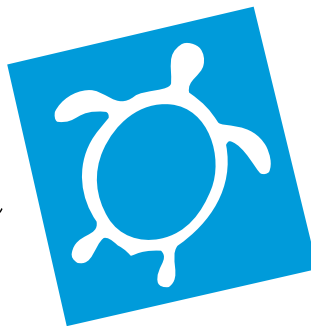


# Environment



# Hawai'i

*a monthly newsletter*

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## *Turtles on the Menu At Council Meeting*

Turtles – loggerheads and greens, in particular – weighed heavily on the minds of members of the Western Pacific Fishery Management Council when it met last month in Honolulu.

Some members, representing longliners' interests, want to be able to take more loggerheads in their pursuit of swordfish. Others, saying they speak for indigenous peoples of the Pacific islands, claim they are being held back from practicing their traditions by not being permitted to kill and consume green sea turtles. Yet another protected species – the Hawaiian monk seal – was also the subject of heated discussion at the council meeting.

In addition to Teresa Dawson's report on the council meeting in this month's issue, be sure to check out the EH-xtra column on our web page for still more council news.

The last two articles of this month's issue are devoted to the mangrove eradication effort on the Big Island and the man, Sydney Singer, who would stand in its path.

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## Hawai'i Longliners Lose Challenge To Settlement over Loggerhead Turtles

On June 14, U.S. District Judge David Ezra denied without prejudice the Hawai'i Longline Association's (HLA) appeal of a January settlement between the National Marine Fisheries Service and environmental groups regarding interactions between the shallow-set longline fishery and threatened loggerhead sea turtles.

Unless the 9<sup>th</sup> Circuit Court of Appeals reverses Ezra's decisions, it's likely the Hawai'i fleet, which targets swordfish, will have to limit itself to 17 loggerhead interactions annually at least until some time next year.

With the swordfish season winding down, HLA president Sean Martin says he's not as worried as he was a month ago about the fishery closing this year, even though at mid-June, the fishery was just five loggerhead interactions short of the limit allowed by the NMFS.

Still, Martin says, he remains concerned because a single boat can take two or three turtles in one trip. What's more, with the fishery so close to hitting its loggerhead cap, "someone who might have decided to do shallow-set fishing will instead fish bigeye [tuna], which could lead to a closure of that fishery in November," he says. (Western and Central Pacific bigeye are subject to overfishing and annual catches by the Hawai'i fleet are limited to 3,763 metric tons. In the last two years, longliners reached that limit late in the year during the holiday season, when demand for tuna is especially high.)

### *Impatience*

In 2009, at the request of the Western Pacific Fishery Management Council, the NMFS loosened restrictions on the Hawai'i fleet, completely lifting the cap on the number of hooks set annually and nearly tripling the number of allowed interactions with loggerheads.



Loggerhead sea turtle

PHOTO: GEORGIA DEPT. OF NATURAL RESOURCES

To the Center for Biological Diversity, KAHEA: the Hawaiian-Environmental Alliance, and the Turtle Island Restoration Network, the move made no sense, especially in light of

data that they said showed that the North Pacific loggerhead population was in serious trouble.

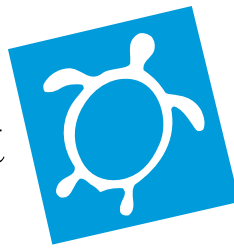
Shortly after the groups sued the NMFS over the new rules, the NMFS itself proposed listing the North Pacific population of loggerheads as endangered. Within months, the two sides were ready to settle the matter, despite opposition from the HLA, an intervenor in the case.

Under the settlement, the NMFS vacated all of the 2009 rules and portions of its biological opinion on the fishery's impacts that related to loggerheads and endangered leatherback sea turtles. In particular, the settlement repealed a 2009 rule that increased the cap on turtle interactions from 17 to 46.

At the time the deal was struck, the NMFS was expected to issue by March 16 a rule on whether to create nine distinct population segments (DPS) of loggerheads and list them

**to page 3**

# Environment Hawai'i



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## NEW AND NOTEWORTHY

**Hawaiian Sandalwood 'At Risk':** United Plant Savers, a group dedicated to protecting native medicinal plants and their habitat in the United States and Canada, has now added six species of Hawaiian sandalwood to its list of "at-risk" species. The list, writes executive director Susan Leopold in the group's summer newsletter, "has been used since UpS was established as a way to bring awareness to the vulnerability of overharvesting of native medicinal plants."

Hawai'i "remains the only region in the world where sandalwood is being commercially harvested without regulation," she notes. In addition, "Native Hawaiian sandalwood represents a quarter of the diversity of the genera *Santalum*. Six separate species are found throughout the islands, and within these species are several unique varieties, all endemic to the Hawaiian Islands." Only one, *Santalum freycinetianum* var. *lanaiense*, has been officially recognized as endangered.



PHOTO: J. B. FRIDAY

Sandalwood fruit (*Santalum paniculatum*)

The listing by UpS is an effort, she writes, "to bring about stewardship of these living Hawaiian heirlooms that desperately need regulations that will provide guidelines to their management and protection."

**Meanwhile, in Hokukano:** The sandalwood logging continues apace, now under the supervision of a bankruptcy trustee. According to the latest documents filed with the bankruptcy court, Jawmin (the sandalwood logging company which is in Chapter 11 proceedings) is expecting that its sales to a sandalwood middleman will bring in revenues amounting to more than \$9 million.

The middleman is Wescorp Pacific Sandalwood, an Australian company. Its mission, as stated on its website, is to provide "sustainable quality sandalwood products to the world." Jawmin ships the sandalwood directly to the parties lined up by Wescorp, and Wescorp pays the invoices.

Tim Coakley, executive director of Wescorp, stated in an email to *Environment Hawai'i* that his company "is absolutely comfortable that the harvest is operating in a sustainable manner otherwise we would not be involved."

"It is very important to our company that we

only be involved in sustainable harvesting of sandalwood," he wrote. Coakley was scheduled to visit the Kona logging site in late June.

**Powerful People:** Efforts to facilitate the integration of renewable energy into island utility grids are ramping up. Last month, the state Public Utilities Commission contracted with Alison Silverstein Consulting to serve as the independent facilitator of the long-awaited reliability standards working group (RSWG). The Hawaiian Electric Company (HECO) had originally proposed to manage the \$100,000 contract, but the PUC rejected the idea in March.

The RSWG, proposed by HECO in response to criticism that it had been slow to promote renewable energy, will help "determine how we can interconnect the maximum amount of renewable generation to the grid while preserving grid reliability," a June 14 PUC order states.

Parties to the PUC's dockets on net metering, photovoltaics (PV), intra-governmental wheeling, feed-in tariffs, and a proposed amendment to HECO's interconnection standards began naming their representatives to the group on June 20.

As of June 21, Hawai'i County; the state Department of Business, Economic Development and Tourism; Zero Emissions Leasing, LLC; Life of the Land; Blue Planet Foundation; and South Maui Renewable Resources had submitted their selections to the PUC.

In related news, the PUC ordered HECO companies and parties interested in feed-in tariffs to "review the FIT experience to date, identify 'lessons learned', and apply those lessons to the design of Tier 3 [tariffs]," states a June 3 PUC order.

Tier 3 tariffs apply to renewable energy projects greater than Tier 2 limits — those up to 500 kilowatts of PV and concentrated solar power (CSP) on O'ahu, 250 kw of PV on Maui and Hawai'i, 100 kw of PV and CSP on Lana'i and Moloka'i, and 100 kw of in-line hydro-power and onshore wind on all islands — and up to 5 megawatts on O'ahu and 2.72 MW on Maui and Hawai'i (not including wind) or one percent of the grid's peak load from the previous year.

The PUC's independent observer will facilitate discussion among the parties this month and they must file revised Tier 3 tariffs with the commission by August 15.

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### Quote of the Month

"I'm just concerned we're playing God."

— **Manny Duenas, Wespac,  
on monk seal enhancement proposals**

*Wespac from page 1*

as endangered. A proposed rule published more than a year ago included the establishment of a DPS of North Pacific loggerheads, which would be listed as endangered.

The settlement required the NMFS to issue a biological opinion (BiOp) on the North Pacific DPS and an incidental take permit for the longline fishery no later than 135 days after up-listing the turtles. Had the NMFS met its projected deadline, it would have had to produce a new BiOp by the end of this month, but issues regarding the North Atlantic population postponed its completion.

In March, the NMFS announced it would issue a final decision on loggerhead stocks in mid-September.

Upset by the delay, the HLA immediately filed an appeal of the settlement. Specifically, the HLA asked Ezra to insert language that would require the NMFS to complete its BiOp by July 31.

*“Despite being invited to participate, however, HLA chose to sit on the sidelines ...”*

— **NMFS Counsel**

In its court filings, attorneys for the NMFS and the Department of Commerce argued that the HLA had its chance to help develop the settlement agreement and propose terms necessary to protect its interests, including a date-specific deadline for the new BiOp.

“Despite being invited to participate, however, HLA chose to sit on the sidelines, and only now complains of the existence of a ‘significant change in circumstances’ that was, in fact, anticipated by the parties as a possible outcome. Having chosen to sit out of settlement talks, HLA should not now be allowed to defeat the express intentions of the settling parties,” they wrote.

They added that the court had already made clear that, even if the NMFS failed to finalize a BiOp and incidental take statement by July 31, 2011, the HLA would not be unreasonably harmed.

“Even if NMFS does not complete the new biological opinion by its estimated deadline, the proposed consent decree still does not unreasonably extend the period of time during which the Fishery must operate under the 2004 levels. Finally, if the Fishery does reach the reduced incidental take limits for loggerhead sea turtles before NMFS issues the new biological opinion and the Fishery must be shut down, this result would be consistent with the goals of the ESA and in the public’s interest. At a time when NMFS is investigat-

ing whether to uplist the loggerhead sea turtle from threatened to endangered, it is a prudent measure to reduce the incidental take limits while NMFS is making this determination,” Ezra wrote earlier this year.

In his order denying the HLA’s motion, Ezra pointed out that the 9<sup>th</sup> Circuit Court of Appeals was evaluating similar issues and that he won’t have the authority to address the merits of the HLA’s request until subject matter jurisdiction is returned to his court.

He added that even if he had jurisdiction to grant the HLA the relief it sought, he would not. His justification: “A district court has [the ability] to ‘efficiently and economically control its docket’ as it sees fit.”

At the June meeting of the Western Pacific Fishery Management Council, NMFS Pacific Island Regional Office chief Michael Tosatto reported that the NMFS is barred by statute from extending the September 16 deadline to decide on the nine proposed distinct population segments for loggerheads. While acknowledging that the agency has exceeded

statutory deadlines in the past, he added that it was still his hope that by September 16, the determination on the DPS will be made.

**Council Concerns**

In a document titled, “Council problems and concerns,” distributed at last month’s meeting, the council criticized the proposal to list the North Pacific DPS as endangered. The proposal, the document states, flies in the face of “overwhelming scientific evidence that the nesting population in Japan has shown an increasing trend over ten years, and that many of the previously-existing threats to the population have been eliminated in the last several decades.”

It continues, “[T]he use and interpretation of scientific information by NMFS is questionable, leading to unduly pessimistic proposed rules regarding loggerhead turtles. ... The court-ordered incidental take limits of 17 loggerhead and 16 leatherback sea turtles takes annually by the shallow-set fishery are not based upon the best available science or any science whatsoever. The willingness of NOAA General Counsel to seek a settlement and the unwillingness of NMFS to stand behind their science undercuts the rational [sic] and benefits of the conservation measures developed by the Council through the MSA [Magnuson-Stevens Act] process. Moreover, the failure to defend the fishery and [the

2009 rule raising the take limit] continues a climate of uncertainty in this fishery, which acts as a disincentive to investment in and discourages new entry into the fishery.”

When council chair Manny Duenas raised these concerns during the meeting, Tosatto did not directly respond to his arguments. He stated simply that his agency has determined that the North Pacific population warrants uplisting to endangered.

“Despite the fact that there is documentation that nesting [in Japan] has increased. ... What? Do you think they’re all going to turn radioactive?” Duenas asked.

But even with the council’s claim that the fisheries and nesting data support an increase in the loggerhead take limit, council members apparently recognized that their case needed bolstering. The council voted to establish a method for evaluating the success of its turtle restoration projects throughout the Pacific and directed its staff to develop guidelines for estimating and reporting hatchling production.

§ § §

## Council Adopts New Limits On Hawai‘i Bottomfish Catches

Under limits adopted by the Western Pacific Fishery Management Council last month, Hawai‘i bottomfish fishers may catch about 82,000 more pounds than they did last year.

The 25 percent increase is largely due to the fact that the most recent stock assessment suggests there are more bottomfish in the Main Hawaiian Islands (MHI) than previously thought.

The National Marine Fisheries Service, which the council advises, first placed limits on bottomfishing in the Main Hawaiian Islands in 2007, when its 2006 stock assessment suggested that the so-called Deep 7 bottomfish population here was being overfished. (Deep 7 species include ‘opakapaka, onaga, ‘ehu, gindai, hapu‘u, lehi, and kalekale.) Based on the council’s recommendation, the NMFS set a total allowable catch limit, or TAC, of 178,000 pounds, which represented a 24 percent reduction from 2004.

The next year, even though a 2008 stock assessment found that the MHI population was no longer subject to overfishing, the council set a TAC of 241,000 pounds, which posed a 40 percent risk of overfishing in the MHI. The following year, the council pushed the limit a little further, to 243,050 pounds, posing a 39 to 44 percent risk of overfishing in the MHI. For the 2010-2011 fishing year, the council kept the status quo.

At the same time the council was trying to prevent overfishing of bottomfish in the MHI, it was also working toward meeting new requirements of the 2006 Magnuson-Stevens Reauthorization Act. Under the act, all fishery councils must prepare Annual Catch Limits (ACLs) for all fished species in their respective jurisdictions. The deadline to create ACLs for overfished species was last year. For all other species, ACLs must be in place this year. In the case of the Hawai'i bottomfish stock, the ACL would replace the TAC.

The Magnuson-Stevens Act states that the ACLs recommended by councils may not exceed the recommendations developed by their Scientific and Statistical Committees on what constitutes an acceptable biological catch (ABC).

To tackle the bottomfish ACL, two groups were set up, each composed of fisheries scientists and managers. The first would determine an acceptable risk of overfishing (not to exceed 50 percent) and a corresponding ABC. The second group, known as the Social, Economic, Ecosystem, and Management (SEEM) group, would determine how and whether the ACLs should be reduced given any social, economic, ecological and management uncertainty.

The first group determined 40.8 percent to be an acceptable risk of overfishing, which is close to the levels used in recent years to determine the TACs. Based on a 2010 stock assessment, that equates to 345,522 pounds.

The SEEM group then determined that the ACL should be set equal to an ABC of 345,522 pounds. To minimize the risk of exceeding the ACL, the group recommended establishing an annual catch target (ACT) six percent lower than the ACL, which is 324,790 pounds.

In June, the council's Scientific and Statistical Committee rounded up the groups' recommendations, proposing an ABC of 346,000 pounds and an ACT of 325,000 pounds.

At the full council meeting that followed, the alphabet soup confused chair Manny Duenas, who wasn't sure whether the proposal met Magnuson-Stevens Act requirements and what the purpose of the ACT was. Staff explained that the council needed to adopt the recommended ABC, decide that the ACL should equal the ABC, and set an ACT (optional under the act) of 325,000 pounds for the 2011-2012 bottomfish season.

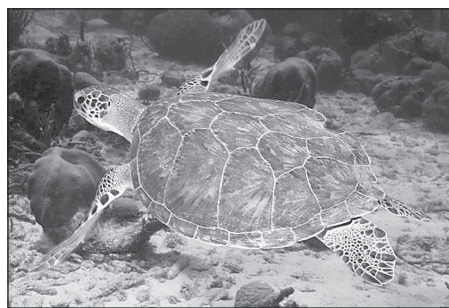
"We were all confused about this. When drafting the recommendation ... it took us half an hour to get through this. This ACT is really a quota for the fishery for the season," council executive director Kitty Simonds told Duenas.

Although one member of the public, a fisherman, expressed concern about the general use of ACLs, the council unanimously approved the SSC's recommendations.



## Council Supports Downlisting Of Hawaiian Green Sea Turtle

The Hawaiian green sea turtle (*Chelonia mydas*) is federally listed as threatened under the Endangered Species Act and that status is not likely to change anytime soon, according to Mike Tosatto, Pacific Islands Region administrator for the National Marine Fisheries Service.



Hawaiian green sea turtle.

PHOTO: ANDY BRUCKNER, NOAA

What's more, the turtles live and forage mainly within state waters.

So it seemed like merely a symbolic gesture when the Western Pacific Fishery Management Council voted last month to support efforts to remove Hawaiian green sea turtles from the International Union for Conservation of Nature (IUCN) Red List of Threatened Species.

The IUCN currently considers the global population of green sea turtles endangered, but the organization's Marine Turtle Special-

**"We're the last people you need to lecture, thank you very much."**

**— Kitty Simonds, Wespac**

ist Group is reviewing whether or not the population in Hawai'i, which is showing signs of recovery, should be down-listed.

Rookeries at the turtles' primary nesting spot at French Frigate Shoals (FFS) in the Northwestern Hawaiian Islands have increased from fewer than 100 in the 1970s to a few hundred, council protected species coordinator Asuka Ishizaki said at last month's meeting.

She added that the prevalence of fibropapilloma tumors, which plagued the turtles in the 1980s and '90s, has declined.

For these reasons, the IUCN is considering listing the Hawaiian population as "near-threatened," which is just above species of

"least concern." Ishizaki said the main reason the turtles don't qualify for "least concern" status is because so many of them — more than 50 percent — nest on East Island in FFS, a relatively small area.

When council chair Manny Duenas asked whether any studies had been done on the effects climate change and sea level rise might have on the turtles, Ishizaki said that carrying capacity studies at FFS suggest that even with sea level rise, a good chunk of East Island will remain. "If you have a seawall and an eroding beach, that's an issue," she said.

(Although research suggests that sea level rise will affect East Island the least of all the nesting sites at FFS, it also warns that nest destruction resulting from increased use of the island's remaining beach by turtles could limit population growth.)

At the council meeting, Tosatto reminded members that "the ICUN Red List does not equal the ESA."

He urged the council to support the science needed for the NMFS to create a distinct population segment (DPS) of Hawaiian turtles, which would be required before they could be removed from the federal endangered species list.

"The council should promote the conservation of these turtles and the science needed to make an informed status review. ... The underlying science here is good," he said.

The NMFS is planning to review the status of green sea turtles at the end of the year, but it's a lengthy process, he said.

Council member David Itano, a fisheries scientist, said he was astounded that the Hawaiian turtles are not considered DPS.

Responding to Tosatto's suggestion that concentrating on the ESA's requirements is more beneficial than supporting actions be-

fore the IUCN, council executive director Kitty Simonds suggested she was perfectly aware of what needed to be done.

"We're the last people you need to lecture, thank you very much," she told Tosatto. Whether or not the NMFS will act anytime soon on the Hawai'i population of green sea turtles, Simonds said, initiating a public discussion on the possibility of de-listing and the status of the science on the turtles "does a service to the people of Hawai'i." The night before, the council had held a public forum on the possible de-listing of Hawaiian green sea turtles.

When it came time to vote on a motion to send a letter of support for the removal from

IUCN's Red List of Threatened Marine Species, Tosatto cautioned the council again.

"The [NMFS] horizon on decisions regarding green turtles is a long way off. ... I can't stress that enough," he said.

Council chair Manny Duenas, however, who was eager to see the day when people in U.S. territories and states throughout the Pacific could catch and eat turtles again, said he thought the apparent recovery of the Hawai'i green sea turtle was a success story.

"It's been over 30 years [since the turtle was first listed under the ESA]. ... This [vote] recognizes the effort. ... I don't think this opens to the door to decimation of stocks," he said.

Like Tosatto, Hawai'i council member Julie Leialoha was uncomfortable with the proposed motion. She suggested that the council instead explore the possibility of allowing for cultural take in Guam, Samoa, and Hawai'i.

In the end, the motion passed, with Tosatto and Leialoha abstaining.



## Council Grills NMFS Experts On Monk Seal Proposals

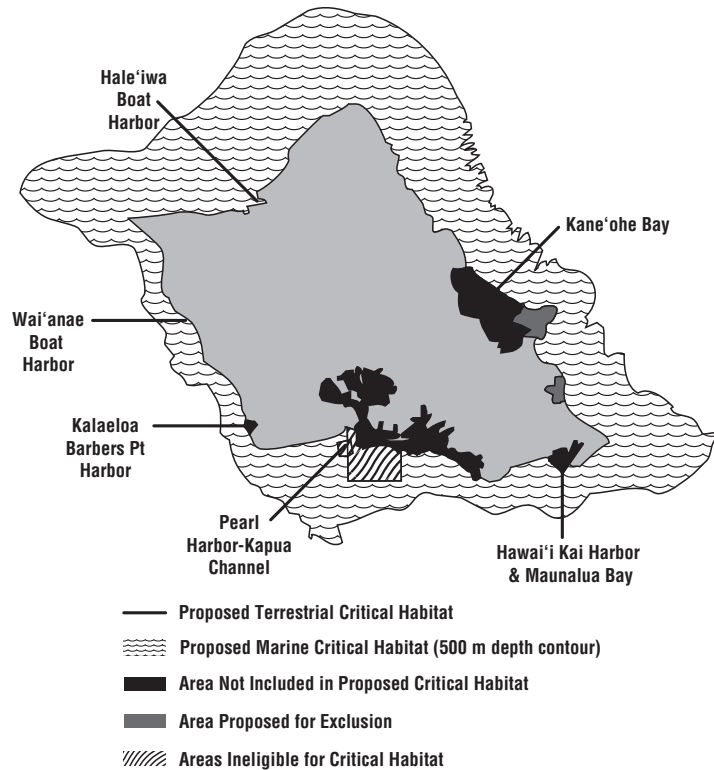
It's kind of a conundrum. We have the Northwest Hawaiian Islands protected and you're bringing [monk seals] down here. The more intensely inhabited area is a better environment. ... It's an interesting change in thought pattern," said Sean Martin of the Western Pacific Fishery Management Council.

Last month, council members and staff aired their concerns about the efforts that the NMFS is proposing to stabilize and increase monk seal populations in the Main and Northwestern Hawaiian Islands.

The seals may be critically endangered, but there is little evidence large numbers ever lived in the MHI and the 200 or so here now are already vexing fishermen, some council members said. They also questioned the NMFS's rationale behind the proposed inclusion of deep sea slopes and exclusion of military and other sites, such as Waikiki Beach, in its proposed critical habitat designation.

In response to a July 2008 petition from the Center for Biological Diversity, KAHEA: the Hawaiian-Environmental Alliance, and the Ocean Conservancy, the NMFS last month issued a proposed rule that would expand the current critical habitat to include coastal areas in the Main Hawaiian Islands and deeper waters in the Northwestern Hawaiian Islands.

## Proposed Monk Seal Critical Habitat around O'ahu



Except for a handful of harbors, bays, and military sites, the proposed critical habitat encompasses coastal areas, from five meters inshore out to the 500-meter depth contour, around all eight main islands, as well as Kaula island near Ni'ihau.

Once the NMFS designates critical habitat, activities in those areas that have a federal nexus must be reviewed to determine their impacts on the seals and what mitigation measures, if any, are needed to avoid jeopardizing their existence. The NMFS expects the designation will likely affect marine and coastal construction, dredging and material disposal, energy development, aquaculture, fisheries, vessel groundings response and military activities, and other water-polluting activities.

The public has until August 31 to comment on the proposed rule.

In addition to revising the monk seal's critical habitat, the NMFS is preparing a programmatic environmental impact statement (PEIS) to cover current and new efforts to protect the seals.

In particular, NMFS scientists propose bringing baby female seals in danger of starving in the Northwestern Hawaiian Islands down to the Main Hawaiian Islands, where there is less competition for food. The seals

would be returned once they turn three, when they are more likely to compete successfully with the large tunas and sharks that dominate the waters in the NWHI.

A draft PEIS is expected to be completed next month, followed by public hearings in September. The NMFS plans to issue a final PEIS next March and complete a biological opinion in May.

### Interrogation

Regarding the proposed critical habitat designation to depths of 500 meters, council member David Itano questioned the NMFS's determination that monk seals forage in waters that deep in the MHI. He told Jean Higgins, the service's project lead for critical habitat, that fishermen are concerned about the impacts the designation of waters below 100 meters would have on fisheries.

Higgins said tracking data indicates that seals dive just as deep in the MHI as they do in the NWHI. She also noted that regardless of critical habitat, the NMFS could one day determine that fishing is reducing the seals' prey to the point that it jeopardizes their survival.

Itano suggested that the deep diving behavior may be relatively new and he questioned why waters in the 100-500 meter range

were being targeted when they were “generally absent of anthropogenic disturbance.”

“I don’t see why the designation has to go beyond the outer reefs,” he said.

Higgins said that the amount of habitat proposed for designation in the MHI is tied to the numbers of seals needed to meet recovery goals.

“We have a lot of habitat available. They are increasing in number through births. If we want habitat to be able to meet recovery goals, we should go with the same amount [of habitat] they use in the NWHI,” she said.

Council chair Manny Duenas suggested that the designation would significantly alter life in the MHI.

“It’s just going to condemn the MHI to become sanctuary. ... I really hate to see the MHI become a police state. ... If you’re having a family picnic [and a seal shows up], you’re S-O-L,” he said.

Although Higgins said it was her agency’s



PHOTO: COURTESY NWHI RESERVE/NMFS  
Monk Seal

**“Not all seals are created equal.”  
— Jeff Walters, NMFS**

goal to have seals and humans co-exist, council executive director Kitty Simonds added, “The other thing is, the monk seal is a dangerous animal.” Simonds, Itano and Duenas said they doubted the seals were common in the MHI.

Council member Julie Leialoha, who has worked with monk seals, countered that the monk seal is included in the Kumulipo (the Hawaiian chant on the origin of the Hawaiian people) and that Hawaiian historian Samuel Kamakau identified them as a possible food source in the past. NMFS’s Jeff Walters added that a monk seal bone has been found in midden, possibly going back as far as the 1400s, at Lapakahi on the Big Island.

Regarding Simonds’s comments, Leialoha said, “They are dangerous, but they’re more afraid of us than we are of them. ... Having spent a year and a half with them, the only time they were dangerous is [when there were] aggressive males. With all due respect, I have to disagree with some of the comments made.”

To those concerned about the seals’ impacts on fisheries in the MHI, Walters said that seals forage over a broad area. He added that the NMFS does not expect the proposed translocation will increase the total seal population right away.

Because so few reproductive females remain and so few NWHI pups survive to adulthood, the NMFS needs to fortify the species’ age structure to slow its decline, he said. The population of about 1,100 seals is currently shrinking at a rate of 4.5 percent a year.

With a translocation program in place, the French Frigate Shoals population, which produces most of the population’s pups, would decrease over 10 years, but would end up with 100 instead of 80 adult females, Walters said.

“That’s a big deal. Not all seals are created equal,” he said. “If we do translocation successfully, we would have more females with high reproductive value ... and help the seals hold on.”

He added that before attempting to move seals, the NMFS needs to do more outreach with communities, including fishermen.

“We think we have about 200 seals in the [MHI] now. Whether we do translocation or not, we need to ... work with fishing community to minimize interactions,” he said, adding that bringing down 10 or 20 NWHI pups a year would be a relatively minor increase in the seals already here.

Although seal pups largely learn to forage on their own, Walters said the NMFS will probably release pups relocated to the MHI in groups, so they’re not alone.

Duenas suggested that the bottomfish and lobster fisheries in the NWHI influenced the seal’s predicament. Seals fed on the offal discarded and “there was no need for competition. The fishermen were feeding them. ... It was our fault we got rid of the fishermen. These animals are like trained animals in the zoo,” he said, adding that keeping the seals in the MHI wild is going to be a daunting task.



## For Further Reading...

This month’s articles on the Western Pacific Fishery Management Council deal with a number of issues that we have covered extensively in the past. The following is a list of some of our articles, old and new, that are available on our website ([www.environment-hawaii.org](http://www.environment-hawaii.org)):

### On Loggerheads

“Revised Turtle Restrictions Threaten to Close Hawai’i Swordfish Fishery,” April 2011;

“Swordfish Rule Challenged,” New & Noteworthy, January 2010;

“New Report Supports Lifting Annual Limit on Interactions between Loggerheads, Fishers,” December 2008

“Fishing Council Relaxes Turtle Limits, NMFS to Initiate New Biological Opinion,” August 2008;

“Fishery Council Narrows Scope of Study on Expanded Longlining Effort in Hawai’i,” November 2007;

“Swordfish Fishery is Shut Down After Reaching Limit on Loggerhead Takes,” May 2006;

“After Eight Years, NMFS Finds Longliners Jeopardize Sea Turtles,” April 2001.

### On Bottomfish

“Open Hostility Among Members Apparent in Recent Wespac Meeting,” August 2010;

“Council Once More Increases Quotas for Bottomfish in Main Hawaiian Islands,” September 2009;

“Council Splits Difference on Bottomfish Limits,” Wespac wrap-up, December 2008;

“Bottomfish Restrictions May Do Little for Stocks in Main Hawaiian Islands,” August 2007;

“Council Plan for Bottomfish Takes Little Heed of State Efforts,” April 2007.

### On Monk Seals

“NMFS Proposes Main Hawaiian Islands as Critical Habitat for Monk Seals,” EH-xtra (*Environment Hawai’i* website);

“Board Allows Shark Killing at French Frigate Shoals,” Board Talk, June 2011;

“Fishing May Have Impacted NWHI Monk Seal Population,” Conservation Conference highlights, October 2010;

“Board Approves NWHI Cruise, Seal Aid, Cetacean Sampling,” Board Talk, September 2010;

“Experts, Managers Gather in Honolulu to Discuss Protection of Marine Mammals,” January 2010;

“Groups Push Closure of Lobster Fishery to Promote Recovery of Monk Seals,” April 2000;

“At French Frigate Shoals, Monk Seals Face Threats Both Man-Made and Natural,” April 2000.

"I'm just concerned we're playing god. We're deworming, we're changing habitats ...," he said.

Should interactions between the MHI seals and fisheries start to increase, Itano said he'd like the NMFS to try seal behavior modification rather than closing those fisheries.

Walters assured him that seeking deterrents would be a priority.

"If one of these valuable females is making a living preying fisheries ... it's not going to be good. We don't want to see that seal do that either," he said. To this, Itano warned, "You can almost guarantee that they will. ... It seems to me, you could be putting these pups in peril by putting them down here."

In the end, the council recommended that the NMFS work with fishermen to inform them of reporting systems for seal interaction issues and develop a process to deal with nuisance animals. It also instructed council staff to comment on the critical habitat proposed rule, expressing the council's concern on potential fisheries impacts. Finally, staff were told to comment on the draft PEIS, relaying the council's concerns about the translocation proposal and the potential increase in problematic interactions.



## Bigeye Catch Skyrockets In First Quarter of 2011

Whether the January U.S. District Court settlement reducing loggerhead interaction limits had anything to do with it is unclear, but only a handful of Hawai'i longline vessels targeted swordfish in the first quarter of 2011, which is usually when most swordfish are caught.

Instead, most vessels fished for bigeye tuna and they caught a near record amount in the first quarter — 47,900 fish. At the same time in 2009, they had caught only 25,000 fish and last year, when the bigeye fishery had to close in late November because it was projected to reach the 3,763 metric ton limit set by the Western and Central Pacific Fisheries Commission (WCPFC), they had caught 33,000, according to Russell Ito of the Pacific Islands Fisheries Science Center (PIFSC).

Chris Boggs, also with the PIFSC, told the Western Pacific Fishery Management Council last month, that based on the current catch rate, he predicts the Hawai'i bigeye fishery will have to shut down around November 11 — more than a week earlier than it did last year.

"I really need to double check all of this. The November date might move up earlier. From the auction data, fish are a little smaller this year than in the past couple of years. It

certainly looks like we won't get through year without a closure," he said.

Council member Sean Martin, who is also president of the Hawai'i Longline Association, said that based on his own observations of the fleet's activities, catch rates should plateau for a while.

"We're experiencing slower fishing than during the beginning of the year," he said.

Given the fact that the fleet hit the limit last year and that it might hit it again, are vessels considering shifting effort, council member David Itano asked Martin.

"Not so much the fleet, but there's been some discussion among the market folks. They were anxious to have it spread out," Martin said.

Martin also reiterated his complaint that when the fishery closed in 2009 and 2010, bigeye catches were under the WCPFC limit and because the value of those last few fish can't be recovered, "that translates into significant money [lost]." He said probably a couple million dollars have been left unavailable because projections by fisheries scientists missed the mark.

Boggs, whose agency is responsible for predicting whether and when the fishery will hit its limit, agreed that ending the fishing year four percent under the limit, as it did in 2010, is not a good thing. But he pointed out that the underage had less to do with the science behind the projection and more to do with the change in the fleet's behavior following the announcement of the closure date.

"Anything anyone can do to elucidate what happened would really help us," Boggs said.

### Plan of Action

At the end of the year, the WCPFC restrictions on bigeye fishing are set to expire, unless the commission devises a new set or decides to extend the deadline. Set in 2008, the restrictions — including catch and effort limits, closures, and management of fish aggregating devices (FADS) — were intended to reduce fishing of bigeye by 30 percent. For various reasons, the measures did not have their intended effect and bigeye are still being fished at an unsustainable rate. For one thing, the WCPFC's science committee determined in 2009 that the conservation measures would not work. Compliance among the various countries associated with the commission was spotty, as well. (For more on this subject, see the cover story in the January 2011 issue of *Environment Hawai'i*.)

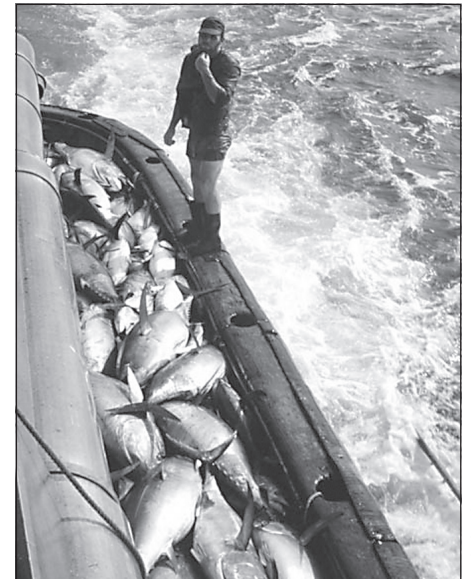
At last month's council meeting, the WCPFC's new chair, Charles Karnella, said achieving consensus among the commission members on new measures is going to be a

struggle and predicted a lot of "head-banging."

"We need to be focusing on how to make it work for bigeye. There is some possibility that it may be overfished. ... I'll leave that to the scientists," he said.

Pacific yellowfin and skipjack tuna, which are mostly caught by purse seiners, are not yet subject to overfishing, but are headed "where you need to keep an eye on things," Karnella said.

The commission has asked its members to do their own analysis and provide thoughts on what can be done to help bigeye. Karnella said he and his vice chair will devise an approach to



Bigeye fishing boat.

PHOTO: NOAA

enhance conservation measures, based on recommendations of its scientific committee, and present it at a technical compliance meeting this fall.

At last December's WCPFC meeting, several countries proposed alternatives to the current scheme, known as CMM 2008-01. None were adopted.

Whatever the commission decides, Karnella said, the new restrictions should have a measurable and credible conservation benefit, the burden should be distributed equitably, and the commission needs to develop the capacity for all its members to fully implement and monitor the measures.

"We have some tools that are vastly under-used, including the observer program and VMS [vessel monitoring system]," he said.

He added that it's critical for the commission to adopt reference points regarding overfishing, overfished, and maximum sustainable yield determinations.

If the WCPFC can't craft a new measure by the end of the year, there will be no restrictions on bigeye catch, except for purse seiners fishing under what's known as the Nauru Agreement. Parties to the agreement include the Solomon

Islands, Tuvalu, Kiribati, the Marshall Islands, Papua New Guinea, Nauru, the Federated States of Micronesia and Palau.

Karnella said that while some countries want to keep the current management scheme in place until the commission creates a new one, the Philippines, which has long opposed the measure closing a portion of the high seas to purse seining, could block the continuation of 2008-01.

"I believe we have a pretty daunting task," he said. "We [need to] try to make that head-banging more productive instead of less productive."

### Council Questions

Council executive director Kitty Simonds asked Karnella about reports that Japan was sharing its quota with China and that China had exceeded its quota.

Karnella noted that some countries had suggested going from a flag-based to a zone-based system and dividing quotas equally among members.

"That's something the commission has to deal with, [but] if people can just sell the rights to things they wouldn't avail themselves of, it puts more pressure on the stocks. Right now I'm keeping my mind open," he said.

Regarding overages, Karnella said penalties should apply.

"That's something we need to give serious consideration to. If there's no strong disincentive to going over their quota, people will go over their quota," he said.

Council member Martin asked about efforts to set quotas on small island states trying to develop their fisheries. Right now, there are none and last year, Hawai'i-based vessels with permits to fish in American Samoa were able to supplement their catch in waters just outside the Hawai'i exclusive economic zone after the Hawai'i fleet met its quota.

"This is probably one of the hottest areas were going to have to deal with," Karnella said. "We can't exclude small island developing nations from resources in their areas, but there needs to be some sort of balance. ... My own view is it doesn't make sense to allow an unlimited number of fish ... particularly if the nature of that arrangement [with other countries or states] is that it doesn't do anything to develop the capacity of the small island developing nations."

Both Karnella and council members agreed that more needs to be done to reduce the number of small fish taken by FAD fishing and by purse seiners. Karnella noted that data indicates that the effect of bigeye catch by the purse seine fleet has increased to the point that it's equal to the impact of longliners.

— Teresa Dawson

## Lawsuit over Mangrove Eradication Brought to a Close with Settlements

The lawsuit brought by Sydney Ross Singer to defend the red mangrove from eradication efforts has finally ended. The state Department of Land and Natural Resources and the Hawai'i Tourism Authority settled with Singer last December. The remaining defendants – Hawai'i County and the non-profit organization Malama O Puna – settled in May. The U.S. Fish and Wildlife Service, which had also been named as a defendant, was dismissed in April 2010, when Singer, representing himself, told a federal judge he wanted the case remanded to state court.

Singer included the Big Island Invasive Species Committee as a defendant as well. This group, a consortium of various public and private agencies, had helped Malama O Puna in the mangrove removal projects, but was not named in the permits that Singer was challenging. It was later dropped from the lawsuit.

As a practical matter, Singer's challenge had little effect. At the time he filed his complaint, on February 8, 2010, Malama O Puna and the Big Island Invasive Species Committee had permits to remove red mangroves (*Rhizophora mangle*), by poisoning, pulling, or cutting, at several sites on the Big Island.

The first project, at the Wai 'Opae Marine Life Conservation District and nearby private land, had been underway for nearly two years and was nearly completed.

With some 20 acres in mangrove on both public and private land, the Wai 'Opae infestation represented the largest of the areas where Singer specifically wanted the eradication efforts to stop. According to Ann Kobsa, vice president of MOP and its invasive species coordinator, the Wai 'Opae project was around 80 percent complete when the lawsuit was filed.

In addition to the work at Wai 'Opae, Malama O Puna had also obtained Special Management Area (SMA) minor permits to remove mangroves from private land at Paki Bay, near Kea'au, and at land

on and near two county beach parks: Isaac Hale, in Pohoiki, Puna, and Onekahakaha, in Hilo. The planning for another eradication project at Alula Bay, near Honokohau Harbor on the Kona side of the island, was just beginning when Singer sued.

### The Four Counts

Singer claimed that Malama O Puna and the agencies that cooperated in, permitted, or financed its work were violating state and federal laws intended to protect the environment. But, with the federal lawsuit having been dismissed, Singer could only argue violations of state law as the case was presented in 3<sup>rd</sup> Circuit Court.

First, he alleged that the defendants had failed to comply with Chapter 343 of Hawai'i Revised Statutes (no environmental assessment or environmental impact statement was done for the projects). Second, he claimed that their work violated Chapter 342D, the state's clean water statute, inasmuch as the pesticide used to poison mangroves could pollute the water, as could the foliage shed by targeted trees. In addition, he said, "large pieces and branches of dead mangrove trees can fall off and enter the ocean, posing a threat to swimmers, surfers, and boaters."

Singer's third claim was that the work was a threat to endangered species and thus violated Chapter 195D and was in conflict with the "environmental policies and guidelines" of Chapter 344. Chapter 195D is the state's endangered species law, while Chapter 344 sets forth the state's approach to conservation and public health and welfare.

Finally, Singer charged that the defendants



Mangrove on lava at Wai 'Opae Marine Life Conservation District.



were violating Hawai'i's pesticide law, Chapter 149A, by using a pesticide, Habitat, in a manner not consistent with the product label.

Singer asked the court for a permanent injunction against the mangrove eradication efforts. He also asked it to require the defendants to: undertake a water quality monitoring program at project sites; halt the issuance of any new permits for such work and cancel existing permits; and post signs warning the public "that the area has been poisoned and may pose a health risk." He also sought "fees and costs" and "damages to the full extent of the law."

The injunction was denied, allowing MOP and its partners to continue with the mangrove removals. However, the Fish and Wildlife Service suspended its funding for one of the projects. According to Kobsa, "Nothing about the lawsuit stopped us. We continued to work. But it did gum things up. Government agencies got freaked out... After the Fish and Wildlife Service got sued, they pored over everything carefully and found they had not completed their cultural compliance," a federal requirement.

That took months, she said, as a result of the State Historic Preservation Division (an agency within the Department of Land and Natural Resources) being so backed up. "When the Fish and Wildlife Service pulled out, we scraped by with volunteers," said Kobsa, herself a volunteer. After the cultural review for Pohoiki (Isaac Hale Beach Park and nearby land) was finished, then the service decided they would do an environmental assessment.

For the Alula Bay project, the Fish and Wildlife Service is back on board, Kobsa said. Because the site is known to contain archaeologically significant structures, including a heiau, Historic Preservation was involved in the permitting as well. "It's all going to be manual clearing—no herbicides," Kobsa said. "We did an archaeological monitoring plan. SHPD wanted all mangroves cut to the ground, so why bother to poison the trees anyway. And because it's such a relatively small area—seven-tenths of an acre of mangroves—and has road access, it's do-able manually." In addition to removing the mangroves, MOP will also be taking out pickleweed, another invasive species, and planting native coastal species.

All that's needed now is for the county to issue the SMA minor permit, the Office of Conservation and Coastal Lands to issue a Conservation District Use Permit, and for the Board of Land and Natural Resources to approve a right-of-entry, needed because of the site's archaeological value. Kobsa said she expects work there will begin in the fall.

### **Water Quality Issues**

The summer of 2010, before the settlements were reached and after the preliminary injunction request had been denied, saw a flurry of charges and counter-charges exchanged between Singer, on the one hand, and the attorneys representing the state, county, and private parties.

One of the points Singer focused on was the fact that Malama O Puna did not remove from private land at Wai 'Opae, the trunks and foliage of mangroves that had been poisoned. (All the mangroves within the Wai 'Opae Marine Life Conservation District had been removed by hand, without the use of pesticide.) He argued that the state Department of Health was also concerned by this practice, referring to an email to Singer from Jamie Tanimoto, a staffer with the DOH Clean Water Branch. In her email, dated February 4, 2010, just days before Singer filed his legal complaint, Tanimoto had written that, with all the leaves falling off after poisoning, there could be "water quality problems. Shedding foliage is the main concern I have... [M]y supervisor and I are working on what we can do to answer our questions."

Singer had also asked the Department of Health if it was involved in or knew of water-quality testing being done at the sites where the pesticide was being used. Tanimoto responded by noting that the DOH itself was not involved in any such testing. In a phone call between her branch and Malama O Puna, Tanimoto wrote, the Clean Water Branch "requested that they start water quality monitoring."

"However," she continued, "bear in mind that their activities are not addressed in water pollution regulations, and if they are applying their approved herbicide correctly, they are not breaking any laws the Clean Water Branch can enforce upon." Malama O Puna did, in fact, take water quality measurements at Wai 'Opae. The report, prepared by Rich MacKenzie and Caitlin Kryss, was forwarded to the DOH.

According to Singer, Malama O Puna was required to take out the dead and dying trees as a condition of its permits.

According to Kobsa, however, the permits required no such thing. In fact, for removing the mangroves from the state Marine Life Conservation District itself, no Conservation District Use Permit was required at all. In a declaration filed with the court, Kobsa stated that in February 2009, the Department of Land and Natural Resources' Office of Conservation and Coastal Lands informed Malama O Puna that, in Kobsa's words, "mangrove removal did not require a CDUP unless power tools were used (which they were not)." For the Pohoiki site, Kobsa continued, the DLNR "first said a CDUP would be needed... because

Malama planned to use chain saws... However, Malama has not and will not be using chain saws at the Pohoiki site."

As to the volume of dead foliage, which Singer amply documented in photos taken of the work sites, Kobsa acknowledged the issue. "One of the major problems associated with mangroves in Hawai'i is the large amount of organic matter that they shed continually into the water," she wrote. "Malama members have observed that in areas without vigorous flushing, this organic material, as it decomposes, forms a thick sludge that is anaerobic at the bottom, releasing sulfurous gasses, especially when disturbed. When the mangroves are killed, about one year's worth of organic matter falls into the water over several month's time, depending on how rapidly we move through an area."

Although the amount of dead foliage may be unsightly, the removal effort actually reduces the volume of dead organic matter over time, Kobsa pointed out. "At Wai 'Opae, it took Malama five months to complete the first round of injections to kill the larger trees and the herbicide takes up to three months to fully defoliate the trees," she wrote. "Therefore, in eight months we caused the shedding of the amount of organic matter that would typically fall over the course of a year without treatment. If the mangroves were allowed to continue growing exponentially, the amount of organic matter shed into the water each year would quickly dwarf the amount that is shed as a result of our project."

As to Singer's contention that Malama O Puna left the dead mangroves in place to save money, he "is mistaken in his assumption," Malama's attorney, Elijah Yip, wrote in a responding memo to the court. "Non-removal of treated mangroves is actually better for the surrounding environment than removal," he continued. "It was in large part due to the concerns of the Clean Water Branch that Malama decided not to cut down any of the larger mangrove trees at Pohoiki."

In an email to *Environment Hawai'i*, Kobsa said that for her, "the main issue is that removal of the dead mangroves basically requires a clearcut. So, in addition to causing disturbance of sediment, it would require removing all interspersed native trees as well, which would create an unsightly and unstable situation and make it harder for the ecosystem to return to its natural state. Even with our replanting, it would be more likely that the shorelines would become dominated by other invasives."

### **Label Violations**

Singer also alleged that Malama O Puna was violating pesticide laws in the manner in

which it applied the herbicide. The Habitat product label, he said, “does not specifically list mangroves as an aquatic species that can be controlled with this product. Therefore, using Habitat to poison mangroves is use of this pesticide in a manner inconsistent with its label.” He also argued that using the product in what he deemed to be “sensitive shoreline conservation sites” also constituted a label violation.

Malama O Puna rebutted this with a declaration of James Leary, assistant specialist for invasive weed management at the University of Hawai'i's Cooperative Extension Service. The fact that mangroves weren't specifically called out on the pesticide label, Leary said, means little. Singer's argument “is a misinterpretation of the label and goes against conventional understanding among



PHOTO: MALAMA O PUNA

At right (light gray) is a stand of dead mangroves near Wai 'Opae tidepools.

herbicide applicators of how to read an herbicide label.... It is often misconstrued that if a plant is not listed ... that it is unlawful to target that species. Instead, it is only unlawful to treat a species if it is specifically prohibited in the label.” Apart from the targeted species, he continued, the other main consideration in determining compliance with label instructions is the application site. “Mangrove in Hawai'i would be a marine site,” he pointed out, “which is in fact listed in the label.”

Leary praised the practice of injecting herbicide into individual trees as “a very discrete and efficient technique relative to other conventional application methods.” (Aside from its efficiency, use of herbicides to remove mangroves is far more economical than other removal methods, such as by hand or with chain saws. According to Kobsa, mechanical removal in Hawai'i has cost between \$37,000 and \$175,000 per acre. By using a shoreline-approved herbicide to kill the mangroves, she has written, the cost can be lowered to just \$2,000 per acre, potentially putting mangrove eradication within reach at many more locations.)

### *The Noxious Weed List*

One of the arguments raised by Singer had to do with the fact that the red mangrove does not appear on the state Department of Agriculture's noxious weed list. The DLNR rules for Conservation District uses allow removal of listed noxious plants, Singer wrote, but with mangrove not being on that list, “the exemption from the need for a permit was unjustified for these projects,” he wrote. And, “since the exemption for needing a permit was unjustified, therefore the exemption from needing an Environmental Assessment based on this erroneous conclusion was also unjustified.” DLNR rules actually are more ambiguous, stating that “noxious plants are defined in Chapter 152 HRS and [Hawai'i Administrative Rules] Chapter 4-68, Subtitle 6,” the noxious weed rule (including the Board-of-Agriculture-approved list of weeds).

The court dismissed Singer's claim of a violation of HEPA (the Hawai'i Environmental Protection Act, Chapter 343) as untimely, putting paid to further discussion of whether an environmental assessment should have been required. In any case, Yip argued, the fact that a species does not appear on the list means little. “Mangroves do not need to be officially designated on the noxious weed list to qualify as a

target pest to be eradicated ... Narrowly focusing on whether the red mangrove is on the list ... ignores the broader policy objectives as expressed in legislation.” In Chapter 152 of Hawai'i Revised Statutes, Yip noted, a “noxious weed” is defined as “any plant species which is, or which may likely become, injurious, harmful, or deleterious to the agricultural, horticultural, aquacultural, or livestock industry of the state and to forest and recreational areas and conservation districts of the state, as determined and designated by the department [of agriculture] from time to time.” The list, he continued, “was last updated on June 18 1992. The presence or absence of a harmful species on a list that has not been updated for two decades is not the final determinant of the state's authority to control a species, however. It cannot be the case that agencies are powerless to facilitate eradication of an invasive species ... simply because the DOA has not placed the species on the noxious weed list.”

### *Endangered Species*

In arguing that the mangrove removals might

threaten endangered species, Singer cited concerns of the National Park Service over the use of pesticides at Alula Bay, near Kaloko-Honokohau National Historical Park. In comments on the project, the service had expressed concerns over possible impacts to a shrimp and the orangeblack damselfly, both candidate endangered species.

In opposition to this, the defendants noted that no work had begun near Park Service lands. What's more, Kobsa pointed out that some studies have indicated mangroves themselves threaten some of the very species called out by Singer. Kobsa attached to her declaration an article by James Allen, “Mangroves as Alien Species: The Case of Hawai'i,” published in 1998. Allen notes that “the most direct impact [of mangroves] ... is the invasion of foraging and nesting habitat. None of the [waterbird] species will forage or nest in mangroves, so many areas where mangroves are established are therefore existing or potential habitat lost to the waterbirds.... Mangroves are known to provide shelter for some waterbird predators.... The native black-crowned night herons and introduced cattle egrets, both of which prey on other waterbird chicks, nest in mangroves.... The Hawaiian stilt is probably affected the most. Its optimal foraging habitat is on shallowly flooded marshlands and exposed tidal flats, sites ideal for mangrove colonization.”

### *A Ruling*

Last September, Judge Greg Nakamura issued two orders. The first dismissed the motions for summary judgment and injunctive relief filed by Singer, who since August had been represented by Waimea attorney Margaret Wille. The second granted in part and denied in part Malama O Puna's cross motion for summary judgment or for partial summary judgment. Nakamura dismissed the allegation of a HEPA violation, agreeing with Malama that it was untimely. He also dismissed the charge that the state's pesticide law had been violated, saying that Malama O Puna had “satisfied its burden of producing evidence showing the absence of a violation.”

On the matter of alleged violations of the state's clean water and endangered-species laws, however, Nakamura allowed the case to proceed, agreeing with Singer that both these laws allowed for a “private right of action.”

### *Settlement*

By December, the Hawai'i Tourism Authority and the DLNR had settled with Singer. The agreement, which runs to just

two pages, states in the “whereas” clauses that the DLNR had allowed “this herbicide-based mangrove eradication program to be undertaken at the project locations (subject to removal of the poisoned dead mangroves from the area)” and that HTA had financed “this eradication program at one site, Wai ‘Opae (but likewise expected the dead poisoned mangroves to be removed from the shoreline area).” Apart from those concessions – which Malama continues to contest – the settlement gave Singer very little.

In terms of state actions, the settlement calls only for the state to “remove signage requesting visitors to kill and remove mangrove propagules” if the signs are on state land. For signs paid for with state funds that are on private land, the attorney general’s office agreed to request permission to remove them. Singer himself agreed to take the signs down, “upon written request” from the state.

According to Kobsa, there was just one sign, which was on land owned by the Kapoho Vacationland Community Association. The sign, she said, was stolen before the state asked for its removal. Within a few weeks, Singer’s attorney delivered the sign to the state Land Division agent in Hilo, who then called Malama O Puna. “We got it from them and took it back to the community association.... The community association thought it was their sign to keep, since it was on their property,” she said.

By May, the remaining defendants – the county and Malama O Puna – were nearing a settlement agreement as well. That three-page agreement, which was signed in mid-May, forbids Malama O Puna from posting any signs in the future requesting that visitors kill and remove mangrove propagules. It also prohibits Malama O Puna from using herbicide at Alula Bay (no pesticide use was planned there, in any event) and bars the county from allowing their use at the same site.

The county “may approve future mangrove eradication projects but agrees that before approving such a project, it shall give due consideration of whether an environmental assessment under HEPA is necessary.” (The county had, in fact, signed the requisite exemption determinations in issuing the SMA minor permits, which legally satisfies the “due consideration” requirement.)

Finally, the settlement agreement contains a paragraph prohibiting any of the parties from making disparaging statements about the others. —**Patricia Tummons**

## Singer’s Campaign to Protect Waiawi Is Seen as Case Study in Social Manipulation

The man who sued to stop the mangrove eradication project on the Big Island, Sydney Singer, has developed a reputation for activism on behalf of non-native species that are targeted for control by mainstream conservation groups. In addition to his crusade against mangrove eradication, he has also championed coqui, strawberry guava (or waiawi), feral pigs, feral cats, and wild sheep.

One of Singer’s most ambitious campaigns was launched against the plan of state and

Science, Technology, and Society at Santa Clara University and Frances Kinslow, a graduate student at Chaminade University, analyze Singer’s efforts to rally support for his claims as a case study in how risk communication can be communicated. (The article, “Manipulating risk communication: value predispositions shape public understandings of invasive species science in Hawai‘i,” appears in the May 25 edition of *Public Understanding of Science*.) The case, they write,

“Admittedly, I am not a scientist.”

— Sydney Singer

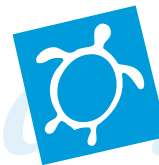
federal agencies to introduce a scale insect, *Tectococcus ovatus*, intended to slow down the spread of strawberry guava (*Psidium cattleianum*), generally considered one of the greatest threats to tropical and subtropical islands worldwide. Singer’s efforts to stymie the release of the biocontrol agent, thoroughly tested to ensure little likelihood of it jumping to another host plant, found fertile ground in the minds of many members of the public and, more significantly, that of county legislators as well.

That campaign has recently been written up in a scholarly journal. Authors Keith Warner, assistant director of the Center for

“illustrates the obstacles to invasive species risk communication to the public, and its vulnerability to manipulation by an activist opponent.”

The authors describe a situation on the island of Hawai‘i where more than a decade ago, relations between conservationists, on the one hand, and pig hunters and their supporters, on the other, became almost hopelessly broken. A “common theme ... emerged: resentment by the local people toward the advice brought by mostly white, mainland-born scientists whom they considered ‘outsiders.’ Hunters maintained that the conservation scientists’ assertion that pigs

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harmed forests was speculative.” The so-called pig wars of the '90s thus put in place an “established, popular narrative that conservation science is used by ‘outsider’ government agencies to justify decisions that directly conflict with how rural Hawaiians use forests,” Warner and Kinslow write.

It is against this backdrop that Singer’s opposition to the release of *T. ovatus* played out. The authors note that Singer and his wife, Soma Grismajer, had already run up against mainstream science with a book arguing that bras cause breast cancer. “Their argument has been rejected by cancer researchers and the mainstream medical community, but was popular among some advocates for alternative medicine,” the article states. Their critique of “consensus science,” it goes on to state, then turned “to invasive species control efforts, specifically of the noisy Puerto Rican coqui frog (*Eleutherodactylus coqui*).”

“Through websites dedicated to these issues and extensive advocacy via petitions, participation in public events, and postings on the internet and local bulletin boards, Singer constructed a public identity as a contrarian scientist who articulated local values and criticized government scientists. Singer drew on this local credibility in his campaign against the *T. ovatus* introduction.”

Singer’s “rhetorical strategy had two thrusts,” they write. First, he raised doubts about the “trustworthiness of conservation scientists.” Second, they say, he linked efforts to suppress strawberry guava through biocontrol “with the established narrative of government agency indifference to rural livelihoods.” They note how, through the selective use of phrases from a government researcher’s reports, Singer made it appear

as though the researcher was endorsing opinions diametrically opposed to those he actually held. “Singer thus selected from [U.S. Department of Agriculture researcher Tracy] Johnson’s risk communication to regulatory scientists and then constructed his own narrative – using scientific terms – to appeal to some local values.”

“Singer drew from the same lexical field used by those who objected to pig fences,” the article goes on to say. “He claimed that free, wild food was under attack. . . .”

“It was not that Singer was himself a credible messenger, but rather that he was able to discursively appeal to established narratives about government agencies and science.”

“Several critical questions about the public understanding of invasive species science are cast into sharp relief by this case study,” the authors write. Might “credible local authorities” – they suggest a pig hunter or native Hawaiian cultural leader who uses native forest plants for cultural practices – be called on to speak in favor of invasive species control? On the other hand, “skeptical members of the public could reasonably ask for greater transparency on the part of government agencies and more responsiveness to community concerns.”

They conclude: “When a gap exists between invasive species scientists and a network of opponents, in the absence of public engagement, the potential for a perverse outcome exists: augmented public mistrust of science institutions.” Singer’s “knowledge of the local values predisposition” gave him “a form of social power that can hold off government efforts to pursue conservation goals. . . . [The case] illustrates how routine risk communication can be manipulated by reframing deliberation about scientific management practices into a debate about the credibility of government scientists.”

### Singer Responds

Singer commented on the article in a posting made to an online user group for people

concerned with invasive species in Hawai'i. The article, he wrote, “was poorly written and I believe inaccurately described the strawberry guava biocontrol project’s public reaction and my personal reason for opposing this project. . . .”

“I think, in general, the environmental managers are wanting to get the public behind their agenda, rather than adapting the managers’ agenda to the public’s values,” he continued.

Also, “species being targeted are vilified. . . .” he wrote. “The species becomes the ‘enemy’ as war is declared. As a scientist I find this extremely objectionable, and my personal crusades to protect the coqui, strawberry guava, and mangrove began when I read propaganda coming from the government and saw it was not objective, honest science.” Among other things, to achieve “improved risk communication,” he suggested that resource managers “admit the benefits of target species and be more holistic in seeing the complex interrelationship between species and the environment.”

Although describing himself in this post as a scientist, at other times, Singer has specifically stated he is *not* one. On the same online user group, in a comment just a few weeks earlier on another invasive species, Singer wrote, “Admittedly, I am not a scientist.”

On many occasions, Singer has described himself as a medical anthropologist and a biochemist. A resume he provided to the court says he received a bachelor’s degree in biology from the University of Utah. He also informed the court that he received a master of arts degree (in anthropology) from Duke University, “where I spent two years in the Ph.D. program in biochemistry and an additional two years in the Ph.D. program in anthropology.” Following that, Singer claims to have been enrolled in the M.D./Ph.D. program at the University of Texas medical branch at Galveston, “where I spent two years in the medical school program and an additional year in the medical humanities program.” — P.T

