2014 OCT | NOV | DEC

ANNUAL REPORT FISCAL YEAR 2014 SUPPLEMENT

STAYING AFLOAT SWIM BLADDER ASPIRATION OF THE SPOTTED KNIFEJAW

Alg

 $page\,4$



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 underway 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



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!

Kilo ia

Issue Number 191 2014 OCT | NOV | DEC

EDITOR Dr. Andrew Rossite

ART DIRECTOR Kelsey Ige PRINTING

Reskyu

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

Waikīkī Aguarium 2777 Kalākaua Ave. Honolulu, HI 96815-4027 PHONE (808)923-9741 FAX (808)923-1771 www.waquarium.org

© 2014 Waikīkī Aquarium

PRINTED ON RECYCLED PAPER WITH ENVIRONMENTALLY FRIENDLY INKS

ΜΑΝΑΊΟ

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

raining is being used increasingly as a way to improve animal husbandry and make medical procedures less stressful for captive animals. Husbandry training at the Waikīkī 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



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

Andrew Kos

Dr Andrew Rossiter Director, Waikīkī Aquarium



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.

Sunrise Wrasse Bodianus sanguineus

wrasse and other unique and rare deepwater fishes without the need for specialized diving equipment required to access such great depths.



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.

hortly 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 cm³ 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 $\rm cm^3$ 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=SIuqAW4sVEI

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, Volunteer 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 Pittsburgh but quickly felt the need to expand her horizons. From there she moved to Italy, Hawaii, Cambodia, 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 Waikīkī. "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 — taking 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 biology. 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 aquarium biologist. Although her primary responsibilties 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 Waikīkī Aquarium is the second oldest aquarium in the states and has a reputation for several firsts in the aquarium industry," 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 Hōʻailona, 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 becoming a U.S. National Parks Ranger, because he loved the outdoors," says Dave, "that is, before technology and engineering caught my attention.

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

Dave joined the Waikīkī 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

Meet the Monk Seals! Ist 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 N Nov 3, Mon 6:30-8:30 (Nov 20, Thu 6:30-8:30 (Dec 5, Fri 7:00-9:00 Dec 19, Fri 6:30-8:30 (Jan 18, Sun 6:30-8:30 (For an experience you'll nor get, join us as we explore th at night. Wade into the ocea these wet and wild excursic Search for night-active cral lobsters, eels and octopuse: Look for sleeping parrotfish triggerfish and day octopus their dens. For the adventu ages 6 years and up; youngs must be accompanied by ar adult. Participants should k comfortable in the ocean, b day and night. \$15/adult, \$1 child (\$20/15 for non-mem)	p.m. p.m. p.m. p.m. p.m. p.m. tfor- e reef an on pns. bs, s. h, sin rous, sters 1 pe ooth LO/		s m t w 5 6 7 8 12 13 14 15 19 20 21 22 26 27 28 29 1 2 3 4 5 9 10 11 12 16 17 18 19 23 24 25 26 30 1 2 3 7 8 9 10 1 2 3 7 8 9 10 1 1 2 3 7 8 9 10 1 2 3 2 3 24 2 3 24 2 3 24 2 3 24 2 3 24 2 3 3 3 1 2 3 1 3 4 1 2 3 1 3 4 1 2 3 1 2 3 1 2 3 1 3 4 1 2 3 1 2 3 1 2 3 1 2 3 1 3 4 1 2 3 1 3 4 1 3 10 1 12 1 2 3 1 3 10 1 12 1 12	r f s 2 3 4 5 9 10 11 16 17 18 23 24 25 30 31 1 2 6 7 8 1 3 14 15 20 21 22 27 28 29 1 3 14 15 20 21 22 27 28 29 1 3 14 15 20 21 22 27 28 29 1 20 2 2 2 2 2 7 2 8 29 1 1 12 13 1 8 19 20 2 5 2 6 27 1 6 7 8 1 9 20 2 5 2 6 27 1 7 18 1 9 20 1 9 18 1 9 19 19 1 9 20 1 9 18 1 9 20 1 9 18 1 9 18 1 9 19 1 9 19
		 			Se.
ACTIVITY REGISTRATI					~~
NAME(S) Adults				Phone (Home)	
				Phone (Work)	
Address					
City/State/Zip			Email		
PLEASE REGISTER ME FOR					
Activity			Date(s)	Number of Adults/Children	Price
	,				
Total amount of payment enclosed (check payable to "University of	Hawaiʻi"):			
IF PAYING BY CREDIT CARD					
Credit card #				VISA MC	
Expiration Date			Last three digits of the second	of security code on back of card	

I am a FOWA Member Yes 🗌 No 🗌

6 OCT-DEC 2014











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.
- $\ensuremath{\,{\scriptscriptstyle >\!>}}$ Questions about the activities? Call the Waikīkī Aquarium Education Department at $440\math{-}9007\math{.}$
- $\boldsymbol{\gg}$ 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 ~ FISCAL YEAR 2014

ANNUAL REPORT SUPPLEMENT



FOWA BOARD

CHAIRPERSON Marcus Boland NORTHWESTERN MUTUAL

CHAIRPERSON Faye Kurren HAWAI'I DENTAL SERVICE

TREASURER Jennifer Isobe KPMG LLP

SECRETARY Dr. Chuck Kelley OUTRIGGER ENTERPRISES, INC.

Dale Armstrong ARMSTRONG CONSULTING

Barbara Campbell OUTRIGGER ENTERPRISES

Chris Cole MARR, JONES & WANG

James L. "Kimo" Greenwell IONES LANG LASALLE AMERICAS INC

Tim Guard MCCABE, HAMILTON & RENNEY CO. LTD

William T. Henderson AQUA HOTELS & RESORTS

Charles Loomis A&B PROPERTIES

Mike Niethammer KING WINDWARD NISSAN

Damian Roncevich PRIME BUILDERS OF O'AHU

James K. Tam CHAR SAKAMOTO ISHILLIM & CHING

Nancy Taylor

Peter Thacker FARL THACKER LIMITED

Brett Thomas BT PROPERTIES

Dirk Yoshizawa BANK OF HAWAII



n behalf of the Friends of Waikīkī Aquarium's (FOWA's) Board of Directors, mahalo nui loa for your generous support during the Waikīkī 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

of our Distinguished Lecture Series, spotlighting important ocean conservation issues; the continuation of our Waikīkī Coastal Restoration efforts and research to restore Waikīkī'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!

Fayeev K

Marcus R. Boland O-CHAIR, ERIENDS OF WAIKĪKĪ AQUARIUM

Faye Kurren CO-CHAIR, ERIENDS OF WAIKĪKĪ AQUARIUM

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 'Iolani 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 groomsto-be, wedding party members and their

immediate families. Jr. Military Volunteer Fair. beach cleanup programs.

'IMUA MOVING FORWARD

different environments fishes and animals.

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, Waikīkī 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,

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

> 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-thescenes 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

> 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

> 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 behindthe-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 Waikīkī Aquarium.

HANA HOU!

The 2014 KE KANI O KE KAI summer concert series kicked off in June with performances by Hoʻokena and Ben & Maila. Other concerts featured HAPA and Cyril Pahinui, Natalie Ai Kamau'u and Mark Yamanaka, Weldon Kekauoha 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 Waikīkī 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* $i'a \langle up | 13\% \rangle$. The Grant category incurred a decreases (down 12%).

The Waikīkī 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 FOWArelated fund transactions, including those relating to the Natural Selection Gift Shop (NSS) which is managed by FOWA.

REVENUES	FY 2013-14	FY2012-13	43%
Gift Shop	\$642,080	549,959	GIFT
Investment Gain (Loss)	333,032	189,402	SHOP
Grants	59,787	69,000	22%
Membership	160,715	152,336	INVESTM
Events			GAIN
Sponsorship	73,547	60,000	11%
Sales	111,404	98,058	MEMBERS
Interest	68,003	63,043	7%
Donations	33,500	96,731	I /0 EVENT SA
Vending Machine	5,030	6,625	
Gross Revenues	\$1,487,098	1,285,154	2%

2% DONATIONS 4% GRANTS 5%

5%

5% VENDING

MACHINE

NATURAL	SELECTI	ONS	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,	16,540	10,262
Repair & Maintenance		
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

FOWA CONSOLIDATED FUND BALANCE

Years ended June 30, 2013 and 2014

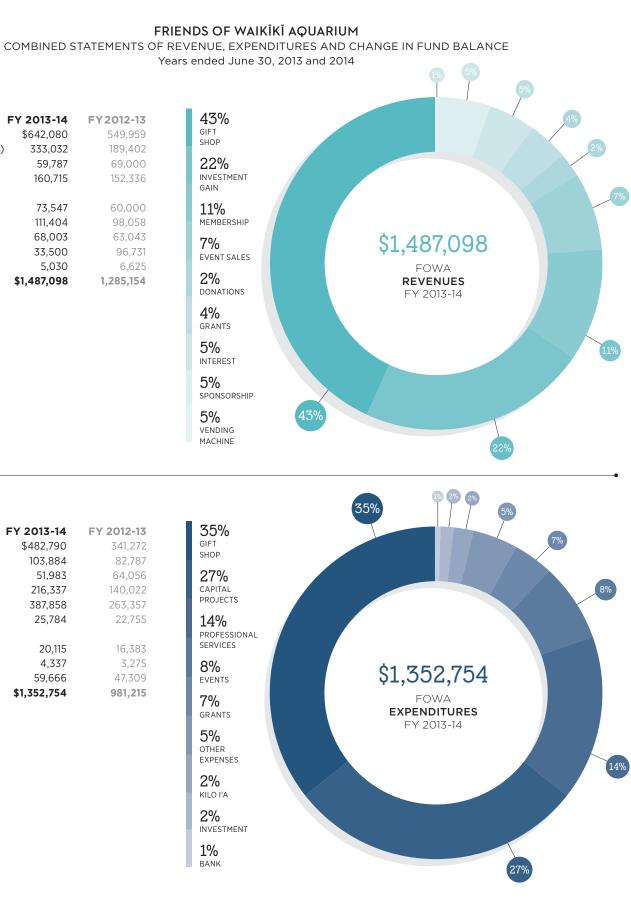
FUND BALANCE	FY 2013-14	FY2012-13
Restricted	\$464,515	338,198
Non-restricted	3,001,177	2,993,150
Total Fund Balance	\$3,465,692	3,331,348
Beginning Fund Balance	3,331,348	3,018,977
Net Income (Loss)	134,344	312,371
Ending Fund Balance	\$3,465,692	3,331,348

EXPENDITURES	FY 2013-14	FY 2012-13	35%
Gift Shop	\$482,790	341,272	GIFT
Events	103,884	82,787	SHOP
Grants	51,983	64,056	27%
Professional Services	216,337	140,022	CAPITAL
Capital Projects	387,858	263,357	PROJECTS
Newsletter (Kilo iʻa)	25,784	22,755	14%
Financial			PROFESS
Investment	20,115	16,383	SERVICES
Bank	4,337	3,275	8%
Other Expenditures	59,666	47,309	EVENTS
Total Expenditures	\$1,352,754	981,215	7%

5% OTHER EXPENSES 2% KILO I'A

2% INVESTMENT

1% BANK



NEW + RENEWING FOWA MEMBERS

Tim & Keahi Fredrickson

The Membership Office recorded these new and renewing memberships between August 1 and September 29, 2014.

Kevin Adena Carolyn Adler & Jon Kurosu Howard & Doreen Akamine Michael & Noelani Akau Robin Alo & Angela Arakawa Karen Ambrosi Ilan & Angelica Amir Darius Amjadi & Beverly Davis Jodene & Glenn Arakaki Gavin Au & Natalie Togami David, Susan and Sofia Beilman Rvan & Katherine Bellomy Neil & Charlotte Berry Mr. & Mrs. Best Gary & Pat Bilyk Paul Bishay & Marisol Tirado Douglas & Tracev Blackington Robert & Nicole Bonning Adam & Lauren Bookatz Ms Sophia Brara Lars & Yanah Brennan Douglas & Arlene Brown Takara & Gerald Bullock Henry & Cathleen Castro Mr. & Mrs. Melvin R. Castro Kelvin Char & Delores Clark Jill & Brant Chillingworth Kelii Chock &

Colleen Colby-Chock Jiae & Ayoung Choi Michael & Ann Choy Jonathan & Miharu Chun Mr. & Mrs. Noah Chun Erick & Gretchen Clavson Travis & Hannah Clegg Elizabeth & Brooke Cleveland Damon & Heidi Clifton Paul & Sandra Cockrell Kenneth Conklin Felix & Ireane Contreras Ann E. Coopersmith Mr. & Mrs. Stephen Cranston Kathryn & Kevin Daisey Mrs. Claire S. Dang & Mr. Glenn C. Dang Steven Davidson Geraldine DeBenedetti Thomas & Amber DeLeon Jose & Elizabeth Diaz Debbie Dickson & Ella Aki Anh Thu & Thanh Phuong Diep Monsicha & Chuong Dinh Andv Do Marjorie Dougherty & Christina Acevedo Richard & Kumiko Dowland Kelly & Chris Doyle Eleanor Dunning & Jeremy Hausfeld Patti Eisinger

Mr. Dustin Engle Sylvia & Kurt Eschbach Ardis Eschenberg Bernard Fajota Mr. David Fasi & Mrs. Sydney Fasi Robert and Patricia Faus John & Elise Ann Fernley C.I Ford Lucas Fortini &

Paula Mejia Velasquez

Mr Konrad S Fuhri Ken Fukuyama & Keiko Okada Mr. & Mrs. Tyler Furukawa Sherry & Nicolas Gaillard Paul & Nancy Garner Leonid Gavrilchik & Kate Wong Gavrilchik Noriko & Akira Gomikawa Marc Goto Nicole & Jairus Grove Nicole Guinto & Isalah Cobb-Adams Owen Hagino & Grace Ashton Jocelvn Hanawahine & Brvan Keo Dean & Lynn Harada Richard & Shelly Hare Elle Harvey-Serflek & Noel Shaw Donald & Shirley Hasenvager Mr. & Mrs. Robin Hashimoto Wallace T. Havashi Heu Family Dieter & Betty Heycke Mr. Daniel & Mrs. Elavna Ho Mrs. Alma Ho & Ms. Diane Bosworth Victor & Ida Ho Travis Hong & Eileen Zorc Alan & Karen Hong Jesse & Marivic Hoʻokano William & Leisa Horn Jake Houseman & Alicia Moy Charlene S. In & Paul Billington Alan Ing Glen & Lynne Inouye Chivo Ishibashi Mr. & Ms. Wain Iwaki Zaricke & Mercy Jackson Maribel & Jose Jimenez Walter & Ellen Jinbo Dana L. Jones Mr. & Mrs. Luke Joseph Matt & Megan Joswick Mary Ann Kadooka & Lisa Lim Jay & Lillian Kam Fred & Alice Kamemoto Mr. Derek Kamm Jordan & Rebecca Kandell Tracy Kazunaga Judy & Christopher Keller Nicole Kellner & Jesse Davis Mr. David T. Kim Shawna & Aunu'ua King Brittany Kitchen Linda Knox Tad & Lynn Kobayashi Mrs. Ricky Kuga Mr. & Mrs. Derrek N. Kurose Karin Last & Remington Scott Gabriel Lau Thomas J. La Belle Trang Le John & Trisha Lee Kevin & Chiharu Lee Drs. Rachel Murkofsky & Brian Lee Eric & Elinor Leong Herman & Candace Leong Ms. Aaron Leong Jimmy & Sonia Lin William Lofquist Jeffrey Loh & Caroline Chang James & Dona Loustalot Adele Lum & Blair Akion

Jean P. Maharibatcha Leilani Martin Mr. & Mrs. Jose H. Martinez, Jr. Mr. & Mrs. Michael Maru Mr. & Mrs. Myles Matsumoto Tom & Cynthia Matsuoka Scott & Laurie McGinnis Mr. & Mrs. Jim McMann Philip Meltmar Tate Metler & Rebeccah Rodrigues-Metler Lori Michimoto & Abe Toma Cafey Millard Eric Mivasato & Kamla Fukushima Brandon Miyashiro Mohr Family Ken & Janna Joe Morimoto John & Tyna Morrisroe Mr. & Mrs. Edwin Motoshige Eric & Melissa Mueller Lane Nagano Mr. & Mrs. George I. Nagao Marcia S. Nakama Dale & Gary Nakamatsu Neal & Alicia Nakamitsu Joshua & Minako Nelson Mr. Derek Nishibata Matthew & Jan Nishimoto Gene & Verna Nishimura Dr. & Mrs. Wade Nobuhara Gisele Novak Christopher Oberholzer & Libby Lum Michelle & Ewina O'Brien Seung Woo Oh & Eul Noh Mr. & Mrs. Aven T. Okamura Mrs Tavia Oshiro Jill K. Owens Eric & Geraldine Palacol Kyle Pang & Jennifer Foley D Perez Joe & Kris Pishock Evan Poa & Tracev Davies Leilani Pvle Mary Quinn & Tania Ingram Resha & Winona Ramolete Holly Ramsay & Kelley Esh Arthur & Susan Randell Kaliko Rankin Nephi & Melanie Redd **Beynaldo** Bios Greg & Sarah Rocheleau Todd Roll & Lota LaMontagne Nicole Rompasky & Vivian Hayashi Matthew & Megan Ross Judy Rostron Dr. Marina Rovtman & Dr. Peter Poerzgen Ann Ruby Beecroft Family Tetsuaki & Yoshimi Saihara Kevin & Elaine Saito David Sakai David Sato & Jennifer Tanabe Teri Sato Michael Saunders & Teresa Eastoe Mr. & Mrs. Sefo Darren Seu Noel and Andy Shaw Mrs. Jamie Shimozono Jonelle Shintaku & Eric Ho Kristian & Ghillian Smith

Alevi Lyman

Reni Soon & Michael Savala Jamie Barthel **Bachel Subido** Ms. Nadiera C. Sukhraj Mr. Goro Sulijoadikusumo Hiro & Lori Sung Joshua & Crystal Swiger John C. Swindle and Family Jonathan Sy Tomomi Sydow Cheryl Tagaca & Darren Demaya Kevin & Kim Taira Judy Takata Mr. & Mrs. Takei Yoko Takeuchi & Ronald Uno Dr. & Mrs. Jason Tanaka Mr. & Mrs. Bill Tobin Mr. & Mrs. Eli Tangonan Jr. Mark & Erika Tanimoto Mark & Kelly Tanimura Nancy & Carroll Taylor Wade & Kristi Teruya William Thomas & Celia Smith Mr. & Mrs. Peter Thorne Mr. & Mrs. Kenneth Tom Christine & Colby Torres Mr. & Mrs. Jon Y. Tsukamoto Michelle Tsuruda Ryan & Cheryl Tung Nicholas & Tianna Turk Jennifer & James Tuthill Jamie & Ryan Uesato Mr. Kirk Urbanski Bernard & Tammy Uv Gloria & Clinton Uyehara Patty & Virginia Van Kuran Scott & Jennifer Vecchione Srinivas Vemuri & Vijayalakshmi Tummala James & Ann Walkinshaw Mr. & Mrs. Brent & Hannah Watanabe Christopher Watkins & Sheila Zapanta Richard & April Westover Carolvn White & Malia Eversole Ms. Sarah Y. Whitehead Kari Wilhite & Randy Shaw Jeremy & Danica Wong Randal & Yvonne Wong Steffany & Keith Mark Wong Kiko Woodhull Wood Working Hawaii Thomas Yamachika Mr. & Mrs. Wallace T. Yamada Yamagata Family Dave & Jamie Yamagata Kelly & Ann Yamashita Dr. Nozomu & Mrs. Erica Yamauchi Newman & Samantha Yang Beverly & Clinton Young Tim & Paula Young David & Minyoung Yu Mr. & Mrs. Elmer Y.S. Yuen Mr & Mrs Bandall Yuen

Ean & Alex Smith

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.



Pele Awards: Aquarium Wins Gold!

Once again, the work of the Graphics Department has been recognized as one of the best in the state. Out of a sea of hundreds of entries, the 2013 Family Night: Circus Under the Sea campaign was an absolute favorite. A PELE Gold Award presented by the District 13 (Hawai'i) American Advertising Federation, was presented to Graphics Coordinator Kelsey Ige on April, 2014 at the Royal Hawaiian Hotel.

Ke Kani O Ke Kai 2014

Some of the best in Hawaiian music. hula and food were harmoniously featured in Waikīkī Aquarium's 9th annual Ke Kani O Ke Kai concert season. Ho'okena and Ben & Maila kicked-off the series in June and four other concerts followed with entertainment in a setting like no other. Concert artists provided unforgettable performances with special guests and dancers. Our restaurant partners from The Grove, Kani Ka Pila Grille, Da Spot and HASR Bistro offered up their signature dishes for our guests to enjoy.

Despite the threat of a tropical storm, the final concert of the series was attended by over 450 guests and the rain held-off right up until the final song by Kuana Torres Kahele was sung. It was another 'chicken skin' end to a successful concert season with over 3,000 attendees throughout the five concerts.







WALL of FAME

JULY 2014 TO SEPTEMBER 2014

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.

CORPORATE SUPPORT Aqua Hospitality Hard Rock Café Hawaiian Airlines

Martin & MacArthur McCabe Hamilton & Renny Patrick Ching, Naturally Hawaijan Painting Crew LLC

A big thank you to presenting sponsor Outrigger Hotels & Resorts as well as the many other supporters listed in this issue! Proceeds from this year's concert series will go towards marine conservation projects at the Waikīkī Aquarium.

Amazing Adaptations: Members' Preview Event

Friends of the Waikīkī Aquarium members and their guests were among the first to see and experience the new Amazing Adaptations: Seahorses, Seadragons and Pipefishes exhibit on the evening before it opened to the general public on July 3rd. Over 400 guests enjoyed learning about the adaptations of the sygnathid family featured in the new exhibit with guidance from biologists, docents and new audio wands. There were also sygnathid-themed craft activities by the Aquarium's Education department as well as illustrator Joe Dodd. Dessert and new merchandise in The Shop, which members could purchase using their discount, were nice treats too!

The evening featured Tutu Tammy's interactive puppet experience by UH Emeritus Professor of Theatre and Puppetry Dr. Tamara Montgomery. "Tutu Tammy" told a story based on her new book, The Leafy Seadragon, using puppets. Captain Cliff, Tutu Tammy's trusty side-kick, also warmed-up the crowd with his reading of Eric Carle's Mister Seahorse

Service Systems Associates

- FOUNDATIONS. TRUSTS + GRANTS Hawaii Community Foundation National Marine Sanctuary Foundation
- DIRECTORS CIRCLE Richard & Sharon Shlegeris Donald Horner
- IN SUPPORT OF OUR MISSION Dale Armstrong Delores Clark Tim Guard Hazel Hiravama Wayne Kamamura

Charles Loomis Marilyn W.Q. Potter Joan Pratt David Sakai Victoria Sutton Vance Tokumoto Stanley & Janet Zisk

- MATCHING GIFTS Alexander & Baldwin LLC
- CONTRIBUTIONS IN KIND Duke's Waikīkī Hard Rock Café Horizon Lines Statewide Painting & Refinishing Inc.



University of Hawaiʻi at Mānoa Waikiki Aquarium 2777 Kalākaua Avenue Honolulu, HI 96815-4027

KILO I'A *No. 191* 2014 OCT | NOV | DEC NON-PROFIT ORG. U.S. POSTAGE PAID HONOLULU, HI PERMIT NO. 278

THE WAIKĪKĪ AQUARIUM'S MISSION

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

Pacific Threadfin / Moi / Polydactylus sexfilis