

Kilo iā

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Hawaiian Islands Humpback Whales

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Left to right: Patty Miller, NOAA/Hawaii Islands Humpback Whale National Marine Sanctuary; Dr. Celia Smith, UH Botany; Lauren VanHeukelem, Waikiki Aquarium; Cindy Knapman, UH SeaGrant; Sarah Vasconcellos, Limu Project.

AQUARIUM MESSAGE

Sir Arthur C. Clarke, the British science fiction writer, science writer and futurist, inventor, undersea explorer, and television series host, once wrote, "How inappropriate to call this planet Earth when it is quite clearly Ocean." When you think about it this way, it becomes even clearer just how important is the Waikiki Aquarium's mission: to inspire and promote understanding, appreciation and conservation of Pacific marine life.

Here at the Aquarium we take our mission seriously, and in 2017, we will be focusing our efforts on collaboration and education, building on upon key accomplishments in 2016, that included:

- the continuation of our Distinguished Lecture Series with Friends of Waikiki Aquarium and Punahou School, shining the spotlight on important ocean conservation issues
- the launch of a special Pacific Islands Ocean Observing System (PacIOOS) lecture series highlighting ocean data and information that can save lives and resources
- the continuation of our Waikiki Coastal Restoration efforts and research to restore Waikiki's reef ecosystem with the University of Hawai'i at Manoa
- the presentation of special coral workshops

and keiki activities in conjunction with the International Coral Reef Symposium.

In preparation for 2017, the Waikiki Aquarium and its partners have met to discuss important environmental issues and how to continue educating and informing the public about them. The meetings have included partners from the University of Hawai'i's College of Education, UH Botany Department, National Oceanic Atmospheric Association (NOAA), Lyon Arboretum, and Department of Land and Natural Resources (DLNR), among others.

Among the education-focused activities planned for 2017 are:

- More free programs for school groups
- Themed activities, such as the Hawaiian Islands Humpback Whales National Marine Sanctuary program we have planned for January
- Promotional opportunities, including our Badger and American Cancer Society partnership planned for May, to promote the importance of caring for not only your skin, but for the ocean and its organisms
- Our Distinguished Lecture Series

We look forward to your participation in these key events and thank you for your continued support.

Kilo i'a

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MANA'O

Traditionally, the kilo i'a was an expert of fish and marine life. He studied the behaviors and movements of i'a. The kilo stood at a high point of land overlooking the ocean to watch for an expected school of fish and steered the fishermen in the school's direction. The success of surrounding the school was entirely up to the kilo.

RECENT EVENTS



KAI Waikīkī Ocean Art Show

From October 19 to November 2, Hawai'i Wildlife Artist Patrick Ching created six new ocean paintings live in the lobby of the Moana Surfrider Hotel. Visitors were able to purchase these original paintings, with a portion of the proceeds benefitting the Aquarium. Mahalo to Patrick and our program sponsor, Martin & MacArthur.

Martin & MacArthur

Hawaiian Plant Guided Tour with Alice Roberts

Every first Thursday of the month, join volunteer Alice Roberts at 1:30 p.m. for a personal guided tour of the Aquarium's native Hawaiian plant gardens. Upcoming dates include: January 5, February 2, March 2.



Hoku the Seal's Three Wishes

We had the pleasure of welcoming one of Hawai'i's top children's book authors, Gill McBarnet, for a special reading and signing of her newly released book, "Hoku the Seal's Three Wishes." This story features Hoku, an enthusiastic Hawaiian monk seal whose wishes eventually come true. Be sure to pick up a copy at The Shop at the Aquarium.

Visit us on February 18 for another reading with Gill.



Hawaiian Islands Humpback Whales

On December 8, keiki and their families joined the Aquarium and NOAA's Hawaiian Islands Humpback Whales National Marine Sanctuary team to make whale hats and learn more about these majestic creatures. If you missed it, don't worry!

Join us next time on January 16th for a whale of a good time.

Badger Swap

Protecting your skin from harmful sunrays is important but so is keeping our oceans clean and marine life healthy. On December 8, the Aquarium partnered with Badger Healthy Body Care and hosted a Badger Swap Table. Visitors had the opportunity to swap their conventional sunscreen for a free full-sized organic, natural, and coral-safe Badger sunscreen. If you weren't able to join us, be sure to check back in May for a special Badger Swap in partnership with the American Cancer Society.



UPCOMING EVENTS

10th Annual International Aloha Koi Show

Join the Waikīkī Aquarium as it hosts Hawai'i's largest koi show, featuring hundreds of rare and top-quality koi for exhibit and display. In addition, koi experts will lead educational seminars, and guests will enjoy a variety of authentic Japanese performances and keiki activities.

Nishikigoi, commonly referred to as 'koi,' will be

judged on four key characteristics when choosing the grand champion: size, body conformation, pattern and color.

The two-day show will take place on February 11 from 9 a.m. to 4:30 p.m. and February 12 from 9 a.m. to 2 p.m. Activities are included with regular Aquarium admission. For more information, visit WaikikiAquarium.org.



113th Birthday

To celebrate its 113th birthday, the Aquarium will host a celebration in March 26 with hands-on keiki activities, prize giveaways for guests and a formal birthday ceremony. Visit the Aquarium's website or follow us on Facebook ([/WaikikiAquarium](https://www.facebook.com/WaikikiAquarium)) and Instagram ([@WaikikiAquarium](https://www.instagram.com/WaikikiAquarium)) for more information!

Mauka to Makai on April 22

Our annual Earth Day celebration, hosted by the City and County of Honolulu's Department of Facility Maintenance and Hawai'i State Department of Health, will be held on April 22. In support of our mission to inspire and promote understanding, appreciation and conservation of Pacific marine life, this event highlights the impact we have on water sources from Mauka to Makai and what we can do to keep our oceans clean and healthy. Families are invited to enjoy this free day of activities, entertainment, and displays focused on the preservation and protection of our environment.



Save the Date!

**Our annual World Oceans Month celebration
will take place on World Oceans Day on June 8.**

NATIVE WILDLIFE COLLECTION

In contrast to our endearing legacy animals, the Waikīkī Aquarium occasionally acquires new animals to enhance our kama'aina and visitor experience through a variety of means. We receive state confiscations, amnesty donations, trades with reputable institutions, aquacultured animal donations from local collectors, and occasionally our experienced biologists can escape to the ocean to collect native wildlife themselves. Within the last month, these newly showcased animals have arrived through several of these pathways.

Blue Velvet Damsel (*Neoglyphidodon oxyodon*)

The blue velvet damsel is commonly found in the Western Central Pacific around Australia, the Philippines, and Indonesia. It lives in shallow reef communities and feeds on zooplankton and algae, thus making it an omnivore. This damselfish is well known for its brightly colored juvenile stage where it possesses bright neon blue streaks on its dark body. Once an adult, it changes in color to a plain black or brown and loses the neon striping. A fully-grown adult can reach up to 6 inches (15 cm) in length.

Samoan Crab (*Scylla serrata*)

The Samoan crab, also known as the mud crab or mangrove crab, was first introduced to Hawaii on the island of O'ahu in 1926. The crabs were brought over from Samoa in hopes of starting a commercial fishery. Soon after being brought here a few were released into the wild. They can now be found all throughout Hawaiian waters and even up freshwater streams. The Samoan crab feeds primarily on molluscs, crustaceans, and polychaete worms. With claws that can get up to 9 inches (23 cm) in length (larger than their own body), these crabs are considered the most aggressive crab species around the Hawaiian Islands. When cornered, they are rumored to be able to crush a broomstick in half!

Long-eyed swimming crab (*Podophthalmus vigil*)

The long-eyed swimming crab, scientifically known as *Podophthalmus vigil*, is a rare sight in Hawaiian waters. The "vigil" in its name, means "watchful," and most likely refers to its long eye stalks. This easily identifiable feature is not present in any other species of crab found around the Hawaiian Islands. These crabs are typically found in shallow, subtidal waters that have a mud and silty sand bottom. The long eye-stalks allow the crab to raise its eyes well above its body, enabling it to see while the body remains hidden beneath the silt and to keep a look out for any incoming predators or prey. The long-eyed swimming crab can grow up to 5 inches (13 cm) in carapace width and has a diet that consists mainly of small fish, shrimps, and other invertebrates.

Japanese Sea Nettles (*Chrysaora pacifica*)

The Japanese sea nettle is commonly found in subtropical waters in the southwest Pacific Ocean near Japan. This species of sea jelly has a bell that can grow up to 12 inches (30 cm) in diameter, while their tentacles can grow up to 10 feet (3 m) in length. These jellies are carnivorous and feed on comb jellies, small fish, copepods, fish eggs, and other zooplankton.

Did you know? That sea jellies, also known as jellyfish, survive despite not having a heart or brain. Yet they have been around for over 500 million years. That's older than the dinosaurs!

By: Lisa Dilworth
Waikīkī Aquarium Biologist



VOLUNTEER SPOTLIGHT

In their own words...

Frances and Barry Evans - Gift Shop, Aquarium Educator & Special Event

Volunteers since March 2015

We are here on O'ahu from the City of Healdsburg, a small town in Northern California, on a year-and-a-half mission for our church, where we have been assigned to work with the Micronesian members of the Church of Jesus Christ of Latter-day Saints. While serving as missionaries we are asked to volunteer with community organizations and support their efforts as volunteers. We have volunteered at the Makiki Library and the Waikiki Aquarium; both have been special experiences for us as we have lived here and learned about the cultures and environment of O'ahu.

Our experiences at the Aquarium have been exceptional, as we have learned so much about the Aquarium's history, fishes and other interesting exhibits that provide information to visitors. The sea life that inhabits its exhibits is exceptional and provides examples of the environmental diversity and uniqueness of the Hawaiian Islands and Atolls.

This experience has been one of the highlights of our time spent in Honolulu over the past year and a half. All the volunteers and staff have been supportive as they have

helped us to see how valuable a resource the Aquarium is to the City of Honolulu and residents of O'ahu. The University of Hawai'i, of which the Aquarium is a part, is such a special resource, and we truly appreciate their efforts to maintain the integrity of its exhibits and keep the Aquarium operational.

We want to express our sincere appreciation to the staff and volunteers who have trained and assisted us while volunteering at the Waikiki Aquarium. Our missionary service here on O'ahu will end in March, but we take with us our great experiences at the Aquarium and will never truly leave the Aquarium, people and islands.

Thanks for your support and love,
Francis & Barry



2016 Volunteer Holiday Appreciation Event

'Tis the Season to celebrate our Volunteers!! Each year in December, the Aquarium staff expresses its gratitude to our wonderful volunteers at our annual Holiday Appreciation Event. This year, over 100 volunteers came together on the lawn for an evening of food, games and musical entertainment by the Park Rats (a roving group of Kapiolani Park musicians).

A merry good time was had by all!

Our volunteers are the lifeblood of the Aquarium, giving more than 19,000 hours each year of their time to support the Aquarium. For more information on volunteer opportunities, visit www.waikikiaquarium.org, or call the Volunteer Office at 808-440-9020.



Hawaiian Islands Humpback Whale National Marine Sanctuary

By: National Oceanic and Atmospheric Administration

In Hawai'i, humpback whales, that you can often see from shore each year between November and May are generally doing well and have increased in numbers since the days they were hunted. Scientists estimate that two-thirds of the entire North Pacific humpback whale population, as many as 12,000 whales, migrates to Hawaiian waters to breed, calve and nurse their young.

While Hawai'i's iconic humpback whales are no longer considered an endangered species, they are still protected by federal and state laws, including within the Hawaiian Islands Humpback Whale National Marine Sanctuary.

In 1992, the US Congress created the Hawaiian Islands Humpback Whale National Marine Sanctuary to protect humpback whales and their habitat, which covers approximately 1,370 square miles of federal and state waters in the main Hawaiian Islands. Administered by a partnership between NOAA's Office of National Marine Sanctuaries and the state of Hawai'i through the Department of Land and Natural Resources, the sanctuary is a vital component for the protection of the humpback whale population, as it is the only place in the United States where humpback whales reproduce.



While the Hawaiian waters are a protected sanctuary for humpback whales, collisions between whales and vessels occur annually, and these events present serious risks to boaters as well as the whales. Whale calves are more vulnerable to vessel strikes because they are difficult to see as they rest just under the surface of the water and need to breathe more frequently. These magnificent animals deserve our respect. Ocean users are still required to keep a safe distance and not approach humpback whales within 100 yards by any means – whether in a vessel, on a surfboard or just swimming. While these annual visitors attract wildlife enthusiasts, they also pose safety hazards to ocean users when these 45-ton marine mammals surface, breach or slap their massive tails or flippers.

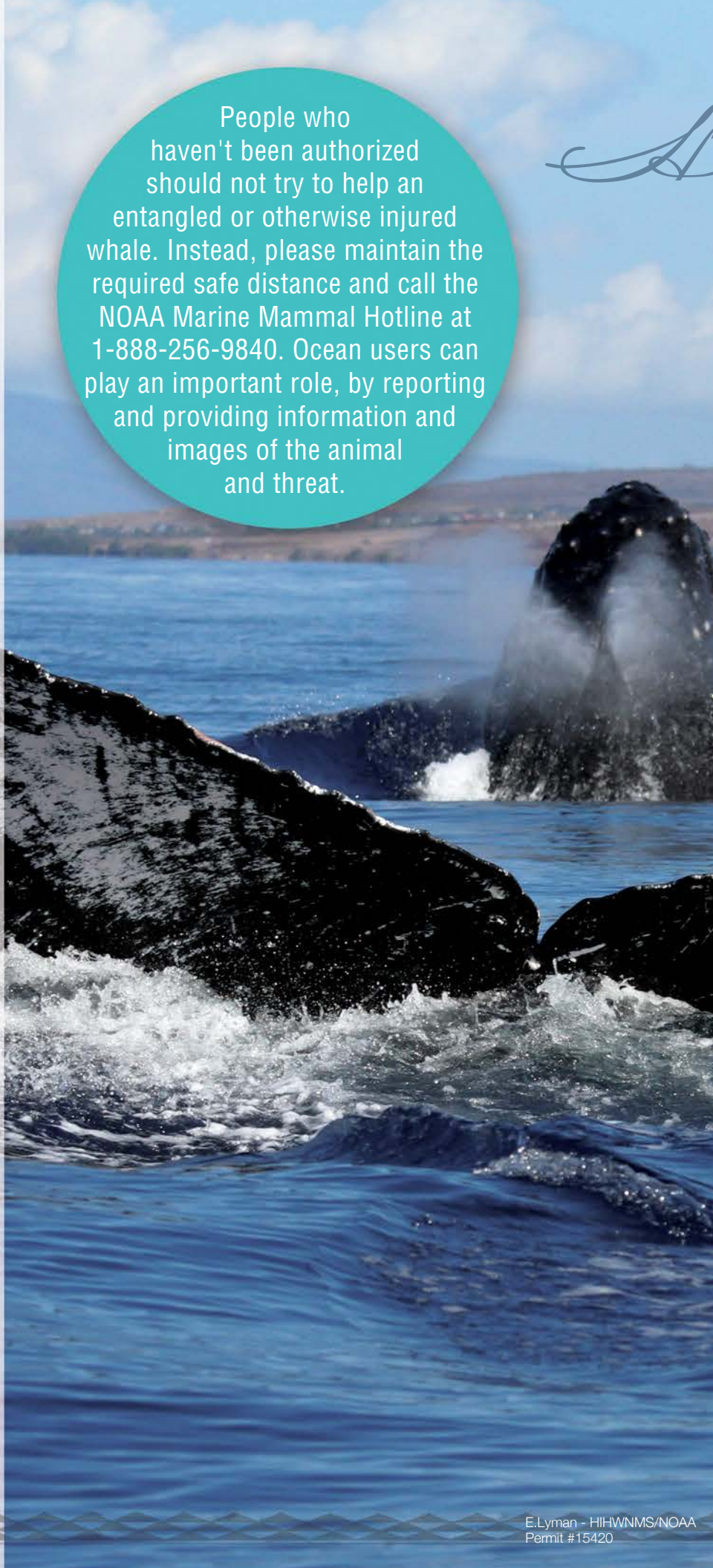


E. Lyman - HIIHWNMS/NOAA Permit #14682

Entanglement is another major threat to humpback whales. Each year the sanctuary receives dozens of reports of whales entangled in gear. The Hawaiian Islands Large Whale Entanglement Response Network, a community-based effort led by Hawaiian Islands Humpback Whale National Marine Sanctuary, was formed in 2002, and works with the community and partners to track and respond to entangled or otherwise distressed humpback whales. Since its establishment, the network has freed 22 entangled whales and recovered almost two miles of nets, ropes and other gear. This network involves over 250 trained responders across the main Hawaiian Islands and is world renowned for designing innovative methods and tools for safely freeing whales.

Large whale response and disentanglement are dangerous for both the animals and humans alike. In preparation for the 2016-2017 whale season, staff from the Hawaiian Islands Humpback Whale National Marine Sanctuary have started training teams of responders on the challenges and risks of freeing a 40-ton free-swimming whale in the open ocean. Qualified responders take part in classroom, hands-on and on-water simulations.

People who haven't been authorized should not try to help an entangled or otherwise injured whale. Instead, please maintain the required safe distance and call the NOAA Marine Mammal Hotline at 1-888-256-9840. Ocean users can play an important role, by reporting and providing information and images of the animal and threat.



Humpback Whale



HIIHWNMS/NOAA Permit #782-1438

The sanctuary's other signature outreach and awareness program, Sanctuary Ocean Count, celebrated its 20th anniversary in 2016. The program recruits volunteers on O'ahu, Kaua'i and Hawai'i islands to conduct shoreline observations of humpback whales on one day each January, February and March during peak whale season. Both locals and tourists alike flock to the shoreline to participate in this award-winning volunteer program. Sanctuary Ocean Count has grown from 150 volunteers participating in 1996 on O'ahu to more than 1,600 volunteers participating on three islands during the 2015-2016 season.

February is the best month of the year to catch a glimpse of Hawai'i's humpbacks and the sanctuary celebrates it as Humpback Whale Month. This special statewide campaign aims to increase awareness about the sanctuary and humpback whales, and the sanctuary is offering a variety of whale watches, whale counts, and other activities throughout February to celebrate humpback whales

Visit the sanctuary's website at <http://hawaii-humpbackwhale.noaa.gov> for a complete listing of events or to learn more about how to get involved in the protection of humpback whales and Hawai'i's marine environment.

Encompassing more than 170,000 square miles of U.S. ocean and Great Lakes waters from Washington State to the Florida Keys and from New England to American Samoa, national marine sanctuaries are special areas designated for long-term protection and conservation, and are part of our nation's legacy to future generations. Those wanting to learn more about the Hawaiian Islands Humpback Whale National Marine Sanctuary can visit the Sanctuary Visitor Center in Kihei on Maui. For more information, visit www.hawaii-humpbackwhale.noaa.gov.

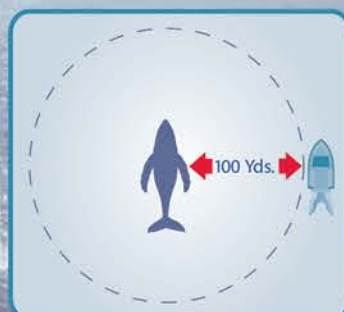
'Tis the season for humpback whales

From November through May, up to 12,000 humpback whales, including mothers and calves, are found in Hawaiian waters.

For safe boating and whale watching information visit the website at hawaii-humpbackwhale.noaa.gov

Safe Boating Tips

- Keep a sharp lookout
- Watch your speed
- Stay at the helm
- Keep your distance - Stay at least 100 yards away



NATIONAL MARINE
SANCTUARIES
HAWAIIAN ISLANDS
HUMPBACK WHALE

Photo Credit: Doug Perrine/HWRF/Seadocs.com/NOAA Fisheries Permit #633

E.Lyman - HIIHWNMS/NOAA
Permit #15420

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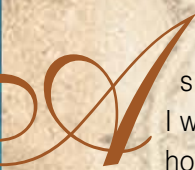
Writing a Legacy...

By Johnathan Casey, Waikīkī Aquarium Biologist

“Most of life on Earth has a deep past, much deeper than ours. And we have benefited from the distillation of all preceding history, call it evolutionary history if you will.”

- Dr. Sylvia Earle





As a young aquarium biologist, I was very humbled and truly honored when I was asked to write my first article for this publication on such a remarkable chronicle. I have and always will have a deep respect for the vast and venerable history here at the Waikiki Aquarium. At the Aquarium, visitors and staff alike are given a marvelous opportunity to interact with a flourishing, living history. As biologists, we have interminable respect for the animals for which we provide husbandry, many of which are older than some of us! We celebrate this rich history by highlighting a few of our many long-lived specimens that we endearingly refer to as our Legacy Animals.

One animal that many know and which plays a flagship role in the Aquarium's Living Legacy is our Giant Clam (*Tridacna gigas*), which can be found nestled in the fertile corals of our 5,500 gallon Barrier Reef Exhibit. This species is the largest living bivalve mollusc that can be found on Earth and is one of our oldest inhabitants here at the Aquarium. Our Giant Clam was originally procured from an aquaculture facility in the Republic of Palau, a small island county in Micronesia. This clam was estimated to be only five years old when it arrived at our facility on January 1, 1982, making this individual an astonishing 40 years old in 2017!

This clam is a filter feeder, sieving food particulates from the water for energy, but is also photosynthetic in nature, producing much of its energy

from light through an incredible cooperative relationship. This energy is produced through the cultivation of symbiotic photosynthetic protists (a single-celled organism that is neither a plant or animal) known as *zooxanthellae*. This organism is cultivated within the mantle of the clam where it provides energy in exchange for a suitable environment to thrive. This same organism that lives within our Giant Clam also occurs within the tissue of many of the coral species also found in the same Barrier Reef Display.

The Waikiki Aquarium is both famous for both the diversity of coral species it maintains, as well as our coral propagation abilities. This expertise in aquatic husbandry is abundantly clear when considering the longevity of our coral collection. Currently, we have more than 40 individual species that have been thriving at the Aquarium for more than 20 years and 10 species-specific colonies that have been on display at the Aquarium for over 30 years!

In addition, many of our vertebrates (animals with a spinal column) live well beyond the lifespan of their wild counterparts, as our team of biologists provides optimal nutrition, environmental conditions and veterinary care. One very colorful and energetic example of this is our Pacific Double-Saddle Butterflyfish (*Chaetodon ulietensis*), which can be found in our Barrier Reef Display. We first acquired this reef fish in 1986 from Kaneohe Bay, making this animal at least 30 years old now! This opportunistic omnivore peruses

the reef throughout the day eating algae and hunting small invertebrates, all while flashing its deep black double-saddle banding and potent golden-yellow hindquarters.

We are also very proud to care for our male Hawaiian Monk Seal (*Neomonachus schauinslandi*), Maka Onaona (meaning "Gentle Eyes"). Maka was brought to us in 1984 from the French Frigate Shoals, located in the Northwest Hawaiian Islands Marine National Monument, after his mother prematurely abandoned him. A typical Hawaiian Monk Seal life span is between 25-30 years. Maka is now 32 years of age, making him the oldest Hawaiian Monk Seal in captivity! Hawaiian Monk Seals are endemic to Hawai'i, meaning they are found nowhere else in the world. These Seals are highly endangered and are by Hawai'i State Law, the Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA). For decades now, Maka has played a key role in our Legacy and has been an exceptional educational ambassador for this critically endangered species.

Through expert husbandry and a deep respect for what has preceded us, we, as aquarium biologists, are honored to be part of this animal legacy so that we may create, influence and provide for today, in the hopes that our contributions live on to tomorrow. Our animal collection is a highly diverse living library of the underwater world that celebrates our Oceans, our Mission, and our Legacy here at the Waikiki Aquarium.

CLASSES & ACTIVITIES

CRITTER ENCOUNTERS

Mondays at 9:30 a.m.

Sneak a peek behind the scenes and learn about Hawaiian reef animals. Hold a sea star, feel a sea cucumber and feed an anemone. This half-hour program is a great addition to any visit to Waikiki Aquarium. Perfect for families with children 4 and up. \$5/person, plus Aquarium Admission.

AFTERNOONS AT THE AQUARIUM

Wednesdays at 3:00 p.m.

Every Wednesday, the Aquarium hosts an interactive learning activity near the aquaculture deck. Join us for a critter encounter or a marine science craft designed for families. Free with admission to the Aquarium.

BEHIND THE SCENES

Thursdays at 3:00 p.m.

Learn what makes the Aquarium run, from fish food to quarantine, and many stops in between. Climb-up and peer into the backs of the exhibits. Visit the Coral Farm and the Jelly Hale, where sea jellies are raised. Minimum age 7 years; youngsters must be accompanied by an adult. Accessibility is limited. \$16/adult, \$10/child (Members receive a 40 percent discount).

EXPLORING THE REEF AT NIGHT

Tuesday, January 10, 6:30-8:30 p.m.

Thursday, January 26, 7:00-9:00 p.m.

Thursday, March 9, 6:30-8:30 p.m.

Search for night-active crabs, lobsters, eels and octopuses. Look for sleeping parrotfishes, triggerfishes and day octopus in their dens. For the adventurous, ages 6 years and up, an adult must accompany youngsters. Participants should be comfortable in the ocean, both day and night. \$20/ adult, \$15/child and \$15/\$10 for members.

SMALL FRY A.K.A. KEIKI TIME

Wednesdays at 9:15 a.m.

January 18 (Fish)

January 25 (Turtles)

February 1 (Sharks)

February 8 (Seals)

Sharks, turtles, and seals are just some of the animals that will be highlighted in these classes for kids. Keiki will learn about sea creatures through crafts, singing, storytelling, dance and play. Designed for kids ages 1- to 4-years-old. \$10/person, \$6/member.

AQUARIUM AFTER DARK

Tuesday, March 21, 6:30-8:30 p.m.

Discover if fish sleep on an after-dark flashlight tour of the Aquarium. Find the sleeping spot for the red-toothed triggerfish or the rock-mover wrasse. Are yellow tang always yellow? Come for a class followed by a tour of the exhibits. Minimum age 5 years; youngsters must be accompanied by an adult. \$15/adult, \$10/child (Members receive a 40 percent discount).

FISH SCHOOL

Wednesday, March 22, 9:30 a.m.-10:45 a.m.

What makes a Fish a Fish? Is a seahorse a fish? Why do some have barbels and whiskers, while others inflate or spit? Can fish change color? Do they really change gender? This class is followed by a fish feeding and a tour of the fish in the aquarium. Minimum age 5 years; youngsters must be accompanied by an adult. \$12/adults, \$6/child non-members (Members receive a 40 percent discount).

CLASSES FOR GROUPS

Waikiki Aquarium offers a variety classes for community and family groups from six to 45 people. Book a Private Aquarium Tour or a Critter Encounter for your clan. Or, an Aquarium After Dark or Fish School for your club or scout group. Call 808-440-9007 for more information or email reservations@waquarium.org.

Register online at
www.waikikiaquarium.org/interact/activities-classes/

The Frogfish Family

By Guerin Earhart, Education Specialist

The Frogfish family has two of our most unusual fish species: Commerson's frogfish and our new Sargassum frogfish. The coloration of frogfishes is highly variable: black, red, orange, yellow, and mottled patterns have been observed in a single species. Some individuals look like brightly-colored Hawaiian sponges, right down to the fake "holes" patterned in the skin that resemble the excurrent openings of real sponges. Other frogfish may be brown and green like seaweed-covered rocks and may even have real algae growing in their rough, scaleless skin.

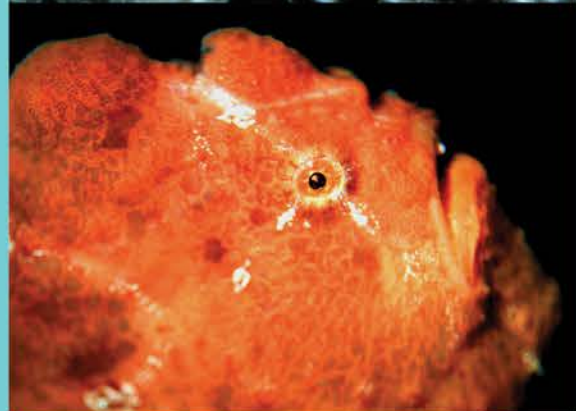
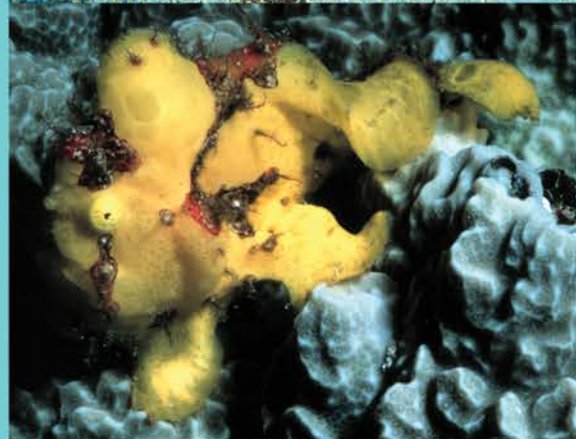
Frogfishes are among the most specialized of ambush predators, using their camouflage so effectively that biologists call it "aggressive mimicry." The frogfish is superbly adapted for its habit of ambushing prey, with a head comprised mostly of an upturned mouth and small gill openings set behind the pectoral (side) fin so that the outflow of exhaled water will not reveal the fish's presence to potential prey. The frogfish braces itself into position on the seafloor using the stubby, joined pectoral and pelvic (forward) fins, rarely moving and remaining in one spot for days while waiting for a passing fish to swim by.

These fish actually lure prey into ambush using a modified dorsal fin spine that acts like a "fishing pole" complete with fleshy lure. The frogfish flicks the lure over its mouth to attract small fishes and if looked at closely enough, it may be seen flattened against its body if it's not erect. If a potential meal swims by, it will twitch its lure in an attempt to draw it closer. When the prey comes within reach, the prey is literally sucked into the frogfish's cavernous mouth as the rapid expansion of the mouth cavity results in an inhalation of water.

Frogfish can expand the mouth cavity to twelve times its normal resting volume within six milliseconds, making this one of the fastest capture mechanisms known in the animal kingdom. Because of this feeding method, frogfishes were once called anglerfishes, but this name is now reserved for families of deep sea fishes that feed in much the same way.

Twelve frogfish species can be found in Hawai'i in quiet areas of the coral reef, and occasionally in shallow water on reef flats. Large specimens of the benthic Commerson's frogfish (*Antennarius commerson*) can reach one foot (30 cm) in length and are common "giant" species in Hawai'i. A touchscreen kiosk in the Aquarium's exhibit showcases the Commerson's frogfish in an amazing slow-motion predation video.

Other smaller species may be no more than two inches (5 cm) long. One of these small frogfish species is known as the Sargassum frogfish (*Histrio histrio*). It has a pelagic lifestyle, inhabiting drifting mats of seaweed blown along the Windward side. Look for our new Sargassum frogfish on exhibit in the back of Gallery 3.





NEW & RENEWING MEMBERS

from May 2016 - June 2016

XXXXX



Three Ways to Support the Waikiki Aquarium

As we start the New Year, the Friends Of Waikiki Aquarium (FOWA) thanks its supporters for their year-round generosity. As a 501(c)(3) organization, FOWA is only able to fulfill its mission to support the Aquarium through financial donations, membership dues and corporate sponsorships. Here are three different ways you can contribute:

School of Wishes

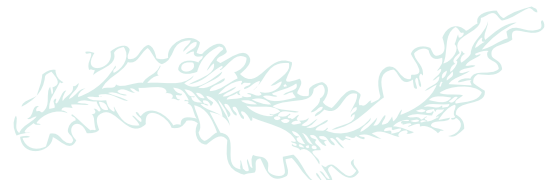
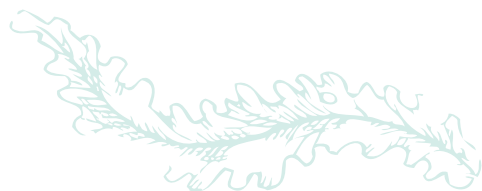
Support the Aquarium with an in-kind donation through its School of Wishes program. From research to live exhibits, facilities and more, the Aquarium could use your support. Visit the Aquarium's website to see what you can donate today www.waikikiaquarium.org/support/donate/school-of-wishes/. For more information, call (808) 440-9027.

Amazon Smile

The Waikiki Aquarium is a proud partner of Amazon Smile, a program that donates 0.5% of the proceeds from customers to support a charity of their choice. When shopping on Amazon, show your support of our aquatic friends by selecting the Aquarium as your favorite charitable organization.

Ke Kani O Ke Kai

The Waikiki Aquarium's annual Ke Kani O Ke Kai summer concert series is one of Hawai'i's most successful summer concert series, featuring five outdoor performances by the islands' top musical artists. Each concert hosts approximately 650 guests and provides an opportunity to support the Aquarium. For information on becoming a sponsor, call (808) 533-4165.



FRIENDS OF WAIKIKI AQUARIUM BOARD MESSAGE

It was another busy year in 2016 for the Friends of Waikiki Aquarium. From another successful summer celebrating Hawaiian music to an evening of marine mysteries featuring the most mysterious habitat on earth – the ocean.

The Distinguished Lecture Series continued with the Director of University of Hawai'i's Hawai'i Institute of Marine Biology, Dr. Ruth D. Gates, and postdoctoral research associate at the Department of Geology and Geophysics, University of Hawai'i, Dr. Sonia J. Rowley. These internationally recognized women addressed important environmental issues like the threatening conditions facing coral reefs in Hawaii and the exploration of the ocean's "twilight zone."

In August, super sleuths from across the island joined the Aquarium to solve marine mysteries, hear about new

discoveries and still unsolved mysteries. The Aquarium welcomed Christie Wilcox, Researcher at Pacific Cnidaria Research Laboratory, who taught children about unique and venomous animals.

We are in the midst of planning the upcoming Ke Kani O Ke Kai summer concert series, and we look forward to another season of music under the stars from Hawai'i's best entertainers and delicious food from our local restaurant partners.

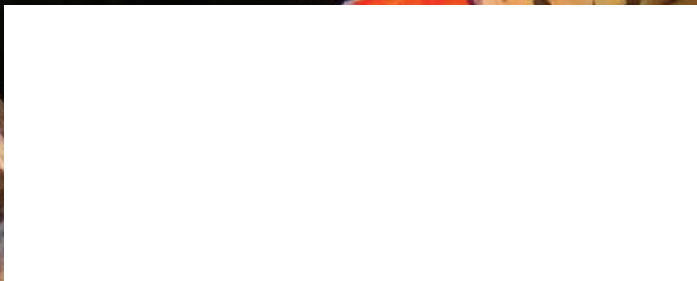
Lastly, we are so thankful for the continued support and contributions of our FOWA members, without whom we could not do what we do. It is because of you that we are able to support our mission to promote understanding, appreciation and conservation of marine life.



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THE WAIKĪKĪ AQUARIUM'S MISSION

*To inspire and promote understanding, appreciation and
conservation of Pacific marine life.*