Having Limu Fun!

Food and Hawaiian culture go together and so do volunteers and the sanctuary. So a mixture of these four ingredients has got to result in some good kau kau (food). And, indeed, it did: Some ono (delicious) treats came out of the Cultural Food Recipe Workshop, held May 31 at the sanctuary headquarters in Maui. The purpose of the event, open to sanctuary volunteers, was to demonstrate the value of the sanctuary’s natural resources.

One of most remarkable hits of the workshop was also one of the simplest: limu kala or crispy fried seaweed. According to those lucky taste-testers who were there, it’s like potato chips—only so much better and healthier for you. Simply wash, drain, and dry the limu and drop into hot oil. Wait a moment for it to cool. Then, munch-a-crunch da limu!

If you’ve never put limu on your daily menu, consider what nutritionists say: It is an excellent source of iodine and iron. As Sanctuary Hawaiian Cultural Educator Joy Lynn Oliveira observes: “Food resources are always limited in an island environment, however, Native Hawaiians were good at cultivating the best that their surroundings had to offer and they were able to prosper.” As for harvesting limu, the sanctuary shoreline right in front of the Maui site is a prime area, where many local families make a day of harvesting Hawaii’s indigenous seaweed.

Dr. Jim Darling studies whale song in sanctuary waters. The yellow flag displays the number of his NOAA Fisheries ESA/MAP permit, without which, close approach of humpbacks (less than 100 yards) in Hawaii’s is prohibited. Such permits are issued to scientists for research supporting endangered species recovery efforts.

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IN THIS ISSUE:

Why scientists pursue whale song

Whale song may not be quite as romantic a tune as it’s been made out to be. Even though the crooning only comes from males, the female gender doesn’t appear to be easily seduced by the tune that reverberates for many miles in the underwater world. In fact recent research suggests that male singers interact primarily with other males. Still, scientists believe that singing and mating go together in humpback society.

The exact role of the humpback song has been under investigation by Dr. Jim Darling, who spent this last winter collecting recordings of male humpbacks in Hawaii’s sanctuary waters. Darling had originally hypothesized that males use the song to display dominance. This would mean that the “alpha whales” at the top of a social hierarchy would have a distinctive song that would stand out as an aural badge of social position, perhaps analogous to the chest-beating of the alpha male gorilla. It would follow that such lead singers would outdo their subordinates in the task of attracting a female for mating purposes.

This hypothesis was based on the proposal that humpbacks have a mating system known as dominance polygyny, where the most powerful males gain access most easily to females through a dominance order established by fights and displays. “We thought that the overt male-male competition, the fighting, on the breeding grounds as well as the song, could be accounted for within this system entirely,” he notes, “but so far we haven’t found any kind of obvious differences in the songs that might be expected”.

Another emerging hypothesis proposes that some humpback males may cooperate on the mating grounds, and the song may facilitate this behavior. Here, too, however, Darling says male behavior patterns vary so much it is difficult to generalize. While some singers draw other males that appear to approach females as a unit, other males appear to work solo. Quite often, when singers are joined by other males, the interaction is very brief and then they speed off in different directions, says Darling.
ON THE SANCTUARY’S HUMAN SIDE: MEET A SAC MEMBER

Those who know Dr. Walter Haas as Kaua‘i’s favorite veterinarian would hardly be surprised to learn that his passion for living things extends to seashells. “I’m fascinated by the creatures that make their way to the islands inside of shells. Each one has its own personality,” he marvels. Malaco-ologist—or the scientific study of shells, Haas says, is especially rewarding in the Pacific islands where geographic isolation has created conditions for thousands of species to evolve on their own. In addition to being an avid shell collector, Haas has also served as the local chapter director of the Natural Malacological Society.

A scientist at heart with a flair for parlaying his natural curiosity into community service, Walter Haas has the right stuff for the many civic-minded hats he wears, including that of the Kaua‘i County Representative on the Sanctuary Advisory Council. Serving in this capacity since the council was first established, Haas has brought a steady and dependable presence to the volunteer board.

During the sanctuary designation process, when citizen opposition was simply divided over the management plan, Haas’s empathy went out to all sides: “The fishermen were dead set against a sanctuary, because they worried it would end their careers...” he recounted, the sanctuary in state waters through August of 2007. “Five years ago, we took a step forward to protect Hawai‘i’s precious ocean resources,” Governor Cayetano said. “And after this period of review and public comment, it is evident that the structure and processes put in place work. I’m happy to endorse the revised plan.”

Formally presented to the Governor by the National Oceanic and Atmospheric Administration (NOAA) in early August, the revised plan is the product of 18 months of review and revision, involving sanctuary staff, agency partners, the Sanctuary Advisory Council (SAC), and other involved citizens. The revised plan presents updated goals and strategies for natural resource protection, cultural resource enhancement, research, administration, and education and outreach. No new regulations or boundary changes were made. Governor Cayetano was especially supportive of the plan’s new strategies to identify new resources for possible inclusion in the sanctuary. In accordance with the sanctuary’s original Congressional mandate, and in response to an overwhelming number of public comments supporting inclusion of additional resources, the revised sanctuary management plan specifies a community-based process to identify, assess and, if deemed appropriate, designate new resources for sanctuary management and conservation.

Acting Sanctuary Manager Naomi McIntosh was delighted to get word of the Governor’s approval. “We’re very honored with Governor Cayetano’s support and continued support of the sanctuary. We look forward to working with all our partners, including our state agency partners, as we put the revised management plan into action over the next 5 years.”

Copies of the revised plan are available on line at http://www.hiwhms.nos.noaa.gov/ or contact your nearest sanctuary office (see info on opposite page) to request a copy.

Sanctuary Reauthorized Through Mid 2007

On September 9, 2002, Governor Ben Cayetano accepted the sanctuary’s revised management plan, thereby “re-authorizing” the sanctuary in state waters through August of 2007. “Five years ago, we took a step forward to protect Hawai‘i’s precious ocean resources,” Governor Cayetano said. “And after this period of review and public comment, it is evident that the structure and processes put in place work. I’m happy to endorse the revised plan.”

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Sanctuary Lessons in Line with DOE Science Standards

There was something different about the educator’s workshop held June 18 at sanctuary headquarters on Maui. The full day of activities—part of a weeklong field studies course aimed at teaching environmental concepts through hands-on activities—was up to standards. Make those the official Hawai‘i’s Department of Education science curriculum standards, please.

“Participants not only wanted information on humpback whales and the sanctuary program, they wanted to learn how to use the information to meet the benchmarks now being used to measure the quality of science instruction in the classroom,” said Rhonda Van Wingerden — Sanctuary Marine Educator. Thus, as part of the workshop, sanctuary staff members and volunteers demonstrated activities, and explained the concepts which the activities are intended to deliver. For example, they presented an exercise where participants line up to span a length of 40 feet which equals the rostrum to fluke length of an average adult humpback whale. In addition to being a fun way of illustrating the

animal’s huge size, the demonstration doubles as a lesson in how to use models to explain natural phenomena. In contrast to past years, when no homework was assigned, field studies participants this year were required to apply what they learned at the sanctuary and other participating Maui sites in crafting their own environmental studies curriculum plan. College credit for the course, organized by the State Division of Aquatic Resources, was increased from one to two credits, to be applied towards a degree in the outreach program at the University of Hawai‘i. Rhonda Van Wingerden said that the caliber of work involved in this year’s field studies course may signal a growing trend in science education. She noted that the sanctuary’s beachfront site in Kīhei is slated to host another inter-disciplinary science workshop for Project Island, a East-Coast-based teacher’s group. “There seems to be a growing awareness that a living classroom is a very effective way to engage student interest in science education,” said Rhonda Van Wingerden.