

Pacific-Based Deep Submergence Science in Jeopardy



The Hawai'i Undersea Research Laboratory (HURL) operates the *Pisces IV* and *Pisces V*, two of only eight deep diving manned research submersibles in the world. With a perfect safety record in over 30 years of operation, HURL has provided the assets, expertise, and availability to place scientists, resource managers, and engineers in the deep sea to carry out cutting edge science, collect valuable specimens, and survey seafloor installations or projected routes. The importance of having this affordable capability centrally located in the Pacific region of service is often underestimated. HURL is ready and able to continue supporting the NOAA mission, meeting the needs of other national and regional priorities, and diversifying into emerging markets such as new living resources, energy, and minerals from the sea.

Please help re-instate HURL's funding in the NOAA budget so that this important work can continue.

As the shallow coral reefs continue to decline it is even more imperative that we begin to explore, and thus understand, the mesophotic communities. HURL provides the ONLY necessary support for such studies here in the Pacific. HURL fulfills a critical role in research and must be kept going at all costs.

~Greta Aeby, Ph.D.



Timeline

- **1980**~ HURL established, becoming a Regional Center in NOAA's Undersea Research Program (NURP)
- **1981**~ Started operations with the 2-person, 1000-m capable submersible, *Makali'i*
- **1987**~ Upgraded to the 3-person, 2000-m capable submersible, *Pisces V*
- **1998**~ Added operations of the robotic vehicle, *RCV-150*
- **2000**~ Added operations of another 3-person, 2000-m capable submersible, *Pisces IV*
- **2009**~ President Obama signed Public Law 111-11 authorizing both NURP and Ocean Exploration (OE), under a merged program called the Office of Ocean Exploration and Research (OER)
- **2012**~ NOAA zeroed out funding for NURP for FY13, and put all the centers on life support funding (or less) for the remainder of FY12
- **Apr 2012**~ Petition demonstrates widespread community support for continued funding of HURL
- **Jan, 2013**~ SOEST supporting HURL temporarily in hopes that funding can be restored
- **May, 2013**~ If further funding is not found, HURL, and the deep-diving capability it provides, may cease to exist

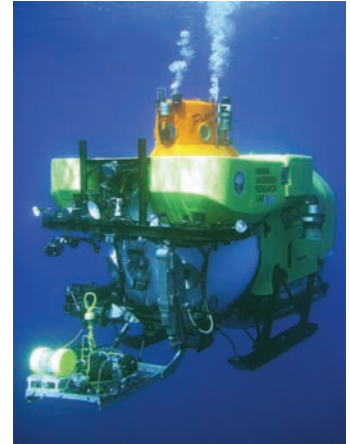
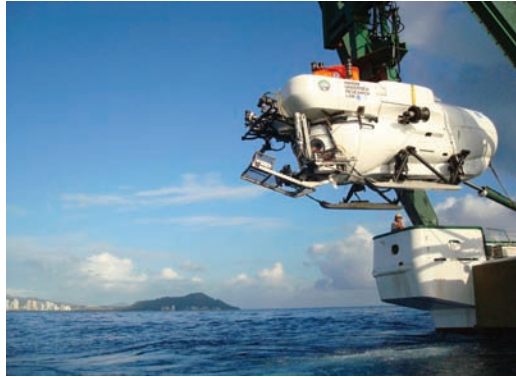
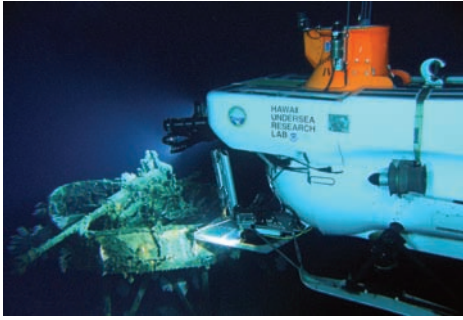
Senators Cochrane & Inouye's Budget Proposal (Senate Report 112-158)

DEPARTMENTS OF COMMERCE AND JUSTICE, AND SCIENCE, AND RELATED AGENCIES APPROPRIATIONS BILL, 2013

Section: NOAA OCEANIC AND ATMOSPHERIC RESEARCH

Ocean Exploration- For the benefit of maintaining Ocean Exploration's advanced technology and at-sea capabilities, NOAA shall use \$4,000,000 from within funds provided to consolidate existing partnerships in the Gulf of Mexico and the **central Pacific regions** into the Ocean Exploration program.

Hawai'i Undersea Research Laboratory



- **Assets:**
 - » Two 2000-m capable human occupied submersibles
 - » R/V *Ka'imikai-o-Kanaloa* support vessel
 - » Bathymetric sonar mapping system
 - » Makai Research Pier Test Facility
 - » Annotated Video Archive
 - » Access to 6000-m capable remotely operated vehicle (ROV)
 - » Multi-use towed submersible platform - *for heavy lift, vehicle deployment, & wet diver support*
- **Established:** 1980; perfect safety record
- **Number of dives:** 1908 (376 *Makali'i*, 270 *Pisces IV*, 796 *Pisces V*, 466 *RCV-150*)
- **Hours underwater:** 9427
- **Personnel:** 19 (including two students)
- **Region of Service:** Entire Pacific
- **Base Cost:** \$2 million per year
- **Examples of notable recent work:**
 - » Engineering surveys: Sea-water air conditioning route, Inter-island power cable route
 - » Extreme & unique environments: 25 years of interdisciplinary study of Lō'ihi volcano
 - » Climate change: drowned reefs show us how sealevel changed during the last deglacial period
 - » Deep-sea Ecosystems: Over 80 new species discovered; some deep corals, found to be over 4000 years old, may be the oldest organisms on the planet
 - » Maritime heritage: discovery of Japanese midget submarine sunk on Dec 7, 1941
 - » Marine National Monuments: Papahānaumokuākea in the Northwestern Hawaiian Islands, as well as Pacific Remote Islands in the Central & Southwestern Pacific

