



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

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*Spatial and Temporal Variability of Plankton Stocks on the Basis of Acoustic Backscatter Intensity and Direct Measurements in the Northeastern Gulf of Mexico*

**OCS Study MMS 2001-063**

The Minerals Management Service (MMS), Gulf of Mexico OCS Region, announces the availability of a new study report, *Spatial and Temporal Variability of Plankton Stocks on the Basis of Acoustic Backscatter Intensity and Direct Measurements in the Northeastern Gulf of Mexico*.

The report documents the use of backscatter from acoustic Doppler current profilers (ADCP) to estimate zooplankton biomass. These data come from twelve ADCPs deployed by the DeSoto Canyon Eddy Intrusion Study and zooplankton collections on research cruises of the Chemical Oceanography and Hydrography Study in the northeastern Gulf of Mexico (March 1997 through April 1999). Significant findings were a general increase in backscatter (biomass) with depth, the highest biomass at shelf-break sites and the lowest at oceanic stations. These results were expected on the basis of knowledge of zooplankton behavior and ecology. Backscatter shows a significant positive correlation with satellite-derived chlorophyll, as expected. A new result is that highest incidence chlorophyll occurs in mid-summer instead of the usual fall-winter time. Other topics examined were the vertical migration of zooplankton in the northeastern Gulf and the offshore transport of zooplankton from the shelf to oceanic stations. Finally, the study documented the downward entraining of bubbles during hurricanes.

For more information about this study or the Environmental Studies Program in general, contact the Environmental Sciences Section (MS 5430), 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123-2394, telephone (504) 736-2752.

You can obtain copies of the report from the Minerals Management Service, Gulf of Mexico OCS Region, at a charge of \$8.00 by referencing OCS Study MMS 2001-063. 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 or 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  
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Rush Orders: 1-800-336-4700

MMS is the federal agency in the U.S. Department of the Interior that manages the nation's oil, natural gas and other mineral resources on the outer continental shelf in federal offshore waters. The agency also collects, accounts for and [disburses mineral revenues](#) from federal and Indian leases. These disbursements totaled nearly \$8 billion last year and more than \$110 billion since the agency was created in 1982. Annually, nearly \$1 billion from those revenues go into the Land and Water Conservation Fund for the acquisition and development of state and federal park and recreation lands.

**-MMS-GOM-**

MMS's Website Address: <http://www.mms.gov>

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