



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

Special Information

June 2005

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*Characterization of Algal-Invertebrate Mats at Offshore Platforms and the
Assessment of Methods for Artificial Substrate Studies: Final Report*

OCS Study MMS 2005-038

The Minerals Management Service (MMS), Gulf of Mexico OCS Region, announces the availability of a new study report, *Characterization of Algal-Invertebrate Mats at Offshore Platforms and the Assessment of Methods for Artificial Substrate Studies: Final Report*.

The composition of biofouling communities on three offshore platforms in the Gulf of Mexico was examined. The platforms studied were located at South Timbalier Block 54 (ST 54) in 22 m of water depth; Grand Isle Block 94 (GI 94) in 60 m; and Green Canyon Block 18 (GC 18) in 219 m. The three platforms had been the site of previous fisheries-related investigations and offered an offshore gradient.

Video surveying, high-resolution photography, surface scraping, and settling plates were employed to describe the biota and to evaluate the effectiveness of the methods. Combined, the methods showed that the inshore ST 54 platform biota conformed to a previously recognized inshore type dominated by barnacles with overgrowths of algae and hydroids. The more seaward platforms conformed to a previously recognized offshore type dominated by a mix of bivalves and larger barnacles overgrown by sponges, hydroids, and ectoprocts (bryozoans). A scenario that viewed the biofouling crust as a system in equilibrium between accretionary growth and crust shedding was developed. Loss of crust is a direct consequence of the vertical orientation of platform benthos and is an important factor distinguishing platforms from natural systems. Accretion of the crust is dependent on the passing ocean water for food and new larval settlement. Biotic interactions such as predation, competition, and bioerosion all contribute to crust loss directly or in concert with wave surge.

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 2005-038. The report may be ordered through the Minerals Management Service's on-line ordering system at <http://www.gomr.mms.gov/WebStore/front.asp>. 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.

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Telephone requests may be placed at

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5285 Port Royal Road
Springfield, Virginia 22161
(703) 487-4650 or FAX: (703) 321-8547
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MMS, part of the U.S. Department of the Interior, oversees 1.76 billion acres of the Outer Continental Shelf, managing offshore energy and minerals while protecting the human, marine, and coastal environments through advanced science and technology research. The OCS provides 30 percent of oil and 21 percent of natural gas produced domestically, and sand used for coastal restoration. MMS's collects, accounts for, and disburses mineral revenues from Federal and American Indian lands, with Fiscal Year 2004 disbursements of approximately \$8 billion and more than \$143 billion since 1982. The Land and Water Conservation Fund, which pays for cooperative conservation, grants to states, and Federal land acquisition, gets nearly \$1 billion a year.

MMS Main Website: www.mms.gov
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*** MMS: Securing Ocean Energy and Economic Value for America ***

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