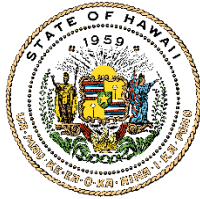


JOSH GREEN, M.D.  
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA

P.O. BOX 621  
HONOLULU, HAWAII 96809

Testimony of  
DAWN N. S. CHANG  
Chairperson

Before the Senate Committee on  
TRANSPORTATION AND CULTURE AND THE ARTS

Tuesday, February 14, 2023  
3:15 PM

State Capitol, Conference Room 224 & Videoconference

In consideration of  
SENATE BILL 1037  
RELATING TO LIMU KALA

Senate Bill 1037 proposes to designate Limu Kala (*Sargassum echinocarpum*) as the official Hawai'i State Limu. **The Department of Land and Natural Resources (Department) fully supports this measure.**

This bill acknowledges and promotes the critical role that limu plays in our natural environment and in sustaining the people of Hawai'i. Limu Kala is an excellent choice for the State Limu due to its numerous uses and significant cultural importance. Traditionally, the word "limu" included a broad range of organisms such as terrestrial moss and lichen, and even some marine zoanthids. However, for the purpose of this testimony, "limu" refers to aquatic botanical species such as algae and seagrass.

The Department has realized the decline of desirable limu species, including Limu Kala, throughout the State. Currently, the Department is supporting non-government organizations in the propagation of limu species for community driven restoration projects.

Additionally, the Department has documented the proliferation of limu'ē (non-native algae) and its detrimental impact on native benthic species such as limu and coral. In response, a decade ago the Department established an urchin hatchery. Urchins produced by the hatchery are released in areas with high limu'ē concentrations. These urchins then feed on the limu'ē, reducing their populations.

DAWN N. S. CHANG  
CHAIRPERSON  
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KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

The Department recognizes that in Hawai‘i’s modern context there is an underappreciation of limu. Senate Bill 1037 is an excellent opportunity to increase awareness, understanding, and appreciation of limu in Hawai‘i, particularly Limu Kala.

Mahalo for the opportunity to provide testimony in support of this measure.



**Mālama Pūpūkea-Waimea**  
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Hale'iwa, HI 96712

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Educational Programs &  
Makai Watch Coordinator*

**Federal Nonprofit Organization**  
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[info@pupukeawaimea.org](mailto:info@pupukeawaimea.org)

February 12, 2023

Re: **STRONG SUPPORT** for **SB 1037**: Relating to Limu Kala

Aloha Chair Lee, Vice Chair Inouye, and Members of the Senate Committee on Transportation and Culture and the Arts,

Mālama Pūpūkea-Waimea (MPW) is the grassroots, community non-profit that actively works to care for, educate about, and protect our fragile, near-shore marine ecosystems of Pūpūkea and Waimea. Our mission is "working to replenish and sustain the natural and cultural resources of the Pūpūkea and Waimea ahupua'a for present and future generations through active community stewardship, education, and partnerships."

**We are pleased to offer strong support of SB1037.** As part of the work we do, we have been monitoring the limu at Papakahāohina (a reef flat at Kapo'o/Sharks Cove) for the past seven years and have identified 32 native species of limu there so far, including Limu Kala, which is by far the most abundant. We regularly offer limu education for anyone, keiki to kupuna, and often host visits to the reef flat to learn more about this very important and special part of a healthy marine ecosystem.

In addition to being a significant source of vitamins, minerals, and fiber with many uses for traditional medicine, limu is a critically important component of a healthy, productive reef ecosystem. Limu is a primary producer and the base of the nearshore marine food chain, an important habitat for many marine creatures, and a key indicator of the health and resilience of the ahupua'a. Limu Kala, specifically, is special because has many uses for Native Hawaiian cultural ceremonies, is used in traditional fishing, and in the protection of ocean voyagers,

Naming Limu Kala as the State limu will help to bring awareness to the recapture, retention and sharing of limu cultural knowledge that will benefit the nearshore fishery and all people of Hawai'i for future generations.

Mahalo for hearing this bill and for the opportunity to provide testimony. **We strongly support SB1037.**

Mahalo nui,

*Jenny Yagodich*

Jenny Yagodich  
Director of Educational Programs &  
Makai Watch Coordinator  
Mālama Pūpūkea-Waimea



Testimony Before The  
House Committee on  
**IN SUPPORT OF SB 1037**  
February 14, 2023, 3:15PM, Room 224

We are Malia Heimuli and Kevin Chang the Limu Hui Coordinator and Executive Director, respectively, of [Kua'āina Ulu 'Auamo \(or KUA\)](#). KUA works to empower grassroots rural and Native Hawaiian mālama 'āina groups to celebrate their places and pass on their traditions to better Hawai'i and achieve 'āina momona— an abundant, productive ecological system that supports community well-being.

KUA employs a community-driven approach that currently supports a statewide network of 36 mālama 'āina community groups collectively referred to as E Alu Pū (moving forward together), 40 fishpond projects and practitioners called the Hui Mālama Loko I'a, and a growing group of over 60 Limu practitioners and supporters called the Limu Hui.

**KUA supports SB 1037 as an incremental step on a pathway towards 'āina momona.**

One of the founding kupuna of our first network E Alu Pū, Uncle Henry Chang Wo Jr., a recognized loea limu (limu expert) grew up in 'Ewa Beach and personally witnessed the decline of limu there. He worked to create a Limu Management Area (LMA) in 'Ewa, a place legally designated for traditional limu gathering. Uncle Henry taught us that one of the main causes of the loss of limu is the loss of groundwater that once flowed abundantly along the shoreline. As the flow of groundwater decreased, limu abundance decreased. One of Uncle Henry's famous sayings was "No limu, no fish". Unfortunately, Uncle Henry passed away in 2015. He left a legacy which includes the Limu Hui, the 'Ewa LMA and the struggle to bring limu back to 'Ewa the way it once was. KUA works to perpetuate his legacy. This resolution is part of that legacy we wish he were here to testify on and help continue.

KUA supports SB 1037 because recognition of the significant socio-cultural dimensions of Limu Kala helps to elevate the importance of the resources, people and culture of Hawai'i broadly. It also uplifts the work and passion of generations of kūpuna like Uncle Henry to perpetuate the deeper socio-cultural ties that bind us to these islands. We also feel this recognition will provide many opportunities to increase awareness and to educate Hawai'i's residents of the environmental and Hawaiian cultural significance of Limu Kala and all limu.

Lastly, this bill is significant to Hawai'i's leadership in the world. Limu Kala is significant to Native Hawaiian processes of reconciliation and healing. Global environmental governance has begun to disentangle the *hīhia* of colonial environmental history reconciliation is a major theme on the pathway toward better caring for our planet together. In this regard Hawai'i is not just a leader for its own kupa'āina but for the world.

Mahalo for this opportunity to testify. Aloha 'Āina Momona, E Ola Limu!

February 12, 2023



Re: **STRONG SUPPORT for SB1037**: Relating to Limu Kala

Aloha Chair Lee, Vice Chair Inouye, and Members of the Senate Committee on Transportation and Culture and the Arts,

We represent the Mālama Limu Club, a Kamehameha Schools Kapālama high school organization. The purpose of the Mālama Limu Club is to remove invasive limu from various fishponds and beaches, giving endemic and native Hawaiian limu the opportunity to thrive and maintain diversity in our ocean ecosystems.

Our entire club recognizes the environmental and cultural importance of seaweed. Limu is the foundation of all ocean ecosystems, as they provide a habitat and food source for various marine organisms. They also produce a large part of our world's oxygen and mitigate erosion and coral breaking. Culturally, limu was used in medicine, lei making, dying clothing, and is still found in a variety of Native Hawaiian dishes. Limu was also a cornerstone in the lives of Native Hawaiian women, as the process of collecting limu was entirely designated for women. Limu Kala, in particular, was used in ritual practices such as the ho'oponopono ceremony, where people would seek forgiveness as they ate or held the limu. It was also used for cleaning, in religious practices, after burials, and prior to fishing.

**We strongly support SB1037** which would name limu Kala as Hawai'i's official state limu. Due to the pollution and warming of our water along with the introduction of invasive seaweeds, which are much more resilient to these environmental changes, the endemic and native limu populations are rapidly decreasing. We believe that limu needs

to be recognized for its immense importance and that this bill will bring awareness to the great need for conserving our endemic and native marine ecosystems.

On behalf of the Mālama Limu Club Members, mahalo nui for this opportunity to provide testimony.

Mahalo,

Madison Murata

Mālama Limu Club President

Members: Hope Rosenbush, Brady Akau, Amara Martin, Shaina Wandasan, Amara Martin, Aidden Murray, Alyssa Faulkner, Ava Pasa, Brayden Van Kuren, Carleena Mattos, Carly Lasconia, Chloe Martin-Blevins, Clarice Hutchison, Cloey-Anne Yamasaki, Eli Nagaishi, Emily Loscalzo, Emma Attwood, Ethan Abraham, Gage Bassett, Hailey Ching, Harryzen Soares, Haylie Reiny, Hekili Kamalani, Jack Poepoe, Jadon Koa Haina Dumlao, Jenna Lingenbrink, Jordyn Lee, Kahiau Kaopuiki, Kaila Kim, Kailani McLain, Kaimana Eliana-Pantil, Kaimana Kau, Kaiya Hoopai, Kaohu Helenihi, Kapua Pupuhi, Kassidy Kepa, Kau‘i Sato, Kekai Wong, Keko Kenichi Agpalsa, Kekoapiilani Moses Kekina Dierks, Kili Rowe, Kilinoe Brown, Korie Lee, Kukamaehu Tamashiro, Lanamaliekikai Haverly, Landon Choy, Lea Richardson, Leilani Jensen, Lucas Valleriani, Mahealani Plunkett, Makamaenamakanamaikalani Santiago, Makayla Lee, Malia Victor, Mālie Nee, Mattea Skeen, Maya Willing, Mehana Silva, Melissa Kaanoi, Mikala Akiona, Mima Field-Perkins, Moanahiwalani Walker, Nikki Chong, Ocean Bustamante, Pi‘i McKenzie, Rhyllie Skye Rabang, Roma Lerner, Sanae Oye, Shalem Asano, Shane Pinho, Shyla Aki, Stella Imada, Tiani Ing, Trevyn Nishimura, Nakoa Moses-Gomera



13 February 2023

**COMMITTEE ON TRANSPORTATION AND CULTURE AND THE ARTS**

February 14th, 2023

3:15 PM

State Capitol, Conference Room 224 & Videoconference

In consideration of

**SB1037**

**RELATING TO LIMU KALA**

Senator Chris Lee, Chair; Senator Lorraine R. Inouye, Vice Chair; and Members of the Committee on Transportation and Culture and the Arts

I write in **strong support of SB1037** that designates limu kala (*Sargassum echinocarpum*) as the official Hawai'i state limu.

We were involved with the Year of the Limu 2022 by hosting community members from different islands at our aquaculture research facility at NELHA (Natural Energy Laboratory of Hawaii Authority) as well as participating at educational events held by KUA (Kua 'Āina Ulu 'Auamo). Our intention is to continue growing limu awareness, and education across the communities in Hawai'i. We believe that this is important for both continuation of cultural practices, and for the continued development of sustainable limu business operations.

Mahalo nui loa for the opportunity to offer these comments.

Aloha,

Simona Augyte, PhD  
Macroalgae Science Lead  
Ocean Era, Inc.

This testimony is in support of SB1037, The Limu Kala bill

Aloha Senators, throughout the islands various types of limu are favored by the communities who have access to those limu. Here in Ho'okena, limu pahe'e is our ono. Pahe'e grows when the ocean is rough or during the rainy season making it difficult to harvest. We fry it with garlic, shoyu, sugar and opae or mix it raw with tomato, onions, opae, vinegar and shoyu. It is also ono when added to opihi.

We do not eat limu kala. That limu feeds the fish, especially the nenu and you can taste the limu when eating poke' nenu. We watch as the nenu comes on the reef with a small wave and as they swim through the limu kala eating, we cast our net.

More importantly limu kala is used as part of a cleansing ceremony. Hawaiians value spirituality as a way to sustain a balance in their world and before healing a sick person's body, the spirit was healed through prayer or ho'opono'pono.

Limu kala is a symbol of what we all need to do in every aspect of our lives. When the government tries to solve problems, they usually spend millions of dollars and try to address the issue by funding a project that purchases land or equipment or constructing an edifice for a specific purpose. People are given money to help them through a difficult time but no thought is devoted to healing the spirit of the affected persons or place.

Limu kala is a reminder to us that the problems of our world are not only physical or social but in every case it is spiritual. Please pass this bill so that politicians are aware of this important part of their decision-making kuleana, so that their thinking is pono and what they support or oppose is made with more than material things in mind.

Ke Aloha Nunui,

Damien Kenison

Kauhako Ohana Association

501 c3 Community organization based in Ho'okena/Kauhakō, South Kona, Hawaii Island

<http://namamo9.wixsite.com/kauhakoohana>



**SB-1037**

Submitted on: 2/11/2023 8:02:06 AM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
STANLEY RUIDAS	Individual	Support	Written Testimony Only

Comments:

I support SB1037

**SB-1037**

Submitted on: 2/11/2023 10:40:50 AM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Miwa Tamanaha	Individual	Support	Written Testimony Only

Comments:

Aloha mai kākou,

I am writing in strong support of SB1037, naming Limu Kala as the state limu. Limu is a foundational element of our marine and nearshore environment, a vital indicator of the health of our places, communities -- naming limu kala as the state limu will provide an opportunity to affirm and educate the role of limu for Hawai'i.

Miwa Tamanaha

94-1144 Moolelo St, Waipahu HI 96797

**SB-1037**

Submitted on: 2/11/2023 4:48:07 PM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Uilani Naipo	Individual	Support	Written Testimony Only

Comments:

Please adopt Limu Kala as our state limu. With it's cultural significance and vital role it plays in our marine ecosystem, we need to recognize this limu as our state limu.

‘Auhea ke kala?

Kala loloa, kala.

Kala loloa o kai.

Kala.

Kala maewa ‘ana i kai

Kai pīkai kala ē

E kala ka hewa kua,

E kala ka hewa alo,

E kala loa ka hewa a kānaka,

I ola loa kanaka.

A puaaneane

‘O ka‘u pule kala nō ia

Ua lele a‘ela nei pule

Lele!

- U‘ilani



**SB-1037**

Submitted on: 2/11/2023 12:29:54 PM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Maria Haws	Individual	Support	Written Testimony Only

Comments:

Aloha,

I am testifying as a private citizen. I have 38 years of experience in aquaculture and natural resource management and would like to support this bill. Part of my research as a Professor of Aquaculture at the University of Hawaii Hilo focuses on seaweed (limu) culture and conservation. The activities related to limu over the last year under the auspices of the "Year of Limu" have been highly effective in raising awareness of the importance of limu for cultural, economic and environmental reasons. The energy and initiatives catalyzed by the "Year of Limu" can be sustained for many years by naming Limu Kala as the state limu. As an educator, I can attest to the important of state organisms and the attention they garner, particularly from school children and educators. As we all know, limu kala holds a very special place in Hawaiian culture and choosing it as the state limu would be most appropriate and will provide many benefits for years to come. Thank you for supporting this initiative.

**SB-1037**

Submitted on: 2/12/2023 8:27:24 AM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Laa Poepoe	Individual	Support	Written Testimony Only

Comments:

I support this bill designating kala as the official state limu. Thank you.

**SB-1037**

Submitted on: 2/12/2023 12:41:04 PM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Lori Poaipuni	Individual	Support	Written Testimony Only

Comments:

Aloha I support SB1037

Līmu holds ecological and cultural significance to the State. Four endemic species of limu kala grow in Hawai'i waters: *S. echinocarpum*, *S. hawaiiensis*, *S. obtusifolium* and *S. polyphyllum*. Limu kala is common in the nearshore ecosystem and is abundant seasonally in many intertidal and subtidal habitats including tidepools and reef flats in areas with moderate to high wave action,

Limu is a critically important component of a healthy and productive reef ecosystem. Limu is a primary producer and the base of the nearshore marine food chain. Herbivorous fish rely on limu to survive and due to a steep decline of limu throughout our state, there has been a correlating decline of fish abundance. Limu kala is used as a traditional bait for reef fish including species of kala fish (unicornfishes) and lack of limu knowledge and limu awareness hinders any work or effort to increase our nearshore fish population. Limu, especially limu kala, is also an important habitat for many marine creatures and is a key indicator of the health and resilience of the ahupua'a.

Please support SB1037, mahalo!

**SB-1037**

Submitted on: 2/12/2023 8:46:49 PM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Lorraine Waianuhea	Individual	Support	Written Testimony Only

Comments:

Aloha kakou,

I am writing to express my strong support of SB1037. Limu kala is an important part of Hawaiian culture and an important part of our ocean ecosystems. Limu feeds the fish which in turns feeds us. 2022 was the Year of the Limu which helped bring awareness to the importance of limu to our communities and Hawaii as a whole. Recognizing limu kala as the official limu of Hawaii will provide further educational opportunities and help honor limu kala as the significant food and medicine that it is. Please pass SB1037.

Mahalo for the opportunity to testify,

Lorraine Waianuhea



**SB-1037**

Submitted on: 2/13/2023 7:38:20 AM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Hope Rosenbush	Individual	Support	Written Testimony Only

Comments:

I support SB1037. As a Native Hawaiian, I care deeply about limu in general. They were once a regular part of my kupuna's diet, and they were also used for other things like medicine, dye, and more. Limu is also important to me as a wahine because limu picking roles were typically assigned to Hawaiian women.

Limu Kala in particular holds a special place in my heart. It was edible and used for cultural practices, such as the forgiveness ceremony. During the forgiveness ceremony, fragments of it were spread amongst quarreling people. Then, those people would sit in a circle, holding their fragments of Limu Kala, and talk out their issues. The limu was a unifying force. I believe that this concept works well for Hawaii, as we must strive to find solutions to our problems, together. Finally, I believe that Limu Kala is the most beautiful limu of all. It's delicate, intricate spikes and dreamy, golden color lighten up my day. It is most fitting that this beautiful limu should represent the most beautiful state in the United States.

**SB-1037**

Submitted on: 2/13/2023 8:36:07 AM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jadon Koa Dumlao	Individual	Support	Written Testimony Only

Comments:

I support this bill

**SB-1037**

Submitted on: 2/13/2023 10:38:58 AM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Kainalu	Individual	Support	Written Testimony Only

Comments:

I strongly support this bill in recognizing Limu Kala as the State limu of Hawai'i. Limu is important to me and my culture on many levels as well as many communities across Hawai'i. I want our future generations to know the significance of our various limu and I believe this bill is a great avenue to do so.

**SB-1037**

Submitted on: 2/13/2023 11:00:08 AM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Ellie S. Jones	Individual	Support	Written Testimony Only

Comments:

To the committee hearing SB1037,

My name is Ellie and I am a marine scientist, fisher, and resident of Mānoa Valley on O‘ahu. I am writing in support of this bill to designate Limu Kala (Sargassum aquifolium) as the official State Limu of Hawai‘i in order to raise awareness for this beloved limu. Sargassum has special cultural and ecological significance to Hawai‘i, but much of the cultural knowledge surrounding use of limu kala for bait, wound healing, and protecting ocean voyages may be lost if it is not highlighted and passed down. Designating limu kala as the state limu will help to perpetuate this knowledge. Additionally, it will build on the precedence of limu appreciation and awareness set by last year’s Year of the Limu in 2022. The designation of 2022 as Year of the Limu brought together people from around the state all year to celebrate, learn about, and share knowledge of native limu in our State waters. Designating limu kala as the official State Limu of Hawai‘i will build on last year’s momentum for recognition of the significance of limu to Hawai‘i.

Mahalo nui for hearing this bill and for your support.

Ellie S Jones

**SB-1037**

Submitted on: 2/13/2023 12:04:23 PM

Testimony for TCA on 2/14/2023 3:15:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Abby Pruitt	Individual	Support	Written Testimony Only

Comments:

Limu kala is a seminal species in Hawaiian culture and history. Enjoyed by ali'i and common people alike, limu Kala was the first limu to be utilized in many ways including food and medicine. It would be monumental if Limu Kala was designated as the Hawai'i state limu.

**SB-1037**

Submitted on: 2/13/2023 8:28:16 PM

Testimony for TCA on 2/14/2023 3:15:00 PM

**LATE**

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Kilia Purdy-Avelino	Individual	Support	Written Testimony Only

Comments:

Limu kala is appropriate to be named as the official state limu. Please move this bill forward.  
Mahalo piha!

**SB-1037**

Submitted on: 2/13/2023 11:18:18 PM

Testimony for TCA on 2/14/2023 3:15:00 PM

**LATE**

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Matthew Geyer	Individual	Support	Written Testimony Only

Comments:

SUPPORT