

Coconut Crab Production Using Recycled Food Sources

Henry Atalig (Rota: Farmer/Rancher Grant)

Project Number: FW06-010
Title: Coconut Crab Production Using Recycled Food Sources
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The coconut crab with its namesake food, which it cracks open with its strong pincers

Situation:

The coconut crab, a cultural icon among indigenous people of Rota and a food delicacy increasingly in demand, was once plentiful in the wild. But populations have dwindled as the crabs were hunted for their cash value.

Ranches on Rota, in the Northern Mariana Islands, have been growing captive populations of coconut crab for several decades. However, few of these part-time producers have applied scientific techniques of animal husbandry to increase yields. The penned crabs typically suffer nutrient deficiency and unsanitary conditions.

Increased demand in the tourist industry, where coconut crab may fetch \$50 a plate, has far exceeded the annual production of farm-raised livestock. Because of declining farm-raised stocks, most of the consumption comes from the hunted wild crabs, which is rapidly shrinking their populations.



The coconut crab, the largest terrestrial arthropod in the world, can reach 9 pounds with a body 16 inches across and claws with a 30-inch span

Objectives:

- Increase the captive coconut crab populations found on ranches of indigenous people on the island of Rota
- Monitor the behavior of captive crabs to assess which recycled foods they prefer and their preferred habitat
- Develop protocols for rearing coconut crabs in captivity
- Disseminate information, in a brochure and on a webpage, to small farmers in the Northern Marianas, Guam and other parts of Micronesia



Wild crabs subsist mainly on coconuts and figs but will eat almost anything organic

Actions:

Project coordinator Henry Atalig, whose father has been growing coconut crabs on his small rural ranch for decades, used separate funding to build a concrete and cinder block coconut crab rearing facility. It measures 25 feet square and 5 feet high and is designed to mimic the crabs' natural environment. It is equipped with two ponds, one fresh and one salt.

The CNMI Department of Land and Natural Resources permitted Atalig to obtain wild coconut crabs, noting that his project had merit and would benefit many CNMI residents, especially current crab ranchers.

Atalig captured 104 crabs, tagging 20 for identification and weighing and measuring each for monitoring.

In addition to coconuts, the crabs are being fed a variety of locally available foods, including banana, tapioca, sugar cane, noni fruit, guava and breadfruit.

Work to be completed:

- Atalig will monitor the crabs, recording growth, reproduction, diets and other elements crucial to their well-being
- A brochure will be printed to provide information on appropriate production practices for crab ranchers
- A webpage will be produced and hosted on the Northern Marianas College website

Results:

Results from the project should be available in 2008



Atalig's facility includes sources of fresh and salt water



The rearing facility measures 25 feet square and 5 feet high

Potential Benefits:

As with the sea turtle, the coconut crab is being hunted into being a rare creature. Growing these crabs using local ingredients like coconuts and other recycled foods should increase the availability of crab, potentially increasing the income not only of farmers but of businesses in Rota's tourism industry.

Producing the crabs on farms will promote good stewardship of natural resources in the Northern Mariana Islands by relieving pressure on hunted populations of wild coconut crabs. It will also enhance the well-being and satisfaction of island residents as the coconut crab is one of the icons of the indigenous people.



The captive herd is being fed a variety of recycled foods in addition to coconuts