

GIANT TREVALLY AND BONEFISH RESEARCH PROGRAM

University of Hawaii



The giant trevally and the bonefish are two of the more revered fishes in the Tetiaroa lagoon. The giant trevally is a premier game fish that is highly sought after by saltwater fly-fisherman throughout the Indo-Pacific. Reaching weights in excess of 100 pounds, giant trevally are revered for their strength and aggressive nature. In contrast bonefish are extremely cautious, and are often referred to as "the ghosts of the flats" because their mirror-like scales allow them to camouflage and vanish in front of your eyes. Tetiaroa's bonefish live in the shallow sand flats of the atoll and are unique in that they are some of the largest in the world, often growing in excess of 10 pounds. The quest for these two species is for many anglers the apex of saltwater fly-fishing, yet despite their popularity very little is known about the biology of these fishes.

Project Description:

Tetiaroa's giant trevally and bonefish research program seeks to understand and describe the biology of these fishes using the following research methods:

STEP 1: Catching fish and recording information: Fish are caught with the assistance of anglers and Information including the length, weight, time spent fishing, and environmental conditions is recorded before they are released back into the lagoon.

STEP 2: Tagging of giant trevally and bonefish: To examine growth rates, population size and movement of these species, each fish that is caught is also tagged before being released. The tag includes a unique identification number and when recaptured we can determine how fast they grow, how far they move and, in time, if enough fish are recaptured, we can estimate the population size of these species in Tetiaroa.

STEP 3: Active tracking of giant trevally: Each giant trevally that is caught is fitted with a V13 continuous acoustic transmitter. The transmitter emits a signal that's heard as a beep through an acoustic hydrophone and indicates the location of the fish, allowing it to be tracked for extended periods of time.





Why is this Research Important?

Healthy populations of giant trevally and bonefish present an opportunity for sustainable economic development and eco-tourism in remote island locations where commercial fishing has historically been the only option. However in many of these locations bonefish and giant trevally are threatened by overfishing. The opportunity to study these animals in lightly fished locations like Tetiaroa is becoming increasingly rare. This research seeks to contribute to our understanding of the biology of these fishes and to determine steps necessary to protect them and establish sustainable fishing programs.

The Project Scientist:

Alex Filous is a research assistant at the University of Hawaii's Fisheries Ecology Research Laboratory studying to complete a Master's of Science in Zoology. Alex is passionate about fish and enjoys working as a fish biologist because it gives him the opportunity to study the world's fishes and work towards conserving their populations so that future generations can enjoy them.

Support Research on Tetiaroa:

This research is sponsored in part by Tetiaroa Society, a non-profit organization established to help protect Tetiaroa, promote sustainable activities, and support scientific research targeted at understanding and protecting delicate island ecosystems.

We invite you to experience the life of a scientist in the field and better understand our work by joining investigators studying on the atoll. If you are interested, please contact one of our scientists on the atoll or the concierge at The Brando.



We also invite you to make a financial contribution to Tetiaroa Society to support the world-class science taking place on the atoll. You donation will support us in our mission and the next phase of this project. If you want your funds to be used exclusively for this research project, please note this when you donate. Donations can be made online at <u>www.tetiaroasociety.org</u>. Thank you for your generosity, participation, and support.

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