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NEWS RELEASE

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Bottomfish Research Demonstrates Kaho'olawe's Ecological Benefits Fishing Community Likely Beneficiary of Restricted Usage of Island Reserve Waters

Honolulu, HI, July 26, 2005—The Kaho'olawe Island Reserve Commission (KIRC) announced receipt of *Detection and Documentation of Bottomfish Spillover from the Kaho'olawe Island Reserve*, a report presenting the results of the bottomfish-tagging project it funded. The report was prepared by the Hawai'i Undersea Research Laboratory (HURL) at the University of Hawai'i Mānoa and the Oceanic Institute (OI) at Makapu'u Point, who teamed up to conduct the first-of-its-kind research on bottomfish in conjunction with the KIRC Ocean Resource Management program.

The report presents the first conclusive evidence that spillover of bottomfish (Opakapaka in the case of this study) is occurring from the Kaho'olawe Island Reserve waters into adjacent open fishing areas. The findings strongly supported the contention that the Reserve waters function as a reservoir for the bottomfish fishery, a collection of species that have become increasingly scarce in Hawaiian waters because of overfishing.

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Sol Kaho‘ohalahala, executive director of KIRC, observed, “These findings reinforce several beliefs we have about the way in which the Reserve should be managed. The use of *kapu*, the traditional practice of restricting use of a resource to conserve and protect it, has proven effective in increasing the Reserve’s bottomfish population. When the population grows to the point that fish begin leaving Reserve waters to feed in surrounding areas, it indicates the Reserve is helping to restore the marine ecosystem inside and outside of the Reserve boundary. We hope this approach to resource conservation will be an example for preservation efforts elsewhere in Hawai‘i.”

According to the principal investigators of the study, HURL’s marine biologist, Dr. Christopher Kelley and OI’s Director of Fisheries and Environmental Science, Dr. David Ziemann, “Our data provide proof that opakapaka are moving out of the Reserve waters into adjacent fishing areas. More than half of the acoustically-tagged fish for which a long-time series of signal receptions were generated showed evidence of east – west movement patterns across the Reserve boundary. Overall we can say that at least 25 percent of the tagged opakapaka population were in the open fishing area with sufficient frequency that they could be collected by fishermen.”

Innovative Research

The project’s pioneering work in bottomfish research differed in several respects from other fish-tagging studies. The water depths that define the habitat of the bottomfish required researchers to capture live Opakapaka using hydraulic reels, along with standard bottomfishing gear. These reels allow for precise control of ascent rates which is important for minimizing trauma to the fish. Once on board, each fish was immediately placed into an aerated tank containing an anesthetic. A hypodermic needle was inserted under the scales to deflate the gas bladder located along the upper wall of the abdominal cavity. A small surgical incision was then made through the wall of the abdominal cavity, and an acoustic tag covered with an antibiotic cream was inserted into the cavity and the opening closed with a single surgical suture. The fish were then placed into a recovery tank containing seawater and once revived, placed back in the ocean at or near where they were captured. This procedure provides survival rates and tag retention rates greater than 90 percent.

Five acoustic tracking arrays were deployed outside the study area along the boundary of the Reserve at depths of 384 – 540 feet. Array positions were determined from navigational software using digitized NOAA bathymetric charts. Each array utilized a bottom weight and anchor, a tension line, and an acoustic receiver located approximately 15 feet above the bottom. When the five acoustic receiver arrays were recovered, the data from each receiver was downloaded to a computer and hourly position data was plotted.

Kapu, Hazards Restrict Fishing

Kaho‘ohalahala noted, “The rules restricting fishing in Reserve waters serve both safety and conservation purposes. The Reserve waters are designated as a federal marine protected area. The submerged lands and waters surrounding Kaho‘olawe also contain unknown quantities of unexploded ordnance that present a public health and safety hazard. The kapu allows only limited trolling, two weekends a month in Reserve waters.” The submerged lands and waters within two nautical miles of the island are divided into two zones; Zones A and B. Zone A includes all the submerged lands and waters extending from the shoreline of Kaho‘olawe down to a depth of 30 fathoms. Unauthorized entry into Zone A is prohibited at all times except in case of emergency. Zone B consists of all submerged lands between the outer boundary of Zone A (30-fathom isobath) and two nautical miles from the shoreline of the island.

Unauthorized entry into Zone B is prohibited at all times, except for trolling, which is permitted by the Open Waters Schedule provided on the KIRC website (http://kahoolawe.hawaii.gov/ocean/open_waters.pdf). Trollers must remain under way at all times while in Zone B and bottomfishing is strictly prohibited.

About KIRC

The Kaho‘olawe Island Reserve Commission (KIRC) was established by the enactment of Hawaii Revised Statutes Chapter 6K to manage the Kaho'olawe Island Reserve while it is held in trust for a future Native Hawaiian sovereign entity. The KIRC uses federal funds designated for State responsibilities in the cultural, environmental and archaeological restoration of the island and its surrounding waters. The KIRC is administratively attached to the State Department of Land and Natural Resources.

The KIRC’s mission is to implement the vision for Kaho‘olawe, in which the kino of Kanaloa is restored, and na po‘e Hawai‘i care for the land. The KIRC commissioners and staff are pledged to provide for meaningful, safe use of Kaho‘olawe for the purposes of the traditional and cultural practices of the native Hawaiian people, and to undertake the restoration of the island and its waters.

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