

DAVID Y. IGE  
GOVERNOR OF HAWAII



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

POST OFFICE BOX 621  
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**Testimony of**  
**SUZANNE D. CASE**  
**Chairperson**

**Before the House Committee on**  
**OCEAN, MARINE RESOURCES, & HAWAIIAN AFFAIRS**

**Tuesday, March 13, 2018**  
**9:45 AM**  
**State Capitol, Conference Room 312**

**In consideration of**  
**SENATE BILL 2079, SENATE DRAFT 2**  
**RELATING TO SHARK AND RAY PROTECTION**

Senate Bill 2079, Senate Draft 2 proposes to establish penalties and fines for any person who knowingly captures, takes, possesses, abuses, or entangles any shark or ray, whether alive or dead, or kills any shark or ray within state marine waters and makes it a misdemeanor. This measure provides exemptions for special activity permits and removals of sharks by the Department of Land and Natural Resources (Department) for reasons of public safety, and protects traditional and customary rights. **The Department supports this measure, and offers the following comments.**

The Department recognizes the important role sharks and rays play in maintaining healthy marine ecosystems, and the detrimental impact from significantly depleting their populations in our waters. The Department also recognizes the importance of these species for native Hawaiian cultural beliefs and practices, as well as their value for ocean recreation and tourism.

The Department supports regulating the take of sharks and rays, and will implement this measure by adopting regulations through the administrative rulemaking process to evaluate and apply scientific management principles, give due consideration to public interests, and carefully craft language to avoid conflict with existing state and federal laws.

Thank you for the opportunity to comment on this measure.

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

**ROBERT K. MASUDA**  
FIRST DEPUTY

**JEFFREY T. PEARSON P.E.**  
DEPUTY DIRECTOR - WATER

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HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

**LATE**



**SB2079**  
**RELATING TO SHARK AND RAY PROTECTION**  
**House Committee on Ocean, Marine Resources, & Hawaiian Affairs**

March 13, 2018

9:45 a.m.

Room 312

The Administration of the Office of Hawaiian Affairs (OHA) will recommend that the Board of Trustees **SUPPORT** SB2079 SD2. This bill would protect sharks and rays by establishing fines and penalties for knowingly capturing, killing, or taking a shark in state waters. Additionally, SB2079 SD2 would expand the existing prohibition on knowingly capturing or killing a manta ray to include all rays.

OHA has long advocated for more responsible and proactive management and protection of our marine resources. Thus, OHA appreciates this measure's recognition of the important role of sharks and rays in marine ecosystems as well as their value in Hawaiian culture. OHA urged the legislature to amend an earlier version of this legislation to provide clear protections for Native Hawaiian traditional and customary rights specific to sharks and rays, and we note that the SD2 explicitly includes such protections.<sup>1</sup> These changes, as well as the inclusion of Hawaiian names for sharks (manō) and rays (hīhīmanu) largely address the concerns raised by OHA in our previous testimony.<sup>2</sup>

OHA looks forward to the opportunity to provide further input via rule-making should the department decide to pursue rules to further define "take" for the purposes of this bill.

Mahalo for the opportunity to testify on this measure.

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<sup>1</sup> HAW. CONST. art. XII, § 7

<sup>2</sup> OHA noted in its earlier testimony that while Hawaiian language references confirm the name "hīhīmanu" for various classes of rays, there are at least two other names commonly associated with rays: hāhālua and hailepo.

**SB-2079-SD-2**

Submitted on: 3/11/2018 5:59:10 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Cathy Goeggel	Animal Rights Hawai'i	Support	Yes

Comments:

**SB-2079-SD-2**

Submitted on: 3/9/2018 6:21:00 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Benton Kealii Pang, Ph.D.	Hawaiian Civic Club of Honolulu	Support	No

Comments:



**THE HUMANE SOCIETY**  
OF THE UNITED STATES



**HUMANE SOCIETY**  
INTERNATIONAL

**To:** Honorable Chair Ing, members of the House Committee on Ocean, Marine Resources & Hawaiian Affairs  
**In support of:** SB 2079 SD2  
**Date:** March 13, 2018, 9:45 a.m.  
**Testimony by:** Keith Dane, Hawaii Policy Advisor, The Humane Society of the United States

**RE: SUPPORT FOR SB 2079 SD2; Relating to Shark and Ray Protection**

On behalf of The Humane Society of the United States, Humane Society International and our members and supporters across Hawaii, I appreciate the opportunity to submit testimony in support of SB 2079 SD2. This bill would impose penalties for anyone who knowingly captures, takes or kills sharks or rays in state waters except for research purposes, under DLNR issued Special Activity Permits, while exercising native Hawaiian gathering rights and cultural practices or at the discretion of DLNR, for specific, emergency public safety reasons.

**Why sharks and rays need protection:**

- In 2010, Hawaii became the first state to enact a ban on the sale of shark-fins or fin products. To this date, 12 states have adopted similar measures following Hawaii's lead. SB 2079 SD2 would further complement existing law by again positioning 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 capture or killing of sharks in state waters.
- With the growing interest and number of commercial operators involved in ray diving tours, this measure would ensure that protections are afforded to ray species. If enacted, SB 2079 SD2 would prohibit the take, capture and killing of ray species in state waters.
- The number of shark and ray landings increased by 227% from 1950 to 2003.<sup>1</sup> However, the actual number of animals killed is much larger since this data represents animals that are caught and brought to shore (landed) and do not account for illegal catches, or discards.

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<sup>1</sup> IUCN Shark Specialist Group. Questions and Answers.

- One quarter of shark and ray species are threatened with extinction due to overfishing and other fishing threats. Five out of the seven most threatened Chondrichthyan species are rays.<sup>2</sup>
- Tens of millions of sharks are estimated to be killed annually for their fins. While anti-finning laws are designed to halt further shark population declines, many species are still threatened and face possible extinction. Recent research from the University of Hawaii<sup>3</sup> 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 humans and pollution.
- There is no directed commercial shark fishery in Hawaii state waters. SB 2079 SD2 would not be expected to have a negative economic impact on commercial fishing interests. Commercial fisheries operating in federal waters reported catching 85,067 sharks and releasing 84,441 of them.<sup>4</sup>
- This measure does NOT preempt or impact federal fishing laws, and only applies to Hawaii state waters.
- With the growing number of interactions between ocean users and shark and rays, this measure would prevent consideration of ineffective mass culling efforts and those individuals who may target sharks due to misinformation. Cases involving cruelty against sharks in recent years<sup>5</sup> have prompted public outcry and highlighted public desire for strong penalties for cruelty against sharks.<sup>6</sup>
- Sharks are apex predators and play a vital role in maintaining the balance of marine ecosystems. Research has found that massive removal of sharks has a cascading effect throughout the ecosystems that they inhabit.
- Current law prohibits the take of *only giant oceanic* Manta Ray species. SB 2079 SD2 would extend this protection to all species of rays in state waters (listed below), including Torpedo, Stingray, Devilray and Eagleray, Manta alfredi (reef manta ray) and Mobula tarapacana (sicklefin devilray).
- Rays are killed in massive numbers for their meat, gill rakers, gill plates, and fins (called “wings” and also used in shark fin soup) and traded worldwide. The significant increase in global demand for these parts poses a major threat to multiple species of vulnerable elasmobranchs.<sup>7</sup> SB 2079 SD2 would prevent any future trade in harvesting rays in Hawaii state waters, as we saw recently with the mass commercial harvesting of our sea cucumbers by international companies. DLNR has since prohibited commercial harvest of sea cucumbers.

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<sup>2</sup> <http://www.iucnssg.org/global-conservation-status-of-sharks-and-rays.html>

<sup>3</sup> <https://www.voanews.com/a/2641635.html>

<sup>4</sup> [http://www.pifsc.noaa.gov/fmb/reports/hlreports/areport\\_items.php?yr=2014&type=tbl&num=1](http://www.pifsc.noaa.gov/fmb/reports/hlreports/areport_items.php?yr=2014&type=tbl&num=1)

<sup>5</sup> Video of tiger shark torture sparks outcry in Hawaii. [https://www.huffingtonpost.com/2013/09/13/shark-torture-video-n\\_3922319.html](https://www.huffingtonpost.com/2013/09/13/shark-torture-video-n_3922319.html)

<sup>6</sup> Three Florida men charged for shark dragging. <http://www.foxnews.com/us/2017/12/12/3-florida-men-charged-in-shark-dragging-video.html>

<sup>7</sup> Ellis, J. R., S. R. McCully Phillips, and F. Poisson. 2017. A review of capture and post-release mortality of elasmobranchs. J. Fish Biol. 90:653–722.

- Sharks and rays share life history traits that make them particularly vulnerable to overexploitation and population collapse.<sup>8</sup> These include slow growth; low fecundity; few, well-formed young; long gestation periods; and delayed age at first reproduction, that together are known in the ecological literature as a “K-selected life history”.<sup>9</sup>

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 sharks.

**Hawaii Shark and Ray Species List:** <http://dlnr.hawaii.gov/sharks/hawaii-sharks/species-list/>

(EN: Endangered; VU – Vulnerable; NT – Near Threatened; LC: Least Concern; DD – Data Deficient)

## **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**

<sup>8</sup> Ebert, D.A. 2001. Sharks, Rays, and Chimaeras of California. University of California Press.

<sup>9</sup> Hoenig, J.M. and Gruber, S.M. 1990. Life-History Patterns in the Elasmobranchs: Implications for Fisheries Management *in* Elasmobranchs as Living Resources: Advances in the Biology, Ecology, Systematics, and the Status of the Fisheries (H.L. Pratt Jr., S.H. Gruber, and T. Taniuchi, eds.) NOAA Technical Report 90 (1990).

**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 pusillus*, 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

**Rays****Order Torpediniformes****Family Torpedinidae**

Torpedo ray, *Torpedo sp.*, DD or LC, depending on species

**Order Myliobatiformes****Family Plesiobatidae**



Giant stingaree, *Plesiobatis daviesi*, LC

**Family Hexatrygonidae**

Sixgill stingray, *Hexatrygon bickelli*, LC

Longnosed deepwater ray, *Hexatrygon longirostra*, IUCN uncertain whether separate species

**Family Dasyatidae**

Diamond stingray, *Dasyatis dipterura*, DD

Brown stingray, *Dasyatis lata*, LC

Pelagic stingray, *Pteroplatytrygon violacea*, LC

**Family Myliobatidae**

Spotted eagle ray, *Aetobatus narinari*, NT

**Family Mobulidae**

Manta ray, *Manta birostris*, VU

Spinetail devil ray, *Mobula japonica*, NT

**The Humane Society of the United States requests a favorable report on SB2079 SD2**

Keith Dane

[kdane@humanesociety.org](mailto:kdane@humanesociety.org)

301-312-1489

**SB-2079-SD-2**

Submitted on: 3/12/2018 9:57:20 AM

Testimony for OMH on 3/13/2018 9:45:00 AM

**LATE**

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Melodie Aduja	OCC Legislative Priorities Committee, Democratic Party of Hawai'i	Support	No

Comments:

# Support for SB 2079

ONE OCEAN DIVING <oneoceandiving@gmail.com>

Sun 3/11/2018 3:54 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

**I strongly support SB 2079.** Sharks and rays are a vital component of healthy marine ecosystems that have experienced rapid declines throughout the last decades. As apex predators sharks are at the top of the food chain, therefore maintaining balance of the ecosystem by regulating abundance of marine life in lower trophic levels and acting as the immune system of our oceans by picking off the weak, sick and overpopulated keeping fish stocks healthy.

## Support for Ecological Importance

Ecosystem models predict that the removal of sharks can result in complex community changes, including trophic cascades, mesopredator release, and consequent declines in some commercial fish and cascading changes in some coastal ecosystems (Ferretti et al. 2010). Additional research indicates that the removal of shark and rays may alter size, structure and population parameters in response to changes in species abundance (Stevens et al. 2000).

In the context of ecosystem level changes specific to Hawaii, a study published in 2000 examined the potential long term impacts of the removal of sharks with the use of a dynamic model ECOSIM that predicts changes in biomasses, yields, and consumption for each group through time. They found that when tiger sharks were removed from the model a total and rapid crash in the abundance of tuna and jacks, and an increase in bottom fishes occurred due to increases in seabird populations which compete with tunas and jacks for food and were no longer subject to top down control by tiger sharks (Stevens et al. 2000). While ecological relationships are very complex and difficult to simulate this study highlights the potential for unforeseen and unintended consequences when sharks are removed.

Further evidence for the ecological importance of sharks can be found when comparing the density, size, and biomass of reef fishes in northwestern Hawaiian islands, a large, remote, and lightly fished area, and the main Hawaiian islands (MHI), an urbanized, heavily fished area. The study by Friedlander & DeMartini in 2002 revealed dramatic differences between the two ecosystems, as grand mean fish standing stock in the NWHI was more than 260% greater than in the MHI, more than 54% of the total fish biomass in the NWHI consisted of apex predators, (primarily sharks and jacks) whereas this trophic level accounted for less than 3% of the fish biomass in the MHI. The study concluded these differences represent both near-extirpation of apex predators and heavy exploitation of lower trophic levels in the MHI compared to the largely unfished NWHI (Friedlander & DeMartini 2002).

A 2008 report by the DLNR-DAR of Hawaii found that Oahu's reefs have around 1/10th the biomass of apex predators (Willaims et al. 2008) when compared to remote inaccessible reefs, indicating that anthropogenic pressures through the main Hawaiian islands has dramatically reduced populations of sharks and rays that are particularly susceptible to over-exploitation due to life history characteristics including slow growth, late attainment of sexual maturity, long life spans, low fecundity (Stevens et al. 2000).

## Support for economic value of sharks

Sharks are also not only ecologically important, but also economically important. Sharks are more alive according to a 2013 study by Cisneros-Montemayor et. al which estimates participants in the shark

ecotourism industry expend > USD 314 million per year and is projected to grow based on current trends to an estimated > USD 780 million in tourist expenditures in the next 20 years (Cisneros-Montemayor et al. 2013). Similarly, a 2012 study by Vianna et. al provides support for the argument of non-extractive resource use based on data from shark ecotourism operations in Palau which generates USD\$18 million per year, and states that the estimates value of the population of approximately 100 sharks used in the operation to be at most USD\$10,800 if they were harvested which is a fraction of worth of these animals as a non-consumptive resource (Vianna et al. 2012).

Based on the scientific studies cited above there is a very clear argument for protecting sharks and rays in Hawaiian waters for their ecological, economic, and intrinsic value. The long term ecological implications of removal of apex predators are difficult to document, but when it comes to conserving such a vital component of our marine ecosystems the precautionary approach should be taken to ensure healthy populations of these animals persist for future generations. Some may oppose this bill because they believe it will be difficult to fund enforcement, but some of the business that stand to gain (shark ecotourism businesses) from this bill could participate in a voluntary "shark watching tax" of \$5 for every person who wants to commercially see a shark alive to help with any costs of enforcing this law. We as a community could help to provide the evidence to DLNR to enforce this law leaving no logical reason not to support this bill.

## Sources

Cisneros-Montemayor, A., Barnes-Mauthe, M., Al-Abdulrazzak, D., Navarro-Holm, E., & Sumaila, U. (2013). Global economic value of shark ecotourism: Implications for conservation. *Oryx*, 47(3), 381-388. doi:10.1017/S0030605312001718

Ferretti, F., Worm, B., Britten, G. L., Heithaus, M. R. and Lotze, H. K. (2010), Patterns and ecosystem consequences of shark declines in the ocean. *Ecology Letters*, 13: 1055–1071. doi:10.1111/j.1461-0248.2010.01489.x

Friedlander, Alan & DeMartini, EE. (2002). Contrasts in density, size, and biomass of reef fishes between the northwestern and the main Hawaiian islands: The effects of fishing down apex predators. *Marine Ecology-progress Series - MAR ECOL-PROGR SER.* 230. 253-264. 10.3354/meps230253.

Stevens, J. D., Bonfi R.I, Dulvy N. K., Walker P. A. ; The effects of fishing on sharks, rays, and chimaeras (chondrichthyans), and the implications for marine ecosystems, *ICES Journal of Marine Science*, Volume 57, Issue 3, 1 June 2000, Pages 476–494

Vianna, G.M.S., Meekan, M.G., Pannell, D.J., Marsh S.P., Meeuwig, J.J. (2012) Socio-economic value and community benefits from shark-diving tourism in Palau: A sustainable use of reef shark populations, *Biological Conservation*, Volume 145, Issue 1, 2012, Pages 267-277. <https://doi.org/10.1016/j.biocon.2011.11.022>.

WILLIAMS, I., WALSH, W., SCHROEDER, R., FRIEDLANDER, A., RICHARDS, B., & STAMOULIS, K. (2008). Assessing the importance of fishing impacts on Hawaiian coral reef fish assemblages along regional-scale human population gradients. *Environmental Conservation*, 35(3), 261-272. doi:10.1017/S0376892908004876

<https://dlnr.hawaii.gov/dar/files/2014/04/ReefFishStocks.pdf>

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@JuanSharks

#HelpSaveSharks #ItsTheirOcean #AppexPredatorNotMonster #SaveTheOcean

"In the end we will conserve only that we love; we will love only what we understand; and we will understand only what we are taught." (Baba Dioum, 1968)

# In SUPPORT Of SB2079 Save Sharks ans Rays!

[Thomas Wernhart <th.wernhart@gmail.com>](mailto:th.wernhart@gmail.com)

Sun 3/11/2018 8:15 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

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Mag. Thomas Wernhart  
Redbull.com  
Head of Department SNOW/ADVENTURE  
Social Media Management  
Writer, Photographer, Ocean Lover  
VIENNA  
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## Attn Chair Ing: Support SB 2079

carrie trujillo <tru.carrie@live.com>

Mon 3/12/2018 8:44 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha,

I came to Hawaii because I was enamored by the culture, the spirit of aloha, and the reverence for nature that awakens in the eyes of every soul who looks upon this paradise. And of course I came for the sharks; to commune with them and to protect them.

However, in my almost seven years in Hawaii, the number of times I have swam with sharks is still in the single digits. And I have only witnessed two species in the wild, the white tip reef shark and the sandbar shark, unless out with One Ocean Diving at their natural aggregate site on the North Shore of Oahu.

In my almost seven years in Hawaii, I have never found a shark tooth; and I have been taught that being able to find shark teeth along the shore is one way to tell if an area has a thriving shark population. Sharks constantly lose and replace teeth so the logic makes sense. Yet here, not a one.

However I do see social media videos of catching and releasing sharks in Hawaiian waters, claiming no harm no foul as the animal wasn't actually killed. But these animals have a low incidence of surviving catch and release encounters due to the high stress the event causes, the physical exhaustion from the fight, and the weight of our atmosphere crushing their internal organs when forced out of the water. I do see gill nets legally left unattended for up to two hours at a time with a four hour allowed maximum that have snared, suffocated, and killed countless marine animals including baby reef sharks.

Yet none of these folks are breaking the law; the problem is not with them. The problem is with the legislation. So let's change that legislation, let's protect our sharks, our ocean's balance keepers. our amakua. Let's make a difference at the top, where it all starts. [Let's begin today and let's begin with this bill.](#) SB 2079.

Mahalo for your time and kokua.

Aloha,

Carrie Trujillo  
Owner, Maui Island Mermaids  
Lead Ambassador, One Ocean Global Team Maui  
808-250-2998  
[info@mauiislandmermaids.com](mailto:info@mauiislandmermaids.com)  
[www.mauiislandmermaids.com](http://www.mauiislandmermaids.com)

In support of SB 2079

Jessica Strickland <jessicakstrickland@gmail.com>

Sun 3/11/2018 11:57 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attention Chair Ing,

I support bill SB 2079 to further protect Hawaii's shark and ray populations by prohibiting the recreational fishing of these animals for the reasons as follows:

1. As apex predators, sharks ensure a healthy ecosystem by preying upon weak or diseased individuals, keeping prey populations healthy and in check and maintaining a balanced food chain.
2. Biologically, sharks and rays have very low reproductive rates, late sexual maturity and long gestation periods making them highly vulnerable to population decline from overfishing.
3. Despite their low reproductive rates, importance within the ecosystem, and high economic value (when alive!), 70-100 million sharks are senselessly killed in our oceans each year, rendering many species endangered or threatened.
4. Sharks (like the Galapagos, Sandbar, Tiger and Hammerhead) and rays (including Reef and Oceanic Manta Rays) provide a fundamental economic benefit to the Hawaiian tourism industry, drawing visitors from all over the world to view these animals in their natural habitat.
5. As top level predators, sharks have often accumulated unhealthy or even dangerous levels of toxins within their tissues, making many species an unsuitable choice for food. Banning the recreational fishing of these animals also helps to protect the health of fishers and their families.
6. Hawaii has been a world leader in so many amazing efforts. Attitudes towards, knowledge about, and the understanding of sharks are shifting and evolving. This is the chance for Hawaii to lead the movement and be an example to others.

It is absolutely necessary to stop damaging fishing practices and enforce sustainability for the health and safety of our oceans, the planet and future generations.

Jessica Strickland  
Australia

--  
*Jessica Strickland*



*B(Hons)UrbEnvPlan, BSc(Marine Biology)*

***Director, I.SEA. Conservation***

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**SB-2079-SD-2**

Submitted on: 3/9/2018 5:06:02 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Shyla Moon	Individual	Oppose	No

Comments:

**SB-2079-SD-2**

Submitted on: 3/9/2018 5:06:49 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Isaac Moon	Individual	Oppose	No

Comments:

**SB-2079-SD-2**

Submitted on: 3/9/2018 9:36:43 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Nancy Davlantes	Individual	Support	Yes

Comments:

**SB-2079-SD-2**

Submitted on: 3/9/2018 10:25:13 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Ted Bohlen	Individual	Support	No

Comments:

Sharks and rays are apex predators that need the protections provided in this bill. If they are not protected, the entire ocean ecosystem will suffer. Please pass this bill. Mahalo!

**SB-2079-SD-2**

Submitted on: 3/10/2018 5:22:10 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Jaunette Itsuno	Individual	Support	No

Comments:

I strongly support SB2079 and the amendments made which extended the protection to all members of the rays of the *elasmobranchii* subclass and established the fines for each offense for both sharks and rays. However, I think that the effective date should be changed to 2019 instead of 2050. Our shark and ray populations could be drastically reduced if we wait that long to establish their protections. Please pass this bill to protect Hawaii's unique ocean ecosystems which require the healthy populations of these animals.

**SB-2079-SD-2**

Submitted on: 3/11/2018 4:40:31 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Stephanie McLaughlin	Individual	Support	No

Comments:

**SB-2079-SD-2**

Submitted on: 3/11/2018 5:16:58 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Ocean Ramsey	Individual	Support	Yes

Comments:

IN SUPPORT OF SB 2079

While we have the strongest state law against finning and the sale of shark fin/fin products, our current laws don't prohibit killing a shark (or some rays). This bill would add that prohibition and (preventing any future shark killing contests) and extend the existing protections for manta rays to all rays. This horrendous story graphically brought the issue to the attention of the public:

<http://www.hawaiinewsnow.com/story/23421253/tiger-shark-captured-on-video-from-hawaii-island-sparks-controversy>

I strongly support SB 2079. Sharks and rays are a vital component of healthy marine ecosystems that have experienced rapid declines throughout the last decades. As apex predators sharks are at the top of the food chain, therefore maintaining the balance of the ecosystem by regulating the abundance of marine life in lower trophic levels and acting as the immune system of our oceans by picking off the weak, sick and overpopulated keeping fish stocks healthy.

Support for Ecological Importance

Ecosystem models predict that the removal of sharks can result in complex community changes, including trophic cascades, mesopredator release, and consequent declines in some commercial fish and cascading changes in some coastal ecosystems (Ferretti et al. 2010). Additional research indicates that the removal of shark and rays may alter size, structure and population parameters in response to changes in species abundance (Stevens et al. 2000).

In the context of ecosystem-level changes specific to Hawaii, a study published in 2000 examined the potential long-term impacts of the removal of sharks with the use of a dynamic model ECOSIM that predicts changes in biomasses, yields, and consumption for each group through time. They found that when tiger sharks were removed from the model a total and rapid crash in the abundance of tuna and jacks, and an increase in



bottom fishes occurred due to increases in seabird populations which compete with tunas and jacks for food and where no longer subject to top-down control by tiger sharks (Stevens et al. 2000). While ecological relationships are very complex and difficult to simulate this study highlights the potential for unforeseen and unintended consequences when sharks are removed.

Further evidence for the ecological importance of sharks can be found when comparing the density, size, and biomass of reef fishes in northwestern Hawaiian islands, a large, remote, and lightly fished area, and the main Hawaiian Islands (MHI), an urbanized, heavily fished area. The study by Friedlander & DeMartini in 2002 revealed dramatic differences between the two ecosystems, as grand mean fish standing stock in the NWHI was more than 260% greater than in the MHI, more than 54% of the total fish biomass in the NWHI consisted of apex predators, (primarily sharks and jacks) whereas this trophic level accounted for less than 3% of the fish biomass in the MHI. The study concluded these differences represent both near-extirpation of apex predators and heavy exploitation of lower trophic levels in the MHI compared to the largely unfished NWHI (Friedlander & DeMartini 2002).

A 2008 report by the DLNR-DAR of Hawaii found that Oahu's reefs have around 1/10th the biomass of apex predators (Willaims et al. 2008) when compared to remote inaccessible reefs, indicating that anthropogenic pressures through the main Hawaiian islands has dramatically reduced populations of sharks and rays that are particularly susceptible to over-exploitation due to life history characteristics including slow growth, late attainment of sexual maturity, long life spans, low fecundity (Stevens et al. 2000).

#### Support for the economic value of sharks

Sharks are also not only ecologically important but also economically important. Sharks are worth far more alive according to a 2013 study by Cisneros-Montemayor et al. which estimates participants in the shark ecotourism industry expend > USD 314 million per year and is projected to grow based on current trends to an estimated > USD 780 million in tourist expenditures in the next 20 years (Cisneros-Montemayor et al. 2013). Similarly, a 2012 study by Vianna et. al provides support for the argument of non-extractive resource use based on data from shark ecotourism operations in Palau which generates USD\$18 million per year, and states that the estimated value of the population of approximately 100 sharks used in the operation to be at most USD\$10,800 if they were harvested which is a fraction of worth of these animals as a non-consumptive resource (Vianna et al. 2012).

Based on the scientific studies cited above there is a very clear argument for protecting sharks and rays in Hawaiian waters for their ecological, economic, and intrinsic value. The long-term ecological implications of the removal of apex predators are difficult to document, but when it comes to conserving such a vital component of our marine ecosystems the precautionary approach should be taken to ensure healthy populations of these animals persist for future generations. Some may oppose this bill because they believe it will be difficult to fund enforcement, but some of the business that stand to

benefit (shark ecotourism businesses) from this bill could participate in a voluntary “shark watching tax” of \$5 for every person who wants to commercially see a shark alive to help with any costs of enforcing this law. We as a community could help to provide the evidence to DLNR to enforce this law leaving no logical reason not to support this bill.

## Sources

Cisneros-Montemayor, A., Barnes-Mauthe, M., Al-Abdulrazzak, D., Navarro-Holm, E., & Sumaila, U. (2013). Global economic value of shark ecotourism: Implications for conservation. *Oryx*, 47(3), 381-388. doi:10.1017/S0030605312001718

Ferretti, F., Worm, B., Britten, G. L., Heithaus, M. R. and Lotze, H. K. (2010), Patterns and ecosystem consequences of shark declines in the ocean. *Ecology Letters*, 13: 1055–1071. doi:10.1111/j.1461-0248.2010.01489.x

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Stevens, J. D., Bonfi R.I, Dulvy N. K., Walker P. A. ; The effects of fishing on sharks, rays, and chimaeras (chondrichthyans), and the implications for marine ecosystems, *ICES Journal of Marine Science*, Volume 57, Issue 3, 1 June 2000, Pages 476–494

Vianna, G.M.S., Meekan, M.G., Pannell, D.J., Marsh S.P., Meeuwig, J.J. (2012) Socio-economic value and community benefits from shark-diving tourism in Palau: A sustainable use of reef shark populations, *Biological Conservation*, Volume 145, Issue 1, 2012,

Pages 267-277. <https://doi.org/10.1016/j.biocon.2011.11.022>.

WILLIAMS, I., WALSH, W., SCHROEDER, R., FRIEDLANDER, A., RICHARDS, B., & STAMOULIS, K. (2008). Assessing the importance of fishing impacts on Hawaiian coral reef fish assemblages along regional-scale human population gradients. *Environmental Conservation*, 35(3), 261-272. doi:10.1017/S0376892908004876

<https://dlnr.hawaii.gov/dar/files/2014/04/ReefFishStocks.pdf>

Please pass this law for the sake of Hawaii’s future.

**SB-2079-SD-2**

Submitted on: 3/11/2018 6:00:09 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Heather McCarthy	Individual	Support	No

Comments:

I am supporting this bill because I believe in the protection of sharks and rays. I grew up being totally scared of sharks and anything else in the ocean due to Hollywood movies, which featured them as hungry man eating animals. Since moving to Hawaii and educating myself about them and the ocean I have learned so many wonderful things and real life facts and figures about these beautiful and necessary creatures in our oceans. Hollywood has really hurt sharks' reputations and its movies like Jaws that lets people continue to kill them for meaningless soups or jewelry. This must be stopped, as these creatures are vital for our oceanic ecosystem. I continue to learn and from going out into the oceans on a daily basis I am changing my fear into compassion. We all must educate ourselves and each other about the truths to sharks, rays, the health of our oceans, and how to protect and sustain them all. And because most people have been influenced by these movies, that ignorance has allowed the ceaseless murder of most the sharks' populations nowadays. For facts and figures check out One Ocean Diving. They are doing all the valid research and I have researched further into other organizations as well because I feel as a citizen we must all do our part, our own research as well so that we understand what is truly going on and how we can play a part to impact this environment and world in a positive way. I strongly urge protection for all sharks and rays.

Thank you,

Heather McCarthy

**SB-2079-SD-2**

Submitted on: 3/11/2018 6:31:58 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Shannon Murphy	Individual	Support	No

Comments:

**Aloha, my name is Shannon Murphy and I am a 17 year old attending Kaiser High School. I am also the president of a beach cleanup club called the Wipeout Crew at school. My work in environmentalism has opened up my world and has taught me so many things. I used to fear sharks because of the mass media and its portrayal of these animals. Little did I know that 80-100 million sharks are killed every year, which was completely shocking to me and my peers. We should not fear sharks, but fear for them.**

**Sharks are crucial for the ocean: they make sure only the healthiest organisms reproduce and they eat the sick, diseased, and dying species. STUDIES show that a decrease of shark population equals a collapse of fisheries. We need these animals more than people think. Sharks have been on Earth long before the first humans, and they are here for a reason.**

**Please consider this bill. It will help save sharks for my future and for a healthier ocean. Thank you for your consideration.**

**SB-2079-SD-2**

Submitted on: 3/11/2018 6:40:43 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Melanie Laberge	Individual	Support	No

Comments:

My name is Melanie and I am a shark conservationist from Canada. I learned through exploring marine biology how sharks play an important role in every ecosystem because they keep our oceans in balance. These predators eat the fish who consume the plankton we depend on to get more than 50% of our oxygen; which is why our planet cannot let sharks go extinct and must protect them, today. Rays play an important part in our ecosystem also and they too deserve to be protected.

If you choose to protect these creatures you would be investing in your countrys economy because the more sharks and rays you have in the ocean, the more tourists will want to pay to see them! There is no negative aspect here in approving this bill and I want to live in a world where ecosystems thrive the way they were supposed too. I know that with the present state of our oceans in mind, you will choose ocean conservation today and vote to protect sharks and rays!

**SB-2079-SD-2**

Submitted on: 3/11/2018 7:10:31 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Morgan Esarey	Individual	Support	No

Comments:

Please help save sharks. They are so important to the survival of this planet. They keep the oceans healthy, providing most of the air we breathe.

From an economic standpoint, sharks are worth way more alive than dead.

It's in all of our best interests. Please save the sharks and rays.

**SB-2079-SD-2**

Submitted on: 3/11/2018 7:19:15 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Andrea Nandoskar	Individual	Support	No

Comments:

Please support this bill protecting sharks and all rays from senseless cruelty and abuse. These magnificent ocean creatures deserve to live in their own right in addition to playing important roles in our marine ecosystem. This bill will deter their cruelty and victimization and fine those who participate in such behavior.

Mahalo for your consideration.

**SB-2079-SD-2**

Submitted on: 3/11/2018 8:40:43 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
M. Markl	Individual	Support	No

Comments:

Hello Chair(s) And Committee Members:

I totally support this important bill SB 2079. You are the power that holds the life of these valuable sharks and rays in your hand. Please do everything you can do to ensure the forwarding of this bill into law this session since we can't count on many of the public to do the right compassionate action. Thank you.



**SB-2079-SD-2**

Submitted on: 3/11/2018 9:18:05 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Dominique	University of Hawaii at Manoa	Support	No

Comments:

**SB-2079-SD-2**

Submitted on: 3/11/2018 9:59:24 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Michael Amrhein	Individual	Support	No

Comments:

As stated in the bill, sharks and rays play vital roles in Hawaii's ecosystem, culture, and economy, and I believe it is critical for the state to continue taking measures that will protect and preserve these species. I hope that Hawaii can remain at the forefront of environmental consciousness and pass important measures like the bill proposed here to serve as an example for the rest of the country. Beyond the importance of sharks and rays in preserving the well-being and health of our ocean, the data has consistently demonstrated that, from an economic standpoint, sharks are worth more alive than dead due to their role in the ecotourism industry. For these reasons (not too mention sharks and rays are just plain cool), I offer my full support for this bill.

**SB-2079-SD-2**

Submitted on: 3/12/2018 6:06:24 AM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Crystal Dombrow	Individual	Support	No

Comments:

Thank you for taking the time to read this testimony. I am a graduate student at Scripps Institution of Oceanography and I support the passage of SB2079. Sharks are a crucial top predator in our oceans. They intentionally detect and feed on the weak, sick and dying individuals of prey populations and leave the healthiest to survive and reproduce. Their predation behavior keeps ocean communities healthy and yields a healthy food supply with fish as a top source of protein for much of the world. They are likewise vital to maintaining oceanic ecosystems which are especially of commercial value for ecotourism revenue in the State of Hawai'i.

Unfortunately, films and television documentaries have been framing sharks as man-eating monsters over the past few decades and this portrayal directly impacts shark populations. A close colleague of mine recently interviewed recreational shark fishermen in the US and filmed on camera; these fishermen attributed their love for shark fishing having started after watching the Discovery Channel's Shark Week which capitalizes on that image of a deep sea demon to be conquered. By not allowing these animals to be hunted for sport, the state of Hawai'i is declaring their value to our world. As sharks hold cultural value in Hawai'i as 'aumakua, I hope you will stand to protect them from needless slaughter which will in turn help transform public opinion of them so we can again coexist with these keystone species of our ecosystem.

Many species have already been hunted to the brink of extinction with 90-99% of populations of large species having already declined over the past 3-4 decades. These particular species are popular for sport fishing because of the "fight" they put up when hooked. Unfortunately, catch and release has been shown to result in high post-release mortality for both commercial and recreational fishing often due to high lactate buildup and that these species require constant swimming to breathe (see research by Melanie Hutchinson, JIMAR Fisheries Bycatch Researcher, NOAA and University of Hawai'i affiliate). It is not a solution to allow recreational catch and release of the animals.

Finally, Hawai'i killed nearly 5,000 sharks during its cull from 1959-1976, contributing to the significant decline in local large species' populations. The evidence is empirical: as a diver and hearing from fellow divers, seeing a Tiger shark is extremely rare and other large species are even more scarce. The State of Hawai'i, therefore, will benefit from protecting its shark populations from recreational angling, which accounts for more shark deaths worldwide than all commercial industries combined.



"3-13-18 Support for SB 2079, SD2".

[Karen Foster <kfoster00@hotmail.com>](mailto:kfoster00@hotmail.com)

Sun 3/11/2018 3:12 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Stop all killing of sharks and rays.

Sent from my Samsung Galaxy Tab®4

In support SB2079

[Kayleigh Burns <kayleigh.burns0920@gmail.com>](mailto:kayleigh.burns0920@gmail.com)

Sun 3/11/2018 4:00 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha Committee Members,

I strongly support SB2079 SD1 in granting more protection for sharks and rays in Hawaiian waters. As a shark naturalist for One Ocean Research & Diving, I understand the ecological importance of sharks in marine ecosystems, the economic benefit to “swim with shark” programs, and the cultural value of sharks in Hawaiian tradition.

From 2000-2010 Sharks around the world have been decimated at a rate of about 100 million sharks per year (Worm & Gruber 2013). With only about 3% of the worlds ocean as a marine protected area (MPA) there exists few safe havens for these animals around the globe (Department of State Bureau of Oceans and International Environmental and Scientific Affairs 2016).

Sharks and rays are especially vulnerable to exploitation due to slow growth rate, late attainment of sexual maturity, long life spans, & low fecundity (Stevens et al 2000)

As apex predators, sharks are at the top of the food chain, therefore maintaining the balance of the ecosystem by regulating the abundance of marine life in lower trophic levels while acting as the immune system of our oceans by picking off the weak, sick and overpopulated keeping fish stocks healthy.

Additional research indicates that the removal of shark and rays may alter size, structure and population parameters in response to changes in species abundance (Stevens et. al 2000).

Sharks are a clear sign of a healthy reef and marine ecosystem due to their predatory status. Hawaiian tourism relies greatly on our natural environment. It is our responsibility as a community to conserve our natural world for generations to come and those around the globe to enjoy. I have personally interacted with countless tourists from around the world traveling specifically for aquatic tourism with a focus on sharks and rays between Oahu and Hawaii island. Studies in the Maldives, Bahamas, and South Africa have clearly outline

the value of a live shark to severely outweigh the value of a dead shark.

“In the Maldives, for example, divers engaged in over 76,000 shark-observing dives in just one year, bringing in an estimated US \$2.3 million to the local economy in 1993

alone (Anderson & Ahmed, 1993; Anderson & Waheed, 2001). This same study also estimated that a single grey reef shark was worth an average of \$3,300 per year, and

over \$35,000 per year at the most popular dive sites.” Anderson and Ahmed (1993) concluded a grey reef shark was worth 100 times more when alive than dead.

Our team of conservationists at Keiko Conservation and One Ocean Research and Diving urge your committee to lead by example not only for the state of Hawaii but the entire nation and preserve Hawaii’s natural assets by passing SB2079 SD1.

Mahalo nui loa,

Kayleigh Nicole Burns

## IN SUPPORT OF SB 2079

[juan oliphant <juansharks@icloud.com>](mailto:juan.oliphant@icloud.com)

Sun 3/11/2018 4:01 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

## IN SUPPORT OF SB 2079

While we have the strongest state law against finning and the sale of shark fin/fin products, our current laws don't prohibit killing a shark (or some rays). This bill would add that prohibition and (preventing any future shark killing contests) and extend the existing protections for manta rays to all rays. This horrendous story graphically brought the issue to the attention of the public: <http://www.hawaiinewsnow.com/story/23421253/tiger-shark-captured-on-video-from-hawaii-island-sparks-controversy>

*I strongly support SB 2079. Sharks and rays are a vital component of healthy marine ecosystems that have experienced rapid declines throughout the last decades. As apex predators sharks are at the top of the food chain, therefore maintaining balance of the ecosystem by regulating abundance of marine life in lower trophic levels and acting as the immune system of our oceans by picking off the weak, sick and overpopulated keeping fish stocks healthy.*

**Support for Ecological Importance**

*Ecosystem models predict that the removal of sharks can result in complex community changes, including trophic cascades, mesopredator release, and consequent declines in some commercial fish and cascading changes in some coastal ecosystems (Ferretti et al. 2010). Additional research indicates that the removal of shark and rays may alter size, structure and population parameters in response to changes in species abundance (Stevens et al. 2000).*

*In the context of ecosystem level changes specific to Hawaii, a study published in 2000 examined the potential long term impacts of the removal of sharks with the use of a dynamic model ECOSIM that predicts changes in biomasses, yields, and consumption for each group through time. They found that when tiger sharks were removed from the model a total and rapid crash in the abundance of tuna and jacks, and an increase in bottom fishes occurred due to increases in seabird populations which compete with tunas and jacks for food and were no longer subject to top down control by tiger sharks (Stevens et al. 2000). While ecological relationships are very complex and difficult to simulate this study highlights the potential for unforeseen and unintended consequences when sharks are removed.*

*Further evidence for the ecological importance of sharks can be found when comparing the density, size, and biomass of reef fishes in northwestern Hawaiian islands, a large, remote, and lightly fished area, and the main Hawaiian islands (MHI), an urbanized, heavily fished area. The study by Friedlander & DeMartini in 2002 revealed dramatic differences between the two ecosystems, as grand mean fish standing stock in the NWHI was more than 260% greater than in the MHI, more than 54% of the total fish biomass in the NWHI consisted of apex predators, (primarily sharks and jacks) whereas this trophic level accounted for less than 3% of the fish biomass in the MHI. The study concluded these differences represent both near-extirpation of apex predators and heavy exploitation of lower trophic levels in the MHI compared to the largely unfished NWHI (Friedlander & DeMartini 2002).*

*A 2008 report by the DLNR-DAR of Hawaii found that Oahu's reefs have around 1/10th the biomass of apex predators (Willaims et al. 2008) when compared to remote inaccessible reefs, indicating that anthropogenic pressures through the main Hawaiian islands has dramatically reduced populations of*



sharks and rays that are particularly susceptible to over-exploitation due to life history characteristics including slow growth, late attainment of sexual maturity, long life spans, low fecundity (Stevens et al. 2000).

### **Support for economic value of sharks**

Sharks are also not only ecologically important, but also economically important. Sharks are more alive according to a 2013 study by Cisneros-Montemayor et al. which estimates participants in the shark ecotourism industry expend > USD 314 million per year and is projected to grow based on current trends to an estimated > USD 780 million in tourist expenditures in the next 20 years (Cisneros-Montemayor et al. 2013). Similarly, a 2012 study by Vianna et al. provides support for the argument of non-extractive resource use based on data from shark ecotourism operations in Palau which generates USD\$18 million per year, and states that the estimates value of the population of approximately 100 sharks used in the operation to be at most USD\$10,800 if they were harvested which is a fraction of worth of these animals as a non-consumptive resource (Vianna et al. 2012).

Based on the scientific studies cited above there is a very clear argument for protecting sharks and rays in Hawaiian waters for their ecological, economic, and intrinsic value. The long term ecological implications of removal of apex predators are difficult to document, but when it comes to conserving such a vital component of our marine ecosystems the precautionary approach should be taken to ensure healthy populations of these animals persist for future generations. Some may oppose this bill because they believe it will be difficult to fund enforcement, but some of the business that stand to gain (shark ecotourism businesses) from this bill could participate in a voluntary "shark watching tax" of \$5 for every person who wants to commercially see a shark alive to help with any costs of enforcing this law. We as a community could help to provide the evidence to DLNR to enforce this law leaving no logical reason not to support this bill.

## Sources

Cisneros-Montemayor, A., Barnes-Mauthe, M., Al-Abdulrazzak, D., Navarro-Holm, E., & Sumaila, U. (2013). Global economic value of shark ecotourism: Implications for conservation. *Oryx*, 47(3), 381-388.

doi:10.1017/S0030605312001718

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Friedlander, Alan & DeMartini, EE. (2002). Contrasts in density, size, and biomass of reef fishes between the northwestern and the main Hawaiian islands: The effects of fishing down apex predators. *Marine Ecology-progress Series - MAR ECOL-PROGR SER.* 230. 253-264. 10.3354/meps230253.

Stevens, J. D., Bonfi R.I, Dulvy N. K., Walker P. A. ; The effects of fishing on sharks, rays, and chimaeras (chondrichthyans), and the implications for marine ecosystems, *ICES Journal of Marine Science*, Volume 57, Issue 3, 1 June 2000, Pages 476–494

Vianna, G.M.S., Meekan, M.G., Pannell, D.J., Marsh S.P., Meeuwig, J.J. (2012) Socio-economic value and community benefits from shark-diving tourism in Palau: A sustainable use of reef shark populations, *Biological Conservation*, Volume 145, Issue 1, 2012, Pages 267-277. <https://doi.org/10.1016/j.biocon.2011.11.022>.

WILLIAMS, I., WALSH, W., SCHROEDER, R., FRIEDLANDER, A., RICHARDS, B., & STAMOULIS, K. (2008). Assessing the importance of fishing impacts on Hawaiian coral reef fish assemblages along regional-scale human population gradients. *Environmental Conservation*, 35(3), 261-272. doi:10.1017/S0376892908004876

<https://dlnr.hawaii.gov/dar/files/2014/04/ReefFishStocks.pdf>

JUAN OLIPHANT HALEIWA

Mahalo and thank you for supporting shark and marine conservation and research. #HelpSaveSharks

## Support for SB2079; shark-ray protection

[Kendra Nelson <kendranelson@go.byuh.edu>](mailto:kendranelson@go.byuh.edu)

Sun 3/11/2018 4:46 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

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I strongly support SB 2079. Sharks and rays are a vital component of healthy marine ecosystems that have experienced rapid declines throughout the last decades. As apex predators, sharks are at the top of the food chain, therefore maintaining balance of the ecosystem by regulating abundance of marine life in lower trophic levels and acting as the immune system of our oceans by picking off the weak, sick, and overpopulated, keeping fish stocks healthy. Help save our oceans! Protect them!

# In Support of SB2079 Save Sharks and Rays

[Adam Ross <aross@Autotask.com>](mailto:aross@Autotask.com)

Sun 3/11/2018 4:46 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Get [Outlook for iOS](#)

## In SUPPORT Of SB2079

[Kiana Petty <kianapetty@gmail.com>](mailto:kianapetty@gmail.com)

Sun 3/11/2018 4:52 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Thank you,  
Kiana Petty

Sent from my iPhone

Attn: Chair Ing In Support of SB 2079

Thomas Chardon <thomchardon@gmail.com>

Sun 3/11/2018 4:52 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

To whom it may concern,

Please allow us to be the generation that goes forward ! Sharks are vital to our oceans and our planet, I am sure you'll receive plenty of emails reminding you of this, do us all a favor and give them your voices to allow for them to be protected.

Thanks so much !

Best regards,

Thomas Chardon

## IN SUPPORT of SB2079 Save Sharks & Rays

[MARK O'BRIEN <markobrien1@outlook.com>](mailto:markobrien1@outlook.com)

Sun 3/11/2018 5:01 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Please help save sharks

Thanks,

Mark

In support of SB2079 save sharks and rays

[viridiana zugasti g <viridianazugastig@hotmail.com>](mailto:viridianazugastig@hotmail.com)

Sun 3/11/2018 5:06 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Save sharks and rays!!



# Sharks

[Hannah Cremmins <hancrem@gmail.com>](mailto:hancrem@gmail.com)

Sun 3/11/2018 5:35 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

In support of SB2079 Save Sharks and Rays!

--

Hannah Cremmins  
Silver Creek Leadership Academy Member  
Class of 2018

In support of sb 2079 save sharks and rays!

Kathy Van Wagoner <[kevanwagoner@gmail.com](mailto:kevanwagoner@gmail.com)>

Sun 3/11/2018 5:58 PM

To: omhtestimony <[omhtestimony@capitol.hawaii.gov](mailto:omhtestimony@capitol.hawaii.gov)>;

## In SUPPORT of SB2079 Save Sharks and Rays Inbox x

Paige Luther <pmluther@ncsu.edu>

Sun 3/11/2018 6:11 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I am sending this email all the way from Raleigh, North Carolina to voice my support to save sharks. Sharks are very important to our oceans and killing them is cruel, unjustified, and only hurts the ecosystem. I have had the ability to scuba dive with only a few sharks in my life time but never once have I felt threaten in anyway, however, it broke my heart to see an old shark swimming around with a giant hook sticking out of its mouth. Someday, I would love to get the opportunity to help sharks and dive with them more often but as of now this is how I can help. Save the sharks!!!!!!!!!!!!

Thank you,

Paige Luther

Attn: In support of SB 2079

[Shea Prueger <shea.prueger@gmail.com>](mailto:shea.prueger@gmail.com)

Sun 3/11/2018 6:12 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha!

I'm writing in support of protecting sharks and rays. Humans are the biggest threat to our oceans and we cannot exist without a healthy ocean. Sharks and rays are essential to this.

I've spent time freediving with sharks and was amazed at how gentle they are. Humans are destroying animals in our oceans that have existed far longer than we have. It is the humane move to protect our sharks and rays.

I hope compassion, statistics, and logic come into play with this vote. Sharks and rays need us to protect them, they need us to use our voices for them!

Mahalo,

Shea Prueger  
Pahoa, Hawaii  
8087472836

## In SUPPORT of SB2079 Save Sharks And Rays!

Lizzie Youmans <lizzie.youmans@icloud.com>

Sun 3/11/2018 6:17 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

#savesharks #saverays #saveoceanlife

Dear Person I am Emailing,

I am someone who wants to the ocean to survive because it has been here since before the first man and it should be here long after. The organisms might not have been here as long as the water itself, but it doesn't mean that they don't matter. These animals are a CRUCIAL and INTEGRAL part of our environment and food chain. I know you probably are already trying to make a difference, but I just wanted to encourage you to work hard to save our oceans because they need to stay. They are going fast due to the littering and pollution and nobody realizes how affected the animals are. Please tell the world what is happening to our oceans so the world can come together and come up with a healthy and easy solution to the problem that may result in the extinction of some of the world's natural wonders.

Thanks,

Lizzie

P.S. I really believe in the cause. 🐠🐠

## Save Our Sharks

Moria Nisbet <prueferm@gmail.com>

Sun 3/11/2018 6:29 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

### To Whom It May Concern:

While we have the strongest state law against finning and the sale of shark fin/fin products, our current laws don't prohibit killing a shark (or some rays). This bill would add that prohibition and (preventing any future shark killing contests) and extend the existing protections for manta rays to all rays. This horrendous story graphically brought the issue to the attention of the public:

<http://www.hawaiinewsnow.com/story/23421253/tiger-shark-captured-on-video-from-hawaii-island-sparks-controversy>

I strongly support SB 2079. Sharks and rays are a vital component of healthy marine ecosystems that have experienced rapid declines throughout the last decades. As apex predators sharks are at the top of the food chain, therefore maintaining balance of the ecosystem by regulating abundance of marine life in lower trophic levels and acting as the immune system of our oceans by picking off the weak, sick and overpopulated keeping fish stocks healthy.

### Support for Ecological Importance

Ecosystem models predict that the removal of sharks can result in complex community changes, including trophic cascades, mesopredator release, and consequent declines in some commercial fish and cascading changes in some coastal ecosystems (Ferretti et al. 2010). Additional research indicates that the removal of shark and rays may alter size, structure and population parameters in response to changes in species abundance (Stevens et al. 2000).

Aloha,

Moria Nisbet

808-777-7107

## Support SB 2079

Judy Mick <ppchawaii@yahoo.com>

Sun 3/11/2018 6:36 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha - I am asking that you support SB 2079. We must protect sharks from being killed for sport or any other reason. Mahalo and aloha, Judy Mick, Kailua

Save the sharks and rays!!!

[Bella Tran <bellatran11@yahoo.com>](mailto:bellatran11@yahoo.com)

Sun 3/11/2018 6:37 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

In SUPPORT OF SB2079

Save the sharks, rays, and in turn save our oceans and life!



In support of SB2079 Save sharks and rays!

[Hannah Hubanks <hhubanks@hawaii.edu>](mailto:hhubanks@hawaii.edu)

Sun 3/11/2018 6:51 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

--

Hannah L. Hubanks

Department of Natural Resources and Environmental Management  
University of Hawaii at Mānoa

Attn: Chair Ing In Support of SB 2079

[Emma Penelope <emmaslikker@gmail.com>](mailto:emmaslikker@gmail.com)

Sun 3/11/2018 6:53 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hawaii should try to protect the sharks and rays more!! Those animals are no less important then we are and they deserve protection.

## In support of SB2079 Save Sharks and Rays!

[Erin <erinrice@att.net>](mailto:erinrice@att.net)

Sun 3/11/2018 7:09 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hello,

I am writing in support of SB2079 to help save sharks & rays. Please pass this bill as sharks and rays are vital to the health of our planet & must be protected!

Thank you,

Erin Rice

## Support SB 2079

[N S <shawrbs@gmail.com>](mailto:shawrbs@gmail.com)

Sun 3/11/2018 7:13 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I support SB 2079

When sharks and rays are removed from an ecosystem it often results in dramatic unforeseen consequences that impact the ecosystem structure across multiple levels. Sharks are an important part of Hawaiian culture. Sharks and rays in Hawaiian waters means healthy oceans, and healthy oceans attract visitors to our lovely islands. Mahalo,

Regards,  
Nathan Shaw

Attn:Chair Ing In Support of SB 2079

[Ben Witmer <benwitmerart@gmail.com>](mailto:benwitmerart@gmail.com)

Sun 3/11/2018 7:14 PM

To:omhtestimony <omhtestimony@capitol.hawaii.gov>;

I have only lived in Hawaii for 4 months, but I plan on living here for much longer. I think that hunting and killing sharks and rays is absurd and should not be done here or anywhere else in the world. Please continue to protect these species that are an intrinsic part of our ecosystem and prevent any further damage to them or their habitat and the biodiversity of the ocean. Thank you,

Ben Witmer

## Bill SB 2079

[Gillian Boss <gillian1@hawaii.rr.com>](mailto:gillian1@hawaii.rr.com)

Sun 3/11/2018 7:21 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Please pass bill SB 2079

Thank you

Gillian Boss

In SUPPORT of SB2079 save sharks and rays!

[Mackenzie Watson <m.watson7100@gmail.com>](mailto:m.watson7100@gmail.com)

Sun 3/11/2018 8:00 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attn: Chair Ing In Support of SB 2079

[Nadean Lane <lane.nadean@yahoo.com>](mailto:lane.nadean@yahoo.com)

Sun 3/11/2018 8:02 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha Chair,

Please pass this bill SB 2079 to further protect sharks and rays here in Hawaii. Sharks are so vital for a healthy ocean. Sharks and rays are also just amazing creatures that the islands of Hawaii should protect. I'm sure it's what the ancestors of the island would want.

Mahalo for your time

Nadean Lane



# In SUPPORT Of SB2079 Save Sharks and Rays!

Jasmine Stephenson <jasminestephenson@cloud.garincollege.ac.nz>

Sun 3/11/2018 8:11 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

01010011011000010111011001100101001000000101010001101000011001010010000001010011011010000110000101110010011010110111001100100000010000100110010101100110011011101  
110010011001010010000001001001110100011100110010000001010100011011101101110010000001001100011000010111010001100101

# In Support of SB2079 Save Sharks and Rays!

Sunshine Hatto <[sunshinehatto@gmail.com](mailto:sunshinehatto@gmail.com)>

Sun 3/11/2018 8:15 PM

To: omhtestimony <[omhtestimony@capitol.hawaii.gov](mailto:omhtestimony@capitol.hawaii.gov)>;

Sent from my iPhone

## In Support of SB2079 save sharks and rays!

[Marco Pavioni <pavioni73@gmail.com>](mailto:pavioni73@gmail.com)

Sun 3/11/2018 8:31 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Supporting from Switzerland

Besten Dank und freundliche Grüsse  
Marco Pavioni

-----  
Phone: 076 455 37 73

Mail: [pavioni73@gmail.com](mailto:pavioni73@gmail.com)

## 3-13-18 Support SB 2079 SD 2

[Anita Wintner <anitabanana@hawaiiantel.net>](mailto:anitabanana@hawaiiantel.net)

Sun 3/11/2018 8:42 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I support this bill to stop killing of rays and sharks. Mahalo, Anita Wintner Maui  
Sent from my iPad

# IN SUPPORT Of SB2079 Save Sharks and Rays!

[Sierra Otero <sierraotero@icloud.com>](mailto:sierraotero@icloud.com)

Sun 3/11/2018 8:46 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Sent from my iPhone

## ATTN: Chair Ing In Support of SB2079

[Amy Cady <a.cady@yahoo.com>](mailto:a.cady@yahoo.com)

Sun 3/11/2018 8:56 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha Chair Ing,

I am writing to express my strong support for SB2079. Sharks and rays play a pivotal role in the health of our oceans and have an important cultural significance in Hawaii. These animals are already being wiped out in unfathomable numbers in federal waters around the islands and all around the world. It is unnecessary to fish them for recreation in state waters and I hope you will help make Hawaii the first state to write it into law.

Mahalo Nui,  
Mrs. Amy Cady  
Ewa Beach

Attn: Chair Ing In Support of SB 2079

[Becca Hoff <becca.hoff.rh@gmail.com>](mailto:becca.hoff.rh@gmail.com)

Sun 3/11/2018 9:05 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I support this bill because sharks and rays are in desperate need of protection. The rate in which they are being killed for meat, their fins and as bycatch is very alarming. I also think it would be a very inspiring thing if Hawaii went forward as a good example to protect sharks and rays.

Sincerely,  
Rebecca Hoffmann  
Keiko Conservation Norway

## In SUPPORT Of SB2079 Save Sharks and Rays!

[Jenna Hardy <jen.hardy98@gmail.com>](mailto:jen.hardy98@gmail.com)

Sun 3/11/2018 9:08 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hello,

I am writing to you to support the bill SB2079 to save the sharks and rays! Sharks are a FUNDAMENTAL species to our ecosystem. They do not deserve to be slaughtered. They do not deserve to be thrown back into the sea after their fins have been cut of only to sink to the bottom and drown. We need sharks and they need us to help them. Please pass this bill! Help save the sharks and the rays!!!!

Thank you,  
Jenna



## Chair Ing: I support SB 2079

Marina Woieni <jtmnature@gmail.com>

Sun 3/11/2018 9:17 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

The Hawaiian waters can be protected in this critical situation in the world. Sharks play a vital role for eco balance. As "leukocytes" of the ocean, sharks maintain its health, but 95% of them were killed in the last few decades and it sounds very dangerous for the planet as a whole. They do not have time to reproduce, because they reach maturity on average at 12 years and then give offspring every 2 years. Now each shark counts. Hawaiian culture is all about respect for marine animals, they believe that the ancestral souls protect the islands and families of those living here. Today there is a chance to support deep and wise cultural traditions and preserve the health of the islands.

Personally for me, directly in contact with sharks in the ocean as a freediver, they are not only the most important predators in the ocean but also highly vibrational creatures that fill life with positive emotions and goodness. They treat when they are alive and poison people with mercury on plates when they are dead.

I hope you have sufficiently studied this subject yourself and make the right decision. Mahalo and aloha.

Отправлено с iPhone

## IN SUPPORT OF SB 2079

[Charnele Peat <c.peat91@hotmail.com>](mailto:c.peat91@hotmail.com)

Sun 3/11/2018 9:17 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attention Chair Ing,

I support bill SB 2079 to further protect Hawaii's shark and ray populations by prohibiting the recreational fishing of these animals for the reasons as follows:

1. As apex predators, sharks ensure a healthy ecosystem by predating on sick, dead or dying individuals, keeping prey populations in check and the food chain in balance.
2. 70-100 million sharks are senselessly killed in our oceans each year, without cause or reprimand. This needs to change for the future of our seas.
3. Sharks (like the Galapagos, Sandbar, Tiger and Hammerhead) and rays (including Reef and Oceanic Manta Rays) provide a fundamental economic benefit to the Hawaiian tourism industry, drawing visitors from all over the world to view these animals in their natural habitat.
4. Biologically, sharks and rays have very low reproductive rates, late sexual maturity and long gestation periods making them highly vulnerable to population decline from overfishing.

It is absolutely necessary to stop damaging fishing practices and enforce sustainability for the health and safety of our oceans, the planet and future generations.

Thank you for being a part of the movement to save our seas.

Charni Peat  
New Zealand

Attn: Chair Ing In Support of SB 2079

[Erin Rodriguez <e.rod80@yahoo.com>](mailto:e.rod80@yahoo.com)

Sun 3/11/2018 9:21 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Sharks and rays play a pivotal role in the health of our oceans and have an important cultural significance in Hawaii. These animals are already being wiped out in unfathomable numbers in federal waters around the islands and all around the world. It is unnecessary to fish them for recreation in state waters and we hope you will help us make Hawaii the first state to write it into law.

They play a vital role in keeping our ocean's healthy. They do this by keeping other populations in check. As well as preying on the sick and old. This prevents the spread of disease and improves the gene pool.

Many divers relay magical experiences with sharks. And indeed this is often the highlight of any diving trip. Research shows that experiencing nature improves our well-being. And sharks are an integral part of our natural world. We want future generations to be able to enjoy sharks and healthy oceans that teem with life.

Thank you for your time,  
Erin Gordon

[Sent from Yahoo Mail on Android](#)

Attn: Chair Ing in support of SB2079

[Anna Diego <annabethdiego2@gmail.com>](mailto:annabethdiego2@gmail.com)

Sun 3/11/2018 9:39 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha,  
I am writing in hopes to add supprt for protection of sharks and rays in our Hawaiian waters.  
They are an integral part of our oceans health which directly impacts our health on the islands here.  
The State of Hawaii has a unique position in setting examples of how we can live sustainably NOW, be eco-concious NOW and make a difference for our children's FUTURE!  
Thank you,  
Anna Diego and Ohana in Hana, Maui

## ATTN: Chair ING

Taylor Henley &lt;taylorahenley@gmail.com&gt;

Sun 3/11/2018 9:44 PM

To: omhtestimony &lt;omhtestimony@capitol.hawaii.gov&gt;;

## IN SUPPORT OF SB 2079

While we have the strongest state law against finning and the sale of shark fin/fin products, our current laws don't prohibit killing a shark (or some rays). This bill would add that prohibition and (preventing any future shark killing contests) and extend the existing protections for manta rays to all rays. This horrendous story graphically brought the issue to the attention of the public: <http://www.hawaiinewsnow.com/story/23421253/tiger-shark-captured-on-video-from-hawaii-island-sparks-controversy>

I strongly support SB 2079. Sharks and rays are a vital component of healthy marine ecosystems that have experienced rapid declines throughout the last decades. As apex predators sharks are at the top of the food chain, therefore maintaining balance of the ecosystem by regulating abundance of marine life in lower trophic levels and acting as the immune system of our oceans by picking off the weak, sick and overpopulated keeping fish stocks healthy.

## Support for Ecological Importance

Ecosystem models predict that the removal of sharks can result in complex community changes, including trophic cascades, mesopredator release, and consequent declines in some commercial fish and cascading changes in some coastal ecosystems (Ferretti et al. 2010). Additional research indicates that the removal of shark and rays may alter size, structure and population parameters in response to changes in species abundance (Stevens et al. 2000).

In the context of ecosystem level changes specific to Hawaii, a study published in 2000 examined the potential long term impacts of the removal of sharks with the use of a dynamic model ECOSIM that predicts changes in biomasses, yields, and consumption for each group through time. They found that when tiger sharks were removed from the model a total and rapid crash in the abundance of tuna and jacks, and an increase in bottom fishes occurred due to increases in seabird populations which compete with tunas and jacks for food and were no longer subject to top down control by tiger sharks (Stevens et al. 2000). While ecological relationships are very complex and difficult to simulate this study highlights the potential for unforeseen and unintended consequences when sharks are removed.

Further evidence for the ecological importance of sharks can be found when comparing the density, size, and biomass of reef fishes in northwestern Hawaiian islands, a large, remote, and lightly fished area, and the main Hawaiian islands (MHI), an urbanized, heavily fished area. The study by Friedlander & DeMartini in 2002 revealed dramatic differences between the two ecosystems, as grand mean fish standing stock in the NWHI was more than 260% greater than in the MHI, more than 54% of the total fish biomass in the NWHI consisted of apex predators, (primarily sharks and jacks) whereas this trophic level accounted for less than 3% of the fish biomass in the MHI. The study concluded these differences represent both near-extirpation of apex predators and heavy exploitation of lower trophic levels in the MHI compared to the largely unfished NWHI (Friedlander & DeMartini 2002).

A 2008 report by the DLNR-DAR of Hawaii found that Oahu's reefs have around 1/10th the biomass of apex predators (Williams et al. 2008) when compared to remote inaccessible reefs, indicating that anthropogenic pressures through the main Hawaiian islands has dramatically reduced populations of sharks and rays that are particularly susceptible to over-exploitation due to life history characteristics including slow growth, late attainment of sexual maturity, long life spans, low fecundity (Stevens et al. 2000). Support for economic value of sharks

Sharks are also not only ecologically important, but also economically important. Sharks are more alive according to a 2013 study by Cisneros-Montemayor et al. which estimates participants in the shark ecotourism industry expend > USD 314 million per year and is projected to grow based on current trends to an estimated > USD 780 million in tourist expenditures in the next 20 years (Cisneros-Montemayor et al. 2013). Similarly, a 2012 study by Vianna et al. provides support for the argument of non-extractive resource use based on data from shark ecotourism operations in Palau which generates USD\$18 million per year, and states that the estimates value of the population of approximately 100 sharks used in the operation to be at most USD\$10,800 if they were harvested which is a fraction of worth of these animals as a non-consumptive resource (Vianna et al. 2012).

Based on the scientific studies cited above there is a very clear argument for protecting sharks and rays in Hawaiian waters for their ecological, economic, and intrinsic value. The long term ecological implications of removal of apex predators are difficult to document, but when it comes to conserving such a vital component of our marine ecosystems the precautionary approach should be taken to ensure healthy populations of these animals persist for future generations. Some may oppose this bill because they believe it will be difficult to fund enforcement, but some of the business that stand to gain (shark ecotourism businesses) from this bill could participate in a voluntary "shark watching tax" of \$5 for every person who wants to commercially see a shark alive to help with any costs of enforcing this law. We as a community could help to provide the evidence to DLNR to enforce this law leaving no logical reason not to support this bill.

## Sources

Cisneros-Montemayor, A., Barnes-Mauthe, M., Al-Abdulrazzak, D., Navarro-Holm, E., & Sumaila, U. (2013). Global economic value of shark ecotourism: Implications for conservation. *Oryx*, 47(3), 381-388. doi:10.1017/S0030605312001718

Ferretti, F., Worm, B., Britten, G. L., Heithaus, M. R. and Lotze, H. K. (2010). Patterns and ecosystem consequences of shark declines in the ocean. *Ecology Letters*, 13: 1055-1071. doi:10.1111/j.1461-0248.2010.01489.x

Friedlander, Alan & DeMartini, EE. (2002). Contrasts in density, size, and biomass of reef fishes between the northwestern and the main Hawaiian islands: The effects of fishing down apex predators. *Marine Ecology-progress Series - MAR ECOL-PROGR SER.* 230. 253-264. 10.3354/meps230253.

Stevens, J. D., Bonfi R.I., Dulvy N. K., Walker P. A. ; The effects of fishing on sharks, rays, and chimaeras (chondrichthyans), and the implications for marine ecosystems, *ICES Journal of Marine Science*, Volume 57, Issue 3, 1 June 2000, Pages 476-494

Vianna, G.M.S., Meekan, M.G., Pannell, D.J., Marsh S.P., Meeuwig, J.J. (2012) Socio-economic value and community benefits from shark-diving tourism in Palau: A sustainable use of reef shark populations. *Biological Conservation*, Volume 145, Issue 1, 2012, Pages 267-277 <https://doi.org/10.1016/j.biocon.2011.11.022>

WILLIAMS, I., WALSH, W., SCHROEDER, R., FRIEDLANDER, A., RICHARDS, B., & STAMOULIS, K. (2008). Assessing the importance of fishing impacts on Hawaiian coral reef fish assemblages along regional-scale human population gradients. *Environmental Conservation*, 35(3), 261-272. doi:10.1017/S0376892908004876 <https://dlnr.hawaii.gov/dar/files/2014/04/ReefFishStocks.pdf>

Please pass this law for the sake of Hawaii's future.

In support of SB 2079

Samuel Coe <mbsamcoe@gmail.com>

Sun 3/11/2018 11:58 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attention Chair Ing,

I support bill SB 2079 to further protect Hawaii's shark and ray populations by prohibiting the recreational fishing of these animals for the reasons as follows:

1. As apex predators, sharks ensure a healthy ecosystem by preying upon weak or diseased individuals, keeping prey populations healthy and in check and maintaining a balanced food chain.
2. Biologically, sharks and rays have very low reproductive rates, late sexual maturity and long gestation periods making them highly vulnerable to population decline from overfishing.
3. Despite their low reproductive rates, importance within the ecosystem, and high economic value (when alive!), 70-100 million sharks are senselessly killed in our oceans each year, rendering many species endangered or threatened.
4. Sharks (like the Galapagos, Sandbar, Tiger and Hammerhead) and rays (including Reef and Oceanic Manta Rays) provide a fundamental economic benefit to the Hawaiian tourism industry, drawing visitors from all over the world to view these animals in their natural habitat.
5. As top level predators, sharks have often accumulated unhealthy or even dangerous levels of toxins within their tissues, making many species an unsuitable choice for food. Banning the recreational fishing of these animals also helps to protect the health of fishers and their families.
6. Hawaii has been a world leader in so many amazing efforts. Attitudes towards, knowledge about, and the understanding of sharks are shifting and evolving. This is the chance for Hawaii to lead the movement and be an example to others.

It is absolutely necessary to stop damaging fishing practices and enforce sustainability for the health and safety of our oceans, the planet and future generations.

Samuel Coe  
United Kingdom

--  
**Sam Coe**  
B.Sc

*Director*

***I.SEA. Conservation***

[www.iseaconservation.org](http://www.iseaconservation.org)

e: [sam@iseaconservation.org](mailto:sam@iseaconservation.org)

p: +44 (0) 7780 536 339

e: [mbsamcoe@gmail.com](mailto:mbsamcoe@gmail.com)

Instagram portfolio: [@i.sea.id](https://www.instagram.com/i.sea.id)

## In Support Of SB 2079



On behalf of Keiko Conservation and our international supporters, I would like to voice our support for Bill 2079 to further protect sharks and rays in Hawaiian waters.

Of particular concern to us is Hawaii's scalloped hammerhead shark population, a species classified as endangered in other parts of the world, and severely vulnerable to at-vessel (Morgan, A. and G. H. Burgess. 2007) or post-release mortality due to the stress of struggling on a line and build up of lactic acid. Although the tropical fish on Hawaii's reefs have gained protection from the aquarium fish trade this past year, sharks are still vulnerable to this practice. Sharks caught for aquariums are usually juveniles, as the smaller they are, the longer they tend to live in a confined space. This takes many sharks out of Hawaiian waters long before they have a chance to reach sexual maturity and reproduce. Studies have show that the survival rate of juvenile sharks can play the largest role in that animal's overall population rate (Heppell et al. 1999, Cortes 2002). Unfortunately, the mortality rate is very high during the capture (Morgan, A. and G. H. Burgess. 2007) and transport of these animals, so multiples have to be caught which could be anywhere from 20 to 90 animals for one aquarium (Keyes, R. 2000, Arai 1997), making the impact on our reefs even higher. Scalloped hammerheads in Kaneohe Bay have been taken for aquariums and shipped everywhere from Louisiana to Tokyo (Young, F. A., Kajiura, S. M., Visser, G. J., Correia, J. P.S. and Smith, M. F.L. 2002), profiting few but impacting many.

The fight to save sharks is not just to save sharks. It is a fight for to help save the overall health of the oceans as well. No matter how landlocked we may find ourselves on this planet, more than half of the oxygen we breathe still comes from the ocean. Marine ecosystems are fragile and intricate. Every organism has a role. Sharks have arguably one of the most important roles in the ecosystems they inhabit. Removing them can inadvertently cause a domino effect that can lethally impact organisms all the way down the food chain, wiping out everything from bivalves to plankton. The same plankton that produces the oxygen we breathe. The ocean is being attacked from all angles by human action. It has never been so important to give sharks as much protection as we possibly can and we hope you will consider the passing of this bill.

Mahalo!

Natalie Parra

Co-Founder of Keiko Conservation





**TO:** Honorable Chair Ing and Members of the House Committee on Ocean, Marine Resources and Hawaiian Affairs  
March 13, 2018, 945am

**SUBMITTED BY:** Inga Gibson, Policy Consultant, West Hawaii Humane Society  
[ponoadvocacy@gmail.com](mailto:ponoadvocacy@gmail.com), 808.922.9910

**RE: STRONG SUPPORT for SB2079, Relating to Shark and Ray Protection**

The West Hawaii Humane Society respectfully urges your support of SB2079 which would prohibit the capture or killing of sharks or rays in state waters (within 3 nm) except for research purposes, under DLNR issued Special Activity Permits, the use of shark parts/products for native Hawaiian cultural purposes and at the discretion of DLNR for specific, emergency public safety reasons. The prior Committee accepted strengthening and clarifying amendments proposed by both DLNR and OHA, thus we fully support the bill in its current form.

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 this 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 capture or killing of sharks.

Tens of millions of sharks are estimated to be killed annually for their fins. While anti-finning laws have improved shark populations, many species are still threatened and face possible extinction. Recent 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 humans and pollution (SEE: Hawaii Scientists Study Threatened Shark Species)

There is no directed commercial shark fishery in Hawaii waters so this would not be expected to have a negative economic impact on commercial fishing interests. Evidence suggests that juvenile reef sharks are taken in small numbers by Hawaii's aquarium trade for personal aquariums outside Hawaii, but, citing confidentially, DLNR does not release the data. Further, this measure does NOT preempt or impact federal fishing laws, and only applies to Hawaii state waters (3 nm).

With the growing number of interactions between ocean users and sharks this measure would prevent consideration of ineffective mass culling efforts and those individuals who may target sharks due to misinformation (see: Local Shark Experts Explain Shark Attacks )

Finally, sharks are apex predators; when they are removed our entire marine ecosystem is negatively impacted. In addition, sharks and rays 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 sharks.

Current law prohibits the take of only Manta Ray species. This measure would extend this protection to all species of rays in state waters (listed below), including Torpedo, Stingray, Devilray and Eagleray, Manta alfredi (reef mantas) and Mobula tarapacana (sicklefin devilray).

While the trade has not yet hit Hawaii, China and other countries have begun mass harvesting of rays for their gills/gill soup, especially since shark populations are still facing serious decline and many states and island nations now prohibit selling shark fin products. This measure would prevent any future trade in harvesting Hawaii rays as we saw in 2015 with the mass commercial harvesting of our sea cucumbers by international companies (DLNR recently prohibited commercial harvest of sea cucumbers).

Rays are known to be among the slowest marine species to reproduce. For example, new data on manta ray reproduction suggest that they may reproduce even more slowly than previously believed, with a maximum lifetime reproduction potential estimated at only 5 to 15 offspring. Such extremely low reproductive capacity shows that manta and mobula rays are far more vulnerable to exploitation than previously known, and that immediate investment in their conservation is necessary to avoid continued rapid declines (SEE: <http://www.wildaid.org/mantas>)

Thank you for the opportunity to testify on this important marine animal protection measure.

Attn:chair ing

[kimmy abaricia <kimmyabaricia@gmail.com>](mailto:kimmyabaricia@gmail.com)

Sun 3/11/2018 10:15 PM

To:omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha,

I am writing in support of Bill SB 2079. Sharks are not monster predators the media sets them out to be. They are crucial to our ecosystem and should be protected as such. Whenever we turn on the news and see these cruel images of sharks caught in lines or left for dead, it hurts not only our hearts, but the ocean, a little at a time. The people responsible should be held accountable. We need to protect these creatures and speak out since they cannot speak for themselves!!! I support SB 2079.

Mahalo for your time,  
Kimmy Harbin

## SUPPORT OF SB2079 Save Sharks and Rays!

Antonia Barber <[antoniabarber@hotmail.co.uk](mailto:antoniabarber@hotmail.co.uk)>

Sun 3/11/2018 10:26 PM

To: omhtestimony <[omhtestimony@capitol.hawaii.gov](mailto:omhtestimony@capitol.hawaii.gov)>;

This single article below provides evidence on why we need sharks for our existence, and for the eco systems of the oceans to thrive.

More deaths are caused from falling coconuts, tripping up, traffic lights, cows and many many more individual cases than sharks.

But even though this is the case, for every human killed by a shark, humans kill approximately two million sharks.

I am not a resident of Hawaii, but please take this case on board and set the example for the rest of the world. Sharks are not our enemy, we need them to protect life as we know it, as well as our existence.

\*As apex predators, sharks play an important role in the ecosystem by maintaining the species below them in the food chain and serving as an indicator for ocean health. They help remove the weak and the sick as well as keeping the balance with competitors helping to ensure species diversity.

As predators, they shift their prey's spatial habitat, which alters the feeding strategy and diets of other species. Through the spatial controls and abundance, sharks indirectly maintain the seagrass and corals reef habitats. The loss of sharks has led to the decline in coral reefs, seagrass beds and the loss of commercial fisheries.

By taking sharks out of the coral reef ecosystem, the larger predatory fish, such as groupers, increase in abundance and feed on the herbivores. With less herbivores, macroalgae expands and coral can no longer compete, shifting the ecosystem to one of algae dominance, affecting the survival of the reef system. Oceana released a report in July 2008, "Predators as Prey: Why Healthy Oceans Need Sharks", illustrating our need to protect sharks.

In the Economy

Sharks' control over species below them in the food chain indirectly affects the economy. A study in North Carolina showed that the loss of the great sharks increased the ray populations below them. As a result, the hungry rays ate all the bay scallops, forcing the fishery to close. Without scallops to eat, the rays have moved on to other bivalves.

The decline of the quahog, a key ingredient in clam chowder, is forcing many restaurants to remove this American classic from their menus. The disappearance of scallops and clams demonstrates that the elimination of sharks can cause harm to the economy in addition to ecosystems.

Sharks are also influencing the economy through ecotourism. In the Bahamas, a single live reef shark is worth \$250,000 as a result of dive tourism versus a one time value of \$50 when caught by a fisherman. One whale shark in Belize can bring in \$2 million over its lifetime.

Kind regards,

Antonia Barber.

## In support of SB 2079

[charlie jeffries <cjj0185@gmail.com>](mailto:cjj0185@gmail.com)

Sun 3/11/2018 10:36 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attention Chair Ing,

I support bill SB 2079 to further protect Hawaii's shark and ray populations by prohibiting the recreational fishing of these animals for the reasons as follows:

1. As apex predators, sharks ensure a healthy ecosystem by preying on sick, dead or dying individuals, keeping prey populations in check and the food chain in balance.
2. 70-100 million sharks are senselessly killed in our oceans each year, without cause or reprimand. This needs to change for the future of our seas.
3. Sharks (like the Galapagos, Sandbar, Tiger and Hammerhead) and rays (including Reef and Oceanic Manta Rays) provide a fundamental economic benefit to the Hawaiian tourism industry, drawing visitors from all over the world to view these animals in their natural habitat.
4. Biologically, sharks and rays have very low reproductive rates, late sexual maturity and long gestation periods making them highly vulnerable to population decline from overfishing.

It is absolutely necessary to stop damaging fishing practices and enforce sustainability for the health and safety of our oceans, the planet and future generations.

Thank you for being a part of the movement to save our seas.

Aloha,

Charlie Jeffries  
Pūpūkea, North Shore Resident

## SUPPORT for SB2079 Protect Sharks and Rays

[Billy Middleton <wfmiddle@gmail.com>](mailto:wfmiddle@gmail.com)

Sun 3/11/2018 10:56 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha,

I'm writing to share my support for SB 2079. Sharks are a critical part of Hawaii's ecosystem (fisheries) and dive tour industry, and are frequently killed for sport or by commercial fishermen looking to maximize short term profits. These behaviors are detrimental to our ocean's health; our apex predators deserve protection from negative human impacts. Sharks protect our fisheries from the spread of disease and infection, we should protect this valuable resource from useless killing. I am lucky enough to see sharks occasionally while spearfishing or diving and I do not fear them- but I do fear for their future.

Mahalo for listening and helping,  
Billy Middleton

Attn: Chair Ing in Support of SB 2079

[Natalie Hancock <natalierhancock@gmail.com>](mailto:natalierhancock@gmail.com)

Sun 3/11/2018 10:41 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Please support the protection of sharks and rays! The ecosystem needs them and so do the islands. Shark and ray tourism is important to Hawaii because they bring in more revenue alive rather than dead.

## In SUPPORT OF SB2079 Save Sharks and Rays!

[Jennifer Georghiou <jennifergeorghiou@gmail.com>](mailto:jennifergeorghiou@gmail.com)

Sun 3/11/2018 11:32 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

### In SUPPORT OF SB2079 Save Sharks and Rays!

It is so important they need to be protected!!!!

Best regards,

Jennifer Georghiou



In support of SB 2079

Jessica Strickland <i.sea.conservation@gmail.com>

Sun 3/11/2018 11:59 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attention Chair Ing,

I support bill SB 2079 to further protect Hawaii's shark and ray populations by prohibiting the recreational fishing of these animals for the reasons as follows:

1. As apex predators, sharks ensure a healthy ecosystem by preying upon weak or diseased individuals, keeping prey populations healthy and in check and maintaining a balanced food chain.
2. Biologically, sharks and rays have very low reproductive rates, late sexual maturity and long gestation periods making them highly vulnerable to population decline from overfishing.
3. Despite their low reproductive rates, importance within the ecosystem, and high economic value (when alive!), 70-100 million sharks are senselessly killed in our oceans each year, rendering many species endangered or threatened.
4. Sharks (like the Galapagos, Sandbar, Tiger and Hammerhead) and rays (including Reef and Oceanic Manta Rays) provide a fundamental economic benefit to the Hawaiian tourism industry, drawing visitors from all over the world to view these animals in their natural habitat.
5. As top level predators, sharks have often accumulated unhealthy or even dangerous levels of toxins within their tissues, making many species an unsuitable choice for food. Banning the recreational fishing of these animals also helps to protect the health of fishers and their families.
6. Hawaii has been a world leader in so many amazing efforts. Attitudes towards, knowledge about, and the understanding of sharks are shifting and evolving. This is the chance for Hawaii to lead the movement and be an example to others.

It is absolutely necessary to stop damaging fishing practices and enforce sustainability for the health and safety of our oceans, the planet and future generations.

Elizabeth Strickland  
Australia

In support of SB 2079

Sam Coe <sieracoe@gmail.com>

Mon 3/12/2018 12:01 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attention Chair Ing,

I support bill SB 2079 to further protect Hawaii's shark and ray populations by prohibiting the recreational fishing of these animals for the reasons as follows:

1. As apex predators, sharks ensure a healthy ecosystem by preying upon weak or diseased individuals, keeping prey populations healthy and in check and maintaining a balanced food chain.
2. Biologically, sharks and rays have very low reproductive rates, late sexual maturity and long gestation periods making them highly vulnerable to population decline from overfishing.
3. Despite their low reproductive rates, importance within the ecosystem, and high economic value (when alive!), 70-100 million sharks are senselessly killed in our oceans each year, rendering many species endangered or threatened.
4. Sharks (like the Galapagos, Sandbar, Tiger and Hammerhead) and rays (including Reef and Oceanic Manta Rays) provide a fundamental economic benefit to the Hawaiian tourism industry, drawing visitors from all over the world to view these animals in their natural habitat.
5. As top level predators, sharks have often accumulated unhealthy or even dangerous levels of toxins within their tissues, making many species an unsuitable choice for food. Banning the recreational fishing of these animals also helps to protect the health of fishers and their families.
6. Hawaii has been a world leader in so many amazing efforts. Attitudes towards, knowledge about, and the understanding of sharks are shifting and evolving. This is the chance for Hawaii to lead the movement and be an example to others.

It is absolutely necessary to stop damaging fishing practices and enforce sustainability for the health and safety of our oceans, the planet and future generations.

Jeffrey Strickland  
Australia

--  
**Sam Coe**  
B.Sc

*Director*

***I.SEA. Conservation***

[www.iseaconservation.org](http://www.iseaconservation.org)

p: +44 (0) 135 752 0361

e: [mbsamcoe@gmail.com](mailto:mbsamcoe@gmail.com)

Instagram portfolio: [@i.sea.id](https://www.instagram.com/i.sea.id)

## In support of SB2079

[Madi Masek <mnm2898@gmail.com>](mailto:mnm2898@gmail.com)

Mon 3/12/2018 12:12 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I believe we should protect sharks and rays in Hawaii waters! They are vital to our ocean's ecosystem and health. They are a keystone species whose removal would negatively impact the whole ocean. Save the sharks and rays!!

Madison Masek

## I support SB 2079

[Rick and Cindy Rogers <rick.cindy.rogers@gmail.com>](mailto:rick.cindy.rogers@gmail.com)

Mon 3/12/2018 12:51 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I am writing to register my support for SB 2079. Sharks are one of the most important components of the ocean, and need to be protected since their numbers are declining. Be a leader in ocean conservation Hawaii!

Rick Rogers

Sent from my iPhone

## In support of 2079 save sharks and rays

[Maik Nimrich <maik@nimrich.de>](mailto:maik@nimrich.de)

Mon 3/12/2018 12:55 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Maik Nimrich  
Head of Purchasing  
+61 402 304 705

## In support of 2079 save sharks and rays

[Maik Nimrich <maik@nimrich.de>](mailto:maik@nimrich.de)

Mon 3/12/2018 12:55 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Maik Nimrich  
Head of Purchasing  
+61 402 304 705

Attn: chair Ing in support SB 2079 to protect Hawaii's sharks and rays

[Veronica Perez <veronicag.perez@hotmail.com>](mailto:veronicag.perez@hotmail.com)

Mon 3/12/2018 12:59 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Good day to whom it may concern,

I am writing in favor of the bill to protect Hawaii's sharks and rays from recreational fishing and needless killing.

Sharks and rays play a crucial role in the oceans eco system and they are dying faster than they can recover from. Their roles dictate the health of the oceans and it's important we do something to protect them.

I sincerely hope this bill goes through and that it promotes the understanding that these animals are important and should not be unnecessarily killed for the sake of our planet.

Thank you for your time and consideration.

Warm regards,  
Veronica Perez



## Support sb2079

[Shane Y <shaneyost@gmail.com>](mailto:shaneyost@gmail.com)

Mon 3/12/2018 1:01 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Sharks and rays are dying off in record numbers. Without sharks we have no reefs, without reefs, we have no fish

## In SUPPORT of SB2079 Save sharks and Rays!

[Lara Omomo <laraomomo@gmail.com>](mailto:laraomomo@gmail.com)

Mon 3/12/2018 1:04 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

## In support of SB 2079

[Michelle Coates <michellelcoates@icloud.com>](mailto:michellelcoates@icloud.com)

Mon 3/12/2018 1:07 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attention Chair Ing,

I support bill SB 2079 to further protect Hawaii's shark and ray populations by prohibiting the recreational fishing of these animals for the reasons as follows:

1. As apex predators, sharks ensure a healthy ecosystem by preying on sick, dead or dying individuals, keeping prey populations in check and the food chain in balance.
2. 70-100 million sharks are senselessly killed in our oceans each year, without cause or reprimand. This needs to change for the future of our seas.
3. Sharks (like the Galapagos, Sandbar, Tiger and Hammerhead) and rays (including Reef and Oceanic Manta Rays) provide a fundamental economic benefit to the Hawaiian tourism industry, drawing visitors from all over the world to view these animals in their natural habitat.
4. Biologically, sharks and rays have very low reproductive rates, late sexual maturity and long gestation periods making them highly vulnerable to population decline from overfishing.

It is absolutely necessary to stop damaging fishing practices and enforce sustainability for the health and safety of our oceans, the planet and future generations.

Thank you for being a part of the movement to save our seas.

(Name & Country)

Sent from my iPhone

## In support of sb 2079 save sharks and rays

[Courtenay Pravata <masonsmom76@aol.com>](mailto:masonsmom76@aol.com)

Mon 3/12/2018 1:20 AM

To: omhtestimony@capital.hawaii.gov <omhtestimony@capital.hawaii.gov>; omhtestimony <omhtestimony@capitol.hawaii.gov>;

Please help us save the sharks and rays from extinction. People's fear is from lack of education, a lack of respect and understanding for these animals. The world would be a better place if everyone took the time to understand one another, humans and animals. We can't change the world by protecting the sharks and rays, but it's a start. These animals need your protection, please.

Courtenay Pravata

Sent from my iPad

## Atta: Chair Ing In Support of SB 2079

[Amanda Engel <mandyengel@comcast.net>](mailto:mandyengel@comcast.net)

Mon 3/12/2018 1:33 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Dear Sirs and Madams,

I believe that Sharks and Rays should stay protected, since they play an essential roll in our ecosystem. They keep our oceans healthy and balanced, by eating older, weaker or sick fish. Sharks and Rays are not life threatening to humans, but you can surely say it is the other way around! I speak for the sharks and rays that can not speak for themselves and ask you to keep your them protected.

Also if you keep them protected you can attract more tourists to Hawaii, for people that enjoy diving and snorkeling with these species.

Sincerely,  
Amanda Engel

Attn: Chair Ing In Support of SB 2079

[Muktaa Maria Schwemmlin <muktaa.ms@gmail.com>](mailto:muktaa.ms@gmail.com)

Mon 3/12/2018 1:40 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Because i care and so should you.

## In support of SB2079 save sharks and rays

[Lis Cancio <liscancio@gmail.com>](mailto:liscancio@gmail.com)

Mon 3/12/2018 1:44 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Save the sharks!

--

## I Support SB 2079

[Lana Laird <lanavictorialaird@gmail.com>](mailto:lanavictorialaird@gmail.com)

Mon 3/12/2018 1:48 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I Support SB 2079



## In SUPPORT Of SB2079

[Boba Fett <halbertandrew@hotmail.com>](mailto:halbertandrew@hotmail.com)

Mon 3/12/2018 1:58 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Save the Sharks and the Oceans!!!

Sent from [Mail](#) for Windows 10

## In SUPPORT Of SB2079 Save Sharks and Rays!

[Victoria Williams <victoria.lucy@hotmail.co.uk>](mailto:victoria.lucy@hotmail.co.uk)

Mon 3/12/2018 2:10 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

In support of these magnificent animals. PADI Divemaster based in the UK.  
Please protect.

## In SUPPORT of SB2079 Save Sharks AND Rays!

[Elise Haggan <elise.haggan@gmail.com>](mailto:elise.haggan@gmail.com)

Mon 3/12/2018 2:17 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

To whom it may concern,

I am emailing to pledge and confirm my SUPPORT of SB2079 Save Sharks AND Rays!

Best,

Elise L. Haggan

## In Support of SB 2079

[Anna <ahallout@gmail.com>](mailto:ahallout@gmail.com)

Mon 3/12/2018 2:38 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attn Chair Ing,

I support SB 2079. Sharks are an integral part of the marine ecosystem, and it is up to us to do everything in our power to protect them in any way we can. This bill is extremely important in keeping Hawaii's ocean healthy and thriving for generations to come.

Thank you,

Anna Hall

## In support of SB2079

[Arturo Katz <katz.arturo@gmail.com>](mailto:katz.arturo@gmail.com)

Mon 3/12/2018 2:38 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Dear All

I'm writing in support of SB2079.

Please protect our sharks!!

Thanks

B. Regards

I support SB 2079

[Farah Shahsavarian <farahcs@terpmail.umd.edu>](mailto:farahcs@terpmail.umd.edu)

Mon 3/12/2018 2:51 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I support SB 2079

Sent from my iPhone

## In support of SB2079

[Aurore Meyer <auroremeyer@email.com>](mailto:auroremeyer@email.com)

Mon 3/12/2018 2:51 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hi,

I'm sending you this email because i've always been fascinated by sharks and i think it's time things change. It's time we protect our oceans, protect submarine nature, protect sharks. They're one of the main causes i've been defending since I am a little child, since I'm actually able to dive, and I'll never stop protecting them.

I won't make it to the conference as I live in France, but know that you have all my support.

Do your best, and I know you're already doing it, let's protect this cause together, let's save sharks.

Sincerely

Aurore

In SUPPORT Of SB2079 Save Sharks and Rays!

[genevieve onorato <genevieveonorato7@gmail.com>](mailto:genevieveonorato7@gmail.com)

Mon 3/12/2018 3:24 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Save our Sharks!! Please!  
Sent from my iPhone



## 3-13-18 Support for SB 2079, SD2

[amblades@hawaii.rr.com](mailto:amblades@hawaii.rr.com)

Mon 3/12/2018 3:50 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Dear Committee,

I support SB 2079, SD2. Please pass this important bill to prevent future shark killings and expand protections to all rays.

Thank you.

Sincerely,

April Blades

Honolulu, HI

96814

SB2079

[Starry Medicine <starrymedicine@gmail.com>](mailto:starrymedicine@gmail.com)

Mon 3/12/2018 3:54 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

It is my great hope that you will support SB2079 to protect sharks and rays in Hawaiian waters, and set a worldwide example of noble stewardship. Sharks and rays are critical to the health of the ocean and they are in great need of protection. They are also an amazing source of income for the islands due to ecotourism. They are worth far more alive than dead. Thank you so truly for your service, and for your time in hearing the voices of our community.

Sincerely,

Bonnie Sharkey

Attn: Chair Ing In Support of SB 2079

[Emma Sharp <ecs03@cox.net>](mailto:ecs03@cox.net)

Mon 3/12/2018 4:04 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Please pass this law, please. Action needs to be taken against the fishing and killing of sharks and rays before it's too late. 100 million sharks a year are being killed by humans, and if these numbers continue, some species of sharks will be completely extinct within a few decades. Sharks are already on the endangered species list, therefore it does not make logical sense to continue to allow the pursuit of their lives by fishermen. They need to be protected, as any other animal would be if their population was decreasing rapidly. These beautiful, magnificent, awe-inspiring, wondrous beasts of the sea will be gone because of us. Sharks and rays are a huge part of Hawaiian ecosystems, culture, and the health of the ocean. They have been here for millions and millions of years. It is only fair that the right amount of respect is shown to these true Hawaiian locals, who have called these waters home long before us, before it is too late.

In support of SB2079

[Adina Ness <adina.ness@gmail.com>](mailto:adina.ness@gmail.com)

Mon 3/12/2018 4:12 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Save sharks and rays!

Thank you.

## In SUPPORT Of SB2079 Save Sharks and Rays!

[Ruben Hernandez <rubenarturoh@gmail.com>](mailto:rubenarturoh@gmail.com)

Mon 3/12/2018 4:33 AM

To:omhtestimony <omhtestimony@capitol.hawaii.gov>;

--

**Rubén Arturo Hernández Ayala**  
Ingeniero Industrial y de Sistemas  
Master in Business Administration  
Tel Casa (55) 2479 4084  
Tel Celular (55) 4318 3584  
[rubenarturoh@gmail.com](mailto:rubenarturoh@gmail.com)

Attn: Chair Ing In Support of SB 2079

[Sierra Kristie Baldwin <sierrakristiebaldwin@yahoo.com>](mailto:sierrakristiebaldwin@yahoo.com)

Mon 3/12/2018 4:45 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

In this world, it's vital that we do what we can to protect what we can. There's already more than enough destruction out there and we don't need to add to that. To some, sharks and rays may seem unimportant and irrelevant, but that is not the case. Sharks play a highly important role in the ecosystem by helping maintain species. Rays are also highly important too. So many would be devastated and upset if they discovered

Sent from my iPhone

## IN SUPPORT OF SB 2079

[Andrea Jaramillo <andrea.j1978@gmail.com>](mailto:andrea.j1978@gmail.com)

Mon 3/12/2018 5:01 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Supporting sharks and rays

## In support of SB2079

[Bella Nelson <hbhbellanelson@aol.com>](mailto:hbhbellanelson@aol.com)

Mon 3/12/2018 5:22 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I want to email to show my support of this initiative to protect sharks and rays in Hawaii's waters.

Mahalo!

Bella Nelson  
hbhbellanelson@aol.com



## In Support of SB 2079

[anja L <lamb.anja@gmail.com>](mailto:lamb.anja@gmail.com)

Mon 3/12/2018 5:26 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

please do the right thing and protect Hawaii's sharks and rays.

## I Support SB 2079

[Mckenzie McPherson <mckenzie9201@gmail.com>](mailto:mckenzie9201@gmail.com)

Mon 3/12/2018 5:28 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I truly believe that it is our responsibility to maintain and protect the many different and diverse ecosystems on this planet, and if we fail to do so, sooner than we think, these amazing and beautiful parts of our planet will cease to exist. It is our responsibility as people of this earth, as parents, as grandparents, to preserve these ecosystems for the many generations to come so that they may have the opportunity to observe, experience, and learn from them as we have had the privilege to. So please help us take this small step in the long road to saving our planet.

## Support Sharks SB 2079

[judith.liegl@gmx.de](mailto:judith.liegl@gmx.de)

Mon 3/12/2018 5:30 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Support SB 2079

Save sharks!

--

Diese Nachricht wurde von meinem Android Mobiltelefon mit GMX Mail gesendet.

I support SB 2079

[Grace Ragan <g.ragan00@outlook.com>](mailto:g.ragan00@outlook.com)

Mon 3/12/2018 5:37 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

## Fwd: In support of SB2079

[Jerome Kosoglad <jkosoglad@webeqinternational.com>](mailto:jkosoglad@webeqinternational.com)

Mon 3/12/2018 5:59 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Save Rays And Sharks

----- Forwarded message -----

From: Jerome Kosoglad <[jkosoglad@webeqinternational.com](mailto:jkosoglad@webeqinternational.com)>

Date: Mon, Mar 12, 2018, 8:03 AM

Subject: In support of SB2079

To: <[omhtestimony@capitol.hawaii.gov](mailto:omhtestimony@capitol.hawaii.gov)>

Save Rays and Sharks

## In SUPPORT Of SB2079 Save Sharks and Rays!

Coperias Jimenez - Enrique Manuel <ecoperias@zinetmedia.es>

Mon 3/12/2018 5:59 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

1 attachments (2 KB)

image.png;

Enrique M. Coperías  
Director  
Muy Interesante  
@TapasDeCiencia (<https://twitter.com/TapasDeCiencia>)

[cid:3603718792\_2020478]

Zinet Media Global, S.L.

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E-mail [ecoperias@zinetmedia.es](mailto:ecoperias@zinetmedia.es)

[www.muyinteresante.es](http://www.muyinteresante.es)

---

Este mensaje -y sus adjuntos- se dirigen únicamente a sus destinatarios, pudiendo contener información confidencial, por lo que queda expresamente prohibida su difusión, copia o utilización por terceros.

Si Vd. lo recibe por error, por favor, notifíquelo al remitente y destruya el mensaje, sus adjuntos y todas sus copias.

# I support SB 2079

[Noah Ellingsworth <carnivoris1234@gmail.com>](mailto:carnivoris1234@gmail.com)

Mon 3/12/2018 6:00 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

1 attachments (134 KB)

Screenshot\_20180312-110006.jpg;

Protect Sharks and Rays. They are very important to our ecosystem!

Attn: Chair Ing in Support of SB2079

Emma Tresemer <buffy9618@hotmail.com>

Mon 3/12/2018 6:03 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

To Whom it May Concern,

I'm writing to express my support of SB2079.

There are a host of reasons that sharks and rays are hugely beneficial to the ocean and environment, such as the fact that as ocean predators near the top of the food chain, sharks keep the ecosystem balanced, regulate populations of other marine life, and ensure healthy fish stock and reefs. Sharks and rays are more vulnerable than most other fish species. They are long-lived and slow-growing, start reproducing at an advanced age, and produce relatively few offspring per year. If the food chain is disrupted by a decline in the shark population, it affects the entire ocean ecosystem, known as a trophic cascade. Protection for sharks and rays ultimately means healthier, more resilient oceans and reefs that are better able to withstand other pressures on the ocean ecosystem from climate change and pollution.

I also want to mention that I lived in Maui for 2016-2017 expressly to study Hawaiian and Polynesian mythology. Sharks are an integral part of those stories and the amount of respect shown to them is truly inspiring. Protecting these animals is absolutely the right thing to do.

Thank you for your time.

-Emma Tresemer, Ph.D.



## Support for SB2079, SD2

[Austen Stone <umahorse@aol.com>](mailto:umahorse@aol.com)

Mon 3/12/2018 6:16 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I write in strong support of the above, to protect our vital marine wildlife. Anyone living near the ocean should realize how important caring for our water planet is. I have been an ocean researcher for decades, and urge you to move bravely toward protecting our marine animals and ecosystems.

Thank you,  
Austen Stone

Sent from my iPad

in support of sb 2079

[Mollie <mathiesenmollie@gmail.com>](mailto:mathiesenmollie@gmail.com)

Mon 3/12/2018 6:21 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

My name is Mollie Mathiesen and I support protecting sharks and rays. Sharks are the most misunderstood animals in the world. They don't want to harm humans it is just an accident just like a car hitting another! A car accident puts more lives in danger but you wouldn't ban driving because of a few car accidents right? So why harm sharks for a few of their accidents? Sharks help the flow of our ecosystem and by the constant decline of them our oceans become less safe and more toxic. Sharks stop fish from spreading diseases to other marine life that are being eaten by humans and stop the spread to coral reefs and other marine plant life that gives us most of the oxygen we breathe. Without sharks our world would die. Think about the kind of life we want to live and we want to share with our kids, grandkids, great grandkids, and generations on. Be supportive of our earth and help save sharks and rays!

-Mollie

## In Support of SB2709 Save Sharks and Rays!

[Tori Evans <victorialee.evans@gmail.com>](mailto:victorialee.evans@gmail.com)

Mon 3/12/2018 6:54 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hello,

I support **SB2709** to save sharks and rays and I hope you will too!

Regards,

Tori Evans

## In SUPPORT of SB2079 Save Sharks and Rays

[Brittany Oliver <britt.oliva@gmail.com>](mailto:britt.oliva@gmail.com)

Mon 3/12/2018 7:10 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

## In SUPPORT Of SB2079 Save Sharks and Rays!

[Laura Gonzalez <laura.cristina7@icloud.com>](mailto:laura.cristina7@icloud.com)

Mon 3/12/2018 7:11 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hi,

PLEASE H.E.L.P. SAVE SHARKS AND RAYS!!!!

Thanks for saving the OCEAN,  
Laura C. González (from Puerto Rico)

Attn: Chair Ing in Support of SB2079

[Christine Cummings <christinecummingsnyc@gmail.com>](mailto:christinecummingsnyc@gmail.com)

Mon 3/12/2018 7:13 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

In these terrible times for the creatures of this planet, I beseech you to pass this bill to protect the most ancient among us.

## In SUPPORT of SB2079 Save sharks and rays!

Annie Merrill <jm0113@westminstercollege.edu>

Mon 3/12/2018 7:29 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

This legislation must be supported and passed at all costs for the protection of our oceans. Protecting sharks directly protects coral reef ecosystems in and around Hawaii because sharks are crucial apex predators in reef habitats. I support this legislation because I understand the complexity of marine ecosystems and the endless value they have to native Hawaii.

## In Support of SB2079 Save Sharks and Rays

[Krasi Vasileva <krasiasenova@gmail.com>](mailto:krasiasenova@gmail.com)

Mon 3/12/2018 7:32 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Sharks and Rays must be protected in Hawaii as an important part of the ecosystem and also as numerous species of sharks have become nearly extinct. Sharks have a significant role in Hawaiian culture but also they can "teach" everyone and especially visitors to foster respect for the ocean and its inhabitants. I choose Hawaii as a visitor, and not other destinations, despite the long flight, particularly because of its strict environmental protection laws, clean natural parks, and the opportunity to see sharks in the wild.  
Sharks must be protected!  
Thank you !



## Chair Ing. I support SB 2079

Mackenna Cady <kennaaloha@gmail.com>

Mon 3/12/2018 7:58 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha, Chair Ing and members of the House!

Thank you so much for giving me the opportunity to speak up for sharks and rays in Hawaii. My name is Mackenna Cady and I strongly support this bill, SB 2079.

Sharks and rays desperately need better protection in Hawaii. These animals are core components of the ecosystem and they help keep the ocean healthy and alive. Sharks, for instance, keep lower-trophic populations healthy and balanced by primarily only eating the sick, dying, dead, and over-populated animals.

Sharks and rays are predators in the ocean, so they're designed to reproduce slowly and only in small numbers each time. We are killing these animals at a dangerous rate! It's estimated that the shark population has declined by 90%! With their populations dropping so rapidly, they are not able to reproduce fast enough to keep their numbers at a healthy amount.

This bill could help shark and ray populations return to a sustainable number and, therefore, would allow the reefs around these islands to thrive. We must further protect the ocean, not only to keep it "pretty" and extravagant for all who visit it, but for the health of everything that relies on the ocean for oxygen. Which is us.

Please help Hawaii take a next step in protecting these beautiful islands and local ecosystems and pass this bill.

Mahalo nui loa for your time and consideration,

Mackenna Cady

18 years old

## in SUPPORT of SB2079 Save sharks and rays

[grace carr <gracemariecarr89@gmail.com>](mailto:gracecarr@gmail.com)

Mon 3/12/2018 8:00 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

To who it may concern,

I would like to show my support for bill SB2079 all the way from Ireland. I was in Hawaii for the summer and could not believe the number of sharks I was able to see while out freediving off the north shore of Hawaii. I have been many places diving and this was one of the most beautiful places I have seen. It was humbling to see so many top predators everyday and I was full of gratitude as that is how our oceans should be.

Sharks need our protection otherwise greedy people will abuse them for profit and decimate their numbers. They are so important to the environment and also to local economy. I specifically came to Hawaii for the sharks and I know that many people do the same.

Please be the voice for the voiceless and protect sharks and rays in Hawaiian waters. It is not just protecting them but protecting your future as well.

Thank you for your time.

Grace Carr

## 3-13-18 Support for SB 2079, SD2

[diane.kawamoto@gmail.com](mailto:diane.kawamoto@gmail.com)

Mon 3/12/2018 8:04 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I support SB2079, SD2- Please pass this bill with amendments to retain state law against finning and the sale of shark fin/fin products, current laws does not prohibit killing a shark (or some rays). This bill would add that prohibition and ( prevent any future shark killings) and extend the existing protection for manta rays.

Sincerely,  
Diane Kawamoto

Sent from my T-Mobile 4G LTE device

## in SUPPORT of SB2079 Save Sharks and Rays

Nicola McEvoy <njmcevoy89@gmail.com>

Mon 3/12/2018 8:10 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

To whom it may concern,

I would like to show my support for bill SB2079 to be passed. It is of utmost importance that we protect the oceans top predators. Many shark species numbers have declined by over 90% through the fin trade and bycatch.

However fishing them for 'sport' also plays a part in this. Many shark species are extremely fragile and the stress of being caught on a hook or line, even if they are released shortly after, will cause them to die.

Hawaiian sharks and rays are worth far more to the economy alive then dead. I myself know several people who have travelled to Hawaii specifically to witness the biodiversity of megafauna in your waters.

Without the sharks and rays there it will have knock on effects to all other marine life and a trophic cascade will occur, which will eventually wipe out many other species.

Keep your waters beautiful and healthy and protect the wonderful animals that do this for you.

Nicola McEvoy

Attn: Chair Ing In Support of SB 2079

Zoe Williams <sharksareourfriend@gmail.com>

Mon 3/12/2018 8:46 AM

To:omhtestimony <omhtestimony@capitol.hawaii.gov>;

Dear Chair Ing in support of SB 2079,

My name is Zoe "Shark" Williams and I live in Talent, Oregon. I have loved sharks since I was 3 years old. I am an 8 year old Shark, Ray & Ocean Conservationist. It is my job to save the sharks, rays and oceans.

These amazing creatures are protecting our earth and oceans. To let people kill them is like killing the earth and us. I would like you to pass this bill SB 2079 to show people that we care. If you do this, then maybe other states will do this too.

Thank you for all this work you have done.

Sincerely,

Zoe "Shark" Williams

Sharks Are Our Friends

Instagram: #sharksareourfriend

541-326-9755

Attn: Chair Ing In Support of SB 2079

[Katya Zablocki <katyazablocki@gmail.com>](mailto:katyazablocki@gmail.com)

Mon 3/12/2018 9:11 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hello! I just wanted to say that I know it's very important to protect dominant predators such as sharks and rays because of how much they help the ecosystem and keep everything in check!

Attn: Chair In Support of SB 2079

[steph davis <reosteph@gmail.com>](mailto:reosteph@gmail.com)

Mon 3/12/2018 9:20 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hello there,

I'm writing this email to pledge my support to the Senate Bill 2079.

Please help to protect the sharks and rays. Growing up on the ocean, I have seen firsthand what has happened to the shark population and it breaks my heart. Especially now, they need all the help and protection that they can get. Please vote this bill into law.

Thank you for your time,  
Steph Davis

Attn: Chair Ing In Support of SB 2079

[Elaine Wyatt <ewyatt@hawaii.edu>](mailto:ewyatt@hawaii.edu)

Mon 3/12/2018 9:23 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Sharks and Rays play major roles in keeping our oceans healthy and abundant. Without them, our ecosystem will falter. Please help us protect these wonderful animals by passing this bill.



In support of SB2079 Save Sharks and rays!

[Eileen Moorhead <eileen@trlawfirm.net>](mailto:eileen@trlawfirm.net)

Mon 3/12/2018 9:28 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Sharks play a big role in our marine ecosystem and keep other fish populations healthy. They prey on the sick, dying, and old, keeping the healthy fish in the ecosystem. Many different scientific studies indicate that deposition of sharks result in almost complete loss of commercially important fish and shellfish species including key fisheries such as tuna that keeps the coral reefs healthy.

Thank you, Stephanie McHugh

## In SUPPORT of SB2079 Save Sharks and Rays

[Annika Young <oceankeiki@gmail.com>](mailto:oceankeiki@gmail.com)

Mon 3/12/2018 9:42 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

My name is Annika Young, and I strongly support SB 2079. Sharks are a most vital resource for our Hawaiian and global waters, and with the worldwide number of sharks dropping rapidly due to inhuman, unnecessary, and unsustainable human behaviors, it is absolutely crucial that Hawaii takes a leading stance on the protection of sharks. The villainous acts our species (humans) has taken upon sharks because of a lack of knowledge on the true importance of sharks has caused most serious ecological concerns. Sharks keep our oceans at sufficient health levels...When our ocean is healthy, our planet is healthy. Sharks are primarily slaughtered for their fins, as well as being killed in longline fisheries, but the death toll on sharks by acts, such as sport fishing, is one we can look at with equal disgust and destruction. It is a completely unnecessary murder that only hurts the well-being of our local and global ocean ecosystems. With Hawaii being a place of tourism because of our beautiful oceans, we must do everything we can to protect that very important resource. A live shark is worth more than a dead one-ecologically and economically. Please look beyond the fictitious image of sharks to see that they are actually a very intelligent and important source of life. This is why we are asking you as our government to take a step in the right direction...to take a step towards saving our oceans by removing the unnecessary and cruel act of shark fishing from our local waters.

Attn: chair ing in support of SB 2079

Kayla Lamberson <klambers@hawaii.edu>

Mon 3/12/2018 9:43 AM

To:omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha! I wanted to ask that the bill passes to protect sharks. Up to 99% of their population has declined, so it's very important that we have continued protections laws around the world to save these animals. Sharks have outlived the dinosaurs, but might not outlive humans. They are considered keystone species- "keystones species are a [species](#) that has a disproportionately large effect on the [communities](#) in which it occurs. Such species help to maintain local biodiversity within a [community](#) either by controlling populations of other species that would otherwise dominate the [community](#) or by providing critical resources for a wide range of species." Sharks play a crucial role in keeping our ocean healthy, which ultimately effects us on land as well. Over 100 million sharks are killed annually by humans. In contrast, sharks of any type only claim approximately 10 human lives per year. (NOAA 2012). Thousands of sharks are being killed each hour, at which their population rate is not easy to reverse. They have a relatively slow growth, late sexual maturity, and a low rate of offspring. Also, as respect to the local Hawaiians, they hold an important cultural significance, as their "Aumakuas." These are a few of the reasons I have so much respect and desire to save these animals, not just for them but for our planet as well. The ocean was once such a thriving, healthy ecosystem, and without sustainable laws in effect, our ocean is going to be bare in the future. Sharks are at a point where they are too vulnerable, so banning shark fishing, and keeping a sustainable fishing rate for other species are crucial at this time. With your help, Hawaii can help protect sharks and our future. Mahalo!

Sent from my iPhone

Attn: Chair Ing In Support of SB 2079

Rosalia Cubillos <rosaliac09@hotmail.com>

Mon 3/12/2018 9:52 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Cc: Rosalia Cubillos <rosaliac09@hotmail.com>;



Honorable Chair Ing :

I am excited that legislation in SB 2079 is being introduced to help protect rays and sharks in Hawaii state waters. These poor majestic creatures already face such incredible challenges in and outside of state waters, so they need all the help they can get. If they are to thrive and continue to exist, we must do our part to help them do so. In my lifetime, I have visited Hawaii three times. My greatest attraction to your state is the ecological environment. I marvel at the majestic wildlife and ocean life. It would be a travesty to lose any of those jewels. I am certain that such a circumstance would detract me from further vacationing on the great islands. Therefore, I beg you to please support passage of SB 2079 and to help the helpless rays and sharks.

Rosalia Cubillos

"3-13-18 Support for SB 2079, SD2".

**LATE**

Lorraine Garnier <LorraineParis@msn.com>

Mon 3/12/2018 9:54 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Dear Committee on Ocean, Marine and Hawaiian Affairs,

Please support this bill that offers additional protections to sharks and rays, to also include all rays and define appropriate fines for humans who hurt or harm intentionally.

We are island people, we are dependent on our healthy reefs - sharks and rays are a large part of this system. With ocean acidification and changes in sea temperatures, these marine species are already fighting a human induced battle, lets protect them as they weather this continuing storm.

Details of the bill are below.

Establishes penalties and fines for any person who knowingly captures, takes, possesses, abuses, or entangles any shark, whether alive or dead, or kills any shark, within state marine waters and makes it a misdemeanor. Expands the existing prohibition on knowingly capturing or killing a manta ray to all rays. Expands the prohibition regarding rays to cover knowingly capturing, taking, possessing, abusing, or entangling a ray, whether alive or dead, or killing a ray, within state marine waters

Mahalo for your time,

Lorraine Garnier  
Kailua, Hawai'i

Attn: Chair Ing In Support of SB 2079



[Martin Young <martin.jr.young@gmail.com>](mailto:martin.jr.young@gmail.com)

Mon 3/12/2018 9:57 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Sharks need your help! They are under huge threat from a variety of dangers such as fishing, finning and environmental impacts. As apex predators they are top of the food chain and as such keep other species in check, their decline could have drastic impacts on the ecosystem.

For example a reduction in apex predator numbers can result in an increase in smaller predators, which causes an overall decline in prey populations. It was once thought that culling shark populations might result in an increase in commercially valuable fish species, but this is likely not the case! So let's try and keep the oceans a healthier place and save the sharks.

Kind regards,  
M Young

## In Support of SB2079

"Katja Krüger" <katjaundsoweiter@gmx.de>

Mon 3/12/2018 9:58 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



I am excited that Hawaii, my most famous place in earth, is so close to protect the beautiful and important sharks and rays. This is Aloha !

Please help saving the sharks

Best wishes and warmest Aloha  
Katja Krüger

## In Support of SB 2079

Sara Sass <ss7220a@student.american.edu>

Mon 3/12/2018 10:02 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Dear Committee & Chair Ing,

Aloha. I write to you during a week when the Marine Mammal Protection Act, an act that costs U.S. taxpayers merely a penny a year, is in talks to be gutted.

I write to you during a time when legislature to protect marine life from seismic air gun blasts is stalled on Capitol Hill. (<https://beyer.house.gov/news/documentsingle.aspx?DocumentID=387>)

I write to you during a week when sharks are being killed by the hundreds of millions, literally 100,000,000 were killed last year for sharkfin soup. (<https://www.onegreenplanet.org/animalsandnature/7-alarming-facts-about-the-shark-fin-trade/>)

I write to you during a week when the going price for sharkfin is only on the black market, and is \$300/pound. Where that money goes and how it is kept is likely illegal. (<https://www.nationalgeographic.com/magazine/2016/07/shark-fin-soup-campaign-illegal/>)

I write to you a day after a man in Australia used a severed endangered shark head as a beer bong for likes on social media: <http://www.newshub.co.nz/home/new-zealand/2018/03/aussie-drinks-beer-from-shark-s-head-in-bay-of-plenty.html>

I write to you during a week when thousands of Hawaiian seabirds, seals and whales are dying from ingested plastic and microplastic off Kamilo Point ([https://www.huffingtonpost.com/entry/kamilo-beach-hawaii-dirtiest-beach-america\\_us\\_58e99a38e4b05413bfe3792d](https://www.huffingtonpost.com/entry/kamilo-beach-hawaii-dirtiest-beach-america_us_58e99a38e4b05413bfe3792d))

I write to you in Support of SB 2079 -- save and protect Hawaiian sealife and Hawaiian sharks!

Thank you. Mahalo.

Sara



## 3-13-18 Support for SB 2079, SD2

Laurie Pottish <pottishl001@hawaii.rr.com>

Mon 3/12/2018 10:12 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Aloha:

I support SB 2079, SD2.

Mahalo,  
Laurie Pottish  
[2892 Iwalani St.](#)  
[Makawao, Hi 96768](#)

ATTN: CHAIR ING



[Patricia Fernandez-Waid <patrifw1992@gmail.com>](mailto:patrifw1992@gmail.com)

Mon 3/12/2018 10:32 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

To whom it may concern,

I would like to share my support of SB 2079, the bill for legislative act to protect sharks and rays. As a Global Ambassador of One Ocean Diving and an aquarium instructor at Birch at Scripps Institution of Oceanography, I have witnessed firsthand the magnificence of sharks, and their importance to keeping our ecosystems thriving. I hope that our community support of this Act will demonstrate the care we have for these species.

Cordially,

Patricia

--

Patricia Fernandez-Waid

MSc Marine Environment and Resources (Europe)

B.S. University of California San Diego [Dept. Scripps Institution of Oceanography]

[patrifw1992@gmail.com](mailto:patrifw1992@gmail.com)

+1 916 768 6684

In SUPPORT Of SB2079 Save Sharks and Rays!



[Amy Follows <amyfollows@icloud.com>](mailto:amyfollows@icloud.com)

Mon 3/12/2018 10:36 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

SAVE THE OUR BEAUTIFUL OCEAN BLUE AND THE MAJESTIC UNDER WORLD THAT LIVES, BREATHES AND LOVES UNDERNEATH JUST LIKE US  
ON TOP. ONE LOVE. ONE LIFE. ONE WORLD.

In support of SB2079

[jen.t@gmx.net](mailto:jen.t@gmx.net)

Mon 3/12/2018 10:53 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Hi my name is Jennifer and I'm writing in support of SB2079. To protect sharks and rays in Hawaii...

I'm working with sharks here in South Africa and I could see how important they are for a health eco- system.

They need to be protected, in Hawaii and all waters!!!

I hope you'll decide to protect your "protector" how it is said in your believe ...

Lovely greetings from Jennifer Tomuschat and André Roux

Sent from my iPhone

## Chair Ing. Support SB 2079

[dcady97@gmail.com](mailto:dcady97@gmail.com)

Mon 3/12/2018 11:22 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Chair Ing and Committee,

I support SB2079, prohibiting the intentional catching or killing of sharks and rays in Hawaii.

I submitted testimony previously, during earlier stages of the bill. I also attended an initial hearing regarding this bill. I continue to watch the process with great interest.

- This is a vital piece for ocean conservation. Shark populations are being decimated. As goes the ocean, so goes Hawaii.
- Sharks play a vital role in healthy fish populations. Many come to our state to fish, snorkel and dive. No fish, no fish-based tourism dollars.
- There is no food value to catching sharks and rays. It is done purely for sport. In fact, they may be highly toxic.
- Such bills would make a strong statement against the global shark finning industry.
- Even catch-and-release shark fishing often results in death after the shark or ray is released, due to the physical stress put on them.

Please pass this bill.

Mahalo,  
David Cady  
Ewa Beach.  
Husband. Father. Citizen.

Subject: Attn: chair ing in support of SB 2079

**LATE**

[dan@602theking.com](mailto:dan@602theking.com)

Mon 3/12/2018 12:29 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha! I wanted to ask that the bill passes to protect sharks. Up to 99% of their population has declined, so it's very important that we have continued protections laws around the world to save these animals. Sharks have outlived the dinosaurs, but might not outlive humans. They are considered keystone species- "keystones species are a species that has a disproportionately large effect on the communities in which it occurs. Such species help to maintain local biodiversity within a community either by controlling populations of other species that would otherwise dominate the community or by providing critical resources for a wide range of species." Sharks play a crucial role in keeping our ocean healthy, which ultimately effects us on land as well. Over 100 million sharks are killed annually by humans. I'm contrast, sharks of any type only claim approximately 10 human lives per year. (NOAA 2012). Thousands of sharks are being killed each hour, at which their population rate is not easy to reverse. They have a relatively slow growth, late sexual maturity, and a low rate of offspring. Also, as respect to the local Hawaiians, they hold an important cultural significance, as their "Aumakuas." These are a few of the reasons I have so much respect and desire to save these animals, not just for them but for our planet as well. The ocean was once such a thriving, healthy ecosystem, and without sustainable laws in effect, our ocean is going to be bare in the future. Sharks are at a point where they are too vulnerable, so banning shark fishing, and keeping a sustainable fishing rate for other species are crucial at this time. With your help, Hawaii can help protect sharks and our future. Mahalo!

Dan Frederick

Attn: Chair Ing In Support of SB 2079

Lisa Petta <petta14@rcn.com>

Mon 3/12/2018 12:34 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Please protect Hawaii's sharks and rays by prohibiting the recreational fishing of these animals. Although sharks are seen as [aumakua in Hawaii](#), they are still captured, left for dead, or used as bait by some fishermen. Unfortunately, with no laws in place, these actions cannot be legally pursued nor ceased. Sharks and rays play a pivotal role in the health of our oceans and have an important cultural significance in Hawaii. These animals are already being wiped out in unfathomable numbers in federal waters around the islands and all around the world. It is unnecessary to fish them for recreation in state waters.

We must do everything within our power to protect these magnificent creatures.

## IN SUPPORT OF SB 2079

Mon 3/12/2018 12:37 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



It is completely impossible to ignore the importance to sharks to our ecosystems. Especially in Hawaii where the shark is of vital importance. Ecosystem models predict that the removal of sharks can result in complex community changes, including trophic cascades, mesopredator release, and consequent declines in some commercial fish and cascading changes in some coastal ecosystems (Ferretti et al. 2010). Additional research indicates that the removal of shark and rays may alter size, structure and population parameters in response to changes in species abundance (Stevens et al. 2000).



## ATTN: CHAIR ING IN SUPPORT OF SB 2079

[Saving Wildlife Project <savingwildlifeproject@gmail.com>](mailto:savingwildlifeproject@gmail.com)

Sun 3/11/2018 1:24 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Aloha,

I am so pleased that this bill has come so far! Please pass this bill, as an ocean null of sharks is a dead ocean. We need the ocean to provide us with food, mental comfort as studies have shown, and recreational aspects. In addition, without sharks, we wouldn't have a healthy productivity our ocean supplies the world with. Take sharks out of the equation and disease spreads in uncontrolled fish/marine life populations, as sharks hunt the sick, weak, and dying animals. Shark ecotourism has also become really popular worldwide. The world is changing and so are our views on sharks. Please listen to what the public is telling you and help save sharks!

Mahalo nui loa for the active measures you are taking to protect Hawaii's sharks! :)

Much love from a future marine biologist,  
Cassie Paumard

# Attn: Chair Ing in SUPPORT of SB2079 PROTECT SHARKS

Erin Brydon <sparrowvision@icloud.com>

Sun 3/11/2018 11:58 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

>  
> Please protect our Sharks! I am In favor of SB2079  
>  
> Thank you!  
>  
> Eryn M. Brydon

## Attn: Chair Ing In Support of SB 2079

[Hannah M Chesebro <hcheseb1@binghamton.edu>](mailto:hcheseb1@binghamton.edu)

Sun 3/11/2018 12:04 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Hello,

My name is Hannah Chesebro and I am writing to show my support of SB 2079. Sharks are a vital part of the ecosystem and play a key role in the food chain. They are incredible, curious, and smart creatures. Overfishing of these animals has led some marine scientists to believe that shark species will be wiped out during the next 50 years. The idea that animals that have been on this earth since the time dinosaurs roamed the planet is insane. The only way to ensure that they will not go extinct because of human interaction is to enact laws that protect these amazing animals. Please consider this when voting.

Thank you  
Hannah Chesebro

Attn: Chair Ing

[Lucinda Burke <lucindaburke@icloud.com>](mailto:lucindaburke@icloud.com)

Sat 3/10/2018 11:14 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

To whom it may concern,

I would like to show my support for the ban against purposeful killing of sharks and rays in Hawaii. Our planet becoming more fragile as we exploit resources and our wildlife must be protected. Please protect your beautiful country and ban this senseless killing.

Yours sincerely,

Lucinda Burke

Sent from my iPhone

## Support SB2079

Rosemary Karlsson <rosemarykarlsson@gmail.com>

Sat 3/10/2018 1:04 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I ask you to support SB2079 to protect sharks and rays.

I'm a diver and I know that the ocean belongs to the sharks and rays, not to humans.

Rosemary Karlsson  
[PO Box 492266](#)  
[16-1885 Uilani Drive](#)  
[Keaau, HI 96749](#)

# ATTN: Chair Ing (Support for SB2079!!!)

Taylor Cunningham <cunninghamtaylor98@gmail.com>

Sun 3/11/2018 9:46 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

To whom it may concern,

I'm sure that you have been told in many other testimonies about the incredible importance of sharks to keeping ocean ecosystems healthy but I urge you to consider their economic importance. Sharks act as the "white blood cells" of the ocean by eating the sick, injured, or dying animals and leaving behind a healthy ecosystem. Without sharks our fisheries would be plagued with diseased fish. The fishing industry in Hawaii accounts for a significant portion of the economy. A quarter of the Hawaiian population takes part in fishing activity at least once a year and Hawaii's commercial fishermen have brought up to \$64.3 million in fish in previous years. The Hawaiian fishing industry is the 6<sup>th</sup> largest in the US and without the presence of sharks, it could potentially collapse. Tourism is the largest source of private capital into the Hawaiian Islands and contributes \$1 billion in tax revenue. Ecotourism accounts for a large portion of tourism within Hawaii, much of which involves sharks or coral reef ecosystems. It has been proven that by protecting sharks, overall reef health improves. For example, the protection of sharks in the Bahamas has led to a healthier food chain and increased shark-related ecotourism, earning the title of "Shark Diving capital of the world". The shark diving industry in the Bahamas brings in approximately \$78 million a year to the local economy. The protection of sharks and rays in the Maldives has led to a huge ecotourism business among the islands. In Palau, each living reef shark contributed almost \$2 million to the economy within their lifetime via ecotourism. On the other hand, that same shark would be worth a one-time pay out of a couple hundred dollars if killed by a fisherman in Palau. A LIVING SHARK IS WORTH MORE THAN A DEAD ONE! Even if you ignore all the biological and ecological benefits of the presence of sharks & rays within the Hawaiian reef and ocean ecosystems there is an extremely compelling economic reason to protect sharks and rays in Hawaiian waters. I urge you to pass bill SB 2079 and join the Maldives, Honduras, and the Bahamas in efforts to prevent the recreational fishing of sharks.

Mahalo,

Taylor Cunningham

Attn: Chair Ing In Support of SB 2079

[Tracie Sugo <koholakaiblog@gmail.com>](mailto:koholakaiblog@gmail.com)

Sun 3/11/2018 11:01 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Please support SB 2079.

This bill would further protect Hawaii's sharks and rays by prohibiting the recreational fishing of these animals. [Although sharks are seen as aumakua in Hawaii](#), they are still captured, left for dead, or used as bait by some fishermen. Unfortunately, with no laws in place, these actions cannot be legally pursued nor ceased. Sharks and rays play a pivotal role in the health of our oceans and have an important cultural significance in Hawaii, and play a vital role in Hawaii's ecosystem.

These animals are already being wiped out in unfathomable numbers in federal waters around the islands and all around the world. It is unnecessary to fish them for recreation in state waters and we hope you will help us make Hawaii the first state to write it into law!

Thank you,  
Tracie Sugo

**LATE**

**SB-2079-SD-2**

Submitted on: 3/12/2018 4:46:30 PM

Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Wayne	Individual	Support	No

Comments:

Aloha mai kākou,

As a lifelong fisher born and raised in these islands I have seen first hand a decline in shark and ray populations that I now understand are critical to the ecological and cultural integrity of our nearshore environment. Protections such as these will hopefully help to mitigate the impacts of a broad range of human activity on these keystone species that serve vital functions in our ocean ecosystems. Please **SUPPORT** this balanced measure -- which notably contains significant exceptions for Native Hawaiian traditional and customary practices and federal fishery bycatch -- to protect our sharks and rays from further decline.

Mahalo nui!

Wayne Tanaka



**LATE**

**SB-2079-SD-2**

Submitted on: 3/12/2018 8:28:51 PM  
Testimony for OMH on 3/13/2018 9:45:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Connor O'Toole	Individual	Support	No

Comments:

Aloha, Legislative Committee,

I whole-heartedly support bill SB2079. Not only should we protect our marine ecosystems and the immense biodiversity that it encapsulates inside the ocean, but we must protect it outside the water as well. Please take into account that this bill holds significant weight for both the sharks and ray's future populations and their livelihood in Hawaiian waters. As human beings, we have a duty to protect and speak up for the things that do not have a voice for themselves.

He nui ka mahalo,

Connor O'Toole



O'ahu  
Chapter

[Surfrider Foundation O'ahu Chapter](#)

[Web: oahu.surfrider.org](http://oahu.surfrider.org)

[Contact: rbergstrom@surfrider.org](mailto:rbergstrom@surfrider.org)

[Mail: P.O. BOX 283092 Honolulu, HI, 96828](#)

SB 2079: Strong Support  
House Committee on OMH  
DATE: Tuesday, March 13<sup>th</sup>, 2018  
TIME: 9:45 a.m.  
PLACE: Conference Room 312

**LATE**

Aloha Members of the House Committee on OMH,

As the O'ahu Chapter Coordinator for the Surfrider Foundation, I am writing in strong support of SB2079. As a non-profit dedicated to the protection and enjoyment of our world's ocean, beaches, and waves, we have a distinct mission to engage our members and volunteers with issues of environmental protection. We are equally concerned about how we treat the organisms in the ocean as we are with the land-based decisions that affect our nearshore ecosystems. Surfrider works with many groups of ocean conservationists and is educated in our membership base by marine biologists lending their expertise to our mission. With that in mind, we fully support the protection of sharks and rays. These incredible creatures are managers of the ocean, being top level trophic animals that are imperative to the balance of ecosystems. As global loss of sharks continues to mount, it is imperative that we take a stand on the being a leader in protection of these creatures.

Our organization closely monitors water quality and is enriched with dedicated scientists and experts working in the field. Our near shore ecosystems are already in dire straits with massive coral loss and impaired bodies of water becoming the norm. Leading local coral reef scientists already attribute losses to major issues of sedimentation and nutrient runoff from land. We need to ensure that the life within the ocean is not suffering from both ends of the spectrum.

Mahalo for your time in considering this bill.

With Aloha,  
Rafael Bergstrom  
O'ahu Chapter Coordinator, Surfrider Foundation

Attn: Chair Ing In Support of SB 2079

Lisa Petta <petta14@rcn.com>

Mon 3/12/2018 12:34 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



**LATE**

Please protect Hawaii's sharks and rays by prohibiting the recreational fishing of these animals. [Although sharks are seen as aumakua in Hawaii](#), they are still captured, left for dead, or used as bait by some fishermen. Unfortunately, with no laws in place, these actions cannot be legally pursued nor ceased. Sharks and rays play a pivotal role in the health of our oceans and have an important cultural significance in Hawaii. These animals are already being wiped out in unfathomable numbers in federal waters around the islands and all around the world. It is unnecessary to fish them for recreation in state waters.

We must do everything within our power to protect these magnificent creatures.

## IN SUPPORT OF SB 2079

Madeleine James <maddiejam@icloud.com>

Mon 3/12/2018 12:37 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



It is completely impossible to ignore the importance to sharks to our ecosystems. Especially in Hawaii where the shark is of vital importance. Ecosystem models predict that the removal of sharks can result in complex community changes, including trophic cascades, mesopredator release, and consequent declines in some commercial fish and cascading changes in some coastal ecosystems (Ferretti et al. 2010). Additional research indicates that the removal of shark and rays may alter size, structure and population parameters in response to changes in species abundance (Stevens et al. 2000).

## IN SUPPORT OF SB2079

Rachel Forbes <rachel.forbes333@gmail.com>

Mon 3/12/2018 12:47 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Hello, I would like the Hawaiian Government to protect sharks and rays, please. Thank you.

Rachel Forbes of New Brunswick, Canada

Sent from [Mail](#) for Windows 10

In support of SB2079 Sharks and Rays!

Lauren Maycock <laurenemmay@gmail.com>

Mon 3/12/2018 12:47 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Sent from my iPhone

## I Support SB 2079

Rishi J. <rishunj@gmail.com>

Mon 3/12/2018 1:13 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



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Virus-free. [www.avg.com](http://www.avg.com)

## In SUPPORT of SB2079 Save Sharks and Rays

Chelan Forman <chelanforman@hotmail.com>

Mon 3/12/2018 1:49 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



In support of this movement.



In SUPPORT of SB2079

Frida Nettel <frida.nettel@gmail.com>

Mon 3/12/2018 1:55 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Save sharks and rays!

## In Support of SB2079

Jason Chitla <jasonchitla@hotmail.com>

Mon 3/12/2018 2:24 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Good Morning!

Sharks are one of the most beautiful species on earth and I'd hate to see them wiped out. Please pass SB2079 and help protect these animals from deliberate killings!

Thank you for taking the time to read this email. I appreciate the work you do on this committee! :)

Respectfully,  
Jason Chitla

In SUPPORT Of SB2079 Save Sharks and Rays!



Holly Stanton <hollyl.stanton@hotmail.com>

Mon 3/12/2018 2:53 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

If there's anything that needs our help- It's sharks.

Holly Stanton

Attn: Chair Ing In Support of SB 2079

Marisa Forbes <Marisa.Forbes@unb.ca>

Mon 3/12/2018 3:20 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Sharks and rays are important animals in marine habitats and food webs.

# IN SUPPORT OF SB2079

Mon 3/12/2018 4:31 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Attn: Chair Ing In Support of SB 2079

Babette Orenstein <BabetteO@aol.com>

Mon 3/12/2018 4:52 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Hoping it's not too late to join the chorus of voices calling for the protection of sharks and rays in Hawaii. These creatures play a vital role in the oceans' ecosystem. Too much has already been done in this world to curtail the rights and safety of wildlife. Please stop the recreational fishing of sharks and rays.

Very truly yours -  
Babette Orenstein  
Brooklyn, New York

Sent from my iPhone

Attn: Chair Ing In Support of SB 2079



Kuulei Gunderson <kuuleig@hawaii.edu>

Mon 3/12/2018 6:23 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Sharks and rays make up most of what we know as Chondrichthyes, or cartilaginous fish. The evolution of sharks and rays is said to have occurred around 170 million years ago (Jones, 2015). Sharks themselves have been in the process of evolution for 450 million years.

In Hawaiian culture we believe the spirits of our ancestors live on through animals that range from the graceful māno (shark), to the witty pū'eo (owl), to the small yet unassuming mo'o (gecko) or 'enuhe (caterpillar). These "guardians" are called 'aumākua. They appear to us in times of need to guide and protect us (Taylor, 1993). In turn by protecting these keepers of the land and sea, we ensure a healthy ecosystem and sustainable lifestyle for the entire food chain.

An estimated 100 million sharks are killed every year (Aldred, 2016). Through hundreds of years of evolution, Chondrichthyes in particular have received no greater threat than the ones they face today: humans.

According to an article published by The Guardian, the waters surrounding the Galapagos are said to house the greatest concentration of sharks in the world and had been deemed a marine sanctuary reserve since 2016 (Aldred, 2016). A year later, the "greatest seizure of sharks in the history of the Galapagos" occurred and twenty Chinese crew members were jailed and fined a total of \$5.9 million by an Ecuadorian judge (Downs, 2017). Had the waters surrounding the Galapagos not fallen under protection just the year before, those whom were charged with wastefully harvesting sharks and other marine life may not have been fined, jailed, or faced any repercussions.

While the population of sharks and rays have plummeted in the last century, we must do the best we can to restore natural order to the disruption we have caused. It is our kuleana (responsibility) to act upon the changes we see happening in our world. Values that were once heavily incorporated into native Hawaiian society, such as mālama 'āina are becoming foreign to many of the islands. By supporting SB 2079, you are helping ban the senseless killing of sharks and rays throughout Hawaiian waters while ensuring the future of Hawai'i's pristine marine ecosystem and the overall future of our earth.

Mahalo for your time,

Ku'ulei Gunderson

#### Resources

Aldred, J. (2016, March 21). Ecuador creates Galápagos marine sanctuary to protect sharks. <https://www.theguardian.com/environment/2016/mar/21/ecuador-creates-galapagos-marine-sanctuary-to-protect-sharks>

Downs, R. (2017). Ecuador navy arrests Chinese crew for fishing 'thousands' of sharks in Galapagos. UPI Top News,

H.I. Legis. SB2079. (2018).

Jones, L. (2015, October 03). Earth- The epic history of sharks. <http://www.bbc.com/earth/story/20151003-the-epic-history-of-sharks>

Taylor, L. R. (1993). Sharks of Hawaii. Honolulu: University of Hawaii Press.

In SUPPORT of SB2079 Save Sharks and Rays!

Raeann Iler <iler.raeann27@gmail.com>

Mon 3/12/2018 6:46 PM

To:omhtestimony <omhtestimony@capitol.hawaii.gov>;





# In SUPPORT Of SB2079 Save Sharks and Rays!

Valerie Palacios <valpalacios13@gmail.com>

Mon 3/12/2018 6:56 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Save Sharks and Rays!

## In support of SB2079 save sharks and rays

Mermaids For Change <info@mermaidsforchange.com>

Mon 3/12/2018 6:56 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Unfortunately, I will not be able to be present at the hearing but I would like to use this opportunity to present my testimony.

Sharks are what brought me to Hawaii for the first time and the same goes for many tourists, captivated by an apex predator they can be introduced to safely.

The connection between sharks and the Hawaiian culture and the beautiful waters of Hawaii, create the perfect scenario for ecotourism to thrive, making sharks a treasure for this state.

Failing at restricting and punishing killings of sharks and rays is not only culturally and morally wrong. It also deprives Hawaii of a rich revenue. Moreover, sharks, as apex predators are meant to regulate the reefs and oceans, eating the sick and weak fish, leaving us healthy reefs. Letting killings of sharks unpunished will allow more and more sharks to be taken and the reefs to suffer consequentially. With fewer sharks to maintain a healthy fish population we'd soon find ourselves dealing with sick fish, contaminating schools and entire species of marine animals.

Chiara Salomoni

Mermaids for Change

[www.mermaidsforchange.com](http://www.mermaidsforchange.com)

## In support of SB2079 save sharks and rays

Giulia Fiori <julie.gemini86@gmail.com>

Mon 3/12/2018 8:12 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Unfortunately, I will not be able to be present at the hearing but I would like to use this opportunity to present my testimony.

Sharks are what brought me to Hawaii for the first time and the same goes for many tourists, captivated by an apex predator they can be introduced to safely.

The connection between sharks and the Hawaiian culture and the beautiful waters of Hawaii, create the perfect scenario for ecotourism to thrive, making sharks a treasure for this state.

Failing at restricting and punishing killings of sharks and rays is not only culturally and morally wrong. It also deprives Hawaii of a rich revenue. Moreover, sharks, as apex predators are meant to regulate the reefs and oceans, eating the sick and weak fish, leaving us healthy reefs. Letting killings of sharks unpunished will allow more and more sharks to be taken and the reefs to suffer consequentially. With fewer sharks to maintain a healthy fish population we'd soon find ourselves dealing with sick fish, contaminating schools and entire species of marine animals.

Giulia Fiori, Los Angeles, CA

Sent from my iPhone

Attn: Chair Ing



HashtagSpeakUp Movement <hashtagspeakupmovement@gmail.com>

Mon 3/12/2018 9:08 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

**Support Bill SB 2079 Protect Hawaii's Sharks**

I am writing today representing both of my organizations, The Plastics Project and Hashtag Speak Up Movement, as a One Ocean Ambassador, and most importantly, as a voice for future generations, including my own. The decisions that you make in this hearing regarding the protection of sharks is just as important as the other bills I fought for last week to help our oceans.

Humans need the ocean to survive. Our lives literally depend on it! Between pollution and humans killing off sharks, their populations are declining and this scares me. It should scare all of us!

In school we learn about photosynthesis as the way that humans get the air we breathe. What I didn't learn until I started doing ocean conservation is that most of the air that we breathe actually comes from the ocean. In fact, around 85% of the air we breathe is from the ocean so I don't understand why ocean conservation isn't more important to everyone.

Losing the apex predator of our seas will cause a domino effect and it won't be good.

Certain sea animals can grow uncontrollably and many fishes and other animals will go extinct

Mid-level predators will increase and eat most of our algae eaters

Our seas will be overrun with algae and the gross stuff that comes with algae making the water slimy

Sunlight will have a harder time penetrating the water

The overgrowth of algae would also suck the oxygen out of the water and marine life will suffocate to death  
Algae can produce toxins that are harmful, even for people, and toxins will lead to mass die offs in the ocean

Coral reefs will start to die and many will go extinct

Without sharks to eat the ill or the weak, diseases will spread among fishes and animals and this could also cause mass die offs

Without sharks controlling other predators, their prey will be overeaten and will cause other species to disappear

The ocean regulates the carbon cycle of the planet because carbon is stored in marine plants. Without sharks, the animals and fish that eat marine plants would not have a predator and they will grow out of control. They will eat all the marine plants and our carbon levels will go up. This will speed up global warming and climate change.

So you see, every thing has a role in the ecosystem of the ocean and sharks are one of the most important things keeping that ecosystem functioning. We need to protect sharks! If you enjoy breathing and you want your kids and your kid's kids and generations after that to have air to breathe, we need you to PLEASE protect our oceans. Please pass this bill.

Thank you!

Rylee Brooke Kamahele

## In SUPPORT Of SB2079 Save Sharks and Rays!

slavka.sopkova@gmail.com

Mon 3/12/2018 9:19 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



To Whom It May Concern,

Our country does not have an ocean, I am writing to You from the central part of Europe - Slovakia, because for me - as a natural scientist - the life on this planet means to me a lot. I have a hope for a thriving marine ecosystem.

I support the SB2079. Please help to protect and save SHARKS and RAYS.

Thank you

With Regards

Slavka Sopkova PhD.

(geologist)

## In support of SB2079

Monique Handloser <monique.handloser@gmail.com>

Mon 3/12/2018 9:33 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Hello,

I support SB2079!

Sharks and rays are both incredibly crucial to maintaining a healthy ocean environment. Without a healthy ocean in balance, we will quickly begin to see the downfall of many ecosystems directly effected by the ocean (ALL OF THEM). Please give them the protection they deserve and so desperately need. They are not scary creatures, just misunderstood. The decline in species is unacceptable. They are VITAL to a health worldwide ecosystem. We need to act immediately and be responsible.

Mahalo,

Monique

I support SB2079

Ruben Louwagie <ruben.louwagie@gmail.com>

Mon 3/12/2018 9:50 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



It's very important to protect the marine life in Hawaii because it forms part of the daily life in the islands.

The SB2079 is completely necessary and I, Ruben Louwagie, support it.



Attn: Chair Ing in support of SB 2079!



Ashley Sanner <ashleyasanner@icloud.com>

Mon 3/12/2018 10:20 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

Attn: Chair Ing in support of SB 2079!

Please act upon passing the bill and helping the Sharks. Anyone can say "they're just Sharks." They're not "just" Sharks, they're a large part of our ecosystem and it's failing incredibly.

Please help; you have a say, you have a way.

Thank you,  
Ashley Sanner of Michigan, USA.

## IN SUPPORT OF SB2079

Dilberay Engin <dilberay\_engin@hotmail.de>

Mon 3/12/2018 10:36 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Dear Ms/Mrs/Mr,

in order to keep our oceans ecosystem healthy we need sharks. All over of the world 700 000 sharks being killed mostly just for a toxic bowl of soup. We have to do whatever we can to protect the few left. Sharks aren't eating machines they are just trying to survive.  
MAHALO NUI LOA

#helpsavesharks #oceanramsey #sharksarentmonsters #sharksareimportant  
#speakupforthosewithoutavoice

Yours sincerely  
Dilberay Engin

Gesendet von myMail für iOS

In support of SB2079 Save Sharks and Rays!

[Bianca Paishon <ponialoha13@gmail.com>](mailto:ponialoha13@gmail.com)

Mon 3/12/2018 11:17 PM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Please save our sharks and rays for our future generations and the good of Mother Earth!

Sent from my iPhone

"In SUPPORT Of SB2079 Save Sharks and Rays!



Jean-Yves Dicaire <jydicaire@gmail.com>

Tue 3/13/2018 12:27 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I'm not resident of Hawaii but as sharks and rays travel across the oceans, we all have to preserve them knowing that when a chain breaks nothing can not remain stable. they are a essential links that unite the marine life of all the seas of the globe. Hawaii is surrounded by water, if all marine life disappeared, the island itself would be greatly affected and could hardly survive.

Tanks for your implication in the preservation

Jean Yves Dicaire, Levis, Québec Canada

## In Support of SB2079

Christian Henning <christiantinman@me.com>

Tue 3/13/2018 1:57 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



To Whom It May Concern:

Im writing in to voice my support for bill SB2079 to protect the natural resources of Hawaii and its fish life. With out sharks we can not have a healthy ocean. Hawaii must lead the way to show the rest of the nation a better way towards sustained fish populations and that can only happen when we take care of the sharks and protect them as they in turn will protect us by keeping our oceans healthy.

Kind Regards

Christian Henning  
Waialua, Oahu

## In Support of SB2079

Marie Lidén <marieliden@yahoo.com>

Tue 3/13/2018 2:14 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Attn: Chair Ing in SUPPORT of SB2079 PROTECT SHARKS

Please protect all oceans animals. They all need our protection, from us humans who are still unaware.

Thank you so much for your work and for creating a healthier ocean & planet for our children.

Kind Regards,  
Marie Lidén  
Stockholm  
Sweden

Attn: Chair Ing In Support of SB 2079



[Leah Messer <leahdawn0913@icloud.com>](mailto:leahdawn0913@icloud.com)

Tue 3/13/2018 2:19 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I stand with all in Hawaii protecting SHARKS AND RAYS!! PROTECT OUR SHARKS AND RAYS!!

Sent from my iPhone

## Support for SB2079

[Vanessa Bourque <vanmariejulie@hotmail.com>](mailto:vanmariejulie@hotmail.com)

Tue 3/13/2018 3:03 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



I support the conservation of sharks and rays!!!!!!!!!!!!



## Support for SB2079

shawn feener <shawnfeener1019@gmail.com>

Tue 3/13/2018 3:03 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;

I support rays and sharks!



## Support for SB2079

[Ainslee MacMillan](mailto:Ainslee.MacMillan@unb.ca) <[Ainslee.MacMillan@unb.ca](mailto:Ainslee.MacMillan@unb.ca)>

Tue 3/13/2018 3:04 AM

To: omhtestimony <[omhtestimony@capitol.hawaii.gov](mailto:omhtestimony@capitol.hawaii.gov)>;



I support this! From New Brunswick Canada.

Get [Outlook for iOS](#)

## Support for SB2079

Jenna Miller <jenna.miller96@unb.ca>

Tue 3/13/2018 3:06 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



I support sharks and rays!

## Support for SB2079

[Kayla Guy <kayla.guy@icloud.com>](mailto:kayla.guy@icloud.com)

Tue 3/13/2018 3:28 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



I support this bill.

Sent from my iPhone

## Support for SB2079

Matt T Miller <mmiller7@unb.ca>

Tue 3/13/2018 4:32 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



I support sharks and rays!

## Support for SB2079

Danika Letourneau <hlycd@stu.ca>

Tue 3/13/2018 4:39 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



I support sharks and rays!

## Support SB 2079- Support Sharks & rays!!

Daniella Guerin <dguerin@my.hpu.edu>

Tue 3/13/2018 5:48 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



Aloha,

I support SB 2079 which helps protect elasmobranchs in Hawai'ian waters. Please hear us out when we present how vital these apex predators are to the ocean!

Sharks and rays are extremely important in maintaining healthy marine ecosystems. They are at the top of the food web and many sharks act as the white blood cells of the ocean. They pick off sick, diseased or injured prey and help keep the ocean clean that way. If shark populations CONTINUE to drastically dwindle, more diseased or sick animals will ensue.

Next, many fish or turtle populations will increase if they are not maintained by shark predation. Then, this impacts the NEXT trophic level, where fish or turtles will eat more algae beds, jellyfish, smaller fish, polyps, etc. So, less sharks, more fish or turtles, even LESS algae or reef populations. With decreasing shark populations comes a great impact.

Also, if more disease spreads through prey species typically eaten by sharks, that actually puts US at risk. We eat fish. We love seafood. Hawai'i is KNOWN for delicious & fresh fish. However, what would happen if illness spread across that trophic level, and we didn't even know it until it was too late? Whatever the fish has, we'd be exposed to. OR, even MORE fish would die from disease, so we'd suffer the consequences. Sharks help US this way. We need a healthy, sustainable ecosystem even for our economy and food industry. That's a HUGE part of the Hawaiian Islands and by protecting sharks, we can actually help protect ourselves!!!

We should be doing anything we can to help take care of this planet. PLEASE listen to Ocean Ramsey and Juan Oliphant along with the rest of SB2079 supporters. Many have plentiful experience with sharks & rays, and we all know the damage it can do if the populations diminish.

After all, its their ocean, not ours.

If anyone is spiritual or religious, it says in Genesis 1:28 that God gave us responsibility to take care of this Earth. He gave us this responsibility because we are conscious creatures. We have the capability for compassion & understanding unlike most animals here. So, it IS our responsibility to take care of this planet, its inhabitants, and ourselves.

Genesis 1:28

28 And God blessed them. And God said to them, "Be fruitful and multiply and fill the earth and subdue it, and have dominion over the fish of the sea and over the birds of the heavens and over every living thing that moves on the earth."

Best regards,  
Mahalo for your time and consideration,

Dani Guerin  
[dguerin@my.hpu.edu](mailto:dguerin@my.hpu.edu)  
[\(815\) 353-5825](tel:(815)353-5825)

Sent from my iPhone

I support SB 2079 Shark & Ray

Frances Pueo <owlit1@gmail.com>

Tue 3/13/2018 8:08 AM

To: omhtestimony <omhtestimony@capitol.hawaii.gov>;



SB 2079, SD2 (SSCR2772) Shark/Ray

I support this bill because without substantial penalties and fines, abuse, bullying, possession taking, and killing of our sharks and ray within state and costal marine waters will continue.

Sharks and rays are the keepers of a well balance marine/costal waters and need our human intervention to protect them from those within our own species(humans) that exploit and do them harm.

Frannie Pueo

(808) 769-1128