



NEWS

11 December 2006

FOR IMMEDIATE RELEASE

American Geophysical Union 2006 Fall Meeting

Media Contact: *Kim Fulton-Bennett*
831-775-1835, kfb@mbari.org

(From Dec 11 to Dec 14, I can be reached in the AGU press room at 415-348-4440)

MBARI research highlights—AGU 2006 Fall Meeting

SAN FRANCISCO—Researchers from the Monterey Bay Aquarium Research Institute (MBARI) will present 20 different talks and posters at the American Geophysical Union 2006 Fall Meeting in San Francisco this week. Most of these talks fall into one of three subject areas: Marine Geology, Marine Biology, and Marine Instrumentation and Data Management. In addition, three presentations at this year's AGU conference describe unique observations and measurements of methane hydrate deposits on the seafloor made by MBARI researchers during a recent oceanographic cruise off the coast of British Columbia.

MARINE GEOLOGY

MBARI marine geologists use remotely operated vehicles to map and analyze geologic features on the seafloor, as well as to collect samples for analysis on shore. This "undersea fieldwork" provides new and unique perspectives on geologic processes that occur miles below the sea surface, and sometimes below the seafloor as well. Such processes include undersea landslides and turbidity currents, the formation of methane in seafloor sediments, and the eruption of undersea volcanoes.

Title	Researcher	Day	Time	Number
The extent and recurrence of holocene turbidity currents in Monterey Canyon and fan channel, offshore California (talk)	Joel Johnson	Mon	17:15	OS14A-06
The potential of silent tsunamis along the Central California margin (talk)	Gary Greene	Wed	16:30	OS34C-03
Assessing methane release from the colossal Storegga submarine landslide (poster)	Charles Paull	Thurs	13:40	OS43C-0682
Rates of anaerobic oxidation of methane and authigenic carbonate mineralization in methane-rich deep-sea sediments inferred from models and field data (talk)	William Ussler	Tues	11:20	B22A-05
Vertical motions of oceanic volcanoes (talk)	David Clague	Wed	8:05	V31E-01
Caldera formation on the Vance Seamounts (poster)	David Clague	Mon	13:40	V13A-0644
Erratic continental rocks on volcanic seamounts off California and Oregon (poster)	Jenny Paduan	Mon	13:40	V13A-0640
Mapping AUV survey of axial seamount (poster)	Hans Thomas	Tues	13:40	V23B-0615
Similarities in chemistry of North Gorda Ridge basalts with ultra-slow spreading ridge lavas due to decreasing magma supply (poster)	Alicé Davis	Tues	13:40	V23E-0687

METHANE HYDRATES

In August 2006, MBARI researchers spent several weeks studying methane hydrates exposed at the seafloor in Barkley Submarine Canyon, off the coast of British Columbia. They first mapped these outcrops using multibeam and seafloor-penetrating sonar systems carried by a unique autonomous underwater vehicle. Then they performed experiments on the hydrates using the remotely operated vehicle Tiburon and an underwater laser Raman spectrometer. This work resulted in new discoveries that have implications for global warming and climate change, as well as for future energy supplies.

Title	Researcher	Day	Time	Number
Novel observations on the massive Barkley Canyon hydrates (talk)	Peter Brewer	Wed	8:30	MR31A-03
An experimental determination of natural clathrate hydrate dissolution rates in the deep sea (poster)	Edward Peltzer	Thurs	13:40	MR43A-1067
An autonomous multibeam, sidescan, and subbottom survey of a methane hydrate outcrop in Barkley Canyon, offshore Vancouver Island (poster)	Dave Caress	Thurs	13:40	MR43A-1063

MARINE BIOLOGY

Three MBARI biologists will describe newly discovered characteristics of phytoplankton that help these tiny marine algae survive in the ever-changing ocean environment. A fourth biologist will discuss new findings on the forests of large, deep-water corals that thrive on seamounts off the California coast.

Title	Researcher	Day	Time	Number
Diatom vertical migration to acquire iron (talk)	Ken Johnson	Mon	9:25	OS11D-05
A characterization of the megafauna on Davidson Seamount (poster)	Lonny Lundsten	Mon	13:40	V13A-0650
Functional relationship between phytoplankton and aerobic anoxygenic photosynthetic bacteria: modes of coexistence (poster)	Zbigniew Kolber	Mon	13:40	OS13C-1571
Carbon cycle dynamics in the Labrador Sea during the spring to summer phytoplankton bloom (poster)	Todd Martz	Fri	13:40	OS53A-1088

MARINE INSTRUMENTATION AND DATA PROCESSING

MBARI researchers are at the forefront of a movement that will help oceanographers collect, process, and distribute their data more efficiently. Modern oceanographic instruments and ocean observatories yield huge volumes of data that are often shared between literally dozens of researchers. MBARI engineers are developing software to make this process faster and easier. They are also spearheading the "marine metadata initiative," which aims to make more oceanographic instruments "plug-and-play," so that they can more easily be hooked up to tomorrow's ocean observatories.

Title	Researcher	Day	Time	Number
Distributed observatory management (talk)	Michael Godin	Thurs	9:30	IN41C-07
Visualization tools for model/data comparisons and decision making during the Monterey Bay 2006 experiment. (poster)	Lionel Pawlowski	Mon	8:00	OS11C-1507
The marine metadata initiative: the next 3 years (poster)	Luis Bermudez	Thurs	8:00	IN41B-0885
Error analysis and sampling design for ocean flux estimation (poster)	Yanwu Zhang	Wed	13:40	OS33A-1683