DAVID Y. IGE GOVERNOR OF HAWAII





#### STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621 HONOLULU, HAWAII 96809

**Testimony of** SUZANNE D. CASE Chairperson

**Before the House Committees on ENERGY & ENVIRONMENTAL PROTECTION** and WATER, LAND, & HAWAIIAN AFFAIRS

> Thursday, February 6, 2020 9:15 AM State Capitol, Conference Room 325

#### In consideration of **HOUSE BILL 1847** RELATING TO ENVIRONMENTAL PROTECTION

House Bill 1847 proposes to require the Department of Land and Natural Resources (Department) to adopt rules to protect herbivorous fish in all state waters. The Department supports this measure, and offers the following comments.

Herbivorous fish provide a key ecological service for Hawaii's reefs by affecting the competition between seaweed and corals. On our reefs, seaweed compete with corals for space and light. Seaweed have a competitive advantage because they grow much faster than corals. Certain herbivorous fish consume seaweed, allowing corals to grow and proliferate with less competition from seaweed. This ecosystem service that herbivorous fish provide increases the overall health and resilience of our coral reefs. Reefs with greater resilience respond better to stressors such as coral bleaching. Due to the anticipated increased frequency of coral bleaching events, the ecological service that herbivorous fish provide is more relevant than ever. In addition, monitoring efforts indicate a number of herbivorous fish species are in decline.

The Department has piloted the creation of an herbivore fishery management area at Kahekili, Maui, where the harvest of herbivorous reef fish and sea urchins was prohibited in 2009. Since 2009, parrot fish and surgeon fish biomass have increased significantly as well as an increase in crustose coralline algae, a precursor to coral settlement.

The Department has the authority to adopt rules pursuant to Chapter 91, Hawaii Revised Statutes, to protect herbivorous fish in state waters. This year, the Department will begin

#### SUZANNE D. CASE CHAIRPERSON BOARD OF LAND AND NATURAL RESOURCES COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA

M. KALEO MANUEL

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

undertaking a statewide public engagement process as part of its 30x30 marine management initiative to identify and develop management measures that promote healthy aquatic ecosystems and sustainable fisheries. This process will include consideration of better regulations for herbivorous fish, such as bag limits, size limits, area and seasonal restrictions.

The Department suggests adding the following language to SECTION 2 of the bill to clarify the intent and effect of the bill, and to allow the Department to continue its stakeholder engagement process:

For the purposes of this measure, "protect" means to manage for sustainability, and not necessarily to prohibit take. The department of land and natural resources shall have the discretion to determine which species of herbivorous fish should be protected to benefit the health of coral reefs throughout the state.

Thank you for the opportunity to comment on this measure.



PHONE: (808) 323-4267 FAX: (808) 323-4786 EMAIL: Rebecca.villegas@hawaiicounty.gov

#### HAWAI'I COUNTY COUNCIL

West Hawai'i Civic Center, Bldg. A 74-5044 Ane Keohokalole Hwy. Kailua-Kona, Hawai'i 96740



February 6, 2020

#### TESTIMONY OF REBECCA VILLEGAS COUNCIL MEMBER, HAWAI'I COUNTY COUNCIL ON HB 1847, RELATING TO ENVIRONMENTAL PROTECTION

Committee Energy & Environmental Protection Committee on Water, Land, Hawaiian Affairs Thursday, February 6, 2020 9:15 a.m. Conference Room 325

Aloha Chair Lowen, Chair Yamane, and Members of the Committees:

I thank you for the opportunity to testify in support of HB 1847, relating to environmental protection. My testimony is submitted in my individual capacity as a member of the Hawai'i County Council, and Chair of the Hawai'i County Council Public Safety Committee.

The purpose of this measure is to require the Department of Land and Natural Resources to adopt rules to protect herbivorous fish that are crucial for the health of coral reef throughout the State. Coral Reefs have been subject to immense stress in the recent decades because of human caused climate change, including warming ocean temperatures, coral bleaching, severe storms, coastal development, pollution from wastewater, and other issues. Record setting temperatures have led to wide spread coral bleaching events in Hawai'i's waters in the recent years. Once that happens high nutrient levels in polluted waters and the absent of sufficient amount of herbivorous fish to graze on the algae and prevent overgrowth make these algal blooms more likely to occur. Ensuring health populations of herbivorous fish in all of Hawai'i's waters is essential to protect Hawai'i's coral reefs from extinction.

For the reasons stated above I urge the Committee on Energy & Environmental Protection, the Committee on Water, Land, and Hawaiian Affairs to support this measure as well. Should you have any questions, please feel free to contact me at (808) 323-4267.

Mahalo for your consideration.

Rebecca Villegas

Council Member, Hawai'i County Council

Hawai'i County is an Equal Opportunity Provider and Employer.

<u>HB-1847</u> Submitted on: 2/4/2020 9:01:56 AM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Alexandra Kahn	Surfrider Oahu	Support	No

Comments:

<u>HB-1847</u> Submitted on: 2/4/2020 11:38:23 AM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Cathy Goeggel	Animal Rights Hawai'i	Support	No

Comments:

<u>HB-1847</u> Submitted on: 2/4/2020 3:53:23 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Randy Fernley	Coral Fish Hawaii	Oppose	No

#### Comments:

I honestly feel that this bill can be hijacked and modified to create an anti aquarium fish bill

Submitted on: 2/4/2020 8:03:20 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Bishop	Friends of Hanauma Bay	Support	No

#### Comments:

From: FRIENDS OF HANAUMA BAY

To: HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION (EEP)

Representative Nicole Lowen, Chair

Representative Tina Wildberger, Vice Chair

To: HOUSE COMMITTEE ON WATER, LAND AND HAWAIIAN AFFAIRS (WLH)

Representative Ryan Yamane, Chair

Representative Chris Todd, Vice Chair

Re: HB1847 RELATING TO ENVIRONMENTAL PROTECTION

Hearing: Thursday, February 5, 2020 9:15 a.m., Room 325

Position: STRONG SUPPORT

Aloha Chair Lowen, Chair Yamane, and Committee members,

Thank you for the opportunity to testify in STRONG SUPPORT of HB1847 Relating to Environmental Protection and requiring the Department of Land and Natural Resources to adopt rules to protect herbivorous fish in all state waters.

This sentence from the bill says it all:

"...ensuring healthy populations of herbivorous fish in all of Hawaii's waters is essential to protect Hawaii's coral reefs from extinction."

Please protect our herbivores and pass HB1847!

Respectfully,

Lisa Bishop

President

Friends of Hanauma Bay

#### **Testimony Opposed to HB 1847**

#### 2-6-20 9:15 am Room 325

Herbivorous fish populations are doing very well with a huge drop in these near shore fish in 2019. Hundreds of thousands of palani, kole, sturgeons, yellow tangs and other species are enjoying record populations.

See DLNR fish counts in the 5 year report which confirms record numbers and healthy fish populations. The crippled low impact aquarium fishery takes only an estimated 1-2% of only two of these species and is no where near the maximum sustainable yield. HB 1847 should be deferred as it has not scientific standing; there are studies specifically on herbivorous fish and the aquarium fishery also backing up no need for regulations.

We need the aquarium fishery to collect species for researchers, public aquariums, breeding programs, monitor areas no others go, continue the fisheries long term management relationship with DLNR (the Hawaii State Department of Land and Natural Resources) and maintain potentially susceptible at jeopardy species in aquariums to ensure the survival of those species for our next generations. Our small 1-2% catch sustainable fishery provides valuable state income for fishermen, inspectors, researchers, airlines, and stores worldwide and aquarium manufacturing jobs.

We are currently working with major renewable energy federal researchers wanting to utilize quick growing Hawaiian seaweeds as a renewable energy source. Our vast highly renewable ocean resources should be utilized sustainably not banned.

Impacts of the <u>aquarium fishery</u> have been studied for over 40 years with constant management and thousands of fish counts. Recently the <u>5-year report to the legislature</u> by Dr Bill Walsh was done and submitted with new data on the fishery. The fishery is sustainable! Fishery takes are well below maximum sustainable 25% yield with an estimated take of only 1 to 2 %.

An Environmental Review (complete <u>EIS Environmental Impact Statement</u>) of 490 pages was done and is now completed. Same results the fishery is sustainable with little impact to both the environment and the Hawaiian culture. Hawaii's aquarium fishery is the <u>most regulated fishery</u> in the world.

<u>Without a scientific doubt the fishery is sustainable.</u> But still user groups based in *user conflict* over the ocean want the fishery closed. For them Science is not considered, intentionally ignored or distorted. The reason for their request asking for a closure of the fishery is for personal gain. They want to be the only ones who can show Hawaii's fish with snorkel and dive charters for a profit.

<u>Leading Marine Scientists</u> and the State of Hawaii has agreed many times that the aquarium fishery is a "Model Fishery" (Suzanne Case DLNR head 2019 Legislature) and a desired fishery due to the fact it keeps fish alive, provides jobs, fishery education, ecology and can contribute to science and species preservation!

How were the fish populations in 2019? We did not see the Biblical fish bloom of 2015, but we did see nearly as many. It was a great year for fish in 2019. One of the biggest fish drops for many species ever! Currently working on a video to be released soon.

Luckily the tropical reef fish mostly respond favorably to warmer temperatures by increasing spawning. Even our opposition agreed in the news there are more fish than ever. Fish breeders commonly uses warmer temperatures to stimulate fish breeding with reef fish producing 10,00 to 5 million fry per spawning and multiple times a year. Marine reef fish are amount the most renewable resources on the planet.

Impacts need to be addressed for individual species and fishermen need to work with state agencies for fluid adaptive conservation. This is already being done.

After having aquariums for 45 years, there is one thing I have learned is that fish are able to acclimate to environmental chemical changes. Compared to global warming aquarium ecosystem changes can be drastic and rapid. Fish can still survive with pH, salinity, oxygen level, temperature and other water quality issues. "The Solution to Pollution is Dilution". Nearshore ocean temperatures run off and pollution can affect fish. Luckily deeper waters have nearly all the same species and you do not see coral bleaching or pollution affecting deeper reefs. Fish and corals can repopulate quickly and abundantly.

Thanks for your time and consideration in Opposing HB 2154,

Ron Tubbs B.S.N.D. UHM HTAFA

### "Global Warmings Benefits for Hawaii's Reef Fish Populations".

It is happening again late 2019, report from several divers, face book posts and video from the East, South West and North shores confirms huge numbers of reef fish on Hawaii's reefs, east, north and south all seeing big baby fish numbers, warmer temps in 2014 and 15 were recorded and fish then also bloomed, not just reef fish but their predators also increased in population. Video post and more videos soon. Exciting to see lots of reef fishes. Fish tend to breed more and produce more during warm temperatures. Many fisheries breeding fish use warmer waters to entice fish breeding.

https://www.hawaiinewsnow.com/story/26454840/videos-show-tropical-fish-swarming-states-reefs/

## Certain algae help Kaneohe Bay corals weather warmer seas

https://www.staradvertiser.com/2020/01/27/hawaii-news/certain-algae-help-kaneohe-bay-corals-weather-warmer-seas/

A unique algae may be helping corals at Kaneohe Bay become more resilient to climate change, but the algae might also cause the corals to eat less, according to a study by University of Hawaii researchers.

# 'Super-corals' found in Kaneohe Bay give researchers a glimmer of hope

"Much to our surprise, there are a huge number of corals that are naturally growing in Kaneohe Bay that are very tolerant of higher sea water temperatures and more acidic waters."

https://www.kitv.com/story/40496627/super-corals-found-in-kaneohe-bay-give-researchers-a-glimmer-of-hope

# Coral reefs in West Hawaii showing signs of recovery

https://www.khon2.com/news/coral-reefs-in-west-hawaii-showing-signs-of-recovery/

### Great Barrier Reef Is In Much Better Shape Than Climate Alarmists Claim, Australian Environment Minister Confirms

https://www.thegwpf.com/great-barrier-reef-is-in-much-better-shape-than-climate-alarmists-claim-australian-environment-minister-confirms/

The Great Barrier Reef is not dead, is not dying and is not even on life support, federal Environment Minister Sussan Ley has declared after her first official visit to the World Heritage-listed site.



February 4, 2020

To: Representative Nicole E. Lowen, Chair

Representative Tina Wildberger, Vice Chair, and Members of the

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

And

Representative Ryan I. Yamane, Chair

Representative Chris Todd, Vice Chair, and Members of the

HOUSE COMMITTEE ON WATER, LAND, AND HAWAIIAN AFFAIRS

Re: HB 1847, to require DLNR to protect herbivorous fish to protect coral reefs

Hearing: Thursday, February 6, 2020, 9:15 a.m., Room 325

Position: **Strong Support** 

Aloha, Chairs Lowen and Yamane, Vice Chairs Wildberger and Todd, and Members of the Committees,

The HAWAI'I REEF AND OCEAN COALITION – HIROC – was formed in 2017 by coral reef scientists, educators, local Hawaii environmental organizations, elected officials, and others to address a crisis facing Hawaii's coral reefs and ocean – namely, the pollution of our near-shore environment by sunscreens that are literally killing our marine life. We are currently asking the Legislature to pass a handful of very important bills to save our coral reefs – they are bills relating to sunscreens, plus bills on cesspools, plastic marine debris, the climate crisis and sea level rise.

HIROC strongly supports this bill, which would require the Department of Land and Natural Resources to adopt rules under HRS Chapter 91 to protect herbivorous fish species that are needed to clean algae off coral reefs, and help them recover from coral bleaching and other damage. Our coral reefs are in crisis, and this bill is one of the most urgent measures that we need to undertake to protect them.

The coral reefs that protect Hawaii's shorelines are in crisis! They face assaults from rising ocean temperatures, increasingly acidic oceans, sewage and polluted runoff, sunscreens and depleted fish stocks. Coral bleaching and death are widespread. One very important way that Hawaii can help the reefs survive is to ban fishing for herbivores that help clean suffocating algae off the corals. This bill is thus a critical step toward protecting the coral reefs that protect our beaches, recreational economy and shorefront (including homes) from erosion and intense storms.

The need for this bill is obvious and critical. Our reefs already show great damage. We must begin major efforts to stop the damage and help them recover. Thank you for the opportunity to testify!

Alan B. Burdick, on behalf of HIROC, 486-1018 Burdick808@gmail.com



Submitted on: 2/5/2020 9:17:12 PM

Testimony for EEP on 2/6/2020 9:15:00 AM



Submitted By	Organization	Testifier Position	Present at Hearing
Eric Dilley	The Uhu Conservancy	Support	Yes

#### Comments:

The Uhu Conservancy would like to voice its strong support for HB1847. Coral reefs are existentially threatened by the ravages of climate change. 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.

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. We urge the legislature to pass this bill to ensure that Hawaii will do everything possible to foster resilient coral reefs in the state.

-The Uhu Conservancy

<u>HB-1847</u> Submitted on: 2/5/2020 4:10:20 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Ryan Rothwell	Tropical Fish Emporium	Oppose	No

Comments:



Submitted on: 2/6/2020 9:03:20 AM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dean Sensui	Hawaii Goes Fishing	Oppose	No

#### Comments:

All fishery management regulations should be done through the administrative rule-making process, and not through legislation.

The administrative rule-making process allows for careful study of the situation, as well as making adjustments for the inevitable changes in conditions found in nature. Legislated rules are inflexible and can't accommodate such variations.

Please let the Division of Aquatic Resources handle this issue, and do not approve HB1847.

Thank you, Dean Sensui, executive producer. Hawaii Goes Fishing.

Submitted on: 2/4/2020 11:45:25 AM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Phaethon Keeney	Individual	Support	No

#### Comments:

Aloha! Please SUPPORT HB1847, we need our herbivorous fish more than ever! Our reefs are facing an onIslaught of threats from Climate Change and human encroachment, from ocean heat waves to acidification to pollution runoff to sunscreens and so much more, we need to reduce our impact on these very delicate ecosystems in every way we can. With the coming bottleneck of impacts due to climate change, if we hope to see any of our beautiful ocean friends make it thru this very short window of time we have for planetary protection, we need to treat them together, for Hawai'i's people, visitors, and the ocean itself, we need to protect ALL we can. Ensuring and encouraging the health and success of our herbivorous reef fish would help protect the reefs from uncontrolled algal growth due to ocean heating and nutrient overload relating to pollution and sedimentation runoff. This simple step would help ensure the health of the reefs and ALL of the reef species which Hawaii's people depend on. Until the threats to our reefs have significantly diminished and the health of the ecosystem is restored, we need to take special precautions to preserve our beneficial and beautiful herbivorous fish friends. Please support HB1847. Mahalo!

Phaethon Keeney

Honoka'a Hawai'i

Submitted on: 2/5/2020 8:44:09 AM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
James T Lovell	Individual	Oppose	No	

#### Comments:

Aloha Committee members,

My name is Jim Lovell and I am opposed to this bill.

This bill is not needed. DLNR already has rule making authority to protect the herbivore populations.

Please vote "No" on this bill.

Thank You!

Sincerely,

Jim Lovell

Submitted on: 2/4/2020 6:49:42 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
Andrea Quinn	Individual	Support	No	

#### Comments:

Dear Honorable Committee Members:

Please support HB1847. Herbivorous fish are important to Hawaii's marine ecosystem because they maintain the coral reefs. Aquatic resources are our most valuable natural resource in terms of tourism and the economy.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei

Submitted on: 2/4/2020 10:58:11 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Brian F. Funai	Individual	Oppose	No

#### Comments:

I am in opposition to HB1847 whereas I believe the Dept of Land and Natural Resources should perform the job of managing our resources as mandated by the Legislature. By introducing and passing these types of bills, the Legislature is removing the responsibility from the Department and bypassing the rule-making process that entails the opportunity for a fair and impartial scientific analysis as to what's really needed for management which allows sustainable use of the resource.

Thank you,

Brian F. Funai

Keaau, Hawaii 96749

<u>HB-1847</u> Submitted on: 2/4/2020 6:14:30 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Shyla Moon	Individual	Oppose	No

Comments:

HB1847 is ill advised, biologically naïve, and based on emotion, not science, as well as a lack of Knowledge about herbivorous fish species' role in the ecosystem. The stock status of many herbivorous species may relate to more to available substrate for grazing than to human exploitation. Many herbivorous fish are very important culturally both as subsistence fish and ceremonial fish for important cultural occasions. Cultural practices and food security are what needs protection. Furthermore, DAR can make scientifically based decisions following the Administrative rules procedure without legislative interference. Well intended but biologically naïve legislation has in the past done more harm than good to the stocks. Witness Kona Crab.

Submitted on: 2/4/2020 12:27:46 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
scott masunaga	Individual	Oppose	No

#### Comments:

I speak in opposition to HB 1847.

I am not opposed to the concept or needs of conservating our aquatic resource but see this legislation as unneccessary as it is the responsibility of DNLR to actively and responsibly manage them.

Submitted on: 2/4/2020 2:33:45 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Matthew Ross	Individual	Oppose	Yes

#### Comments:

While herbivorous fish are and important part of the ecosystem, eating them is a very important part of local culture and traditions. Better management of these fish is needed, but an outright ban in the name of "protection" goes too far. Also, the bill does not provide any funding for DLNR to do the research necessary to properly accomplish this goal.

Please do not pass HB1847.

Submitted on: 2/5/2020 1:52:37 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Danielle Bartz	Individual	Support	No

#### Comments:

The protection and preservation of herbivorous fish in Hawai'i are critical and necessary for the health and survival of our coral reefs. Not only are coral reefs a source of income for Hawai'i through ecotourism (i.e. snorkeling/diving tours), but they serve as a barrier preventing coastal erosion. Herbivorous fish play a key role in eating the macroalgae that settle on dead reefs, allowing a suitable habitat for new coral polyps to settle and begin growing. Without herbivorous fish, macroalgae can take over and make for a habitat that coral will NEVER be able to grow within again. Herbivorous fish are currently severely overfished and populations are declining all throughout Hawaiian waters, therefore there is no time to waste in implementing rules to protect these vitally important species. Without them, coral populations will never be replenished and Hawai'i will suffer the implications of the losses of biodiversity financially, culturally, and biologically.

Submitted on: 2/5/2020 2:07:32 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Daniela Escontrela	Individual	Support	No

#### Comments:

I strongly support the bill to protect herbivorous fish. Hawaiʻi's economy is highly reliant on coral reefs for their economy, not only because of the food fish that live there but also for ecotourism purposes. Coral reefs are also important because they protect the shoreline from erosion and wave action. With an eye to the future we should aim to maintain healthy coral reefs, especially as storms become more frequent and intensify. In order to keep coral reefs healthy and strong we need herbivorous fish. They act like lawnmowers and remove seaweed and other algae from hard surfaces which opens up space for coral to grow. By protecting herbivorous fish, we are protecting our coral reefs and our economy

Submitted on: 2/5/2020 2:07:35 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Mark Hixon	Individual	Support	No

#### Comments:

As a professor studying coral reefs for the past 40 years, I strongly support HB1847. 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 [nenue]) 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. Please do not give-in to the fishing lobby – herbivorous fishes need our help! Mahalo!

Submitted on: 2/5/2020 3:25:46 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Ronald Tam	Individual	Oppose	No

#### Comments:

The language of the proposed legislation is nebulous; i.e., "protect" how and to what level. There is an absence of scientific / satistical data to support the proposed legislation. Please recognize that fish is food.

Submitted on: 2/5/2020 4:12:36 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Alexander Peleholani Garcia	Individual	Oppose	No

#### Comments:

While I believe that our herbivorous fish populations need better management, this bill is much too broad. furthermore, I have asked the DAR about rule making for this same reason, and they have administrative rules to make these changes. DLNR is also actively starting to seek community and scientific input to address this issue, and coral reef health as a whole, per the States Marine 30x30 initiatives. The Marine 30x30 is heavily reliant on the fishing community, who very much cares for this resource and wants to see it sustainably managed. The legislature should let this important community process play out, or risk losing the trust of the community that it should be protecting from special interest rule making such as this.



Submitted on: 2/5/2020 9:19:22 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Eric Dilley	Individual	Support	Yes

#### Comments:

I strongly support HB1847. Hawaiʻi'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 [nenue]) 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. Please do not give-in to the fishing lobby – herbivorous fishes need our help! Mahalo!

Submitted on: 2/5/2020 7:09:30 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Danita Dahl	Individual	Support	No

#### Comments:

I strongly support HB1847. Coral reefs that undergo bleaching due to ocean acidification have a chance of recovering if they are cared for by herbivorous fish. By eating the seaweeds these animals keep the coral clear for new coral growth. Worldwide, people travel to Hawai'i to enjoy the beauty of the islands. This includes the coral reefs. If we do not help the reefs recover and remain healthy we will see the consequences in many ways - to include in our tourism dollars.



Submitted on: 2/5/2020 5:11:40 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
David Nakashima	Individual	Support	No

#### Comments:

I strongly support HB1847. We need to protect herbivores, who in turn protect our coral reefs.

Thank you.



### <u>HB-1847</u>

Submitted on: 2/5/2020 4:53:29 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
William K. Chang	Individual	Oppose	No

#### Comments:

I oppose this Bill.

Language is vague, i.e there are no parameters on "protection. This bill is is not science based and it fails to recognize that fish is food.

Thank You for alloing me to testify.

William Chang





Submitted on: 2/5/2020 11:01:30 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
J Riverstone	Individual	Support	No	

#### Comments:

#### **Dear Legislators**

I strongly support HB1847. Hawaii's coral reefs are under grave threat from coral bleaching. Degraded reefs become covered with seaweeds that inhibit regrowth of corals. Herbivores including parrotfishes (uhu), surgeonfishes (kala, etc), and sea chubs (nenue) 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.

Please do not give-in to the fishing lobby but instead protect the overall health of our reef, which depends on healthy populations of herbivorous fishes.

Mahalo,

Jerry Riverstone

Submitted on: 2/5/2020 11:43:49 PM

Testimony for EEP on 2/6/2020 9:15:00 AM

Submitte	ed By	Organization	Testifier Position	Present at Hearing
Kaitlyn P	Jacobs	Individual	Support	No

#### Comments:

I strongly support this bill being passed because our herbivorous fishes are some of the most critical for Hawai'i's marine ecosystem. Fishes that eat seaweed keep corals able to grow without suffocation, thereby protecting the state's coasts in tourism, erosion, as well as habitat for sustenance fish and other important organsisms. Hawai'i is known for our coral reefs, and tourists should be able to see a parrotfish every time they go snorkeling. These are important species that we really must try to conserve, for the benefit of the community, and the preservation of Hawaiian culture.

