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ENERGY & ENVIRONMENT

Maui Could Be First County To Protect Aquarium Fish

AUGUST 20, 2010 · By MICHAEL LEVINE



A scuba diver sees a brightly colored fish dart behind a rock. He follows it, waits for it to stay still and snares it in his net.

That scene is played out every day in Hawaii, with collectors catching prey not for food, but for private display, mostly on the mainland. The aquarium industry brings millions of dollars to Hawaii's shores, but some argue that it faces little oversight as it pillages one of Hawaii's most treasured resources.

Today Maui is poised to become the first Hawaii county to pass an ordinance that would require permits and reports for the extraction of aquarium fish from local reefs. With no limits on how many people can catch the fish or on how many they can take, proponents of the bill say it's desperately needed.

"If you love Hawaii, you've gotta love what's here, and not want it strip-mined," says Robert Wintner, executive director of the Snorkel Bob Foundation, an organization focused on reef recovery that backs the measure. "There is no limit on the catch, none on any species, no constraints on endemic or vanishing fish. ... There's an assembly line of Styrofoam coolers getting onto the airplane."

Regulation has fallen to the counties because the state's permitting process doesn't put any restrictions on the people who catch the fish. It just requires that they register and file a report on their take. The federal government only gets involved when the fish are exported internationally. The Federal Endangered Species Act doesn't come into play because the fish are not officially listed as threatened or endangered, which requires a long and costly process.

While Maui doesn't have the state's biggest fishery, its county council appears to be the most open to regulating its reefs.

Photos copyright 2010 Robert Wintner are taken from Some Fishes I Have Known (Skyhorse Publishing, NY), to be released Oct. 1, 2010.

Wintner says the bill scheduled for a final vote today by the Maui County Council will provide much-needed accountability.

If it passes and is signed by Maui Mayor Charmaine Tavares, Bill 52 [pdf] will require that those collecting aquatic life prominently display a permit and compile two reports each year detailing how many fish, by species, were collected and sold and how many died while they were in the

collector's possession.

Those found to be in violation of the ordinance would be guilty of a misdemeanor and could be fined up to \$2,000 and imprisoned for up to a year.

The bill has been watered down, with tougher restrictions on the handling of fish placed in a separate measure that isn't as close to passage.

One person who is, perhaps unexpectedly, in support of the permitting regulations is Richard Xie, president of the Living Art Marine Center, among the state's largest aquarium fish exporters.

"I think if you have proper regulation, it should be a good industry in the long-term," Xie said at his Honolulu warehouse Saturday. He says the real threat to the reef comes from inexperienced "garage operations" that don't have a stake in the future of the industry and thus don't take precautions to protect the ecosystem. They often don't pay commercial rent or property taxes either, he complains, driving down prices and depriving the local economy of much-needed revenue.

Xie said he's in favor of even stronger regulation, such as warehouse inspections he's already subjected to by the federal government due to his status as an international exporter. Xie's company, located a stone's throw from Honolulu International Airport, exports Hawaiian fish and serves as a way station for species shipped in from Australia, Indonesia, Mexico, the Caribbean and the Red Sea. But the Living Art Marine Center also offers tours of its facilities and educates children about the life teeming beneath the ocean's surface.

Overall, it is estimated that the aquarium industry is worth \$5 billion in the United States each year, and fish are just a small — though critical — part of the equation. Tanks, stands, lights, hoods, filters, pumps, rocks, shells, gravel, plastic tubing and even miniature treasure chests are part of the hobby, and some of the accessories are available in the Living Art Marine Center's gift shop.

The center is developing an aquaculture program that could be good for the bottom line and help protect Hawaii's native fish. Xie says his company is the first commercial breeder of harlequin shrimp in the world, and is working on breeding other fish from larva, with much higher percentages surviving in captivity than in the wild. If the saltwater aquaculture technology takes hold, it would eliminate the need to go into the ocean to capture aquarium fish, Xie said.

Regulating Fish Cruelty



A veteran diver working on the Living Art Marine Center tour Saturday said he spent more than a decade catching rare and valuable fish. He said bringing fish up from 100 or 200 feet below the ocean's surface requires hours of patience, as many of the species have swim bladders that inflate when they're removed from the high-pressure environment of the deep. Force these fish skyward too quickly and they'll die, with internal organs pushed out of their open mouths.

Aquarium collectors have developed another technique for preventing the death of their valuable catch: popping the swim bladder with a hypodermic needle. "Fizzing" is one of a handful of practices that would be outlawed if the other proposed Maui ordinance becomes law. Another, "finning," trims the fish's fin or spine to prevent it from puncturing the plastic bag in which it is shipped. Both practices have been decried as cruel.

The bill [pdf], which was split off from Bill 52 and is currently in the Maui County Council's Public Services Committee, would add aquatic life to the county's existing animal cruelty law. Both fizzing and finning would be banned.

Xie says the practices are for the fishes' own good. He said that fizzing is only used as a life-saving alternative when holding fish at an intermediate depth and waiting for them to adjust naturally doesn't work, and compared finning to cutting a dog's nail. Asked why he doesn't use sturdier shipping containers that would allow the fish to keep their pointy fins, Xie says that would be too expensive.

"Human beings are always chasing profit, so unless you say you cannot catch them, they will try, and there will be more dead fish," Xie said. "I don't want to ban this industry."

State Regulations Critical



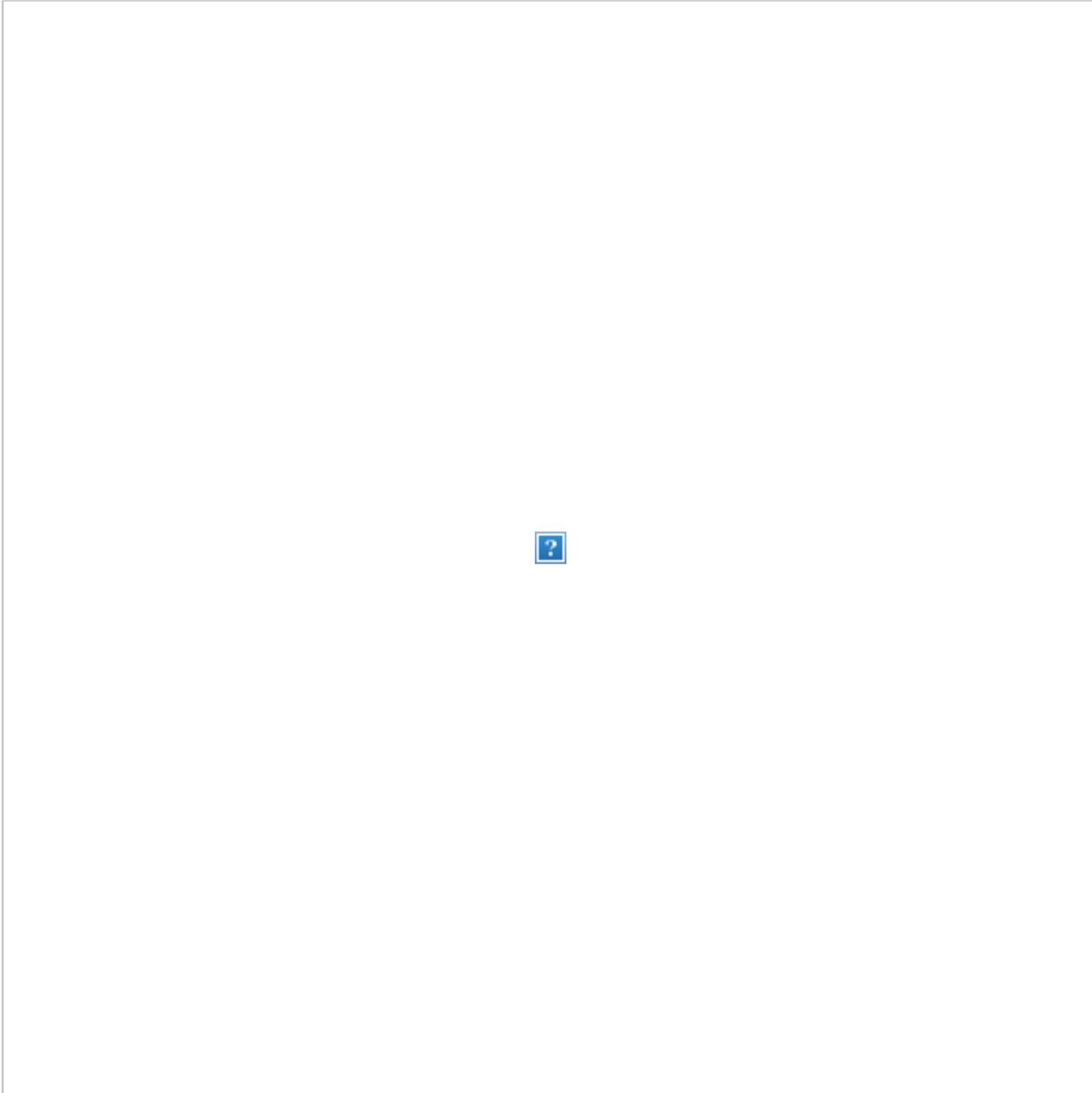
Because counties have jurisdiction only above the highest wash of the waves, the state government still has an important role to play. And even if both Maui bills become law, aquarium fishing in that county is a drop in the bucket compared to the hottest spot in the state, off the Kona coast of the Big Island.

Dr. Bill Walsh, an aquatic biologist in the Division of Aquatic Resources in Kona, said that 16,300 aquarium animals were caught off Maui in 2009. During the same year, commercial food fish operators captured more than 300,000 reef fishes of 75 species, many of which had considerable overlap with the aquarium trade. Recreational and subsistence fishers were projected to have caught nearly a half-million more near-shore reef animals off Maui, meaning the aquarium industry accounted for just 2 percent of the total fish mortality in the county, Walsh said.

By comparison, more than 400,000 aquarium animals were removed from the waters off West Hawaii each year from 2005 to 2009, on average. That dwarfs the 140,000 removed from Australia's great barrier reef in 2007, especially when you consider that underwater ecosystem covers 6 million square miles of ocean and the unprotected areas near Kona cover just 11,000 square miles, Walsh said.

"The point is that this area here is super-intensely collected," he said.

The Hawaii Department of Land and Natural Resources Division of Aquatic Wildlife has rules governing fishing [pdf], both recreational and commercial. The state has taken other steps to regulate the capture of aquarium fish in particular, establishing "fishery replenishment areas" (FRAs) off the Kona coast a decade ago.



This map shows the Marine Life Conservation Districts, Fishery Management Areas and Fisheries Replenishment Areas in the main Hawaiian islands.

Some 35 percent of the 147-mile coastline is part of the FRA program, with 65 percent of open ocean serving as a control in the experiment. A report on the findings and recommendations of the effectiveness of the West Hawaii Regional Fishery Management Area provided to the Hawaii Legislature earlier this year showed that the most popular aquarium fish — the yellow tang — showed marked population growth in the protected areas and a dramatic drop in the open areas.

Reef Fish Report

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“What is disconcerting and of concern to us ... since about 2003, it has just been going down, down, down, down, and the difference between the open area and the protected areas is getting to be very large,” Walsh said. “In fact, it’s about a 70 percent difference between the number of yellow tangs in the open areas relative to the protected areas.”

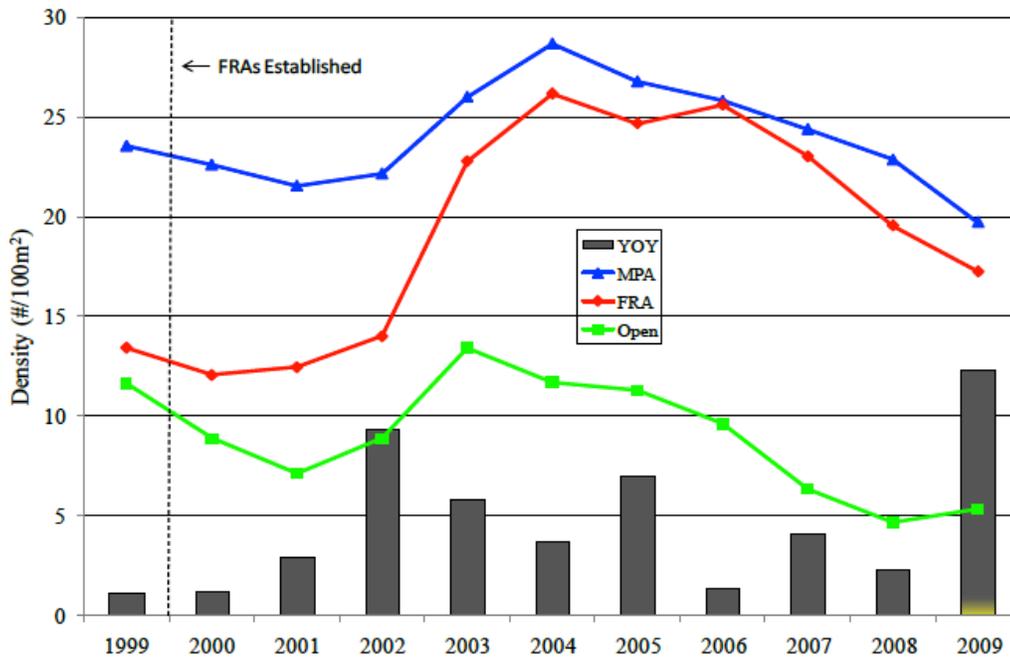


Figure 4. Overall changes in Yellow Tang abundance in FRAs, MPAs and Open areas, 1999-2009. Yellow bars indicate mean density (June-Nov) Yellow Tang Young-of-Year (YOY). YOY are not included in trend line data.

While the yellow tang comprised 81 percent of the total aquarium fish catch over the last five years, according to Walsh, there are some 180 other species that are being taken, many of which are uncommon, rare and very valuable, each yielding hundreds of dollars for divers, distributors and retailers. Some fish are thriving in protected areas, and others are not.

An important factor that sets the yellow tang apart from other species is that it has not been widely used as a source of food, Walsh said. Fish that are targeted both by aquarium collectors — typically when they are younger and smaller — and for food — typically when they’re larger, mature and capable of producing thousands of offspring — have a tough time surviving.

Earlier this month, state Sen. Josh Green told West Hawaii Today that he is planning to introduce next year legislation banning tropical fish collecting in Hawaii waters. But the industry might prove to be too valuable to shut down entirely, and it might head underground if regulations are too restrictive.

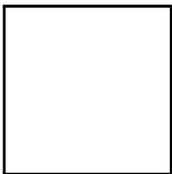
In an ongoing effort to turn the tide, the Division of Aquatic Resources is considering a pair of administrative rule changes that would overhaul the law of the land and sea, Walsh said. One possible amendment would limit the number of permits that are handed out to collectors, a

strategy called “limited entry.” Another would allow collectors to target only the top 25 aquarium fish on a “white list,” protecting the especially rare “species of special concern” while allowing the industry to retain 99 percent of its revenue sources. Negotiations are ongoing.

“That’s what we need to make this fishery something that’s justifiable biologically and ethically,” Walsh said.

DISCUSSION *Should Hawaii take further steps to protect its reef fish? Join [the conversation](#) and learn more about [endangered species in Hawaii](#)*

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The whole trade must be ended. practically all salt water aquarium fish were "stolen" from reefs. Fresh water fish can be raised ashore. NOT SO SALTWATER.

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