

www.waquarium.org

Kiia

Summer 2008

ing at the sea



MONK SEALS: THEY'RE HERE
CLASS CALENDAR

FROM THE DIRECTOR

For years, the Aquarium's entrance has been graced by a wiliwili tree. This native tree has great significance in Hawaiian culture, its wood being used in everything from chieftains surfboards to fish floats. Sadly, an introduced parasitic gall wasp has been decimating wiliwili trees across the islands and the Aquarium's tree did not escape the deadly wasp. The largest limbs have already been removed and the remainder of the dead tree will be felled in the near future. On a brighter note, the trunk has been donated to a local school for woodworking projects.

Meanwhile, the project to upgrade the Aquarium's electrical system has been delayed while contractors resolve permitting issues. Work will hopefully start soon. In the meantime, work has been progressing on the roofing repairs so we no longer have to worry about leaks in our aging facility.

On the staff front, Amanda Hendrickson has stepped into the newly created position of events and membership manager. Amanda has been a bright and welcoming face for members and visitors alike since she joined us as visitor services coordinator—we know she will bring the same positive energy to our many popular events.

Speaking of which, spring is a busy time of year for us. On Valentine's Day we hosted another hugely successful Seaduction dinner. The evening was sold out so far in advance that we added a second night on Feb. 15. A great time was had by all and our taste buds give thanks to Ginniberreries caterers who created a truly tasty Valentine affair.

Another spring favorite, the Sea Hunt, returned to the Aquarium lawn on March 15. As you can see by the photos on page 7, it was another successful family day with the Easter bunny, treasure eggs, crafts and plenty of happy keiki.

And so summer rolls toward us again and planning is well under way for the summer concert series. You can find the dates on the opposite page. Our staff is finalizing the artists as we go to press and we have high expectations that this year's line-up will eclipse all others, vaulting Ke Kani O Ke Kai on its way to one of the premiere events in town. We look forward to seeing you there!



Dr. Andrew Rossiter
Director



We have high expectations that this year's line-up will eclipse all others



Kilo i'a

Issue Number 166 Summer 2008

Editor: Alice Keesing

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

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Cover photo: Hawaiian monk seal by Alice Keesing.

SHARK!



Swim down to the Aquarium for some sharky fun on July 18. Bring the family and a picnic to enjoy on the lawn as the sun goes down, then join in the games and activities. Take a plunge into the shark feeding ground, play the reef riddles game and check out our exciting new predator cam that gives you a jaw-to-jaw encounter with the animals in the shark tank. Shark biologist and author Gerald Crow will be there with his book, *Sharks and Rays of Hawai'i*, and also with answers to your most biting shark questions.

This Family Night event is a continuation of our year-long International Year of the Reef celebration ... we celebrate sharks because they are vital for the well-being and balance of a healthy reef ecosystem.

See page 11 for more information.



BITE THIS WAY

Ever wanted to get eye-to-eye with a shark? You can — in a virtual way — at the Waikiki Aquarium.

The new predator cam in the shark tank gives you full control of a spyball camera that lets you pan, tilt and zoom your way around the large tank. Track a shark, find the nostrils in a jack, count the spots on a zebra shark — and see the animals in a way you've never seen them before.

The joystick can be found in the new gaming kiosk by the weedy seadragons. For four quarters, the shark tank is yours to explore. (The money raised will go to support the Aquarium's conservation work.)



Ke Kani Ke Kai THE SOUND OF THE OCEAN

Spend a Thursday evening on the beachfront with good company, good food and good sounds. Our popular summer concert series continues this month with some of the best in Island music.

July 10	Jay Larrin & Jerry Santos
July 24	Eddie Kamai
August 7	Willie K

For reservations, call 440-9015 or visit www.waquarium.org. Tickets for members are \$18 for adults and \$7 for children aged 7 to 12; children under 6 are free.





For as long as living memory, the Aquarium's Maka onaona and Nuka'au have provided most people in Hawai'i with their only, rare glimpse of the Hawaiian monk seal.

The species, which lives mostly in the Northwestern Hawaiian Islands, is teetering on the brink of extinction with only an estimated 1,200 animals left in the wild. Yet in an ironic twist, as the overall population declines, the number of monk seals around the main Hawaiian Islands has been on the rise in recent years and they now may number around 77.

These days it's not unusual to spot a wild monk seal basking and foraging in the waters at the doorstep of the Waikiki Aquarium. Staff have even noticed that the wild animals appear to be aware of the presence of Maka and Nuka, and the animals have even been observed barking back and forth.

"It used to be that you could go your entire life without ever seeing a monk seal in the wild," says Aquarium Biologist Leah Kissel, who oversees the monk seal program. "Now, on any given day, you can probably find one hauled up at some location."

So as officials ramp up efforts to save the Hawaiian monk seal, a key part is raising public awareness of the animals. More frequently, Kissel is fielding questions from the public about what to do when they come across a monk seal on the beach. (See page 6 for more information.) Sadly, there are already

cases of discord, including a case in Wai'anae, where a man allegedly sicced his pit bull on a basking monk seal.

"They're here, they're coming inshore, let's share the beaches with them and coexist," says Kissel. After all, monk seals are now officially Hawai'i's state mammal and they have been in the island chain for 13 million years, before the main islands were even formed. Experts believe that the main islands did become part of the seals' historic range and that they may now be recolonizing the area.

There has been an increase in the number of pups born in the main islands since the mid-1990s. The pups born here are generally faring better — they are larger and healthier after weaning — than their counterparts further north.

In the Northwestern Hawaiian Islands, newborns face challenges from all quarters. Young pups are starving, possibly because of a lack of food. The weak pups are sometimes preyed upon by sharks. And they are falling foul of marine debris, a perennial scourge in the Northwestern Hawaiian Islands.

Other challenges include habitat loss and aggressive behavior by males that can lead to the death of females and pups. Experts also are concerned about the possible introduction of disease, an issue that is only heightened in the populated main islands. Monk seals have no protection against diseases such as leptospirosis and toxoplasmosis and an outbreak in the already strug-

SEAL ENCOUNTER



gling population could be devastating. Leptospirosis killed thousands of seals on the California coast when it was introduced there.

The Waikiki Aquarium is able to help on this front thanks to its ongoing research with Maka and Nuka. Since late 2006, Aquarium staff have been collecting oral and nasal samples from our two resident seals to document the naturally occurring flora and fauna in a healthy animal. When researchers in the field encounter a sick monk seal, they could use this information to help narrow down what is afflicting the animal. Kissel and her research collaborators expects to publish the findings in the near future.

Below: Aquarium Biologist Leah Kissel conducts a routine ultrasound on Nuka. The ultrasound, which was originally designed to measure the fat in farmed pigs, is used to measure the monk seals' blubber layer. The ultrasounds are part of an Aquarium study that seeks to understand why monk seals undergo a seasonal weight fluctuation. Half-way through the three-year study, researchers have already determined that the animals' weight loss is not a result of lost blubber, pointing to other factors such as hormonal fluctuations. Photos: Kelsey Ige and Alice Keesing.





figuring **OUT** >> monk seals

13 million The number of years since monk seals made their way to Hawai'i. The ancestors of modern pinnipeds (seals) probably lived along the coast of present-day California some 23 million years ago.

1,200 The estimated population of the Hawaiian monk seal today; the lowest in recorded history.

60 The percent drop in population in the last 50 years.

5 The number of years in which the population could drop below 1,000.

77 The estimated number of monk seals living in the main Hawaiian Islands.

90 - 40 The percentage decline in pup survival rates in the 1980s — this coincided with climate change that affects the availability of monk seal prey.

268 The number of monk seals found entangled in marine debris between 1982 and 2006. Of the 268 animals found entangled, 183 were released, 69 escaped unaided, eight died and eight were not released, with their fate unknown.

8 - 12 The number of monk seals predated by sharks each year at French Frigate Shoals in the last five years. This accounts for 15-21 percent of the pups born in the year.

25 - 30 Expected natural lifespan of a Hawaiian monk seal.

7 - 10 The average age at which female monk seals reach reproductive maturity. Some do so as young as 4.

20 The percentage chance a monk seal pup has of reaching reproductive age.

Sources: *Recovery Plan for the Hawaiian Monk Seal*, National Marine Fisheries Service, National Oceanic and Atmospheric Administration; Waikiki Aquarium.



the WALL

Things are getting sticky in the Aquarium classroom — Velcro sticky, that is. Thanks to the Alexander & Baldwin Foundation, the classroom is now sporting a brand new, bright blue interactive wall.

Community Enrichment Program Coordinator Mary Roney says the wall will bring a fun new dynamic to toddler classes, such as Sea Stars. The kid-friendly space is made of Velcro tiles to which teachers and kids can stick interactive props, including fish and other sea life.

"We can put up a piece of limu and the animals that eat it can come over," Roney says. "It's all 3-D and hands-on; not words and chalkboards."

Monk Seal 101

IF YOU SEE A MONK SEAL ...

To report all seal sightings, call 220-7802 or e-mail PIFSC.monksealsighting@noaa.gov.

To report entangled or injured seals, call 888-256-9840.

When viewing:

- Stay well behind barricades or signs placed around a basking seal. Stay at least 150 feet from seals in unmarked areas.
- Keep an even greater distance from a mother and pup or from any seal that appears disturbed or agitated.
- Never approach or attempt to feed a seal — either on the beach, while swimming or on a boat.
- View quietly. Do not throw sand, stones or other objects or make noise to induce movement and create photo ops. Avoid flash photography.
- Keep dogs leashed and well away from the seal.

FOR MORE INFORMATION

- Visit the Aquarium website to download a marine life profile or check out the seal cam: www.waquarium.org.
- Read the federal recovery plan: www.fpir.noaa.gov
- Find out about the monk seal response network and volunteer opportunities: www.fpir.noaa.gov/PRD/prd_marine_mammal_response.html
- Read about conservation efforts by the Marine Conservation Biology Institute: www.mcibi.org/what/monk_seals.html



WEED Splash

This summer, the Waikiki Aquarium will make an exciting new splash on the Internet with a beautiful, redesigned website.

The sleek, fluid new look was created by Graphic Designer Carlos Chang, who harnessed the theme, *There's Magic in the Water*.

The site, at www.waqaquarium.org, includes all the information that has made it a valuable resource for years, along with some great new additions.

You can find out about volunteer opportunities, drop in and visit the monk seals or the sharks on the web cams, or research your favorite animal with our marine life profiles.

A new calendar will bring all the Aquarium's activities to your fingertips. And the site harnesses the power of the Internet to further our conservation efforts by inviting people to share their fishing tales from the Waikiki of days gone by. You might even meet Wili, our bright yellow piscine mascot, who is swimming around on the pages.

IT Specialist Mike Wieneke says visitors will find the revamped site more user-friendly with its streamlined layout and handy drop-down menus. In the future, he says, web visitors can look forward to even more exciting and interactive ways of enjoying the Aquarium.



WHAT A DAY!

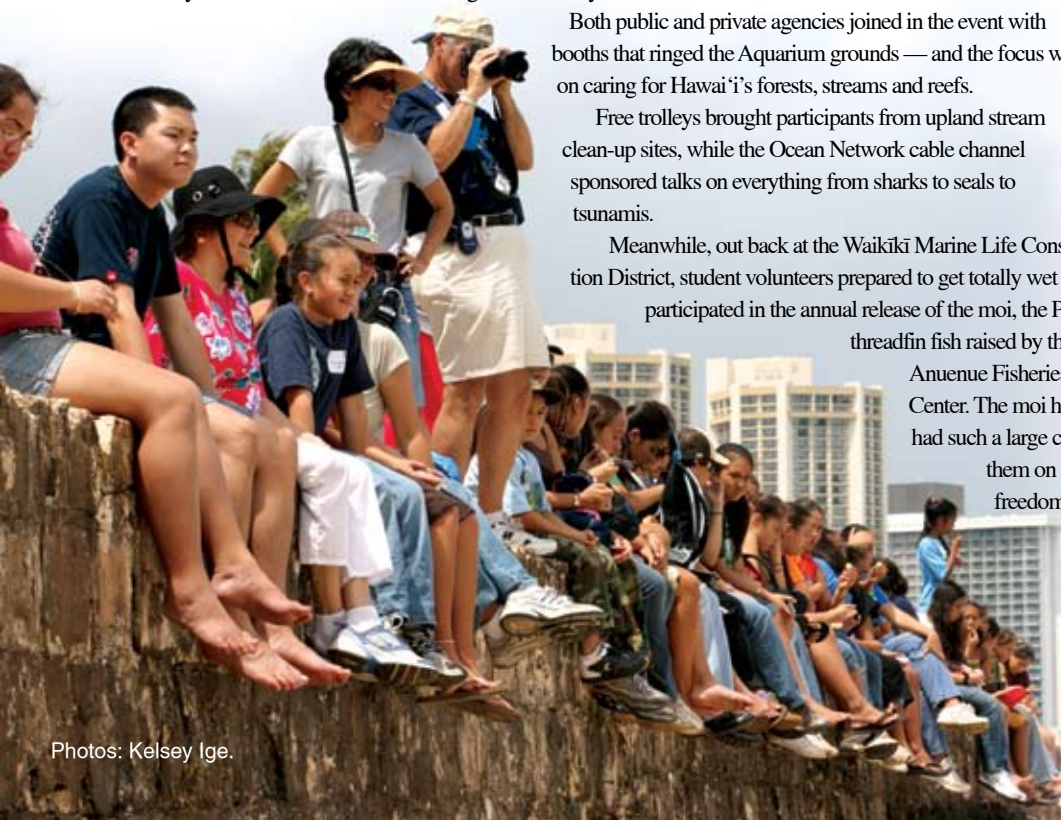
A crowd of nearly 3,000 joined in the Mauka to Makai Expo at the Aquarium on April 12 — it was free and it was for a good cause. After all, where else in town could you have your picture taken while dressed up like a humuhumu? Where else could you discover where all that stuff goes when it washes down those storm drains on the roadway? And where else could you learn about the aliens invading our waterways?

Both public and private agencies joined in the event with booths that ringed the Aquarium grounds — and the focus was on caring for Hawai'i's forests, streams and reefs.

Free trolleys brought participants from upland stream clean-up sites, while the Ocean Network cable channel sponsored talks on everything from sharks to seals to tsunamis.

Meanwhile, out back at the Waikiki Marine Life Conservation District, student volunteers prepared to get totally wet as they participated in the annual release of the moi, the Pacific threadfin fish raised by the state's Anuenue Fisheries Research Center. The moi have never had such a large crowd cheering them on as they swam to freedom in the ocean.

Sponsored by the city and county Department of Environmental Services, the state Clean Water Branch and the Waikiki Aquarium, the event proved that by working together, we can make a difference.





Pauline

Name: **Pauline Yeung**

Position: **Natural Selections Gift Shop Assistant**

Favorite Aquarium resident: **Humuhumunukunukuapua'a**

Pauline Yeung grew up in Hong Kong and moved to Hawai'i with her husband in 1984. Together they manage an import business bringing in items such as fish magnets from Indonesia that are sold at visitor attractions around town.

Yeung joined the gift shop team in May where she says she enjoys the people and the variety of work. In her spare time, Yeung loves to browse the shops.



Gerald

re-FRESHED Face

The new person in charge of the Aquarium's facilities is Gerald Crow. Crow has headed up the Live Exhibits Department as curator for the last five years and stepping into this new role brings an important new synergy between the two departments.

"Having a head of Facilities Management who intimately understands the Aquarium from a Live Exhibits perspective is an ideal situation," says Director Dr. Andrew Rossiter. "When we're developing the construction of new exhibits, we'll now be able to foresee things that are needed from the live animals' point of view."

"It makes sense," Crow says of his move, adding with a laugh, "I've been here so long, I know where all the pipes are buried and everything that's underground."

Crow came to the Aquarium in 1987 from Sea World in Orlando, Fla. Starting as an aquarium biologist, he has been involved in many exciting exhibits of the last 20 years

"One of best things I've seen in that time has been all the growth in the spectacular coral exhibits," he says. "It's also been rewarding to help the staff grow and develop."

Of course, Crow has become best known for his work with sharks. He has published more than 27 scientific papers as well as his book, *Sharks and Rays of Hawai'i*, and he's often called on by the media when sharks are in the news.

Crow still has some research work in the fire but these days he's concentrating more on reinvigorating the Aquarium's aging facilities.

"The first order of business is to clear the backlog of deferred maintenance," he says. Major projects underway including the roofing and electrical repairs and the upcoming bathroom upgrades.



Gerard

Name: **Gerard Fort**

Position: **Visitor Services Coordinator**

Favorite Aquarium resident: **Octopus**

Gerard Fort joined the Aquarium as the visitor services coordinator in May. He brings a wealth of knowledge from the hospitality industry, which he hopes he can draw on to help make the Aquarium an even better experience.

Fort grew up in Alsace in France and came to Hawai'i in 2001 to be with his wife, a local girl whom he met while they were both students in London. "I'm now a totally settled local guy," he says in his unmistakable French accent.

During his career, Fort has worked mostly in the hospitality industry, most recently at top hotels in Waikiki. After the birth of his son eight months ago he decided it was time for a change. He comes from a long lineage of teachers and he was drawn by the Aquarium's mission, which he describes as "noble."

Fort's leisure and his pleasure is food, something that he learned from his father. "I cannot fix a car," he says. "But I'm the man in the kitchen."

When Fort was living in London as a student he and his roommate, who was Malaysian Chinese, decided to cook each other a dinner in their own country's cuisine. Next thing they knew, a German friend joined in and then someone else and the idea just grew and grew.

"By the end of the year we needed to rent an entire facility and we were making dinner for 400 guests," Fort says happily.



bon Voyage

In recent weeks the Aquarium has bid farewell to some longtime employees. We thank all four for their contributions toward the success of the Aquarium and wish each of them every happiness in the new phases of their lives.

Aquarium Biologist **Charles Delbeek** is off to become a senior biologist at the soon-to-reopen Steinhart Aquarium in San Francisco. A native of Canada, Charles worked as a schoolteacher in Toronto before moving to Hawai'i 13 years ago. A co-author of *The Reef Aquarium*, volumes 1, 2 and 3, and a regular contributor to aquarium hobbyist magazines and websites, Charles is well known throughout the tightly knit aquarium world. During his time here, Charles made an outstanding contribution toward the Aquarium, helping build its reputation and reach the heights it occupies today. Although Charles may now be enjoying the fogs of San Francisco, the evidence of his efforts and skills will remain with us for years to come in the form of the many outstanding exhibits that have benefited from his attention and TLC.

Groundskeeper **Roy Hanzawa** recently retired after 16 years of service. If you happened to pass by on Kalakaua when Roy was attending to the lawn there, you'll know him as a gifted raconteur. Awarded the UH President's Award for Excellence in Buildings and Grounds Maintenance in 2007, Roy leaves behind a facility that has never looked greener. Unlikely to adapt to retirement gracefully, we are sure Roy will remain active, and we quietly look forward to seeing him at the Aquarium now and again, checking up on his botanical charges and his many friends here.

Natural Selection Gift Shop
Assistant **Mila Miyahara** has

departed for the mainland, where her husband has found a new job. Always smiling, always helpful and always courteous, Mila was a pleasure to work with and will be missed by all who knew her, whether colleagues, volunteers or the regular customers at the gift shop.

And, catching up on one of our former employees: Two years ago, Aquarium Biologist **Mike Callahan** moved to Sea Life Park to take the position of curator. Now he's on the move again — and up the administrative ladder again, but this time back to the mainland to become Director of Aquatics at the newly opened California Science Center in Los Angeles. We are sure that Mike's combination of a high work ethic and true resolve, coupled with his warm personality and people skills will bring him, and his new workplace, great success.

It is our hope that all four have enjoyed and benefited from working at the Aquarium as much as we have enjoyed and benefited from having them as part of our team. I am a firm believer that the success of any organization is founded upon its personnel, as individuals and as a group. The team the Aquarium now has in place will see some new faces and some new ideas. Together we will consolidate our conservation, education and research activities, and we will strive to push the boundaries of aquarium keeping and technology, and continue to provide a service to the community and beyond.

— Dr. Andrew Rossiter

Seasons and the SEA

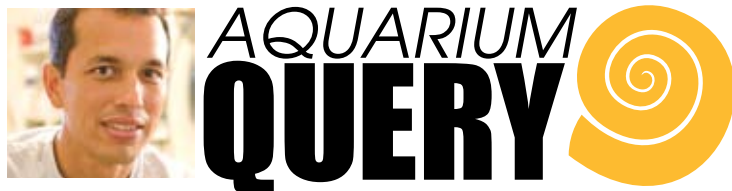
Watching the Waikiki sunset is special any time of the year but it attains special significance around May 2. This is when an observer in Waikiki can see the sun set directly into the crater of Pu'u o Kapolei. For ancient Hawaiians, this celestial event heralded the shift from winter to summer.

The Aquarium marked the occasion again this year with its special Seasons and the Sea event. More than 200 people watched the sun's descent and joined in as Sam 'Olu Gon and Halau Mele taught the crowd a traditional oli, or chant, to mark the event.

KHNL8 was there, broadcasting live on the news and KHON2 also featured the event.

Aquarium educators staffed tables with fun activities and traditional Hawaiian fishing artifacts to highlight reef conservation. This year we also celebrated the International Year of the Reef with our co-sponsors, the Hawai'i Tourism Authority and Mālama Hawai'i, which was on hand with an IYOR pledge that participants could sign, as well as reef tattoos for the kids.





Disease Management

By Eric Curtis, Fish Disease Specialist

Q As a home aquarist, do I need a disease-management program?

A It depends. If you enjoy high-stakes gambling and watching, in hopeless frustration, as your well-established tank with prized animals basically implodes on itself, then no, you don't need one. But if you do care about your animals, tank, time, money and efforts, then yes, it is important to have one.

As the saying goes, "An ounce of prevention is worth a pound of cure." It turns out that the best disease-management program is actually a stress-management program. The idea is to minimize the chances of — or to prevent — disease before it shows up rather than treating it when it does. So be proactive rather than reactive in the treatment of disease. That said, of course disease can still show up despite all our best intentions.

Step 1: Research. Know your animal. I can't emphasize this enough. Find out its optimum environmental needs, normal behavior, dietary needs etc. Most of this information can be found in books, on line, at pet stores or from hobbyists.

Step 2: Observation. Look at your animals. It's best if you can find a good pet store/wholesaler that has a good disease management program in place. (Do they buy from responsible fish collectors? Are their fish healthy, active, eating and in good body condition? Are they treating any diseased animals?) Look closely for anything abnormal or for signs of stress — this can include rapid breathing, gasping at the surface, lying on the side, wrong buoyancy, irregular swimming, clamped fins, hiding and wrong color. One of the reasons that research is so important is so that you can recognize when things are wrong.

Step 3: Quarantine. Improve your odds. This step can save you from so many headaches. The duration can vary, but the idea is to hold the animals in a separate location so that any unforeseen problems can materialize and be dealt with before the animal is introduced to your established tank. Quarantine is usually a minimum of 14 days and can often be longer. This step also lets you slowly acclimate the fish to their new environment. It also allows the fish to get rid of any stress-related issues brought on from capture, transport or treatments.

Step 4: Treatment. Kill the bad guys; save the good guys. It's important to recognize and treat any problems quickly and efficiently. There is not enough space here to cover the different kinds of problems and their treatments, but there are good books, web pages, articles and other sources that you can use as a resource. At the root of it all, it is important to identify the underlying causes of the problems and to try to fix them rather than just treating the symptoms.

on BOARD



Name:

John Blair Overton

Joined FOWA board:

November 2006

Can also be found at:

his own company where he's a copyright and trademark attorney.

Favorite Aquarium

resident: The seadragons

What inspired you to become a FOWA board member?

An admiration for the Aquarium and a desire to expand its reach into the community.

What do you enjoy most about the Aquarium?

The perfectly maintained displays of communities of reef-dwelling fish.

What do you believe is the Aquarium's role in Hawai'i?

The Aquarium has many roles and much potential: fostering an appreciation of the beauty and complexity of marine life, educating people about the use of marine resources and contributing to marine research.

On a personal note: As a father of four young children, I have little free time, but when I am able, I love to sit down with my guitar.

This is the last in our series of profiles on the people who volunteer their time to help the Aquarium by serving on the Friends of the Waikiki Aquarium board.

Got questions about your home aquarium? We've got the experts. Every issue, *Kilo i'a* addresses some of the key concerns and quandaries of the home aquarist.



CLASSES & ACTIVITIES

July-September 2008

Marine Munchies

Mondays in July & Aug

4:15-6:00 p.m.

Discover animals' adaptations for capturing their meals and what they eat here at the Aquarium. Included is an exclusive after-hours animal feeding. Watch the octopus eat. See the seadragons slurp up shrimps. Then it's your turn to feed the animals in our Edge of the Reef exhibit. Minimum age 5 years; youngsters must be accompanied by an adult. \$16/adult, \$12/child (\$20/\$15 for non-members).

Gyotaku with Riley Yogi

July 8 & 15, Tues

6:30-8:30 p.m.

Fishermen! Artists! Teachers! Learn the art of fish printing with local artist and fisherman Riley Yogi. On the first night, participants will use non-toxic black ink to print their fish and learn to paint realistic eyes. On the second night, techniques for adding watercolors will be taught. Supplies will be provided, but participants are encouraged to bring their own fish or octopus. Minimum age 14 years. \$22 (\$26 for non-members).

Ke Kani O Ke Kai

July 10 & 24, Aug 7

Spend a Thursday evening on the lawn enjoying the Aquarium's summer concert series. The doors open at 5:30 and the concert kicks off at 7:30. See page 3 for details on the artists. For reservations, call 440-9015 or visit www.waqaquarium.org. Tickets for members are \$18 for adults and \$7 for children aged 7 to 12; children under 6 are free.

Family Night

Sharks!!! And Other Creatures of the Reef

July 18, Fri

6:00-8:30 p.m.

Celebrate the International Year of the Reef while enjoying an evening packed with sharky fun. Bring a picnic for your family then join in the games and activities. Make a shark to take home. Solve reef riddles. Meet shark biologist and author of *Sharks and Rays of Hawai'i*, Gerald Crow. Then visit the predator tank and check out the sharks up-close with the new predator camera. All ages welcome; children 2 and under are free. \$10/person (\$12 for non-members).

Aquarium After Dark

July 22, Tues

7:00-9:00 p.m.

Sept 12, Fri

7:00-9:00 p.m.

Discover if fish sleep, sea snails snooze or weedy seadragons doze on an after-dark flashlight tour of the Aquarium. Find the sleeping spot for the red-toothed triggerfish or the rockmover wrasse. What color is a yellow tang at night? Minimum age 5 years; youngsters must be accompanied by an adult. \$8/adult, \$6/child (\$10/7 for non-members).



REGISTRATION INFORMATION

- Questions about course, enrollment or disability accommodations? Call the Waikīkī Aquarium Education Department at 440-9007.
- Preregistration is required for all activities.
- FOWA members are allowed up to four total registrants at FOWA rate.
- Overpayments (\$5 or less) cannot be refunded.
- 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.

Full payment must accompany completed registration forms. Please, no cash.
Make checks payable to **University of Hawai'i**.

Mail registration. Fill out the registration form over the page; send check or credit card information for the total amount to:

Waikīkī Aquarium Education Department
2777 Kalākaua Avenue
Honolulu, HI 96815



Overnight with the Sharks

Aug 14, Thu

7:00 p.m.-8:00 a.m. (Holiday)

Design and build your own shark model for our early morning shark races. Will your shark be a bottom feeder, a spinner shark or will it run straight and true? Minimum age 5 years; youngsters must be accompanied by an adult. Evening refreshments and continental breakfast included. \$30/adult, \$25/child (\$35/30 for non-members). Reminder, Friday is Admission's Day holiday.

Overnight Lights

Aug 22, Fri

7:00 p.m.-8:00 a.m.

Many ocean creatures have the ability to shine at night or in the darkness of the deep ocean. Some fluoresce, while others bioluminesce — but all are radiant. Spend a night learning about glowing animals large and small, then sleep in their luminous light in the galleries. This program is co-sponsored by the University of Hawai'i's Center for Microbial Oceanography: Research and Education. Minimum age 5 years; children must be accompanied by an adult. Evening refreshments and continental breakfast included. \$30/adult, \$25/child (\$35/30 for non-members).

Small Fry

Sept 2-30, Tues

A Session

B Session

8:30-10:00 a.m.

10:30 a.m.-noon

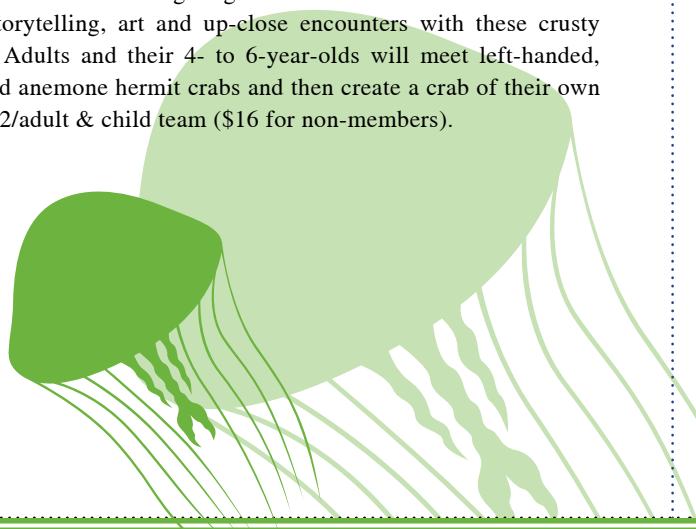
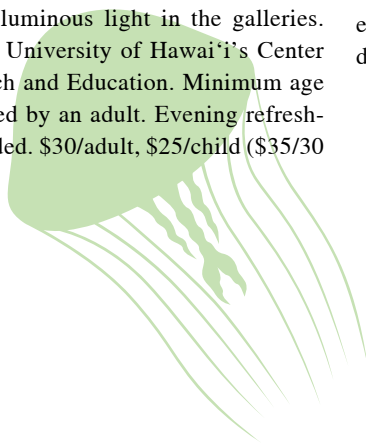
For the youngest learners. An adult and their 1- to 3-year-old team up to discover the amazing undersea world of the Aquarium. Five weekly sessions include crafts, song, play and exploration of the exhibits. For adult-child teams. \$50/adult & child (\$80 for non-members).

Home for a Hermit Crab

Sept 22, Mon

3:30-5:00 p.m.

Spend an afternoon investigating hermit crabs and their housemates through storytelling, art and up-close encounters with these crusty creatures. Adults and their 4- to 6-year-olds will meet left-handed, elegant and anemone hermit crabs and then create a crab of their own design. \$12/adult & child team (\$16 for non-members).



ACTIVITY REGISTRATION FORM★

Name(s)

Adults _____ Phone (home) _____

Children/Ages _____ Phone (work) _____

Address _____

City/State/Zip _____

Please register me for

Activity	Session	Date(s)	Number of Adults/Children	Price
_____	/	_____	_____	_____
_____	/	_____	_____	_____
_____	/	_____	_____	_____
_____	/	_____	_____	_____
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Total amount of payment enclosed (check payable to University of Hawai'i) : _____

If paying by credit card

Credit card # _____ ☐ Visa ☐ Mastercard ☐ JCB

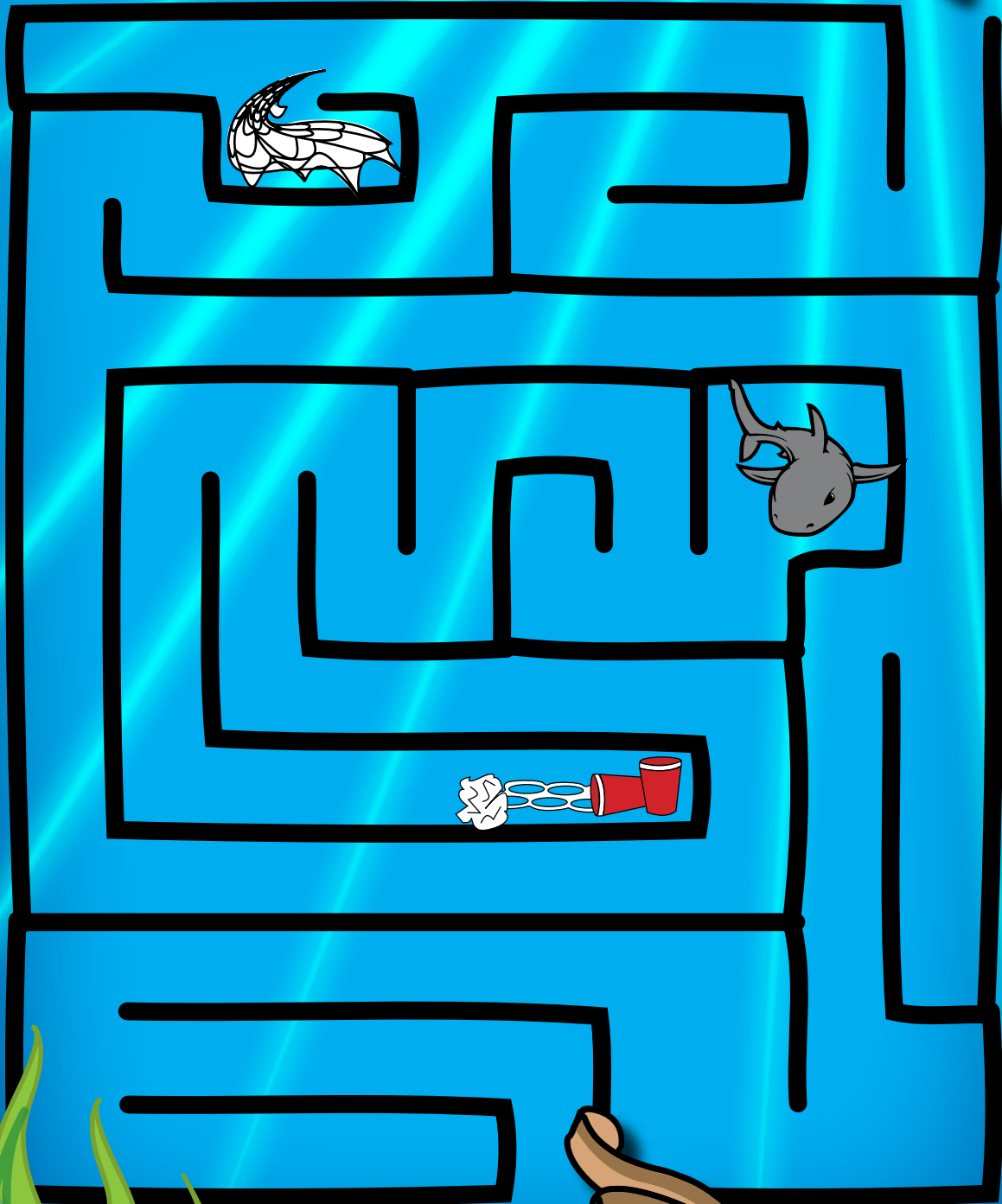
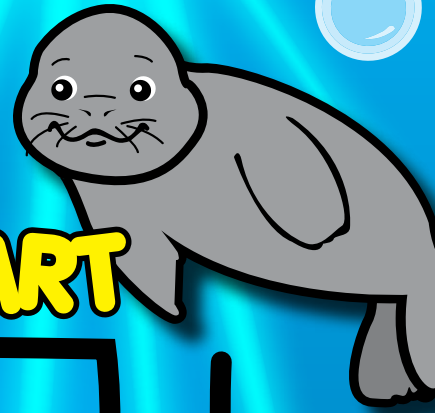
Expiration date: _____ Last three digits of security code on back of card: _____

I am a FOWA Member ☐ Yes ☐ No



Be careful of sharks and marine debris!

START



FINISH

NEW & RENEWING FOWA MEMBERS

The Membership Office recorded these new and renewing memberships between Feb. 22 and June 3, 2008.

Tedric & Allyson Abe
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Lionel, Chris & Devon Aguiar
Mr. & Mrs. Shakil Ahmed
Dr. & Mrs. Gary Ahn &
Mrs. Alison Butville
Tom Aitken
Paul K. Akaka
M.M. Akamine
Mr. & Mrs. Geoffrey Akey
Mr. & Mrs. Octobiana Aledo
Tom & Carol Allison
Mr. & Mrs. Dexter P. Almeida
Zenn Ame
Jacqueline
Dr. Valorie
Dr. Joeph
Mrs. Kathy &
Mr. Michael An
Peter C. Anderson & Deborah
Lui-Anderson
Franklin & Loida Ankrom
Mr. & Mrs. Hart Anway
Ralph Aona & Tonia Mahi
Rhodora Day G. & Loren Aquino
Mrs. Deborah &
Mr. Richard Arakaki
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Roy & Patricia Arita
Chris & Ana Arrasmith
Mrs. Christine Asing &
Mr. John Asing, Jr.
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K.D. Bartok & Stephen Rush
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Kristeen Bates &
Kathleen Chung
Mr. & Mrs. Dave Beers
Mary Ann Belke
Mr. & Mrs. Royce Benjamin
Benjamin & Julee BenZaken
Mr. & Mrs. Christopher Bettis
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Marcus & Emma Boland
George R. Bonnett
Mr. Kelly Boyle & Mrs. Erin Cox
K. Boyle & Julie B. Tomei
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Chakravarthy
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Mrs. Delia Chang
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Mr. & Mrs. Clifford Chew

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Mr. John & Mrs. A
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Diane Yuen
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Caitlin Anne Flower
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Arati Clarly &
Christopher Kip Sohriakoff
Ms. Deanna & Mr. Robert Cleaves
Kerry and Linda Cloward
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Kariane Concannon &
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Carlene Damon
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Monica Martinez
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of Dr. Vincent J. De Feo
Mr. & Mrs. Lawrence D. Dobina
Katherine DeLia & David DeGenti
Kevin and Merryl Dempsey
Larry Denneau &
Maureen O'Connell
Christina Dettloff
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Mr. Roxanne Dik
Arnel & Farrah D
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Mr. Mi
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 Lani Mamiya
 Mrs. Janet &
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Moon Jellies.
Photo: Alice Keesing.

THE WAIKIKI AQUARIUM'S MISSION

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



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