Postcards from HAWAII

by **Ret Talbot**

"There was never a time when all fishing was tabu."

— Mary Kawena Pukui

The fisher's dark skin, still wet from a burst of tropical rain, reflects the sheen of the full moon's glow as he makes his way down the path toward the sea on the north shore of Oahu. Reaching the water's edge, in a protected cove where the swell is calmed by enclosing fingers of lava rock, he sorts out his net and prepares to fish. He knows what he is doing is prohibited, but he takes the risk anyway. There are many reasons for his actions—some perhaps justifiable—but that's not what he is thinking about. He is Hawaiian. He has a family. He is a po'e lawai'a—a fisherman.

A sound from the rock ledge overlooking the cove attracts his attention. He looks up and sees two men silhouetted by the moonlight. It is too late to hide. They have seen him. For a moment, the fisher considers swimming out to sea, but he knows there is no escape. He collects his gear and climbs back up the path to where the men wait. He took the risk, and he knows the consequences. Even if he does not agree with the law, there is no escaping the penalty. This he knows.

The next day the fisher will be executed—drowned in the same cove in which he was fishing. He broke the ancient kapu that prohibited fishing during the spawn. The punishment is death.

I have the violent old fishing taboos in mind when visiting the Waikiki Aquarium on the island of Oahu, where I notice a family from the American Midwest marveling at Hawaii's incredible diversity of tropical marine life. Yellow Tangs, Longnose Butterflyfishes, Masked and Bandit Angelfishes, gloriously pigmented Regal Parrotfish, and myriad other species sweep and dart in the currents as they negotiate an artificial reef structure built to mimic the local rocky shoreline.

An aquarium docent describes the reef ecosystem as the rainforests of the sea and warns of the dangers they face. The reefs

Yellow Tangs are Hawaii's leading live fish export and are at the center of most arguments about the sustainability of the aquarium fishery here. Previous page: Shoal of Hawaiian Dascyllus, *Dascyllus albisella*, above a *Porites* colony.

around Hawaii are not what they once were, she explains. Terrestrial development, climate change, overfishing, and a host of other anthropogenic stressors are to blame. This is important stuff, no doubt, but today it is the face-to-face interaction between a young girl in a pink hoodie and a Crosshatch Triggerfish (*Xanthichthys mento*) that has my full attention. Nose to glass, she stares into the fish's eye and recognizes something. Curiosity? Connection? This is the type of magic that aquarium fishes can conjure, and yet to many there is an inherent contradiction in such places, especially if the aquarium is under the care of a "hobbyist" in his or her home.

In our twenty-first century, globalized lives, our impact extends well beyond our own daily interactions, and yet we so easily become complacent about things with which we don't come into direct contact. This has a cumulative and somewhat numbing effect in my experience. I went hunting once with a friend near my cabin in Wyoming, and when he had an elk in the sights of his rifle, he couldn't pull the trigger. We stopped for a burger on the way back to the airport in Jackson for the trip home to his urban life. He didn't see the contradiction.

Coming face-to-face with a living animal—be it elk or a fish—can cause us to rethink our relationships to other species and, by extension, the ecosystems from which they come. I eat both elk and fish, and I consider myself an advocate for wildlife and oceans. This is not a moral contradiction. To me, the fact that I paid $9 to visit the Waikiki Aquarium to admire the beauty of Hawaiian fishes is not at odds with the fact that I will eat Hawaiian-caught Mahi-Mahi for dinner tonight. By the same token, I see no contradiction in having a 135-gallon reef tank populated by predominantly wild-collected fishes within sight of the desk where I pen articles about sustainability and coral reef conservation.

Robert Wintner does.

Wintner, who frequently goes by the *nom de plume* "Snorkel Bob," is one reason I'm in Hawaii researching the marine aquarium trade. For me, Hawaii is another stop in what has become an extended odyssey to come to understand what a sustainable marine aquarium trade looks like. I am particularly interested in seeing how the collection of reef animals from the wild is managed in a sustainable way.

ALL UNDERWATER IMAGES BY KEOKI STENDER | WWW.MARINELIFEPHOTOGRAPHY.COM

For Wintner, who owns the largest reef sports outfitting business in the Islands, Hawaii is Ground Zero for his battle against a trade he has spent a lot of time and money portraying as "morally challenged." When the anti-whaling Sea Shepherd Society published his essay entitled "The Dark Hobby; Can We Stop the Devastating Impact of Home Aquaria on Reefs Worldwide?", it was greeted with perfunctory expletives by many in the Hawaiian Islands familiar with his crusade. More than a few concerned aquarists, on the other hand, wanted to know if Wintner's claim that the aquarium trade aggressively and irresponsibly overharvests fish in Hawaii was factual. More than one asked questions in this vein: "If the trade isn't sustainable in Hawaii, how can it be sustainable in developing island nations where oversight and regulation is not what it is in the U.S.?"

FACE TO FACE WITH SNORKEL BOB

Several days after my visit to the Waikiki Aquarium, I deplaned from a small Cessna Grand Caravan at the airport on Maui, where Wintner lives. My goal in coming to Hawaii was to give aquarists an accurate picture of the trade in the state that is most important for marine aquarium collection. In the absence of any viable system for traceability of fishes and invertebrates in the hobby, the best tool for the aquarist who wants to use his or her purchasing power to support sustainable wild collection is geography, and I wanted to be able to answer the sustainably-minded aquarist's question: "Can I buy Hawaiian animals with confidence?" Wintner is on the record saying that we should not only stop buying fish from Hawaii, we should drain our aquaria.

Wintner and I sat down at a Starbucks on the Dairy Road not far from the airport to discuss the trade. Wintner begins by telling me his own story; this campaign against the aquarium trade is, after all, deeply personal for him. Wintner's argument is primarily rooted in his own experience diving the reefs of Maui. He tells me there was once "an abundance of fish" in Hawaii. Now the "aquarium hunters" have diminished that abundance. "Aquarium hunters have oppressed Hawaii's reefs for years," he says. "With no limit on catch or number of catchers." If it doesn't stop, Wintner contends, there will be no fish left. "Ninety-eight percent of Hawaii's reefs can be emptied of every fish by the aquarium trade, and it's legal."

I proffer that this is an exaggeration not based in fact. (For example: 35% of the reefs on the Big Island of Hawaii, which is where the aquarium trade is concentrated, are completely off-limits to livestock collectors.) I suggest that this is hyperbole in the service of his ends, but Wintner remains firm. "They can do whatever they want," he says.

What about the permitting and reporting system? I ask. "Anyone with Internet access and 50 bucks can get a permit...and there are huge discrepancies between reported catch and actual catch," Wintner counters. "The Division of Aquatic Resources [DAR] has admitted that the report of catch of 1 to 2 million fish per year is off by a factor of two to five times." DAR's published numbers do not bear any resemblance to those Wintner attributes to them.

But still, I continue, the fishery is managed by the state to be sustainable, right?

Robert "Snorkel Bob" Wintner: reef sport entrepreneur and arch foe of marine livestock collectors.

"A state agency manages the trade as a 'fishery,' and [the Department of Land and Natural Resources (DLNR)] calls the aquarium trade 'sustainable,'" Wintner admits, "but it's really nothing more than disposable wildlife pet trafficking for the money. By sustainable the DLNR means taking all but a few brood fish so the species won't collapse."

I have reams of data from marine scientists in my notebook on the table between us that clearly refute Wintner's claims. While there are myriad ways to interpret the data, there is no scenario in which any one species has been overfished to the point where only a few brood fish remain. Based on my reading of the data, and the interviews I have already conducted, I suspect that the fishery needs to be better managed if it is to continue to be both robust and sustainable, but what I'm really interested in knowing is whether or not Wintner thinks the fishery itself is unsustainable at present.

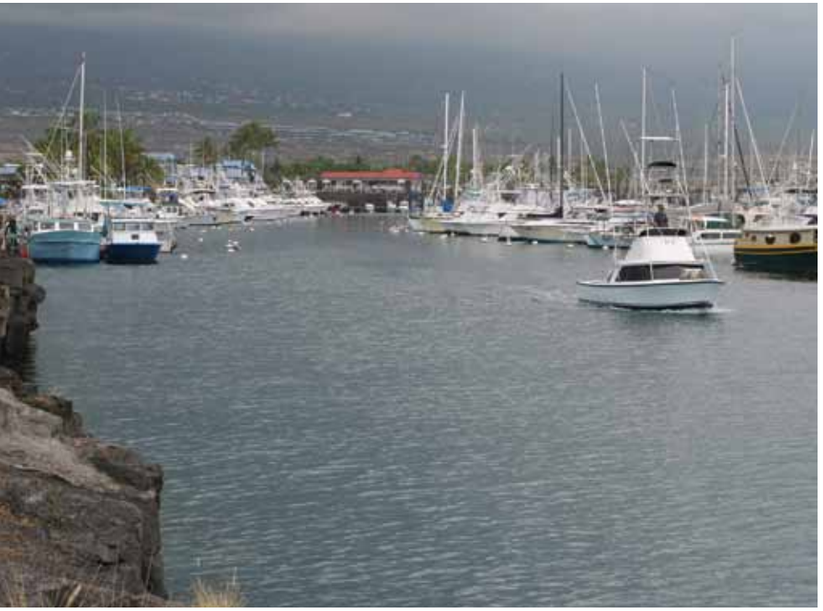
"Sustainability ignores the ethical issue," Wintner responds. And that's when I get it. Debating whether or not the marine aquarium fishery is sustainable is not an option with Wintner because he doesn't agree to use the accepted language of fisheries management when it comes to marine aquarium fishes. For him, this is not

ILLUSTRATION BY JOSH HIGHTER | ORIGINAL IMAGE: WWW.SMALLTOWNMAUI.ORG

about sustainability—it is about morality. As our conversation continues, Wintner won't even discuss the marine aquarium fishery as a fishery.

"We don't use the 'f' word," he says, referring to fishing. "This isn't fishing. Fishing is about sustenance. This is wildlife trafficking for the pet trade, and people shouldn't keep wild animals. This is a crime against nature being committed in Hawaii," he says. "I am here because I have a relationship with fish...It's a moral issue."

As I drive the road to Hana later that day to meet with a cultural practitioner, I think back over my conversation with Wintner. His arguments are about ethics and morality. They are about his own individual relationships with fishes, not unlike the relationship between the girl and the Crosshatch Triggerfish I observed at the Waikiki Aquarium. I can respect that, even if I don't agree with his position. That said, it is important to understand that Wintner is not making an argument against the so-called "trop" or AQ fishery, for, by his own admission, he does not acknowledge the existence of a marine aquarium fishery. While he sometimes uses data—hard numbers—to support his position, when pushed he always comes back to his central premise: the marine aquarium trade is immoral.



Kona Harbor, the center of the marine aquarium collection trade on the west coast of the Big Island of Hawaii, where the vast majority of Yellow Tangs are harvested.

THE AQ FISHERY

Since before Hawaii became a state, the marine aquarium (aka "trop" or AQ) trade has been managed as a fishery in a manner most people would agree is no more or less moral than any other fishery in state waters. Millions eat fresh fish from Hawaiian waters each year, and many native Hawaiians and tourists love to fish and spearfish, taking large tangs, triggerfishes, groupers, and other reef fishes well known to aquarists.

The first aquarium collection permitting system in Hawaii was established in 1953 and anticipated a profitable and sustainable fishery. Much has changed since then, but those responsible for managing the fishery today maintain that it is, at present, a sustainable and important one.

Over the past 50-plus years, it has grown to become one of the state's largest inshore fisheries, with a reported value of over $2.2 million based on just under 700,000 animals collected annually, according to state records. In reality, the trade is probably significantly larger than that, but nowhere near the high end Wintner conjured in his Sea Shepherd essay. The trade's trajectory from the early years to present has grown far faster than the funding for the state agencies responsible for managing it. The result is a plethora of reporting, enforcement, and oversight challenges. State officials are clear on one key point: the marine aquarium fishery in Hawaii will remain sustainable only if additional management measures are enacted.

Time and again during my time in Hawaii, I am told that hundreds of years ago, when Hawaii was inhabited exclusively by Pacific peoples possessing a longstanding and intimate relationship with the ocean, the management of what we would call "the resource" was effective. This is the reason I have made the long drive to Hana on the island of Maui.

Hana is about as Hawaiian as you can get, and the gentleman with whom I am meeting, an individual who prefers to remain anonymous, is introduced to me as a "cultural practitioner." As a person who both traces his ancestry back to the earliest Hawaiians and continues to perform his cultural, traditional, religious, and customary practices protected by Hawaiian law, he seems uniquely qualified to talk about the sustainable traditions of the culture of these islands.

We meet at Pi'ilanihale heiau, an ancient temple dating back perhaps 700 years. Built of lava rock, it is a massive platform with commanding views from high peak to ocean. "In the old ways, Hawaiians lived by ahupua'a," he explains. "From the top of the mountain to the sea." He makes his hands into the shape of a piece of pie.

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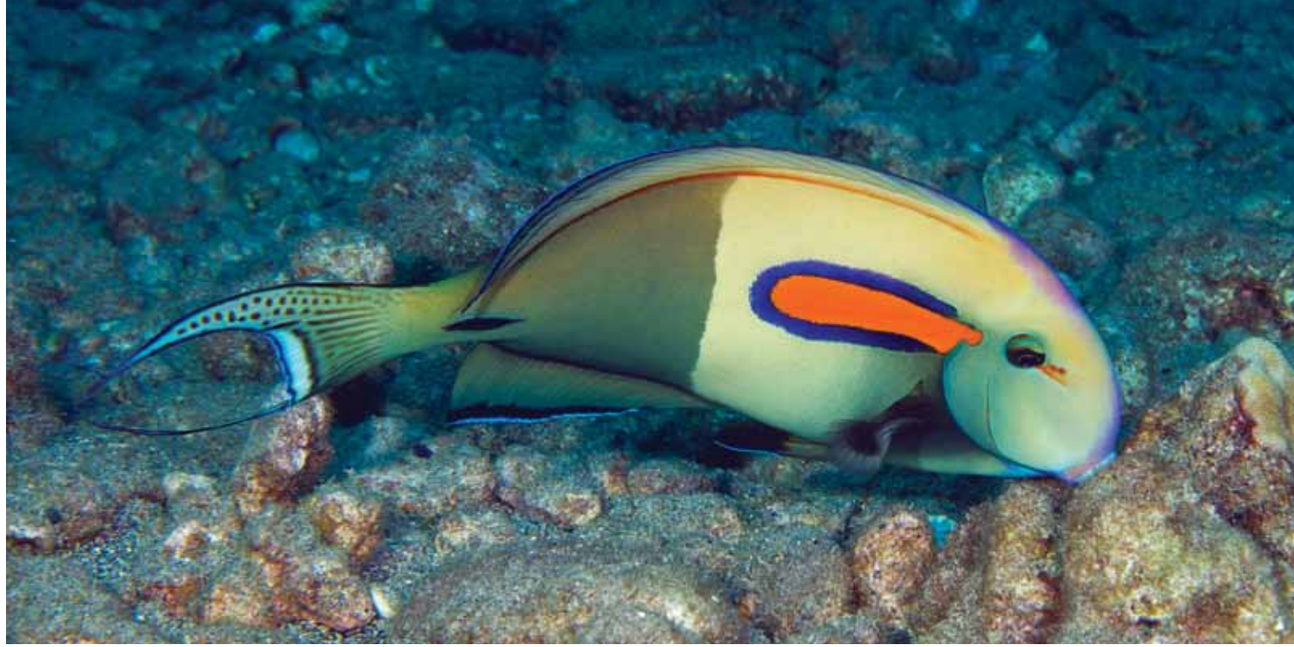

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Orangeband Surgeonfish, *Acanthurus olivaceous*: One of 40 species on a proposed new White List of species approved for collection in Hawaii. Some150 species would be blacklisted.

"This was the system by which land was divided, and it was, to use your word, sustainable. Caring for the land was the central idea behind ahupua'a."

He goes on to explain that each ahupua'a was managed by the chief through a complex system of laws known as kapu. The kapu system dictated what each person, based on his or her rank in society, could do or not do. In the case of resource management, the kapu system was intuitively based on sustainability. "Overharvesting of plants and animals was prevented by the kapu system," he says, explaining that certain restrictions or taboos on various fishes, for example, were seasonal according to both the life cycle of the fish and the abundance at any given time. "The time of the kapu was decided by the priests along with those who knew the habits of the fishes." The punishment for breaking the kapu could be death.

BUT TIMES CHANGED

"Much has changed, but much remains unchanged," the cultural practitioner tells me after a prolonged silence during which I try to reconcile the utopian society just described and current resource management. From western development practices to the introduction of invasive species, I can't help but think that we people of European descent have brought lamentable changes to these islands.

"The men who take the fishes from the sea to make them pets?" He sighs deeply. "This is not something that would have been done because people had a relationship with the fish. A fish could help you or it could be your ancestor." He goes on to explain, much as Wintner did, that eating a fish that is not restricted by kapu is different than collecting one to put in an aquarium. "One is about sustenance," he says, as we walk back to where the cars are parked. And then he asks me a question.

"What is aquarium keeping about?"

I tell him about the girl at the Waikiki Aquarium—the one who pocketed her iPhone and spent several long moments face-to-face with a triggerfish. "To me, that's what it is about," I say. I suggest it's about empathy and education. "My daily interactions with my marine aquarium fishes, corals, and other invertebrates make me more curious, better informed, and ever more in awe of coral reef ecosystems," I explain. "My home aquaria are opportunities to share that curiosity, information and awe with others."

He smiles. "Times change, and the oceans need people who care. It sounds like you care." It's my turn to smile. We shake hands, and I head back to the airport for the quick trip to the Big Island.

HEALTHY FISH: REEF TO AQUARIUM

On the flight to the Kona International Airport on the Big Island, I stare out over the expanse of ocean glinting with bright moonlight. As the dark shoreline of the Big Island comes into view, I am reminded that this is, geologically speaking, the youngest of the Hawaiian Islands. While the Kona Coast of the Big Island today is home to the bulk of the Hawaiian marine aquarium trade, both in terms of animals collected and economic value, it did not begin here.

The trade was put in motion by legislation in 1953, but did not come into its own until the early 1970s, and—at that time—all the action was on Oahu. I was given a glimpse into the early days of marine aquarium collec-

tion on Oahu in the upstairs office of Wayne's Ocean World in Aiea, Oahu. Owner Wayne Sugiyama and several of the marine aquarium fishers living and working on Oahu agreed to meet me and discuss the trade. These guys have been around the marine aquarium fishery in Hawaii since pretty much the beginning, and, perhaps not surprisingly, they believe the fishery is sustainable.

"For most of us it started as a hobby," says Sugiyama. He has four decades of experience under his belt, and it is far from a hobby for him and the other fishers gathered around the table. Most of them earn the majority, if not all, of their income from the trade. Like most of the guys, Sugiyama began by collecting nearshore fishes and invertebrates while freediving without an air supply in the early '70s. With the advent of SCUBA, he began collecting deeper-water fishes; then, in the early 1980s, he transitioned from collector to manager to entrepreneur, and today owns one of the biggest import-export marine fish businesses in the state.

"Through the years, I've seen great advances in collecting and diving equipment and aquarium technology. This has resulted in more efficient methods of collecting fish safely and providing higher quality fish from Hawaii," says Sugiyama. I point out that it is this efficiency that concerns some of the anti-trade proponents. Sugiyama has another take on that. "Efficiency equates to spending less time in the water, collecting only what is needed, and transporting the fish to the holding facilities faster."

In short, the fishers agree that efficiency on their part is exactly the reason the Hawaii fishery is known for sustainably providing such healthy, high quality fishes to aquarists. Add to the efficiency of the collectors a short supply chain and the fact that destructive fishing practices are almost nonexistent in Hawaii, and it's clear why so many aquarists buy Hawaiian fishes with almost complete confidence, knowing that Hawaiian fishes will be healthy and long-lived in their aquaria.

WHAT ABOUT SUSTAINABILITY, THOUGH?

"The world market can only take a certain amount of fish," responds Sugiyama, "and this becomes self-regulating for the collectors. This is how divers insure sustainability for their industry." This response is one I hear time and again from divers—the trade will regulate itself through the natural market forces of supply and demand. While this indeed seems to be the case on Oahu at present, it is not at all clear that the same can be said about the Big Island. Nor is it clear that upward shifts in demand couldn't lead to overcollection if the market was the only thing to stand between a sustainable fishery and an unsustainable fishery. Luckily, it is not. As I increasingly come to understand, it is the fishers themselves who have long been gatekeepers of sustainability—fishers like Dennis Yamaguchi.

Yamaguchi, another fisher at the table, firmly believes the marine aquarium fishery in Hawaii is sustainable. "It is a tradition to care for the resource in Hawaii," he says. Yamaguchi has been collecting marine aquarium fishes in Hawaii since the mid-1960s, when he experimented in his own aquarium with a variety of species caught near his grandparents' house. Toward the end of the decade he began collecting fish while freediving on the west side of Oahu. He remembers well his first catch at Waianae, when he collected a Potter's Angelfish (*Centropyge potteri*), a Longnose Butterflyfish (*Forcipiger longirostris*), a Pebbled Butterflyfish (*Chaetodon multicintus*), and a small Achilles Tang (*Acanthurus achilles*). "The smaller Achilles were highly prized even back then," Yamaguchi tells me.

In 1970, Yamaguchi sold his first fish to Modern Pet, a local fish store in Honolulu, and realized he could make money doing what he loved. "During the beginning snorkeling years," he recalls, "the catch was mainly inside the reef—fish like Raccoon Butterflies (*Chaetodon lunula*), Auriga Butterflies (*Chaetodon auriga*), Moorish Idols (*Zanclus cornutus*), Rectangular Triggers (*Rhinecanthus rectangulus*), and some Yellow Tangs (*Zebrasoma flavescens*)." A few years later, now certified in SCUBA, he began setting his sights on other species. "As we got better we began to venture into deeper waters at Waianae. Waianae was, and still is, known for its variety." In addition to the fishes already mentioned, he also started collecting Potter's Angels, Longnose Butterflies, Teardrop Butterflies, Naso Tangs, Achilles Tangs, and Red Lions.

Gradually, Yamaguchi started earning a more regular income from collecting fishes for the marine aquarium trade. "I dove from shore, one tank a day, two or three days a week," he recalls. "It was still part time, but once I began using SCUBA gear, all the open-sea fish were accessible." In 1974, Yamaguchi transitioned to selling fishes full-time, and two years later he was able to save up $1,000 for a 13-foot Boston Whaler. "I would fish off this boat for almost 30 years," he laughs. By 1981, nearly 85% of the aquarium fishes collected in Hawaii were being collected by Oahu's fishers.

"Have you seen fewer fishes around Oahu since you started collecting for the marine aquarium trade?" I ask him.

HURRICANE IWA'S AFTERMATH

"Yes," says Yamaguchi, "but I don't think it has to do with the collectors. Especially here on Oahu. The most significant event in my diving career was Hurricane Iwa [in 1982]," he recalls. "It hit the west side of Oahu especially hard. Luxuriant *Porites* coral stands, which are needed by Yellow Tangs, were 90% destroyed at Waianae. Live *Porites* rubble piles, a major habitat for aquarium fish, were scattered and buried in sand. To this day, the large rubble piles remain dispersed and will most likely not return in my lifetime."

In reality, Hurricane Iwa added insult to injury for the aquarium collectors, who were already feeling the pressure from the combined forces of recession and skyrocketing oil prices. "As if all this wasn't enough," Yamaguchi adds, "Hurricane Iniki came along in the early '90s and devastated what Iwa missed." Today, the Oahu fishery accounts for fewer than half of the Hawaiian animals collected, although Oahu is still central to the trade in terms of imports from other Indo-Pacific island nations. As such, the marine aquarium trade in Hawaii plays an important role in sustainable socioeconomic growth in developing island nations.

"This has always been a quality fishery," one of the fishers gathered around the table at Wayne's Ocean World points out. "We've always done it right." While they acknowledge they legally have few restrictions on their catch, they reiterate that the demand itself regulates the trade. "We deal in about 100 species, and most are collected to order. "We seldom hold fish for any length of time," another says. They point out that even if there was greater demand, it would be foolish to collect in an unsustainable manner. "It's like farming," one fisher explains. "To be successful, we need to harvest year after year, and it would be foolish to over-harvest one year and then have nothing left in the future." Nonetheless they concede more regulation would make the fishery easier to defend against accusations of unsustainability, although they disagree on exactly what regulations would be appropriate.

The first bay designated as a Marine Protection Area and an important site for ancient Hawaiian islanders. Once overfished for aquarium and food species, the reef here has seen its fish populations rebound impressively.

RET TALBOT

Disagreement among fishers as to how the fisher community should respond to critics and work with state officials has been a consistent problem and has probably exacerbated the tension between pro-trade and anti-trade forces. To complicate matters, the two largest fisheries in Hawaii—Oahu and Big Island—are radically different in many respects. It is unlikely that a one-size-fits-all management plan will work for both islands. "In Oahu, we don't have a lot of conflict with

dive operators," one Oahu fisher points out. "I think you'll find a very different story on the Big Island."

YELLOW TANG SCARCITY?

Indeed, I do find a very different story on the Big Island. With a few hours to kill before checking into my hotel, I decide to do an informal survey of Kona dive shops. After my first interaction, I find it is easier—perhaps even safer—to not identify myself as researching a story for a marine aquarium publication.

Someone at each store I enter, whether it is the owner or an hourly employee, has an opinion on the aquarium trade, and none of them are positive. I hear a lot of the same accusations voiced by Wintner, sometimes nearly verbatim. Most seem to agree that the trade should be shut down altogether, although one college-aged employee allows as how "better management might solve the problem."

"And what is the major problem?" I ask.

"The Yellow Tang," he says. "They used to call this the Gold Coast because there were so many Yellow Tangs. Now they are rarer and rarer."

For many, the controversy over the fishery along the Kona Coast does come down to this iconic fish, which is undoubtedly emblematic of Hawaii. I am told by Dr. William Walsh, a DAR aquatic biologist on the Big Island, that the Yellow Tang makes up over 80% of the fishery there. After Hurricane Iwa, when Yellow Tang became scarce around Oahu, the bulk of the Hawaiian marine aquarium fishery shifted to the Big Island. Today, the fishes collected along the Kona Coast account for nearly 70% of the total value of the fishery statewide. While commercial permitting has increased on all islands, nowhere has the growth in the number of collectors been as marked as on the Big Island. During the last 20 years, commercial permits here have increased by more than 600%, and so has the level of controversy.

On the Big Island, clashes between aquarium fishers, divers, and other stakeholders have been more the norm than the exception. Much, if not all, of the controversy up until the 1990s was based largely on anecdotal evidence—the kind Wintner frequently uses. Statements like "When I dove this site 10 years ago, there were two or three times as many fishes" make for good headlines, but without the science, the conflict pretty quickly devolves into a shouting match.

In the 1990s, the DAR conducted the first widely accepted, peer-reviewed study on the impacts of the Big Island's marine aquarium fishery on target species. The study, which was carried out in conjunction with the University of Hawaii at Hilo, looked at the impacts of aquarium collecting along the Kona Coast, where upwards of 98% of Big Island marine aquarium collection occurs. The results of the study gave anti-trade propo-

HAWAII'S "TROP" TRADE SNAPSHOT

Statewide: 240 species collected (190 fish species; 50 different invertebrates)

Total State Catch (both fish and invertebrates): 699,119 animals. Value to collectors: $2,276,535

Total Fish Catch: 492,390 specimens; value $2,203,878 (97% of total value)

Top 10 Fish Species Catch: 449,047 specimens; value $1,948,210 (91% of catch, 88% of total value)

Big Island Fish: 79% of total fish catch (72% of total fish value)

Big Island Total Catch: Value is 72% of total state catch value.

Source: Dr. William Walsh, Hawaii Division of Aquatic Resources

KEOKI STENDER

nents some of the first science-based evidence that the marine aquarium trade might be having a negative impact. Seventy percent of the fishes targeted by marine aquarium fishers were, according to the study, "significantly reduced by collecting"; at least one targeted species (the Fourspot Butterflyfish, *Chaetodon quadrimaculatus*) showed up to a 75% reduction in abundance at collection sites.

This study, along with mounting anecdotal evidence produced by stakeholders and citizens, resulted in the passage of Act 306 in 1998. This Act established a West Hawaii Regional Fisheries Management Area and a mandate to create Fish Replenishment Areas (FRAs), where aquarium collecting would be banned, along over 30% of the Kona coastline. (Spear and hook-and-line fishing are allowed in these FRAs.) Implementation, delegated to a group of stakeholders and government officials called the West Hawaii Fisheries Council, was carried out over the next several years. Within a few years of the establishment of the FRAs, positive impacts were reported in two noteworthy marine aquarium species—the Potter's Angelfish (*Centropyge potteri*) and the Yellow Tang—with increases as high as 80% in the FRAs. This proved, according to some parties, that marine protected areas (MPAs) are a viable strategy for managing a fishery.

Unfortunately, Act 306 and the establishment of the FRAs did not set up a decade of peace and harmony amongst stakeholders and citizens on the Big Island, as some hoped it might. When I arrived this past fall, in the wake of Wintner's editorial and subsequent book tour aimed at ending the marine aquarium industry in Hawaii, and a new piece of legislation aimed at banning the marine aquarium trade effective January 2011, the tension was palpable. I had the opportunity to meet with Big Island fishers, anti-trade activists, and DAR biologists, and while they all alluded to moving toward consensus, decades of mistrust and animosity lurk in every corner.

WORRISOME DATA: "TRENDS ARE DOWN, DOWN, DOWN"

Most of the Big Island's marine aquarium catch is landed at Honokohau Harbor in Kona, and this is where I meet Dr. Walsh. I can't help but recall that this is also the place where, last year, more than 600 marine aquarium fishes—mostly Yellow Tangs and butterflyfishes—were found dead in a dumpster, apparently having died in the hands of an irresponsible collector. Photographs of the fishes horrified environmentalists and aquarium collectors alike, and their publication added fresh fuel to Snorkel Bob's attacks. They also put more pressure on state biologists like Walsh, who is charged with protecting natural resources.

During a meeting that lasts more than an hour, Walsh goes over his data with me regarding the marine aquarium fishery. Most of it is information with which I am familiar from various reports, private correspondence, and public reporting on the trade. Unfortunately, there is much conflicting evidence about the level of collection in waters of the West Coast of the Big Island. I ask Walsh a simple question: Is the fishery sustainable?

Walsh leans back in his chair. "No," he says. "Not the way it's being fished now because trends are down, down, down."

Walsh is referring specifically to trends in Yellow Tang populations. "The Yellow Tang fishery is 81% of the West Hawaii fishery," he explains, as he takes out a graph showing Yellow Tang abundance trends in West Hawaii from 1999 to 2009. The top line on the graph indicates abundance in marine protected areas (MPAs), the middle line represents abundance in the FRAs, and the bottom line indicates abundance in open areas where aquarium collection takes place. The top two lines, while generally growing closer together, clearly indicate that Yellow Tang abundance in the protected areas has been in decline since 2006. The bottom line shows an upward trend from 2008 to 2009, but has continued to move further and further away from the top two lines.

"What is of particular concern is the decline in open areas in recent years and the increasing disparity between the open areas and the protected areas," says Walsh. "Over the past three years, the open areas have had 73% fewer Yellow Tangs than the protected areas. This is not an encouraging trend, nor a sustainable one for the fishery." These open areas account for 65% of the coral reefs off the Big Island.

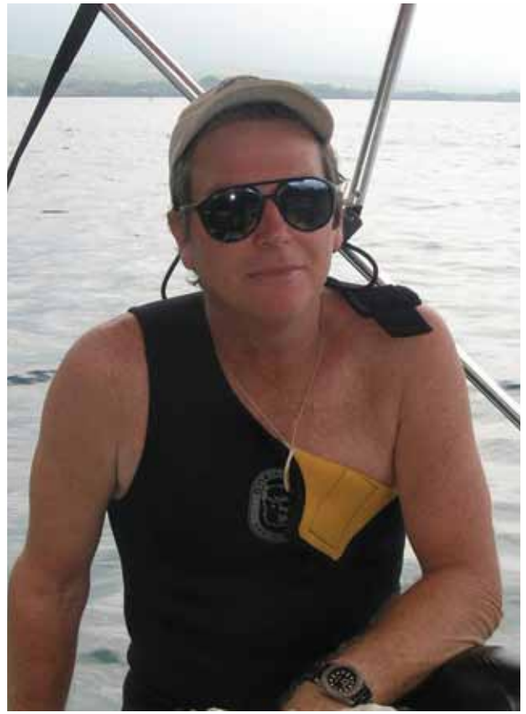
Clearly, collection is having a measurable impact on Yellow Tang abundance in areas open to fishing, which, in and of itself, should be what we expect. The trouble is that the gap between abundance in the protected areas versus the areas where the collectors are collecting continues to widen instead of stabilizing. The upward trend from 2008 to 2009 is probably based on a year with exceptionally high recruitment (successful settling of young fish), and, over time, the years with excellent recruitment have managed to keep the fishery sustainable in very general terms, but Walsh doesn't expect that to continue indefinitely.

"As it stands now, with the present numbers of collectors and the intensity of collecting, only prodigious recruitment each year can prevent the yearly loss of most of the young Yellow Tangs in open areas."

"It can be a sustainable fishery , though," Walsh says, and he explains the deal recently brokered between the stakeholders, which includes a swap of some unprotected area in front of a development for some protected area further off the beaten track and a 40-species "White List." The list represents the species that may be collected, while effectively blackisting everything else (190 species of fish were collected last year, according to DAR data).

Walsh tells me that he is confident that this agreement will be a strong move toward insuring a sustainable fishery. In addition, he thinks a limited-entry rule change, which would limit the number of fishers, is critical. "The take-home message is that, for the Yellow Tang fishery, the numbers of fishers and the number of Tangs taken needs to be reduced. Limited entry is an essential step in the management of the fishery. Luckily for us, it's not too late. It is a vulnerable fishery, but there is infrastructure we can put in place to insure sustainability."

Dr. William Walsh, aquatic biologist with the state Department of Aquatic Resources: "It can be a sustainable fishery, but not the way it's being fished now."



COURTESY DR. WILLIAM WALSH

Later that day, I ask the president of the Big Island Association of Aquarium Fishermen (BIAAF), Bob Hajek, what he thinks of Walsh's proposals. Two of the other three fishers who are sitting with us have been part of the Big Island fishery for more than 30 years. Like the other fishers I have met, Hajek expresses frustration with the continual attacks on the trade, and he tells me that is why aquarium fishers have formed associations like the BIAAF—"to give our side a singular voice."

"We used to fight everything on a grassroots level," Hajek says. "We've had gentleman's agreements with the dive companies, and they didn't work. Then the state stepped in more aggressively with the passage of Act 306. What you need to understand is that these current rule changes are on top of decades of changes where we, the fishers, have made concession after concession."

Nonetheless, the BIAAF is ready to accept the rule changes Walsh wants to see enacted. The White List seems acceptable so some—but by no means all—collectors, as the 40 approved species account for an estimated 99% of the value of marine species.

"We want people to know we are both reasonable and responsible," Hajek says. He hopes that now, with an Association in place that gives the fishers a unified voice, the slate can be wiped clean. "The swap is a great example," he goes on to say. "The BIAAF worked very hard on that part of the deal. While an actual swap did not occur, in less than four months the BIAAF managed to give the community of Pebble Beach what they had been trying to get from the West Hawaii Fisheries Council for the past six years. We are proud of what we did for their community."

Earlier in the day, before meeting with the Big Island fishers, I sat down with Tina Owens, the executive director of the LOST Fish Coalition, a citizen's group whose battle cry is *Leave Our Shallow Tropical Fish In their Sea Habitat*. LOST Fish has been one of the most active and organized of the anti-trade groups. Owens told me that LOST Fish would not continue to fight for a ban on marine aquarium collecting if the agreed-upon rule changes came to fruition. Could this be a new dawn?

LINGERING CLOUDS

It may not be clear sailing yet for Hawaiian marine collectors—Wintner is not likely to go away, and there are other powerful forces working to ban all collection.

On my very first morning in Hawaii, I went to the State Capital in Honolulu to meet with Senator Josh Green about his bill to end the marine aquarium trade in Hawaii. Green greeted me in his office wearing jeans and a hospital-blue scrubs top—he is an ER doc, and he usually deals with health bills.

"I'm surprisingly neutral [on marine aquarium fishing]," is one of the first things Green says to me about his bill. This catches me off guard. So why is he proposing this bill? "I've watched the nonsense at the county council level, and I can tell you the typical political back-and-forth is not working," Green tells me. "Both sides have gotten nasty. Those [people] at the extremes are driving the legislation."

While Green's bill, if passed, would be signed into law in 2011, by his design it would not come into full effect until 2016. "That gives industry and conservation people a chance to collaborate before the ban goes into effect. The intent of the legislation is to bring people together...and to let the state bring in biologists to get data."

Fishers on both Oahu and the Big Island express frustration and anger when I ask them about Green's bill. What bothers them most is that Green, by his own admission, knows little about the fishery, and yet he is proposing a bill that could end all of these fishers' livelihoods. But Senator Green, I have to remind myself, is an elected official. He strives, like most elected officials, to continue to earn the votes of his supporters. "Tourism is number one in Hawaii," and an unsustainable marine aquarium trade that decimates populations of reef fishes could negatively impact tourism. Green says he doesn't know if the aquarium trade is unsustainable or not, but he is confident that there is an answer to that question.

"I am a scientist," Green says, "and I tend to defer to whoever comes in with good science."

THE AQUARIST'S ROLE

In a recent NPR interview, Robert Wintner said "It doesn't mater how many millions of fish these guys are taking. They're taking fish...critical to a system in decline, and that's wrong." Hawaii's fishers, and not just the aquarium fishers, believe the numbers do matter. Why? Because sustainable fishing, like the snorkel tour business, provides important income for fishers and for associated businesses in Hawaii. Because many fishers believe that, just like snorkelers, educated marine aquarists and educated consumers of Hawaiian seafood can be important advocates for reef ecosystems in decline. Because fishers are watermen who work on the water day-in and day-out and who appreciate and love the majesty of ocean ecosystems. For all of these reasons, Hawaii's fishers care about Hawaiian fisheries being sustainable over the long term, and so they are offended when someone like Wintner is careless with the data he uses to tell them their livelihood is "wrong."

How can marine aquarists support the collectors' efforts? Buy Hawaiian fishes with confidence, knowing they are among the healthiest animals available to North American hobbyists, and that destructive fishing practices are almost unheard of in the fishery. Be willing to pay a premium for these animals, and consider boycotting Hawaiian animals offered at suspiciously deep discounts—this is a quality fishery, and quality livestock costs more than that peddled by the cheap-and-dirty trade. Finally, stay informed. Ask questions and demand opinions based on facts rather than anecdote and innuendo.

As I leave Hawaii, the image of a long-forgotten fisherman paying the ultimate price for violating ancient fishing rules haunts me. In many ways, the lack of a contemporary system of effective science-based rules and regulations to manage Hawaii's marine aquarium fishery has led to the current situation and mudslinging. We no longer have chieftains to decree death to fishing violators, but the ancient Hawaiian tradition of protecting the sustainability of the islands' precious fisheries is something that must not be lost.

Ret Talbot *is the coauthor of* The Complete Idiot's Guide to Saltwater Aquariums *(Alpha, 2008) and a frequent* CORAL *contributor. He lives in Laguna Beach, California.*