

# Kilo iā

2014 OCT | NOV | DEC



STAYING AFLOAT  
SWIM BLADDER ASPIRATION OF  
THE SPOTTED KNIFEJAW

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ANNUAL REPORT  
FISCAL YEAR 2014  
SUPPLEMENT

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2014 saw our 110th anniversary celebrations, and our succession to the second oldest public aquarium in the United States. But rather than dwell on its past, 2014 heralded progress and change at the Aquarium. The first thing members might notice is the new blue color of the Aquarium frontage, and the matching metal bollards with solar lighting at the Aquarium entrance. These changes have greatly improved the appearance of the Aquarium and also moved us along our path towards energy efficiency. With a monthly HECO bill exceeding \$40,000, any savings in this area are welcome!

And once inside, the completely renovated gift shop is sure to catch your eye. Drop by for those Christmas gifts, or something special for someone special! The theatre is now blocked off, and has been completely gutted in preparation for conversion to a new Ocean Discovery Laboratory. This is scheduled to open in early 2016 and will provide information and hands-on learning opportunities about ocean-related research and topics of interest. The flooring in the galleries has been completely replaced, although the quality of the work leaves a lot to be desired and already needs refurbishing. Within the galleries, the major change was the opening of our new Amazing Adaptations exhibit, which highlights seahorses, seadragons and pipefishes. Upcoming improvements and the addition of new species over the coming months will further enhance this popular exhibit.

Upon exiting the galleries, work is currently under way on replacement of the holding area for animals used in the Edge of the Reef exhibit. This project will increase the size of the holding area, and provide optimal holding conditions for these and other animals. Eventually, this area will be included in our behind the scenes tours, which we plan on beginning once all the



(L to R) Raina Fujitani, Events and Membership Manager; Faye Kurren, FOWA Chair; Dr. Andrew Rossiter; and Kevin Yen of Barefoot Wines at the final 2014 Ke Kani O Ke Kai concert in August.

construction in the non-public areas is completed. Also on the grounds, past the public restrooms, a new rain garden has been installed, providing an inspirational model of how to utilize rainwater efficiently and so save on potable water for irrigation. In the virtual world, we launched a new website, and have received many positive comments from you, our members, and from visitors and teachers, who have accessed it for information.

Behind the scenes a new live feeds area is almost complete. This will allow us to produce on-site the phytoplankton, zooplankton and small shrimps need to feed our animals, and will also provide us with a guaranteed source of live food that is disease free, improving food quality and cutting food costs. A new jellyfish propagation and research area, and a new seadragon research unit, in which we aim to breed these rare and delicate animals, are complete. Upcoming changes planned for the coming year include an expansion of the coral propagation area, and the establishment of a specialized quarantine area and laboratory. Lots done, lots going on, and lots to come – and most of it funded by FOWA, which means you! A busy but productive year at the Aquarium, and with your continued support, more progress to come!

Dr. Andrew Rossiter  
Director, Waikiki Aquarium

# 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*.

# Blood Collection

## Training for use in Medical Management of the Hawaiian Monk Seal

Training is being used increasingly as a way to improve animal husbandry and make medical procedures less stressful for captive animals. Husbandry training at the Waikiki Aquarium includes all health care procedures and incorporates the physiological and psychological welfare of the animals. These procedures are necessary in order to ensure that these animals are in good health and receive exemplary care.

A high percentage of routine medical procedures on the Hawaiian monk seals (*Monachus schauinslandi*) at the Aquarium have been trained to be accepted voluntarily. Owing to the amount of information it provides about the animal's overall health, perhaps the most important of these procedures is blood collection. Training an animal for voluntary blood collection is a high priority for most animal facilities. From a resource standpoint, training voluntary blood collection has

numerous benefits, as staff time and other resources are reduced considerably.

At the Aquarium, an involuntary blood collection involves draining the seal pool, which takes 3.5 hours, bringing in the NOAA monk seal team for proper restraint and animal handling, administering sedatives, and additional staff time for animal observation pre- and post-procedure. More importantly, an involuntary blood collection results in aversive conditions for an animal. In the course of this procedure, the animal experiences foreign stimuli (including crowding boards and nets), unfamiliar people, increased handling and injections, and physical restraint. These stimuli can be very stressful for the animal, and this can alter blood chemistry values and give misleading information about the baseline health of the animal.

As with any trained behavior, accustoming the monk seals to blood collection is achieved



through operant conditioning and successful approximations (progressive training steps), and desensitization (getting an animal accustomed to new stimuli). However, husbandry behaviors, such as blood collection, are trained with one more critical component in addition to proper technique: trust. Blood draws are invasive, and thus a high degree of trust and a positive trainer-animal relationship is essential. Building this relationship requires time, positive reinforcement, and truly knowing the animal: how do they learn?, What is reinforcing or aversive for them?, What are their frustration thresholds?,

etc. Using training, the animal has the choice to participate in a session and procedure, versus being forced into it. The animal trusts that their trainer has worked hard to allow each and every behavior and session to be reinforcing and positive. Then, when a procedure like blood collection is necessary, the animal treats it like any other behavior, knowing that if it meets accepted criteria, it will gain reinforcement. The goal for a trainer and a facility is to have husbandry behaviors compare to any other behavior in an animal's repertoire, and achieving this enables the animal to receive optimal care.

## UNIQUE SPECIES



Collected and donated by Dr. Richard Pyle, the Aquarium's sunrise wrasse is currently on display in our "Deep Reefs" exhibit in Gallery 2.

PHOTO: KEOKI STENDER

## Sunrise Wrasse *Bodianus sanguineus*

This colorful fish is native to the Hawaiian Islands and can reach a length of approximately 7 inches (18 cm). Unlike most wrasse species that live in shallow water, the sunrise wrasse has an overall depth distribution of about 100 - 550 feet (30 - 170 meters), and is most commonly seen on rocky ledges at 330 - 390 feet deep, (100 - 120 meters). The sunrise wrasse has a red and yellow stripe running from snout to tail and a reddish-orange lower body. While its scientific name means "bloody," the common name reflects its beautiful coloration. In the wild, adults are typically seen in pairs, and juveniles are known to serve as cleaner fish to larger fishes. Currently, owing to their deep distribution, little more is known about the life of sunrise wrasses in the wild, and so observations on the behavior of this fish in the Aquarium's exhibit can provide important new information about this species.

This exhibit provides visitors with the opportunity to view the sunrise wrasse and other unique and rare deepwater fishes without the need for specialized diving equipment required to access such great depths.





» The spotted knifejaw (*Oplegnathus punctatus*), is a relatively uncommon fish found only in the Pacific Ocean. These fish can reach a length of approximately, 34 inches (86 cm), and usually inhabit reefs ranging in depth from 10–400 feet, (3–135 m). Knifejaws have a distinctive beak which helps them consume hard-shelled invertebrates like sea urchins and barnacles.



Waikīkī Aquarium is currently home to two spotted knifejaws, the older of which is currently a resident in the Aquarium’s Shark Exhibit and has lived here for the past five years. The second animal was collected in a plankton tow and raised in captivity; he was donated to the Aquarium in July this year. We are unaware of this species being housed in any other aquarium worldwide.



Shortly after arrival, the young knifejaw started exhibiting signs characteristic of an animal with a swim bladder problem. While able to eat and swim, the animal was positively buoyant and floated near the surface. The bulge in his abdomen also grew exponentially. Trauma, decompression sickness and infection are amongst the current diagnoses for fish exhibiting these symptoms. As the history of the animal was known, trauma/decompression sickness was unlikely.

As the fish is relatively rare, the Animal Health team, with the help of the Aquarium veterinarian, decided to proceed with caution and treat symptomatically. The animal was initially treated with a broad spectrum antibiotic to eliminate the possibility of any internal infection. After two weeks, although the fish continued to feed ravenously, no relief was evident and the decision was made to aspirate the swim bladder, as this would allow the animal to be neutrally buoyant.

Aspiration of the swim bladder by piercing the body wall and swimbladder with a hypodermic syringe to release trapped air, is a fairly widespread practice, however, the possibility of introducing infection and/or damaging an internal organ is high. After giving it careful consideration, the Animal Health team decided to perform an ultrasound guided aspiration of the swim bladder.

Colleagues from the John A. Burns

School of Medicine (JABSOM) kindly agreed to transport their equipment and volunteer their time to give this unique little animal a better chance of survival. Initial assessment included a macroscopic health evaluation, a respiration count and water quality readings.

After a briefing, history, and quick fish anatomy refresher, the team began the procedure. The knifejaw was initially sedated with a low dose of Tricaine (MS-222), and approximately 30 minutes later, was moved to the Aquarium Laboratory for the procedure. The fish was placed in a shallow container of aerated water which allowed it to have constant water over its gills and also provided the radiographer with the opportunity to perform the ultrasound procedure with relative ease. The fish had to be gently restrained by staff as the radiographer worked. After a few minutes it was clear that the swim bladder was filled with air and was fortunately not obstructed by any other organs.

Once a clear path to the swim bladder was identified, the body surface was disinfected with saline solution so as to minimize the risk of introducing disease. A total of 13 cm<sup>3</sup> of air was carefully aspirated with a small needle by one of the visiting specialists. The fish was relatively calm throughout the procedure, allowing the team of experts to work quickly. Once the procedure was completed, the now-slender knifejaw was quickly returned to its holding

tank, where staff continued to monitor his respiration rate, swimming pattern and water quality over the next hour.

The animal was neutrally buoyant and was feeding well shortly after the procedure. A further 10 cm<sup>3</sup> of air was aspirated by the Animal Health team approximately two weeks later. The knifejaw is currently in good health and the team currently have their hands full trying to keep this boisterous little fish busy.

The older knifejaw was collected in the Northwestern Hawaiian Islands and was trained to ensure that he would not have to compete for food with the larger animals in the exhibit. You can watch some of the training and enrichment that Aquarium Biologists have done with this curious fish on <https://www.youtube.com/watch?v=SI-uqAW4sVEI>

**FISH FACT:** Spotted knifejaws are known carriers of ciguatera, a toxin that affects the mammalian nervous system!

The Aquarium Animal Health team, and the knifejaw, are extremely grateful to Dr Todd Seto, Associate Professor of Medicine at UH JABSOM and Director of the Non-Invasive Laboratory at the Queens Heart Center, Dr Chad Walton, Assistant Professor of Medicine and Surgery at UH JABSOM, and Dr Ralph Shohet, Professor of Medicine and Director of the Center for Cardiovascular Research at UH JABSOM, for their efforts and expertise. 🐟





LAURA WHITELOCK

**POSITION**  
Volunteer Program Coordinator

**EDUCATION**  
B.A. in International Studies,  
Hawaii Pacific University (2013)

**FAVORITE AQUARIUM RESIDENT**  
First place goes to biologist Mark  
Dimzon, but second place goes to  
the cowfish

While on her many travels, Volun-  
teer Program Coordinator Laura  
Whitelock always finds time to give  
back to the communities she visits  
— from volunteering in Cambodian  
orphanages to helping residents  
of New Orleans in the aftermath of  
Hurricane Katrina.

After graduating high school  
with a class of 18 students, Laura  
initially went to college in Pitts-  
burgh but quickly felt the need to  
expand her horizons. From there  
she moved to Italy, Hawaii, Cambo-  
dia, Costa Rica, and finally to Oahu  
to complete her education. Laura  
has traveled to 14 countries and is  
looking forward to the next stamp  
in her passport.

Laura has not wasted anytime  
in her new position, “My favorite  
part of the job is getting involved  
with volunteers and marine life  
during beach clean-ups, at the  
Edge of the Reef, and during  
trainings. I love getting to know  
the volunteers and appreciate their  
surprise tea parties, baked goods,  
postcards and especially their  
passion for marine life.”



MARK DIMZON

**POSITION**  
Aquarium Biologist

**EDUCATION**  
B.S. in Marine Biology, University  
of San Carlos Technological Center,  
Cebu, Philippines (2001)

**FAVORITE AQUARIUM RESIDENT**  
Every animal in the Aquarium is  
equally amazing and important!

As the lead biologist for coral  
propagation at the Aquarium, Mark  
Dimzon is living a childhood dream.  
A native to Leyte, Philippines,  
Dimzon’s career has taken him to  
Underwater World in Singapore, the  
Dubai Aquarium Underwater Zoo,  
back to the Philippines’ National  
Coral Restoration Project and finally  
to Waikiki. “One of my biggest  
achievements as a young aquarist  
was working with an international  
pioneer crew in Dubai. I worked  
with a variety of sharks, eagle rays,  
napoleon wrasses, and seadragons.”

An avid surfer, Dimzon makes  
sure to paddle out in every country  
he visits. And when he isn’t surfing,  
Mark loves spending time with his  
wife and two daughters, Kailana  
and Alana. Before moving to Hawaii,  
Dimzon set up the relief mission  
group REVIVE (Rehabilitation  
through Voluntary Initiative for  
Village Empowerment) to help his  
home community and the nearby  
villages that were destroyed by  
Super Typhoon Haiyan in Leyte.

“In my new position, I would like  
to research and educate visitors on  
coral reproduction. The results of  
this research would help with coral  
restoration and climate change  
studies,” says Dimzon, “My career  
has been fun yet challenging — tak-  
ing me around the world (in and out  
of the water).”



MALINI PATHER

**POSITION**  
Quarantine & Disease Specialist

**EDUCATION**  
B.S. in Biological Sciences,  
University of Kwazulu Natal (2006)

**FAVORITE AQUARIUM RESIDENT**  
The seadragons—grace and  
camouflage never fail to amaze me.

Since the age of 5, Malini Pather  
has had a passion for marine biol-  
ogy. She comes to the Aquarium  
after spending the past 8 years at  
uShaka Sea World, South Africa,  
where she began as an education  
guide and later became an aquari-  
um biologist. Although her primary  
responsibilities include caring for  
the Aquarium’s new seadragons,  
Pather is very passionate about sea  
turtle rehabilitation, “Working with  
these animals has challenged me in  
so many positive ways.”

Her expertise spans animal  
health and quarantine as well as  
turtle rehabilitation. “I am excited  
to introduce new quarantine  
protocols and improve on existing  
procedures,” says Pather, “Since  
my arrival, I have been caring for  
the seadragons and am eager to  
see if we can get them to breed by  
next summer.”

South African born, of Indian  
origin, Pather spends her off-time  
reading, socializing, and enjoying  
her new Hawaiian environment.

“The Waikiki Aquarium is the  
second oldest aquarium in the  
states and has a reputation for  
several firsts in the aquarium indus-  
try,” says Pather, “After hearing  
about all of the Aquarium’s new  
developments, I was eager to be a  
part of the team!”



DAVID NICKLES, PH.D.

**POSITION**  
Information Technology  
Coordinator

**EDUCATION**  
Biological Sciences (BA ‘91),  
Computer Engineering (MS ‘00),  
Computer Science (PhD ‘10)

**FAVORITE AQUARIUM RESIDENT**  
Hō‘ailona, because, like him, my  
eyesight is failing (from staring at  
computer screens)

Born near the foothills of the  
Appalachian Mountains in South  
Carolina, David Nickles lived in  
Atlanta, where he worked as a  
Design Engineer. For the last 15  
years, Dave has lived and worked in  
Hawaii as a student and teacher.

In his college years, Dave kept  
a saltwater aquarium with percula  
and tomato clownfish. He even kept  
an axolotl salamander as a pet,  
which he rescued from a biology  
lab. “I once dreamed of becom-  
ing a U.S. National Parks Ranger,  
because he loved the outdoors,”  
says Dave, “that is, before technol-  
ogy and engineering caught my  
attention.

Dave has spent most of his  
career teaching Engineering, Infor-  
mation Technology, and Computer  
Science. Broadening STEM education  
in schools is one of his passions.

Dave joined the Waikiki Aquarium  
team to develop exciting new  
technologies that will make the  
Aquarium more accessible, more  
informative, and more interactive.

“It makes me happy to help  
people overcome difficulties with  
technology,” says Dave.

WAIKĪKĪ AQUARIUM ACTIVITIES & CLASSES

2014 OCT | NOV | DEC

Meet the Monk Seals!

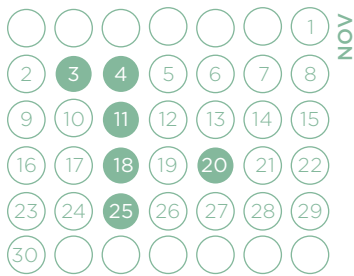
1st and 3rd Tuesday  
of the month 3:00 p.m.  
More sightings of seals around  
the main Hawaiian Islands have  
renewed interest in these amaz-  
ing, endangered animals. Learn  
about seals in the wild: What do  
they eat? How deep do they dive  
while hunting? Then move to the  
monk seal habitat and interact  
with Aquarium Biologists to  
learn what it takes to care for  
endangered Hawaiian monk  
seals. Designed for participants  
6 and up, but anyone interested  
is invited to attend. \$14/adult,  
\$10/child (\$10/\$6 for members).

Behind the Scenes

2nd and 4th Tuesdays  
of the month 3:00 PM  
Learn what makes the Aquarium  
run, from fish food to quaran-  
tine, 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. Acces-  
sibility is limited. \$16/adult, \$12/  
child (\$10/\$8 for members).

Exploring the Reef at Night

Nov 3, Mon 6:30-8:30 p.m.  
Nov 20, Thu 6:30-8:30 p.m.  
Dec 5, Fri 7:00-9:00 p.m.  
Dec 19, Fri 6:30-8:30 p.m.  
Jan 18, Sun 6:30-8:30 p.m.  
For an experience you’ll not for-  
get, join us as we explore the reef  
at night. Wade into the ocean on  
these wet and wild excursions.  
Search for night-active crabs,  
lobsters, eels and octopuses.  
Look for sleeping parrotfish,  
triggerfish and day octopus 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. \$15/adult, \$10/  
child (\$20/15 for non-members).



ACTIVITY REGISTRATION FORM

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 payable to “University of Hawai‘i”):

IF PAYING BY CREDIT CARD

Credit card # \_\_\_\_\_ VISA ☐ MC ☐

Expiration Date \_\_\_\_\_ Last three digits of security code on back of card \_\_\_\_\_

I am a FOWA Member Yes ☐ No ☐





## Members' Night 2014

On Sunday, November 2, Members Night 2014 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 on the Aquarium lawn, to the enjoyment of the many families present. Members packed their dinners and enjoyed a picnic on the lawn, experiencing these ocean-related features under the moonlight. Of course, with the movies, popcorn was provided. A special thank you to Funflicks Outdoor Movies for their generous support!

### 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 registration form with a check or credit card information to:

Waikīkī Aquarium • Education Department  
2777 Kalākaua Avenue  
Honolulu, Hawai'i 96815-4027

# FISCAL YEAR 2014 ANNUAL REPORT SUPPLEMENT





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of our Distinguished Lecture Series, spotlighting important ocean conservation issues; the continuation of our Waikiki Coastal Restoration efforts and research to restore Waikiki's fragile reef ecosystem; three grant awards: for staff professional development; for ocean studies, in collaboration with the Seattle Science Center and San Francisco Exploratorium; and a new Remote Pacific Islands exhibit, scheduled for late 2015; the public celebration of our 110th anniversary; and another successful and sold-out Ke Kani O Ke Kai summer concert series.

As we look ahead to 2015, plans are afoot for upgrades to the public galleries and bathrooms; renovation of existing exhibits, including several with new themes; opening of our new Ocean Discovery Center; and opening of entirely new exhibits. We'll also continue to offer programs and events that the entire family can enjoy as we continue to fulfill our mission of ocean education and conservation.

FOWA couldn't do what we do without you. Thank you, again, for your contributions that help us celebrate and protect Hawai'i's marine resources.

Here's to the next 110 years!

**Marcus R. Boland**  
CO-CHAIR, FRIENDS OF WAIKĪKĪ AQUARIUM

**Faye Kurren**  
CO-CHAIR, FRIENDS OF WAIKĪKĪ AQUARIUM

On behalf of the Friends of Waikīkī Aquarium's (FOWA's) Board of Directors, mahalo nui loa for your generous support during the Waikiki Aquarium's 110th anniversary year!

As the second oldest aquarium in the United States, we celebrated some major milestones, including: The opening of our Amazing Adaptations exhibit, featuring seahorses, seadragons and pipefishes; the launch

HOALAUNA COMMUNITY

▶ Our **SCHOOL SUPPORT PROGRAM** hosted 6,992 students and teachers for presentations in the Docent Program and 19,703 individuals through group reservations.

▶ With the support of the Freeman Grant, the Education Department offered **FREE PROGRAMS**, educational materials, transportation and lunches to 243 under-served families and over 2,400 students from Title I Schools.

▶ Our **COMMUNITY ENRICHMENT PROGRAM** reached 2,208 people through a variety of fun, hands-on educational activities. 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 115 teachers and guests who gathered marine science curricula from 14 different ocean-related agencies.

▶ The Aquarium saw nearly 10,000 visitors during our **110TH ANNIVERSARY** celebrations on March 19 and 22. The two-day celebration included performances by the Royal Hawaiian Band, the UH Marching Band, Honu by the Sea, and many others. Visitors enjoyed a special art exhibit by Tolani School and live chalk art by artists Alan Tsukamoto, Scott Goto, Michael Furuya and Patrick Ching, as well as an incredible LEGO Aquarium by LEAHI.

▶ Our **FACILITY RENTAL PROGRAM** welcomed almost 14,000 guests and continues to be a popular event venue location for members. In addition to private weddings, birthdays, graduations and other celebrations, the Aquarium was venue for events hosted by Alexander & Baldwin, Aloha Koi Appreciation Society, American Renaissance, Central Pacific Bank, Commercial Plumbing, Duke Kahanamoku Foundation, Hawaii Bowl, Kaiser Permanente, Kapiolani Medical Center for Women & Children, Large Scale Managers, Mercedes Benz, Morgan Stanley, Outrigger Hotels, Punahou School Alumni, St. Clement's School, Sustainable Coastlines, UHM Children's Center, Wedding Café, and more.

▶ The Aquarium's reputation and popularity as an exquisite **WEDDING VENUE** has grown. The Events and Membership Department also welcomed 15 destination wedding producers, mainland travel agencies, and meeting planners as part of a familiarization tour with the Oahu Visitors Bureau. The Aquarium was featured at **THE WEDDING CAFÉ'S VENUE WORKSHOP** – a free series attended by about 300 brides- and grooms-to-be, wedding party members and their

immediate families.

▶ To enrich FOWA membership benefits, we continued members' benefits with Aquascapes, Colorwhims Hawaii Party Entertainers, Coral Fish Hawaii, Education Works, Hard Rock Café, HASR Wine Co., Kalihi Pet Center, Lucoral Museum, Pigtails & Crewcuts, Waikiki Dive Center, and Waiola Shave Ice. We also forged new partnerships with Atlantis Submarine Adventures, Haili's Hawaiian Foods, Menehune Mac Chocolate Factory, and Mindy Metivier Photography.

▶ Our Membership Department has been out and about in our community, participating in Kahala Mall's Toddler Time, the Oh Baby! Family Expo, and the Martin Luther King, Jr. Military Volunteer Fair.

▶ **GRANTS** totaling over \$85,000 from the Freeman Foundation and Hawaii Community Foundation have allowed us to provide educational programs and expand our coastal restoration, invasive algae cleanup and beach cleanup programs.

‘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 research behind-the-scenes and now that they had grown large enough, were recently released into the wild. Six new hatchlings have replaced them.

▶ Advancing its ongoing **CONSERVATION EFFORTS**, the Aquarium has installed advanced LED lighting fixtures that will decrease electrical costs, provide the ultraviolet spectrum necessary for corals, and accurately replicate natural photoperiod for different environments.

▶ To further **RESEARCH** efforts, the new Live Foods Area and Jellyfish Propagation Laboratory are near completion behind the scenes. These areas will promote research on jellyfish biology, and food production, which will ultimately decrease costs and provide a regular supply of disease-free live foods for our exhibit fishes and animals.

▶ After a long wait while the biological and chemical parameters of their new exhibit stabilized, the peppermint angelfish (*Centropyge boylei*) and Abe's angelfish (*Centropyge abei*) have a **NEW HOME** in Gallery 3. Ours is the only public aquarium anywhere in the world where you can see these two fishes.

▶ The Education Department trained 80 new volunteers for both the Aquarium Interpreter Program and the Docent Program.

▶ Our new **TEEN INTERPRETER PROGRAM** kicked off with 22 teens completing the initial training. They worked as volunteer interpreters to interact with visitors and set

up hands-on activity stations throughout the Aquarium.

▶ The Aquarium's **REPAIR AND MAINTENANCE** program activities have included extensive facility renovations, including: newly upgraded office spaces; the Aquarium's new rain garden; a new Live Foods deck behind-the-scenes; as well as power consumption reduction with new solar light posts at the front of the Aquarium, and a transition to LED lighting.

▶ Fifty five aquariums and zoos, including new partnerships with Edmonton Valley Zoo, Alberta, Canada; and Kushimoto Marine Park, Wakayama, Japan, now have reciprocal membership arrangements with the Waikiki Aquarium.

HANA HOU!

▶ The 2014 **KE KANI O KE KAI** summer concert series kicked off in June with performances by Ho'okena and Ben & Maila. Other concerts featured HAPA and Cyril Pahinui, Natalie Ai Kamau'u and Mark Yamanaka, Weldon Kekaoha and Melveen Leed, concluding with Kuana Torres-Kahele and Makana. Proceeds will go towards marine conservation projects at the Aquarium.

▶ Over 600 people joined us for a **CIRCUS UNDER THE SEA** at the Aquarium's Family Night 2013. Experts dazzled the crowd with unique and unusual animals, kids joined the circus at the Adaptation Station, and enjoyed many other educational activities and crafts.

▶ **MEMBERS' NIGHT 2013** celebrated the arrival of our newest reptilian residents — the Hawaiian green sea turtles. The evening featured expert presentations about these amazing and endangered animals by two NOAA staff: Dr. Kyle S. Van Houtan, leader of the Marine Turtle Assessment Program, Protected Species Division and Irene Kinan Kelly, sea turtle coordinator.

MAHALO

▶ Our sincere thanks to the National Marine Sanctuary Foundation, the John R. Halligan Charitable Fund, Weissman Family Foundation, Freeman Foundation, Lloyd Moore Foundation, Outrigger Hotels and Resorts, Matson Navigation, Alexander and Baldwin, Honolulu Star Advertiser, Horizon Lines, Aqua Hospitality, and all of our corporate sponsors and individual sponsors for their support.

Special thanks to the founding members of our newly created Directors Circle, individuals who have generously contributed to the Friends of Waikiki Aquarium this year.



Reflecting improvement in the economy, we are happy to report that in FY 2013-14 overall revenue increased by 15% as compared to FY 2012-13.

Substantial increases were seen in the categories of Investments <up 76%>, Gift Shop <up 17%>, Events <up 14%>, Interest <up 8%>, Sponsorships <up 7%> and Membership <up 6%>. On the down side, decreases were reflected in the categories of Donations <down 65%>, Vending Machine <down 24%> and Grants <down 13%>. It should be noted that the decrease in Donations is due to the absence of significant estate gifts that were made in fiscal year 2012-2013.

We also saw a 38% increase in Overall Expenditures, which was mainly due to increases in Professional Services <up 52%>, Capital Projects <46%>, Shop <41%>, Bank Fees <up 32%>, Events <up 27%>, Other Expenditures <up 23%>, Investment Fees <up 23%> and *Kilo i'a* <up 13%>. The Grant category incurred a decreases <down 12%>.

The Waikiki Aquarium's Amazing Adaptation exhibit was a major Capital Project for the fiscal year 2014.

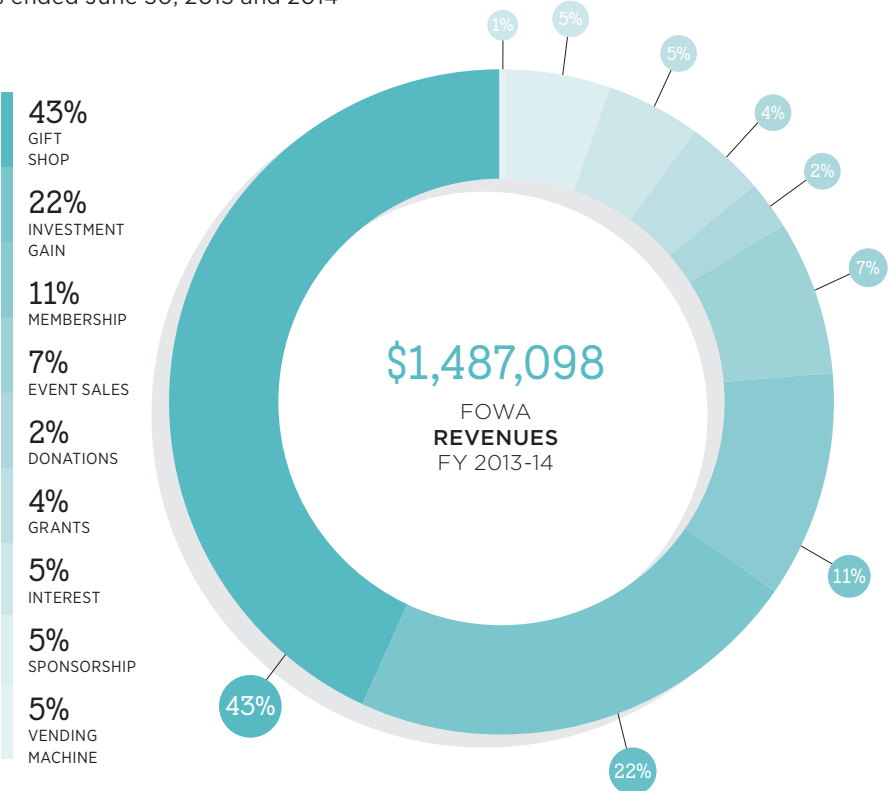
This unaudited financial information is presented on an accrual basis. The NSS fund balance is down 23% over the last fiscal year, largely due to the transfer of funds to offset Capital Project expenditures.

NOTE: Fiscal year 2010-11 forward annual reports include only FOWA-related fund transactions, including those relating to the Natural Selection Gift Shop (NSS) which is managed by FOWA.

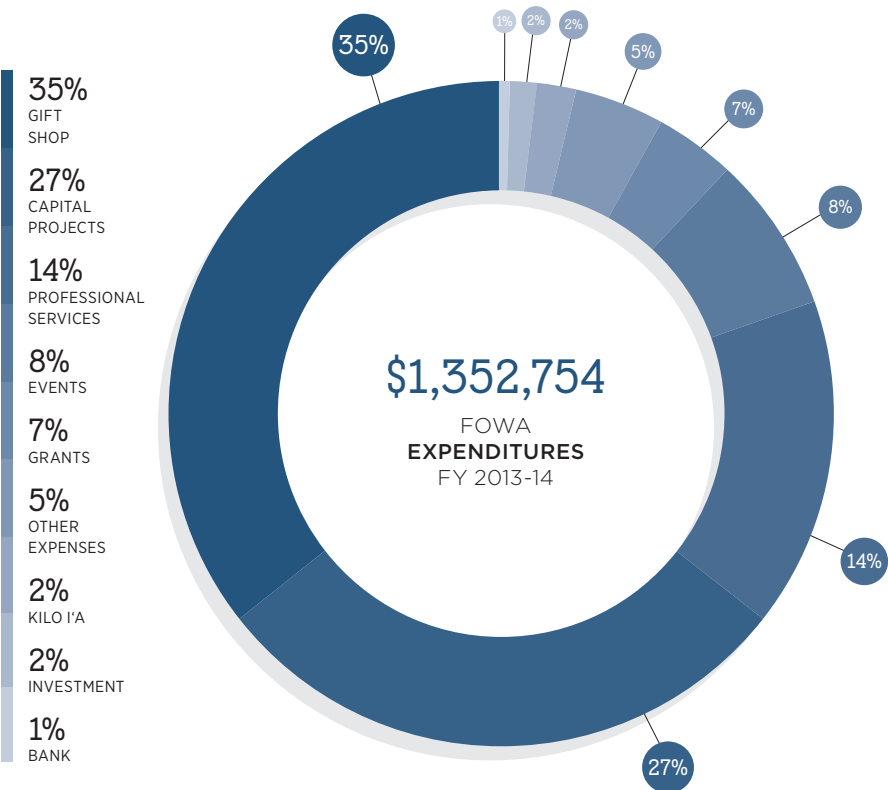
NATURAL SELECTIONS GIFT SHOP COMBINED STATEMENTS OF INCOME AND CHANGE IN FUND BALANCE Years ended June 30, 2013 and 2014			
REVENUES	FY 2013-14	FY 2012-13	
Sales	\$661,929	647,974	
Cost of Goods Sold	(264,221)	(258,852)	
Photo Booth	244,301	160,750	
Investment Gain (Loss)	--	--	
Interest	70	87	
Gross Revenues	\$642,080	549,959	
EXPENDITURES			
Personnel Cost	\$112,000	101,879	
Professional Fees (Photo Vendor)	171,025	112,455	
General Excise Taxes	36,305	33,519	
Bank Service Fee	14,669	12,850	
Depreciation	1,216	2,432	
Equipment, Supplies, Repair & Maintenance	16,540	10,262	
Fire Insurance	2,570	2,383	
Other Expenditures	3,992	3,662	
Transfer to UH	124,543	61,830	
Total Expenditures	\$482,790	341,272	
Net Income (Loss)	\$159,290	208,687	
FUND BALANCE			
Ending Fund Balance	308,992	549,702	
Amount Transferred	400,000	275,000	
Beginning Fund Balance	549,702	616,016	
Change in Fund Balance	159,290	208,687	

FRIENDS OF WAIKĪKĪ AQUARIUM  
COMBINED STATEMENTS OF REVENUE, EXPENDITURES AND CHANGE IN FUND BALANCE  
Years ended June 30, 2013 and 2014

REVENUES	FY 2013-14	FY 2012-13
Gift Shop	\$642,080	549,959
Investment Gain (Loss)	333,032	189,402
Grants	59,787	69,000
Membership	160,715	152,336
Events		
Sponsorship	73,547	60,000
Sales	111,404	98,058
Interest	68,003	63,043
Donations	33,500	96,731
Vending Machine	5,030	6,625
Gross Revenues	\$1,487,098	1,285,154



EXPENDITURES	FY 2013-14	FY 2012-13
Gift Shop	\$482,790	341,272
Events	103,884	82,787
Grants	51,983	64,056
Professional Services	216,337	140,022
Capital Projects	387,858	263,357
Newsletter ( <i>Kilo i'a</i> )	25,784	22,755
Financial		
Investment	20,115	16,383
Bank	4,337	3,275
Other Expenditures	59,666	47,309
Total Expenditures	\$1,352,754	981,215











University of Hawai'i at Mānoa  
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## THE WAIKĪKĪ AQUARIUM'S MISSION

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

Pacific Threadfin / Moi / *Polydactylus sexfilis*