## **West Hawaii Today**

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## **Checkup for Kahaluu**

## Study looks at health of bay

by Chelsea Jensen West Hawaii Today cjensen@westhawaiitoday.com Saturday, September 25, 2010 7:21 AM HST

Kahaluu Bay is a unique place that affords oceangoers the opportunity to experience a marine habitat like no other in the state, marine biologist Kaipo Perez III said Friday in Keauhou.

"This is a very special place and because of that it has always attracted a lot of tourists who come here for snorkeling, which has raised the community's concern regarding sustainability of the area," said Perez, who has spent the past nine months studying the bay. "It is a really rare place to have the ability to go out and within knee-deep water see coral."

The study is part of the Kahaluu Project, which is funded by a three-year federal grant to scrutinize the area from mauka to makai, he said. Information will be used by the Kahaluu Advisory Board to address mitigation measures that may need to be taken to maintain the area's intrinsic resources.

Preliminary data shows a 75 percent decrease in coral life in highly used areas of Kahaluu Bay compared with a 3 to 4 percent decrease in coral life in low-impact areas since a trampling survey was conducted a decade ago. - Illustration By Island Effects

Perez presented some of the study's preliminary findings to about four dozen people who attended the free Puana Ka lke lecture series presentation on Kahaluu Bay's coral reef resources held at the Outrigger Keauhou Beach Resort.

Perez, who holds a Bachelor of Science in marine biology and is pursuing a doctorate in zoology with an emphasis in coral ecology from the University of Hawaii at Manoa, discussed the bay and its connection to freshwater sources, culture and the effects of global climate change.

Kahaluu Bay is a popular Hawaii County recreation area that attracts 400,000 people annually, according to University of Hawaii Sea Grant Program counts. While many surveys and studies have been conducted on the lands around the bay, Perez said the area's marine resources have never been mapped.

"This project will create baseline of what it looks like in the water now. If you don't understand what it looks like now, then 10 years from now you wouldn't know how it changed," Perez said. "This project is in its infancy and is slowly coming together."

Although data is still being collected, Perez said preliminary data shows a 75 percent decrease in coral life in highly used areas of the bay compared with a 3 to 4 percent decrease in coral life in low-impact areas since a trampling survey was conducted a decade ago.

"Although it is a trampling study, it doesn't (necessarily) mean that this decrease is a sole result of trampling or people walking on coral," Perez said and noted ocean currents, fish, invasive species, temperature changes and man-made structures may have also contributed to the decline.

Another survey conducted inside the bay, however, showed nearly 90 percent of an area of the reef covered in coral, he said.

The study also has seven temperature gauges deployed at sites within and outside Kahaluu Bay that record temperature and salinity data hourly, providing scientists data needed to assess how ocean temperature impacts coral and marine life.

"This will be pivotal in understanding how water temperatures change and are affected because if there is a sustained, long enough temperature change it can induce a coral bleaching event," he said.

For more information on the free lecture series and a schedule of upcoming events, call 534-8528, or visit kohalacenter.org/puanakaike/about.html.

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