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OceanEYES | Nature Nation

September 16, 2020


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Each week, we feature a worthy citizen science project or nature news segment from around the world. This week's is OceanEYES, brought to you by the National Oceanic and Atmospheric Administration's (NOAA) [Pacific Islands Fisheries Science Center](#).



Courtesy of NOAA

NOAA scientists have deployed cameras to the ocean floor to observe deep-sea fish, and each camera can record tens of thousands of images! They need your help to analyze some of these photos. According to their website, by participating in OceanEYES research, you can "explore the depths of the ocean to help monitor the Hawai'i bottomfish population!"



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Citizen Scientists Help Count Deep 7 Bottomfish in Hawaii

BY: DAN DINICOLA

The [Pacific Islands Fisheries Science Center](#) is launching a new citizen science project called [OceanEYES](#) and is seeking volunteers to help find Deep 7 bottomfish in underwater videos.



NOAA scientists are partnering with citizen scientists to count seven important bottomfish species.

Hana Ra's (BS Biology, 2020) interest in citizen science began when SAFS Professor Julia Parrish gave a presentation on the [Coastal Observation and Seabird Survey Team \(COASST\)](#) program in Ra's marine biology course. She was amazed by how Parrish had created a program that had both researchers and the general public collecting data that subsequently informed a multitude of management and conservation projects. Ra's interest would grow through internships with COASST and the [NOAA Pacific Islands Fisheries Science Center \(PIFSC\)](#), where she helped create a citizen science project in her hometown of Honolulu, Hawaii.

During the summer of her junior year, Ra began to help develop the citizen science project.



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Citizen Scientists Help Count Deep-7 Bottomfish in Hawai'i

September 15, 2020

NOAA scientists are partnering with citizen scientists to count seven important bottomfish species.

Feature Story | Pacific Islands



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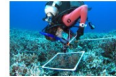
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The [Pacific Islands Fisheries Science Center](#) is launching a new citizen science project called [OceanEYES](#). We are seeking volunteers to help find Deep 7 bottomfish in underwater videos.

A student in the [Young Scientist Opportunity program](#) and our scientists have partnered with [Zooniverse.org](#) to develop a user-friendly web page called [OceanEYES](#). There, citizen scientists can help review images from our annual bottomfish survey, tagging and identifying all the fish that they see. Scientists can then use those data to train advanced artificial intelligence (AI) tools, to look at different ways of counting fish in video. The data can also be used as information for stock assessments.

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The images are collected every year during the [Bottomfish Fishery-Independent Survey in Hawaii \(#BFISH\)](#) using state of the art stereo-camera systems. The survey provides an estimate

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CITIZEN SCIENTISTS HELP COUNT DEEP-7 BOTTOMFISH IN HAWAI'I

NOAA Fisheries

September 16, 2020 — *The following was released by NOAA Fisheries:*

The Pacific Islands Fisheries Science Center is launching a new citizen science project called **OceanEYES**. We are seeking volunteers to help find Deep 7 bottomfish in underwater videos.

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The images are collected every year during the [Bottomfish Fishery-Independent Survey in Hawaii](#) (#BFISH) using [state of the art stereo-camera systems](#). The survey provides an estimate of the number of "Deep 7" bottomfish. That's a group of seven species of fish that have both economic and cultural value to the islands. The data from this survey are used in the [Deep 7 stock assessment](#) to provide managers with the best information to make management decisions. That includes annual commercial fishery catch limits.

The camera systems, which rest on the seafloor for 15 minutes at a time, record *hundreds of thousands* of images over the course of the survey. NOAA scientists currently analyze these images but, as you can imagine, the number of images collected during survey operations can quickly overwhelm them.

NOAA has been investing heavily in the [development of AI solutions](#), allowing scientists to use machine learning and computer vision to analyze images. However, for the machine to learn, it requires large numbers of training images. Those are images of fish that a human has already tagged and identified.

[Read the full release here](#)

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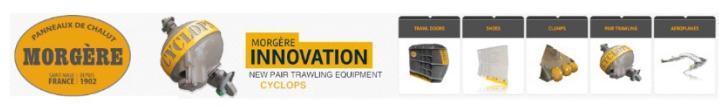
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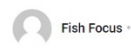
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MARINE SCIENCE

CITIZEN SCIENTISTS HELP COUNT DEEP-7 BOTTOMFISH IN HAWAI'I



Citizen Scientists Help Count Deep-7 Bottomfish in Hawai'i

NOAA scientists are partnering with citizen scientists to count seven important bottomfish species in Hawai'i.

The [Pacific Islands Fisheries Science Center](#) is launching a new citizen science project called [OceanEYES](#). They are seeking volunteers to help find Deep-7 bottomfish in underwater videos.

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Alumna Highlight: Hana Ra ('20) & the OceanEYES Citizen Science Project

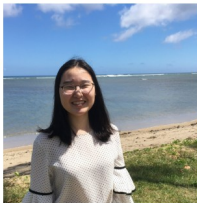
Friday, September 18, 2020 - 11:00 to Friday, December 18, 2020 - 11:00



NOAA scientists are partnering with citizen scientists in the OceanEYES project to count seven important bottomfish species.

Hana Ra, UW Biology '20 alumna, first became interested in citizen science during her junior year introductory marine biology course when founder Dr. Julia Parrish presented on the citizen science program Coastal Observation and Seabird Survey Team (COASST), based at the UW School of Aquatic and Fishery Sciences. "I was amazed by how the founder, Dr. Julia Parrish, had created a program that utilized both researchers and the general public to collect data and subsequently inform a multitude of management and conservation projects," says Ra.

Ra began working with COASST as an undergraduate intern and then found an opportunity to help the NOAA Pacific Islands Fisheries Science Center (PIFSC) create a citizen science project in her hometown of Honolulu, Hawaii. She began to develop the citizen science project "OceanEYES" as a NOAA/JIMAR PIFSC Young Scientist Opportunity (PYSO) Intern.



"During my internship, I collaborated with PIFSC researchers and utilized research data collected from the annual bottomfish surveys to create informative training and education materials" says Ra. "I also regularly communicated and collaborated with private industries including Kitware Inc. and Zooniverse to ensure the information that I generated would integrate seamlessly into their downstream product pipelines. Near the end of the internship, I helped conduct a beta test in order to see how useful and effective the project that we developed was for users to produce the high quality data that we needed."

With OceanEYES, citizen scientists can help review images from the annual bottomfish survey, tagging and identifying all the fish that they see. Scientists can then use those data to train advanced artificial intelligence (AI) tools, to look at different ways of counting fish in video. The data can also be used as information for stock assessments.

The images are collected every year during the Bottomfish Fishery-Independent Survey in Hawaii (#BFISH) using state of the art stereo-camera systems. The survey provides an estimate of the number of "Deep 7" bottomfish. That's a group of seven species of fish that have both economic and cultural value to the islands. The data from this survey are used in the Deep 7 stock assessment to provide managers with the best information to make management decisions. That includes annual commercial fishery catch limits.

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BY THE CITIZEN

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Kaumakani was officially known as Makaweli meaning "fearful features". The name was changed in 1954 to Kaumakani

NOAA seeking volunteers for fish count

BY THE CITIZEN ON SEPTEMBER 29, 2020

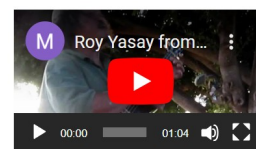
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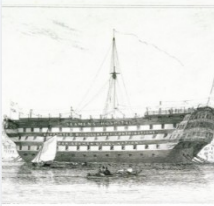


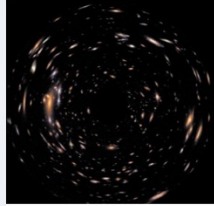
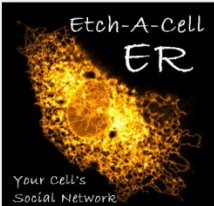
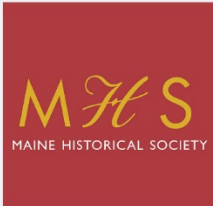







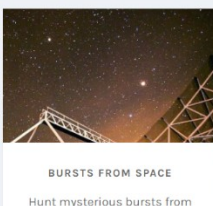








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