

ENVIRONMENTAL STUDIES PROGRAM: Ongoing Studies

Region: National

Title: Archiving of Outer Continental Shelf Invertebrates by the Smithsonian Institution

BOEM Cost: \$1,219,383

Period of Performance: FY 2009-2014

Conducting Organization(s): Smithsonian Institution

BOEM Contact: [Gregory Boland](#)

BOEM Information Need(s) to be Addressed:

Description:

Background: The Bureau of Ocean Energy Management (BOEM) conducts many biological projects in support of decision-making related to the development of offshore energy and mineral resources. These projects frequently result in large collections of invertebrate specimens. Taxonomy is a critical component to the ecological interpretation of biological data. Archiving of the collections provides for taxonomic verification and for the future use of the collections. The Smithsonian Institution's National Museum of Natural History (NMNH) is the Nation's most reliable and respected repository for biological collections. Since 1979, invertebrate specimens collected through the BOEM Environmental Studies Program have been carefully maintained through the NMNH's archiving standards and made available to taxonomists around the world. During the period 2004-2008, this project was supported by USGS funds that are available for BOEM information needs. In 2007 BOEM and USGS agreed that BOEM would continue support of this project beginning in FY 2009 and the USGS funds previously used to support NMNH would be directed to other BOEM information needs that could be addressed by in-house USGS scientists.

Specimens from BOEM studies represent more than 20% of the total Smithsonian database and in some species groups, BOEM samples represent the majority of the museum's collections.

Objectives:

- The purpose of this study is to provide quality assurance for biological data generated through the BOEM Environmental Studies Program and the credibility of offshore energy and mineral resources decision-making.
- Preservation of Federally-funded biological samples and providing for their availability for scientific study into the future.

Methods: To accomplish the objectives of this project, specifications for the handling, storage, and shipping of invertebrate specimens collected through BOEM environmental studies are included in applicable contracts. These specifications were developed in

coordination with the Smithsonian Institution to provide contractors with information required to ensure that the collected specimens are delivered to the NMNH in the best possible condition. The Smithsonian accepts the specimens, checks the condition of the samples and taxonomic identification, and makes them part of the national collections. The collections are then maintained according to the strict guidelines of the NMNH and are made available to other researchers. Quarterly, Semi-annual and Annual reports to BOEM provide updates on the numbers of specimens accessioned into the NMNH collections, those remaining to be accessioned, and those on loan to taxonomists around the world. To date, over 400 species new to science have been identified in the BOEM collections.

Importance to BOEM: Continued archiving and long-term reliable curating of the vast collections of invertebrate specimens acquired through BOEM-sponsored projects are essential elements of biological quality assurance. This effort provides BOEM with the scientific credibility important to stakeholders' acceptance of decision-making in the Offshore Energy and Minerals Program.

Current Status: Current 5-year contract awarded 5-18-2009. Progress has been continuing with a significant backlog from both past and current study collections. A contract modification for \$80,417 was awarded in 2011 to support archiving of deep-sea invertebrate samples from recent Gulf of Mexico studies performed by USGS complimentary to other BOEM concurrent studies.

Final Report Due: Archiving status and updates to collections, visiting international scientists using collections, specimen loans and other activities are reported in varying detail quarterly, semi-annually and annually.

Publications: None

Affiliated Web Sites: Smithsonian Institution National Museum of Natural History, Museum Support Center data base access to all BOEM invertebrate collection data.

<http://invertebrates.si.edu/boem/boem.htm>

Link to download Google Earth plug-in to allow interactive map viewing of all archived sample locations. The colored markers represent the different BOEM programs in the Gulf of Mexico. Clicking on each marker explodes the marker view into individual sample records from that station with additional data links.

<http://invertebrates.si.edu/boem/files.htm>

Revised Date: May 9, 2012

ESPIS: Environmental Studies Program Information System

All *completed* ESP studies can be found here:

http://www.data.boem.gov/homepg/data_center/other/espis/espisfront.asp