



University Communications & Marketing
777 Glades Road, ADM 286
Boca Raton, FL 33431
561.297.3020 phone
561.297.3001 fax

MEDIA CONTACT: Mr. Jan Petri
772-242-2241, petri@hboi.fau.edu

FAU's Harbor Branch Develops Underwater Camera and Sensor Unit for Australian Scientists

BOCA RATON, FL (March 30, 2010) – An innovative deep-sea lander designed and built at Harbor Branch Oceanographic Institute at Florida Atlantic University is on a ship headed for Australia, where it will be used by scientists from the University of Queensland and others to reveal secrets of the deep. The new camera and sensor unit, named Medusa, can be deployed to depths of 2,000 meters (6,562 ft.) or in the midwater, and is designed to film ocean life without startling it.

“Capturing images of life in the deep sea is complicated by the fact that most creatures tend to shy away from light and noise, as with a submersible,” said Medusa project manager and Harbor Branch engineer Lee Frey. “By eliminating those factors, we hope to be able to see things no one has seen before.”

Although the concept is not new, the configuration of Medusa is. Frey helped to design Eye in the Sea, a large camera unit that requires an underwater vehicle for deployment. Eye in the Sea is currently at work on the floor of Monterey Bay in California. In contrast, Medusa can be deployed from the side of a small boat and, with its legs detached and a tether line and stability fin added, can operate higher in the water column. Power is supplied via battery packs that allow Medusa to run continuously for up to 72 hours.

To retrieve the unit, an acoustic signal sent from the surface causes Medusa to jettison its drop weight and float back to the surface. Bright yellow syntactic foam flotation and a strobe light make it easy to spot, and a transponder relays acoustic position information. The buoyant foam, drop weight and leg design together produce a unit that maintains an upright orientation during deployment and is extremely resistant to tipping.

The unit was commissioned by Justin Marshall, Ph.D., from the University of Queensland, who required a camera unit that was very modular and cost-effective to build.

Marshall is the coordinating chief investigator of Deep Ocean Australia, a three-year project involving Australian and other international experts in marine and deep-sea biology, including Harbor Branch's Frey and Tammy Frank, Ph.D.

To undertake Marshall's work, Medusa is equipped with an ultra low-light video camera, water and light sensors, and far-red LED lighting that cannot be seen by many deep-sea creatures. Modular sensor and battery housing design allows researchers to experiment with different types of equipment.

.Goals of the Deep Ocean Australia include discovering and describing new forms of life, characterizing the deep-sea ecosystem, and studying the biology of life forms that live in depths up to 4,000 meters (13,123 ft.).

- FAU -

***Image Caption:** The Medusa lander, developed by Florida Atlantic University's Harbor Branch Oceanographic Institute, undergoes acceptance testing before being shipped to the University of Queensland in Australia.*

About Harbor Branch Oceanographic Institute:

*Harbor Branch Oceanographic Institute at Florida Atlantic University is a research institute dedicated to exploration, innovation, conservation and education related to the oceans. Harbor Branch was founded in 1971 as a private non-profit organization. In December 2007, Harbor Branch joined Florida Atlantic University. **The institute specializes in ocean engineering, at-sea operations, drug discovery and biotechnology from the oceans, coastal ecology and conservation, marine mammal research and conservation, aquaculture, and marine education. For more information, visit www.hboi.fau.edu.***

About Florida Atlantic University:

Florida Atlantic University opened its doors in 1964 as the fifth public university in Florida. Today, the University serves more than 28,000 undergraduate and graduate students on seven campuses and sites. Building on its rich tradition as a teaching university, with a world-class faculty, FAU hosts 10 colleges: College of Architecture, Urban & Public Affairs, Dorothy F. Schmidt College of Arts & Letters, the Charles E. Schmidt College of Biomedical Science, the College of Business, the College of Education, the College of Engineering & Computer Science, the Harriet L. Wilkes Honors College, the Graduate College, the Christine E. Lynn College of Nursing and the Charles E. Schmidt College of Science. For more information, visit www.fau.edu.