

Pied Pipers With Poison

As the residents of Hamelin well knew, rats are a scourge and their removal can exact a high price.

In the case of Lehua island, non-native rats have established a beachhead and threaten the rare species of plants and animals there, but is the potential price of their eradication too high?

As this month's cover explains, the Department of Land and Natural Resources, charged with protecting wildlife, says no. Whether the state Department of Agriculture, which regulates the use of rodenticides and other pesticides, agrees remains to be seen.

Also in this issue, we look at the most recent developments in the troubled 'Aina Le'a project on the Big Island, a decision on the Keauhou aquifer petition, and the final testimony in the Thirty Meter Telescope contested case hearing.

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State, Federal Agencies Try Again To Rid Lehua Island of Rodents

If all goes as planned, Lehua island, a 284-acre state-designated seabird sanctuary that's less than a mile north of Ni'ihau, will be rat-free in the very near future.

But that's a big "if."

Among other things, the state Division of Forestry and Wildlife (DOFAW), the lead agency on the Lehua Island Eradication/Restoration Project, must obtain a permit from the Pesticide Branch of the state Department of Agriculture (DOA) to aerially apply restricted use pesticides. In this case, the pesticides being considered are the anticoagulants diphacinone and, possibly, brodifacoum, both of which have been used to successfully eradicate rodents from islands elsewhere, according to a draft environmental assessment for the project released last month.

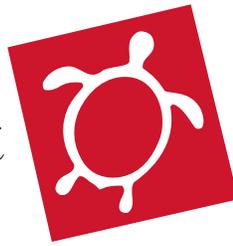
When DOFAW first tried to eradicate rats from the island several years ago, it dropped its original proposal to use brodifacoum as a

back-up to diphacinone. Diphacinone has a lower success rate and is not as commonly used for island eradication projects, but it is considered less of a threat to non-target species. Even so, the Pesticide Branch chief at the time, Robert Boesch, directed DOFAW's contractor not to distribute any rat bait within 30 meters of the water, so as to limit any potential harm to marine life. When loads of dead fish and a whale calf washed up on the shores of Ni'ihau and another calf washed up on Kaua'i after the January 2009 rodenticide drop, Boesch's agency imposed a ban on aerial baiting on February 5, 2009, "until general conditions around testing guidelines for rodenticide impacts in marine environments were developed" by the Environmental Protection Agency, states a January 2011 independent review of the project. That review, by New Zealand's Landcare Research, cited the **continued to page 5**



Red-footed booby chick on Lehua island.

PHOTO: ISLAND CONSERVATION



NEW AND NOTEWORTHY

Kahului Airport Powered by Biogas? The state Department of Transportation is seeking approval to enter into a 20-year contract to purchase biogas from Maui Resource Recovery Facility, LLC (MRRF), that will be used to provide electrical power to the Kahului airport. The proposed value of the contract is nearly \$85 million.

The Airports Division of the DOT filed a request for exemption from standard bid procedures with the State Procurement Office on March 15. In explaining why the contract should be approved, it stated that this was the only source of renewable energy able to provide all of the airport's electricity needs, reducing the airport's carbon footprint by some 13,000 tons per year.

As outlined in the bid exemption request, MRRF would deliver biogas to a combined heat and power (CHP) facility that MRRF would build at the airport. The per-kilowatt-hour cost is estimated at 28.5 cents initially, with a 2 percent annual escalation over the life of the contract. By contrast, the DOT stated, power purchased from Maui Electric is 29.4 cents per kWh.

MRRF is a subsidiary of Anaergia, a global renewable energy company that has proposed several other projects on Maui. The company's website states that the MRRF has a target removal rate of 75 percent of the recyclable material. It has had a contract with Maui County to develop the facility since January 8, 2014. Ground has yet to be broken on the MRRF and there has been no environmental assessment or environmental impact assessment done for the project.

The DOT bid exemption request anticipates that the plant will be up and running by January 1, 2019, which is the start date for the contract proposed to the Procurement Office. A company press release published in *Waste Management World* in January 2014 stated that the MRRF would be "fully operational in 2017."

Kaua'i Springs Update: For more than a decade, the bottling of water by Kaua'i Springs, Inc., has been the subject of controversy involving, among other things, what agencies should be consulted in the permitting process.

The source of the water is a spring near Koloa on land owned by the EAK Knudsen Trust. It is conveyed by a plantation-era system of tunnels and pipes to a tank owned by the Grove Farm Company, which then distributes it to the Kaua'i Springs facility (described in a filing with the Public Utilities Commission as "two Matson shipping containers, joined by roof and wood decking") as well as dozens of homes.

Kaua'i Springs ran afoul of the Kaua'i County Planning Commission, which in early 2007 denied it use permits and zoning permits. Among other things, it wanted the company to show

that its use of water complied with all applicable laws and regulations of the state's Public Utilities Commission and Commission on Water Resource Management.

Ultimately, the case wound up before the state Supreme Court, which in February 2014 remanded it to the Planning Commission. Last year, Kaua'i Springs was required to obtain a determination from both the Water Commission and the Public Utilities Commission that its operations do not fall under their jurisdictions.

It filed such a request with the PUC on March 6, which the PUC rejected for technical reasons, asking it to be refiled. On January 17, Jeffrey Pearson, director of the Water Commission, informed Kaua'i Springs that it would not be needing any approvals from that body.

(For background, see articles in the June 2013 and April 2014 editions of *Environment Hawai'i*.)

Milestone: It is with profound sadness that we note the passing of Paula Dunaway Merwin of Haiku, Maui. For many years, Paula served as a board member of *Environment Hawai'i*, and long after her service ended, she remained a great friend. We send our condolences to her husband, William, who also was for a time a member of our board; to Paula's aunt, Joan Packer, of Waikiki, and to her two sons and their families.

Paula was always gracious and generous with her time and talents, witty, and possessed at times of a wicked sense of humor. She was a welcoming hostess and cook and a helpmeet to William. We miss her.

Department of Red Faces: Our March issue contained a couple of errors. Our cover story mistakenly stated that a workshop at which planners and scientists discussed sea level rise occurred on Kaua'i. It was held in Honolulu. Also, a New & Noteworthy item erroneously stated that certain fishing rules restricting the catch of parrotfish applied to Lana'i and Maui. They only pertain to Maui.

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Quote of the Month

*"I used to subscribe to
Environment Hawai'i for many years
... then I stopped.
Then they went out of publication.
But I guess they were on the internet."*

— **Mililani Trask**

'Aina Le'a Makes \$200 Million Claim Against State Over Stalled Development

One of the companies that is involved in attempting to develop about 1,000 acres of land near Waikoloa Village, on the island of Hawai'i, has filed a complaint in state court that seeks \$200 million in damages from the state, plus additional "compensatory consequential, and punitive damages," along with interest, attorneys' fees, and other costs.

The lawsuit, filed by DW 'Aina Le'a, LLC, on February 23 in 1st Circuit Court, dates back to a decision the state Land Use Commission made six years ago to revert land where the company had begun to build 385 affordable housing units from the state Urban District to the Agricultural District. On March 13, the case was transferred to federal court.

The land had been in the Urban District since 1989, when the original redistricting petition was approved. In the intervening years, title to the area changed several times, with DW 'Aina Le'a entering the picture in 2009 as a development partner with Bridge 'Aina Le'a, which owned the land at that time.

As *Environment Hawai'i* has reported in numerous articles over the years, in April 2011, the LUC took the vote to revert the land use classification to Agricultural after it determined that Bridge (and DW 'Aina Le'a) had not fulfilled a condition to have at least 16 affordable units built by March 31, 2010.

Judge Elizabeth Strance of the 3rd Circuit ruled that the LUC had violated

Bridge's due process rights, among other things. On appeal to the state Supreme Court, this determination was rejected, although the high court did find that the LUC should have gone through a more thorough redistricting hearing before reverting the land to Agricultural.

In a separate federal lawsuit, Bridge claimed damages of upwards of \$15 million. Last year, this was settled for \$1 million, with the final agreement signed in February this year.

Since filing that lawsuit, Bridge sold almost all its land in the Urban District to DW 'Aina Le'a Development (DWAL). The first purchase was in 2009 of 61 acres, which included the area where it planned to build the affordable housing units plus additional market-based single-family houses and upscale condominiums. In 2015, DWAL took title to an additional 1,011 acres, leaving Bridge with a 27-acre parcel, zoned for commercial development. (Bridge continues to hold title to roughly 2,000 acres in the state Agricultural District that surround the Urban land on three sides.)

In the most recent filing, DW 'Aina Le'a claims that the 2011 LUC action amounts to inverse condemnation — a taking that is prohibited under the 5th Amendment to the U.S. Constitution.

A Disillusioned Suitor

DW 'Aina Le'a Development, LLC, owns a major stake in another company, 'Aina Le'a, Inc., a Delaware corporation formed in 2012 to raise more than \$35 million in capital needed to move the Villages of 'Aina Le'a development forward. The offerings of shares failed to generate the required funds, but last year, 'Aina Le'a (the corporation) did locate a promising investor: the Origo Acquisition Corporation, based in the Cayman Islands.

As *Environment Hawai'i* reported last month, Origo is a "blank check" company with no business activity of its own, except to identify takeover targets. The merger agreement was signed in December, but Origo then had two months in which to conduct due diligence.

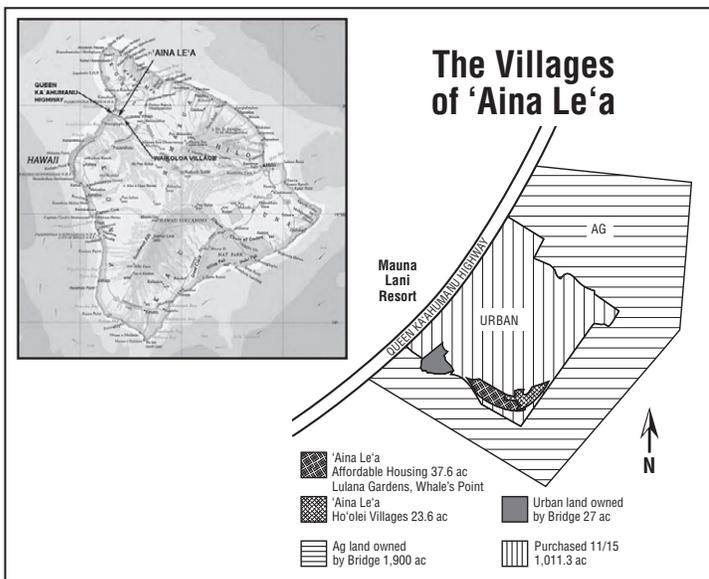
In late December, one of 'Aina Le'a's Chinese investors, Libo Zhang, filed a lawsuit seeking to foreclose on a 23.6-acre parcel where DW 'Aina Le'a is proposing a residential development. Zhang had obtained a mortgage on the parcel in return for providing a \$6 million loan to 'Aina Le'a, Inc.

The lawsuit may have been one of the factors in Origo's decision to terminate its merger agreement.

On February 17, Origo notified 'Aina Le'a that in light of certain breaches of the agreement as well as a "material adverse effect" on the company that was "uncured and continuing," it would not be going forward with the merger.

In a notification to the Securities and Exchange Commission, 'Aina Le'a stated that the company disputed the facts that Origo had cited in its termination notice. "However," it added, "after careful evaluation, the company decided that it is not in the best interest of its stakeholders to continue pursuing the merger."

In addition to the unpaid loan from Libo Zhang, 'Aina Le'a also is in arrears on a \$14 million loan it took out from Bridge to finance purchase of the bulk of the Urban area in 2015. — *Patricia Tummons*



For Further Reading

Environment Hawai'i has reported extensively on the 'Aina Le'a development. Here are a few recent articles:

- " 'Aina Le'a Update: A Settlement, an Overdue Note, and a Possible Suitor," March 2017;
- "As One Court Case over 'Aina Le'a Is Settled, Another, Larger One Looms," August 2016;
- "Hawai'i Planning Director Questions Whether 'Aina Le'a Complied with Zoning Conditions," April 2016;
- "Whatever Happened to the Villages of 'Aina Le'a?" January 2016.

Water Commission Denies NPS Petition To Designate Keauhou Aquifer System

At its February 14 meeting in Kona, after hours of testimony and discussion, the Commission on Water Resource Management denied a petition filed by the National Park Service (NPS) in September 2013 to designate the Keauhou aquifer system as a groundwater management area, finding that none of the designation triggers set forth in the state Water Code had been met.

The NPS filed the petition out of a belief that a stricter management regime needed to be imposed to ensure that fresh groundwater continued to flow into the coastal portions of Kaloko-Honokohau National Historic Park — particularly its ancient fishponds and anchialine pools — as water demands in the development-targeted area grew. If the commission were to have designated the aquifer system as a groundwater management area, all withdrawals from it would have required a use permit from the commission.

The petition was controversial, to say the least.

“Since the petition submission, there have been lengthy discussions and community involvement ... through 11 commission meetings (including two field investigations with videos) covering eight action submittals, 42 presentations/briefings/updates, 466 written testimonies, and various consultations with federal, state and county agencies, presentations to community groups, and staff field investigations,” a staff report states.

Ultimately, however, the petition forced the commission and the Hawai'i County Department of Water Supply to investigate and flesh out the area's current and future water needs for the first time and to identify ways to ensure that traditional and customary rights were taken into account in management decisions regarding the aquifer system.

Shortly before taking up the NPS petition at the February meeting, the Water Commission approved an update to the county's Water Use and Development Plan that describes how the DWS — through watershed-protection and well-development strategies, among other things — will ensure the sustainable use of the Keauhou aquifer resource and at the same time not infringe on constitutionally protected traditional and customary rights. The county has committed to consulting with the state's Aha Moku Advisory Council and the Department of Hawaiian Home lands when evaluating new proposed county wells in the area.

When it came time to discuss the NPS petition, commission hydrologic program manager Roy Hardy touted the county's past practices and its WUDP update as examples of good resource management.

“Today, we are part of the plan to protect the [national] park with the acceptance of the Phase 2 Water Use and Development Plan,” he said.

Hardy recommended that the commission deny the petition because the criteria for designating groundwater water management areas had not been met. Triggers for designation include:

- 1) an increase in use or authorized planned use that may cause the maximum rate of withdrawal to reach 90 percent of the sustainable yield;
- 2) a determination by the Department of Health that water quality degradation is occurring or is threatened;
- 3) a finding that regulation is necessary to preserve the diminishing ground water supply for future needs, as evidenced by excessively declining ground water levels;
- 4) rates, times, spatial patterns, or depths of existing withdrawals endanger the stability of optimum development of the groundwater due to upconing or the encroachment of salt water;
- 5) an increase in chloride levels of wells to the point they reduce the value of existing uses;
- 6) excessive preventable waste of ground water;
- 7) serious disputes respecting the use of groundwater; or
- 8) a threat that water development projects that have received federal, state, or county approval may result in one of the above conditions.

With regard to the first trigger, a commission staff report notes that current “authorized planned use” of the aquifer according to the WUDP is 28.07 million gallons per day (mgd), which is nearly 74 percent of the aquifer's sustainable yield of 38 mgd. Hardy added that actual use as of November 2016 totaled a mere 39 percent of the sustainable yield.

He said that actual water use in the area had not changed much since the petition was filed, adding that, at the rate use has been increasing, the sustainable yield would be reached about 69 years from now.

With regard to the second and third triggers, Hardy reported that the DOH has stated that it does not see any threat to water

quality in the Keauhou aquifer system area and that commission staff's evaluation of the aquifers in the area found that water levels aren't changing.

With regard to triggers four and five, Hardy noted that the county has successfully spread out its well pumping to avoid increased chloride levels.

Regarding trigger six, contrary to the petition's claim that water consumption in North Kona averages 1,000 gallons per day per single-family dwelling — 2.5 times higher than other areas of the county — commission staff found that meter records show that the actual average usage was a “reasonable” 430 gallons per day.

As for the “serious disputes” trigger, commission staff argues in its report to the commission that many of the issues identified by the NPS as areas of dispute can be addressed without designating the aquifer. For example, Hardy told the commission, disputes over the aquifer system's sustainable yield are most appropriately dealt with in the commission's Water Resource Protection Plan (WRPP) process.

“The WRPP is the appropriate venue to address sustainable yield. Petitions are not the appropriate process,” he said, adding that the commission plans to release its proposed WRPP update this year.

Commission staff recommended the adoption of eight actions as alternatives to designation, including referring all well permit applications to the Aha Moku Council for review to protect traditional and customary practices, and commencing public informational meetings if authorized planned use reaches 80 percent of the area's sustainable yield.

The commission ultimately approved its staff's recommendations, with the amendment that the commission also send well permits to the Department of Hawaiian Home Lands for review.

Commissioner and Hawai'i island resident Kamana Beamer was the sole dissenter, stating before the vote that he believed serious disputes regarding groundwater usage did, indeed, exist.

After commissioners Mike Buck and Neil Hannahs expressed confidence that the new county plan and staff's recommended actions would protect the area's water resources, Beamer stressed, “It's not an issue of trust with me. I trust staff.” However, he added that there seemed to be “structural barriers” that might prevent the optimum spacing of wells, for example. “Short of designation, we can't space out the wells to avoid upconing,” he said. Upconing occurs when salt water is drawn up through the aquifer as a result of over-pumping. — *T.D.*

Despite Non-Target Fatalities, Wildlife on Palmyra Rebounds

In June 2011, Island Conservation eradicated rats on Palmyra atoll, which is located about 1,000 miles south of Hawai'i and is co-owned by the U.S. Fish and Wildlife Service and The Nature Conservancy. The company aerially broadcast the anti-coagulant rodenticide brodifacoum at rates much higher than is expected to be used for the Lehua rat eradication project. It also distributed additional bait by hand.

In addition to successfully ridding the 618-acre atoll of rats, the project incidentally killed fish and birds. Brodifacoum residues were also found in soil and in crabs, cockroaches, and lizards, among other animals.

A 2015 *Biological Conservation* article by staff with the U.S. Department of Agriculture and Island Conservation scientists on the non-target species mortalities resulting from the Palmyra operation states that the

maximum number of birds that could have died during the operation is estimated at 68 bristle-thighed curlews, 28 Pacific golden plovers, 10 wandering tattlers, and 8 ruddy turnstones.

"These estimated bird losses are well below the numbers permitted to be taken" in the permit issued by the Fish and Wildlife Service under the Migratory Bird Treaty Act, it stated.

"Brodifacoum residues were found in 12 birds found dead following the rat eradication on Palmyra Atoll and was likely the cause of mortality. One year following the rat eradication on Rat Island, ~350 gull carcasses from two species had detectable levels of brodifacoum ... indicating primary or secondary exposure," it continued. "There is reason to be concerned that Palmyra may have suffered higher mortality than we

documented in our short-term assessment because residues persisted and all carcasses were almost certainly not discovered."

Despite the fatalities and the rodenticide's lingering residual effects, Island Conservation's Heath Packard says the Palmyra project overall has been "wildly successful." The seabirds are healthier, native trees long-suppressed by rats have sprouted anew and now tower over people, new land crab species have been recorded, and even marine life seem to prefer the new forest habitat, he says. Sooty and white terns, black and brown noddies, white-tailed tropicbirds, dragonflies, and crickets have also reportedly seen dramatic population increases. —T.D.



Lehua from page 1

DOA's requirement of a coastal buffer as one of several possible contributors to the project's failure.

The draft EA — which has a preferred alternative of using diphacinone first and brodifacoum only if necessary — states that the project will be more effective without the coastal buffer, "thus ensuring a uniform and complete distribution of bait in shoreline areas used by rats."

Boesch retired several years ago and it's unclear whether or not the DOA will maintain his position. Steve Russo of the Pesticide Branch said late last month that he hadn't yet read the draft environmental assessment and could not say what his agency's position would be without first seeing a permit application.

The Department of Land and Natural Resources, DOFAW's parent agency, and contractor Island Conservation stated in a joint email to *Environment Hawai'i*, "Until the EA process is complete, discussion of the operational details (including the presence or absence of buffer) would be premature. However, the EA outlines the well-established principles of rat eradication that highlights the need to place bait into every potential rat territory to ensure a reasonable probability of success. The coastal fringe of the island is important habitat for rats

and removal of rats in these habitats would include any or a combination of broadcast application up to the high-water mark, bait station placement and/or hand placement of bait and/or traps to ensure removal tools are placed into every potential territory."

Should the DOA ultimately grant the permit and the eradication effort succeed, one of the largest and most diverse seabird colonies in the main Hawaiian Islands will "have the potential to become a refuge to species displaced by sea level rise," the draft EA states.

The comment period for the draft EA ends April 6. The U.S. Fish and Wildlife Service, a participating agency in the project, is also expected prepare its own analysis.

Tragic Trilogy?

"This one made me cry," said Boesch in an interview, pointing to a photo of the dead humpback whale calf that had washed up on Ni'ihau shortly after the Lehua diphacinone broadcast in 2009. He had included the picture in a power point presentation he presented at a May 14, 2009 Western Region Pesticides Meeting. The presentation — as well as his unpublished paper, "Did Rat Bait Kill Humpback Whale Calves in Hawai'i?" — includes a litany of non-target species deaths that he believes resulted from past large-scale uses of diphacinone for rat

control in the state.

In late 2003, when diphacinone was dropped by helicopter on Keauhou Ranch near Volcano village, on the island of Hawai'i, and was, without authorization, loaded into several bait stations at the treated plot's perimeter, feral pigs broke into the bait stations and also likely consumed large quantities of the aerially broadcast bait. Shortly afterward, 12 feral pigs were found dead. Another pig — a 185-pound boar — that had been radio-tracked was captured alive, killed, and tested for diphacinone residues.

Boesch, who worked for the EPA before joining the state's Pesticide Branch, noted in his paper that the amount of diphacinone found in the dead pigs was a fraction of that found in the living pig (which he refers to as 'pig number 1'). This, he argued, illustrates the wide sensitivity range among individuals of a single species.

"What might happen with the pigs that survived?" he asked in his paper. "Hunters and their families consuming liver from pig number 1 would be exposed to a significant amount of diphacinone. Risk assessments in Eisemann and Swift calculated that a 55 kilogram (120) pound pregnant woman or a 10 kilogram (22 pound) child would need to eat less than 1/2 pound per day (0.37 and 0.29 pounds respectively) over several days to cause effects observed in maternal rats.

Liver lovers with an opportunity to indulge in wild pig liver pate would be able to easily consume this amount. Bon appetit!”

Boesch extended his concern about the inadvertent human consumption of diphacinone via contaminated wild-caught food to aerial rodenticide applications on offshore islets to control rats. In 2007, the state sought permits to do a diphacinone broadcast on Mokapu, a rock peak off the Moloka'i coast. When the project was first proposed, diphacinone was not allowed to be applied directly to water, areas where surface water is present, or intertidal areas below the mean high water mark, and the DOA refused to issue a permit to aerially broadcast diphacinone baits. The EPA, however, removed its restriction regarding applications in water in December 2007, and the project proceeded in February 2008.

Thirteen days after the final bait application, a juvenile humpback whale stranded on a beach on Maui about 40 miles from Mokapu. The U.S. Geological Survey, which tested liver samples taken from the whale, was unable to detect any diphacinone residues.

Less than a year later, nearly four tons of diphacinone were aerially applied to Lehua over the course of two trips. Boesch stated in his paper that “tons” of dead fish and a juvenile whale reportedly washed up on Ni'ihau within days. Within weeks, another juvenile whale washed up in Kekaha, Kaua'i, although no diphacinone was detected in tissue samples taken.

Boesch points out that in all three cases — Keauhou, Mokapu, and Lehua — diphacinone bait was applied in amounts that exceeded the maximum amount specified by its label. What's more, he argues that the tests used to detect diphacinone residues in the tissues of non-target species “are unable to detect values that result in harm and federal agencies have sought and obtained approvals to remove label statements critical to protect marine ecosystems from the EPA, making their rat eradication program largely unenforceable.”

He insists that the tissue samples of the dead fish from Ni'ihau contained a chemical signature that while not identifiable as diphacinone under the tests' detection limits, could have been an indicator of diphacinone poisoning.

“Unless laws are amended and [DOA] resources retained, Hawai'i's capacity to regulate pesticides will [be] significantly impacted and [the state] will not be able to review and investigate issues critical to protecting human health and the environ-

ment and to keep collateral damage to a minimum,” he wrote.

Post Mortem

Seven months after the baits were dropped on Lehua, rats were seen on the island. The Research Corporation of the University hired New Zealand's Landcare Research to conduct a review of the project for the Department of Land and Natural Resources. In their January 2011 final report, Landcare's John Parkes and Penny Fisher identified several possible reasons why the project failed and also dismissed the possibility that the diphacinone bait had anything to do with the Ni'ihau fish kill or the humpback whale deaths.

They noted that no independent quality assurance of the diphacinone bait had been done, that coverage was constrained by the DOA's instruction that no bait fall into the sea or within 30 meters of it, and that the bait was applied after a rainfall event in December “that triggered a flush of green vegetation with more abundant natural food than might have been more palatable than the cereal baits.”

The decision to bait after rain and the timing of the DOA's regulatory conditions, in particular, increased the risk of failure, they wrote, adding that the permit's expiration date — March 1, 2009 — also made it impossible for project managers to reapply bait in response to evidence of surviving rats, since the rats weren't seen until August.

Ground-based rat control methods may have been permitted, but funding issues and regulatory concerns over the Ni'ihau fish deaths confounded any further action, they wrote.

“Given the difficulties in detecting survi-

vors at an early stage, a precautionary rather than reactive application might have been best, if it met the EPA label requirements for evidence of survival,” they wrote.

With regard to the fish deaths, they noted that evidence of a toxin from a freshwater blue-green algae was detected in the stomachs of some fish, giving “a little weight” to the possibility that the deaths were due to land-based runoff. No diphacinone residues were detected in any of the fish tested — dead or alive — and “logically one would expect that the larger the kill, the less likely it could have been caused by the limited number of baits that may have fallen into the sea,” they wrote.

“While various agencies undertook appropriate investigations to confirm whether diphacinone was involved and identify other potential causes of the fish mortality, their response (on 3 June) was outpaced by media and internet coverage, and by alarmist presentations” — here, they cite Boesch's power point presentation at the western region pesticides meeting — “all of which served to convey a message of an adverse outcome of the Lehua operation that was not borne out by the eventual test results,” they wrote.

In their recommendations, they called for studies to address concerns about the risk of diphacinone baits to marine fish.

“We do not think this is a high risk but regulators and the public need to be convinced. It is hard to see how one would do similar tests on cetaceans or pinnipeds, but common sense suggests exposure is highly unlikely and thus the risks low,” they wrote.

Robin Baird, a Hawai'i cetacean expert with the Cascadia Research Collective,



Lehua Island.

Feds Plan to Revise, Expand Plan To Cover Rodent Control in Hawai'i

It's too soon to say what the Lehua rat eradication/restoration project will ultimately look like, but public comment on its draft environmental assessment as of press time was minimal (only four comments) and mixed (two neutral, one supportive, one asking if there was an alternative to using rodenticide).

The same can't be said of the U.S. Fish and Wildlife Service's June 2015 Notice of Intent to prepare a programmatic draft environmental impact statement for invasive rodent and mongoose control and eradication on U.S. Pacific islands within the National Wildlife Refuge System and in native ecosystems in Hawai'i, which contemplates aerially broadcasting anticoagulant rodenticides.

The original comment period ended in October 2015, but was reopened in December. When the comment period ultimately closed on April 7, 2016, the agency had received 7,282 comments, the vast majority of which were in opposition to the aerial broadcasting of rodenticides. Many of the comments were identical or very similar, calling the practice "irresponsible" and "highly dangerous" to humans and non-target animals, and urging the agency to abandon its plan.

Supportive comments were received from



The U.S. Fish and Wildlife Service received more than 7,000 comments on its proposal to aerially broadcast rodenticides to control rodents.

PHOTO: ISLAND CONSERVATION

local and national wildlife conservation groups, as well as local resource managers and professors.

One commenter in support of the PEIS criticized the nearly uniform backlash. Kyle Pias, who works with the Kaua'i Forest Bird Recovery Project, stated, "Most of the people speaking out against this effort likely could not even name any of the native flora and fauna which this effort would protect. They have not seen the remains of an 'A'o chick outside of its burrow after having

been savaged by rats. They have not seen a Haha'aiakamanu stripped of its bark by rats and slowly dying, the loss of its flowers causing I'iwi and 'Amakihi to go hungry. They have not heard the haunting calls of an 'Ua'u colony in the middle of the night under a full moon, knowing the birds are landing in a forest filled with waiting rats. They have never seen the fierce battles between breeding 'Alae 'ula or the graceful landing of Koloa maoli, birds that continue to thrive only on Kaua'i because mongoose have not yet taken over the island."

He continued that as a wildlife professional, he understands the devastating impact invasive animals have had on the native wildlife.

"The scope of the problem means that all solutions must be considered, including the use of rodenticide, when alternative control measures are unavailable (and I challenge anyone that argues that mechanical trapping over a large area in the mountains of Kaua'i is feasible to go out and try it for a month, nevermind indefinitely)," he wrote.

According to Reese Phillips of the Fish and Wildlife Service, some of the suggestions made by commenters about control methods that perhaps should have been considered have resulted in the agency revamping its approach. A revised document is several months to a year away, in part because of limited staff, he said.

"Our team is small. To begin with, we had four. Two left," but there have been some new hires, he said. — **T.D.**

says the likelihood that the humpback calf fatalities were caused by diphacinone is "extremely, extremely small." Regarding the possibility that calves might have consumed diphacinone through their mothers' milk, he echoed an observation in the draft EA that female humpbacks don't feed in Hawai'i.

Marine Impacts

The DLNR is intent on eradicating rats from Lehua, and in its draft EA, it stresses the need for the next eradication effort to be unrestricted by a coastal buffer requirement.

"Improved effectiveness of bait distribution to all rats on Lehua will be achieved by not excluding areas adjacent to coastlines for bait application, thus ensuring a uniform and complete distribution of bait in shoreline areas used by rats," it states.

To assess the potential impacts to marine life should any bait fall into the water, the DLNR contracted Island Conservation to

conduct a test run of another rodenticide drop in 2015. The trial used inert bait pellets similar to those to be used in an actual eradication. Pellets were tossed in the water while a diver watched how fish responded.

"During this trial, the number of fish that contacted and consumed bait was higher than that found in a similar survey conducted by USFWS surveys in 2008. It should be noted that the bait application rate for the 2015 survey was extremely high and would not be needed to eradicate rats from Lehua. Thus, this study may be viewed as a 'worst case' scenario to determine the species that may interact with bait pellets should they enter the marine environment in large quantities (e.g. bait spill)," the draft EA states.

Studies done so far have shown that some fish may eat diphacinone bait, while others won't. "[S]ome fish species are able and will behaviorally avoid bait containing diphacinone, diminishing the potential for primary exposure," the draft EA states.

It continues, "In the unlikely event of fish contamination by diphacinone, recent studies using three fish species indicate that they are amongst the least sensitive animals to the effects of diphacinone."

Brodifacoum contamination, however, is possible. Residues of the toxin were found in fish after bait was applied to Palmyra Atoll, including residues in mullet found dead nearshore, the EA states, adding that, the impact was believed to be inconsequential at a population level.

The EA does not delve into the possible risks to any and all cetacean species found in waters surrounding Lehua. It only comments on the dead humpback whale calves from 2009, noting that they feed exclusively on milk and would have had "no possible contamination pathway by diphacinone."

Baird told *Environment Hawai'i* that with regard to the potential danger to whales and dolphins that live around or travel past Lehua, "The animals have more to worry about" — such as persistent organic pol-

Near Close of TMT Contested Case, Witness Says EIS Process Was Flawed

As the evidentiary portion of the contested case hearing for the Thirty Meter Telescope wound down last month, a witness whose testimony seemed to threaten the very foundation of the Conservation District Use Permit for the observatory near the Mauna Kea summit took the stand.

The witness, Brian J. “Kawika” Cruz, claimed to be the author of the Cultural Impact Assessment (CIA) undertaken to support the TMT environmental impact statement (EIS). Cruz said he would provide testimony showing that the draft EIS had included manipulated data, that his recommendations of no further actions had been excluded, and that, as a result, the critical EIS process was fatally flawed.

Cruz’s very appearance in the hearing was controversial. He had not been included in KaHEA’s final list of direct witnesses submitted to the hearing officer, retired judge Riki May Amano, by October 11. The first time he was mentioned was three days after that deadline, when he was identified as a rebuttal witness.

Not until January, when Amano was attempting to schedule witnesses through the end of the month, did Cruz pop up again, this time as a direct witness, with his written direct testimony submitted on January 17. The following week, Amano asked to be briefed on the issue of whether Cruz should be allowed to give live testimony.

KaHEA attorney Yuklin Aluli argued that Cruz’s allegation “calls into question the adequacy of the EIS, and as an essential element, the sufficiency” of the Conserva-



Brian J. “Kawika” Cruz

tion District Use Application (CDUA). The removal of his recommendations from the draft EIS, she wrote, “is arguably the type of intentional data manipulation designed to circumvent the laws and rules of the environmental review process.”

Ian Sandison, one of the team of attorneys representing the permit applicant, the University of Hawai‘i, opposed having him testify. It was untimely; it would be “unnecessary, unduly repetitious, duplicative, and will provide no new material or relevant evidence that is not already in the record.” Finally, there was the apparent effort of KaHEA to undermine the 2009 EIS. “This proceeding is not the proper forum for KaHEA to attempt to litigate issues that have already passed the time to legally challenge after acceptance by the governor,” Sandison wrote.

On February 21, Amano heard oral

arguments on the matter. She asked Dexter Kaiama, who, with Aluli, has been representing KaHEA since mid-October, why Cruz hadn’t been presented as part of KaHEA’s case in chief.

Kaiama responded by stating that Cruz “was only available at the time on Mondays,” which, he added, “was why we listed him as a rebuttal witness.” The other fact, he said, “I was not aware of Mr. Cruz until I came on board, and Mr. Cruz made himself available to me.” As soon as that occurred, Kaiama said, he notified “these proceedings of his existence” as a rebuttal witness and not as a direct witness, since the deadline for adding direct witnesses had passed already.

Sandison then argued that Cruz’s testimony was simply not relevant. Not only had the time to challenge the EIS passed, but, in addition, “Mr. Cruz’s testimony would be speculative. . . . He was not involved with [consultant Parsons Brinckerhoff’s] decision about publishing the draft EIS or the final EIS, so he would not have personal knowledge as to why something was done or not done.”

But, Amano asked him, “the degree to which the CDUA relies on the final EIS is relevant and material to these proceedings, true?”

Sandison agreed.

“And that being the case,” Amano continued, “the credibility of that final EIS is in question if there is someone purportedly testifying from his personal knowledge about that process or the information therein. I understand the process. Certainly we don’t have the authority to set [the EIS] aside. But the degree to which I will be relying on the final EIS and all the testimony related to that in the decision on the permit application is material.”

But, she added, “I do think also that

lutants or toxin-laden agricultural runoff — “than a one-time use of a rodenticide.”

Although monk seals do haul out on Lehua’s rocky ledges, the EA states that the insolubility of both diphacinone and brodifacoum ensure that the seals won’t absorb any dissolved rodenticides through their skin. Although the seals could potentially be exposed if they ate contaminated fish, the EA notes that there is no reef surrounding Lehua Island and no lagoon, “minimizing the potential for fish to consume spilled bait. Since fishes are a common prey item to monk seals, there is a theoretical risk of brodifacoum moving through the marine food web, but the potential is very low. Calculations of risk have been made based

on the residues in fish after the Palmyra rat eradication, and these pose a very conservative assessment of possible risk.”

To minimize the amount of bait falling into the water, the hoppers used to distribute the bait have a deflector that “spreads bait out to only one side, in an approximately 120-degree pattern,” the EA states, adding that bait pellets would also not be applied in high winds (greater than 35 mph) or when heavy rains are forecast within a few days of the application.

Should any bait fall into the ocean, the EA states, it would quickly dissolve.

“The total amount of diphacinone at 50 mg/kg per bait drop will be a maximum of 232.5g per drop. As a demonstration of low

solubility, if all of the bait were dropped into the ocean, both brodifacoum and diphacinone would dissolve into the ocean and would be below the detection limit of analytical chemistry (0.003ug/l) in a volume of water the size of a football field 11 feet deep.

“Ocean currents would quickly dilute the chemicals to vanishingly small concentrations.

“Studies conducted after a rodent eradication in Anacapa island reported bait pellets were completely dissolved in seawater within five hours, which is similar to results reported from Kapiti Island, New Zealand,” it states.

— Teresa Dawson

this is rebuttal in nature” and Cruz would be required to testify only “from his direct personal knowledge.”

Devastating Testimony...

On February 28, Cruz finally took the witness stand.

In his opening statement, Cruz said that “after six months of research and interviewing community consultants, cultural practitioners from Hawai'i island, the conclusion of my research, based on what the community had said and based on what the research had said, indicated a no-further-action on the summit of Mauna Kea because of the sacredness of the site.”

A few days after he submitted his report, he said, Jim Hayes, an employee of Parsons Brinckerhoff who was overseeing preparation of the EIS, called him to request he remove that and several other recommendations from the report.

“I refused to remove it,” Cruz said, “and in doing so, Jim Hayes, or Parsons Brinckerhoff – whoever – they took out all my recommendations, and on March 9, 2009, they published a draft EIS for the 45 day comment period without my recommendations, including the do-not-build.”

When the final EIS was published in May 2010, he said, “the recommendations were put back in.” He informed the state Office of Environmental Quality Control of “this discrepancy,” but was told that there was little to be done. “After doing some research before I got here today,” Cruz then stated, “according to Hawai'i Administrative Rules 11-200-17, it states that the draft EIS is required to include the mitigation measures and alternative measures or alternative actions. So I believe they should've left my recommendations in, which is required by law.”

Under questioning by TMT opponents admitted to the contested case proceeding, Cruz elaborated on his assertions.

Kealoha Pisciotta, for example, asked about his claim that his recommendations were inserted only into the final EIS and not the draft: “Would that be considered not a best management practice?”

“Yes,” Cruz replied. “I believe the final EIS does not have the integrity of every other project that we contributed to.”

“Because not all the information was provided to those who are decision-makers, is that correct?” Pisciotta asked.

“Not just all the information, but the most important information from this cultural impact assessment was removed,” he said. “I understand taking out bits and pieces here and there, but they took out the

teeth from that CIA I wrote... No conclusion, no recommendations, no teeth.”

Joseph Camara asked Cruz if, in his opinion, the draft EIS has integrity?

“The letter of the law states that it is required. I don't have to make an opinion that makes it invalid,” Cruz replied. “We all should make that opinion.”

William Freitas asked Cruz: “Are you testifying today under oath that the draft EIS was falsified?”

Cruz: “Yes.”

... Or Not

After 45 minutes of what can only be described as friendly cross-examination, it was the university's turn. Attorney Tim Lui-Kwan began grilling Cruz on his education, his work background, and his residency in Hawai'i.

Cruz stated that he obtained a bachelor's in business from the University of Phoenix (2003) and that he was now enrolled at Leeward Community College, where he was pursuing a bachelor's of science in electrical engineering.

He worked at Cultural Surveys Hawai'i, he said, from 2008 until sometime in 2012. After a short period of unemployment, he began to work for a solar-energy company. Now he was a full-time student at LCC, where he also tutored students in math, he said.

Cruz said he was living in Wai'anae for the last year and a half, but for the 20 years prior, was a resident of Kaneohe.

Lui-Kwan asked Cruz about the statement in his written testimony that he was the author of the cultural impact assessment for the TMT. “Is that accurate?”

“That's correct,” Cruz answered.

When asked about others who worked on the same project, Cruz said there were “three or four others.”

“What percentage of this document, the initial or the preliminary draft CIA — what percentage did you actually write?” Lui-Kwan asked.

Eighty percent, was the reply.

“What if I told you that the amount of time you put in or charged to that project comes to less than 10 percent?” Lui-Kwan then asked.

That drew an objection from KaHEA attorney Aluli, but Amano overruled it. The question, she said, “goes to credibility and bias, and it's proper impeachment.”

Lui-Kwan then showed Cruz work sheets from Cultural Surveys Hawai'i for the TMT cultural impact assessment. The total amount of hours charged to the project came to 2,004.25, Lui-Kwan pointed out.

Just 236 of those were logged in by Cruz.

Time entries for Lisa Gollin, one of the CSH employees also working on the project, began in July 2008, Lui-Kwan noted, and, based on the time codes, she began writing the report in October of that year. The time sheets show Cruz first logged hours on the project on April 2, 2009.

Gollin worked a total of 375.25 hours on the TMT project, said Lui-Kwan, who then asked Cruz if that seemed about right to him.

As his supervisor, Cruz replied, Gollin “can charge hours in a supervisory capacity. So that's why she would have all those hours in October, because the project just came in. She's trying to do the preliminary data, figure out who's going to write the project, who's going to be the lead researcher. So although the hours look that way, it's not indicative of her actually writing the majority of the project or 50 percent or whatever. My time as her employee — she's my boss — are true hours. Those are the hours I spent writing and researching. Hers is supervisory capacity, which is different.”

“I see,” Lui-Kwan responded. “So she was your supervisor?”

“I never disputed that,” said Cruz.

Lui-Kwan: “Well, you never stated that before now.”

The last day Cruz worked on the project was August 31, 2009, but Gollin and others with CSH continued working on the cultural impact assessment into February 2010, when the final CIA — the one included as an appendix to the final EIS — was completed.

“Have you had a chance to go through completely the final EIS for the project?” Lui-Kwan asked.

“No,” Cruz said. “It's three volumes. But I did go through the CIA portion.”

In response to additional questioning, Cruz stated he had compared the preliminary CIA, which he claimed to have written, to both the draft CIA included with the draft EIS, and to the final CIA included with the final EIS.

“So, did you go through the draft EIS?” Lui-Kwan asked.

Again, Cruz said he only went through the draft and final CIAs.

“In that draft CIA,” Lui-Kwan said, “you saw where there's references to the consultation work that was being conducted, correct?”

“Correct.”

Lui-Kwan then pointed out that the draft CIA stated that the “CIA process is ongoing and the following is a summary of initial findings thus far.”

Lui-Kwan: "Do you understand what that meant?"

Cruz: "Yes."

Lui-Kwan: "Did it mean that the interviews of those being consulted were still being done?"

Cruz: "It could mean that."

Among those whose advice had been sought for the CIA was Kalani Flores, another of the protesters and also a party to the contested case. Lui-Kwan showed Cruz a copy of an email exchange between Flores and a CSH researcher dated in April 2009 – after the draft CIA had been published – in which Flores asked to submit written comments.

Lui-Kwan noted that the draft CIA indicated that "consultations, including community members, will be ongoing" until the final CIA is completed. "Do you recall this being in there?" he asked.

"I don't recall it, but I agree it's in there," Cruz replied.

The EIS

Lui-Kwan then circled back to the subject of the draft EIS. Cruz admitted that he did not read it "in its entirety."

Lui-Kwan: "What part did you read?"

Cruz: "Only the CIA."

"So," Lui-Kwan asked, "if mitigation measures and alternatives were actually in the draft EIS, you wouldn't have read it?"

Cruz's reply was puzzling: "I would have read it if they moved it, but they didn't have to move it, because it was in my CIA."

Lui-Kwan reminded Cruz of his earlier testimony that Hawai'i administrative rules require that alternatives and mitigation be disclosed in environmental impact statements.

"So, if [the discussion of alternatives and mitigation] is actually in the draft EIS, would that change your opinion on what you stated regarding the lack of recommendations?" Lui-Kwan asked.

"No," Cruz responded.

Lui-Kwan: "So is it your position that unless it's in the draft CIA attached to the draft EIS, that would be in non-compliance with the OEQC regulations" regarding environmental impact statements?

Cruz: "One hundred percent yes." When people read the cultural impact assessment, he continued, "they have to see what my results were and what my recommendations were... So you can't take it out of the CIA and move it somewhere else because if someone wants to specifically read my CIA and those are removed, they're not getting the full scope

of my work."

Replying to further questions, Cruz acknowledged he believed that the administrative rules applying to environmental impact statements also applied to cultural impact assessments.

A Puzzling End

Lui-Kwan then returned to the matter of where Cruz had been living while employed by CSH, asking him several questions to establish that he did, in fact, reside at an address in Kailua at least part of the time.

Lui-Kwan then reminded him of his earlier testimony, when he said he had been residing in Kaneohe for the last 20 years.

"Correct," Cruz said, adding that he also "was in Kailua, back and forth."

Lui-Kwan then presented Cruz with a letter from the state Unemployment Insurance Division that had been mailed to him at the Kailua address in September 2012. (The letter stated that Cruz's application for unemployment payments had been approved.)

Cruz said he had never seen it before.

Lui-Kwan then asked if the letter stated that Cruz had been discharged because he did not meet the employer's standard for performance for the position he held. "Do you dispute that?" he asked.

Before Cruz could complete his answer, Amano interrupted. Lui-Kwan then said he would move on to his next question, which he prefaced in this way:

"I'll just ask, preliminarily – I'm going to ask you whether or not you understand you are testifying under oath today."

"Okay," Cruz replied.

"And anything you answer –"

At this point, Aluli jumped up. "I'd like to approach the judge right now," she said, responding to the implication

that the line of questioning Lui-Kwan was about to begin might lead her witness into troubled waters.

After a short whispered sidebar conference, Amano announced a ten-minute recess. During that time, the conference continued, with Lui-Kwan showing the judge documents that he apparently was intending to use to impeach Cruz's credibility.

When the hearing resumed, Lui-Kwan said he had no further questions for Cruz.

Douglas Ing, one of the attorneys representing the TMT, questioned Cruz briefly about his contacts with other parties to the proceeding.

KaHEA attorney Aluli was then given an opportunity to ask questions on redirect, the time when attorneys can attempt to rehabilitate witnesses whose credibility has been impugned or otherwise clarify issues arising on cross-examination.

"No redirect," Aluli stated.

As Cruz stepped down from the table where he had been testifying, the couple of dozen supporters of the protesters sitting in the audience broke into cheers and applause.

For the Record

Both the draft EIS and the final EIS for the Thirty Meter Telescope contain a discussion of alternatives (including a no-action alternative) and mitigation measures.

The documents that Lui-Kwan referenced in his cross-examination of Cruz are available online at a website maintained by the Department of Land and Natural Resources: <http://dlnr.hawaii.gov/mk/documents-library/>. They may be found under the heading "Evidentiary Hearing Submittals," in the category of submittals from the University of Hawai'i.

— *Patricia Tummons*

4.2.1 No Action Alternative

The "No Action" alternative, required to be evaluated in the EIS process, considers existing conditions as well as what would be reasonably expected to occur in the foreseeable future absent the proposed Project, based on current land use plans.

Facilities

Pursuant to this alternative, TMT would not fund construction, installation, or operation of the TMT Observatory and its supporting facilities at Maunakea. However, the 36-acre Area E is identified for development of a Next Generation Large Telescope (NGLT) in the [Mauna Kea Science Reserve Master Plan](#). Therefore, it is possible that absent the proposed Project, another

Environment Hawai'i Article Used to Show Apparent Rift Among Opponents of TMT

As the contested case hearing over a permit to build the Thirty Meter Telescope on Mauna Kea drew to a close, one of the last witnesses to testify was Mililani Trask, a practicing attorney well known for her involvement in Hawaiian sovereignty movements. Trask testified on behalf of Joseph Camara, one of the challengers in the contested case.

For years, Trask was the leader – the *kia'aina* – of Ka Lahui Hawai'i, a movement to build a Hawaiian nation. She was also involved in the Pele Defense Fund when it was protesting the development of geothermal energy on the Big Island in the 1980s and 1990s. Trask has lobbied for years to gain recognition and rights for indigenous people worldwide.

During cross examination, Ian Sandison, one of three attorneys representing the University of Hawai'i in the contested case, explored Trask's relationship with the Sierra Club in efforts that began in the 1990s to oppose further telescope development. He asked whether Trask knew Marti Townsend, the current executive director of the group's Hawai'i chapter.

Camara objected, but hearing officer Riki May Amano overruled him, agreeing with Sandison that the questioning was "foundation for impeachment and goes to bias."

Trask acknowledged that she knew Townsend.

Sandison then showed Trask what he had marked as the university's exhibit A 151, a copy of an article *Environment Hawai'i* published on its website in February regarding Townsend's testimony during the contested case hearing and Trask's own comments on the article.

When presented with the exhibit, Trask told Sandison she hadn't actually ever seen the article.

"You've never seen this article before?" Sandison asked.

"I don't think so," Trask said. "You're saying I was interviewed for this?"

Pressed again by Sandison about her familiarity with the exhibit, she said, "I don't think I saw the article. I just talked to Pat. Because this, *Environment Hawai'i*, isn't this Pat Tummons's? ..."

"Yeah. I remember having a talk with her. It could have been this. Not Marti. But Pat. She was looking at this. She was

questioning some of the statements that had been made by Sierra."

Sandison called Trask's attention again to the portion of the exhibit that appeared to be a response to the article made on February 7. "You see that?" he asked her. "It says Mililani B. Trask. Is that you?"

Trask: "Yes."

Sandison: "Does it say, 'Aloha, Pat?'"

Trask didn't answer, but proceeded instead to read from the comment: "This is not the first time that Marti Townsend hasn't been honest and truthful about issues of critical import to Hawaiians and our culture.' Yes."

Yuklin Aluli, the attorney representing KaHEA and on whose behalf Townsend had testified as a witness in January, interrupted the questioning. "This is being offered to denigrate the testimony of a witness we offered," she said. "We object to its introduction in terms of its attempt to impeach someone who's not here – our witness, Marti Townsend."

Because Trask was not testifying on behalf of KaHEA, Amano told her that her objection "is out of place at this time... The question is whether or not this witness wrote this statement."

Once again, Sandison asked Trask, "Did you review this article and did you write these comments?"



Mililani B. Trask

"No, no," Trask protested. "I didn't review the article. I didn't see it. But I did have a conversation with Pat a while back about some of the statements that she was getting in terms of Mauna Kea. She was questioning whether or not they were accurate."

Amano pressed Trask for a straight answer: "Very specifically, is that comment, which is indicated as a reply and that appears to bear your typewritten name, did that come from you?"

"Yes," Trask said. "But it wasn't in response to the article, because I never saw it. I had a call from Pat."

"I got it," Amano said.

"And in it do you question the truthfulness and honesty of Ms. Townsend and also the Sierra Club?"

"Yes."

The following day, Camara asked Trask about the article during his redirect questioning – the opportunity given to those who present witnesses to repair damage done during cross examination.



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“You mentioned that you didn’t particularly remember that article?” Camara asked.

“That is my recollection,” Trask replied. “I used to subscribe to *Environment Hawai'i* for many years. I got it at my office. And then I stopped. Then they went out of publication. But I guess they were on the internet.

“What I recall, and this was just recently, there was a big brouhaha about comments [of] Marti Townsend. Someone called me about it and I gave them a comment. When I looked in my computer – because I just saw the exhibit yesterday – I have contact information for Pat. I don’t have any emails or graphics of the environment today. But I did have a really bad computer hacking crash a little while ago. When I looked at the comment, the truth is, it pretty much reflects my mana’o [thinking].

“It’s not Sierra Club. It’s incorrect to attribute my comments and sentiments to Sierra Club. But Marti Townsend – I hold her in very little esteem.” — *P.T.*

STATEMENT FROM THE EDITOR

Following the testimony of Marti Townsend, the executive director of the Sierra Club, Hawai'i Chapter, in the TMT contested case hearing, I wrote a short article about several of the more dubious statements Townsend had made. Townsend was asked for comment on each of the points mentioned in the article but she chose not to respond.

This write-up was posted in the online EH-Xtra column of our website home page, <http://www.environment-hawaii.org>.

Within a few days of posting the article, Mililani Trask wrote a comment, in which she made several unflattering statements about Townsend and the Sierra Club. The EH-Xtra article and Trask’s comment on it were introduced during the questioning of Trask by Ian Sandison on February 28.

Trask’s description of the manner in which her comments to the article were gen-

erated does not comport with the facts.

At no point did I or anyone associated with *Environment Hawai'i* call Trask to ask for her comments. I did not email her about this, nor did anyone else associated with the publication. I have had no interactions with her for several years. Her statements stating that I did approach her, whether by phone, email, or any other means, in relation to the EH-Xtra article are simply not true.

It may be the case that someone called her about the Townsend article and she gave them a comment. But I have absolutely no reason to believe that anyone other than Trask posted the comment that was made on the article.

Finally, her statement that *Environment Hawai'i* stopped publishing is altogether false. We have been published continuously, every month, since July 1990.

—*Patricia Tummons*

Testimony Has Ended, But The Contested Case Is Far From Over

Testimony in the protracted second contested case hearing on the Conservation District Use Application (CDUA) for the Thirty Meter Telescope concluded on March 2, after 44 days of hearings over nearly six months and 71 witnesses.

The next stages in the process are:

- The acceptance of evidence (written testimony, government records, scholarly articles, photos, and other documents used by the petitioners in making their case in chief);

- Preparation and distribution of transcripts for every day of testimony and pre-hearing conferences (the transcripts will be

copied with full sets placed in three public libraries on the Big Island, the University of Hawai'i at Hilo library, and the main state library in Honolulu);

- Drafting and submittal of proposed findings of fact, conclusion of law, and decision and order by all the parties admitted to the case;

- Objections to other parties’ findings;
- The hearing officer’s submittal to the Board of Land and Natural Resources of her recommendations;

- The Land Board’s deliberation and vote on the Conservation District application.

After that, a court appeal is likely, especially in the event the Land Board decides to grant a permit to build the \$1.4 billion facility proposed for the plateau north and west of the summit of Mauna Kea. Under Act 48 of the 2016 Legislature, the appeal is likely to be heard directly by the state Supreme Court.

Whether all this can be accomplished by the deadline that the TMT International Observatory Corporation has announced – April 2018 – is uncertain at this point.