

Letter from the Director

Aloha,

We here at CTSA hope that you are well and finding moments to enjoy this summer, even in these uncertain times. As we reported last month, we are in the midst of our annual development process. Last week we received and processed five full proposals, which are now being reviewed by a panel of external and internal reviewers. This review process is critical to ensure that the technical merit and approach for each project are sound, and that the project addresses an existing or emerging aquaculture industry issue.



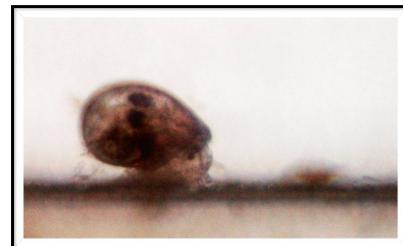
CTSA and our IAC and TC are beholden to our mission to support to commercial aquaculture production; I am hopeful that the FY21 group of projects will solve critical industry problems and build opportunities to grow aquaculture production in the region. As we reported last month, we received a total of 18 pre-proposals for consideration this year. While there were many innovative ideas, we only have a limited amount of funds to allocate. Those pre-proposals that were not selected to move forward this round are encouraged to rethink, revise and resubmit. It is important to note that some pre-proposals may be more suitable for other funding agencies with a different mission. The selection process at CTSA is very competitive; our IAC and TC care deeply about the investments of the CTSA program, and accordingly they scrutinize each pre-proposal with their essential industry insight and research expertise.

I would like to take this opportunity to express my appreciation for everyone who participates in our annual development process, and who shares an open mind to working together for a brighter future! If you haven't already, please take some time to rest and rejuvenate as we prepare to close out one season and begin another.

Mahalo,
Dr. Cheng-Sheng Lee
Executive Director, CTSA

CTSA 'Opihi' Project Set to Publish Manuscript in *Communications Earth & Environment*

CTSA is pleased to share that one of our project Co-PI's Dr. Anthony Mau is scheduled to publish an article in the publication *Communications Earth & Environment*. The article, titled "Near-daily reconstruction of tropical intertidal limpet life-history using secondary-ion mass spectrometry" is based largely on the work conducted under the 6-year CTSA project "Aquaculture of Opihi."



Opihi is a high value seafood in Hawaii, with prices reputed to be \$100-200 gallon shell on. An established niche market exists, bolstered by the need for opihi at Hawaii gatherings. Demand for opihi exceeds the level that the wild caught fishery can supply because of over fishing. Under the CTSA project, which ended last summer, the research group engineered an aquaculture system that maintains necessary intertidal stimulus (sea spray), formulated feeds that support long-term growth, and developed captive maturation, spawning, and larval rearing methodologies. These recent improvements have increased the capacity to close the life cycle of 'opihi—which remains a main goal. Future studies for this work will focus on optimizing settlement output by increasing the number of good larvae used for settlement experiments.

The article has been scheduled for publication in *Communications Earth & Environment* on the 23rd August 2021. [Click here to learn more.](#)

Aquaculture Announcements

-- [FDA Seeking Comments on MUMS](#)

The Food and Drug Administration (FDA), Center for Veterinary Medicine, is seeking comments from the public to support the Indexing provision of the Minor Use, Minor Species Act of 2004 (MUMS). To read the Federal Register notice and to comment [click here](#). The deadline for comments is September 22, 2021.

-- [Reminder: Sign Up For 2022 Census of Aquaculture](#)

The 2022 Census of Agriculture is right around the corner and USDA NASS is making every effort to count all aquaculture producers in the United States. If you produce any aquaculture products and want to make sure that you are counted in the 2022 Census of Agriculture and the 2023 Census of Aquaculture, please sign up your operation using this online form: <https://www.agcounts.usda.gov/cgi-bin/counts/>. Once you have signed up, you might receive a short survey in the next two years to further categorize your operation. Most likely, you will not receive a survey until the 2022 Census of Agriculture in January or February, 2023.

AquaClip: NASA satellites help plan future for Palau fish stocks

People in Palau, a small nation with a population of about 20,000, consume more wild fish per capita than nearly any other country in the world. But in recent years, populations of rabbit fish and other staples of their cultural diet began to dwindle because of a combination of factors, including increasing food demand and changing ocean conditions.

To meet the country's need for food supplies and keep traditions alive for future generations, Siksei and others are working with international scientists to build sustainable aquaculture farms in the ocean. Their projects are using NASA's satellites to help protect the nation's pristine waters, coral reefs, and shorelines.

"We found that fish stocks were declining due to [our waters] being unable to produce enough to maintain the population of the fish, and that was reason enough for the fishermen to start thinking about management issues," Siksei said. "We talked with fishermen about ensuring that our fish are there and our resources are there, also about ensuring that our culture continues to thrive for generations to come, because fish is a big part of our life."

With more than 300 small islands amounting to a landmass about twice the size of Washington D.C., Palau is one of the tiniest nations in the world. Surrounded by a 200-mile radius of scenic ocean and coral reefs that make for a scuba diver's paradise, the country's economy relies primarily on tourism and fishing.

But even though tourism serves as an important driver for the economy, Palau's islands are under pressure to provide the resources to sustain the hundreds of thousands of people who visit the country in normal, non-pandemic times, Siksei said.

For several years, Siksei and others in Palau have been working with scientists at The Nature Conservancy to manage the aquaculture sector and find the best locations within Palauan shores to build marine aquaculture farms necessary to meet future food production needs.

The idea, Siksei said, is to breed fish and shellfish without disrupting marine ecosystems and other aspects of the country's nature, culture and economy. For that, the team is focusing on rabbit fish and giant clams, two types of seafood entrenched within the cultural history of the nation.

"We don't want to stop people from fishing or stop people from doing what they usually do," Siksei explained. "We're trying to find a way where they can continue to make a living and enjoy these resources."

Source: Phys.org // [Full Article](#)

This newsletter is written and prepared by the CTSA Information Specialist Meredith Brooks.

The Center for Tropical and Subtropical Aquaculture (CTSA) is one of five regional aquaculture centers in the United States established and funded by the U.S. Department of Agriculture's National Institute of Food and Agriculture (NIFA) under active grants 2016-38500-25751, 2018-38500-28886, and 2020-38500-32559. The regional aquaculture centers integrate individual and institutional expertise and resources in support of commercial aquaculture development. CTSA was established in 1986 and is

Center for Tropical and Subtropical Aquaculture
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