VOLUME 8 ISSUE 2

The HONU Whisperer

Mission:

"To protect the Hawaiian green sea turtles through education, public awareness and conservation, all in the spirit of Aloha."

IN THIS ISSUE

We are officially into winter and the holiday season is upon us meaning big waves, celebrations and gift wrapping (wink wink). Mālama i nā honu will be repeating gift wrapping this year starting December 16th. Keep an eye out for a message from Debbie regarding volunteer sign up . The schedule is posted below.

10 11am – 6pm	11 10am – 7pm	12 10am – 7pm	13 10am – 7pm	14 10am – 7pm	15 10am – 8pm	16 10am –9pm
17 11am – 7pm	18 10am – 9pm	19 10am – 9pm	20 10am – 9pm	21 10am – 9pm	22 10am – 9pm	23 10am – 9pm
24 9am – 6pm	25 Christmas Day CLOSED	26 10am – 9pm	27 10am – 7pm	28 10am – 7pm	29 10am – 8pm	30 10am – 8pm

In this issue we have a note from our Preisdent, Don, a great Zookeeper Tales on Bonobos and some interesting information from three of our wonderful volunteers.

Some quick reminders regarding the change in scenery at our beach. Please follow rules set by lifeguards on big swell days, setting up at the edge of the road instead of on the beach. Provide guidance to visitors regarding safety and be cautious of the waves and newly exposed rocks. Volunteer safety is a number one priority. Have a wonderful winter season!

BOD 2023

- Don Porter—President
- Tammy Tootell— Secretary
- Lolita Ayala—Treasurer
- Kelly Hardy— Board Member
- Tim Wesely— Board Member
- Erynn Tait — Board Member
- Debbie Herrera—VEC & Board Member

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24HR sightings/Emergencies
888-256-9840

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debbie@malamainahonu.org
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CONTACT INFORMATION

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Instagram: malamainahonu

www.facebook.com/malamainahonu

BOD PRESIDENT

Aloha Fellow Honu Guardians,

Our dedicated volunteers have always been our most precious resource. Without you, there would be no Mālama i nā honu . It is because of you we are able to continue our mission of Education, Conservation and Outreach.

Unfortunately, Covid prevented us from holding our annual Christmas party to properly thank and acknowledge our volunteer's contribution. We are truly excited and pleased to restore this tradition. The almost countless number of hours spent by all of you on the beach at Laniakea deserve to be recognized and rewarded.

We hope that you all will accept our sincere thanks and those of you able to join us please enjoy the event.

Mahalo Nui Loa

A Hui Hou
Until We Meet Again

Mālama i nā honu
`Ohana

The Battle on Base: Marine Debris Invades Marine Corps Beaches

As you settle in to read this issue of The Honu Whisperer, The Great Pacific Garbage Patch, now twice the size of Texas, is swirling between Hawaii and California. Another blemish on the map of the Pacific, The Western Garbage Patch, spirals off the coast of Japan. Between those two gyres, the Subtropical Convergence Zone harbors still more trash and spans the ocean north of the Hawaiian archipelago. By the time you've read this paragraph, some of those pieces of debris have landed on our shores.

Over the course of the 2023 turtle nesting season, the Mālama i nā honu team tasked with surveying the beaches of Marine Corps Base Hawaii has been capturing, weighing, and disposing of some of those invading pieces from windward O'ahu beaches. Over 1,500 pounds of trash were collected by our MCBH volunteers, mostly made up of lightweight plastics that arrived with the help of wind and current. Additionally, an unknown total of pounds of heavier items like tires and large fishing buoys were piled in shoreline caches by our volunteers to aid in retrieval by Base Environmental staff.

Where does all this trash come from? The answer is everywhere. From the case of beer cans left by last night's partiers to the Japanese glass fishing floats that have been adrift for decades, the source of marine debris is as varied as the items found. The volunteer WhatsApp chat would come to life with notifications reporting some of the more interesting finds, like when there was an influx of pastel-colored buoys dubbed the "Barbie buoys" and the week that inexplicably yielded eight matching bright red bottles of Heinz ketchup.

So what can we do as individuals? Reduce, reuse, recycle is still the best approach, in that order. Reducing plastic use and creating a demand for alternative products is the first step. Picking up litter everywhere is also important to keep it from entering waterways that eventually lead to ocean habitat. In this way, our friends not only in Hawaii but all around the world can help keep marine life safe!

If you would like to learn more about the ocean garbage patches and the effects of marine debris, visit https://marinedebris.noaa.gov for educational articles, videos, and downloads.

Some volunteers collected individual items to show the impact of commonly used plastic items, like these toothbrushes.

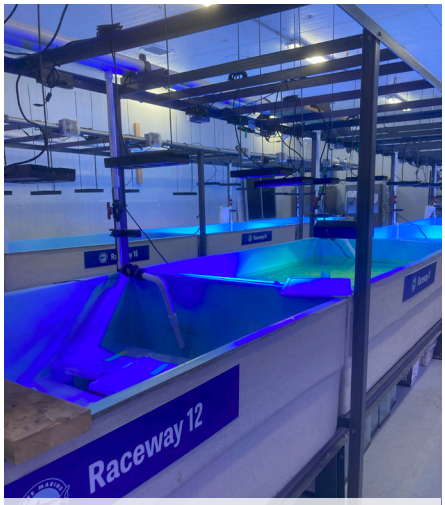
This collection of bottlecaps belongs to Cathy Hussey, who collected the most trash this season, with a total of 376.44 pounds.

Anna Weigand found treasure among the trash with this antique glass fishing float

One of the trash caches left for our friendly partners at Base Environmental

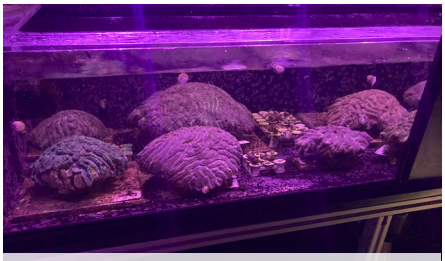
KAITLYN KINLEY *Coral Reef Preservation*

Coral reefs are a vital ecosystem. Not only do they support a diverse array of wildlife but they also play a crucial role in coastal protection and fisheries. The individual corals that make up the coral reefs are composed of tiny polyps that secrete a calcium carbonate



Gene Bank Coral

skeleton, giving corals their rock-like appearance. As the polyps grow and multiply the coral will grow in size. Unfortunately, coral reefs are delicate ecosystems and face many threats including ocean warming, ocean acidification, overfishing, and habitat destruction. It is imperative that steps are taken


Coral Spawning System

to protect this essential ecosystem.

This summer, I had the amazing opportunity to intern at Mote Marine Laboratory and Aquarium's Coral Gene Bank. The Gene Bank, which acts just like a seed bank, houses over 25 different species of Caribbean corals. The Gene Bank is located at Mote's Marine Aquaculture Park which is located almost 15 miles from the ocean. This means that all salt water at the Gene Bank is made there and recycled. A lot of my job consisted of making sure the salt water in the tank was suitable for the corals. This included keeping the temperature and salinity (how salty the water is) consistent, dosing the tank for missing elements, and changing and cleaning filters to keep the water clean. My absolute favorite task was feeding the corals. At the end of every day, I would get to hand feed every coral with a pipet. Whoever said that corals are just colorful rocks have never seen a coral feed. The polyps get super excited and all their tentacles come out as they grasp for food.

One of the most exciting parts of my internship was assisting with coral spawning. Corals use a variety of cues to synchronize their spawning. These cues include temperature, lunar cycle, light, and more. The spawning tanks were set


Kaitlyn Fertilizing Coral Gametes

up to replicate actual ocean conditions except the lights in the tank were set to be nighttime during our day. This was done because coral spawn at night and the biologists want the corals to spawn during the day so we could monitor them. The corals being monitored were set to spawn after either of the two full

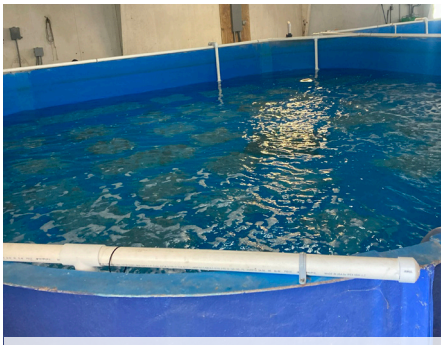
Mote Marine Laboratory Coral Gene Bank

moons that occurred in August this year. My job involved supervising the corals every 15-20 minutes to check for spawning throughout the day. During my time at the Gene Bank, two corals of the same species spawned! I got to help collect the gametes, fertilize the eggs, and settle the larvae. This was such a unique experience! These corals will be grown in the Gene Bank until they are large enough to outplant on the reef.

In mid-July, the sea water in the Florida Keys was hit with record high temperatures of over 100 degrees! Because of the extreme ocean temperature, MOTE's ocean-based coral nurseries, as well as other nurseries in the Keys, were reporting a mass bleaching event. Bleaching occurs when a coral becomes heat stressed and kick out the symbiotic zooxanthellae that live in their tissues. Zooxanthellae are photosynthetic microbes that are essential to coral health because they provide food for the corals. Corals can survive short amounts of time without their zooxanthellae before they die, however, temperatures on some reefs were so high that the corals were dying before they could even bleach. The Coral Restoration Foundation in fact reported almost 100% coral mortality on several reefs in the Lower Keys.

What followed this news was a mass coral evacuation from the Florida Keys. The Gene Bank staff and I, as well as

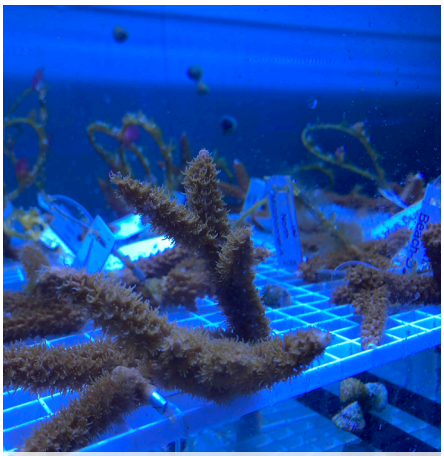
The Gene Bank staff and I, as well as scientists from the main aquarium, were recruited to assist with the setup of tanks and the delivery and care of the evacuated corals. Over the course of a week, the Aquaculture Park received several thousand rescued Staghorn corals. This was an incredibly daunting task as there was no infrastructure to care for the sudden influx of corals. The day before the first corals arrived, thousands of gallons of saltwater were delivered to fill the massive tanks that were meant for the aquaculture of crabs. The corals



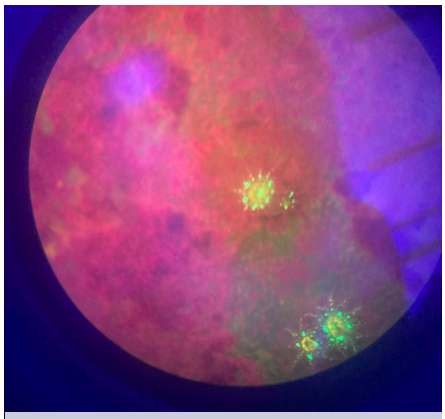
Crab Tank for Rescued Coral

arrived early the next morning. When they arrived, they were rushed into the tanks where over the course of the next few hours they were organized by genotype and tagged. The first batch of corals that arrived looked healthy, however the rest of the shipments of corals were in far worse shape. The next day, double the number of corals arrived. Unfortunately, many arrived bleached, dying, or dead and by the end of the day we had lost at least half the corals that had arrived that morning. The corals that arrived the rest of the week didn't look much better. Clearly the water temperature and the stress of transport were worsening the coral's health. Despite the many losses, the corals that did survive wouldn't have if they hadn't been evacuated. This mass effort would not have been possible without the amazing people that stepped up to help. From those in the Keys who were scuba diving and removing corals from the reef to the volunteers who drove through the night to reach the Aquaculture Park, and to the scientists who continue to care for the corals now.

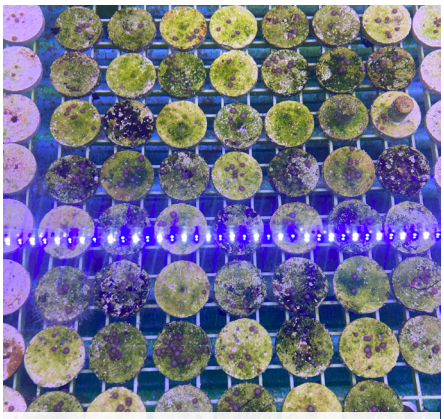
These rescue corals will stay at the Aquaculture Park until water temperatures drop. This mass bleaching event serves as a stark reminder of the vulnerability of coral reefs. As we look ahead, we must consider the fate of our coral reefs and the growing importance of coral gene banks. Coral gene banks are built to help our corals recover from catastrophic events like this bleaching event. The Gene Bank ensured that the death of those corals did not mean the disappearance of that species genetic diversity. This gives me hope that one day our coral reefs can recover.



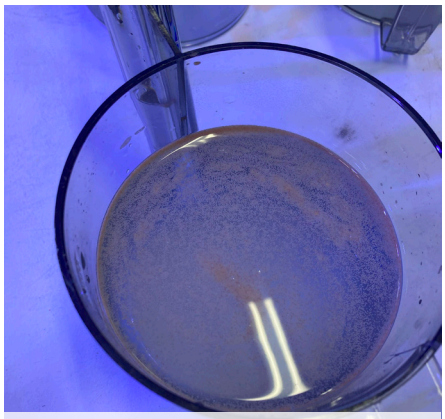
Rescued Staghorn Coral



Microscopic Baby Corals



Several Month Old Brain Coral



Coral Eggs

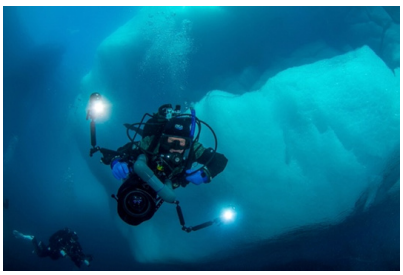
JIM VAN GOGH Scuba Dive Anywhere

Ready to Scuba Dive Anywhere....

Scuba diving draws tens of thousands of visitors to our Hawai'ian Islands each year. Kaua'i is a dream destination for divers hoping to catch glimpses of our threatened honu, endangered monk seals, and other endemic critters living around the Hawaiian Islands.

Kaua'i is also a great place to disembark to visit the shark filled waters surrounding the forbidden isle of Ni'ihau and its younger sister Lehua. Tropical diving is fantastic as it requires little thermal protections to keep you warm while exploring the ocean and its magnificent creatures. From The Golden Triangle around Indonesia, to the warm breezes in the Caribbean, warm water diving has its advantages. Scuba diving, however, is not limited to the tropics. Some of my favorite areas to dive are in the polar regions of our planet. Additional training and specialized equipment are obviously required. These include "dry suits" with highly insulating undergarments, redundant breathing apparatus and knowledgeable guides with experience diving around ice and in frigid water.

After you can get over the fact that you will be diving in sub-freezing water temperatures, polar diving offers a number of dive opportunities unavailable in most other watery areas of the planet. Diving around ice bergs is one of the draws. These large chunks of ice, which originate from calving glaciers, can be the size of cars up to large cities. The pressure of the compacted snow of the glaciers produce magnificent colors with hues of blues to stunning whites. As they melt, many bergs flip over unexpectedly, so an experience eye is required to ensure the ones you are diving are stable. This flipping,



creates mesmorizing texture and features. Each berg is unique.

A large variety of sea life are also attracted to the ice bergs. In the Antarctic, on can expect to see many of the 8 species of penguins and several species of seals, including the Antarctic's apex predator, the leopard seal. Top side the animal life is just as spectacular with many variety of seabirds, breaching whales, dolphins and killer whales. In the Arctic, one can expect to see polar bear, ringed seals and

walrus, but these are usually best observed out of the water as they can be very unpredictable and aggressive. Of course, whales also call the Artic their home, , including the elusive beluga and narwhal. Both of which are on my underwater bucket list!

If you are a scuba diver and up for an adventure, I would highly recommend getting the training and trying the cold waters of the poles. If you are not a diver, many shops offer discover scuba diving on the islands where trained instructors lead you through an introductory dive in our underwater world. For more pictures on what our underwater world offers, you can visit my website at www.vangoghscuba.com.

ZOOKEEPER Tales

LINDSAY BYRNE Bonobos

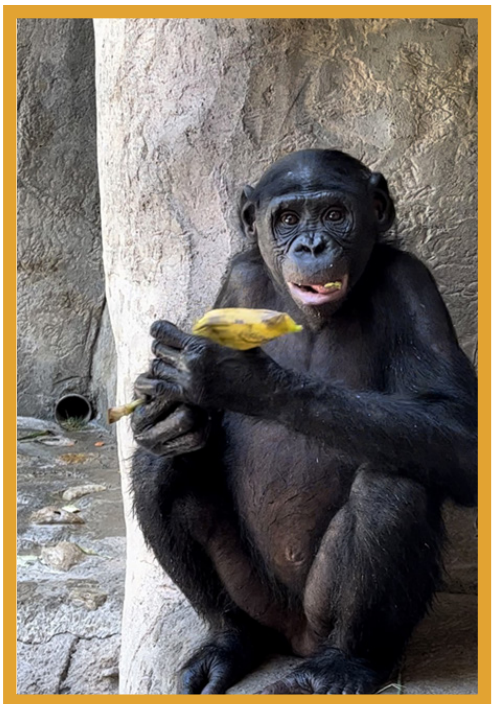
This month I'd love to highlight a lesser known species that I have the privilege of working with – the bonobo! At first glance, many think they are chimpanzees. It's not a bad guess; they look very similar and are both found in Central Africa. But bonobos are leaner, smaller, and prefer to use more peaceful methods to solve conflict. Their troops are matriarchal in structure (the opposite of chimpanzees), so the females are in charge, despite being a little smaller than males. This hierarchy seems to be key to keeping a peaceful troop.

At the Fort Worth Zoo, we care for 10 individuals. In nature, bonobos will sleep in large groups in nests they construct in trees. During the day, they will split off into smaller groups to forage for food. We try to imitate their natural social dynamics, so we will change which "buddies" each bonobo hangs out with that day. They often let us know when they're tired of another individual!

Bonobos are extremely intelligent, so one of my daily challenges is to keep them physically and mentally stimulated. I offer them objects and foods that they don't get on a daily basis to keep things interesting. I often put their treats in puzzle feeders or places where they have to work for their prize. They also can choose to participate in training. We don't teach them tricks; instead, we teach them things that help us take better care of them. For example, we can ask a bonobo to open its mouth so we can examine its teeth. We can ask to see harder-to-see spots like their backs or the bottoms of their feet. In this way, they participate in their own healthcare! They enjoy training sessions because it means they will receive lots of grapes and attention.

We don't know exactly how many bonobos are left in the wild – it could be as low as 5,000 or as morthany as 30,000. But we do know that populations have decreased dramatically over the years. One easy way to help them out is by recycling your old cell phones and other electronics. These batteries contain coltan, a mineral that is mined in the Congo rainforest where bonobos are found. Recycling what we already have keeps that mineral in circulation and reduces the need for new mining operations in their habitat.

I could talk about bonobos for ages, but that's all for now. Enjoy a few pictures of our cuties!



Mea Nui (JP)

mālama i nā honu

Do you have suggestions for our newsletter? Maybe you have a great picture from the beach or a fun story. If so, please contact Debbie Herrera by email at ***debbie@malamainahonu.org***
Reference Honu Whisperer.
Thanks for reading and we'll see you at the beach!

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