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Testimony in support of 30 day extension to Oahu Aquarium Fishery 9am 9-24-21 item F. DAR

Please grant the 30-day extension to the sustainable, valuable and important Oahu Aquarium Fishery. Please read why and watch amazing videos below. **Thanks** Ron Tubbs B.S.N.D.

[Click To Read 2021 Fish Population Report](#)

Welcome to Hawaii's Sustainable Aquarium Fishery Scientific Facts

Click on the following text link to watch amazing epic video of a small portion of Oahu's [Yellow Tangs](#).

Hawaii's [Aquarium Fishery](#) has been studied more than any other fishery in the world. Both the [2,400 page Environmental Review](#) of the West Hawaii fishery, and the [Oahu Environmental Review](#), based in [State fish counts and reports covering nearly 20 years of data](#), scientifically prove Hawaii's aquarium fishery is eco-friendly, having low environmental impact. The head of Hawaii Department of Land and Natural Resources (DLNR) – Suzanne Case, stated Hawaii's Aquarium Fishery is a “**Model Fishery**”. With many reef fish populations on the rise overall, Hawaii's Aquarium Fishery is the true definition of “Sustainability.”

Hawaii's [leading scientist speak](#) out in support of the aquarium fishery regaining their permits.

Hawaii's top marine biologists **William Walsh Ph.D., Ivor Williams Ph.D., Brian Tissot Ph.D.; Leon Hallacher Ph.D.; Bruce Carlson Ph.D.; Charles Birkeland Ph.D.; Jeremy Claisse Ph.D.; Mark Christie Ph.D.; Richard Pyle Ph.D.; Leighton Taylor Ph.D.; Randy Kosaki Ph.D.; Cynthia Hunter Ph.D.; Brian Bowen Ph.D.; Brian Zgliczynski Ph.D.; Jeff Ebel Ph.D.; Alan Friedlander Ph.D.; Kosta Stamoulis Ph.D.; Delisse Ortiz Ph.D.; Jan Dierking Ph.D.; Rob Toonen Ph.D.; and Jim Beets Ph.D.** Thursday, June 25, 2020, all signed the letter condemning the DLNR [land board decision](#) not to approve fisheries environmental review. Why? Because the fishery is sustainable.

Most reef fish produce 10,000 to 5 million fry per spawning, and with spawning occurring three times a day to daily for months out of the year, reef fishes ability to repopulate is staggering! Moreover, marine biologists have stated that the Hawaii fisheries' most favorite fish- the indigenous Yellow Tangs- produce one million fry per pair per year! Further, warmer temperatures brought on by global warming, only seem to stimulate spawning. An example of this is the [fish population increase](#) of 2014 and 2015. Indeed, the [Fish base](#) website, which rate fish species vulnerability rates, indicates low vulnerability for all fish species taken by the proven sustainable aquarium fishery. None of these fishes are at risk of extinction. The Sustainability of the fishery being based on science should not be in question.

According to the state regulatory agency DLNR's [17 year study](#) of the fishery, fish counts for the major species collected were up by millions. The years of Kona fish count research was headed by DLNR marine biologist, Bill Walsh, Ph.D., who worked with his team of marine biologists to count fish and review years of fish reports and studies. These studies showed that Hawaii's small [aquarium fishery was sustainable](#), and had a low impact on Hawaii's oceans. The state has issued aquarium permits for over 60 years. Yet fish count data and catch reports up to 2017 show no major recent fish catch increases or declines in fish. Instead, fish counts were increasing for the 2017 fishery. In the past, DLNR has opposed closure of the fishery basing their decision on years of catch report data and fish counts. Why now with a reduced number of aquarium divers, reduced fish take, and proven sustainability, in the face of an environmental review ruling, has the DLNR changed their minds?

Hawaii Aquarium Trade Under Unconstitutional Attack Despite Sustainable Effective Management of the Fishery – Why?

Last year Hawaii's world famous and most famous leading [marine scientists](#) came out in Support of the fishery. Despite this, the support of Hawaii's Aquarium Fishery repeatedly finds itself still under attack. Why is it under attack? The answer is user conflict from a small, vocal tourist-based group whose eco-funding drives an emotional debate over the Hawaii fishery. The opposition, **snorkel dive charters** with a stake in owning the oceans, **gain by shutting the fishery down**. This opposition group wants all to pay to see Hawaii's fish from their tours only. This conclusion is evidenced by tourist groups who testified against new fish catch limits as proposed by Hawaii's aquarium fishermen ([enact new laws to protect fish](#)) who were willing to go the extra mile and were working with Hawaii's DLNR Land Board in 2015! ***What kind of ecology group testifies against fish protection laws?*** One that is not really based on ecology or science, but a user group who wishes to be the only ones who profit from Hawaii's oceans.



Public Aquarium's Educate Visitors on Ecosystems and Provide a Protective Ark for Many Fish Species Waikiki Aquarium Exhibit (photo by Ron Tubbs)

Our fishery has [proven effective at management](#). Aquarium fishermen's livelihoods depend on plentiful fish supply. For many years DLNR successfully managed the fishery; many new laws were implemented to regulate the fishery. FRA (Fish Management Areas) were created in Kona to separate the user groups and allow fish to repopulate. Over 1,600 fish counts were done and fish populations were on the increase with millions more fish on the reefs. The already sustainable aquarium fishery became even more regulated and sustainable when, the Hawaii Tropical Fish Association met with DLNR scientists to create new laws to ensure the sustainability of the Hawaii's aquarium fishery. These additional laws took the form of the Oahu and Kona aquarium collecting [rules packages](#) and went into effect in 2014 and 2015. These new rules created enhanced restrictions on diver's gear, species restrictions, size limitations, and quantities (bag limits) of fish that could be collected. To further prevent ocean user conflict, numerous areas statewide remain open to tourists but closed to aquarium fishermen. DLNR employees have stated that if they fail to manage the fishery effectively then they have not done their jobs. Clearly the results of the 20 years studied and the incredible [fish population](#) increases have shown DLNR has done its job!

How will other fisheries respond to working with governments to introduce laws if they still get shut down anyway? The fishery no longer exists on Maui. It had only a handful of divers 8 years ago, but it was blamed for fish population declines on the island. They claimed that the fishery has unlimited "take," but there are many laws [Hawaii's laws for the fishery](#) which prove that to be untrue.

The **United Nations** has deemed that **oceans are the common heritage of all men, and that no individual group should lay claim to own it**. Current attacks violate the **United States Constitution**, and the **Hawaii State Constitution**, both of which state that **oceans belong to the public**. **Governing agencies are there to manage the oceans not to eliminate user groups**. To restrict access to or eliminate any user group over another without the science to back-up the decision, particularly one in which many Hawaiians work, is clearly a violation to the State of Hawaii Constitution, and puts the state at legal risk. Aquarium fishermen were told by lawyers that we could legally sue DLNR for removing our permits, but unlike our opposition we have morals and ethics, especially regarding facts and truth.

There are several public and commercial marine **aquariums for tourism in Hawaii who rely on the fishery** (e.g. Oceanarium, Sea Life Park, Waikiki Aquarium, Waikaloa, and Disney resort), and **the potential for increasing the production of the state's already valuable marine aquaculture business that are also dependent on aquarium fishermen and the laws affecting them**. People may soon have to resort to diving or snorkeling to see Hawaii's fish, which will benefit the main proponents of the fishery closure- a few radical snorkeling and dive shop owners who have led this unsubstantiated, biased attack on Hawaii's sustainable aquarium fishery. Ignoring the scientific evidence with which to measure their ecological concerns, they are primarily concerned with their bottom line, not ecology, and have sold the majority of legislators, eco-groups, and the public, a bill of goods which will have negative impacts on tourism and our economy.



Hospital Aquariums Calm the Sick Children photo by Ron Tubbs

Hawaii's [beautiful fish](#) seen in aquariums around the world, allow education about sustainable ecosystems to occur, and encourage tourists to come to Hawaii. If tourist-based user conflict groups succeed in closing the fishery, no one will be able to learn about Hawaii's tropical fish in aquariums. Now that, will be a big loss- to the fishermen, state business, and airlines and even to tourism.

For years, special interest groups- have used the guise of "ecology," to attack the Hawaii Aquarium Fishery by promoting the fallacy that there is a lack of Hawaii tropical fish and aquarium fishermen have no restrictions. Anti-aquarium fish advocates refuse to listen to science, instead not budging on the stand that the fishery needs to be totally shut down. They use untruths because 20 years of scientific studies conducted by the state's ocean researchers show [fish population increasing](#), which does **not** back up their claims. Laws affecting ecological concerns must be based in science, or they will undermine the meaning and importance of real ecological issues.

Let's look at the Oahu Yellow tangs the most common fish taken for aquarium fish.

Yellow Tangs (Latin name *ZEBRASOMA FLAVESCENS*) are a reef fish that is not indigenous to Hawaii. They are found in several other Pacific regions. Pacific distribution covers depths ranging from the shallow surge zone to over 200 feet deep. The fact that the fish are found at deeper, cooler depths, decreases the vulnerability of Yellow Tangs to global warming, and to impacts from near shore pollution. Abundant and widely found on nearly every reef in Hawaii, Yellow Tangs were reported by an ex-DLNR Biologist, Bill Walsh article, as having "**average**" reef fish reproductive abilities.

A scientific review of Yellow Tang population vulnerability made by the world's most comprehensive info. source for global extinction risk - the *International Union for Conservation of Nature's Red List of Threatened Species* (IUCN Red List)- rated Yellow Tangs at its lowest level - "**Least Concern**"([source Fish Base](#)).

An extensive thesis study was done in 2007 by Megan Bushnell and included data from Big Island and Oahu fisheries. This [study collected and counted Yellow Tang fry eggs](#) and monitored breeding throughout the year. The study is one of the most comprehensive reef fish reproduction studies ever conducted. Its findings indicated **that just one pair of Yellow Tangs can produce 1.14 million fry per year!** Each sampled female produced between 3,000 to 28,000 fry per spawning, with spawning occurring year-round. Notably, they breed more often in the spring and summer months, with the highest fry counts sampled occurring in November. Yellow Tangs continuously reproduce.

Yellow Tang broadcast their fry out to sea, then when the fry mature, they then return onto shallower reefs, about 55 days later. The survival rate of the fry into an adult breeding size is low, but the overall repopulation ability of Yellow Tangs is staggering. Yellow Tang can breed when they reach 4 inches long; this occurs in just a few months. Moreover, [Yellow Tangs can live for 40 years](#) or more, and can grow up to 9 inches in length. Larger fish are not targeted by the aquarium trade and big yellow tangs left on reefs are very efficient breeders.

Flame wrasse

<https://www.youtube.com/watch?v=5W2zMhBLUAY&t=1s>

Flame wrasse are an abundant schooling fish species widespread throughout the Hawaiian archipelago. These wrasse are the most abundant wrasse in Hawaii and have a [conservations status of species of "Least Concern."](#)

Most large populations occur in deep, 100 to 600 feet deep, sandy or hard bottom flat zones where Halameda sea weeds are abundant. This type of habitat is one of the most widely observed ecosystems around the main Hawaiian Islands. A contributory research website for fish, [Fish base](#) indicates Flame Wrasse populations have High resilience, with a population doubling time less than 15 months. Vulnerability is low with rating of only 18 out of 100.