics.

This report is available only in compact disc format from the Minerals Management Service, Gulf of Mexico OCS Region, at a charge of \$15.00, by referencing OCS Study MMS 2007-033. The report may be downloaded from the MMS website through the [Environmental Studies Program Information System \(ESPIS\)](#). You will be able to obtain this report also from the

National Technical Information Service in the near future. Here are the addresses. You may also inspect copies at selected Federal Depository Libraries.

Minerals Management Service
Gulf of Mexico OCS Region
Public Information Office (MS 5034)
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394
Telephone requests may be placed at
(504) 736-2519, 1-800-200-GULF, or
FAX: (504) 736-2620

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161
(703) 487-4650 or FAX: (703) 321-8547
Rush Orders: 1-800-336-4700

MMS Main Website: www.mms.gov
Gulf of Mexico Website: www.gomr.mms.gov