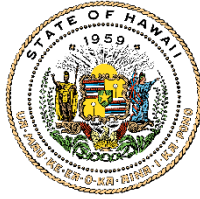


JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



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

P.O. BOX 621
HONOLULU, HAWAII 96809

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

RYAN K.P. KANAKA'OLE
FIRST DEPUTY

CIARA W.K. KAHAHANE
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
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CONSERVATION AND RESOURCES
ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Testimony of
DAWN N. S. CHANG
Chairperson

Before the Senate Committee on
WATER AND LAND

Wednesday, February 5, 2025
1:00 PM
State Capitol, Conference Room 229 & Videoconference

In consideration of
SENATE BILL 244
RELATING TO PARROTFISH

Senate Bill 244 proposes to amend conservation and resources law to prohibit: (1) Commercial sales of parrotfish that have been caught by spearing; and (2) The spearing of parrotfish in state waters after sunset or before sunrise. **The Department of Land and Natural Resources (Department) acknowledges the intent of this bill and offers the following comments.**

The Department recognizes the importance of Hawai'i's parrotfish, or "uhu", species for both the health of coral reef ecosystems as well as non-commercial and commercial fisheries. It is the responsibility of the Department to find a balance between ecosystem health and continued access to sustainable fisheries through effective management informed by public input.

In response to mounting scientific evidence and community concerns regarding the sustainability of uhu and other herbivorous reef fish, the Department's Division of Aquatic Resources (DAR) led a multi-year statewide stakeholder engagement process to develop conservation measures for these important species. This process gathered public input through public scoping sessions, targeted stakeholder outreach, and formal public rulemaking hearings. As a result of this process, last year the Department adopted amendments to statewide uhu rules, including a daily noncommercial bag limit of two uhu per person, revised minimum size limits, and prohibitions on the commercial harvest of less common uhu species. The rules establish important statewide limits on both non-commercial and commercial uhu fisheries, prior to which did not exist.

Additionally, DAR continues to partner with interested local communities to address their local concerns through the creation of Community Based Subsistence Fishing Areas (CBSFAs) and Fishery Management Areas (FMAs). In the most recent example, the Board in January 2025 approved the creation of the Maunalua Bay FMA which includes a prohibition on night dive spearfishing between the Diamondhead lighthouse and spitting caves (Portlock). This community-led and supported initiative was motivated in part by the concern that heavy night dive spearfishing in the area was facilitating the excessive and unlawful take of certain high-value target species including uhu.

The Department intends to continue to monitor the health of statewide uhu populations to gauge the effectiveness of these new regulations. If found to be ineffective, the Department will pursue regulatory changes in consultation with the public to achieve management goals. Additionally, through the ongoing Holomua Marine Initiative, the Department is facilitating a community-led process to identify island-scale fishery issues and establish island- and place-based management measures reflecting varying resource conditions and cultural practices. This Holomua process is currently underway on Maui, and the Department plans to introduce this process to Hawai'i island later this year. Rules established on the island- and place-based scales will complement statewide rules to provide local communities a powerful tool to guide how their resources are managed.

Mahalo for the opportunity to comment on this measure.



To: The Honorable Chair Lorraine Inouye, Vice-chair Brandon Elefante, and members of the Committee on Water and Land

From: Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

Re: **Hearing SB244 RELATING TO PARROTFISH**

Hearing: Wednesday, February 5, 2025, 1:00 p.m. CR229

Aloha Chair Inouye, Vice-chair Elefante, and members of the Committee on Water and Land:

The Hawai'i Reef and Ocean Coalition (HIROC) is a group of scientists, educators, filmmakers and environmental advocates who have been working since 2017 to protect Hawaii's coral reefs and ocean.

The Hawai'i Reef and Ocean Coalition STRONGLY SUPPORTS SB244!

Parrotfish, also known as uhu, is a critical species for the health of Hawai'i's coral reefs!

These “lawnmower” fish graze on algae and seaweed that can smother coral. They scrape the reef free of all algae and other coral-competitors so that new corals can settle and grow to repair reefs, thereby helping to maintain the delicate balance necessary for reefs to thrive. Parrotfish feeding on algae is especially **critical in the face of climate stressors such as warmer oceans and pollution.**

A stock assessment conducted by fisheries scientists from the National Oceanic and Atmospheric Administration found that parrotfish (uhu palukaluka) are experiencing overfishing (i.e., fish are

being removed faster than they are replenished). All herbivores are important for the health of the reef, but research shows that **herbivorous fish populations, particularly uhu, have been severely depleted near human population centers in Hawai'i. The depletion of these natural reef caretakers makes coral reefs more vulnerable to environmental stressors, leading to ecosystem degradation.** Reefs with increased herbivores see less coral mortality following severe heat stress compared to reefs with reduced fish populations.

The degradation of coral reef ecosystems affects not only marine life, but humans as well.

Healthy coral reefs provide essential shoreline protection against storm waves and coastal erosion, support fisheries that sustain local livelihoods, and hold cultural, recreational, and economic significance for all Hawai'i's people. The largest parrotfish even help replenish Hawai'i's beaches by eating dead coral and excreting fine sand.

This bill would protect parrotfish by prohibiting commercial sale of parrotfish caught by spearing. It also would prohibit knowingly spearing parrotfish at night, when they sleep. It would not prohibit spearing parrotfish in the daytime except for commercial purposes.

Protecting parrotfish is an investment in the future of our oceans and our islands!

Please pass this bill to help preserve Hawai'i's reefs, strengthen coastal resilience, and preserve thriving marine ecosystems for future generations.

Mahalo!

Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

SB-244

Submitted on: 2/2/2025 9:21:39 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Godfrey Akaka	Testifying for The Native Hawaiian Gathering Rights Association	Oppose	Remotely Via Zoom

Comments:

Aloha, my name is Godfrey Akaka Jr. President for The NHGRA. We are in strong opposition to this bill as it is banning a form of gathering and is in direct infringement of our Native Hawaiian Gathering Rights. This bill is anti Hawaiian and anti culture. Our ocean has proven to be sustainable for gathering and production locally for self reliance and self sustainability. Furthermore, this is another attack on communities to over regulate fishing by scare tactics related to Global warming. The science being used to show that stopping people from catching fish will improve reef growth or reef health to make a difference is not reliable or sound. There is no clear evidence that proves this theory is accurate. Mahalo.

SB-244

Submitted on: 2/1/2025 11:17:21 AM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Cathy Goeggel	Testifying for Animal Rights Hawai'i	Support	Written Testimony Only

Comments:

Support!



March 22, 2023

COMMITTEE ON WATER AND LAND

Senator Lorraine R. Inouye, Chair Senator Brandon J.C. Elefante, Vice Chair

Date: Wednesday February 5, 2025

Time: 1:00 PM

Regarding SB 244 Relating to Parrotfish

Oppose

HFACT is a not-for-profit, IRS 501c (5) organization, that advocates for small boat commercial, non-commercial, and recreational fishermen throughout Hawaii. HFACT board members sit on a number of federal fisheries management and endangered species advisory committees as well as state marine and coastal zone advisory committees; and, HFACT is thoroughly familiar with and participates in ocean and marine resource management in Hawaii and the central Pacific.

We are in opposition to SB 244 on the grounds that this decision making should be under the jurisdiction of the DLNR's, Division of Aquatic Resources. They are intimately aware of all aspects of any, and all issues, regarding parrotfish or uhu. There are innumerable factors that are being considered by many factions within the DAR staff and advisory bodies. The knowledge that they possess, not only about the all the various species of uhu, regarding life history, abundance at specific areas, and the environmental factors that are related to this fish, but also the human aspects. The extent of their knowledge includes, who is fishing for them, commercially and non-commercially, how this fish filters down throughout the community, whether it is gifted to relatives and friends, or being purchase by all of community's fish lovers.

We strongly believe that fishing regulations need to stay within the responsibility of DAR. History has shown us the highly negative consequences that Legislative actions can impose, not only to the fishermen. but to the stock population itself, as it did to the Kona Crab Fishery, which, by the way, took 5 years to reverse the legislation.

HFACT thanks the chair, vice-chair, and committee members for this opportunity to provide comment and to assist in providing food to the people of Hawaii and to assist in the conservation of Hawaii's natural resources.

Sincerely and Aloha,

Edwin Watamura
Executive Director.
watafishing @ gmail.com

Hawai'i Ocean Legislative Task Force



February 5, 2025

Senate Committee on Water & Land
Hawai'i State Legislature

Re: Testimony in SUPPORT of SB 244, Relating to Parrotfish

Aloha Chair Inouye, Vice Chair Elefante, and members of the committee,

The Ocean Legislative Task Force, a coalition of over 100 individuals and organizations committed to protecting Hawai'i's marine ecosystems, strongly supports SB 244, which seeks to protect uhu, or parrotfish. Safeguarding these vital reef fish is essential to ensuring the long-term health of Hawai'i's coral reefs, coastal fisheries, and marine biodiversity.

Parrotfish serve as a keystone species within coral reef ecosystems. By grazing on algae and seaweed that would otherwise overwhelm corals, they help maintain the delicate balance necessary for reefs to thrive. Their feeding behavior prevents algal overgrowth, which is especially critical in the face of climate stressors such as coral bleaching and pollution. Additionally, as the largest parrotfish consume dead coral and excrete fine sand, they contribute to the formation and replenishment of Hawai'i's beaches, which are vital for coastal stability and habitat preservation, and are enjoyed by millions of visitors to Hawai'i each year.

Research shows that herbivorous fish populations, particularly uhu, have been severely depleted near human population centers in Hawai'i. Without these natural reef caretakers, coral reefs struggle to recover from environmental stress, leading to ecosystem degradation that affects both marine life and local communities. Healthy reefs are not just important for biodiversity—they provide essential shoreline protection against storm waves and coastal erosion, support fisheries that sustain local livelihoods, and hold cultural, recreational, and economic significance for all Hawai'i's people.

As noted in a recent report, "reefs with increased herbivorous fish populations...had positive coral cover trajectories pre-disturbance. These reefs also experienced a modest reduction in coral mortality following severe heat stress compared to reefs with reduced fish populations...."ⁱ

Protecting uhu and other herbivorous fish is an investment in the future of our oceans and our islands. By enacting this measure, the Legislature has the opportunity to take a proactive approach in preserving Hawai'i's reefs, strengthening coastal resilience, and ensuring that future generations inherit thriving marine ecosystems. For these reasons, we respectfully urge the passage of this bill

The Ocean Legislative Task Force advocates for measures that promote funding for natural resource protection and restoration, ocean resources, coral reefs, subsistence fishing, and coastal resilience, and other priorities.

ⁱ Gove, J.M., Williams, G.J., Lecky, J. et al. Coral reefs benefit from reduced land–sea impacts under ocean warming. *Nature* 621, 536–542 (2023). <https://doi.org/10.1038/s41586-023-06394-w>

SB-244

Submitted on: 2/3/2025 4:11:52 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
George "Bud" Antonelis. PhD	Testifying for Na Kama Kai	Support	Written Testimony Only

Comments:

Aloha Legislators,

I strongly **support SB244 Relating to Parrotfish** to save our coral reefs saviors from severe over exploitation. Parrotfishes or *uhu* are key species that keep our reef surfaces clean so new coral can flourish. Unfortunately, *uhu* are severely depleted and the new herbivore fishing rules approved by the Board of Land and Natural Resources are insufficient to replenish these reef saviors. It is common knowledge that pillaging of our reefs occurs at night, when divers spear *uhu* as they sleep helplessly under ledges. These pillaged fish are often sold to markets by lawbreakers without commercial licenses. This practice is not *pono*. SB244 would not only prohibit night spearing of *uhu*, but also prevent the commercial sale of illegally speared *uhu*. The bill does not affect subsistence and recreational fishers who fish *pono* during the day, nor commercial fishers who use nets or traps.

Uhu and other herbivores are the natural lawnmowers of the sea that can save our reefs from poor water quality, pollution, and coral bleaching, yet they must be abundant to do so. The science is clear that herbivores are depleted near human population centers in Hawai‘i, especially the *uhu*.

Importantly, *uhu* are about far more than fishing and feeding people. They are the natural resilience mechanism needed for our reefs to recover and thrive. As saviors of our reefs, they are far more valuable to all the people of Hawai‘i alive than as food. Healthy coral reefs protect our coasts from erosion, provide fisheries for many species (not just herbivores), and are valuable sources of recreation, tourism, and spiritual connection. Our reefs are seriously threatened by poor water quality and increasingly severe coral bleaching. Without abundant and diverse herbivores, especially *uhu*, many of our reefs are now covered in seaweeds, which quickly smother corals unless they are removed by these natural lawnmowers.

Uhu replenishment is not about environmentalists vs. fishers; it is about the long-term perspective of those who care about the future of our valuable coral reefs vs. the short-term perspective of those who would continue to allow the depletion of our reef saviors. Ultimately, by helping to replenish *uhu* populations now, SB244 will help sustain our fisheries and other benefits provided by our coral reefs far into the future.

Mahalo,

Bud Antonelis, PhD

Kailua,Hawai'i

SB-244

Submitted on: 2/3/2025 4:24:23 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Lisa Bishop	Testifying for Friends of Hanauma Bay	Support	Written Testimony Only

Comments:

Friends of Hanauma Bay Strongly supports this bill!

With aloha,

Lisa Bishop

President

SB-244

Submitted on: 2/3/2025 6:59:34 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jenny Yagodich	Testifying for Malama Pupukea-Waime	Support	Written Testimony Only

Comments:

In STRONG support of SB244 to amend conservation and resources law to prohibit: (1) Commercial sales of parrotfish that have been caught by spearing; and (2) The spearing of parrotfish in state waters after sunset or before sunrise.

Taking parrotfish at night when they rest in their protective mucus cocoon is not pono. An abundant parrotfish population is a key element of a healthy and productive reef ecosystem.

Mahalo

SB-244

Submitted on: 2/3/2025 8:35:03 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Natalie Parra	Testifying for Keiko Conservation	Support	Written Testimony Only

Comments:

We strongly urge you to protect the future of herbivorous fishes in Hawai'i and **support** SB244.

The islands' fragile reef ecosystems are already plagued with invasive species, poor land management practices, warmer waters, and increased acidity. The reefs need these herbivorous species to play their critical ecological role more than ever and we hope you will **SUPPORT** this bill.

SB-244

Submitted on: 2/4/2025 9:43:06 AM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Eric Dilley	Testifying for The Uhu Conservancy	Support	Written Testimony Only

Comments:

The Uhu Conservancy would like to voice its strong support for SB244. The ravages of climate change existentially threaten coral reefs. With increased warming and subsequent coral bleaching events (like what occurred in 2014, 2015, and 2019) we are likely going to see coral bleaching on a near-annual basis by 2030. If we do not act boldly to protect coral reefs and increase their resilience to climate change, they will likely degrade into a state dominated by algae instead of coral. This collapse of coral reefs in Hawaii would be devastating in terms of losses in tourism, recreation, and ecosystem services like coastal protection.

To address the threats climate change poses to Hawaiian reefs, it is clear that we must provide the best possible conditions for corals to not only grow but also to recover following major storms and bleaching events associated with climate change. Herbivorous fish, such as parrotfishes, surgeonfishes, and chubs are the "lawnmowers of the sea" that clear algae or limu that grows on coral reefs to allow new corals to settle and grow. Additionally, these grazers crop algae that grows around larger corals and therefore prevent competition with corals to facilitate recovery. Herbivores therefore provide a vital ecosystem service that we cannot replace.

This bill will provide two vital changes to how herbivores are harvested in the state. Firstly, it will prevent the use of spearing for harvesting parrotfish commercially. Doing this will drastically reduce the parrotfish take in the state and limit take to subsistence fishing purposes only. This is important to both increase the stocks of herbivores for take by subsistence fishers while enhancing coral reef ecosystem functioning by having more parrotfishes on reefs in the state. Secondly, this bill will eliminate the ability of fishers to spear parrotfish at night. Parrotfish sleep on the reef at night and are highly vulnerable to spearfishing. By allowing spearfishing on parrotfish at night, it facilitates overfishing and drastically reduces parrotfish stocks. This is akin to shooting fish in a barrel and is not a pono practice. By banning night spearfishing, the state will make a significant difference in the sustainability of the parrotfish subsistence fishery and enhance ecosystem services that parrotfish provide as the "lawnmowers of the sea".

The Uhu Conservancy would like to voice its strong support for this bill because it will continue the process of protecting our "lawnmowers of the sea" so they can play their role in creating resilient Hawaiian coral reefs. By preventing commercial take of parrotfish by spearing and eliminating spearfishing of parrotfish at night, the state will enhance parrotfish populations and allow them to grow for the benefit of subsistence fishers and Hawaiian coral reefs. We urge the legislature to pass this bill to ensure that Hawaii will do everything possible to foster resilient coral reefs in the state.

SB-244

Submitted on: 2/4/2025 12:36:14 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Stuart Coleman	Testifying for WAI: Wastewater Alternatives & Innovations	Support	Written Testimony Only

Comments:

Aloha, Chair, Vice Chair and Committee Members,

My name is Stuart Coleman, and on behalf of WAI, I'm writing in support of SB244, which would protect herbivorous reef fish like the parrotfish. There has been rampant overfishing of coral reefs near population centers, especially on O‘ahu, and this occurs at night when some spearfishers plunder parrotfish (uhu) as they sleep.

As you may know, Uhu and other herbivorous fishes are the saviors of the reefs, eating seaweeds that would otherwise smother reefs, thereby allowing corals to flourish. Along with their cultural and environmental benefits, Hawaii's coral reefs generate an estimated \$863 million annually in economic value from tourism, recreation, research, and commerce. We can't afford to lose our reefs, and the best way to save them is by protecting herbivorous fish populations and reducing nutrient runoff (from cesspools, rag unoff, etc.).

In the scientific journal Nature, Gove et al. wrote in a August 2023 article: “ Reefs with increased herbivorous fish populations and reduced land-based impacts, such as wastewater pollution and urban runoff, had positive coral cover trajectories predisturbance. These reefs also experienced a modest reduction in coral mortality following severe heat stress compared to reefs with reduced fish populations and enhanced land-based impacts.”

Mahalo for protecting our herbivore fish populations and our coral reefs.

Stuart Coleman, Hibiscus Pl., Hon., HI 96815

TESTIMONY OF PACIFIC WHALE FOUNDATION

THE SENATE
COMMITTEE ON WATER AND LAND
WEDNESDAY FEBRUARY 5, 2025
1:00 PM

IN SUPPORT OF SENATE BILL 244

Aloha Chair Inouye, Vice Chair Elefante, and Members of the Committee,

Pacific Whale Foundation (PWF), a nonprofit organization dedicated to protecting the ocean through science and advocacy and inspiring environmental stewardship, supports SB244, a crucial measure to safeguard Hawai'i's coral reefs by eliminating the commercial sale of speared parrotfish and prohibiting nighttime spearfishing of parrotfish.

As an ocean conservation organization, PWF recognizes that herbivorous fish, particularly parrotfish, are essential to maintaining the delicate balance of coral reef ecosystems. Parrotfish function as "living lawnmowers of the sea," consuming algae that would otherwise outcompete corals and smother reef structures. Without healthy herbivore populations, reefs are at increased risk of degradation, which in turn reduces coastal protection, diminishes biodiversity, and negatively impacts local fisheries that depend on reef-associated species.

Furthermore, parrotfish play a vital role in sand production, contributing up to 1,000 pounds of sand per individual per year by breaking down coral rubble and algae through their feeding behavior. This natural process is particularly critical in an era of rising sea levels, as it helps sustain Hawai'i's beaches and mitigate coastal erosion.

PWF supports sustainable fishing practices that allow for the responsible use of marine resources while ensuring the long-term health of fish populations. However, parrotfish are particularly vulnerable to overexploitation due to their predictable resting behaviors. Many species of parrotfish sleep openly on the reef, encased in a mucus cocoon, making them an easy target for spearfishers. This nocturnal vulnerability allows for the removal of large numbers of these ecologically important fish before they have a chance to reproduce, leading to population declines that disrupt reef health and resilience.

We urge the committee to pass SB244 to protect Hawai'i's parrotfish population and their critical service to coral reefs. Mahalo for your leadership on this critical issue and for considering the testimony of Pacific Whale Foundation and its supporters.

Sincerely,



Dayna Garland
Interim Executive Director



Susan Frett
Conservation Director



Protecting the ocean through science and advocacy, and inspiring environmental stewardship



SIERRA CLUB OF HAWAI'I

SENATE COMMITTEE ON WATER AND LAND

LATE

February 5, 2025

1:00 PM

Conference Room 244

In SUPPORT of SB244: Relating to Parrotfish

Aloha Chair Inouye, Vice Chair Elefante, and Members of the Committee,

On behalf of our over 20,000 members and supporters, the Sierra Club of Hawai'i **SUPPORTS** SB244, which will help to prevent the continued depletion of a vital reef species and thereby support our coral reef ecosystem, as well as the subsistence, cultural, recreational, scientific, and economic interests associated with both uhu and a healthy nearshore environment.

Hawai'i's uhu play a critical and direct role in perpetuating our nearshore ecosystems and cultural and subsistence traditions, and their sustainable management supports a wide range of interests in our marine environment. These fish species serve a critical and unique role in maintaining healthy reefs through their control of coral-inhibiting algae; are the basis of a number of Native Hawaiian traditional and customary practices; and also serve as a subsistence and recreational fishery resource. The ecological services provided by uhu also benefit a wide range of cultural, subsistence, recreational, scientific, and economic interests dependent upon a healthy and abundant nearshore environment.

Unfortunately, our uhu populations are far from healthy, and may be at risk of further decline or collapse. The value of uhu as table fare creates a significant financial incentive to harvest them for commercial gain, and their extreme vulnerability at night has enabled significant numbers of uhu to be taken with devastating efficiency, particularly through the use of SCUBA gear and spears. Without greater controls to manage the harvest of uhu, we risk seeing the further depletion of these species, and ever increasing impacts to the environmental, cultural, subsistence, recreational, scientific, and economic values they provide.

By prohibiting the commercial take of uhu by spear and protecting uhu from night harvest using the same, this measure provides a much-needed, targeted layer of protection that can help prevent the further decline of this critical resource. **Notably, the increased abundance of uhu that would be facilitated by this measure will provide greater opportunities for subsistence and cultural practitioners to sustainably enjoy and share this resource, without having to compete with commercial operations and "recreational" fishers known to harvest uhu en masse, particularly at night.**

Accordingly, the Sierra Club respectfully urges the Committee to **PASS** this measure. Mahalo nui for the opportunity to testify.

Senator Lorraine R. Inouye, Chair
& Members of The Committee On Water and Land

Aloha Chair Inouye and Committee Members,

I support the prohibition against spearing uhu (parrotfish) at night contained in SB244, and the other protections for parrotfish contained in SB 244, because parrotfish are so important to the long-term sustainability of both (i) our reefs, and (ii) our white sandy beaches. And parrotfish are being overfished, and depleted, in Hawaii (and especially on Oahu) in a way that is simply not sustainable.

The Critical Importance of Uhu (Parrotfish)

According to scientists at the University of Hawaii, approximately 70% of the white sand in Hawaii comes from uhu (parrotfish). Parrotfish feed on the algae that grow on the surface of many reefs. In this process of eating, the parrotfish teeth also chew off a small bit of the coral, which is ground up further by special grinding teeth, and eventually expelled (pooped out) as white sand. A single large parrotfish can produce 2,000 pounds of white sand, or more, per year!

In addition to parrotfish helping us preserve our beaches by producing about 70% of all the white sand in Hawaii, scientists also tell us that parrotfish are good for the health of our coral reefs. In addition to removing the algae that sometimes smother and kill our coral reefs, the small bite marks on the coral actually stimulate new coral growth, which helps corals be more resilient against warming ocean water and pollution.

The Remaining Uhu (Parrotfish) Stocks are Being Rapidly Depleted

Uhu (parrotfish) are already listed as a “depleted” species by the National Marine Fisheries Service. They have been overfished in Hawaii, and especially Oahu, in a way that is not sustainable on a long-term basis.

The scientific evidence is also consistent with my personal observations, and the observations of my friends who spearfish and surf. On both the North Shore and the South Shore of Oahu, we used to see many parrotfish, now we see very few.

Spearfishing at Night Makes it Way Too Easy to Find and Kill Uhu (Parrotfish)

Parrot fish tend to be wary of humans in the daytime. At night, however, parrotfish are typically in a “sleep-like” state, and frequently sleeping under rock overhangs or in crevices, and particularly vulnerable to spearfishing at night. When an underwater hunter finds a sleeping

parrotfish and shines a light on it at night, it typically does not swim away, which makes it an easy target, just swim up to it and spear it.

Many South Pacific islands have similar species and sub-species of parrotfish, to those found in Hawaii. And on many of those South Pacific islands, parrotfish have been absolutely decimated by excessive spearfishing at night. On Guam, at least one sub-species of parrotfish is now extinct.

Here in Hawaii, all too often, especially on Oahu, large groups of people will spearfish for uhu (parrotfish) at night, with lights, and collectively kill dozens and dozens of parrotfish, and more or less “sweep an area clean” of all the parrotfish.

In order to help protect this depleted, but critically important, species of fish, there really should be a limitation that spearfishing for uhu (parrotfish) can be done only during daylight hours.

Mahalo for considering the ideas in this testimony,
Ken Martyn, Waialua, Hawaii.

References supporting the scientific statements made in this testimony, are listed below:

<https://manoa.hawaii.edu/exploringourfluidearth/physical/coastal-interactions/beaches-and-sand/weird-science-parrotfish-and-sand>

<https://ocean.si.edu/ocean-life/fish/tough-teeth-and-parrotfish-poop>

<https://www.nature.org/en-us/get-involved/how-to-help/animals-we-protect/parrotfish/#:~:text=Parrotfish%20live%20in%20reefs%20all,in%20the%20coral%E2%80%94at%20night.>

<https://fishpono.org/>

SB-244

Submitted on: 2/4/2025 10:59:58 AM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Kim	Individual	Oppose	Remotely Via Zoom

Comments:

I oppose this bill

LATE

SB-244

Submitted on: 2/4/2025 2:33:17 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Phil Rarick	Individual	Support	Remotely Via Zoom

Comments:

Honorable Chairman / members of the committee, I wish to testify in Strong SUPPORT of this measure.

I have witnessed the continued decline of the Parrot fish / Uhu in nearshore waters off Oahu. The biomass of herbavoiere fish has crashed due to night diving and spearing Uhu. The fish are easy prey as they sleep at night. They have been targeted by Pacific Islanders over the last few years. All of this while night diving with spears. The traditional "torching" surface fishing method on the reefs for bait, legal throw nets, rod and reel fishing will still be allowed in other than closed areas.

DLNR DOCARE Oahu branch citations for taking of undersize Uhu and Kala are the #1 violation for citations issued for resource violations on Oahu. In additon the poaching of these fish in closed Marine Life Conservation Districts (MLCD's) and Fisheries Management Areas closed to night diving / spearing at night has continued to be violated.

With the prohibition of sale of speared Uhu, this will help enforcement gain compliance at commercial retail point of sale. By eliminating the legal sale of speared Uhu, the poaching will be a lot less. This is critical to save the Parrot fish / Uhu, and our reefs around Oahu.

If any changes are made in a SD1, please keep this bill intent intact for the ISLAND OF OAHU.

Mahalo,

Phil Rarick-East Oahu Resident

SB-244

Submitted on: 2/4/2025 2:48:06 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

LATE

Submitted By	Organization	Testifier Position	Testify
Klayton Kubo	Individual	Oppose	Remotely Via Zoom

Comments:

Strongly Oppose

SB-244

Submitted on: 2/1/2025 10:00:52 AM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Douglas Perrine	Individual	Support	Written Testimony Only

Comments:

The overharvesting of parrotfish in Hawaii waters threatens the survival of some species of parrotfish and also the survival of our coral reefs and beaches. Parrotfish graze algae off dead coral substrate, creating areas that new coral larvae can settle. They grind that dead coral into sand, which nourishes our beaches. Already some species, such as our endemic spectacled parrotfish, uhu uliuli, are so rare that they are almost never seen in my home waters in West Hawaii. Parrotfish sleep soundly at night on shallow coral reefs, making them sitting ducks for spearfishers. Spearing at night has the potential to wipe out parrotfish populations very quickly, as has been amply demonstrated in other locations, such as Tonga. I am speaking as a former spearfisher, who has seen the damage that can be done by night spearing through my own actions, and with my own eyes. SB244 provides partial protections that are urgently needed. Please pass SB244 to protect our fish, and out reefs. Mahalo.

Testimony in Support of SB244

February 3, 2025

Aloha Legislators,

I strongly **support SB244 Relating to Parrotfish** to save our coral reefs saviors from severe over exploitation. Parrotfishes or *uhu* are key species that keep our reef surfaces clean so new coral can flourish. Unfortunately, *uhu* are severely depleted and the new herbivore fishing rules approved by the Board of Land and Natural Resources are insufficient to replenish these reef saviors.

It is common knowledge that pillaging of our reefs occurs at night, when divers spear *uhu* as they sleep helplessly under ledges. SB244 would not only prohibit night spearing of *uhu*, but also prevent the commercial sale of illegally speared *uhu*. The bill does not affect subsistence and recreational fishers who fish *pono* during the day, nor commercial fishers who use nets or traps.

Uhu and other herbivores are the natural lawnmowers of the sea that can save our reefs from poor water quality, pollution, and coral bleaching, yet they must be abundant to do so. The science is clear that herbivores are depleted near human population centers in Hawai'i, especially the *uhu*.

Importantly, *uhu* are about far more than fishing and feeding people. As saviors of our reefs, they are far more valuable to all the people of Hawai'i alive than as food. Without abundant and diverse herbivores, especially *uhu*, many of our reefs are now covered in seaweeds, which quickly smother corals unless they are removed by these natural lawnmowers.

Uhu replenishment is not about environmentalists vs. fishers; it is about the long-term perspective of those who care about the future of our valuable coral reefs vs. the short-term perspective of those who would continue to allow the depletion of our reef saviors.

Ultimately, by helping to replenish *uhu* populations now, SB244 will help sustain our fisheries and other benefits provided by our coral reefs far into the future.

Mahalo,

Sherri Rigg
Honolulu, Hawai'i

SB-244

Submitted on: 2/3/2025 12:37:43 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Daniela Escontrela	Individual	Support	Written Testimony Only

Comments:

- Rampant overfishing of coral reefs near population centers, especially on O‘ahu, occurs at night when some spearfishers plunder parrotfish (uhu) as they sleep under reef ledges.
- Illegally speared uhu (with obvious spear marks) are sold in some fish markets.
- Uhu and other herbivorous fishes are the saviors of the reefs, eating seaweeds that would otherwise smother reefs, thereby allowing corals to flourish.

SB-244

Submitted on: 2/3/2025 1:29:53 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Dennis Mahaffay	Individual	Oppose	Written Testimony Only

Comments:

To members of the Committee of Water and Land. I am opposed to this bill for the following reasons:

There is currently rampant overfishing of coral reefs near population centers, especially on O'ahu, occurring at night when some spearfishers plunder parrotfish (uhu) as they sleep under reef ledges.

Illegally speared uhu (with obvious spear marks) are sold in some fish markets.

Uhu and other herbivorous fishes are the saviors of the reefs, eating seaweeds that would otherwise smother reefs, thereby allowing corals to flourish.

Thank you for allowing me to testify. Dennis Mahaffay

SB-244

Submitted on: 2/3/2025 1:53:31 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Lisa Morehart	Individual	Support	Written Testimony Only

Comments:

Rampant overfishing of coral reefs a near population centers, especially on Oahu occurs at night where spearfishers plunder parrotfish as they sleep under reefs.

Illegally Speared UHU are sold in the fish markets.

Uhu and other herbivorous fishes are the saviors of the reefs, eating seaweed that othwerwise smother reefs, allowing the coral to flourish.

Please protect the coral reefs!

Lisa Morehart

SB-244

Submitted on: 2/3/2025 2:38:10 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Mackenzie manning	Individual	Support	Written Testimony Only

Comments:

Aloha Legislators,

I strongly **support SB244 Relating to Parrotfish** to save our coral reefs saviors from severe over exploitation. Parrotfishes or *uhu* are key species that keep our reef surfaces clean so new coral can flourish. Unfortunately, *uhu* are severely depleted and the new herbivore fishing rules approved by the Board of Land and Natural Resources are insufficient to replenish these reef saviors. It is common knowledge that pillaging of our reefs occurs at night, when divers spear *uhu* as they sleep helplessly under ledges. These pillaged fish are often sold to markets by lawbreakers without commercial licenses. This practice is not *pono*. SB244 would not only prohibit night spearing of *uhu*, but also prevent the commercial sale of illegally speared *uhu*. The bill does not affect subsistence and recreational fishers who fish *pono* during the day, nor commercial fishers who use nets or traps.

Uhu and other herbivores are the natural lawnmowers of the sea that can save our reefs from poor water quality, pollution, and coral bleaching, yet they must be abundant to do so. The science is clear that herbivores are depleted near human population centers in Hawai‘i, especially the *uhu*.

Importantly, *uhu* are about far more than fishing and feeding people. They are the natural resilience mechanism needed for our reefs to recover and thrive. As saviors of our reefs, they are far more valuable to all the people of Hawai‘i alive than as food. Healthy coral reefs protect our coasts from erosion, provide fisheries for many species (not just herbivores), and are valuable sources of recreation, tourism, and spiritual connection. Our reefs are seriously threatened by poor water quality and increasingly severe coral bleaching. Without abundant and diverse herbivores, especially *uhu*, many of our reefs are now covered in seaweeds, which quickly smother corals unless they are removed by these natural lawnmowers.

Uhu replenishment is not about environmentalists vs. fishers; it is about the long-term perspective of those who care about the future of our valuable coral reefs vs. the short-term perspective of those who would continue to allow the depletion of our reef saviors. Ultimately, by helping to replenish *uhu* populations now, SB244 will help sustain our fisheries and other benefits provided by our coral reefs far into the future.

Thank you,

Mackenzie Manning

SB-244

Submitted on: 2/3/2025 3:22:04 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Matthew Gurewitsch	Individual	Support	Written Testimony Only

Comments:

Aloha, Legislators!

I supported SB244 wholeheartedly. Let me be brief.

I could cut and paste lengthy sample testimony from wildlife advocates and marine biologists. Instead, let me say that I have read their arguments in detail and agree with what they say. As someone who snorkels every day, weather permitting, I can see the degradation of the coral reefs where herbivore stocks are in decline. It is a heartbreaking spectacle.

Let daytime subsistence continue. Stop the shameful, selfish, and illegal theft and commercial sale of uhu speared at night while they sleep.

Thank you for your attention. Urging you to do your part to protect our reefs,

Matthew Gurewitsch

Kihei

SB-244

Submitted on: 2/3/2025 4:06:49 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
E Yancey	Individual	Comments	Written Testimony Only

Comments:

Nighttime regulation- fully support, anyone who would spear a sleeping fish is the worst.

Consider rewording the commercial side of this, as spearing is the only ethical way to commercially fish in the first place...that really isn't the issue on the commercial side...

Also, how you plan to inforce this?

SB-244

Submitted on: 2/3/2025 4:35:47 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
William Roehl	Individual	Oppose	Written Testimony Only

Comments:

Aloha,

I am from a lineage of lawai'a from the Windward side of O'ahu I am also a published marine biologist. I commercially spearfish and have already had to purchase a commercial uhu permit with the last round of regulation updates. I oppose this bill in its current form as it impacts those of us that fish on small scales as individuals. There is already a cap on uhu take in the state for commercial purposes which results in the season closing if the cap is reached.

Furthering restrictions on local, small business fishermen only chokes out the community who needs to fish in order to survive. Uhu is one of the most requested and profitable fish to hunt for us, (these are approximate numbers) for how much fish you have to catch to make even one day's minimum wage of \$12.75/hr or \$102 for a day.

Manini sells for \$6/lb retail it takes bout 2 to 3 fish to get a pound or about 42 fish to hit that one day's wages.

Uhu sells for \$10/lb retail. With the legal requirement for large bodied uhu size increasing with the last bill to a minimum of 14 inches the average uhu that this size is about 2.5 to 3lbs. Given these numbers in order to make one day's minimum wage I would need to shoot 4 legal size uhu.

It makes far more sense to selectively allow us to hunt much smaller numbers of fishes like uhu as opposed to yet again imposing restrictions that would likely result in overharvesting of other species.

There hasn't been enough time to see yearly results on the uhu fishery after the last round of regulations was imposed.

I support not fishing uhu at NIGHT but prohibiting the sale of fish with spear marks does not make sense. Spearfishing is one of the most ethical ways to fish and reduces accidental bycatch far more than alternatives like hooking and netting. Someone night fishing can just as easily net the uhu with a scoop net and sell them the next day. This regulation further limits legal ways for those of us who abide the laws and regulations to support ourselves and could encourage more illegal behaviors from others.

This proposal hurts local fishermen and does not give time for the results of previous regulations to be monitored or observed.

Furthermore many of the studies that were used to inform the past set of fishing policies were works authored by Dr. Mary Donovan a fisheries biologist that regularly expressed anti fishermen sentiment and has repeatedly made borderline racist remarks about Hawaiians and their conservation practices. I experienced this firsthand after working for her as an undergraduate. Many in that lab were only concerned with making a name for themselves in conservation.

Locals know that the ecosystem and our livelihoods are intimately woven. Our policies need to integrate the conservation AND human needs.

February 3, 2025

Hawai'i State Legislature

Dear Legislators,

I come to you with a background in marine education (Hanauma Bay Education Program 1996-2003, Mokupāpapa Discovery Center Manager in Hilo 2003 – 2005, and UH Marine Option Program Coordinator 2005 – present), an avid scuba diver, surfer and a citizen concerned about the health of our reefs. This testimony is **in support of SB244**, restricting the take of parrotfish.

Healthy reefs are immensely important in Hawai'i. They protect our shorelines from erosion, attract tourism dollars, create reliable surf breaks for wave riders, and provide a source of food for locals. Over the years, I have watched our precious coral reefs degrade – some of this is out of our control; namely, environmental change causing our oceans to warm at an unprecedented rate. In 2015, Hawai'i experienced a major ocean heat wave that caused many of our corals to bleach and die, and these events are predicted to hit more frequently in the future. For our reefs to recover, the surviving corals can benefit from the help of herbivores, which keep the algae at bay and can prevent them from overrunning the corals. One family of herbivores, parrotfish, are particularly vulnerable to spear fishing at night because they "sleep" in depressions on the reef, unaware of what's happening around them. Sitting ducks, if you will. Spearing them at night doesn't give them a sporting chance of escaping. On O'ahu, where desirable food fishes (like uhu) are overharvested, more must be done to protect them, and SB244 is a good step forward. Protecting these important members of the reef community is something within our control that can help us fight what is not (climate change), and will give our reefs a chance to thrive again.

Thank you for considering my testimony.

Respectfully,

Jeff Kuwabara, Coordinator

UH Mānoa Marine Option Program

manoamop@hawaii.edu

(808)956-8433

Dean Hall 105A

Honolulu, HI 96822

Chair Inouye, Vice Chair Elefante and Members of the Senate Committee on Water and Land,

I **strongly support SB244** as one of the needed measures to saving uhu from further depletion. Our reefs are seriously threatened by poor water quality and increasingly severe coral bleaching. Uhu and reef fish are needed to help recover the resilience of our reefs.

This measure intends to address the night time ransacking of uhu by spearing. Vulnerable and unsuspecting, uhu are candy picked in significant numbers.

The recent approval of herbivore rules are insufficient to timely replenish these “coral gardeners” and recover the resilience of our reefs. Healthy coral reefs and the balance of marine ecosystems depends on uhu and other herbivores in abundant numbers.

Please support our coral reefs and uhu, and move **SB244** forward.

Mahalo,
U'ilani Naipo

SB-244

Submitted on: 2/3/2025 9:50:14 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Sarita Rich	Individual	Support	Written Testimony Only

Comments:

Aloha Legislators,

I strongly support SB244 Relating to Parrotfish so that these fish, the uhu, may be protected from severe overexploitation in the forms of night spearing and commercial sale of illegally speared uhu. Current fishing rules are not strong enough to replenish uhu populations and recover what we've lost due to illegal pillaging at night when divers wipe out entire reefs as they spear fish in their sleep, then sell them to markets without commercial licenses. This bill does not hurt subsistence and recreational fishers who follow fishing rules during the day or commercial fishers who use nets or traps.

Uhu are among the species of fish that are ocean's "gardeners," playing their essential part in a life cycle full of symbiotic relationships: uhu feed on seaweeds and algae that smother corals if left to grow uncheckedà reef surfaces stay clean so new corals can grow à corals are living animals that create structures of reefs à healthy coral reefs sustain Hawai'i.

Coral reef ecosystems are culturally important to Hawai'i because they protect coastlines from storms and erosion, provide jobs for our communities, encourage tourism, offer recreational activity, and are sources of food and medicine for treating cancer. Our people depend on reefs for food, income, and protection.

But our reefs are severely threatened by human activity. Pollution. Poor waste management practices in costal zones. Sedimentation. **Unsustainable fishing practices**. Climate change that warms ocean temperatures and leads to ocean acidification. All these threats stress corals and lead to coral bleaching and possible coral death. And coral bleaching and death are predicted to increase and occur every year by 2040 (van Hooidonk et al. 2016 Scientific Reports).

Sometimes the damage is permanent. But corals can recover from bleaching events and other stressors if conditions improve before they die. **We can help our reefs survive by protecting the fish that protect the reefs.** Uhu can preserve coral reef health, but not if their populations are constantly being depleted, as is common near human population centers in Hawai'i. It takes years to replenish these fish populations, so we need to start now.

I believe in fishing to be connected physically, emotionally, and spiritually to the aina. But if we want to keep fishing and maintain these connections to our land and sea, we must be responsible stewards of the ocean's resources—especially the uhu that manage reef health. The choice to

ignore what science says about the decline of uhu populations due to overfishing is a choice that will deprive Hawai'i of a future of biodiversity and economic growth. Kill the herbivores, and you kill coral reefs and beaches and tourism. Let's give our reefs, and our people, the gift of life by saving the uhu.

We strongly support prioritizing reef health by replenishing the herbivore populations so that all Hawaiians, and our fellow human beings may continue to enjoy the benefits of a thriving ocean for future generations.

Mahalo,

Sarita Rich

Honolulu, Hawai'i

SB-244

Submitted on: 2/4/2025 9:40:02 AM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Eric Dilley	Individual	Support	Written Testimony Only

Comments:

I strongly support SB244. Hawai‘i’s coral reefs are degrading rapidly, increasingly from coral bleaching. Degraded reefs become covered with seaweeds that inhibit regrowth of corals. Herbivores (parrotfishes [uhu], surgeonfishes [incl. kala], and sea chubs [nenu]) are the "lawnmowers of sea" that control seaweeds so corals can recover. Herbivores are SEVERELY overfished in the main Hawaiian Islands. Protecting herbivores statewide will help to save our reefs, which provide us with food, recreation, tourism, coastal protection, and new medicines. It is crucial that we do everything possible to increase the resilience of Hawaiian coral reefs to climate change now and into the future. Herbivore protection will go a long way toward effectively protecting Hawaiian coral reefs for our children, grandchildren, and future generations.

This bill will provide two vital changes to how herbivores are harvested in the state. Firstly, it will prevent the use of spearing for harvesting parrotfish commercially. Doing this will drastically reduce the parrotfish take in the state and limit take to subsistence fishing purposes only. This is important to both increase the stocks of herbivores for take by subsistence fishers while enhancing coral reef ecosystem functioning by having more parrotfishes on reefs in the state. Secondly, this bill will eliminate the ability of fishers to spear parrotfish at night. Parrotfish sleep on the reef at night and are highly vulnerable to spearfishing. By allowing spearfishing on parrotfish at night, it facilitates overfishing and drastically reduces parrotfish stocks. This is akin to shooting fish in a barrel and is not a pono practice. By banning night spearfishing, the state will make a significant difference in the sustainability of the parrotfish subsistence fishery and enhance ecosystem services that parrotfish provide as the “lawnmowers of the sea”. Please do not give-in to the fishing lobby – herbivorous fishes need our help! Please support this bill and advocate for passing it into law to help ensure parrotfish populations can grow for the benefit of subsistence fishers and Hawaiian coral reefs. Mahalo!

SB-244

Submitted on: 2/4/2025 10:08:19 AM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Kosaki, Randall	Individual	Support	Written Testimony Only

Comments:

Aloha Senators,

I am a marine scientist who has studied Hawaii’s coral reefs for nearly forty years. I am also an avid spearfisher who has been fishing since I could hold a spear. Unfortunately, in my lifetime I have seen a precipitous decline in the abundances of many of our favorite food fishes. Primary among these are declines in the abundance of uhu (parrotfish, family Scaridae).

Herbivorous fishes such as uhu are the “lawnmowers of the reef” whose grazing actions keep algae down and allow corals to thrive. They are absolutely essential to maintaining a healthy reef, which in turn is essential to maintain healthy stocks of coral reef fishes. In a nutshell, what is good for coral reefs is good for fishes (and hence for fishers). SB244 will be a major step toward achieving all of these ends, including enhancement of sustainable fisheries.

A major source of depletion of these ecologically indispensable herbivores is the illegal and commercial take of these fish by night divers while the fish are sleeping. **SB244 will stem this flow of illegal and unethical harvest, while still allowing the “pono” take of these same fish by daytime recreational fishers.** This creates a legal “win-win” situation for the large majority of fishers who fish ethically and sustainably.

Thank you for your support of SB244.

Sincerely yours,

Randall Kosaki, Ph.D.

SB-244

Submitted on: 2/4/2025 10:16:24 AM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Edward Emile DeMartini	Individual	Comments	Written Testimony Only

Comments:

Members of the Hawai‘i State Legislature

Aloha Legislators,

I strongly support the Senate bill SB244 to provide the desperately needed assistance in replenishing herbivorous fishes on O‘ahu’s coral reefs. The herbivorous fishes on the reefs of O‘ahu, as on reefs of the other Hawaiian Islands, are mostly parrotfishes (uhu), surgeonfishes (like kala, kole, manini), and chubs (nenu). These fishes clean reef surfaces, preventing seaweeds from smothering corals. Coral reef habitats are most degraded on Oahu among all of our islands. Although fished-down throughout our islands, reef herbivores are most depleted on O‘ahu. Recent scientific research has shown that the abundance of these fishes around the island of O‘ahu is less than 5% its potential (Donovan et al. 2023 Transactions of the Royal Society B). Many reefs around O‘ahu are already degraded from poor land management practices, coral bleaching from warm water episodes in recent years, and this ever-warming ocean is predicted to cause coral bleaching and death every year by 2040 (van Hooidonk et al. 2016 Scientific Reports).

Enforced measures of herbivore protection are desperately needed on O‘ahu. Especially deleterious is the rampant nighttime spearfishing of uhu by poachers, particularly the largest bodied species, the spectacled parrotfish *Chlorurus perspicillatus*. This species is clearly the most greatly over-fished uhu on Oahu. It is the most important “scraper” that controls algal seaweed overgrowth of corals in the Hawaiian Islands. An enforced temporary moratorium on its extraction or otherwise greatly reduced magnitude of uhu extraction is urgently needed. SB561 would have provided this.

We need more and better enforcement by DOCARE: namely, more funding of staff to better detect, capture and prosecute poachers and increased funding for better detection equipment like night-vision goggles and drones are needed. SB1561 would have provided this. The sunset clause in HB360 will allow cooperating ngo, government, and academic stakeholders to effectively evaluate success of the measures taken by the measures of SB561. SB244 will enforce the prohibition of commercial nighttime poaching by spearfishing uhu while ensuring the continuing recreational/artisanal fishing and continuing legal commercial take of uhu.

Please pass SB244 and any other complementary bills still being considered like HR360 and SB1561 so that Hawai‘i can take steps to replenish these essential, natural lawnmowers of the reef before we exceed the functional resilience of uhu and the tipping point for corals on our O‘ahu reefs.

Mahalo,

Edward E. DeMartini, Ph.D.

Kaneohe, Hawai'i

Retired Fisheries Research Biologist, NOAA, NMFS (1990-2016) and

Adjunct Professor, HIMB, SOEST, University of Hawai'i Manoa (2006-present)

SB-244

Submitted on: 2/4/2025 10:48:36 AM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jana Ireijo	Individual	Support	Written Testimony Only

Comments:

Aloha Legislators,

I strongly **support SB244 Relating to Parrotfish** to save our coral reefs savors from severe over exploitation. Parrotfish (Uhu) are a key component to the future of our coral reefs. They are extremely vulnerable as they are often caught while sleeping under ledges at night. Without these lawnmowers of the sea - that protect our reefs from poor water quality, bleaching, and pollution, we will not have our reefs.

This is about finding a balance between the environment and fisherpeople. Not one against the other.

I was born on Oahu and raised on the ocean with fishermen relatives. Let's look forward to the future where people, our reefs, and herbivore populations are thriving - for future generations to enjoy.

Mahalo,

Jana Ireijo

Aloha Legislators,

I am a professional marine biologist who has studied parrotfishes (uhu) and other herbivorous coral reef fishes in Hawai'i since the 1970s. My experience personally witnessing the extreme importance and long decline of uhu over the decades, combined solid peer-reviewed science by many members of Hawai'i's marine biologist community, lead me to **strongly support SB244**, although I see room for some modifications (below). First, please consider the long, relevant history of this and related bills.

Bill history

SB244 is the latest in a variety of similar bills considered by the Legislature for over 20 years. Why do these bills continue to be introduced and continue to fail? The reasons for failure are clear. First, a vocal minority of the fishing community who fight for the status quo have disproportionate influence in Hawai'i. Second, some legislators believe the Legislature should not be involved in natural resource management. Please consider one example. SB244 is verbatim identical to a bill introduced in the House during the 2024 session. At its first hearing, despite about 100 testimonies in favor and only a few in opposition, the committee chair effectively killed the bill, asserting that only DLNR should make fishing rules. The problem is that the DLNR Chapter 91 process has become not so much a public vetting procedure, but rather an opportunity for that vocal minority of status-quo fishermen to have their way by verbally berating DAR personnel, attacking the science and scientists without offering convincing counter-evidence, and otherwise dismissing the concerned public. This abuse of public process has been so disheartening that concerned fishers, scientists, and other citizens have appealed to the Legislature to save our coral reefs.

Why parrotfish are so important for coral reef survival

Parrotfish are the heavy lifters among the herbivorous fishes that eat seaweeds and other benthic algae, keeping dead reef surfaces clean so new coral can settle, survive, and grow. These fishes are essential for healthy coral reefs, which provide abundant goods and services for us (see Appendix), yet these fishes are extremely depleted around O'ahu and other populations centers (see Figure and Appendix). We know this depletion is caused by intensive fishing rather than coastal pollution because reef fishes that are not taken for food have not declined through time, and all fishes would decline if pollution was the sole effect. Many reefs around O'ahu and other locales are severely degraded due to poor land management practices that end-up fertilizing seaweeds to overgrow and smother corals. Where herbivorous fishes are abundant, these reefs recover; reefs with few herbivores remain degraded. Now our reefs are also faced with increasing coral bleaching, which is predicted to become an annual event by about 2040. Bleached dead coral becomes overgrown by seaweeds, which prevents any coral recovery, unless herbivorous fishes – the lawnmowers of the sea – are abundant. In short, the fishes that could save our coral reefs are often overfished and need stronger protections.

Possible Bill Modifications

SB244 applies to all of Hawai'i. While that precautionary approach is certainly justifiable, it is nonetheless true that not all islands and moku are overfished. Donovan et al. (2023) clearly show that O'ahu is the most overfished island by far, and so limiting this bill to O'ahu would be

better than outright rejection. Also, HB360/SB1262 (which I urge you to hear) provides less restrictive protections for parrotfishes and other herbivores, focusing only on O‘ahu. Note, however, that the provisions in SB244 resulted from conversations with DOCARE officers who reported that such rules are needed for them to effectively curtail illegal fishing at night, which is rampant around O‘ahu. Additionally, HB506/SB561 (which I also urge you to hear), provides much needed equipment for DOCARE’s understaffed night patrol to effectively enforce fishing regulations around O‘ahu.

Summary

To help restore our degraded coral reefs and to provide resilience against forthcoming coral bleaching events, far more parrotfishes and other herbivorous fishes are needed. Please support SB244 with or without modifications, and please consider HB360/SB1262 and HB506/SB561.

Mahalo for your consideration,
Mark Hixon

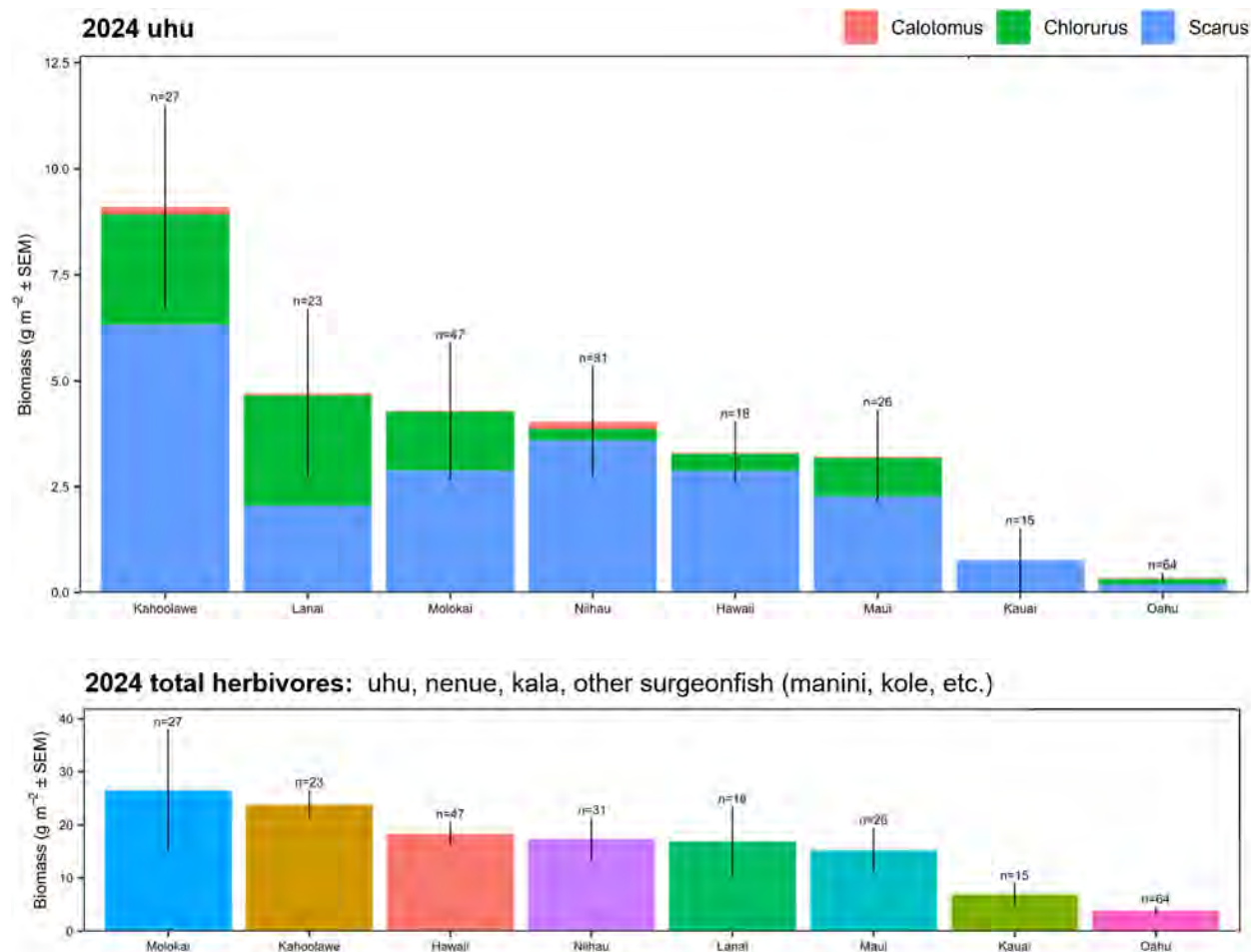


FIGURE: 2024 NOAA surveys of coral reef fishes around the main Hawaiian Islands. Note that the abundance of parrotfishes (uhu, top) and all herbivores (bottom) is extremely low around O‘ahu. These data back-up previous peer-reviewed studies by other scientists (see APPENDIX)...

APPENDIX
Scientific Testimony in Support of 2024's HB1689 Relating to Parrotfish
(identical to 2025's SB244)



Dr. Mark Hixon (Professor, University of Hawai'i at Mānoa, School of Life Sciences)



Dr. Randy Kosaki (Marine Ecologist, NOAA, Papahānaumokuākea Marine National Monument)



Dr. Alan Friedlander (Chief Scientist, Pristine Seas, National Geographic Society, and University of Hawai'i Institute of Marine Biology)



Dr. Kawika Winter (Director, He'eia National Estuarine Research Reserve, and University of Hawai'i Institute of Marine Biology)

testifying as private citizens

Aloha Chair Tarnas and members of the House Judiciary and Hawaiian Affairs Committee:

We marine scientists with long experience studying parrotfishes and other herbivores in Hawai'i strongly support HB1689 Relating to Parrotfish, and offer the narrative below for your consideration as the justifying preamble to this currently bare-bones bill. We also include an appendix and illustrations that address possible concerns about this bill.

Coral reefs provide extremely valuable ecosystem goods and services for the people of Hawai'i, including habitat for nearshore fisheries, opportunities for tourism and other industries and activities, and coastal protection from waves, storms, and erosion as sea level rises.ⁱ Reefs are also fundamental to the fabric of local communities, providing a source of food, materials, and traditional activities.ⁱ From a purely economic perspective, Hawai'i's coral reefs generate about \$800 million per year in gross revenues.ⁱⁱ One estimate of the total economic value of coral reefs in the main Hawaiian Islands is \$33.57 billion.ⁱⁱⁱ

Hawai'i's coral reefs have suffered tremendously from increasing population density and coastal development, resulting in damage by snorkelers and divers, anchor drags and vessel groundings, runoff and leaching of sediment and fertilizers from poor land use practices, urban runoff and leaching of cesspool sewage and other pollutants, plastic debris, invasive species, and overfishing near population centers.^{iv} More recently, ever-increasing ocean warming has caused coral bleaching events that have killed over 50% of the corals on some reefs.ⁱ Ocean climate models predict that Hawai'i's coral reefs will bleach every year sometime before 2040.^v

Maintenance and recovery of coral reefs requires abundant and diverse herbivores, which are fishes and invertebrates that eat seaweeds (technically, benthic algae).^{vi} Herbivores prevent seaweeds from outcompeting and replacing corals, especially following coral mortality events.⁶ Where herbivores are depleted, seaweeds eventually proliferate, which prevents reef recovery.⁶

The major herbivores that clean dead reef surfaces so corals can flourish are parrotfishes (*uhu*)^{vii}: Subfamily Scarinae of the Family Labridae, of which there are seven species in Hawai‘i.^{viii} Three of these species are found only in Hawai‘i and therefore have irreplaceable biodiversity value.⁸ **Parrotfish are also major producers of the sand that replenishes our beaches.⁷**

Parrotfish and other herbivore populations are severely depleted near population centers in the main Hawaiian Islands.^{ix} The Division of Aquatic Resources (DAR) considers the status of both small-bodied and large-bodied parrotfishes in Hawai‘i to be “unsustainable”.^x The depletion of herbivores leaves Hawai‘i’s coral reefs extremely vulnerable to severe degradation because once coral dies and seaweeds cover a reef, corals cannot recover.^{xi}

A major contributor to parrotfish depletion is illegal or otherwise unethical spearing of these fish at night, while they sleep helplessly under reef ledges.^{xii} Legal and otherwise ethical (*pono*) fishing of parrotfish occurs during the day by subsistence, recreational, and commercial fisheries.¹⁰

Management agencies have long been concerned about parrotfish depletion.^{xiii} The DAR proposed a substantial package of herbivore fishing rules in December 2022.^{xiv} By the time the final rules package was passed by the Board of Land and Natural Resources in December 2023,^{xv} **explicit protections for parrotfishes had been weakened to point where we believe these new rules will be ineffective. Additionally, the new rules do not address the sale of fish from successful poaching, which DOCARE reports is widespread at night.¹²**

HB1689 will greatly reduce illegal or otherwise unethical (i.e., not *pono*) night spearfishing of parrotfishes (*uhu*) in Hawai‘i state waters, thereby fostering the replenishment of these crucial herbivores to enhance the maintenance and recovery of Hawai‘i’s coral reefs. The bill does not affect subsistence and recreational fishers who fish *pono* during the day, nor commercial fishers who use nets or traps.

ⁱ <https://dlnr.hawaii.gov/dar/habitat/coral-reefs/>

ⁱⁱ Hawai‘i Coral Reef Initiative Research Program. 2004. Economic value of Hawai‘i’s nearshore reefs. https://www.hawaii.edu/ssri/cron/files/econ_brochure.pdf

ⁱⁱⁱ Bishop, R.C., D.J. Chapman, B.J. Kanninen, J.A. Krosnick, B. Leeworthy, and N. F. Meade. 2011. Total economic value for protecting and restoring Hawaiian coral reef ecosystems: final report. NOAA Office of National Marine Sanctuaries, Office of Response and Restoration, and Coral Reef Conservation. Silver Spring, MD. Program. NOAA Technical Memorandum CRCP 16. 406 pp. <https://repository.library.noaa.gov/view/noaa/684>

^{iv} Friedlander, A.M., G. Aeby, E. Brown, A. Clark, S. Coles, S. Dollar, C. Hunter, P. Jokiel, J. Smith, B. Walsh, I. Williams, and W. Wiltse. 2005. The State of Coral Reef Ecosystems of the Main Hawaiian Islands. pp. 222-269. In: J. Waddell (ed.), The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2005. NOAA Technical Memorandum NOS NCCOS 11. NOAA/NCCOS Center for Coastal Monitoring and Assessment’s Biogeography Team. Silver Spring, MD. 522 pp. https://library.oarcloud.noaa.gov/noaa_documents.lib/NOS/NCCOS/TM_NOS_NCCOS/nos_nccos_11.pdf

^v van Hooidonk, R., J. Maynard, J. Tamelander, J. Gove, G. Ahmadi, L. Raymundo, G. Williams, S.F. Heron, and S. Planes. 2016. Local-scale projections of coral reef futures and implications of the Paris Agreement. Scientific Reports 6:39666. DOI 10.1038/srep39666. Supplemental material details projected bleaching in Hawai‘i.

^{vi} Review by Hixon, M.A. 2015. Reef fishes, seaweeds, and corals: a complex triangle. Pages 195-215 in C. Birkeland, editor. Coral reefs in the Anthropocene. Springer, Dordrecht, Netherlands. Hawai‘i case study: Gove,

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- vii Review by Bonaldo, R.M., A.S. Hoey, and D.R. Bellwood. 2014. The ecosystem roles of parrotfishes on tropical reefs. *Oceanography and Marine Biology: An Annual Review* 52:81-132. Hawai'i case study: Howard, K.G., B.D. Schumacher, and J.D. Parrish. 2009. Community structure and habitat associations of parrotfishes on Oahu, Hawaii. *Environmental Biology of Fishes* 85:175-186.
- viii Randall, J.E. 2007. Reef and shore fishes of the Hawaiian Islands. Sea Grant College Program, University of Hawai'i. 546 pp.
- ix Studies in Hawai'i: Edwards, C.B., A.M. Friedlander, A.G. Green, M.J. Hardt, E. Sala, H.P. Sweatman, I.D. Williams, B. Zgliczynski, S.A. Sandin, and J.E. Smith. 2014. Global assessment of the status of coral reef herbivorous fishes: evidence for fishing effects. *Proceedings of the Royal Society B* 281:20131835. Nadon, M.O. 2017. Stock assessment of the coral reef fishes of Hawai'i, 2016. NOAA Technical Memorandum NMFS-PIFSC 60. Friedlander, A.M., M.K. Donovan, K.A. Stamoulis, I.D. Williams, E.K. Brown, E.J. Conklin, E.E. DeMartini, K.S. Rodgers, R.T. Sparks, and W.J. Walsh. 2018. Human induced gradients of reef fish declines in the Hawaiian Archipelago viewed through the lens of traditional management boundaries. *Aquatic Conservation: Marine and Freshwater Ecosystems* 28:146-157. Gorospe, K.D., M.J. Donahue, A. Heenan, J.M. Gove, I.D. Williams, and R.E. Brainard. 2018. Local biomass baselines and the recovery potential for Hawaiian coral reef fish communities. *Frontiers in Marine Science* 5:DOI 10.3389/fmars.2018.00162. Stamoulis, K.A., J.M.S. Delevaux, I.D. Williams, M. Poti, J. Lecky, B. Costa, M.S. Kendall, S.J. Pittman, M.K. Donovan, L.M. Wedding, and A.M. Friedlander. 2018. Seascape models reveal places to focus coastal fisheries management. *Ecological Applications* 28:910-925. Donovan, M.K., C.W.W. Counsell, M.J. Donahue, J. Lecky, L. Gajdzik, S.D. Marcoux, R. Sparks, and C. Teague. 2023. Evidence for managing herbivores for reef resilience. *Proceedings of the Royal Society B* 290:20232101 (see figure at end of Appendix).
- x <https://dlnr.hawaii.gov/holomua/files/2021/11/Sustainable-Herbivore-Management-Plan-2021.pdf>
- xi Review by Williams, I.D., T.L. Kindinger, C.S. Couch, W.J. Walsh, D. Minton, and T.A. Oliver. 2019. Can herbivore management increase the persistence of Indo-Pacific coral reefs? *Frontiers in Marine Science* 6:doi 10.3389/fmars.2019.00557. Supplemental material focuses on Hawai'i.
- xii Recent examples: <https://dlnr.hawaii.gov/blog/2023/11/08/nr23-192/>, <https://dlnr.hawaii.gov/blog/2023/05/16/nr23-91/>, <https://dlnr.hawaii.gov/blog/2022/10/10/nr22-150/>, <https://dlnr.hawaii.gov/blog/2021/10/24/nr21-188/>, <https://dlnr.hawaii.gov/blog/2020/09/18/nr20-144/>, <https://dlnr.hawaii.gov/blog/2020/08/18/nr20-121/>, see photo at end of Appendix.
- xiii WESPAC. 2008. Biology of parrotfish in Hawai'i. https://www.wpcouncil.org/coralreef/Hawaii%20Parrotfish_Jan%202008%20Final%20Report.pdf
- xiv <https://dlnr.hawaii.gov/wp-content/uploads/2022/12/F-5.pdf>
- xv <https://dlnr.hawaii.gov/wp-content/uploads/2023/12/F-5.pdf>
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APPENDIX: Responses to concerns about HB1689:

Concern: Why protect parrotfish legislatively so soon after a public process that resulted in the new DAR herbivore fishing rules?

Response: In Hawai'i, as with any public hearing process anywhere involving natural resource management, the loudest and most influential voices are always those who make money extracting the resource, even though the silent majority may be opposed to further extraction. We have personally seen this scenario play-out elsewhere in the world – from New England cod to West Coast groundfish to Caribbean grouper and snapper – with the same end result of collapsed fisheries. We believe that the new DAR herbivore fishing rules will not replenish our parrotfish populations sufficiently. HB1689 will provide immediate protection of parrotfish from nighttime slaughter.

Concern: Let's allow time to see if the new herbivore fishing rules will work.

Response: Unfortunately, we don't have time as many of our reefs continue to be overexploited and severe coral bleaching looms on the horizon. Indeed, we seldom see newly recruited uhu during our SCUBA surveys around O'ahu and other crowded regions, a sign of recruitment overfishing and imminent stock collapse. The new herbivore fishing rules are scientifically indefensible given the extremely depleted status of herbivores – especially uhu – on O'ahu and elsewhere (see illustrations on next page).

Concern: The state will eventually implement island-by-island rules, starting with Maui, so let's wait for that process.

Response: With the Maui process stalled because of the fires, and DAR having insufficient funding to start island-by-island processes simultaneously across the archipelago, we just don't have time. Recovery of depleted coral reef fisheries typically takes about a decade, and with the rapidly increasing threat of severe coral bleaching, immediate and substantial protections of parrotfish are imperative. If necessary for passage, HB1689 could be amended to include only O'ahu as a test case, including a 10-year monitoring-and-evaluation clause.

Concern: Subsistence fishers spear uhu at night and we don't want to limit them.

Response: Enforcement officers report that pillaging of our reefs at night is done by “hired guns” posing as subsistence fishers. The subsistence fishers we know are appalled by spearing parrotfish at night – clearly not a pono practice. This is why the bill includes no commercial sale of speared uhu – to account for those who will continue to spear parrotfish at night illegally.

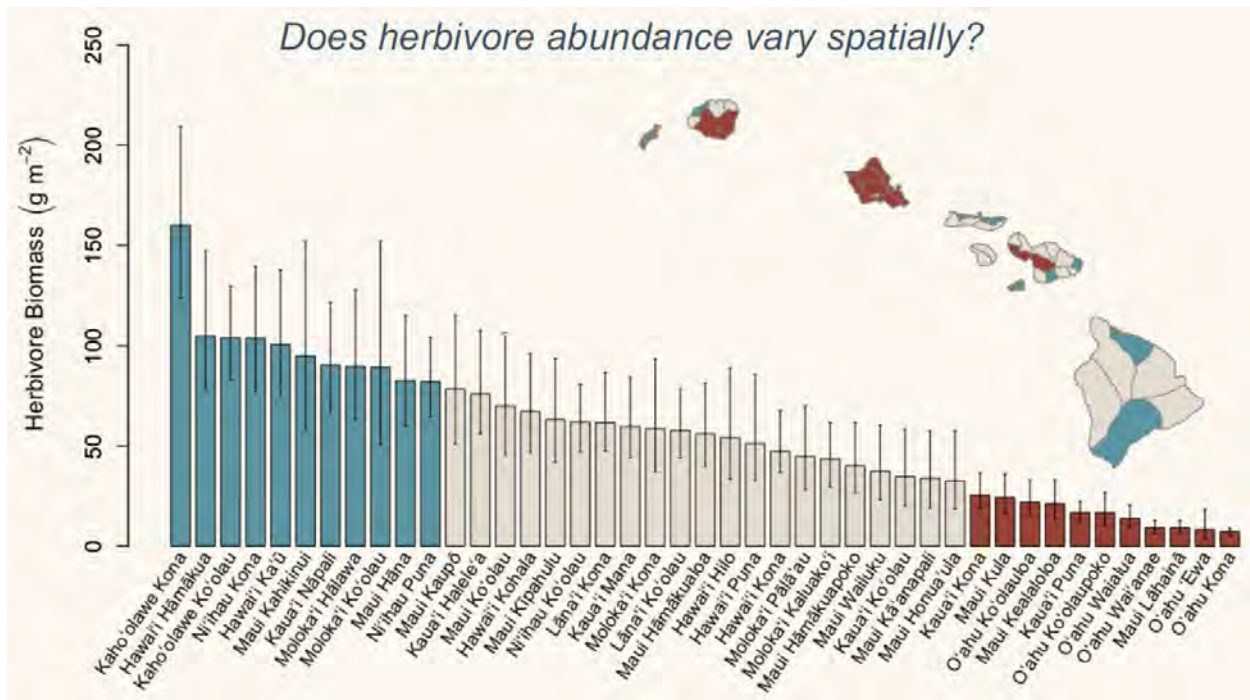
Concern: Much of the commercial catch of uhu is from night spearfishing.

Response: Exactly! The only way to replenish a severely depleted stock is by substantially reducing the catch. This bill would do so, affecting primarily the commercial fishery. Unfortunately, there is no free lunch when it comes to replenishing severely overfished stocks: either those engaged in the fishery are angry because of catch reductions yet the stock eventually recovers, or those engaged in the fishery are happy in the short term yet the stock eventually collapses.

Concern: The elderly and others who don't fish need to be able to buy uhu at the market.

Response: This bill still allows the commercial take of parrotfish by nets and traps. In any case, parrotfish are much more valuable to the people of Hawai'i as ecosystem engineers that save our reefs than as mere food. There are many other food fishes available.

With high-grade uhu bringing upwards of \$50 per pound in local markets and \$70 per pound shipped to the mainland, this fishery is now entering the realm of threatened Atlantic bluefin tuna: the more depleted the stock, the more valuable the fish, the more intensive the fishing, and the more complete the eventual collapse of the fishery. Unfortunately for Hawai'i, this is not simply a fishery issue: uhu and other herbivores are *THE* natural resilience mechanism on our reefs inhibiting coral bleaching and excess nutrients from accelerating the transition from dominance by coral to dominance by seaweeds. And, as a bonus, they produce most of the sand that replenish our shrinking beaches. **In short, uhu are worth far more alive than dead for the future of Hawai'i's coral reefs and beaches!**



Abundance of herbivorous fishes, including parrotfish, moku-by-moku in the Main Hawaiian Islands. Using Kaho'olawe as an unfished baseline (far left blue bar), it is obvious that O'ahu and parts of Kaua'i and Maui are severely depleted (red bars), and most of Hawai'i is moderately depleted (gray bars). Figure from Donovan et al. (2023)⁹.



Example of overexploitation of sleeping parrotfish (large red and blue fish) from a single night spearfishing. Photo courtesy of DAR.

LATE

SB-244

Submitted on: 2/4/2025 8:09:36 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Kelden Yagin	Individual	Oppose	Written Testimony Only

Comments:

I oppose the bill sb244.

We need to stop taking away the people's methods of gathering. What is the reserch behind this idea and what will is solve or fix. It will not fix anything in my opinion just take away someone's right of choice on how to gather or support them self. Night gathering is a higher percentage of securing this species. The bag limit is there and regulated as is already. Can and do Dlnr have the personal to cover and up hold for the hours of darkness if this regulation passes???? Will they be out there In these hours???? Please take into consideration of the peoples culture and rights to gather their resources.

Thanks

SB-244

Submitted on: 2/4/2025 9:32:04 PM

Testimony for WTL on 2/5/2025 1:00:00 PM

LATE

Submitted By	Organization	Testifier Position	Testify
Eric Koch	Individual	Oppose	Written Testimony Only

Comments:

Aloha committee members,

im writing to you today to oppose this measure. The reason for me is it bans night doing for the fish when the amount allowed for take is already regulated. I stay West Hawaii and I fish in the West Hawaii Regional Fishery Management Area. I'm familiar with this particular rule as it originates from my area(WH). That being said, the no nighttime diving rule for West Hawaii was 25 years ago and there wasn't all these rules limiting take like there is now. To me, the method of take doesn't matter and should be left up to the fisherman. Especially when you have already have catch limits.

please don't over regulate fishing or pass meaningless rules

Appreciate your time, aloha

Eric Koch