



Media Advisory

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NOAA Researchers, Ships Participate in Census of Marine Life's Decade of Discovery

More than 17,500 Species Found in Deep Sea

Preliminary highlights just released by the international Census of Marine Life, a decade-long program to assess the diversity, distribution and abundance of life in the sea, include findings from NOAA Fisheries researchers who studied largely unexplored areas in the North Atlantic and are examining many of the deep-sea specimens collected around the world.

Mike Vecchione of the National Systematics Laboratory (NSL), part of the Northeast Fisheries Science Center (NEFSC), and John Galbraith of NEFSC's Woods Hole laboratory examined the biodiversity of the largely unexplored Mid-Atlantic Ridge as part of the Mid-Atlantic Ridge Ecosystem Project, or MAR-ECO. The program is one of five dedicated to the deep ocean among the 14 Census field projects. A comprehensive global list of marine species collected from all the projects is to be released in October 2010.

Vecchione, NSL colleagues Bruce Collette and Ruth Gibbons, and Galbraith also studied the Bear Seamount, an extinct underwater volcano in the New England Seamount Chain, the largest seamount chain in the North Atlantic. Its marine life was largely unknown until the first cruise was made in December 2000 by the NOAA Ship *Delaware II*, based in Woods Hole. The survey began to document the biodiversity on and over the seamount, resulting in the collection of nearly 300 species of fishes, cephalopods (deep-sea squids and octopods) and crustaceans. Additional cruises have been made since, and the marine life documented on Bear Seamount has been contributed to the Census of Marine Life.

A specialist in deep-sea squids and octopods, Vecchione has been involved in the Census of Marine Life since its beginning through studies of specimens collected from the Arctic and Antarctic, the Gulf of Mexico and other deep-sea environments around the world. He led an expedition in 2003 using the human-occupied Russian MIR submersibles to explore depths on the Mid-Atlantic Ridge up to 15,000 feet, and participated in a 2004 MAR-ECO cruise on a Norwegian research vessel. In June and July 2009 he and Galbraith spent five weeks aboard

the NOAA Ship *Henry B. Bigelow* on another MAR-ECO cruise, for which he served as chief scientist.

Among that expedition's findings was collection of rare cirrate or finned octopods commonly called "Dumbo" because of the large ear-like fins they flap to swim. Nine species of "Dumbos" were collected, including one that may be new to science. A giant "Dumbo" nearly six feet long and weighing 13 pounds was the largest, one of only a few specimens of the species ever collected. These octopods are among the largest animals found in the deep sea.

The researchers also collected only the third known specimen of a rare deep-sea squid, *Promachoteuthis sloani*. In addition to finding specimens that may turn out to be new species, researchers found animals thought to be living in certain depths actually living in others. The 2009 expedition on the *Henry Bigelow* was funded by NOAA Fisheries Service, with additional support from the Alfred P. Sloan Foundation.

Further information about and images from the Summer 2009 MAR-ECO cruise can be found at: http://www.nefsc.noaa.gov/press_release/2009/SciSpot/SS0907/index.html

Vecchione and colleagues at the National Systematics Laboratory are studying many of the species collected during MAR-ECO and other Census cruises to determine if they are new species. The lab is also helping to update information about known species for which there have been few specimens available for study.

NOAA's National Systematics Laboratory, located in the Museum of Natural History at the Smithsonian Institution, is part of the Northeast Fisheries Science Center but serves as the taxonomic research arm of NOAA's Fisheries Service as a whole. The laboratory describes and names new species, and revises existing descriptions and names based on new information, of fishes, squids, crustaceans, and corals of economic or ecological importance to the United States. Because some important species are highly migratory and many exotic species are introduced into U.S. waters or markets, the laboratory's research is worldwide. Major products of this research are worldwide and regional taxonomic publications and identification guides.

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Related Links:

"Beyond Sunlight": Census of Marine Life press release with images and video:

<http://www.coml.org/news/the-deep-sea-world-beyond-sunlight>

Summer 2009 MAR-ECO Cruise:

http://www.nefsc.noaa.gov/press_release/2009/SciSpot/SS0907/index..html

Census of Marine Life: www.coml.org

MAR-ECO: <http://www.mar-eco.no/>