



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

---

Testimony Presented Before the  
Senate Committees on Water, Land and Housing, and Hawaiian Affairs  
Thursday, April 12, 2012 at 2:40 pm

By

Virginia Hinshaw, Chancellor

And

Christopher E. Bird, Ph. D.  
Postdoctoral Research Fellow

And

Robert J. Toonen, Ph. D.  
Associate Research Professor  
Hawai'i Institute of Marine Biology  
University of Hawai'i at Mānoa

SCR 166/SR 96 URGING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO ADOPT RULES TO REGULATE AND CONTROL OPIHI HARVESTING TO ALLOW OPIHI STOCKS TO NATURALLY REPLENISH THEMSELVES AND SUPPORT SUSTAINABLE HARVESTING AND TO ANNUALLY REPORT ON ITS EFFORTS TO REPLENISH OPIHI STOCKS, THE EFFECTIVENESS OF THESE EFFORTS, AND RECOMMENDATIONS AND PROPOSED LEGISLATION FOR IMPROVEMENT.

Aloha Chairs Dela Cruz and Galuteria, Vice Chairs Solomon and Ryan, and members of the committees:

As marine scientists who have studied Hawaiian 'Opihi for the past 13 years, we enthusiastically support SCR 166/SR 96. 'Opihi is a delicacy that is part of Hawai'i's culture, and as such, there is universal agreement that the resource must be sustained for future generations to enjoy. We have visited almost every coastline that harbors 'Opihi in the Hawaiian Islands. In so doing, we have had the opportunity to speak with numerous 'Opihi harvesters and citizens of Hawai'i regarding 'Opihi, cultural harvesting practices, and general ideas on what can be done to sustainably harvest 'Opihi.

There is no doubt that 'Opihi populations have declined in Hawai'i over the past 112 years, and continue to decline presently. This is borne out in the exponentially increasing price of 'Opihi, the severely low population density of 'Opihi on the shores of O'ahu where the majority of the state's residents reside (1/50<sup>th</sup> of other islands), and the 10x decline of the commercial harvest from 1900 to today. These resolutions propose to address the decline of 'Opihi populations by delineating spatial and temporal limitations on the harvest of 'Opihi in Hawaiian waters. The proposed limitations on 'Opihi harvests are driven by science, management concerns, existing cultural practices, enforceability and common sense. It is our expert scientific opinion that SCR

166/SR 96 will result in (1) increased population size for all three species, (2) an increase in the number of ‘Opihi that are sustainably harvested, and (3) at the very least a decrease in the rate at which ‘Opihi prices are rising.

We are sensitive to the concerns of the citizens of Kaua‘i, Moloka‘i, Maui, Lana‘i, and the Big Island of Hawai‘i that O‘ahu is draining neighbor island ‘Opihi stocks. Neighbor islands can expect that a new direction in ‘Opihi management outlined in SCR 166/SR 96 will lead to O‘ahu producing more of its own ‘Opihi. Neighbor islands can rest assured that closing O‘ahu to ‘Opihi harvest will not create a run on neighbor island ‘Opihi because O‘ahu’s shores currently yield very few ‘Opihi and make no significant contribution to the commercial harvest of ‘Opihi. In the future, a revitalized O‘ahu ‘Opihi population will help to ensure that fewer neighbor island ‘Opihi end up in Honolulu markets and at lū‘aus on O‘ahu.

Here we review the key components of SR 96.

#### **Pg4 line 28 – Pg5 line 40. Support**

This section 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 and practice of fisheries management.

#### **Rule Objective 1. Support**

Objective 1 is focused on protecting breeding adult ‘Opihi by establishing “no take” areas. This is a valid method for managing the ‘Opihi fishery as evidenced by numerous peer reviewed manuscripts and the numerous “no take” areas already established by the State of Hawai‘i’s DLNR Division of Aquatic Resources. Of particular note, the Hawai‘i Division of Aquatic Resources’ aquarium fish protected areas on the Kona coast of Hawai‘i have experienced large increases in targeted fish populations (see attached peer reviewed publication). 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 scar periodically throughout the day, and are extremely unlikely to leave the no take area, where they might be harvested. ‘Opihi have free swimming larvae (earliest life stage) that 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 and can be used to evaluate the effectiveness of this strategy. If proven effective, an adequate number of “no take” areas can be established to revitalize ‘Opihi populations across the State. We cannot stress enough that this management strategy is PERFECT for ‘Opihi because the adults stay in one place, the larvae disperse into the surrounding areas, and ‘Opihi typically grow to legal size within 7 months. It is a proven strategy that has been and is currently being successfully implemented by Hawai‘i DLNR’s DAR and management agencies around the world.

#### **Rule Objective 2. Support**

**Rule 2** is focused on protecting the breeding adult ‘Opihi kō‘ele (*Cellana talcosa*) by prohibiting their harvest below the low tide line, and is based on traditional Hawaiian practices. ‘Opihi kō‘ele exists both above and below the water line. By making the subtidal environment a “no take” zone, a portion of the ‘Opihi kō‘ele 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 kō‘ele to shorelines. It is likely that this single measure will allow ‘Opihi kō‘ele to

recover and remain a permanently sustainable fishery species. The most promising aspect of this provision is that it is highly likely to be self-enforced. In the past, OHA specifically requested that Native Hawaiians NOT be exempt from this provision. It is currently self-enforced at the community level in certain areas of Moloka‘i and Maui. Given the consistently low level of funding for the enforcement of fishery rules, especially with the current recession, it is more important than ever to establish rules that don’t require constant enforcement because those that do will surely fail to have an impact on our fishery resources.

### **Rule Objective 3.**

Rule objective 3 restricts the harvesting of all ‘Opihi based on the recommendations of ourselves and DAR. It is possible that this will reduce the harvest pressure on ‘Opihi because there will be fewer days upon which ‘Opihi can be harvested. Alternatively, closed seasons could initiate a run on ‘Opihi when the season opens. It has been proven and published that this happens with fish in the Waikī-Natatorium revolving closed area. We are amassing a fairly large amount of data on ‘Opihi spawning times and can work with DAR to decide upon the best dates for closure if instructed to do so.

### **Rule Objectives 4 & 5. Support**

We recognize the rights of Native Hawaiians and the KIRC operating on behalf of Native Hawaiians to manage and utilize their resources.

### **Rule Objective 6. Support**

Rule 6 states that ‘Opihi harvesting will be temporarily stopped on O‘ahu for 5 years. This section is enforceable - if you are seen picking ‘Opihi on O‘ahu, you are in violation. This section adequately reflects that ‘Opihi populations have been decimated on O‘ahu, relative to the other Hawaiian Islands (50 fold decrease relative to other Hawaiian Islands despite adequate habitat), thus O‘ahu 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 O‘ahu, indicating that ‘Opihi sold in Honolulu markets is not harvested on O‘ahu. O‘ahu 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 O‘ahu. 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 O‘ahu should allow some level of recovery and replenishment. The reopening of the ‘Opihi fishery on O‘ahu should be accompanied by aggressive harvest regulations, implementing more “no take” areas than proposed in Rule 1.

### **Further Resolutions 1-5. Support**

We would like to add that we will help to support DAR’s efforts to track changes in the ‘Opihi populations using our established, standardized, and broadly implemented ‘Opihi Stock Surveying Protocol.

We believe that SCR 166/SR 96 establishes guidelines that are effective and sound. Thank you for the opportunity to offer comment on this bill.