

TESTIMONY

SB 1



University of Hawai'i at Mānoa

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January 28, 2009

SUPPORT for SB 1

RELATING TO OPIHI

Senate Committee on Water Land Agriculture & Hawaiian Affairs

January 30, 2009

3:00 p.m., State Capitol, Conference Room 229

I am a faculty member at the University of Hawai'i and have conducted research on the population biology and management of marine resources in Hawai'i since I was recruited to the University in 2003.

SB1 establishes a five year moratorium on the harvesting of 'opihi on the island of O'ahu, as well as establishing a ban on taking or harvesting 'opihi in protected waters statewide, subject to open and closed seasons and the traditional rights of certain ahupua'a tenants. My support of this measure reflects my personal and research experience gained through the study of 'opihi in the Main and Northwestern Hawaiian Islands in collaboration with State and Federal management agencies, 'opihi harvesters and traditional cultural practitioners rather than an institutional position of the University of Hawai'i.

I fully support this bill. In crafting these proposed regulations the best available science has been taken into account, as well as input from resource managers, and 'opihi harvesters; SB1 draws on both the research done to date and traditional harvest practices still in place on some islands to establish legal guidelines for sustainable harvest of 'opihi. 'Opihi is a delicacy that is part of Hawaii's culinary culture, and as such there is universal agreement that the resource must be preserved for future generations to enjoy. SB1 seeks to reverse the overharvest of 'opihi Statewide and establish protected zones that will increase the local breeding population. These protected breeding populations will then be able to replenish the harvestable 'opihi in the surrounding areas to the benefit and increased supply of all.

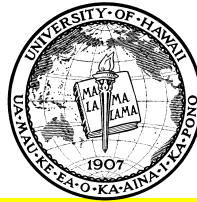
On the island of O'ahu, the 'opihi are so depleted that a complete ban on harvest for five years is needed to allow the breeding populations to recover prior to renewed harvest.

Thus, the measures of SB1 are likely to succeed in the protection and continued harvest of 'opihi. The guidelines are enforceable, and the strength of protective measures are tailored to where the problem is most serious. The overall result is conservation efforts that will increase populations Statewide for future harvest and benefit of all.

Thank you for the opportunity to offer comment on this bill.

Sincerely,

Robert J. Toonen



University of Hawai'i at Mānoa

Christopher E. Bird, Postdoctoral Research Fellow

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I moved to Hawaii in 1998, and began my studies of opihi in 1999 at the University of Hawaii. Over the past 9 years, I have visited almost every coastline that harbors opihi in the Main Hawaiian Islands. In so doing, I have had the opportunity to speak with numerous opihi harvesters and citizens of Hawaii regarding opihi, cultural harvesting practices, and general ideas on what can be done to increase the numbers of opihi. I have conducted studies on the interaction of opihi with other species, the spawning patterns, larval development, adult growth, genetic population structure, population size, and commercial fishery statistics of opihi. I continue to work on opihi as a Postdoctoral Research Fellow at the University of Hawaii.

There is no doubt that opihi populations have declined in Hawaii over the past 108 years, and continue to decline presently. Bill SB 1 proposes to address the decline of opihi populations by putting limitations on the harvest of opihi in Hawaii waters. The proposed limitations on opihi harvest are driven by science, existing cultural practices, and common sense. Here I review SB1 section by section

Section 1 is factually correct, and emphasizes that the goal is to rehabilitate both opihi populations and the fishery. The most important point is that breeding adults must be protected to ensure that opihi populations will replenish themselves. This is a key issue in the science of fisheries management.

Section 2a is focused on protecting breeding adult opihi by establishing “no take” areas. This is a valid method for managing the opihi fishery. In the no take areas, opihi are allowed to breed throughout their entire lives. Adult opihi tend to stay in the same area, returning to their home scare periodically throughout the day, and are unlikely to leave the no take area, where they might be harvested. Opihi have free swimming larvae (earliest life stage) which can disperse from the no take areas into areas where harvest is legal. There probably need to be more no take areas for opihi, but the proposed locations (man-made shorelines, offshore islets, and State Managed Areas) are a good start.

Section 2b is focused on protecting the breeding adult opihi koele (*Cellana talcosa*) by banning their harvest below the low tide line, and is based on traditional Hawaiian practices. Opihi koele exists both above and below the water line. By making the subtidal environment a “no take”

zone, a portion of the opihi koele population is allowed to grow old and breed. Some of the larvae of these subtidal “breeders” will settle above the water line, providing a stable source of opihi koele to shorelines. It is likely that this single measure will allow opihi koele to recover and remain a sustainable fishery species.

Section 2c is related to Section 2b because in order to harvest subtidal opihi koele, one would need a mask and snorkel and a tool to pick the opihi. I have no scientific opinion on this section.

Section 2d restricts the harvesting of all opihi to 6 months per year across the entire state. It is likely that this will reduce the harvest pressure on opihi because there will be 50% fewer days upon which opihi can be harvested.

Section 2e states that an opihi monitoring program be implemented to assess the response of opihi populations to the new harvesting restrictions. Monitoring opihi populations in response to the measures proposed in SB1 is very important. It may be difficult to divine a “seat of the pants” assessment of whether there are more or less opihi five years from the implementation of SB1. A monitoring program will ensure that a concrete answer can be given to the question of “Did SB1 help increase opihi population size?” This will surely drive future management decisions for opihi.

Section 3 states that opihi harvesting will be temporarily banned on Oahu for 5 years. I think this section adequately reflects that opihi populations have been decimated on Oahu, relative to the other Hawaiian Islands, thus Oahu requires more drastic actions to rehabilitate its opihi populations. It is very telling that fish markets have not expressed much opposition to the stoppage of opihi harvest on Oahu, indicating that opihi sold in Honolulu markets is not harvested on Oahu. Oahu has the highest ratio of people to suitable opihi habitat, and it is likely that what has happened is that harvesting pressure is so intense that most opihi don’t get a chance to reproduce on Oahu. Offshore islets with dense populations of opihi, such as Manana off the coast of Waimanalo where opihi harvesting is illegal, indicate that if harvesting is stopped, opihi populations can recover. Opihi grow very quickly, reaching reproductive age in as few as six or seven months. Opihi also have swimming larvae that disperse well within islands. Stopping the harvest of opihi on Oahu should allow some level of recovery and replenishment. The reopening of the opihi fishery on Oahu should be accompanied by aggressive harvest restrictions, implementing more “no take” areas than proposed in Section 1a.

Thank you for the opportunity to offer comment on this bill.

Sincerely,

Christopher E. Bird

Mark Fox



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Testimony of The Nature Conservancy of Hawai'i
Supporting S.B. 1 Relating to 'Opihi
Committee on Water, Land, Agriculture & Hawaiian Affairs
Friday, January 30, 2009, 3:00pm, Rm. 229

The Nature Conservancy of Hawai'i is a private non-profit conservation organization dedicated to the preservation of Hawaii's native plants, animals, and ecosystems. The Conservancy has helped to protect nearly 200,000 acres of natural lands for native species in Hawai'i. Today, we actively manage more than 32,000 acres in 11 nature preserves on O'ahu, Maui, Hawai'i, Moloka'i, Lāna'i, and Kaua'i. We also work closely with government agencies, private parties and communities on cooperative land and marine management projects.

The Nature Conservancy supports S.B. 1. We believe this measure is an important step toward recovery of over-harvested 'opihi species in Hawai'i.

'Opihi shells in archaeological layers are some of the earliest evidence of human habitation in the Hawaiian islands. Indeed, 'opihi have been an important and prized food source for Hawaiians for centuries.

Although limpets grow throughout the world, Hawaii's 'opihi are only found here, evolving over thousands of years in isolation to become unique species in the world.

Sadly, Hawaiian 'opihi are severely depleted and becoming increasingly difficult to find in the main islands. We are in danger of losing not only a marine animal that is unique in the world, but also losing an important direct connection to Hawaiian history and culture.

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SENATE COMMITTEE ON WATER, LAND, AGRICULTURE, AND HAWAIIAN AFFAIRS

January 30, 2009, 3:00 p.m.

(Testimony is 1 page long)

TESTIMONY IN **SUPPORT** OF SB 1

Chair Hee and members of the Committee:

The **Sierra Club, Hawai'i Chapter**, with 5500 dues paying members statewide, firmly supports SB 1, which establishes a five year moratorium on the harvesting of 'opihi on Oahu and creates open and closed seasons Statewide.

'Opihi populations have declined in Hawai'i. This is mostly as a result of overharvesting due to 'opihi's popularity as a delicacy. Commercial harvest numbers on 'opihi, which are the only statewide statistics available to measure the size of 'opihi populations, show a decline from about 16,000 pounds harvested annually in 1970 to less than 8,100 pounds a year now. The increasing price of 'opihi, under the rule of supply and demand, also indicates a decline in the supply of 'opihi.

This measure generally restricts the harvesting of 'opihi while preserving the cultural subsistence and religious uses of the 'opihi. A moratorium on harvesting would be the easiest policy tool to enforce while allowing the populations to recover. Open and closed seasons statewide would allow for the ongoing protection of this valuable part of Hawai'i's culture and history.

Please give the little guys a break.

Thank you for the opportunity to testify.

TESTIMONY
SB 1
(END)