

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 Committee on
JUDICIARY**

**Monday, February 24, 2020
2:00 PM
State Capitol, Conference Room 325**

**In consideration of
HOUSE BILL 1847, HOUSE DRAFT 1
RELATING TO ENVIRONMENTAL PROTECTION**

House Bill 1847, House Draft 1 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 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

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

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

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

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.

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 5:15:38 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Stuart Coleman	WAI: Wastewater Alternatives & Innovations	Support	No

Comments:

Aloha, Chair Lee, Vice Chair & Committee Members,

I am writing in strong support of HB 1847 HD1 in order to protect the herbivore fish that help protect our coral reefs by eating the algae that stunts the growth of our reefs. Our coral reefs are faced with severe threats from over-fishing and many sources, and we can't allow our valuable near-shore ecosystems to continue this decline. Banning fishing of these reef protectors would not only help protect our reefs but also improve the entire ecosystem and benefit the economy and the experiences of all the locals and visitors who value healthy reefs.

Aloha,

Stuart Coleman, Executive Director

WAI: Wastewater Alternatives & Innovations

2927 Hibiscus Pl., Honolulu, HI. 96815

808-381-6220, www.WaiCleanWater.org



**TESTIMONY OF THE SURFRIDER FOUNDATION, OAHU
IN REGARDS TO HB1847, RELATING TO ENVIRONMENTAL PROTECTION
BEFORE THE HOUSE COMMITTEE ON JUDICIARY
MONDAY, FEBRUARY 24th, 2020
2:00PM IN ROOM 325**

Chair Lee, Chair Kahele, Vice-Chair Buenaventura, and members of the committee, my name is Kaitlyn Jacobs and I represent the Surfrider Foundation of Hawaii.

The Surfrider Foundation is a non-profit environmental organization dedicated to the protection and enjoyment of the world's oceans, waves and beaches for all people, through conservation, activism, research and education. Comprised of over 50,000 members and supporters at 60 chapters across the United States, Surfrider has been fighting to protect the world's oceans for over 35 years.

Surfrider Foundation Hawaii **supports** HB1847 and provides comments. This measure requires the Department of Land and Natural Resources to adopt rules to protect herbivorous fish in all state waters.

We believe that it is imperative to offer additional support in protection of herbivorous fish. When corals are negatively affected by other stressors (temperature, pollutants, storms) their recovery can be stalled by the excess growth of algae and other seaweeds. These herbivores, sometimes referred to as the 'lawnmowers of the sea,' keep surfaces in the ocean clean to allow corals to bounce back. So through this bill, protecting herbivores statewide will help to save our reefs, which provide us with food, recreation, tourism, coastal protection, and new medicines. Protecting these fish is a positive step towards preserving Hawai'i's culture, and keeping the oceans healthy.

We **support** HB1847 and we urge this committee to pass this measure. Thank you for the opportunity to testify.

Sincerely,

Kaitlyn Jacobs
Rise about Plastics Coordinator, Surfrider Oahu



LATE

February 23, 2020

To: The Honorable Chris Lee, Chair,
The Honorable Joy San Buenaventura Vice Chair, and Members of the
HOUSE COMMITTEE ON JUDICIARY

Re: **HB 1847, HD1 –re Environmental Protection (Marine Herbivores)**
Hearing: Monday, February 24, 2020, 2:00 p.m. Room 325
Position: **Strong Support**

Aloha, Chair Lee, Vice Chair San Buenaventura, and Members of the Committee:

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 and marine life— they are bills relating to overfishing, sunscreens, plus bills on cesspools, plastic marine debris, the climate crisis and sea-level rise.

HIROC strongly supports this bill, which would require DLNR to adopt rules to protect herbivorous fish. Coral reefs are struggling because of warmer, more acidic oceans, nutrient pollution, sunscreens, and notably overfishing of herbivores. Herbivores are critical for reef health because they clean off macroalgae that smother the reefs. Please help the reefs, which protect our shorelines and marine life, by passing this bill. Mahalo!

Please pass this bill to help maintain healthy reefs and marine ecosystems. Thank you for considering this testimony.

Alan B. Burdick, for HIROC, 486-1018

Burdick808@gmail.com

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 10:54:27 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Eric Dilley	The Uhu Conservancy	Support	No

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



LATE

TO: Honorable Chair Lee, Vice Chair San Buenaventura and members of the Judiciary Committee

SUBMITTED BY: Inga Gibson, Policy Consultant, For the Fishes; PonoAdvocacy@gmail.com, 808.922.9910

RE: SUPPORT for HB2414 HD1, with amendments; Relating to Shark Protection

For the Fishes respectfully urges your support of HB2414 HD1 which would prohibit the intentional/known capture or killing of sharks in state waters (within 3 nm) except for research purposes, the use of shark parts/products for native Hawaiian cultural purposes and at the discretion of DLNR for any specific, emergency purposes. The bill does NOT apply to those who, in the lawful course of fishing, may accidentally capture and subsequently release a shark.

In 2010, Hawaii became the first state in the world to enact a prohibition on shark-finning and the sale of shark-fins or fin products. This measure would complement our existing law, which has now become a global initiative, by again poising Hawaii to be a leader in shark and marine conservation. While current laws prohibit the possession or sale of shark fins or fin products there is no law preventing the intentional capture or killing of sharks. Most notably, there have been a number of cases in recent years where sharks appear to have been intentionally entangled, injured and harmed and current law does not provide for adequate enforcement or prosecution of such cases.

Research from the University of Hawaii has shown that many species of shark, such as tiger and hammerhead, frequent state waters, especially the marine shelf around Maui, and are faced with numerous threats most notably human interactions and pollution. Further, sharks are apex predators; when they are removed our entire marine ecosystem is negatively impacted.

Fortunately, there is no longer any directed shark fishing (for their meat/fillets) and sharks are not a staple human food source as other fish species are. Below is a list of the 40 species of sharks that may be found in Hawaii waters. DLNR notes that it is difficult to distinguish between certain species of shark, thus this measure applies to all shark species.

Concerns have been raised by a few shark researchers speaking independently of their affiliation with any academic institution. However, by exempting shark researchers from the requirement to obtain special activity permits, the current version of this measure removes any and all oversight or accountability. We are suggesting the below clarifications so that legitimate shark research with proper oversight, may continue to occur:

- Maintain the current language in Section 187A-6 regarding Special Activity Permits; and,
- Delete the proposed (f) (1) exemption and replace with this research exemption language that shark researchers have agreed does not inhibit their research: “Any person who holds a license or permit issued by the department of land and natural resources to conduct research.”

For sharks accidentally taken by fishers, we suggest the following clarification to the proposed (F) (5) exemption, because there would be no reason for a person to keep, possess, or intentionally kill a shark that has been accidentally taken:

- Delete “taken, possessed, or killed” and replace with “accidentally captured and released in the course of lawful fishing”.

For the definition of “harass”, and in order to allow for current shark tours as long as they are not intentionally interacting with sharks, we suggest the following clarification: "Harass means to intentionally touch or approach within 9 meters." This is the same distance required for sea turtle encounters.

Thank you for your consideration of these amendments and the opportunity to testify on this important marine conservation issue

See: <https://dlnr.hawaii.gov/sharks/hawaii-sharks/species-list/>

HAWAII SHARKS

Order Orectolobiformes

Family Rhincodontidae

Whale shark, *Rhincodon typus*, VU

Order Carcharhiniformes

Family Scyliorhinidae

Sponge-headed cat shark, *Apristurus spongiceps*, DD

Family Pseudotriakidae

False cat shark, *Pseudotriakis microdon*, DD

Family Carcharhinidae

Bignose shark, *Carcharhinus altimus*, DD

Gray reef shark, *Carcharhinus amblyrhynchos*, NT

Silky shark, *Carcharhinus falciformes*, NT

Galapagos shark, *Carcharhinus galapagensis*, NT

Blacktip shark, *Carcharhinus limbatus*, NT

Oceanic whitetip, *Carcharhinus longimanus*, VU
Blacktip reef shark, *Carcharhinus melanopterus*, NT
Sandbar shark, *Carcharhinus plumbeus*, VU
Tiger shark, *Galeocerdo cuvier*, NT
Blue shark, *Prionace glauca*, NT
Whitetip reef shark, *Triaenodon obesus*, NT

Family Sphyrnidae

Scalloped hammerhead, *Sphyrna lewini*, EN
Smooth hammerhead, *Sphyrna zygaena*, VU

Order Lamniformes

Family Odontaspidae

Smalltooth sand tiger shark, *Odontaspis ferox*, VU
Bigeye sand tiger shark, *Odontaspis noronhai*, DD

Family Pseudocarchariidae

Crocodile shark, *Pseudocarcharias kamoharai*, NT

Family Megachasmidae

Megamouth shark, *Megachasma pelagios*, DD

Family Alopiidae

Pelagic thresher shark, *Alopias pelagicus*, VU
Bigeye thresher shark, *Alopias superciliosus*, VU

Family Lamnidae

White shark, *Carcharodon carcharias*, VU
Short-finned mako, *Isurus oxyrinchus*, VU
Longfin mako, *Isurus paucus*, VU

Order Hexanchiformes

Family Hexanchidae

Frilled shark, *Chlamydoselachus anguineus*, NT
Bluntnose sixgill shark, *Hexanchus griseus*, NT

Order Squaliformes

Family Echinorhinidae

Prickly shark, *Echinorhinus cookei*, NT

Family Dalatiidae

Combtooth dogfish, *Centroscyllium nigrum*, DD
Kitefin shark, *Dalatias licha*, NT
Blurred smooth lantern shark, *Etmopterus bigelowi*, LC
Blackbelly lantern shark, *Etmopterus lucifer*, LC
Smooth lantern shark, *Etmopterus pussilus*, LC
Hawaiian lantern shark, *Etmopterus villosus*, LC

Pygmy shark, *Euprotomicrus bispinatus*, LC
Cookiecutter shark, *Isistius brasiliensis*, LC
Viper dogfish, *Trigonognathus kabeyai*, DD
Velvet dogfish, *Scymnodon squamulosus*, DD

Family Centrophoridae

Mosaic gulper shark, *Centrophorus tessellatus*, DD
Gulper shark, *Centrophorus granulosus*, VU

Family Squalidae

Shortspine spurdog shark, *Squalus mitsukurii*, DD



LATE

TO: Honorable Chair Lee, Vice Chair San Buenaventura and members of the Judiciary Committee

SUBMITTED BY: Inga Gibson, Policy Consultant, For the Fishes;
PonoAdvocacy@gmail.com, 808.922.9910

RE: SUPPORT for HB1847 HD1, with amendments; Relating to Environmental Protection

For the Fishes respectfully urges your support of HB1847 HD1 which would require DLNR to adopt rules to protect the herbivorous fish that are necessary for the health of coral reefs throughout the State.

In addition to the key roles herbivorous fish play in coral reef ecosystems, many are highly valued as food fish, others for their beauty, and some for both. The pressures on their populations from food fishers and from the aquarium trade have taken their toll: recent research shows that the vast majority of Hawaii’s reefs have an herbivore biomass below the threshold required to prevent their collapse as they become overtaken by algae.

In the Hawaii chapter of the Fourth National Climate Assessment, ocean heat waves will drive coral bleaching that will cause Hawaii to lose at least 70% of it’s reefs over the next 20 years, and 99% by 2100.

It is well-established in the literature that sufficient numbers and biomass of algae-eating fishes can mitigate and delay the catastrophe barreling down on Hawaii.

There is no time to delay. Meaningful action is urgently needed now, not in the years to decades it typically takes DLNR to enact rules. Hawaii doesn’t have this kind of time.

DLNR’s Div. of Aquatic Resources has reported that the aquarium trade is a major source of herbivore depletion. In West Hawaii, for example, the aquarium trade historically has taken 1.8X as many fish from Hawaii’s reefs as all other extractive uses combined (i.e. recreational, subsistence, and commercial fishing). Their 2020 report to the legislature documents that the aquarium trade accounts for 27% of the reef fish biomass taken from West Hawaii reefs.

Thanks to the temporary ban on aquarium collecting in West Hawaii since 2018, herbivores are beginning to return. In fact, the greatest increase in yellow tang abundance ever recorded in West Hawaii occurred in 2018, the first year of the ban, before aquarium trade poachers realized DLNR wasn't actively enforcing it.

We urge you to consider that before DLNR enacts any new restrictions on Hawaii's fishing families, the take of these critically important species for sale to the mainland pet trade must end.

This first step in restoring herbivore abundance is well-supported by the public: Honolulu's Anthology market research group documented in a 2017 scientific poll that 83% of Hawaii residents (and 84% of Hawaii voters) want the aquarium trade shut down in Hawaii.

We simply cannot afford to waste another fish for the aquarium pet trade outside Hawaii.

Thank you for your consideration of an amendment that bans the take of herbivores by the aquarium trade, and for the opportunity to testify on this important marine conservation issue.

HB-1847-HD-1

Submitted on: 2/23/2020 9:06:15 AM

Testimony for JUD on 2/24/2020 2:00:00 PM

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

Comments:

HB 1847 is firmly within my expertise as a professional marine biologist who has studied Hawai'i's coral reefs since 1979, and it addresses an extremely important issue for Hawai'i. In the strongest possible terms, I urge passage with enactment well before 2050, by which time many of our reefs are predicted to be dead unless protective measures such as this are implemented as soon as possible. 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]), along with sea urchins, are the "lawnmowers of sea" that control seaweeds so corals can recover. Herbivorous fishes are SEVERELY overfished in the main Hawaiian Islands. Protecting herbivores statewide will help to save our reefs, which provide us with food, coastal protection, recreation, tourism, and new medicines. (Additionally, uhu are among our main sand producers, scraping dead coral surfaces and literally pooping sand.) I understand that the fishing community will be opposed to herbivore protection measures, yet if Hawai'i is to continue to benefit from the many services of coral reefs, then the severe overfishing of our herbivores must stop. Please help our reefs in this extremely important way! If you desire documentation for any of the above patterns, I will be happy to e-mail relevant peer-reviewed papers. Mahalo for your consideration.

HB-1847-HD-1

Submitted on: 2/23/2020 9:23:57 AM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
julia hartl	Individual	Support	No

Comments:

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!

HB-1847-HD-1

Submitted on: 2/23/2020 9:39:24 AM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Valerie Moore	Individual	Support	No

Comments:

Herbivorous fish are vital for the conservation of coral reefs.

Herbivorous fish feed on the algae that grow on corals and compete with them for light and oxygen. By eating the algae, these tiny fish play a big role in the survival of the entire ecosystem.

But corals are quickly losing their greatest allies. Populations of herbivorous fish are dwindling.

The overfishing of commercial species is driving artisanal fishermen to capture even the youngest herbivorous fish, preventing those species from replenishing their numbers.

The loss of these fish is one more threat to coral reefs, already fragile ecosystems that are increasingly vulnerable to climate change. Preserving our reefs will ensure we continue to enjoy the services they provide. Among other things, coral reefs act as fish hatcheries, natural barriers against storms and hurricanes, and the source of medicines that treat illnesses like cancer and Alzheimer's.

Please support this bill to provide protections to these herbivorous fish. Mahalo.

Valerie Moore

HB-1847-HD-1

Submitted on: 2/23/2020 10:33:25 AM

Testimony for JUD on 2/24/2020 2:00:00 PM

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

Comments:

I strongly support this bill! Herbivorous fishes are so important to Hawai'i's ecosystem, and culture. They provide access to new potential medicines, and they graze algae from the reef that are detrimental to coral growth and health. These fishes also provide food for many predators (such as sharks) that bring tourism to the island. The importance of these fish can go on and on, but most importantly, people will miss them when they disappear. Reefs will be quiet, and it will be a loud silence.

HB-1847-HD-1

Submitted on: 2/23/2020 12:15:59 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Cassie Paumard	Individual	Support	No

Comments:

I strongly support HB1847. Hawai'i's coral reefs are degrading rapidly. With algae growing atop of bleached corals, herbivorous fishes are vital in keeping corals free of algae. As a marine biologist, I highly suggest protecting herbivorous fishes in order to keep Hawai'i's coral reefs from being damaged further.

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 2:12:24 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lauren Lilly	Individual	Support	No

Comments:

I strongly support HB1847. Hawaii coral reefs are degrading. rapidly, these reefs become covered in seaweed that inhibits coral regrowth. Herbivores control the seaweed, allowing the corals to recover. Herbivores are seriously overfished on the Hawaiian islands, protecting herbivores will help save our coral reefs, and healthy coral reefs has tons of positive effects!

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 4:54:24 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Michaela Johnson	Individual	Support	No

Comments:

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 [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. Please do not give-in to the fishing lobby – herbivorous fishes need our help! Mahalo!

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 4:57:12 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Dennis Mahaffay	Individual	Support	No

Comments:

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 5:21:40 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Blake Thompson	Individual	Support	No

Comments:

I support HB1847. Herbivore populations across the main Hawaiian island are widely depleted and facing growing fishing pressure. When compared to protected or responsibly managed areas with healthy herbivore populations the importance of species like parrotfish and surgeonfish becomes very clear. Coral reefs are highly reliant on a delicate balance of complex ecological relationships. By grazing on algae/seaweed herbivores can help increase resilience and recovery following stressors or disturbances like coral bleaching events which are becoming more frequent and severe. Please pass this bill!

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 6:48:20 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

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, Maui

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 7:04:17 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Mike Nakachi	Moana Ohana	Support	No

Comments:

All Herbivores need protection.

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 9:06:22 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

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

Comments:

I strongly support HB1847. Herbivorous fish are important because they scrape off algae from the bottom allowing coral to grow. This is critical for Hawai'i, not only because the reefs are so degraded, but also because a big portion of the economy in Hawai'i depends on coral reef related tourism such as scuba diving and snorkeling. Herbivorous fish also produce the sand that make our beaches so great, which again, is not only great for tourism but it also mitigates the effects of coastal erosion and sea level rise.

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 7:10:04 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Devynn Wulstein	Individual	Support	No

Comments:

A huge aspect of Hawaii's economy is based upon the beauty of the coral reefs. One of the clearest and most effective ways to ensure the health and restore deteriorated reefs is through the presence of herbivores who keep the presence of algae in check. Protecting these fish now before it is too late will help to maintain the ecotourism community and the amazing marine environment.

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 9:13:06 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrew Taylor	Individual	Support	No

Comments:

I strongly support the bill to protect herbivorous fish. Hawai'i'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

LATE

HB-1847-HD-1

Submitted on: 2/23/2020 10:49:38 PM

Testimony for JUD on 2/24/2020 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Eric Dilley	Individual	Support	No

Comments:

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 [nenuue]) 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!