

Learning from the Sea

Thanks to a Kamehameha Schools 'Āina Ulu collaboration, students are learning a variety of lessons at He'eia Fishpond



Paepae 'ia ka pōhaku a i pa'a maila he kahua hale hou.

Set the stones until the foundation for a new home is complete.

– FROM HE AU HAWAI'I BY LARRY L. KIMURA

He'eia Fishpond lies expansive and serene, and waits for her caretakers to arrive. Ripples form on the surface of the water as the *Mololani* breeze and morning sun



gather. Small waves from Kāne'ohe Bay splash against the outside of carefully formed stone and coral walls, enticing 'ama'ama and āholehole to enter the pond through the *mākāhā* gate entrance.

On a Saturday morning in March, secondary students from Kamehameha Schools' Hawaiian language and culture classes arrived with their *kumu* for hands-on lessons in traditional land stewardship.

Today, the 88-acre He'eia Fishpond is their classroom.

The day-long class is one of the new 'Āina Ulu eco-cultural programs developed by Kamehameha's Land Assets Division in partnership with Paepae o He'eia, a group of eight young Native Hawaiians dedicated to caring for the fishpond and its adjoining streams and reefs through educational programs such as this one.

It's a win-win situation: students learn history, aquaculture, marine biology, Hawaiian culture, and how to row a boat with a pole – more about that later. In return, this historic fishpond gets some much-needed attention and repair work.

Fishponds are a living example of the highest achievement of aquaculture and technology throughout Polynesia. Hawaiians elevated the occupation of fishing to an unprecedented level with

a fishpond system that produced not only various species of fish but crabs, shrimp and *limu* as well.

Paepae o He'eia's vision is sharply focused: restore the pond to a productive fishery

and utilize it as an educational center for the community. With considerable sweat equity and support from Kamehameha Schools in the form of an operating agreement and some initial funding, the group is passionate that this goal can be accomplished.

"We want the Ko'olaupoko community and the Kamehameha Schools community to enjoy this place, care for it, be fed by it, and be healthy because of it," said Paepae o He'eia Program Coordinator **Faylene Mahinapoepoe Paishon '94**.

"This program is in direct response to Kamehameha's strategic plan goal of incorporating resource stewardship with educational programs and curricula," said Ulalia Woodside, Kamehameha's stewardship resources coordinator.

"Through the efforts of Paepae o He'eia, KS' legacy lands such as He'eia Fishpond are used as an integrated context for learning. The collaboration with entities like Paepae o He'eia allows us to provide ongoing stewardship activities and educational programs to Hawaiian children."

After *pule*, and introductions, *haumāna* and

kumu follow staffers Paishon and **LeeAnn Ānuenue Punua '94** onto the fishpond *kuapā* – a wall 5,000-feet long and 12-feet wide in some places.

continued on next page



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Paepae O He’eia staff member Lihau Hannahs ‘99 shows students a recently cleared section of mangrove.



Kamehameha students Ioane Spencer ‘05 and Kahanuolaokalani Frias ‘05 lop the branches off a mangrove trunk.

Students learn that Abner Pākī, father of Princess Bernice Pauahi Bishop, was awarded the fishpond from Kamehameha III during the Great Mahele of 1848, and later bequeathed it to Pauahi upon his death in 1855.

As *konohiki*, or land administrator, Pauahi oversaw the business of this highly productive fishery, famous for its quality *’anae*, or mullet. Pauahi was also fond of He’eia Fishpond as a serene place to meet with friends and commoners.

Along the wall, students learn about native plants from Paishon, then fellow staffers Hi’ilei Kawelo and **Keli’i Kotubetey ‘96** discuss the finer points of fishpond technology, fishery methods and invasive *limu* species.

Then everyone gets down to work: cutting, hauling and stripping the bark from about two dozen mature mangrove trees. This labor not only clears out the highly destructive tree, but puts it to use in constructive ways. It turns out that mangrove thrives in brackish water, and its tough, saltwater-saturated wood is insect resistant,



Students steer their boat with mangrove poles as part of the eco-challenge race.

making it an ideal building material.

Staff and students turn the pest tree into support beams for storage sheds, *kala’au* hula implements, and ... boat steering poles.

Paishon and her fellow caretakers currently welcome about 4,000 students, workers and visitors per year. Students include classes from three Hawaiian charter schools who regularly collect data on water quality and marine species for monitoring purposes.

Students also clear *Gracilaria salicornia* seaweed and replace it with the native *manauea* (*Gracilaria coronopifolia*). The aggressive *G. salicornia*, or “gorilla” seaweed, is cleaned and sold in small amounts to fishmarkets as an edible *limu* and is being used by *kalo* farmers as an experimental nitrogen-fixing compost.

Besides clearing mangrove and repairing sections of the fishpond wall, one of the most pressing tasks is to rebuild four quarter-acre fish-farming pens located within the pond and re-stock them with baby *moi*, *āholehole*, and *’anae*.

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Keli'i Kotubetey displays two of the invasive *limu* that are being cleared from the fishpond – *Gracilaria salicornia* (left) and *Acanthophora spicifera*.

According to Mary Brooks of Pacific Aquaculture Consultants, peak production was 70,000 pounds of *moi* in 1997. While predation of the stocks by *kākū* and *pāpio* were sometimes problematic, the worst predators turned out to be human.

Eventually, poaching shut down operations.

After lunch, students team up for the day's culminating activity: the He'eia Fishpond Eco-Challenge.

Each group must organize itself to safely cut two mangrove trees, strip them, and use the poles to "row" a small boat out into the pond, around a marker, and back to the dock – without losing its passengers. Paishon watches as the students throw themselves into the game, shrieking with laughter and shouting encouragement to their teammates.

At this moment, the students are not thinking about the Hawaiian values they discussed earlier in the day: *kōkua*, *kuleana*, *mālama* and *laulima*. They are living them, and the lessons gained from this experience will forever remain in their senses.

"The hope is that, like individual stones

carefully set one at a time, each of these students will gain the knowledge necessary to build a firm foundation for a thriving future," Paishon said.

"A future grounded in the living legacy of Hawaiian traditions."

GLOSSARY

- āholehole – Hawaiian flagtail
- 'ama'ama – mullet
- haumana – student
- kākū – barracuda
- kala'au – stick dancing
- kalo – taro
- kōkua – help
- kuleana – responsibility
- kumu – teacher
- laulima – working together collectively
- limu – a general name for plants living underwater
- mākāhā – sluice gate, as of a fishpond
- mālama – to care for
- manauea – a small, red seaweed
- moi – threadfish
- Mololani – name of wind at Kahalu'u and He'eia
- pāpio – young crevalle
- pule – prayer