HAMER NEWSLETTER

support us

YEAR 2023
AT A GLANCE

We've had a busy year!
2024 is going to be awesome!!

Regenerating Lahaina with Living Buildings

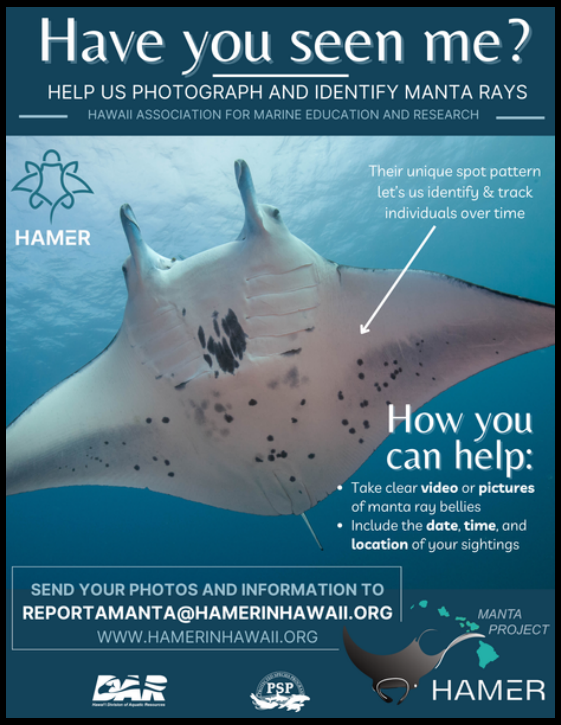
The August 8 Lahaina fire was devastating and a stark reminder that how we build and what we build with has dire consequences to our people and the planet. That is why HAMER has put together a Dream Team of experts to design/build the first Living Building Challenge (LBC) affordable home project on Maui. Why LBC? As an organization dedicated to restoring natural resources, we need examples of homes that REgenerate rather than DEgenerate the health of people and the land. LBC homes help restore ecosystems, produce more energy than they use, all from the sun, recharge instead of deplete aquifers, use only non-toxic materials, create no waste, are healthy and affordable to live in, celebrate equity and culture, and are beautiful and inspirational. Living Buildings are net positive contributions to people and the planet. This project is a game changer and will provide a model of how we can build without compromise.

learn more

We invite all of you to learn more and join us on this journey!

The seven categories of the Living Building regenerative design framework

MANTA RAYS



FIRST COMPLETE GENOME

Together with lead authors Dr. Whitney and Dr. Coleman, HAMER published the first complete genome for the reef manta ray, now available in GenBank for any researcher to use.

OUR STATEWIDE MANTA CATALOG

Our Hawaii statewide catalog has reached a whopping **788 unique manta rays** (including 30 pelagic mantas), thanks to our amazing network of citizen scientists across the islands sharing with us their opportunistic sighting information and photos. We could not learn as much as we are about these gentle without all the community support! You can submit your encounters here:

submit a manta encounter

HAWAII'S MANTA POPULATIONS ARE GENETICALLY DISTINCT

HAMER's second published paper on genetics revealed the Big Island and Maui Nui populations are genetically distinct, highlighting their vulnerability to localized threats, and the need for region-specific management strategies to prevent population decline and loss of critical habitat.

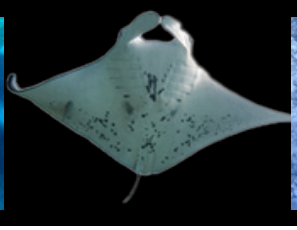
download pdf

MANTA RAYS

OAHU MANTA RAY PROJECT

Thanks to our Oahu Manta Ray Project Manager Corey Nevels, a Hawaii Institute of Marine Biology (HIMB) master's student, the Oahu catalog has grown to over **112 unique individuals** from all areas off Oahu. Adults appear to be mostly on the northeast side while very young individuals are typically seen on the south and northwest shores. Genetics are being collected to determined if this pop'n is genetically distinct.

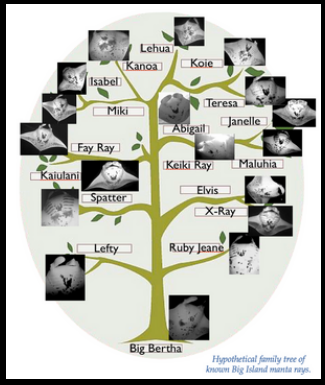
KAILE'A SUCCESSFULY DISENTANGLED


In some regions of Oahu, every manta visiting the area has visible injuries indicative of entanglement in fishing gear; some have new injuries every month. Last year, Blushing, a young male from the region, drowned in an anchor line. This year, Kaile'a, a young female, was seen with a tight wrap of fishing line, threatening to amputate part of her left wing. Fortunately, our citizen scientist from the area known as "Manta John" successfully cut the line free using specialized equipment under an authorized permit. In partnership with Manta Trust and Bob Gladden, HAMER is developing a knife that can safely cut through wire leader, and together with DAR, developing trained and equipped response teams on each island.

KONA MANTA PARENTAGE STUDY

HAMER, in partnership with Manta Pacific Research Foundation, is conducting the first ever parentage study in the world. By collecting the genetics on more than half the population, we will construct a family tree of Kona's beloved manta rays. From this, we can learn who is related to whom, which females and males are contributing most to future offspring, how next of kin socialize together, and valuable population metrics such as the total number of breeding adults.



SEA TURTLES

www.HIhawksbills.org

CRITICALLY ENDANGERED HAWKSBILLS

We are grateful to our **Turtle Team** and other citizen scientist contributions of hawksbill photographs and videos! We're up to **385** individuals in the catalog (1998-present)! Each individual life history can be viewed at www.hawksbills.org.

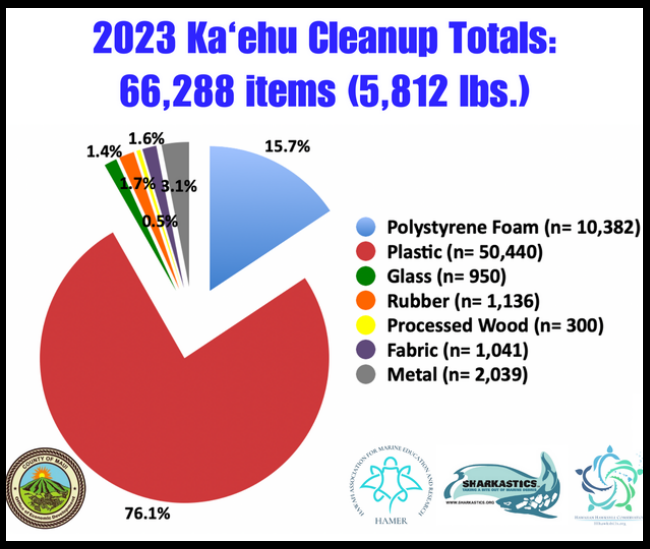
www.SHARKastics.org

MARINE DEBRIS

In 2023, we completed all 12 of our "4th Sunday of Every Month" coastal cleanups at Ka'ehu: 389 volunteers collected a total of 66,288 pieces of marine debris weighing 5,812 lbs.

join us *video*

Thanks to the combined funding assistance from the County of Maui, an awesome team of adventurous volunteers, and Windward Aviation, we were able to fly out 1,084 lbs. of marine debris (and have more staged for our spring cleanup). Please contact us to join!



MICROCOSM

ANTARCTICA

It's been a busy year on the Microcosm front starting with a bipolar debut in Antarctica back in February which was an important goal of the project all along (understanding the hidden ocean from pole to pole). Project leader Michele Hoffman Trotter presented her research with Alex Rose (Ocean Geographic) on the "Attitudes and Expectations of Generation Z Pertaining to Climate Change". Front row center was the ship's namesake Dr. Sylvia Earle, former Chief Scientist of the National Oceanic and Atmospheric Administration (not at all intimidating)!

OCEAN GEOGRAPHIC

learn more

The expedition (assembled by Ocean Geographic) was an effort to bring multidisciplinary experts together to compile a list of directive actions to combat climate change. Working groups comprised of experts hailing from every continent tackled issues such as waste management, carbon reduction, deep sea mining and more, devising action plans and objectives to disseminate to influencers in their home nations. In June, an exhibition featuring highlights of the expedition opened in Singapore and will start making its way to new venues in 2024.

Covid slowed us all down and changed life in ways still being realized, and this reality also applies to the progress we hoped to make with Microcosm. However as hope springs eternal, a new chapter has opened, and Microcosm is back on track with a new partner! In October Microcosm took to the high seas once again on the USCG Healy sailing from Norway to Denmark documenting science ops and special projects for the Coast Guard.

During this operation Microcosm teamed up with (and found a new partner in) David and Kathy Monk of Brave New Pictures with whom we will work to produce a pilot episode.

YEAR 2024

YOUR SUPPORT IS TAX DEDUCTIBLE!

Please consider supporting our work to protect and preserve Hawaii's precious marine resources.

support us

MAHALO!

LOOKING AHEAD TO 2024

- Initiate the design/build of the first Living Building Challenge home project on Maui
- Begin the analysis of the Kona Manta Ray Parentage (family tree) study
- Begin a six-week intensive Maui Nui manta ray critical habitat study
- Continue to broaden HAMER's statewide manta ray citizen science program with a strong focus on Kauai
- Continue to address the fishing line entanglement threats in collaboration with state and county regulators and other stakeholders
- Continue to improve our manta ray auto-matching software
- Ongoing reef and coastal marine debris cleanups
- Continue with critically endangered hawksbill sea turtle monitoring
- Complete another round of Maui Nui humpback whale density aerial surveys

See you all on the water!

contact@hamerinhawaii.org