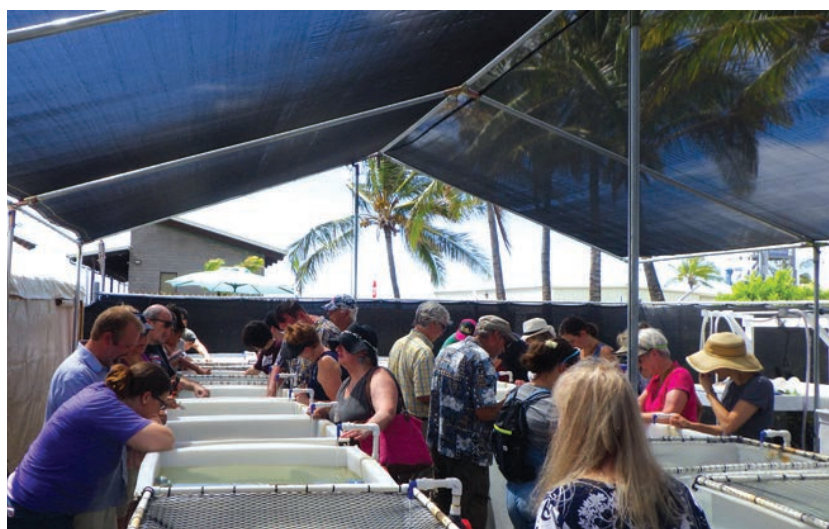


Octopus's Garden

The only one of its kind in the U.S., Kanaloa Octopus Farm educates the public on these enigmatic invertebrates.

BY MEGHAN MINER MURRAY



LEFT: Visitors on the Kanaloa Octopus Farm tour. RIGHT: just hatched octopuses

O N A HOT WEDNESDAY MORNING ON THE BIG ISLAND, 28 visitors dangle pungent pieces of crab into nearly as many tanks hoping to elicit activity from residents. Each open-topped, white vat holds a single wild-caught day octopus (*Octopus cyanea*)—brought in by fishermen who would otherwise have used them as bait—and an artificial rocky burrow where many continue to hide.

“Everyone said it was impossible...It took 14 years! Longer than it took to get to the moon.”

— JACOB CONROY, FOUNDER OF KANALOA OCTOPUS FARM

“They all have different personalities,” says Zach Taylor, a biologist and tour guide at the Kanaloa Octopus Farm. That much is evident. While some octopuses never emerge, others stretch tentacles toward the surface, play with tiny rubber ducky toys, and curiously curl gently sucking tentacles around delighted hands.

The name, Kanaloa Octopus Farm, is somewhat of a misnomer—at least for now. Though octopus are ideal livestock insofar as they have relatively short lifespans (1-2 years), and high fecundity (a single female lays some 7,000 eggs at a time), like many popular seafoods, no one has quite cracked the code of how to farm them efficiently. Kanaloa staff know how to raise adults, get them to lay eggs,

and even how to get the eggs to hatch, but keeping the baby octopuses alive more than a few days on easily raised or grown food has proven tricky. For now, the small farm functions as more of a laboratory, where bubbling beakers froth with algae and copepods, and where visitors’ educational interactions with adult octopus (destined to live out their natural lives in touch tanks) fund their experiments.

The calamari cousins are a popular food item worldwide and wild stocks of many cephalopods are declining. Conservation is one of the primary reasons Jacob Conroy founded Kanaloa three years ago. Another big motivating factor, says Conroy, is the challenge. As a former researcher with Hawai‘i Pacific

PHOTOS: COURTESY OF KANALOA OCTOPUS FARM

University's Oceanic Institute, Conroy was part of a team that was the first to raise yellow tang—a popular aquarium reef fish frequently harvested from the wild—in a lab. “Everyone said it was impossible,” says Conroy. “It took 14 years! Longer than it took to get to the moon.” But persistence, tenacity (“that’s this field, it’s incredibly underfunded: they built systems with parts they got from Home Depot”), and passion to solve an intractable problem ultimately prevailed. The same spirit of using existing knowledge to push the boundaries drives Kanaloa today. What’s more, “We’re trying to do everything local, including finding a local live feed solution ... we have no non-native species at our facility,” says Conroy. “It’s way more of an art than a science.”

There are just a handful of similar outfits in the world—in Mexico, Japan, Australia, Spain and China—but the end goal of farming octopus is not without controversy. Earlier this year, *Issues in Science and Technology* published an opinion piece by several scientists who pled the case that it’s unethical to farm such smart creatures, that farming octopus will take more environmental energy than it’s worth because they eat higher on the food chain, and that farmed octopus may increase the demand for octopus, putting even more pressure on wild-caught populations.

Jacob Conroy, though, sees his farm as more of a conservation solution than a problem. “I totally understand people’s reservations against aquaculture and keeping animals in captivity. I started this as a conservation effort. That’s also why I’m doing this. I’ve seen sustainable aquaculture actually benefit the ecosystem,” says Conroy. “We want to supply the demand with a sustainable solution.” Further, thousands of visitors each year come to his farm to learn about and interact with octopus, and seeing octopuses’ intelligence first hand has led more than one visitor

to decide not to eat them. That’s fine with Conroy. If his team does figure out how to raise the creatures through their whole lifecycle, he says he’d love to see a local octopus farming operation take off and help create more local jobs.

But he will also continue chasing the challenge. “I’m a researcher,” he says. “We can always be better and more efficient.” 🌱

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TOP: Kids delight in touching the octopuses.

ABOVE: An octopus at Kanaloa Octopus Farm.