

# Hawaii 24/7

## Researchers, kupuna share environmental health of Kahaluu

March 13, 2012

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A packed room with standing room only at the Keauhou Beach Resort was buzzing with inquisitive members from the Hawaii Island community.

The free public talk presentation focused on the history, culture and environmental health of Kahaluu Bay and included speakers Kupuna Mitchell Fujisaka, Dr. Kuulei Rodgers, and Kaipo Perez.

The meeting discussing the history of the area and current issues at the bay was sponsored by The National Science Foundation EPSCoR-Track 2, CCRT, HIMB, The Kohala Center, and Jane Musser Fund.

Adorned in maile lei, Fujisaka, a kupuna of the Kahaluu area, was the first to talk-story with the audience. He spoke of his childhood experiences growing up in Kahaluu, as well the culture and history of the area.

Fujisaka was an asset to researchers due to his vast knowledge and moolelo (stories) he shared.

“Without the knowledge from our kupuna, none of this research could have been done,” Perez said.

Fujisaka said if he could, he would “ask all his kupuna if he is doing the right thing.”

Fujisaka learned and worked alongside the transcendent kupuna Kekahuna. Projected on the large screen, a map drawn of Kahaluu by Kekahuna depicted knowledge and detail about the area.



One of the major physical changes was the erosion of the vast amount of fine sand that once adorned the bay. Although there have been different reasons explaining the origins of this occurrence, Fujisaka said he believes it began when the park was being developed.

Another possible cause stems from the mining of the sand by building contractors.

Building is damaging the ecosystems and animal life. The development on the upper slopes are depleting the fresh water supply from the mountains, affecting the watershed, threatening the springs and leading to the damage of aquatic systems.

The next speaker was Dr. Kuulei Rodgers, a coral reef biologist who also serves as a faculty member at U.H. Manoa.

Her thesis focused on Kahaluu, in which she worked on local and global impacts, as well as other climate change issues.

Rodgers posed the question if the watersheds are connected to the coral reefs? And if there really is a connection between the mauka (inland) and makai (sea) watersheds?

“The Watershed Program” led by Mike Hero, created a map depicting the connection between both mauka and makai watersheds.

Rodgers, along with other scientists created “C.R.A.M.P.”, Coral Reef Assessment & Monitoring Program. Created during 1997-1998, at this time there was no large scale monitoring systems in the state.

Rodgers, alongside fellow coral reef researchers, managers, and educators in Hawaii, wanted to make sure they covered a good range of research. They tried to pick ranges on both windward and leeward sides of the island, with the intent of making sure their experiment included all habitat types.

“We wanted to have all local impacts,” Rodgers said.

The researchers looked for trends and patterns to find what was causing the watershed perplexities. The results showed the south shore shallow sites, exemplifying the strongest connection between the mauka and makai watersheds.

As you travel around islands, to the east and west sides, that watershed connection would diminish. Reasoning for this conclusion is the fact that south shores include numerous harbors, and calmer beaches, leading to the developmental increase of residences, and businesses.

Average coral cover in the state concluded to be at 23 percent and found major coral cover decline in the central islands due to the high population rate.

This information can assist in fixing watershed problems by looking at future urban development areas where it would be pertinent to build, and discerning areas better to avoid building upon.

Kaipo Perez III talked about his research that set the baseline of their research findings, and marks the outline for future monitoring programs.

He hails from an ohana lawaia or fishing family. Born in Honolulu, raised in Kaimuki, Waimanalo, and also in Kohala, Perez is a graduate student at U.H. Manoa in the zoology department, and also a research assistant at the Hawaii institute of marine biology.

For his research project, Perez collected data from more than 200 sites, taking into account the different factors over the past three years.

Through his research, some of the topics Perez discovered results on included: the freshwater springs, vitality of salinity, and ocean water temperatures at Kahaluu.

Ocean temperature changes showed to have a direct correlation to coral bleaching.

Another layer of his research included the “turbidity” of the water. He studied the soil and dirt dumped into the ocean and how they affected the coral.

They discovered it didn’t take very much of the sediment to affect the coral.

Other layers of research Perez spoke about included: pH levels, dissolved oxygen, and the status of fish life at Kahaluu.

Although it was a very arduous task, Perez researched the top 12 fish families that dwell in Kahaluu. Some results included: Top 2 fish families — Wrasse (Hinalea), and Surgeonfish; and the Top 2 fish species — Brown surgeonfish, and the yellow tang.

Most of the fish were endemic or indigenous to Kahaluu, with a low level of non-native species. Herbivores made up the largest percentage of feeders at Kahaluu, followed by invertebrate feeders, followed by plankton feeders, then other fish feeders.

Although Kahaluu continues to face issues threatening the status of their coral reef’s, and ocean preservation, there are some programs being administered to avail the protection of the bay including the “Kahalu’u Beach Park Master Plan.”

Cindy Punihaole has implemented the Reef Teach Program and education center in a commendable effort to save Kahaluu.

According to the Kohala Center website, “The mobile education center is located right on the beach at Kahaluu Bay and shares many special features of the park and the bay with visitors.”

The education center is open 9:30 a.m.-4:30 p.m. every day that Kahaluu Beach Park is open.

Punihaole said she also wants to share a short video on coral reef importance with the airlines.

“If there is no reef, there is no visitors” said Punihaole, on putting into summary the vitality of educating others on saving our ocean life.

Because visitors may not be aware of the delicate coral life, they should be educated on its importance to help prevent damage, she said.

The scientists continue to work closely with various state agencies, including the Division of Aquatic Resources. When conducting their research, the researchers have tried to take in information not only from the scientific viewpoint, but also the cultural and environmental viewpoints.

Although great efforts are being accomplished in saving Kahaluu, there is still much work that needs to be done.

According to the Kohala Center website they will need, “\$10 million to realize the vision depicted in the Kahaluu Beach Park Master Plan. With the cooperation of landowners adjacent to the Kahaluu Beach Park, we expect to build the key elements of the park within the next seven years.”

Perez closed the evening with the olelo noeau (Hawaiian proverb), “Mai makau ka hana, makau ka moloa,” or “don’t fear work, fear laziness.”

For further information and the complete reports: [www.kohalacenter.org](http://www.kohalacenter.org)

[portals.intelesense.net/tkc/](http://portals.intelesense.net/tkc/)

For further information on the Kahaluu Bay Education Center:

[www.kohalacenter.org/kahaluubay/vol...](http://www.kohalacenter.org/kahaluubay/vol...)

[www.kohalacenter.org/help.html](http://www.kohalacenter.org/help.html)

[www.kohalacenter.org/kahaluubay/abo...](http://www.kohalacenter.org/kahaluubay/abo...)



An 8-minute educational video is shown to those who rent snorkel gear. (Hawaii 24/7 photo by Karin Stanton)