Hilo-ica

2015 | OCTOBER | NOVEMBER | DECEMBER





fter coordinating and implementing vet another successful Ke Kani o Ke Kai summer concert series, all involved at the Aquarium have stepped back into their main responsibilities. With autumn fast approaching, heralded by unusually wet weather, we are looking ahead to upcoming activities and programs, and to continuing our ongoing efforts at constant improvement. One sign of success in this area has been the annual Family Night, which has grown in popularity yearly. This year themed around Ocean Explorers, the August event was enjoyed by over 400 members, their families, and guests.

Upcoming events include Member's Night on November 8th, which, following the popular format of last year's event, will feature movies on the lawn. Bring a picnic and come along. Also not to be missed is the next Aquarium's Distinguished Lecture Series, featuring renowned fish biologist and deep water explorer Dr. Richard Pyle. Scheduled for 19th November in Punahou School Chapel, Dr. Pyle will present some of his groundbreaking discoveries on the marine life found at 300-400 feet deep, as studied using rebreather diving techniques. Details of these and other upcoming events can be found elsewhere in this issue and on the Aquarium's website.

Recently, the overharvesting of sea cucumbers in Hawaii has been in the headlines after unscrupulous collectors were photographed with huge numbers of sea cucumbers all taken from the same site. The animals have a market value to restaurants for food and also for

traditional Asian "medicine" (of no scientifically proven benefit). Collection at these levels is unsustainable, and the Department of Land and Natural Resources are to be applauded for swiftly imposing a moratorium on the commercial exploitation of sea cucumbers in Hawaii, and limiting the number allowed to five per person. Coincidentally, a recent report documented how overexploitation in other parts of the Pacific and elsewhere has decimated sea cucumber populations, with some areas harboring only 3% of what existed there only 40 years ago. It is hoped that such a tragedy is averted for Hawaii's reefs, whether for sea cucumbers in particular, or any marine life in general.

However, what has surprised me has been the number of aquarium visitors who thought sea cucumbers were 'marine slugs' (they are actually related to starfish and sea urchins) and who were unaware of their important role in the marine ecosystem (they process detritus on the sea floor). Partly in response to this, we have decided to include in future issues of Kilo'ia a section highlighting the biology of marine organisms, so as to give readers a better understanding of the evolution and ecology of some of the amazing creatures found around Hawaii's shores. We hope you will both learn from and enjoy this new section. Similarly, we are always open to suggestions for new sections or topics that you, our members, would like to see included in the magazine. We welcome your comments, and thank you for your continued support.

Dr. Andrew Rossiter

Director, Waikīkī Aquarium

Kilo ia

Issue Number 194 201 5 OCTOBER | NOVEMBER | DECEMBER

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PRINTING

Reskyu

Kilo i'a is published quarterly by the University of Hawai'i and the Friends of Waikīkī Aguarium and is dedicated to increasing the community's knowledge of the Waikīkī Aquarium and Hawai'i's marine life.

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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

Cover Photo Credit: Blake Thompson



Family Night Ocean Explorers

Approximately 450 Aqua Explorers, young and old, learned about ocean exploration at this year's Family Night. Visitors discovered deep sea biologists teaching about hydrothermal vents, twilight zone explorers with their rebreathers, coral reef explorers with glowing corals, acoustic explorers with hydrophones, and micro-explorers with tiny animals. Kids were also able to do a little tactile exploration at the moon jelly touch tank, visual exploration in the Creatures of the Deep glowing room, and kinesthetically at the various games. UV flashlights, given to every child, were used to find clues around the Aquarium on an invisible ink scavenger hunt. The adults in attendance enjoyed seeing and learning about special animals brought in for the event and talking with the amazing scientists in attendance. We hope to see you at next year's Family Night!

Thanks to HIMB, C-MORE, Bishop Museum and the State Division of Aquatic Resources for loaning us their experts! Special thanks to Boy Scout Troop 4, especially Eagle Scout candidate Ian Fukumoto and his family, for creating maritime knot-tying stations and the fun boat races!

Ke Kani O Ke Kai Another Great Summer

The Waikiki Aquarium was the place to be this summer for some of the best in Hawaiian music, hula and food, as the Friends of the Waikiki Aquarium presented its 10th annual Ke Kani O Ke Kai concert season.

Kaiholu and Makana kicked off the series in June and four other concerts followed with unforgettable experiences in a setting like no other. Concert artists brought their unique styles and filled the Aquarium lawn with song and dance. Restaurant partners that offered their signature dishes for guests to enjoy were participating this year was, A Place to Eat, Da Spot, Laverne's and Haili's.

Despite the threat of a tropical storm, the final concert of the series was attended by over 760 guests and the evening turned out to be a clear one filled with an electrifying performance by Jake Shimabukuro. It was another memorable end to a successful concert season with over 3,300 attendees throughout the five concerts.

A big thank you to presenting sponsors, Outrigger Hotels & Resorts, and the Perry, Allen, Chang real estate team from Coldwell Banker Pacific Properties – as well as the many other supporters. Proceeds from this year's concert series will go towards Waikiki Aquarium programs and projects.



Photo Credit: Leon Ho



We welcome your donations towards a specific item on our wishlist. If you have any questions or want further details, please contact MaryLou Foley at (808) 440-9027.

RESEARCH

\$200

CULTURE DECK LED LIGHTING

\$500

Increase

ocean education

& outreach to our

community and

schools.

For animal food

production.

(3) TABLETS

For data research

& storage.

\$1,050

SUMPS FOR LIVE FOOD CULTURE

\$2,000

GAS ANALYSIS PROBE & SATURATION METER

\$3,600

FISH LARVAL REARING TANKS

LIVE EXHIBITS

\$250

MONK SEAL ENRICHMENT ITEMS

\$1,200

FOOD PREP COMMERCIAL BLENDER

\$1,500

(5) WATER FLOWMETERS

\$4,000

MONK SEAL PALLET SCALE

\$25,000

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COMMUNITY OUTREACH

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ENERGY EFFICIENT AQUARIUM IDENTITY MINI SUV

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\$50

14" LED LIGHT BOX

\$420

CANON EF-S 60MM F/2.8 MACRO USM LENS

To enhance

illustrations in our

graphics.

A custom mobile

interpretation station

that will educate the

public about corals.

\$450

HUION GT-190S DRAWING TABLET

\$800

CANON REBEL T6I DSLR CAMERA

INFORMATION TECHNOLOGY

\$770

FIBER OPTICS

\$500

EXHIBIT IBEACONS

\$750

(5) PIXSTAR EXHIBIT FRAMES

VOLUNTEER CENTER

\$500

(3) INTERPRETIVE STATION UMBRELLA MISTERS

\$4,000

VOLUNTEER PHOTO ID BADGE SYSTEM



Behind the Scenes

Thursdays, 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.

Marine Educators Night Friday, Oct 2, 6:00 - 8:30 p.m.

Explore the Aquarium while discovering new education resources and old friends. NOAA's Ocean Explorer website and the "How do we Explore" curricula will be highlighted. In addition, representatives from State and Federal organizations, and education nonprofits will have tables set up with instructional materials for classroom teachers. Refreshments will be provided as well as door prizes. The evening is free for educators and a guest. The program is sponsored by NOAA's Ocean Explorer program and the National Marine Sanctuary

Foundation.

Keiki Time

Wednesdays, Oct 7,14, 21, 28, 9:15 a.m.

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 1 to 4 years olds. \$10/person. Members receive a 40 percent discount.

Exploring the Reef at Night

Sunday, Oct 25, 6:00 - 8:00 p.m. Wednesday, Nov 25, 7:00 - 9:00 p.m. Wednesday, Dec 23, 6:30 - 8:30 p.m.

Join us for the first Exploring the Reef at Night of the season. Search for nocturnal crabs, lobsters, eels and octopuses. Look for sleeping parrotfishes, triggerfishes and day octopuses in their dens. For the adventurous, ages 6 years and up; youngsters must be accompanied by an adult. Participants should be comfortable in the ocean, both day and night. \$20/ adult, \$15/child. \$15/ adult, \$10/child for members.

Afternoons at the Aquarium

Every Wednesday, 3:00 p.m.

Every Wednesday, the Aquarium hosts an interactive learning activity near the Monk Seal Deck. Join us for a critter encounter or a marine science craft designeed for families. Free with admission to the Aquarium. Wednesday activity themes listed below:

October 7, Brittlestar & Critter Encounter
October 14, Hawaiian Sands
October 21, Play-Dough Marine Animals
October 25, Hawaiian Sands
October 28, Halloween Hermit Crabs
November 4, Sea Snails of Hawaii
November 11, Unifcorn Fish & Limu Feed
November 18, Play Dough Marine Animals
December 2, Sea Urchins & Critter Encounter
December 9, Origami Fish
December 16, Sea Snails of Hawaii
December 23, The Seahorse Family
December 30, Surgeonfish & Limu Feed

Look for class updates on: www.waikikiaquarium.org

PRE-REGISTRATION REQUIRED

To Register: Call 808-440-9011 or e-mail: reservations@waquarium.org



NAME(S)					
Adults			Phone (Home)		
Children/Ages			Phone (Work)		
Address					
City/State/Zip		Email			
PLEASE REGISTER ME FOR					
Activity	Session	Date(s)	Number of Adults/Children	Price	
		_			
		_			
Total amount of payment enclosed (check paya	able to "University of Hawa	aiʻi"):			
IF PAYING BY CREDIT CARD					
6 10 1 11			\square VISA \square MC \square		
Credit card #					

A SNORKELERS Duide

There is nothing quite like being immersed in the ocean, watching the plethora of marine life with nothing but the sound of the crackling reef. Snorkeling is a great way to enjoy quality family time while appreciating nature.

UNIQUE TO HAWAII

If you have ever snorkeled in Hawaii, you have likely seen a variety of reef fish, turtles and other marine life. Hawaii is blessed with a variety of incredible marine animals, many of which are unique to Hawaii. Perhaps the most easily recognized of the fish seen around the islands are the reef triggerfish and the longnose butterflyfish.

Hawaii's state fish, the reef triggerfish, referred to as humuhumunukunukuāpua' a in Hawaiian, is one of the most easily recognized Hawaiian fish. The phrase "humuhumu", the first part of the Hawaiian word used for all triggerfishes and may mean "to fit pieces together", likely due to the way some species' color patterns resemble blocks of colors. The second part of the name – "nukunukuāpua' a" means "snout like a pig". These fish root through the sand or rocks for food and make grunting piglike noises when handled. The longnose butterflyfish, easily distinguished by its long slender

The longnose butterflyfish, easily distinguished by its long slender snout, has the longest Hawaiian fish name – 23 letters long – lauwiliwilinukunuku' oi'oi. This descriptive Hawaiian name is based

on the similarities between the color and movements of the fish and the yellow dropping leaves of the wiliwili tree. The name translates as "the leaf of the wiliwili tree with a sharp snout." The long snout of this butterflyfish allows it to reach into the tiny crevices of the reef, such as a cauliflower coral head. Using its snout like a straw, it can siphon up small shrimps from their unseen hiding places.



REGISTRATION INFORMATION

- » Pre-registration is recommended.
- » FOWA members are allowed up to four total registrants at FOWA rate.
- » Questions about the activities? Call the Waikīkī Aquarium Education Department at 440-9007.
- » A handling fee of \$5 will be assessed for withdrawals.
- » No refunds can be made for no-shows or for withdrawals made seven days or less before an activity.
- » Please do NOT fax or email your registration.

To register by phone:

» Call 440-9011. Visa and Mastercard are accepted.

To register by mail:

- » Full payment must accompany completed registration forms. Please, no cash.
- » Make checks payable to University of Hawai'i. Visa and Mastercard are also accepted.
- » Mail the completed registation form with a check or credit card information to:

Waikīkī Aquarium - Education Department 2777 Kalākaua Avenue, Honolulu, Hawaiʻi 96815-4027

SNORKELING TIPS

Young and novice snorkelers benefit from having a calm, safe, shallow place to learn. Here are some of the recommended local spots:

- 1. Kuhio Ponds of Waikiki: At the makai end of Kapahulu Avenue, you can safely snorkel in a giant "pool" of sorts. The kid friendly Kuhio "ponds" are surrounded by concrete block walls and provide a great first place to practice snorkeling, with a sandy sea floor that is easy to walk on. The diversity of fish species is amazing! Lowest tide is best. Watch your tide table to plan a fun outing.
- 2. The Waikiki Marine Life Conservation District: The Waikiki Marine Life Conservation District begins at the Natatorium wall behind the Aquarium. This advanced snorkeling area provides deeper water, about 10 feet or so, and an astonishing abundance of marine life, considering the location. Low tide is the best time to plan a visit. Parking in the Aquarium lot is not allowed for beach use, but free parking is available near the Natatorium and Kaimana Beach.
- 3. Hanauma Bay: Hanauma Bay is a classic spot, and for good reason. One of the most spectacular natural resources in Hawaii, Hanauma Bay has benefited from efforts to restore its pristine marine ecosystem. If you have not been there recently, you will be pleasantly surprised at the plethora of species present when conditions are good. Conditions are prime when the wind is calm and tradewind east swells are minimal. This marine protected

area opens at 6am and is open to visitors every day except Tuesdays. Be sure to get there early as the parking at this popular tourist spot fills up quickly.

- **4.** Electric Beach: Electric Beach (Leeward side) is a favorite snorkeling area because of its clear blue, open water and high fish population. Kahe Point is nicknamed Electric Beach because of the electric power plant that outflows clean warm water through two giant cooling pipes offshore. The warm water attracts a multitude of sea life, including sea turtles and resting spinner dolphins. Best when west side swells are minimal and the ocean is flat and calm, Electric Beach is shallow nearshore, getting deeper as you explore farther. This is best for intermediate snorkelers as there is a moderate swim and there are no lifeguards in the area.
- **5.** Sharks Cove: Sharks Cove is a highly rated small rocky bay, part of Pūpūkea Beach Park, and boasts blue water and an impressive amount of sea life. The bottom is made up of large boulders and coral heads forming small caves for marine life to hide. On the south side of Sharks Cove are tide pools to wade and explore! Located between the famed big wave surf spots of Waimea Bay and Pipeline, you'll have to make sure there are no large swells that day, May to September is recommended. The small parking lot fills up quickly, so early is best!



LEARN MORE

To learn more about other Hawaiian fish species, practice your fish identification skills by using the Hanauma Bay Fish app while exploring our exhibits. Created by the University of Hawaii Sea Grant College Program, the Hanauma Bay Fish app provides users digital access to color images, names (English, Hawaiian, and scientific), and descriptions of the 114 species of reef and shore fishes that are commonly seen by snorkelers and swimmers at Hanauma Bay and elsewhere in Oahu. Their Fish ID is available as a mobile App for \$1.99 on iTunes. You can also follow the link below to learn about the species at the Aquarium and in local waters:

http://www.waikikiaquarium.org/experience/animalguide/. Fish identification guides, as well as a variety of more indepth books are available for sale in the Aquarium Gift Shop.





Introducing

Position: Research Associate (Hawaiian Monk Seal Biologist)

Education: B.S. in Marine Biology, University of California, Santa Cruz (2015)

Favorite Aquarium Resident: Ho'ailona, the Hawaiian Monk Seal

Born in Sacramento, California, Leann Castle began her career in animal training as an Assistant Trainer at the University of California, Santa Cruz, Long Marine Laboratory Marine Mammal Physiology Project. During her two and a half years at the Project, Leann worked with a number of terrestrial and aquatic species, and completed a research project focusing on Hawaiian Monk Seals. Leann had the fortune of working with the Aquarium's younger resident monk seal, Ho'ailona, while he was in California.

After graduating from UC Santa Cruz in 2015, Leann joined the Waikiki Aquarium team as the Research Associate (Hawaiian Monk Seal Biologist), and is extremely excited to be taking care of two of our most popular residents, Maka and Hoa.

Volunteer Spotlight



Steve is one of many retired military veterans who dedicate their time to the mission of the Waikiki Aquarium. Growing up on military bases in the south and in Europe, Steve has a great appreciation for different types of people and good conversation. This appreciation, combined with his enjoyment of swimming and the ocean, has led him to volunteer at the Aquarium as an Educator. He started volunteering with his wife Jane in May 2014 and continues to do so in intervals as he splits his time between Alabama and Oahu. Steve's favorite part of being an Educator is introducing kids to a variety of reef fish and teaching them about monk seals.



In 2014, Neha moved to Oahu with her family. As a high school junior, she enjoys long distance running, programming, working on computer-related side projects, and volunteering at the Waikiki Aquarium. Neha enjoys interacting with the incredible people who work and donate their time to the Waikiki Aquarium.

From her time at the Aquarium, Neha has not only gained invaluable experience interacting with the public, but has also learned to work with various people from different cultures and backgrounds. She values her experience at the Aquarium and considers it an honor to be able to experience first-hand the inner workings of this organization and to meet the dedicated people who work there.

While at the Waikiki Aquarium, Neha realized there was a need for detailed long-term tidal data in Hawaii. She set out to create a solution. In her free time, she has built an app that calculates tidal information (wave height, currents, wave frequency, etc.) for numerous locations around the world using algorithms and public source data from the NOAA API database. This app, which she looks forward to releasing on app stores in the coming weeks, displays this data in an easy-to-understand format with intuitive and detailed graphs and charts.



The Aquarium is always seeking passionate individuals who are looking to dedicate their time to education, conservation, and appreciation of Pacific marine life. We have a variety of volunteer programs that you can read more about at WaikikiAquarium.org/Support/Volunteer

ASSIS CAME



Live Exhibit
Volunteers work
directly with
biologists and learn
the skills it takes to
run an aquarium.

Live Exhibits volunteer Blake Thompson has always had a passion for marine life. From the age of 13, Blake volunteered and eventually worked at saltwater fish and coral stores where he gained husbandry skills and valuable experience with a variety of fish, coral and invertebrate species.

Originally from Chicago, Blake came to Hawaii to study Marine Biology at UH Manoa, where he knew he would have hands on learning opportunities including volunteering at the Waikiki Aquarium as an Aquarium Educator.

When the Aquarium announced their latest Amazing Adaptations exhibit featuring species like the rare weedy seadragon, Blake was eager to become involved in the Live Exhibits department to apply his experience with seahorses towards working with other syngnathid species. During his time at the Aquarium Blake has gained an in-depth understanding of the complex needs of the variety of animals on display, along with relevant job skills and training that will facilitate his future career goals as a marine biologist. Since moving to Hawaii, Blake has become an avid underwater photographer, diving with reef fishes, sea turtles, dolphins and sharks on a regular basis.

Blake hopes to get involved with shark research to better understand Hawaii's shark populations in an effort to increase their protection both locally and internationally. He is also particularly interested in using ornamental aquaculture as a tool to preserve healthy fish populations by providing a sustainable alternative to wild caught fish species.









Be the first to know about activities and events!

Did you know that we're social? Follow us on Facebook /WaikikiAquarium, Twitter @WaikikiAquarium and Instagram @WaikikiAquarium and be the first to know about our upcoming activities and events! Look for special contests and promotions, news about all of our beloved residents and opportunities to get involved with our Waikiki Aquarium programs.



THE SCIENCE BEHIND THE SCIENCE BEHIND THE STING

What do corals, jellyfish and anemones have in common? These animals are grouped together in the Phylum Cnidaria and all have stinging cells. The name "Cnidaria" originates from the Greek word "cnidos," which means stinging nettle. There are five major types of cnidarians:

ANTHOZOA

True corals
Anemones
Sea pens, etc.

CUBOZOA

Box jellyfishes

HYDROZOA

Portuguese Man o' War fire coral hydroids, etc.

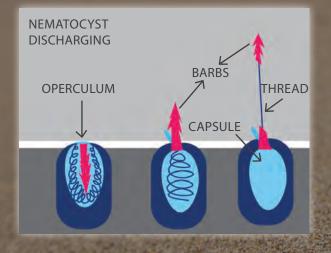
SCYPHOZOA
True jellyfishes

STAUROZOA Stalked jellyfishes The stinging cells of cnidarians are called nematocysts. While most cnidarian nematocysts are harmless to humans, box jellyfish have the most potent poison of all jellyfishes and can cause severe pain and even death. While the most dangerous box jellyfishes do not enter the waters of Hawaii, the coastal waters of Oahu do see an influx of box jellyfishes every month, 8-12 days after the full moon. The first record of a box jellyfish in Hawaii dates back to an 1877 specimen collected in Honolulu by Theodore Ballieu, the French Commissioner to Hawaii.

One type of cnidarian that is of particular concern to beach goers in Oahu is the box jellyfish. In order to better understand the numbers and patterns of box jellyfish in the Waikiki Beach area, Aquarium staff member Gerald Crow and local scientists worked on a 14 year research study on box jellyfishes in Waikiki. In this study, researchers found that:

- There was no seasonal pattern, with box jellyfish numbers varying widely throughout the year;
- Box jellyfish have appeared on Waikiki Beach every month of the year since August 1994: and
- The high beachcount years corresponded with an abundance of small zooplankton (box jellyfish food) and favorable conditions within the waters surrounding the Hawaiian Islands.

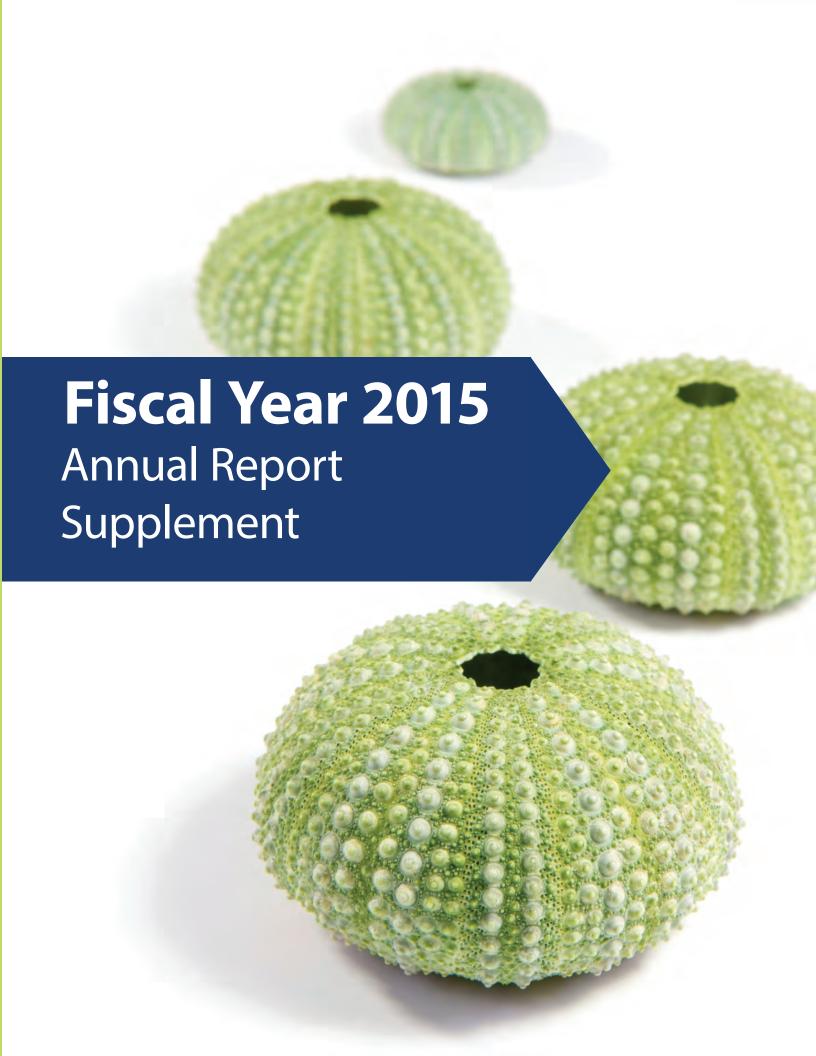
To find out when box jellyfishes will be coming to a beach near you – check out the box jellyfish calendar on our website: http://www.waikikiaquarium.org/boxjellyfishcalendar/





People Protect what they love. - Jacques Cousteau

Donate Today WaikikiAquairum.org/Support/Donate



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s the membership organization of the Waikiki Aquarium, the Friends of the Waikiki Aquarium (FOWA) supports the Aquarium's mission to inspire and promote understanding, appreciation and conservation of Pacific marine life. Our Board consists of volunteers who are dedicated to the preservation and improvement

of this much beloved institution, and we are proud of the quality exhibits and of the outreach that is being done to introduce Hawaii's keiki to the mystery and thrill of our ocean environment.

This past year, FOWA celebrated a number of achievements. Our signature events – including our sold-out Ke Kani O Ke Kai summer concert series – continued to provide entertainment, enjoyment and education to all who participated. Our Distinguished Lecture Series shone a spotlight on ocean conservation issues, including the importance of marine protected areas, which encompass entire ecosystems around the world.

After a 10-year hiatus, the Aquarium also began displaying captive-bred juvenile green sea turtles in a temporary exhibit. And, in the near future, a new outdoor turtle exhibit, complete with an awning and interpretation center, will become their new home. Behind the scenes, the Aquarium is expanding its live feeds area with the goal to become the sole source of food for the Aquarium's marine life, especially jellyfish and the many rare fish on exhibit.

As we look ahead, we're excited about the future and continuing to support the Aquarium's efforts in showcasing the diversity, ecology, and conservation of Pacific marine life. Your continued help allows the Waikiki Aquarium to advance its commitment to being one of the premier marine conservation institutions in the Pacific.

Mahalo for your support.

Marcus R. Boland
CO-CHAIR, FRIENDS OF WAIKIKI AQUARIUM

Faye Kurren CO-CHAIR, FRIENDS OF WAIKIKI AQUARIUM

HOALAUNA COMMUNITY

- Our SCHOOL SUPPORT PROGRAM
 hosted approximately 7,000 students
 and teachers for presentations in the
 Docent Program and 19,750 individuals
 through group reservations.
- With the support of the Freeman Grant, the Education Department offered FREE PROGRAMS, educational materials, transportation and lunches to 458 under-served families and 2,862 students from Title I schools.
- Our COMMUNITY ENRICHMENT PROGRAM reached 2,300 people. Especially popular programs included Hawaiian Sea Creatures, Summer by the Sea, Meet the Monk Seals, Aquarium After Dark, Exploring the Reef at Night, and Afternoons at the Aquarium.
- MARINE EDUCATORS NIGHT, sponsored by NOAA Ocean Explorer, drew 186 teachers and guests who gathered marine science curricula from 14 different ocean-related agencies.
- Our FACILITY RENTAL program
 welcomed over 9,400 guests to the
 Aquarium after hours to celebrate
 birthdays, weddings, graduations,
 anniversaries, and the holidays. The
 Waikiki Aquarium was a featured venue
 at the Wedding Café Workshop a series
 attended by 200 brides-and grooms to-be, wedding party members and
 their immediate families. Presence at
 the workshop has helped to increase
 WEDDING EVENTS held at the
 Aquarium by 10% from last year.
- To enrich FOWA MEMBERSHIP
 BENEFITS, we continued partnerships
 with Aquascapes, Coral Fish Hawaii,
 Hard Rock Café, Haili's Hawaiian Foods,
 HASR Wine Co., Kalihi Pet Center, Lucoral
 Museum, Mindy Metivier Photography,
 Pigtails & Crewcuts, Waikiki Dive Center,
 and Waiola Shave Ice. We also forged
 new partnerships with Aqua Hospitality,
 Farrell's Ice Cream Parlour Restaurant,
 Fun Flicks, and Martin & MacArthur.
- by the State of Hawaii's Department of Health Clean Water Branch and City and County of Honolulu's Department of Environmental Services Storm Water Quality Branch, is our only free admission day and welcomed thirty participants and over 3,500 visitors. The Aquarium foyer area is now home to two humpback whales and a sea turtle puppet models that were part of the "Eddie Wen' Go" presentation at the HAWAII THEATRE CENTER in collaboration with University of Hawaii

Theatre and Dance Department.

- Our MEMBERSHIP department continuously works to expand our reciprocal list, totaling fifty-six different aquariums and zoos including international participants.
- EDUCATION GRANTS totaling over \$140,000 from the NOAA Environmental Literacy Grant Program allowed us to begin a collaborative climate change education project with the Exploratorium and the Pacific Science Center.
- The VOLUNTEER CENTER, provided 19,961 Volunteer hours. The state of Hawaii values volunteer time at \$23.14 an hour which equates to \$461,897 in volunteer time dedicated towards a variety of Aquarium education, administrative, Live Exhibit, facility, and community programs. To facilitate higher numbers of volunteers and more flexible programs, the volunteer center moved online with applications, scheduling, training, and more.

'IMUA MOVING FORWARD

- We welcomed six **HAWAIIAN GREEN SEA TURTLES** (*Chelonia mydas*) on loan from Sea Life Park. The young turtles have been integral in the Aquarium's education and exhibitry as well as for special behind-the-scenes tours where you may catch a glimpse of them. Soon they will be released into the wild. We hope to replace the released turtles with brandnew hatchlings from Sea Life Park's conservation program.
- A NEW EXHIBIT was created for seahorses, pipefishes and seadragons featuring these unique animals that look almost imaginary.
- The Education Department trained 87 new volunteers for both the Aquarium Educator Program and the Docent Program.
- Our TEEN INTERPRETER PROGRAM hosted 17 teen students. Our teen interpreters learned about marine life and shared that knowledge with our visitors.
- The Aquarium's **REPAIR AND MAINTENANCE** program activities have included extensive facility renovations: guest restroom renovations for a better visitor experience. New fixtures reduce the Aquarium's impact on the environment.
- A NEW STAGE and awning structure was completed in time for the start of

- our annual summer concert series.
- The HAWAIIAN CULTURAL GARDENS has received a major refurbishing under the guidance of Mary Ellen Hill and Bob Takase, two among the many volunteers that really make a difference at the Aquarium.

HANA HOU!

- Celebrating its 10th anniversary, and featuring some of the best in Hawaiian music, and food, the Aquarium's KE KANI O KE KAI concert season got underway on the Aquarium's newly renovated stage on June 11. Kaiholu and Makana kicked-off the series in June and four other concerts followed with entertainment in a setting like no other. Unforgettable performances featuring Sean Naauao, Ben & Maila, Kawika Kahiapo, Raiatea Helm, Cyril Pahinui, Jerry Santos and Jake Shimabukuro followed, with a few of the concerts selling out. Restaurant partners from A Place to Eat, Da Spot, Laverne's, and Haili's Hawaiian Food offered up their signature dishes. Proceeds from this year's concert series will benefit Aquarium programs and projects.
- Over 590 people joined us in being SUPERHEROES at the Aquarium's 2014 Family Night. Experts dazzled the crowd with unique and unusual animals, kids completed "Superhero training school", and enjoyed many other educational activities and crafts.
- Members Night 2015 went to the movies! A showing of Disneynature's Oceans and a couple of episodes of The Octonauts were shown on a 16-foot inflatable screen providing a fin-tastic evening of cinema. Members brought their dinners and enjoyed an evening picnic on the lawn and experienced these oceanrelated features under the moonlight. Families also enjoyed crafts, an Octonauts photo area and a Rainbow Fish Shadow Puppet workshop where they crafted their own puppet based on The Rainbow Fish by Marcus Pfister. A special thank you to Funflicks Outdoor Movies for their generous support!

Reflecting the improvement in the visitor industry,

we are happy to report that in fiscal year 2014-2015 overall revenue increased by 15% as compared to FY 2013-2014.

Increases were seen in all categories except donations (down 65%) which can be attributed to significant estate gifts recieved in FY 2012 -2013. We also experienced a 35% increase in overall expenses. Professional Services increases can be attributed to a new agreement executed between the University of Hawaii and the Friends of Waikiki Aquarium. Increases in Capital Projects were due in part to the new Amazing Adaptions exhibit. Other category increases seen in the gift

shop and bank fees were a result of increased sales volume and cost of goods sold.

NOTE: This annual report includes only FOWA-related fund transactions, including those relating to The Shop which is managed by FOWA.

NATURAL SELECTION GIFT SHOP

COMBINED STATMENT OF INCOME AND CHANGE IN FUND BALANCE Years ended June 30, 2014 and 2015

FOWA CONSOLIDATED FUND BALANCE

Years ended June 30, 2014 and 2015

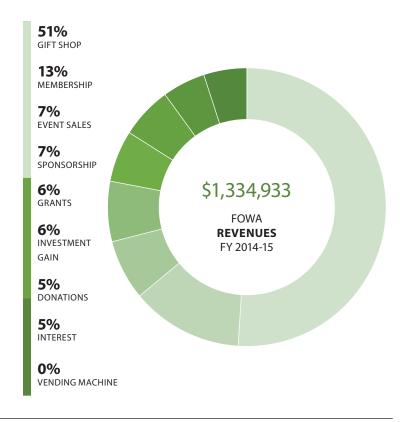
REVENUES	FY 2014-15	FY 2013-14	FUND BALANCE
Sales	\$621,166	\$661,929	Restricted Non-restricted
Cost of Goods Sold	(258,055)	(264,220)	Total Fund Balance
Photo Booth	311,774	244,302	
Investment Gain (Loss)			Begining Fund Balance
Interest	45	70	Net Income (Loss)
Gross Revenue	\$674,930	\$642,081	Ending Fund Balance
EXPENDITURES			
Personnel Cost	\$116,927	\$112,000	
Professional Fees (Photo Vendor)	193,320	171,025	
General Excise Taxes	38,613	36,305	
Bank Service Fees	16,488	14,669	
Depreciation		1,216	
Equipment, Supplies, Repair & Maintenance	9,532	16,540	
Fire Insurance	2,507	2,570	
Other Expenditures	3,939	3,923	
Transfer to UH	160,329	124,543	
Total Expenditures	\$541,654	\$482,791	
Net Income (Loss)	\$133,276	\$159,290	
FUND BALANCE			
Ending Fund Balance	292,268	308,993	
Amount Transferred	150,000	400,000	
Begining Fund Balance	308,993	549,703	
Change in Fund Balance	\$133,276	\$159,290	

FUND BALANCE	FY 2014-15	FY 2013-14
Restricted	\$488,279	\$464,515
Non-restricted	3,018,899	3,001,176
Total Fund Balance	\$3,507,178	\$3,465,691
Begining Fund Balance	\$3,465,691	3.331.347
Net Income (Loss)	, ,	134,344
	41,487	,
Ending Fund Balance	\$3,507,178	\$3,465,691

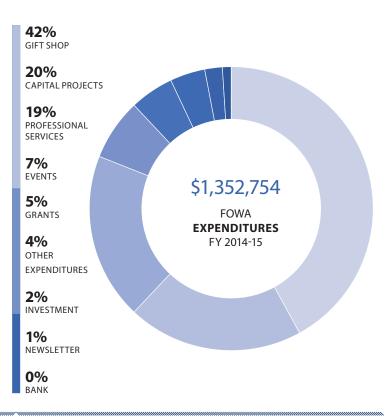
FRIENDS OF WAIKIKI AQUARIUM

COMBINED STATEMENTS OF REVENUE, EXPENDITURES AND CHANGE IN FUND BALANCE Years ended June 30, 2014 and 2015

REVENUES	FY 2014-15	FY 2013-14
Gift Shop	\$674,930	\$642,081
Investment Gain (Loss)	72,939	333,032
Grants	78,372	59,787
Membership	172,911	160,715
Events		
Sponsorship	93,225	73,547
Sales	97,382	111,404
Interest	71,871	68,003
Donations	67,727	33,500
Vending Machine	5,576	5,030
Gross Revenues	\$1,334,933	\$1,487,099



EXPENDITURES	FY 2014-15	FY 2013-14
Gift Shop	\$541,654	\$482,791
Events	94,784	103,884
Grants	62,460	51,983
Professional Services	239,044	216,337
Capital Projects	261,266	387,858
Newsletter (Kilo i`a)	18,255	25,784
Financial		
Investment	21,406	20,115
Bank	5,001	4,337
Other Expenditures	49,577	59,666
Total Expenditures	\$1,293,447	\$1,352,755



NEW & RENEWING FOWA MEMBERS

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Brent & Rochelle Fallon

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If your name is not listed or is listed incorrectly, please accept our apologies for the error and our most sincere thanks for your support.

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NOAA BWET GRANT AWARD

In collaboration with Dr. Celia Smith, UH Botany, Kupuna Chasmin Sokoloski and Jefferson Elementary, the Waikiki Aquarium and the Hawaii Coral Reef Initiative have been awarded a BWET grant from NOAA. This grant will provide workshops, field trips and in-class mentoring to share cultural material with Science, Technology, Engineering and Math (C-STEM) activities. The 18 month project will reach 10 focus Kupuna, 180 educators and 4,000 students in the Waikiki, Manoa and Palolo watershed areas. Through the generous support of Aqua Hotels & Resorts, 10 cultural toolboxes will include an iPad mini preloaded with curriculum materials, a Hawaiian moon calendar, books, including Hawaiian Reef Plants, La'au Hawaii and various other materials.



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PATRICK CHING

Our sincere thanks to Michael Tam, President of Martin & MacArthur stores, and noted international wildlife artist Patrick Ching for their generous donations from the sale of Patrick's work during the annual Kai show at the SheratonMoana Surfrider Hotel. This is the third year that Martin & MacArthur, Patrick Ching and the Moana Surfrider have partnered with the Friends of Waikiki Aquarium, and their ongoing support is greatly appreciated.



Wall of Fame

JULY 2015 - SEPTEMBER 2015

The beautiful exhibits at the Waikīkī
Aquarium and the valuable research and
conservation efforts that go on behind the
scenes are the result of the work of many.
Mahalo to all those who support us through
their generous donations.

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University of Hawai'i at Mānoa Waikiki Aquarium

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