



Price: \$5.00

Deadly Decibels

Deep-diving whales are remarkable creatures, with highly evolved abilities to locate prey and navigate in the sunless canyons of the ocean. As the manmade sources of ocean noise proliferate, however, these cryptic whales are in increasing danger.

So far, the Navy, with the National Marine Fisheries Service at its side, has balked at accepting limits on its training that would afford reasonable protection for the whales.

Whether it will be constrained to accept more stringent measures or be free to do as it pleases is the issue at the heart of several complex lawsuits, including two to be heard later this month – one before the U.S. Supreme Court and another before a U.S. District Court judge right here in Honolulu that is the subject of this month's cover article by Patricia Tummons.

Navy's Sonar Exercises at Heart Of Case Set for Honolulu Hearing

In early February 2007, the U.S. Navy announced it had prepared an environmental assessment for a two-year series of 12 undersea warfare exercises in waters around Hawai'i. The notice of the EA was accompanied by a finding that the exercises, involving the use of high-intensity mid-frequency active sonar, would have no significant impact on the environment.

That notice, published in the *Federal Register* of February 2, 2007, shed public light for the first time on the Navy's planned exercises. Although the Navy has to follow the National Environmental Policy Act when it comes to disclosure of environmental impacts of its activities, and the act requires that the public be included in the process before a finding of no significant impact can be made, no such opportunity had been provided in advance of the *Federal*

Register notice.

On January 27, 2007, the same date that the FONSI was signed, the National Marine Fisheries Service, which has jurisdiction over marine mammals, gave the Navy permission to harass, or "take," such animals (including endangered humpback, sperm, fin, and sei whales) up to 11,299 times a year for each of the two years the exercises would run – the exact number of animals that the Navy had predicted would be affected in its EA. The Navy's actions, NMFS determined in an accompanying biological opinion, were "not likely to jeopardize the continued existence of threatened or endangered species."

The exercises, intended to supplement training of Navy personnel in the detection of enemy submarines, involve the use of

to page 4

IN THIS ISSUE

2

New & Noteworthy

3

Editorial: Navy Harms Marine Mammals

4

A Guide to Recent Sonar Litigation

6

Deep-Diving Whales Most Vulnerable To Sonar Used to Detect Submarines

8

Landscapers, Conservationists Find Common Ground on Invasive Plants

9

Coral Disease, Monk Seals, Invasive Fish Among Marine Issues at HCA Conference

11

Board Talk: Mo'omomi Violation, He'eia Lease, Wind Energy, and More



Humpback Whale

PHOTO: JOSEPH MOBBELY - NMFS

Environment Hawai'i



Volume 19, No. 4

October 2008

NEW AND NOTEWORTHY

A Watershed Achievement: On August 28, the state Commission on Water Resource Management adopted the 2008 Water Resources Protection Plan, which is perhaps the most important of the six plans that collectively make up the Hawai'i Water Plan as it serves as the official inventory of water resources statewide. Although parts of the previous WRPP had been updated over the years, the document as a whole had not been updated in 18 years.

While all of the sustainable yields for the state's groundwater aquifers are updated in the plan, new interim instream flow standards, which determine how much surface water is available for human use and consumption, are not included since the Water Commission is still in the process of setting them.

Ideally, the plan should be used to help ensure that development does not impinge on water resources, and looking island by island, it

appears there is room for growth: Groundwater pumpage on Kaua'i, Hawai'i, and Moloka'i is less than five percent of the total sustainable yields for those islands. Maui is pumping about 16 percent of its sustainable yield, while O'ahu, not surprisingly, is pumping the most, about 42 percent. In certain hotspots, however, such as O'ahu's North Shore and the 'Iao aquifer in Maui's Wailuku sector, pumping is at about 95 percent of sustainable yields. (Although pumping in central Maui actually exceeds current sustainable yields considerably, the plan notes that the substantial irrigation recharge in that area has not been factored into the yields for the sector's Paia and Kahului aquifers.)

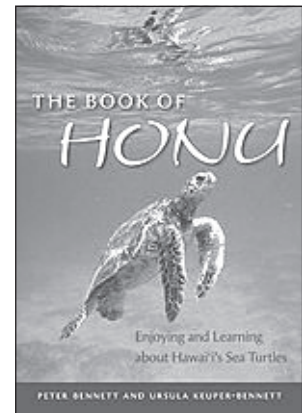
While the long-awaited plan has been roundly praised by the commission and members of the public, Water Commission chair Laura Thielen said at its adoption that the fact that it hadn't been updated in 18 years "leaves a lot of people unprepared for changes." Even so, attorney William Tam noted that the plan's flexibility, which allows new data to be included at any time, will allow it to serve as an "early warning system" upon which land use decisions can be based.

The plan is available on the Water Commission's website at http://hawaii.gov/dlnr/cwrm/planning_wrpp.htm#2008update and can be downloaded in its entirety (13.86 MB) or in sections.

Bridging the Gap: The state Board of Land and Natural Resources voted September 12 to add 650 acres of 'ohi'a-dominated forest to north

Kaua'i's Hono o Na Pali Natural Area Reserve, thus filling the small but significant gap between the NAR and the state's Alakai Wilderness Preserve. The addition creates a corridor for native ecosystem conservation that now runs from the top of Mount Wai'ale'ale to the ocean.

The Natural Area Reserve Commission, which advises the Land Board, first approved the concept of the expansion in August 2003. The area contains intact native wet forest and several species of rare and endangered plants, as well as three endangered birds (koloa, kama'o and 'o'u). The addition also includes recently designated critical habitat for eight rare plants.



The Book of Honu: Peter Bennett and Ursula Keuper-Bennett are a husband-and-wife team who have turned their passion for sea turtles into a near full-time vocation. They divide their time between Canada and the west coast of Maui, where they have dived and photographed honu for the last two decades. Their photographs – many available online at www.turtle.org – have documented the lives, and, occasionally, the deaths, of many of the animals that inhabit the reef off Honokowai.

Now, the University of Hawai'i has published *The Book of Honu* by the Bennetts. The 142-page paperbound volume is generously illustrated with the authors' photographs and the reading level should be accessible to any fourth-grader, but it still contains enough substance to satisfy curious adults. The amazing photographs alone are worth the price of admission: \$18.95.

Environment Hawai'i

72 Kapi'olani Street
Hilo, Hawai'i 96720

Patricia Tummons, *Editor*
Teresa Dawson, *Staff Writer*
Siong Yung, *Office Administrator*

Environment Hawai'i is published monthly by Environment Hawai'i, Inc., a 501(c)(3) non-profit corporation. Subscriptions are \$50 individual; \$85 supporting; \$85 corporate and institutional. Send subscription inquiries, address changes, and all other correspondence to *Environment Hawai'i*, 72 Kapi'olani Street, Hilo, Hawai'i 96720. Telephone: 808 934-0115. Toll-free: 877-934-0130. Facsimile: 808 934-8321. • E-mail: pattum@aloha.net Web page: <http://www.environment-hawaii.org>

Environment Hawai'i is available in microform through University Microfilms' Alternative Press collection (300 North Zeeb Road, Ann Arbor, Michigan 48106-1346).

Production: For Color Publishing

Copyright © 2008 Environment Hawai'i, Inc.
ISSN 1050-3285

A publication of
Environment Hawai'i, Inc.

Officers	Directors	Editorial Advisory Board
Patricia Tummons President and Treasurer	Kathy Baldwin Robert Becker Mary Evanson	Betsy Marston Paonia, Colorado
Teresa Dawson Vice President	Leland Miyano Mina Morita	Helen Chapin Honolulu, Hawai'i
Karen Miyano Secretary		

Quote of the Month

"[T]he Navy... cannot simply fall back on the training argument as a catch-all reason for avoiding its responsibilities."

— **U.S. District Judge David Ezra**

EDITORIAL

The Navy's Shameful Acts Harm Marine Mammals

The Navy has clearly and brazenly broken the law in its push to carry out undersea warfare exercises in Hawai'i.

Without question, it violated the National Environmental Policy Act when it released the first environmental assessment for the exercises in 2007. The first time that document saw light of day was when it was in its final form, with no opportunity for public comment. Not surprisingly, the Navy gave itself the green light to move forward with the series of 12 exercises planned over the next two years. The first two occurred in April 2007. If there were any doubt as to its failure to comply with NEPA, the Navy scrubbed that out with a hastily prepared second EA – virtually identical to the first – that was floated for public comment some nine months later, after a lawsuit had been filed challenging the Navy's actions.

While it could be argued that the Navy's second EA cured one problem, it did not quiet them all. NEPA also requires that agencies prepare full environmental impact statements whenever possible effects on the environment are uncertain or involve unique or unknown risks. As Judge David Ezra noted in his injunction against the Navy last February, "If ever a factual scenario satisfied this criteria, it is this one."

Just as surely, the Navy breached the Coastal Zone Management Act. Under that law, the Navy must inform the state of Hawai'i at least 90 days in advance of any activities that may affect coastal resources. It did not do so until August 2007, and even then, the Navy's so-called "negative determination" – claiming that the exercises would have no effect – was erroneous. To quote Ezra again, "The Navy could not have accurately determined that there would be no reasonably foreseeable effects on coastal uses or resources if the information it relied on to make this determination" – the environmental assessment – "was insufficient."

A separate issue is whether the National Marine Fisheries Service violated the Endangered Species Act when it issued a flawed biological opinion that effectively blessed the Navy's Hawai'i exercises. That issue was not among the ones before Ezra when he issued the injunction last February, but it is coming up for argument this month. Based on the history of the biological opinion – NMFS at first dragged its feet, wanting the Navy to do an EIS rather than an EA, but then meekly

succumbed to political pressure and gave the Navy exactly what it wanted – the prospects that NMFS can prevail on this charge look pretty slim.

National Emergency?

The Navy argues that the Hawai'i exercises are needed as a kind of refresher course for sailors who have already received training in the use of sonar to detect quiet enemy submarines. (The training, which occurs in waters off Southern California, is itself the subject of a lawsuit that will be argued before the U.S. Supreme Court later this month.) If so, argue lawyers for the plaintiffs in the Hawai'i case, that suggests that the Navy has no compelling reason to undertake exercises without regard to the harm they may have on marine mammals.

The relentless increase in ocean noise pollution may soon threaten marine mammals at population levels. What a terrible irony it would be if the ultimate effects of this 'invisible pollution' become obvious only once it is too late.

The Navy, however, has argued that the exercises in Hawai'i are, if anything, *more* important than those in California, and that the training must come as close as possible to simulating actual warfare, with little regard for the welfare of marine mammals. Indeed, the Navy has obtained from the Secretary of Commerce a National Defense Exemption under the Marine Mammal Protection Act to let it pursue its exercises in Hawai'i without concern for the niceties of that law.

Judge Ezra bowed deeply to the Navy's claims, and while he issued an injunction based on the likelihood that the plaintiffs would prevail on the allegations of NEPA and CZMA violations, he allowed the exercises to go forward, albeit under conditions that afforded whales slightly more protections than the Navy had imposed upon itself.

Meanwhile, in the Ocean

The battle in the courtroom should not obscure the real impact that Navy mid-frequency active sonar is having in the ocean. And not just in the ocean around Hawai'i, but globally.

To humans, unwanted noise – an unmuffled motorcycle roaring past a bedroom window at night; boomboxed trucks at

stoplights whose thumping bass can be heard for blocks; the chirps of ten thousand coqui – is mostly a nuisance, although stress from long-term exposure can also harm one's health.

To whales, the noises emitted by Navy vessels conducting their undersea warfare exercises can be frightening, disruptive of their normal behavior, interfere with communication, and cause stress. Under certain conditions, whales can lose their hearing and even die from injuries caused by the pressure of the noise.

Last month, the International Fund for Animal Welfare, a plaintiff in two of the California lawsuits concerning MFA sonar, released a report, "Ocean Noise: Turn it Down," noting that in some regions, the level of noise in the ocean is doubling each

decade. "Ocean noise pollution is already driving some marine mammals from their breeding and feeding grounds," wrote IFAW president Fred O'Regan in a foreword. "While we have much more left to learn, leading marine scientists warn that in addition to losing their hearing from the worst of our largely uncontrolled ocean noise pollution, some marine mammals are already being killed by it."

After naval exercises involving MFA sonar led to mass strandings of beaked whales in the Canary Islands in 2002, the government of Spain outlawed military sonar exercises within 50 nautical miles of the islands' coastline, the IFAW report notes approvingly. Is it asking too much to think that Navy training also can be restricted in areas where deep-diving whales are unusually vulnerable?

To quote O'Regan of IFAW once more: "It is time for the international community ... to work together to take precautionary action now. Without such collective action, the relentless increase in ocean noise pollution may soon threaten marine mammals at population levels. What a terrible irony it would be if the ultimate effects of this 'invisible pollution' become obvious only once it was too late."

A Thumbnail Guide to Recent Sonar Litigation

The Navy's use of high-intensity sonar has been challenged in several court cases, including three that recently came before the 9th U.S. Circuit Court of Appeals. Oral arguments for one of the cases will be made this month before the U.S. Supreme Court.

RIMPAC

The first lawsuit was filed in June 2006 over the Navy's environmental assessment for the 2006 Rim of the Pacific (RIMPAC) naval exercises. Suing Secretary of the Navy Donald C. Winter, Secretary of Commerce Carlos M. Gutierrez, National Marine Fisheries Service administrator William Hogarth, and National Oceanic and Atmospheric Administration head Conrad C. Lautenbacher were the Natural Resources Defense Council, other environmental and conservation groups, and Jean-Michel Cousteau. They claimed that the Navy's environmental assessment violated the National Environmental Policy Act and that

the exercises would constitute a violation of the Marine Mammal Protection Act as well. The EA had been prepared for RIMPAC 2006 exercises after a mass stranding of some 200 melon-headed whales had occurred in Hanalei Bay, Kaua'i, during RIMPAC 2004.

The Navy sought to fend off the litigation by invoking the national defense exemption allowed in the MMPA. But days later, Judge Florence Marie Cooper granted a temporary restraining order based on the NEPA claim alone. The litigation was settled after the Navy agreed to beef up mitigation measures when employing mid-frequency active sonar.

SOCAL Exercises

The second was filed in March 2007 and is still being litigated. That lawsuit, brought by the Natural Resources Defense Council and several other groups against the Navy, challenges the Navy's use of mid-frequency active sonar in undersea warfare training

exercises to be conducted off the Southern California coast between February 2007 and January 2009. According to the Navy's own estimate, the exercises would result in a total of 170,000 "takes" of marine mammals.

The plaintiffs accused the Navy of again violating NEPA, the Endangered Species Act, and the Coastal Zone Management Act and sought to ban the exercises until the violations were cured.

In August 2007, Judge Florence Marie Cooper found that the plaintiffs had a good chance of succeeding in their NEPA and CZMA claims and issued a preliminary injunction. (Unlike Judge Ezra, in the Hawai'i case, her injunction did not allow the exercises to be conducted pursuant to court-imposed mitigation measures.) At the same time, she denied the Navy's request to stay the injunction.

The Navy appealed to a panel of the 9th Circuit, which, on August 31, granted a stay of the injunction pending a full hearing on the injunction. In November, after a hearing on the issues, the 9th Circuit Court of Appeals remanded the case back to Judge Cooper, with instructions to craft mitigation measures so that the Navy would be

Sonar from page 1

mid-range sonar at levels believed by many scientists to cause permanent harm to marine mammals, and for periods of up to 222 hours (nearly 10 days) per exercise. Although litigation involving the use of sonar in the Navy's Rim of the Pacific (RIMPAC) exercises had resulted in the Navy agreeing to more than two dozen conditions intended to mitigate harm to marine mammals, in the case of the Undersea Warfare Training Exercise (USWEX), no mitigation measures were included in either the NMFS biological opinion or the environmental assessment other than a meek list proposed by the Navy.

The first two exercises were conducted in April 2007. Within a few days of each exercise, dead pygmy sperm whales washed up on Hawai'i beaches – a pregnant female on Lana'i, an adult male on Maui.

On May 16, 2007, the Navy and NMFS were sued by five groups concerned with protecting marine resources – the Ocean Mammal Institute, KAHEA: The Hawaiian-Environmental Alliance, the Animal Welfare Institute, the Center for Biological Diversity, and Surfrider Foundation, Kaua'i Chapter. The groups, represented by Earthjustice attorneys Paul Achitoff and

Koalani Kaulukukui, alleged that the agencies and their administrators had violated provisions of NEPA, the Endangered Species Act, the Coastal Zone Management Act, and the National Marine Sanctuaries Act. The lawsuit asked for a declaratory judgment finding that the Navy had violated the laws, vacating the NMFS biological opinion and the FONSI, and enjoining the use of high-intensity, mid-frequency active sonar during or in association with the planned exercises until the agencies were in full compliance with applicable laws.

A Rush to Cure

After a series of planning meetings and scheduling conferences, during which the Navy disclosed that its next round of USWEX was scheduled for sometime in November, the plaintiffs filed with U.S. District Judge David A. Ezra their motion for a preliminary injunction in August 2007, accompanied by statements from six of the world's foremost experts on the subject of sonar's impact on whales. The arguments in support of the injunction repeated and expanded on those contained in the original complaint, while the collective views of the plaintiffs' experts challenged the claims of the Navy and NMFS

that the use of mid-frequency active sonar (MFAS) had no documented effect on deep-diving whales.

In the months following the filing of the complaint, the Navy sought to cure some of the violations. In September, it released for public review and comment a new (but virtually unchanged) environmental assessment of the impacts of the undersea warfare exercises. This, the Navy claimed, made moot the allegations of non-compliance with NEPA. For its part, NMFS revised the biological opinion it had issued, tweaking it to address several errors brought to the agency's attention by the plaintiffs' experts, but still allowing the Navy's planned exercises to move forward with minimal mitigation.

In an effort to address the allegations of CZMA violations, the Navy had given the state Office of Planning a "negative determination" in early August, stating that the warfare exercises would have no effect on coastal resources.

As to the claim of violating the National Marine Sanctuary Act, the Navy argued that the use of sonar in undersea warfare exercises was identified as an existing use at the time the Hawaiian Island Humpback Whale National Marine Sanctuary was established. It disputed the plaintiffs' assertion that the

able to carry out its exercises in some manner.

Judge Cooper promptly revisited the issues and on January 3, 2008, she issued a revised preliminary injunction that imposed mitigation measures on the Navy. In response to Navy concerns, the injunction was again modified on January 10 – but not enough to satisfy the Navy. When Cooper did not agree to a stay of the injunction, the Navy appealed to the 9th Circuit Court of Appeals on the evening of January 15, asking it either to vacate the injunction or issue a stay.

As the Appeals Court later wrote, “The Navy’s motion was based in part on two developments that occurred on the same day that the motion was filed. First, the President of the United States . . . exempted from the provisions of the CZMA the Navy’s use of MFA sonar during the SOCAL exercises, finding that such use of MFA sonar is ‘essential to national security’ and in the ‘paramount interest of the United States.’ Second, the [Council on Environmental Quality], finding ‘emergency circumstances,’ purported to approve ‘alternative arrangements’ to accommodate those emer-

gency circumstances. . . . It permitted the Navy to follow the prescribed arrangements to continue its exercises pending completion of the Navy’s EIS.”

Again, the case was remanded to Judge Cooper, who, on January 17, issued a partial stay pending her consideration of the Navy’s request that the injunction be vacated. But after hearing the Navy’s arguments, on February 4, Judge Cooper once more denied the request to vacate the injunction and lift the stay. Among other things, Cooper determined that the CEQ’s imposition of “alternative arrangements” was invalid, since no emergency conditions existed to allow such an action.

Two days later, the Navy appealed once more to the 9th Circuit, seeking a stay so it could proceed with exercises planned for March 2008.

By February 29, the Appeals Court judges had issued their order, refusing to overturn Judge Cooper’s injunction but at the same time, “out of an abundance of caution,” modifying in the Navy’s favor two of the injunction’s provisions that the Navy claimed could impair its readiness. On June 23, the Supreme Court agreed to hear

the case in its 2008-09 term.

LFA Sonar

Another lawsuit filed by a coalition of conservation and animal welfare groups headed up by the NRDC took on the issue of the Navy’s use of low-frequency active sonar, alleging that the Navy and the National Marine Fisheries Service had improperly approved the Navy’s use of this type of sonar in up to 75 percent of the world’s oceans, violating the Marine Mammal Protection Act, the Endangered Species Act, and the National Environmental Protection Act. Last February, U.S. District Judge Elizabeth Laporte of the Northern District of California found that the plaintiffs were likely to prevail on several of their charges and ordered the parties to negotiate mitigation measures. In August, the court-approved settlement was announced; it requires the Navy to adhere to mitigation measures it had agreed to years before on the use of low-frequency sonar and avoid certain specified areas, including the Papahānaumokuākea Marine National Monument and the Hawaiian Islands Humpback Whale Marine Sanctuary.

—*P.T.*

pre-existing exercises did not include high-intensity mid-frequency active sonar; “the Navy has been employing the same active mid-frequency sonar technology in Hawai’i for the past 60 years,” Department of Justice attorneys representing the Navy argued in court filings.

The Navy’s response to the motion for a preliminary injunction was made on September 27, four weeks after a divided panel of the 9th U.S. Circuit Court of Appeals in California had granted the Navy’s emergency request for a stay of a preliminary injunction that had been issued in a California case with many similarities to the Hawai’i case. In the California litigation, the Natural Resources Defense Counsel and other groups had sought to prevent the Navy from undertaking two types of exercises involving the use of high-intensity sonar. The judge hearing the case had issued the injunction, which the Navy then appealed to the 9th Circuit; the motions panel concluded that while better mitigation might be appropriate, a complete ban on sonar was not. (This case, which is to be argued before the Supreme Court later this month, is discussed more fully in a separate article in this issue.)

In this context, says Achitoff, one of the plaintiffs’ attorneys, there was little chance

that Judge Ezra might grant a temporary restraining order against the Navy’s planned November warfare exercises. “We were running around procedurally while the Navy tried to cure all of the defects in their environmental assessment to effectively moot the lawsuit,” he said in a telephone interview. “They wanted to change the briefing schedule, so it would accommodate the release dates for the revised EA and biological opinion, and so we went through all that. They wanted to give me two days to respond to their new briefs before the motion for injunction was heard, which was scheduled for the beginning of November.”

“I resisted that. I didn’t want the date to be moved, but the way that things played out, I either had to move the hearing back, or had to respond to their briefs in too short a period of time. So I said, all right, we’ll have to move the hearing date back further into November.”

On November 16, when Judge Ezra finally conducted a conference on the injunction motion in his chambers, attorneys for the Navy announced that the November exercises had concluded that morning and that the next exercises were not scheduled to occur until sometime in the summer of 2008. “In light of these changed

circumstances,” Ezra wrote in his order, “the court finds there is no longer a threat of immediate harm to plaintiffs’ interests and, as such, plaintiffs’ injunction motion is now moot.” If the Navy changed its schedule, however, Ezra would give the plaintiffs’ permission to refile their motion “on an expedited basis.”

“I knew there was a risk the exercises would occur before the injunction hearing,” Achitoff said, “but I really didn’t have a choice. . . . Without an injunction, they were free to do their exercises. The only alternative was to seek a temporary restraining order, and I didn’t do that because I wanted to have everything briefed fully, and I preferred not to ask Judge Ezra to issue a TRO at the last minute,” in light of the 9th Circuit Appeals Court action in the NRDC case, which ruled out a total sonar ban.

A Rush to Exercise

Within weeks of the November hearing, the Navy announced it had moved up the schedule for the next planned exercises, which now were to occur in March 2008. In response, Ezra scheduled a hearing on the motion for an injunction on February 11.

In a court session that lasted little more than an hour, Ezra announced he had prepared nine questions for the parties to ad-

Deep-Diving Whales Most Vulnerable To Sonar Used to Detect Submarines

The best chance most of us have to see a Cuvier's beaked whale is if it is in trouble. The species (*Ziphius cavirostris*) was scientifically described only in 1823, and even then, the description was made on the basis of a skull collected in 1803.

But with the increasing use by the U.S. Navy of mid-frequency sonar as part of submarine detection exercises, strandings of Cuvier's beaked whales may well be on the increase in Hawai'i. On July 28, a young male stranded on a Moloka'i beach and later died within a day of the Navy concluding Rim of the Pacific exercises in nearby waters. According to the National Marine Fisheries Service, only five instances of Cuvier's beaked whale strandings had been reported in Hawai'i before that date: in 1950, 1970, 1980, 1996, and 1998.

The Navy has denied any culpability in connection with the stranding last July. While it concedes that high-frequency mid-frequency active sonar can have an impact on deep-diving marine mammals, which rely on a highly developed sense of hearing to locate prey and navigate in sunless environments, it maintains that the sonar signals only cause harm in combination with other factors be-

yond the Navy's control.

Whale experts disagree, noting repeated incidences of whale strandings that occur in connection with military sonar exercises.

In the Bahamas, for example, in 2000, 16 marine mammals stranded, including 10 beaked whales. Seven died, with NMFS finding that the "most likely cause of the observed trauma was either acoustic or impulse injuries." (Since then, the ocean around the Bahamas has been virtually depopulated of Cuvier's beaked whales.) Investigations showed later that the level of sonar that the whales had been exposed to was far less than the Navy had initially claimed.

In 2004, about 200 melon-headed whales stranded in Hanalei Bay, Kaua'i, during Rim of the Pacific exercises. One calf died.

In April 2007, right after the conclusion of two undersea warfare exercises concluded, a dead male pygmy sperm whale washed up on Maui, while a pregnant pygmy sperm whale was found on a remote beach on Lana'i.

In the last two decades alone, mass whale strandings have been associated with naval exercises off the coasts of the Canary Islands, Spain, Greece, Madeira, and Puerto Rico, and

in waters off Washington state, California, and North Carolina.

Experts speculate that the loud "pings" emitted at mid-range frequencies by the Navy during undersea warfare exercises can affect deep-diving beaked whales in a couple of different ways. The high pressure of the sound blasts may cause hemorrhaging in the whales' ears. This can cause disorientation, leading the whales to beach themselves. Also, the sonar may interfere with behavior, leading whales to surface rapidly instead of more gradually and bringing about a condition similar to the "bends" experienced when human divers ascend too rapidly.

Whatever the cause, the Navy itself has estimated that over the course of two years, its planned undersea warfare exercises in waters around Hawai'i will result in more than 61,000 exposures of whales to sounds at or exceeding 173 decibels, with 22,598 "takes" of whales federally listed as endangered.

The lawsuit filed by Ocean Mammal Institute and other conservation groups in Hawai'i argues that while these are high numbers, they are not high enough. The Navy's 173dB thresholds "are far too high, [so] its estimate of the range at which animals may be affected is far too low." The plaintiffs' experts challenged also the Navy's estimates of the distances over which the sound would be attenuated, with whales' behavior being disrupted miles from a mid-frequency sonar source. — P.T.

dress before he would make a decision on the motion. The questions ranged from how NMFS decided on a 173-decibel level as the point below which marine mammals' behavior would not be affected, to how the sonar exercises in Hawai'i differed from those being litigated in California.

When the Navy attorney Luther Hajek was given an opportunity to make a statement, he insisted that the fact that no whale carcasses had washed ashore nor had whales been known to have recently stranded "demonstrates the fundamental weakness in [the plaintiffs'] case... The confluence of factors that have been linked to MFA sonar strandings in other places, particularly the Bahamas, do not occur during the USWEX."

Another Navy attorney, Jay Govindan, repeated the point: "The training that the Navy conducts is not at the expense of the environment... [T]he plaintiffs really can't rebut the fact that there has been no known impact to marine mammals ever since these mitigation measures" — measures proposed by the Navy — "have been in place."

Achitoff responded by noting that the

Navy arguments put forward "are the same arguments the Navy has been making time and again, month after month; and ... every court that has heard them has rejected them.... At this point, it's getting a little ridiculous."

As to the lack of strandings or deaths, Achitoff replied that not all injured whales

"The Navy does not exist in a vacuum."

— U.S. District Judge David Ezra

will wash ashore. Whale expert Robin Baird "pointed out in detail all the reasons why whales can be harmed or killed as a result of the sonar and not be found," he said. "They include the presence of sharks, the fact that the carcasses sink, the fact that there are fringing reefs that prevent the bodies from washing ashore, the fact that there's a lot of inaccessible coastline in Hawai'i. So again, you know, the Navy hammers on the fact that, 'well, show us the carcasses.' That's not the test here. It really isn't."

On February 29, Ezra issued an 84-page-order granting in part and denying in part

the injunction that the plaintiffs had sought. It was agreed by all parties that MFA sonar "can cause injury, death, and behavioral alteration" to marine mammals, he wrote. Although "a preliminary injunction is warranted under the law, ... the undeniable national security interest of having a competently trained Navy in these uncertain

times strongly militates against stopping USWEX or stripping it of its usefulness."

Rather than halt the exercises altogether, Ezra went on to impose a series of mitigation measures. They included all measures attached to a national defense exemption to the Marine Mammal Protection Act that the Secretary of Commerce gave the Navy in early 2007, and eight more. Among them:

◆ Powering down of sonar by 6 decibels whenever a marine mammal is spotted within 1,500 meters, or by 10 dB when a marine mammal is within 750 meters, and stopping sonar altogether when a marine

mammal is spotted within 500 meters of the sonar dome.

◆ Monitoring for 60 minutes before the start-up of any MFA sonar and continuing to monitor while exercises are occurring. And monitoring is to include not only the use of lookouts with binoculars, but also “passive acoustic monitoring,” including the Navy’s underwater hydrophones when exercises are conducted in or near the Pacific Missile Range Facility as well as aerial monitoring.

◆ Powering down sonar when rapid changes in the seafloor occur (these conditions can result in a kind of underground echo chamber, exacerbating the sonar’s effect on whales), when sonar is being deployed by more than one vessel in an area, and where bathymetry, channels or other conditions conducive to “surface ducting” may multiply the undersea noise generated by the sonar.

◆ Gradually “ramping up” sonar, “with sound levels starting at sufficiently low levels and gradually increasing to allow marine mammals to depart the area before transmissions reach harmful levels.”

Both the plaintiffs and the Navy asked Ezra for clarification on several points, leading Ezra to revise the injunction in early March. Later that month, the Navy con-

ing may have had an impact on the March exercises, he continued, the Navy’s “continued adherence to the uncompromising position of ‘we must train as we fight’ remains unpersuasive.”

“The Navy does not exist in a vacuum,” Ezra went on to say. “Context, whether financial, cultural, environmental or otherwise, requires the Navy and other branches of the armed services to function in such a manner as to recognize considerations in addition to those related to military preparedness. Where, as here, there is a likelihood that the Navy has not adhered to federal law, it cannot simply fall back on the training argument as a catch-all reason for avoiding its responsibilities.”

After conferring with both parties, Ezra modified his injunction for a second time, substituting the 9th Circuit’s surface ducting provisions. He also imposed a 12-nautical mile coastal exclusion provision during the Navy’s May and June exercises, except for two areas west of Kaua’i.

A Hurried Appeal

Within a week of Ezra’s second revision to the February injunction, the Navy appealed to the 9th Circuit, asking that the appellate court either vacate the injunction or remand it for further modification. In

more than National Environmental Policy Act violations alone.

And, to underscore the point, in August the plaintiffs filed a motion for partial summary judgment on the allegations that the National Marine Fisheries Service violated the Endangered Species Act by issuing flawed biological opinions as to the impact of the undersea exercises. (The ESA claim, part of the original complaint, had not been included in the motion for preliminary injunction.) Because NMFS had “relied heavily on the Navy’s inadequate EAs in formulating its biological opinions,” the motion said, “the BiOps were at least as flawed as the EAs upon which they were based.”

The Next Chapter

Documents attached to the motion indicate the extent to which the Navy had planned to evade NEPA requirements and skirt Endangered Species Act requirements.

In June 2006, seven months before any notice of the USWEX environmental assessment was made public, Navy personnel were discussing how to circumvent NMFS’ concerns over impacts to marine mammals. “NMFS is holding the USWEX permit application until the Navy adds more mitigation,” a Navy staffer informed his colleagues. “Also, note the reluctance for NMFS to accept an EA/IHA [incidental harassment authorization] package—[they] seemingly want an EIS/LOA.” (Under the Marine Mammal Protection Act, an IHA, or incidental harassment authorization, permits an agency to harass marine mammals; a LOA, or letter of authorization, allows for incidental “takes,” which can include injury or death.)

And, in fact, in a letter on October 5, 2006 from NMFS to the Navy, NMFS pushed the Navy to go this route. “The LOA process allows NMFS to consider the potential for incidental mortality and to authorize incidental mortality provided the activity has a negligible impact on the population or stock involved. Because mid-frequency sonar has been implicated in several marine mammal stranding events including some involving serious injury and mortality, and because there is no scientific consensus regarding the causal link between sonar and stranding events, NMFS cannot conclude with certainty the degree to which mitigation measures would eliminate or reduce the potential for serious injury or mortality. Therefore, NMFS recommends... that the Navy revise its application....”

But when the Navy refused, NMFS backed down. The biological opinion it released to accompany the January 2007 environmental assessment for the exercises

“[T]he Navy hammers on the fact that, ‘well, show us the carcasses.’”

— **Paul Achitoff, Earthjustice**

ducted exercises under the provisions of the revised injunction, but was unhappy with the outcome. Having to modify exercises when surface ducting conditions existed resulted in “ineffective and flawed training,” the Navy claimed in its second request for a modification to the injunction. It sought to eliminate completely any restriction related to surface ducting.

The plaintiffs responded by noting that the conditions imposed by Ezra were already weak. If the injunction were to be modified, they said, Ezra should either replace the provision the Navy objected to with the one in the original injunction (changed at the Navy’s request) or adopt a surface ducting provision that the 9th Circuit Court had imposed following the Navy’s similar complaint in the California case.

Ezra denied the Navy’s request. “Defendants have presented this court with no new information... [They] did not provide the court with an alternative proposal beyond the wholesale elimination of the ... condition,” he wrote. Although the train-

2007, the Navy had announced it would prepare a full environmental impact statement for all the Navy’s activities in the Hawai’i Range Complex, including USWEX. By June 2008, with the EIS nearing completion (the record of decision was issued in late June), the Navy wanted essentially to moot the current litigation and have the undersea exercises conducted under the terms set in the EIS without the court’s additional mitigation measures.

Early last month, the appellate court issued its first order in the case, refusing to vacate the injunction but agreeing to remand it to Ezra for consideration of whether the injunction should be vacated or modified in light of the EIS. October 4 was the deadline set by the court for the Navy to report back, either with an update on the status and a motion for “appropriate relief,” or with a motion to supplement the Navy’s opening brief in the appeal.

According to Achitoff, if the Navy’s preparation of the Hawai’i Range Complex EIS has any effect, it still cannot moot the whole lawsuit, since the claims concern

was based almost entirely on information fed it by the Navy and did not contain any independent analysis or critical review of that information. NMFS itself acknowledged this in the bi-op: "For our exposure analysis, NMFS relied solely on the results of acoustic models the U.S. Navy used."

Making the flaws in the biological opinion even more egregious, the plaintiffs argue, is the fact that when the Navy began to prepare a more thorough EIS on all Hawai'i Range Complex activities, including the undersea exercises, in the summer of 2007, it adopted a different standard to determine harm to marine mammals – one based on a dose-response calculation (where injury is proportional to the intensity of sound received by an animal) instead of the threshold calculation used in the EA (where any sound received below 173dB is deemed to have no effect). The draft EIS plainly stated that the assumptions used in the earlier EA were not supported by data.

But when the Navy hastily prepared a second EA for the undersea exercises a few months later, in an effort to make moot the NEPA issues in the lawsuit pending before Ezra, it retained the 173dB-threshold calculations of harm – and NMFS did the same in its accompanying biological opinion.

As the plaintiffs note, "although NMFS had been working on this newer methodology for many months, and although it had already been utilized in a publicly released draft EIS in July 2007 assessing MFA sonar activities, NMFS in its September 2007 revised BiOp pretended it did not exist. NMFS ... was under intense pressure from the Navy to issue a biological opinion that did not interfere with the Navy's plan to conduct its next USWEX in November 2007. Thus, when NMFS issued its revised BiOp on September 26, 2007, it retained the obsolete methodology despite knowing the newer dose-response methodology was not only more accurate, but available."

This, the plaintiffs argue, constitutes a clear violation of the Endangered Species Act. By failing to use what it already had acknowledged was a more accurate methodology, or to consider the views of respected marine mammal experts *not* in the pay of the Navy, they conclude, NMFS' actions were "arbitrary and capricious" and, as such, constitute a violation of the Endangered Species Act.

Government lawyers had not drafted a response to the most recent filing by press time. A hearing on the motion for partial summary judgment was set for 9 a.m., October 27, in the courtroom of Judge Ezra. — *Patricia Tummons*

Landscapers, Conservationists Find Common Ground on Invasive Plants

Relations between conservationists wanting to reduce the introduction and spread of invasive plants, on the one hand, and advocates of horticulture, on the other, have not always been smooth. But a workshop held during the July Hawai'i Conservation Alliance's annual conservation conference suggests the two groups have staked out common ground.

Nearly 40 percent of the invasive plant species now plaguing Hawai'i are ornamentals that were introduced and spread by the horticultural trade (including botanical gardens, garden clubs, exotic plant collectors, and the landscape industry). In 2004, in an effort to minimize future harm from this source, scientists at the University of Hawai'i at Manoa and the U.S. Department of Agriculture's Forest Service adapted a risk assessment protocol used by New Zealand to evaluate the invasive potential of plants in the nursery trade in Hawai'i. When the resulting

Kaua'i Landscape Industry Council and the O'ahu Nursery Growers Association have identified lists of seven and 12 plants, respectively, that they recommend not be sold because of their invasive qualities. Building on that early initiative, HASLA assembled a statewide committee of representatives from all facets of the industry to review the complete list of 168 plants identified by the Weed Risk Assessment as potentially invasive in Hawai'i. Their objective was to evaluate both risks and benefits of these plants to the industry and to develop a consensus recommendation for their use. Planting options were expanded to reflect the complexity of the issue. They noted that some species, such as seashore paspalum (*Paspalum vaginatum*) fill a specific need for which there is high demand and no known alternatives, whereas others, such as the Australian treefern (*Cyathea cooperi*), could be replaced with slower growing alternatives. Unlike newly

Nearly 40 percent of the invasive plant species now plaguing Hawai'i are ornamentals that were introduced and spread by the horticultural trade.

Hawai'i Pacific Weed Risk Assessment was rolled out, representatives of the state's landscape industry were skeptical.

At the July conference, organized by Christoph Kueffer of UH-Manoa, Chris Dacus and Boyd Ready of the Hawai'i Chapter of the American Society of Landscape Architects and the Landscape Industry Council of Hawai'i noted that the risk assessment failed to balance costs and benefits, describing it as a blunt tool at best. The scores given to plants assessed did not always reflect the degree of invasiveness, they said, while predictions of a given plant's invasive potential were not always correct. The rate of "false positives" – predicting a plant to be invasive when it was not – was about 15 percent, they noted. Still, they agreed that the WRA provided an objective evaluation of plants and was better than having to deal with multiple lists of undesirable species posted on various websites, which provided uncertain guidance both to the public and the industry.

Dacus described initiatives of the Hawai'i Chapter of ASLA to provide guidance for its members in addressing invasive species issues. Working with Christy Martin of the Coordinating Group on Alien Pest Species, the

introduced species, those already widespread in Hawai'i may be little affected by industry initiatives. HASLA's planting recommendations include "do not plant," "use an alternative" and "avoid near sensitive locations" as well as "continue to plant" and "seek more information and industry input." Eventually, Dacus said, the HASLA committee recommended placing 122 species on the "do not plant" list, that the industry continue to plant 22 species, and that it seek additional industry input on 25.

An industry survey done in 2007, Dacus said, revealed strong support for the planting guidelines and for reduction in use of invasive species among industry professionals. Next steps, he said, include seeking assistance in defining environmentally sensitive areas to avoid for species that will continue to be planted; reviewing and updating recommendations based on new risk assessments, increasing the use of native plants by horticulturalists; and investigating the implementation of an agreement similar to the National Pest Plant Accord developed in New Zealand between the horticultural industry and state agencies charged with management of invasive species.

— *Julie S. Denslow*

Coral Disease, Monk Seals, Invasive Fish Among Marine Issues at HCA Conference

The new green is blue," says Sylvia Earle, the pioneering marine researcher who was a plenary speaker at this year's Hawai'i Conservation Conference. And with a theme of Island Ecosystems: The Year of the Reef, the conference, held last July at the Hawai'i Convention Center in Honolulu and organized by the Hawai'i Conservation Alliance, offered dozens of marine-related presentations detailing the latest research on reefs and wetlands throughout the Pacific and on life within those habitats. The following is a summary of a handful of those presentations.



Coral Diseases Spread At French Frigate Shoals

Coral disease expert Greta Aeby has discovered something startling amidst the seemingly pristine reefs of the Northwestern Hawaiian Islands. At French Frigate Shoals, two coral diseases are spreading. One of them has already devastated reefs in the Florida Keys, where between 1996 and 2000, it spread from 26 research stations to 131. At Australia's Great Barrier Reef, the number of reefs with the syndrome grew from four in 1998 to 33 in 2003.

In 2002, none of the six reefs Aeby surveyed at FFS showed any disease, she said. The next year, Aeby found one Acropora reef with white syndrome and by 2005, it had spread to four reefs. That year, she marked 41 diseased coral colonies and by the next year, 19 of them were dead. As of 2006, the most recent year for which data is available, seven of the nine reefs surveyed at FFS had Acropora white syndrome, Aeby said. (While Aeby was denied a permit from the state Board of Land and Natural Resources to continue her work in 2007, Hawai'i Institute of Marine Biology researcher Evelyn "Fenny" Cox received a permit to continue Aeby's work this year.)

In addition to the white syndrome, Aeby said she has found large lumpy growths on some of the Acropora corals at FFS. In 2005, she found five instances of these unusual growths, and 24 the following year. Over that time, she said, there had been a 62.5 percent increase in the number of tumors.

Throughout FFS, less than half a percent of the corals are affected with these tumors. However, at "tumor city," a 12-by-14 meter area, 40.2 percent of the corals are affected by the disease. "That is mind-boggling," she said, adding that the area includes a number of dead zones of deformed, dead coral colonies.

The clustering of the corals with growth anomalies suggests that the cause is some kind of infectious agent, she said. The tumors, she added, drain the corals of energy and depress their ability to reproduce.

Aeby said that the incidence of disease at FFS is similar to where the Florida Keys were in the 1970s. Since then, Acropora in the Florida Keys and in the Caribbean have become very rare, she said.

The spread of disease at FFS is of particular concern to Aeby since she says the area is the center of diversity and abundance for Acropora corals.

While news of the spreading disease at FFS has been well reported over the past two years, Aeby said that the looming threat of ocean acidification has brought some urgency to the need to understand and control what's going on up there.

"We need to start acting now... We need to know more about diseases for management," she said, adding that surgical intervention may be appropriate since corals regenerate.

In response to a question from the audience about the genotype of the corals in "tumor city," Aeby noted that in Kane'ohe Bay off O'ahu, in the Main Hawaiian Islands, two types of zooxanthellae inhabit corals there and that bacterial communities differ among the two genotypes.

If the corals in "tumor city" all contained the same type of zooxanthellae, "that would offer an alternative explanation," for the growths she said, adding, "I think we're going to find a variety of reasons."



Monk Seals Pups Need Nursery, Expert Says

By all accounts, the endangered Hawaiian monk seals of the Northwestern Hawaiian Islands need some kind of inten-

sive care facility that gives pups and juveniles a better chance of surviving to adulthood.

Right now, with a relatively small number of adult females remaining and fewer than one in five pups surviving, Charles Littnan, a monk seal researcher with the National Marine Fisheries Service, said that the entire Hawaiian monk seal population is in "kind of a death spiral," declining at a rate of four percent a year.

Of the total population of about 1,200 seals, "Juveniles are hit extremely hard... terrible, terrible survival" rates, he said.

So in 2006 and 2007, Littnan and other NMFS researchers ran an experimental captive care facility at Midway atoll. In total, they helped raise seven pups, two of which were born on Midway and quarantined at Kewalo basin on O'ahu for a few months.

The pups were fed herring and vitamins and were kept in captivity anywhere from 89 to 297 days. During their stay, the seals' body weights improved up to 143 percent, Littnan said, adding that the longer they were kept, the more weight they gained.

One juvenile that was held only 23 days died from what Littnan believes was chronic nutritional stress combined with the stress of being in captivity. Although maintaining the facility was difficult at times, with winter storm surges nearly burying the seals' fenced pen and tsunami threats forcing two evacuations, the remaining six seals got fat and were eventually tagged and released, Littnan said.

Initially, the seals lost weight; two continued to deteriorate while the rest stabilized and improved, he said. All of the released seals foraged in less than 20 meters of water at first, but dove progressively deeper as time went on. While control seals all fed in one area, the released seals fed all over, with one swimming to Kure island after a few weeks, Littnan said.

Despite the initial improvement of some of the seals, all of the animals, even the control seals, are now dead, Littnan said. Of the "captive care" seals, four disappeared while in good condition, even the "champion who went to Kure," he said. One seal continued to deteriorate, and the last disappeared in poor condition. The deaths, Littnan said, were probably due to a catastrophic event, like a shark attack or debris entanglement.

While the results overall were abysmal, Littnan said, the project was not a failure of technique and there is still a strong case for doing more captive care. In the 1980s and 1990s, former National Oceanic and Atmospheric Administration researcher Wil-

liam Gilmartin had run a similar program and successfully released dozens of seals.

Jeff Walters of the state Division of Aquatic Resources added in a later session on monk seals that managers need to do anything they can to improve juvenile survivorship, including developing a monk seal nursery hospital and rehabilitation center.

Shark Attacks

In most cases, monk seal pups are successfully weaned, NMFS researcher George Antonelis said in his presentation. But at French Frigate Shoals, where most pups are born, pup survival can be as low as 60 percent, with the majority of the deaths due to shark predation.

So between 2000 and 2005, the NMFS removed 12 Galapagos sharks from FFS and the number of pups killed there dropped to about 10 a year. Since then, however, no sharks have been killed, in part because they have learned to stay away

Between 2000 and 2005, the NMFS removed 12 Galapagos sharks from FFS and the number of pups killed there dropped to about 10 a year.

when humans are around. This year, instead of trying to kill the sharks, researchers have deployed electromagnetic, physical, and visual deterrents, and have also translocated seals to safer areas. Although three seals at FFS' Trig Island and a total of nine seals at FFS were lost to sharks, only one of the deaths occurred after the deterrents were put in place. Antonelis added that 13 pups were successfully weaned at FFS.



Tilapia Destroy Grass, Promote Invasive Algae

While humans have filled, drained, or otherwise destroyed much of the state's wetland habitats, tilapia, introduced here in the 1950s, are killing the native sea grass in those wetlands that remain. At the same time, the invasive fish may also be facilitating the growth of invasive algae. That's according to research by University of Hawai'i graduate student Kim Peyton, who presented her results at July's Hawai'i Conservation Conference.

Tilapia is one of five invasive species in sea grass habitats, said Peyton, whose research focused on the impacts tilapia were having on *Ruppia maritima*, a native seagrass and an important food source for

native waterbirds. Most wetlands throughout the Main Hawaiian Islands have tilapia, whether *Ruppia* is present or not. But of the sites where *Ruppia* is absent, more than 50 percent of them have been invaded by tilapia.

At one such site in O'ahu's Kawainui marsh, the largest wetland in the state, Peyton said she was surprised to see nothing green growing in the water. To determine whether the tilapia were to blame for the lack of vegetation, Peyton submerged fish enclosures around clumps of *Ruppia*, as well as fish cages containing *Ruppia* and either large or small tilapia at two study sites, one at Kawainui and the other at the Kawaiie wetland on Kaua'i.

Peyton found that large tilapia grazed on the *Ruppia* in the cages. In the cages containing small tilapia and in those without any tilapia, the *Ruppia* grew just fine, she found. "These results indicate that unfavorable water quality and/or sediment

characteristics cannot explain the absence of *Ruppia*," her abstract states.

"The tilapia are very good at removing vegetation," she said. And because the native *Ruppia* is distinct from varieties in North America, "we are losing genetic diversity before we can understand it," she said.

In similar experiments using a red invasive algae (*Gracilaria salicornia*) instead of *Ruppia*, Peyton found that the algae grew significantly in the presence of large tilapia because the fish grazed on the algae's epiphytes (plants that grow on other plants).

Because tilapia are such prodigious grazers, Peyton said, they are completely denuding coastal wetlands. And losing wetland plants is quite serious, she added, since they play such important roles in processing organic carbon and regulating water chemistry. She said that *Ruppia*, in particular, is not only a food source for waterbirds, but is habitat for 'opae (native shrimp).

Do we want wetlands with plants and high water quality or do we want a "fish-poo" system, she asked the audience, adding that if resource managers want to improve Hawai'i's wetlands, tilapia need to be controlled.

"We don't expect to eradicate tilapia in Hawai'i," since about five species of tilapia are established in a diversity of habitats in

Hawai'i – from anchialine pools to coastal wetland ponds – and they are known to hybridize, she said.

Even so, the fish can be controlled with electrofishing (in fresh water), blasting caps that blow up their swim bladders, and other non-chemical means. Chemicals, she said, should only be used as a last resort.

"This is one [species] that we want the numbers to go down. If we can take that same energy [that we have put into depleting other fish species], we can do it," she said.



'Opihi Stick To their Home Islands

Chris Bird and Rob Toonen of the Hawai'i Institute of Marine Biology, and fellow researchers Brenden Holland, Brian Bowen, and Steve Karl have recently studied the DNA of 'opihis (*Cellana* spp.), an endemic limpet and popular local food item, to determine its population boundaries. All three 'opihis species in Hawai'i have undergone a huge crash over the last century, Bird said in his presentation at the conference. Despite the state's imposition of size limits on harvesting (a 1.25-inch minimum) in 1978, 'opihis populations have not recovered, he said. While some have proposed using marine protected areas (MPA) to help improve populations, Bird said managers need to first know where 'opihis larvae go so they can decide where to put the MPAs.

Since 'opihis larvae are only .17 mm long, tagging them to find out their patterns of migration is out of the question. Instead, the researchers used differences in DNA to track different 'opihis populations. They found that no larvae from the Northwestern Hawaiian Islands settle in the Main Hawaiian Islands, and that each of the MHI supports a distinct population of 'opihis, which means that no larvae are crossing the oceanic gaps between islands, he said. 'Opihis within each island, however, are genetically similar, they found.

Based on these results, Bird said, every island needs its own MPA. He also recommended some specific laws that could help the species: 1) Protect all subtidal 'opihis (which would affect the species known as koele), since adult 'opihis don't move; 2) protect all 'opihis in current MPAs; and 3) protect all 'opihis on all man-made shores, since those areas could not be considered cultural harvesting grounds.

— Teresa Dawson

BOARD TALK

Land Board Raps Mo'omomi Hui For Unpermitted Shoreline Slab

No treat me like one criminal. No treat me like I did something wrong... I did something that is good for the community. And I think I better stop myself before I get one heart attack," Kelson Poepoe told the state Board of Land and Natural Resources on August 22. That day, the board's Office of Conservation and Coastal Lands had recommended that the conservation group Hui Malama o Mo'omomi, where Poepoe serves as resource manager, be fined \$2,000, plus \$300 in administrative costs, for constructing a 150-square-foot concrete slab at the shore of Mo'omomi without a Conservation District Use Permit.

In his testimony before the board, Poepoe explained that he installed the slab in 2001 to protect the shore, which was being chewed up by vehicles taking boats in and out of the water. In written testimony, he stated that more than 1,000 native Hawaiians living in the nearby Ho'olehua Homesteads, who rely on subsistence fishing, benefit from the ramp.

"The cement slab is just one of many actions taken by the Hui to accomplish its mission of fixing problems along the Mo'omomi coast... We do not expect help from state agencies in addressing such problems because we have never received any help that has been requested in our 14-year history of community-based resource management," he said in written testimony.

The Maui County Fire Department and other island residents testified that the slab is the only place along the island's northwest coast where fishing and rescue vessels can safely enter and exit the water. In the end, the board voted not to impose the recommended \$2,000 fine, but decided that the hui must still pay the \$300 in administrative costs.

Because the OCCL stated that it does not believe the slab is interfering with sand movement, the board also approved the office's recommendation that the hui either remove the slab or apply for an after-the-fact CDUP within six months.

Before voting on the matter, at-large member Tim Johns told Poepoe that the hui's community-based management was a model for the state.

"I don't want you to think we don't appreciate the work that you've done over there. But we've got to look at the rules as well... You guys have your rules and when people break

them, you talk to them and tell them, 'You can't do that.' We've got to deal with that as well," he said.



Friends of He'eia Hangs On by a Thread

At its August 22 meeting, Land Board member Tim Johns told the Division of State Parks' Steve Thompson, "It goes without saying, but it's unfortunate that the board has to go through all these gyrations because you guys haven't done your job."

"It's embarrassing," Big Island Land Board member Rob Pacheco added.

More than a year ago, the DLNR's Division of State Parks was supposed to have developed a Request for Proposals/Request for Qualifications for a new manager for He'eia State Park, on the windward coast of O'ahu. It hasn't, and the delay has pushed the non-profit Friends of He'eia, which currently occupies the park and relies on grants to fund its educational programs, to the brink of collapse.

For decades, Friends of He'eia has leased the park's visitor center and exhibit hall where it has taught more than 100,000 students about nature and Hawaiian culture. But after two other groups expressed their interest in taking over the job in 2003, the Land Board directed State Parks to develop the RFQ and RFP to select the best manager. To make sure Friends

of He'eia's work could continue while the division prepared its documents, the board extended the group's lease twice. The most recent extension was set to expire on August 31.

According to a report by parks administrator Dan Quinn, the law prohibits the board from granting another extension, but does allow the board to grant a month-to-month revocable permit for up to one year. Parks representative Steve Thompson told the board that the RFP/RFQ documents are being reviewed by the Department of the Attorney General and that it would likely be several months before a new manager is selected.

In her testimony before the board, Friends director Carol McLean lit into the Parks Division for its foot-dragging. Despite her having called the division every two weeks about the status of the selection process, little had been done, she said. The delay has put the organization in the position of taking reservations for the hall and looking for interns for the upcoming school year while its tenancy is uncertain, she said. To plan its educational schedule and hall rentals and to apply for grants, her group needs more than a one-year lease or permit, she said.

"I used to have ten people working for me... We cannot pay people. I have been a volunteer for years now," she said, adding that if Friends of He'eia was not there, "the place we currently have, the classroom and visitor's center, will be inhabited by thieves, drug dealers, and homeless people, exactly like the place in front of the park... We recently asked seven cars doing suspicious things to leave so we can lock the gate."

"My board is tired, I am tired... My board wants to quit because of the shabby treatment by the [parks] division," she said.

Unable to do much else at its August 22 meeting, the Land Board granted the group a



Help us by making a donation or (finally) signing up for your own subscription.

Sign me up for a new renewal subscription at the
 individual rate (\$50) corporate rate (\$85)

— I wish to make a donation of \$ _____ a month through my credit card account for 12 months.

(Fill out form below; minimum amount is \$20 a month)

— I wish to make a onetime donation of \$ _____.

To charge by phone, call toll free: 1-877-934-0130

For credit card payments: VISA or MC

Account No.: _____ Exp. Date: _____

Subscription Payment: \$ _____ One-time donation: \$ _____ Monthly authorization: \$ _____

Phone No.: _____ (expires after 12 months)

Signature of account holder _____

name _____


address _____

city, state, zip code _____

Mail form to:
Environment Hawai'i
72 Kapi'olani Street
Hilo, HI 96720

We are a 501(c)(3) organization. All donations are tax-deductible to the extent allowed by law.

Non-Profit
Organization
U.S. Postage
PAID
Permit No. 208
Honolulu, HI

Printed on recycled paper 

one-year revocable permit. However, Johns said that at a future meeting, he would suggest that the new lease not start until after the Friends of He'eia permit expires at the end of August 2009. The board also directed the division to provide an update on the status of the RFP/RFQ process, as well as a report on the possibility of directly issuing an educational lease with a concession component or a conservatorship contract to the group.



Oregon Developer Proposes New Wind Farm at Kahuku

West Wind Works, LLC, of Oregon has received preliminary approvals to develop a wind farm at Kahuku in North O'ahu. At its August 8 meeting, the Land Board granted a request by its Land Division to withdraw 232 acres from the Kahuku Agricultural Park, approve in principle a direct lease to West Wind for a wind farm, and approve a right-of-entry to allow the company to conduct tests on the site, which is adjacent to land where UPC Wind plans to develop a 30-megawatt wind farm.

Keith Avery, president of West Wind Works, told the Land Board that if it can secure a lease for the land, his company will be able to participate in Hawaiian Electric Co.'s efforts to generate 100 megawatts of power from wind. A Land Division report states that direct negotiations for a lease will start once West Wind is issued a conditional use permit and begins negotiations with HECO for a power purchase agreement, among other things. The report also states that West Wind plans to erect ten wind turbines, which will

produce up to 25 megawatts of electricity.

Avery, whose previous efforts under different companies led to the development of the wind farm at Kaheawa, Maui, added that if the state succeeds in purchasing nearby Turtle Bay resort, he would want to see a wind farm constructed on the property's mauka lands.

At-large board member Tim Johns, who also sits on HECO's board, recused himself from voting on the recommendations.



Bird Protections Reviewed For Two Wind Farms

On September 12, the Land Board approved a habitat conservation plan (HCP) and incidental take license (ITL) for the construction and operation of seven meteorological towers on Lana'i that will collect the data necessary to determine whether or not the island's northwest tip is a viable site for Castle & Cooke, Inc.'s proposed \$750 million wind energy project.

Under the plan, Castle & Cooke's towers may injure or kill seven to 14 Hawaiian petrels ('ua'u), and up to two Newell's shearwaters ('a'o), two Hawaiian stilts ('ae'o), and two Hawaiian hoary bats ('ope'ape'a) over a two-year project period. All four of the species are federally or state-listed as threatened or endangered. If more than 14 petrels are taken within two years, the plan requires Castle & Cooke to remove the towers.

All but one of the towers were erected last year. In accordance with the plan, Castle & Cooke will pay the Department of Land and Natural Resources' Division of Forestry and Wildlife more than \$250,000 to manage the natural resources in the area.

According to news reports, Castle & Cooke seeks to erect as many as 125 wind turbines on Lana'i, which could generate 300 to 400 megawatts of electricity. Using under-

water cables, the wind farm has the potential to supply a significant portion of O'ahu's power needs.

At the same September meeting, the Land Board also voted to release for public review a proposal by Maui's Kaheawa Wind Project to amend its HCP and ITL to add six meteorological towers, two on the existing wind farm site and four on an adjacent property where the project's parent companies – UPC Wind Partners, LLC and Makani Nui Associates, LLC – plan to erect more turbines.

Land Board member Tim Johns recused himself from voting on both items.



Board Approves Settlement For Molokini Coral Damage

According to a settlement agreement approved by the Land Board on September 12, Maui Snorkel Charters has agreed to pay the DLNR a total of \$386,297 for damaging coral when its boat sank within the Molokini Shoal Marine Life Conservation District in 2006, plus \$10,618 in administrative costs. The agreement requires an initial payment of \$260,618, with subsequent annual payments of \$50,000 a year for the next two years and \$36,297 in 2011. The company will also receive credit for suspending its operations for 2 1/2 months after the fall 2006 incident.

After approving the settlement, Maui Land Board member Jerry Edlao told Maui Snorkel's Jeff Strahn, "I know this has been real hectic for you guys and everybody else, but something had to be done and I believe that we were able to...learn from this and in the future we can avoid this kind of situation."

(For more details on this incident, see the "Board Talk" column of in the May 2008 edition of *Environment Hawai'i*, available online at www.environment-hawaii.org.)

— T.D.

