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Kei iā

Autumn 2008

at the sea



**SEA HORSES, SEAHORSES
EVERYWHERE**

ANNUAL REPORT FY 2008 SUPPLEMENT





FROM THE DIRECTOR

Those who visit the Aquarium regularly might have missed our female blacktip reef shark. In July, she suddenly stopped feeding and showed a rapid weight loss, and we moved her to a quarantine tank. With no visible symptoms, we undertook an aggressive regime of antibiotic treatment and assisted feeding.

Unfortunately, this was to no avail, and we lost her one week later. It was only later that the cause was discovered. Blacktips are one of several shark species that can evert their intestine through the cloaca, effectively flushing out any indigestible material and parasites contained therein.

First observed in captive sharks, our own Jerry Crow was a co-author on the scientific paper that described this remarkable behavior for the first time. It has since been observed in wild sharks. One unfortunate consequence of this behavior is that the exposed intestine flapping beneath the shark is an inviting morsel for other predators, sharks included.

And this is what happened to the blacktip in our shark tank. A postmortem revealed the female's intestine to have been bitten off by one of her tank mates. Animals die from this in the wild and, unfortunately, even in captivity she had no possibility of recovery. Even in captivity, despite the best care and medical attention, nature sometimes takes no prisoners.

Dr. Andrew Rossiter
Director

“Nature sometimes takes no prisoners.”

Kilo i'a

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Cover photo: Smooth seahorse by Alice Keesing.

monk seal *Rescue*

The Waikīkī Aquarium stepped in to lend a hand during a recent rescue mission to help a Kaua'i monk seal. The young seal, code named DP4, had been observed with fishing gear dangling from her mouth, and NOAA Fisheries researchers were concerned that the hook had become lodged in her body — where it could have fatal results.

With monk seal numbers stuttering at just 1,200, researchers stepped into action to protect her life. They airlifted the monk seal to O'ahu by a Coast Guard C-130 patrol plane on June 24. She was then transported by truck to the Aquarium, where she was placed in a 20-foot holding tank behind the scenes.

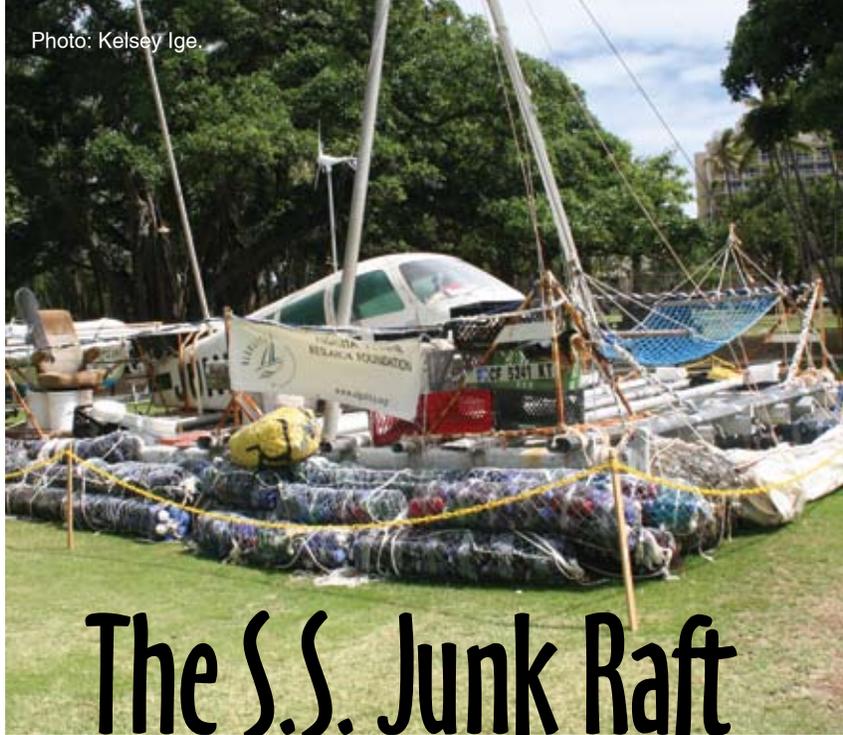
While the Aquarium was able to provide the space to house the monk seal, staff set up strict quarantine boundaries during the mission, says Aquarium Biologist Leah Kissel.

“We didn't want to risk the transmission of disease between the wild animal or our two monk seals,” she says. “Their staff entered through a separate side gate; we didn't even shake hands.”

Later that week, DP4 was taken to a veterinary hospital, where a team of veterinarians flown in from the Mainland conducted an x-ray, ultrasound and endoscopic procedure. Happily, DP4 avoided surgery; they found no traces of the hook, leading to the assumption that it somehow had worked free on its own.

After a short period back at the Aquarium, the monk seal was flown back to Kaua'i and released on the beach where she had been picked up. She promptly headed back out to sea.

Photo: Kelsey Ige.



The S.S. Junk Raft

A pile of junk landed on the Aquarium's front lawn in August — and we couldn't have been happier. It was the junk raft, a 30-foot concoction of 15,000 plastic bottles that two eco-mariners sailed from California to Hawai'i in an effort to call attention to all the plastic trash floating in our seas.

North of Hawai'i, in the North Pacific Gyre, there is now more plastic, by weight, than plankton. The floating trash interrupts the feeding of marine life — it can choke birds and the plankton ingest it — and the plastics release toxins into the water.

It took Dr. Marcus Eriksen and Joel Paschal nearly three months to make their crossing. They ate peanut butter along with the mahimahi and squid they caught along the way. Disturbing Thought No. 1: The toxins in the plastics that these fish eat are now entering our own bodies. Disturbing Thought No. 2: They also caught plenty of plastic in their drag net — hundreds of particles at a time.

You can read more about efforts to tackle the problem by voyage sponsors Algalita Marine Research Foundation (www.algalita.org) or go to the junk blog at www.junkraft.com.

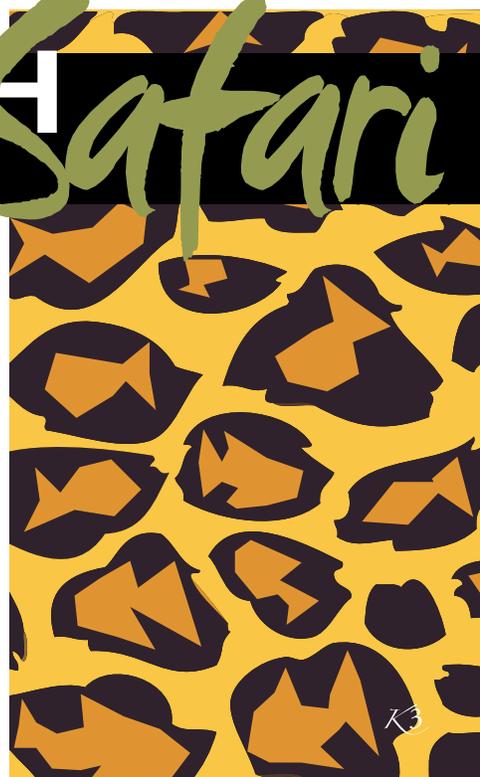


Photo courtesy of NOAA.

FISH

Safari

Circle **November 9** on your calendar and come and join us for Members' Night. The FOWA annual meeting will be followed by good food and a presentation by none other than Aquarium Director Dr. Andrew Rossiter, who will take you on a safari of some of the most fascinating fish facts in the world. See page 7 for more information.





Pictured at left: *Hippocampus kuda* can change colors from black to yellow to cream. At right: These young seahorses are among the herd that grew up at the Aquarium and is now breeding. Photos: Alice Keesing.

SEAHORSE

Nursery



This phenomenon, where a species has a sudden resurgence, often happens thanks to a fluke of good conditions. If a high number of juveniles survive in one breeding season, the population can quickly build on itself. The same thing has recently been witnessed in the bigfin squid.

The Aquarium has long worked on breeding and raising seahorses. Of course, one of the many fascinating things about these animals is their breeding habits. It starts with daily bonding activities as the seahorse couple swim together each morning with their tails entwined. When it's time to mate, the female deposits her eggs into a brood pouch on the male's belly, where they are fertilized. The father carries the developing embryos until they are fully formed. His labor can last up to a day and a half.

The young emerge as fully formed — and hungry — seahorses. Because they have no teeth or true stomach, food passes through their digestive tract very quickly, making them voracious eaters. Chan started the new herd on copepods and newly hatched brine shrimp.

The knowledge gained while raising these seahorses can ultimately help protect these animals in the wild. Around the world, many species of seahorses are threatened by overfishing. They are in high demand for medicinal purposes in Asia and many more are sold as souvenirs. The endearing fish are also popular aquarium pets, and the recent population peak in Hawai'i has resulted in an influx of wild-caught seahorses into the pet stores.

But Chan urges caution if you're tempted to keep a seahorse as a pet. Wild-caught seahorses prefer live food, which can be very difficult to obtain, so these animals often come to an unfortunate and quick end. Aquacultured or tank-raised juveniles that are accustomed to frozen foods can be hardier, he says.

Aquarist Norton Chan has had his hands full lately with all the newborns arriving at the Aquarium. First it was the bigfin squid. Now he's raising seahorses. In early August, one of the male seahorses in Gallery 3 began to look like he was in a fatherly way. The seahorse, which is one of the species found in local waters, was placed in a nursery tank behind the scenes, where he gave birth several days later to around 500 offspring — all perfectly formed seahorses about 4 millimeters high. And it's obviously the season: a second small herd was born in early September.

And while there is all this activity behind the scenes at the Aquarium, seahorses in the wild also appear to be enjoying something of a resurgence. It used to be that seeing a seahorse was a rare experience — now they are popping up everywhere.

"People have found them in ankle-deep water at Magic Island; they've been seen along the shoreline at Pearl Harbor and in Kāne'ōhe Bay; and there are lots at piers and harbors like the Kāne'ōhe Bay Yacht Club and the Ala Wai," Chan says.

ALL MIXED UP

Q What has a head like a horse, a tail like a monkey, a pouch like a kangaroo and eyes that resemble a chameleon's?

A A seahorse.

SEAHORSE STATS

NAME: *Hippocampus kuda*,
smooth seahorse

COLOR: Ranges from yellow to orange to black

LENGTH: Average 11 to 13 centimetres

LIFE SPAN: Can be more than 2 years in captivity

DIET: Crustacean plankton

SEXUAL MATURITY:
Ranges from 4 to 12 months

GESTATION: 9 to 10 days
at warmer temperatures

KE KANI O KE KAI 2008



Ke Kani O Ke Kai rocked the Aquarium again this summer. The concert series kicked off in June with Kaukahi and wended its way through the mellow sounds of Hapa, Jay Larrin and Jerry Santos and Eddie Kamae. Willie K wrapped it all up in his usual exuberant style in August. Hana hou! We look forward to seeing you all on the great lawn again next summer.

Pictured from top: Hapa & Dr. Andrew Rossiter, Kaukahi, Jerry Santos, Jay Larrin, Eddie Kamae and Willie K. Photos: Kelsey Ige.

CORAL ARK

Aquarium Biologist Rick Klobuchar presented the Aquarium's work to preserve the rare Hawaiian coral *Montipora dilatata* at the 2008 Hawai'i Conservation Conference in July.

A bleaching event in Kāne'ohe Bay in 1999 wiped out several large stands of *M. dilatata* and the National Marine Fisheries Service has listed it as a Species of Concern.

Samples were taken from one of the remaining colonies in 2000 and brought to the Aquarium for propagation. They have since more than quadrupled in size and the Aquarium is now discussing the transplantation of fragments back into the bay.

Klobuchar co-authored the poster presentation with former Aquarium Biologist J. Charles Delbeek.



SHARK!



Photos: C. Myers

Nearly 400 people cruised in to enjoy our family shark night on July 18. Schools of people played the Fish or No Fish Game Show on the new interactive wall in the classroom. They hunted down critters in the shark tank with the new predator cam and took in the educational talks.

Jerry Crow and Jennifer Crites were there to sign their book, *Sharks and Rays of Hawai'i*. And Crow also had on hand some fascinating specimens, including a cookie cutter shark and a new species of cat shark that he had just helped identify — found off the coast of Kona's Natural Energy Laboratory of Hawai'i, it is the first cat shark of its kind ever seen in the Islands.

People snapped up pairs of our amazing new Shark Shades and donned them to watch the Friday Night Fireworks over Waikiki. (If you didn't catch a pair of your own, they'll be available again on Members' Night in November.) Everyone left with sharky smiles despite an end-of-the-evening rain shower.

CLASSES & ACTIVITIES

October-December 2008

Small Fry

Oct 15-Nov 12, Wed

A Session

8:30-10:00 a.m.

B Session

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).

Sea Stars

Oct 22-Nov 5, Wed

3:00-4:15 p.m.

Is your preschool-age child ready to graduate from Small Fry? Bring your keiki, ages 3 to 5 years, to spend three afternoons singing and dancing, playing and creating. Learn about camouflage, locomotion, predators and prey in this three-session class. \$36/adult & child team, (\$48 for non-members).

Members' Night/FOWA Annual Meeting

Nov 9, Sun

4:00-7:30 p.m.

The Board of Directors of the Friends of the Waikīkī Aquarium and Aquarium staff invite you to the 2008 FOWA Annual Meeting and Members' Night. The evening begins with the annual meeting, which will be held from 4 to 4:45 p.m. in the classroom. Doors and exhibits open at 5 p.m. There will be light pupus on the lawn at 5:30, followed by a presentation by Director Dr. Andrew Rossiter. He will take you on a trek to far-reaching

corners of the planet, looking at the unique characteristics and habitats of the fishes that live in each area. "Scales and Tales: Chasing Fishes around the World" will take you to Africa, Russia, Japan and Canada, exploring such fascinating facts as the life span of the sturgeon fish and the lengths that some African fish will go to to mate. RSVP required by Oct. 24. Please call our Membership office at 440-9015. Free to FOWA 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**.

Complete the registration form on the next page and mail it with your check or credit card information for the total amount to:

Waikīkī Aquarium Education Department
2777 Kalākaua Avenue
Honolulu, HI 96815



Exploring the Reef at Night

Nov 10, Mon 6:00-8:30 p.m.
 Nov 25, Tues 6:30-9:00 p.m.
 Dec 11, Thu 6:30-9:00 p.m.
 Jan 9, Fri 6:30-9:00 p.m.

For an experience you'll not forget, join us as we explore the reef at night. Aquarium staff and participants waded up to their knees on these wet and wild excursions. Test your nocturnal vision as we search for crabs, shrimps, eels and octopus. For adventurers age 5 years and up; youngsters must be accompanied by an adult. \$10/adult, \$8/child (\$12/10 for non-members).

Ocean Arts!

Holiday-themed Ocean Crafts

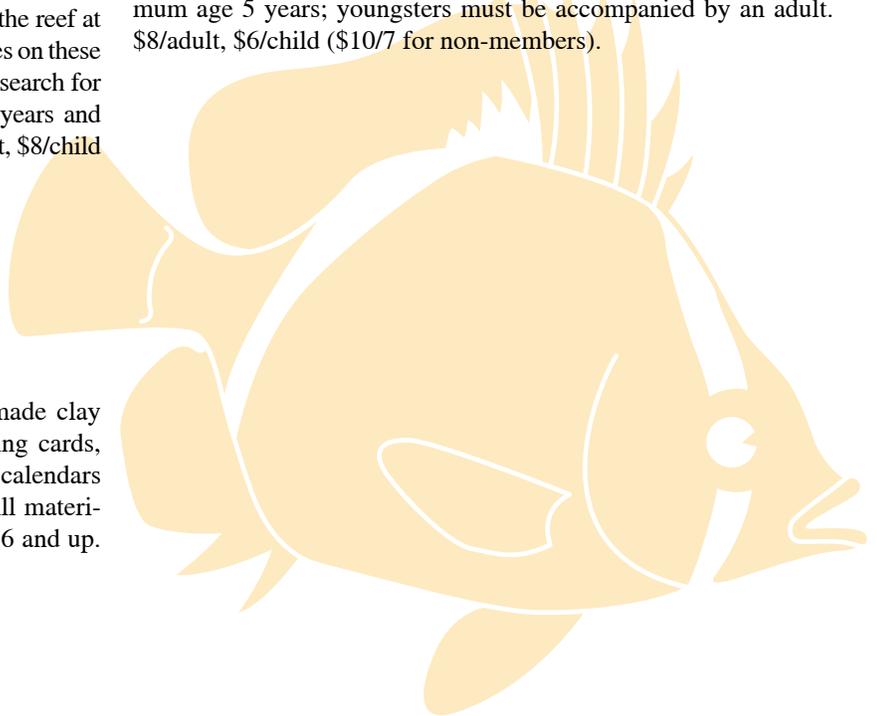
Nov 11, Tues (Veteran's Day)
 A Session 9:30-11:30 a.m.
 B Session 12:30-2:30 p.m.

Have a Merry Fishmas with a tree decorated in handmade clay ornaments. Use printmaking techniques to make greeting cards, thank you notes or gift tags. Make 3D scrapbooks or calendars for gifts. The projects are great multi-age challenges. All materials provided. An adult-child program for children ages 6 and up. \$8/person (\$10/person for non-members).

Aquarium After Dark

Dec 18, Thu 7:00-9:00 p.m.
 Dec 23, Tues 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 exhibits. Minimum age 5 years; youngsters must be accompanied by an adult. \$8/adult, \$6/child (\$10/7 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
_____	/	_____	_____	_____
_____	/	_____	_____	_____
_____	/	_____	_____	_____
_____	/	_____	_____	_____
_____	/	_____	_____	_____

Total amount of payment enclosed (check payable to University of Hawai'i) : _____

If paying by credit card

Credit card # _____ Visa Mastercard

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

I am a FOWA Member Yes No Please send me information on becoming a FOWA Member Yes No

sea squirts

Those little rascals! Daddy seahorse needs your help:

Match 10 pairs of seahorse twins!



NEW & RENEWING FOWA MEMBERS

The Membership Office recorded these new and renewing memberships between June 4 and Aug. 31, 2008.

Mr. & Mrs. Victor L. Abaya
Mr. Arnold & Mrs. Norma Abe
Mr. Raymond & Mrs. Maureen Abe
Chetana Acharya &
Lawrence Spurgeon
Bill & V'a Agbayani
Myladel & John Aguilon
Dr. Leila M. Agullana &
Mr. Woodley P. Funtanilla
Ms. Velma Agustin
Brad Akagi
Kari Akini
Mr. & Mrs. Gary Akiona
Mr. & Mrs. Vincent Alejo
Ms. Geraldine Aluli &
Ms. Monica McConell
Diane Amuro
Eve G. Anderson
Jeanne A. Anderson &
Malia Vandervoort
Mark & Caroline Anderson
Marty Anderson
Mr. Zachary & Dr. Sarah Antalis
Mr. & Mrs. Calvin K. Arata
Daci Armstrong
Martin R. Asuncion & Chris R. Moffitt
Sylvia Atkins
Mr. Kenneth & Mrs. Mae Au
Mr. Jean-Jacques Aubert &
Mrs. Cheryl Schon Aubert
Kevin, Michele & Isabella Aucello
Jennifer & Ivan Auilla
Mrs. Eileen I. Awai
Nake'u Awai
Mrs. Jan & Mr. Steve Awakuni
Mr. Thomas & Mrs. Sandra Ayala
Norman & Eileen Azama
Dr. Jolene Bachman &
Dr. Martin Piette
Mrs. Kayleen & Mr. Frank Bantell
Hannah Barcus
Mr. Joshua Barnes & Dr. Julie Iezzi
Helen J. Baroni & Rodman Low
Ms. Jennifer Barrett
Mr. Robert S. &
Mrs. Deborah W. Barry
James Batalon
Brenda L. Becker
Valerie Beck-Richards &
Kent Richards
Mr. & Mrs. Frank J. Bednar
Mr. Paul & Mrs. Gabriela Bell
Mr. Paul K. Bennet &
Ms. Cindy T. Teramoto
Bethany Bereman
Debra Best
Teresa Bill & Steve Yuen
Mr. Michael Bishop &
Mrs. Marie Shiels
Deborah C. Blair
Chris & Jamie Blake
Jack & Nancy Blanton
Dr. Emily & Mr. Alan Bogdanoff
Sergio Bololi
Mr. Ben & Christine Bondroff
Dr. R.A. Boolootian
Robert Boulette
Norman & Janine Brand
Ms. Marjorie L. Bray &
Mr. Roy Toguchi
Lon & Leslie Briggs
James Brock &
Diana Montgomery-Brock
Dr. Karl Brookins & Dr. Vivian Viar
Peter Brown & Anita Santiago
Gary Budlong
Thomas Burke & Marie Wagner
Christine R. Bush & Kevin Wakayama
Ivana Cablova & Zdenek Cabla
Dr. Peter D. Caldwell &
Ms. Olga Caldwell
Robert Calvert & Mary Rydell
Leonard & Natalie Calvo
Keith Camacho
Mr. Patrick Camacho &
Susana Ucol-Camacho
Robin & John Campbell
Mrs. Lesley & Mr. Brad Canfield
Michael Caracciolo & Kim Nieves
Domenic Cardani
Justin Carland

Dave Carlon & Jenny Davidson
Russell & Judith Carlson
Dr. Dee-Ann Carpenter & Lani Ladao
Jean M. Carr
Phincas & Lesley Casady
Mr. Jesse Chacon
Warren & Tiffany Chaiko
Elizabeth D. Chalmers
Dr. John & Mrs. Lianne Chan
Chia Chang & Shi Xiao
Nai-Wen Chang & Paul Kai
Mrs. & Mr. Wendy Chang
Happie Chapman
Kelvin Char & Dolores Clark
Krishnama Chari
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Dr. Nancy Chen & Dr. Dru Gladney
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Edric M. & Leslie Ching
Stefanie Ching & John Yanagida
Stephanie & Cory Ching
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Stephen & Gloria Chong
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Carson Chun
Jonathan Chun
Mrs. Terri-Ann & Mr. Michael Chun
Wesley W. Chun
Byunggho Chung
William Churchill & Michelle Clark
Sherrri-Ann Lau Clark & Jerry Lau
Ronald & Sara Clove
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Thu Huiyuh
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Linda Honma-Lacaran
Koalani Lagareta
Wendy & Bruce Lagareta
Olin & Alison Lagon
Billie Lairsey
Mr. Ben Lam & Ms. Diane Tran
Mr. & Mrs. Philip Lambeth
Mr. Al & Mrs. Melissa Lapena
Lynn Larrua
Esther Larsen
Robert Larson
Bernice & Tanya Lau
Mr. & Mrs. Norman R. Lau
Theresa & Susan Lau
Cindy Laverdure
Jay Lawyer
Mrs. Terese & Mr. Ben Leber
Brian F. Lee
Charles Lee & Vickie Chen
Donna Lee & Jennifer Koki
Hsiu-Mei Lee
Mr. James Lee & Mrs. Lynn Lee
Jeffrey & Ina Lee
Mrs. Kwa Shin Lee
Patricia A. Lee
Richard & Misato Lee
Robert S. Lee & Andrea Maya
Mr. Truman Lee & Mrs. Cheryl Lee
John & Keiko Lemoine
Mr. & Mrs. Calvin Leong
Mr. & Mrs. Derek Leong
Mr. & Mrs. Eric Leong
Aaron & Sharleen Levine
Leslie Lewis
Sylvia Lewis
Phillip & Susan Li
Rogers Liddle III
Sandra Lieberman & Bruce Neely
Dr. Linda & Mr. Ralph Lierheimer
Mr. Choong Meng Lim &
Chi Ching Ngai
Lionel & Renee Lind
Ms. Priscilla W. Lindsay
Daniel Linehan
Christine Ling
Ulilani Lingo
Wilbert L. Liu
Ranada & Thomas Locke
Lani Lofgren
Patricia A. Lognion
Mr. Jonathan & Mrs. Alice Loo
Mr. & Mrs. Bennett Loui
Katherine Love
Nelson Low & Tertia Yee-Low
Garrick & Bonnie Lowry
Merrilee Lucas
Randy & Billie Lueder
Mr. Kendall & Renee Lui
Mr. & Mrs. Chris Lum
Mr. Jeffrey M.C. & Mrs. Carol M. Lum
Ronald & JoAnn Lum
Reynold Lum & Chunli Liu
Tim & Maile Lum
Abby Lund & Timothy Lund
Chris & Maria Lutz
Dr. Frank Lutz
Matthew & Tracey Lyum
Aaron Matthew Pookela MacDonald
Mary E. Mackay
Brent MacNab &
Susan Hannifin-MacNab

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 Michael & Michelle Maeda
 Nancy Magraudy
 Bruce Mahoney
 Susan Malterre-Htu
 Tony Manchen & Mr. Joe Zbin
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 L. Richard Melcher
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 Patricia Meyer
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 Barbara Miller
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 Nancy S.N. Miller
 Nancy Miller
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 Mr. Craig & Mrs. Mana Miyasato
 Eric Miyasato & Kamla Fukushima
 Ronald Miyasato
 Lori Mizue & Van Yoneda
 Thensiri Moen & Karsten Moen
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 Mr. Steve Pherigo
 Mrs. Andrea Molina-Vasquez &
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 Ms. Jerre Nishida &
 Shantal McIntosh
 Helen & Trisha Nishimoto
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 Mr. & Mrs. Jon Nishimura
 Mr. Wade Nishimura &
 Mrs. Lori Nishimura
 Mr. & Mrs. Evan H. Nishioka
 Mr. Ernest K. &
 Mrs. Naomi M. Nishizaki
 Spencer & Michele Nitta
 Mr. & Mrs. Thomas Takashi Nitta
 Mr. & Mrs. Hideo Noguchi
 Kathleen A. Norris
 Kayla Nowack
 Barbara R. Nowak
 Ronn & Rochelle Nozoe
 Manuel D. & Carole N. Oasay
 Patric Ogletree
 Barbara & Lehiwa Ohelo
 Edward Ohye &
 Margaret Goettelmann
 Mr. Jerry Oishi & Mrs. Allison Oishi
 Paula & Shirley Okamoto
 Brian Okamura
 Tony & Christy Okano
 Eric & Chiyoko Okazaki
 Wallace M. Okazaki
 Maizie Okimoto
 Linda Okita Tom
 Mr. & Mrs. Hiromi Okuda
 Mr. Jon Okuma & Agnes Ablog
 Colin & Yvonne Okutsu
 Brigid Omeare & Jeff Aki
 Ms. Jan Ono & Mr. Kavin Hivata
 Mr. & Mrs. Mark Onodera
 Signe Opheim
 Mr. Alvin Ordonez
 Mrs. Laurene & Mr. Dana Oride
 Wade & Joni Orimoto
 Mr. Jan Orque
 Mr. Scott Orton & Erica Rice
 Mr. & Mrs. Wendell Y. Oumaye
 Steven & Sally Oyama
 Ryan & Jennifer Ozawa
 Daphne & Shanlyn Park
 Dr. Charles E. & Ericka G. Parker
 Diane Parker
 Adriano & Chita Pascual
 Sonia G. Patel &
 James M. Manaligod
 Cindy & Marc Patrick
 Scott & Malia Paul
 Anthony & Soo Kyung Paupe
 Darin & Daphne Payne
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 Mr. Douglas Peebles
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 Sarah Peoples
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 Stacey Perry
 Kirsten Petersen
 Ola Peyton
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 M.C. Rankin
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 Mrs. Tanya Fuentes-Ho
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 & Francine AQUI

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 Sonja Swenson-Rogers
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 Dr. Jeffrey & Mrs. Bonnie Sakai
 John M. Sandor
 Mr. & Mrs. Derek Santos
 Jen K. Sarsuelo & Steven Kunishima
 Terry Savage
 Corey Savinski & Leilani Pascua
 Sharon L. Sawdey
 Beryl Sawyer
 Faith Scheideaman
 Marco & Malia Schlessler
 Mrs. Schneevoigt & Ms. Renate Layi
 Ralph & Jean Schrader
 Todd Schrick & Kim Carroll
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 Pat Schwarz
 Marsha Schweitzer
 Mrs. Cindy J. Sellitto
 Yoriko & Nisaburo Setoguchi
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 Mr. & Mrs. Joseph F. Seward
 Mr. & Mrs. Geoff Seymour
 Ms. Eileen & Mrs. Lavonne Shea
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 Mr. & Mrs. Shigetani
 Ann & Keith Shigetomi
 Mr. & Mrs. Bryce Shimabuku
 Mr. Duane Shiroma & Terri Chee
 Dick & Sharon Shlegeris
 William Short
 Cindy Shyne
 Reid & Patricia Siarot
 Eric Siemer & Denby Fern
 Mr. & Mrs. Naret Sihavong
 Michael Silberfeld & Nicole Carvalho
 Marshall Silverberg &
 Gail Grabowsky
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 Josie Sims
 Dr. Arleene D.K. Skillman
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 Mr. & Mrs. Max K. Suzuki
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 Sim, Lucia & Trinette Tabbal
 Trinette L. Tabbal
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 Masaki & Amanda Takai
 Ms. Naomi & Mr. Erik Takai
 Robyn Takamine
 Ward & Iris Takamiya
 Steven & Jae Takase
 Mr. Richard &
 Mrs. Claire Takashima
 Luke Takayama &
 Dayle Akamine
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 Kimi & Hale Takazawa
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 Anne Tam
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 Duane & Christine Tamashiro
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 Sara Tello
 Ms. Wendy N. Tenn
 Dr. & Mrs. Christopher K. Teramura
 Burrelle & Lisa Thiim,
 for Noah Thiim
 Elaine M. Thomas
 Mr. Melvin Thomas &
 Michelle L.K. Miguel
 Paulette Thomas &
 Philip Thomas
 Mr. Claude S. Thompson &
 Leila L. Fuller
 Clay & Lois Lee Thompson
 Ms. Jill Thompson &
 Mr. Troy Harrell
 Drs. James & Mary Tiles
 John & Suzanne Tobin
 Mr. Nyles Toguchi &
 Ms. Jennifer Chang
 Mr. Tanner Tokuyama
 Juliette C. & Webster Tom
 Mr. & Mrs. Thomas K. Toma
 Mr. & Mrs. Francis Tomnaga
 Mrs. Celeste & Mr. Leigh Tonai
 Margaret Torigoe
 Natalie Torkelson
 Kimberly Towler
 Bonnie Town
 Mr. & Mrs. Gaylord Town
 Dean K. Toyama &
 Deborah Murata
 Mike & Joanne Tsuda
 Steven Tsutsumi
 Rico Tudor
 Steven & Sarie Uechi &
 Mazie Okimoto
 Jason Umemoto &
 Nancy Cassandro
 Richard & G. Wendi Uyeda
 Kim Uyeda-Young & Ai Young
 Harry & Sue Uyeoka
 Mr. & Mrs. Michael E. Valdez
 Thanh P. & Jeremy Van
 G. Wayne & Louisa Van Citters
 John Van Tine
 Ed Van Wattering
 Robert Villanueva
 Amanda Vinson
 Randy & Mariko Wakaki
 Bill Ward
 Mike & Deborah Washofsky
 Mr. & Mrs. Gerald Watanabe
 Sawako Watanabe
 Mr. Tim M. &
 Sharlene Watanabe
 Mr. Alex Watson
 Mr. Michael &
 Mrs. Tomoko Watson
 Lisa & Travis Webster
 Mr. Jonathan Weeks
 Mr. Eric & Mrs. June Wehner
 Darlene E. Weingand &
 Roger P. Couture
 Mr. & Mrs. Joe Welch
 Kate Werner
 Mr. Gregory M. &
 Mrs. Michelle L. West
 Marlu West
 Kristine C. Westmoreland
 Jennifer Wharton &
 Peng Chin Hsieh
 Debra Wheeler
 Mrs. Elizabeth Whisnant &
 Mr. Kevin Hopkins
 Vangie White
 Robert B. & Flora Whittier

Mr. Gaylord H. & Mrs. Carol M. Wilcox
 Mr. & Mrs. E.K. Williams
 Heather Williams
 Mr. Raymond & Mrs. Melinda Willing
 David & Beverly Wilson
 Mark Wilson
 Neil Wilson
 Ruth M. Wilson
 Wendy Wiltse
 Robynne Wise & Guy Yasuda
 Colene S. Wong
 Mrs. Del Wong
 Mr. Justin Wong & Mr. Jonathan Augustin
 Mr. & Mrs. Michael F. Wong
 Winifred & Charles Wong
 Mrs. Diana & Mr. Richard Woo
 Mary C. Wood
 Thomas Woodrow
 Sarah Woodruff
 Erika Wyrtki
 Clara Yakushi & Susan Petsche
 Thomas & Ami Yamachika
 Sara Tello
 Mr. Lenn & Mr. Robert Yamada
 Mr. Dave & Jamie Yamagata
 Yuki & Naoko Yamaguchi
 Mr. Lance & Mrs. Regina M. Yamamoto
 Lisa Yamamoto
 Jason & Cheryl Yamanaka
 Ms. Lauren Yamane & Edward Paulo
 Lori Yamane
 Jean & Aolani Yamasato
 Francis Yamashita & Alexa Fujise
 Clinton & Lori Yee
 Jeffrey & Samantha Yim
 Kenneth & Helen Yonamine
 Mr. Thomas York & Chalida York
 JoAnn Yosemite & Grant Ito
 Alan Yoshimoto
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 David & Lydia Yoshishige
 Mrs. Billie Jo & Mr. Seth Yost
 Mr. & Mrs. Alfred G. Young
 Don & Judi Young
 Norman Young
 Mr. Peter & Mrs. Paula Young
 Sandra & Malia Young
 Mr. & Mrs. Stephen C.H. Young
 Terry Thomas Young
 Mr. & Mrs. Elmer Y.S. Yuen
 Mr. Randall Yuen & Ms. Amy Yuen
 Lynn & Gloriette Zane
 Mike & Jamie Zane
 David Jing Zhang & Huan Qing Chen
 Joseph Zilliox & Margaret Camacho
 Stan & Janet Zisk

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.

Annual Report FY 2008 Supplement

LIVING THE MISSION

DIRECTOR'S MESSAGE

The highlight of the year for us has been the installation of a new roof on the Aquarium, complemented with new awnings and a new color scheme on the 'ewa face of the building. We thank the Legislature for its support of this project, which has solved the issues we had with water dripping from the office and gallery ceilings whenever it rained. It has also improved immeasurably the view of the Aquarium when approaching from downtown.

Internally, the classroom has a new interactive wall (kindly funded by Alexander & Baldwin), a matching painted wall and a new audio-visual system. This has improved the room's functionality and aesthetics and provides a new, fun learning experience for children.

Several staff changes have taken place this year. We wish those who have moved on every happiness in their chosen vocation, be it new job opportunities locally, a move to the Mainland or retirement. We have been joined by Alex Alconcel (Facilities Management), Eric Curtis (Live Exhibits), Gerard Fort (Visitor Services), Raina Fujitani (Membership and Events), Gary Nakashima and Peter Yeung (Hanauma Bay Gift Shop), Karen Quinn (Administrative Assistant), Tammy Tanaka and Pauline Yeung (Natural Selection Gift Shop), and Mike Wieneke (Information Technology). We extend them a warm welcome to our team.

In the galleries, a new Kona Coast exhibit opened. Very much a work in progress, the exhibit will mature gradually as the corals become established and as new fishes and invertebrates are added. Elsewhere, the reef squid were reintroduced into the Jet Set Gallery. The squid signaled approval of their return by breeding. We were able to rear two generations, a first for this species in public aquariums. The squid, of course, claimed their exhibit back from the bearded armorheads, who moved to Gallery 4; we are still one of only two aquariums worldwide displaying these unusual fishes.

In this election season, "change" is very much the buzz word, but it is something we have long practiced. Over the coming year we will continue our momentum in renewal, renovation and improvement. Among the slated projects, there is a new Kāne'ohe Bay exhibit coming to Gallery 2, and significant changes in Gallery 4, where we will begin construction of the major Northwestern Hawaiian Islands exhibit. There are also plans underway for a new, expanded Hawaiian Streams exhibit. There is always something new for you to enjoy at the Waikīkī Aquarium!

Kilo ʻia



MESSAGE FROM THE CHAIR, FRIENDS OF THE WAIKĪKĪ AQUARIUM

Hot topics in this election year include the soaring cost of energy and the related topic of how we protect this planet from the pollutants of our everyday activities. Marine pollution is caused by toxins, such as pesticides that run off into the streams and rivers that then feed into the ocean. Other challenges are posed by oil spills, ship pollution and untreated wastewater.

The Waikīkī Aquarium has been and will continue to be instrumental in educating people about how to preserve our marine environment. For example, our 2008 summer concert series, Ke Kani O Ke Kai, supported plans for a new Hawaiian Streams exhibit, which will focus on how our streams impact the marine ecosystem.

And every time the Education Department holds its classes and activities for keiki, such as Small Fry, Home For a Hermit Crab and Marine Munchies, they are helping to instill respect for animals in the undersea world.

The Aquarium's mission is to inspire and promote an understanding, appreciation and conservation of Pacific marine life. As members of the Friends of the Waikīkī Aquarium, your support is instrumental in that effort.

Jennifer Isobe
Chair, Friends of the Waikīkī Aquarium

kokua: reaching out

In fulfilling our mission to inspire and promote understanding, appreciation and conservation of Pacific marine life, Aquarium staff reached out to hundreds of thousands of people, both at the Aquarium and farther afield.

- ★ 310,742 people visited the Aquarium this year.
- ★ Approximately 2,975 households enjoyed an Aquarium membership.
- ★ The Aquarium's great lawn continues to be a great gathering place — after-hours functions this year were attended by 13,526 people.
- ★ School programs hosted more than 5,700 students and teachers in the Docent Program and 19,000 students overall. More than 1,700 youngsters and adults joined in our classes and activities.
- ★ Education programs reach out to teens as select high school-level home school students worked with the docent program; the Aquarium Interpreter Program worked with the Assets High School Mentorship program; and Community Programs offered the first Teen Marine Biology Camp.
- ★ Education's Dan VanRavenswaay and Live Exhibits' Norton Chan helped Waikiki Elementary School 4th graders set up a saltwater tank in their school.
- ★ Nearly 3,000 attended the **Mauka to Makai Environmental Expo** and Free Day, celebrating the International Year of the Reef and cheering on the release of the moi.
- ★ Interpretive Program Coordinator Dan VanRavenswaay attended a National Association of Interpretation workshop to begin the process of becoming a certified trainer for interpretation.
- ★ Education Director Mark Heckman presented at the Pacific Congress on Marine Science and Technology.
- ★ Leah Kissel attended the Society for Marine Mammalogy's Biennial Conference in Cape Town, South Africa, in late 2007.
- ★ Gerald Crow served on the organizing committee for the Seadragon Husbandry Symposium held in April 2008 at the Dallas World Aquarium in Texas.

na'auao: knowledge

Aquarium staff continued their valuable research with corals, monk seals and other marine life.

- ★ Monk seal staff concluded the second year of a three-year data collection period for a metabolic study on the Hawaiian monk seals.
- ★ The Aquarium co-hosted a workshop with the Marine Conservation Biological Institute; an effort to join the public and private sectors in recovery efforts for the Hawaiian monk seal.
- ★ *Acropora cytherea*, a rare coral in Hawai'i, was collected off Kaua'i's Mana Reef by Gerald Crow with the help of the state Department of Land and Natural Resources and Bubbles Below dive tours.
- ★ The Aquarium received deepwater corals from DLNR staff. These were collected during deep dives off Diamond Head in February 2008.
- ★ Aquarium Biologist Norton Chan successfully bred and exhibited two generations of bigfin squid.
- ★ The Aquarium continues to maintain deepwater *Leptosiris* corals for research in partnership with Dr. Samuel Kahng. The research includes exploration into the life history of a coral-eating flatworm and possible control options for the animal.
- ★ Aquarium aquarists are furthering their research on the control of various aquatic parasites.

'imua: to progress

This year, the Waikiki Aquarium began to see the results of some much-needed repairs and renovations.

- ★ Some much-needed upgrades got underway this year. Three sections of the roof and a section of the skylights have been repaired and the long-awaited electrical upgrade project is in the final stages of permit approval.
- ★ The wiliwili tree in front of the Aquarium, which was part of the state's Art in Public Places program, was killed by the invasive gall wasp that has decimated the tree throughout the Hawaiian Islands. A new tree is being selected for the open spot.
- ★ A new green vinyl awning on the second floor has met with community approval for aesthetically blending into the Kapi'olani Park environment.
- ★ Planning and design work for the new Northwestern Hawaiian Islands exhibit was completed; construction should begin in the next year.
- ★ Aquarium staff, students and volunteers pitched in to renovate the classroom. Updates include a fantastic interactive Velcro wave wall funded by Alexander & Baldwin, new paint and a new high definition monitor.
- ★ We added new community classes and activities, including a **Mystery Evening** with the UH Center for Microbial Oceanography and a **Seadragons' Family Night** with the UH Theater Department.
- ★ Education Director Mark Heckman and Community Program Enrichment Coordinator Mary Roney began work on a contract to create a teacher program for the Northwestern Hawaiian Islands. Roney flew to Midway Atoll in January to run a think tank session.
- ★ The Kona Coast exhibit was completely overhauled and aquarists are having good results maintaining some previously difficult coral species.
- ★ New species that visitors enjoyed at the Aquarium this year included a white-spotted hermit crab, yellowtail filefish, yellowbarbel goatfish and a hybrid wrasse, which is a natural cross between a saddle wrasse and a sunset wrasse.

hana hou!

We continued our traditions with those events that have helped make the Aquarium great for years.

- ★ The perennially favorite summer concert series returned to the great lawn this year. **Ke Kani O Ke Kai's** 2007 season wrapped up with Brother Noland and Tony Conjugacion, Cyril Pahinui and Dennis Kamakahi, and Natalie Au Kamau'u and Auntie Genoa Keawe. The 2008 season got off to a great start with Kaukahi and Hapa.
- ★ We celebrated our members with **Members' Night** on Nov. 4, 2007. Attendees enjoyed the food catered by Ginniberries and a talk on hammerhead sharks by Dr. Tim Tricas.
- ★ **Seaduction** worked its magic on the couples that dined amongst the galleries on Valentine's Day.
- ★ It was an excellent time on March 15, 2008, as more than 1,800 people joined in the **Sea Hunt** family day.
- ★ More than 200 people joined us for a spectacular sunset during the fifth annual **Seasons and the Sea** event sponsored by Mālama Hawai'i and the Hawai'i Tourism Authority.

FINANCIAL REPORT FY 2008

Aquarium admissions decreased by 2 percent this year. Overall income decreased by 36 percent due to a combination of a poor investment environment and the return of our normal allotment from the state. Areas showing an increase are membership dues and education classes. Areas experiencing declines are grants and contributions, and fundraising programs.

Overall expenditures decreased by 19 percent for the period mainly in the area of repair and maintenance for the roof repairs and electrical upgrade. Areas exper-

riencing increases were personnel costs, utilities, professional fees and general and administrative costs, and equipment purchases.

Natural Selection Gift Shop sales dropped 3 percent for the fiscal year, while expenses increased by 10 percent, mainly due to staffing and general and administrative costs. The gift shop at Hanauma Bay posted a less than 2 percent decrease in income for the year. Expenses increased 11 percent, mainly due to costs for personnel, increased storage rental and replacement equipment.

WAIKĪKĪ AQUARIUM COMBINED STATEMENTS OF REVENUES, EXPENSES AND CHANGE IN FUND BALANCE Years ended June 30, 2008 and 2007			
	2008	2007	
REVENUES			
Admission fees	\$1,592,766	1,615,893	
Allotment - University of Hawai'i	643,769	2,100,812	
Grants and contributions	110,011	135,006	
Friends of the Waikiki Aquarium membership dues	156,869	152,402	
Transfer from Natural Selection gift shops	197,532	200,778	
Interest & other	(20,067)	171,666	
Facility rental	174,991	206,423	
Fundraising	124,083	134,894	
Education	35,413	28,853	
Total revenues	3,015,367	4,746,727	
EXPENSES			
Personnel costs	1,944,467	1,740,156	
Repairs and Maintenance	375,556	1,677,109	
Supplies	278,725	263,646	
Utilities	348,904	240,418	
Marketing, Fundraising, Protocol	121,831	109,299	
Professional Services	112,620	55,792	
General and Administrative	50,766	39,020	
Furniture, fixtures, exhibits and equipment	113,632	10,959	
Printing and publications	34,640	34,599	
Total expenses	3,381,141	4,170,998	
Change in fund balance	(365,774)	575,729	
Fund balance at beginning of year	3,046,045	2,470,316	
Fund balance at end of year	\$2,680,271	3,046,045	

RESTRICTED & DESIGNATED FUNDS	
Fund balance at June 30, 2008:	
Waikiki Aquarium	\$2,680,271
Natural Selection Gift Shop	501,824
Natural Selection Gift Shop at Hanauma Bay	405,962
Less:	
Restricted funds held by:	
University of Hawai'i Foundation	(359,186)
Friends of the Waikiki Aquarium	(2,155,367)
Designated funds:	
Natural Selection Gift Shop expansion, FYE 2009	(300,000)
Outdoor expansion - FYE 2008	(250,000)
Working capital for operations	(500,000)
Unrestricted and undesignated fund balance at June 30, 2006	\$ 23,504

Notes to Combined Financial Statements

The combined financial statements represent the unaudited results of operations on a cash basis of accounting for the Aquarium and includes funding from the following sources: University of Hawai'i-Mānoa, UH Foundation, Research Corporation of the University of Hawai'i, National Oceanic and Atmospheric Administration, National Marine Sanctuary Foundation and the Friends of the Waikiki Aquarium.

The unaudited results of the Natural Selection Gift Shop's operations at the Waikiki Aquarium are presented in an accrual basis of accounting and are not a component of the Aquarium's combined financial statements. The shop contributes 20 percent of its gross sales to Aquarium operations.

The unaudited results of the Natural Selection Gift Shop at Hanauma Bay's operations are presented in an accrual basis of accounting and are not a component of the Aquarium's combined financial statements. The shop contributes 10 percent of its gross sales to Aquarium operations.



NATURAL SELECTION GIFT SHOP

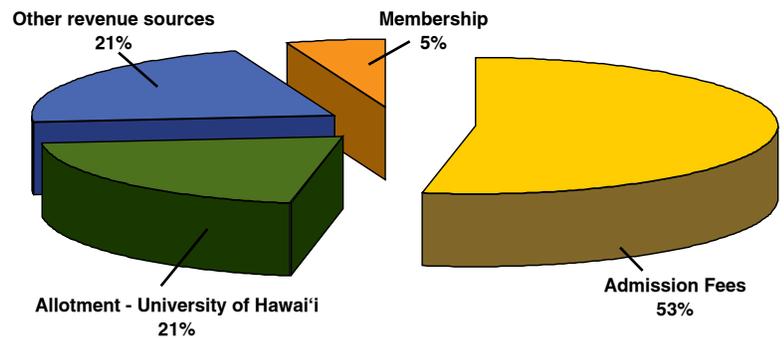
(A division of the Friends of the Waikiki Aquarium)

COMBINED STATEMENTS OF INCOME AND CHANGE IN FUND BALANCE Years ended June 30, 2008 and 2007

	2008	2007
REVENUES		
Sales	\$616,435	634,140
Cost of sales	257,937	272,072
Gross profit	<u>358,498</u>	<u>362,068</u>
EXPENSES		
Personnel costs	98,290	87,581
General Excise taxes	25,722	24,678
General and administrative	13,724	11,818
Equipment, supplies, maintenance & repairs	5,839	6,817
Insurance	2,019	2,031
Total expenses	<u>145,594</u>	<u>132,925</u>
Operating income	212,904	229,143
Interest income	6,769	15,287
Transfer to Waikiki Aquarium	(123,280)	(126,822)
Change in fund balance	96,393	117,608
Fund balance at beginning of year	405,431	287,823
Fund balance at end of year	<u>\$501,824</u>	<u>405,431</u>

REVENUE FYE 2008

Admission fees	\$1,592,766
Other revenue sources	621,963
Allotment - University of Hawai'i	643,769
Membership	156,869
	<u>3,015,367</u>

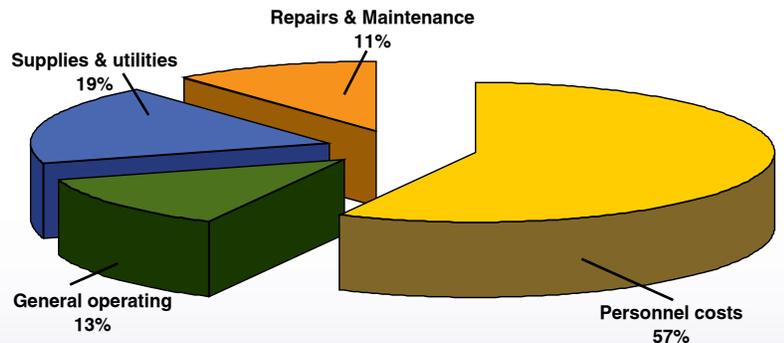


NATURAL SELECTION GIFT SHOP at HANAUMA BAY COMBINED STATEMENTS OF INCOME AND CHANGE IN FUND BALANCE Years ended June 30, 2008 and 2007

	2008	2007
REVENUES		
Sales	\$733,667	746,677
Cost of sales	325,296	326,019
Gross profit	<u>408,371</u>	<u>420,658</u>
EXPENSES		
Personnel costs	152,467	140,803
Comissions to City	74,266	73,957
Storage rental	5,180	4,747
General and administrative	21,161	21,551
Equipment, supplies, maintenance & repairs	10,631	5,067
Insurance	5,011	4,715
Taxes	10,000	(942)
Total expenses	<u>278,716</u>	<u>249,898</u>
Operating income	129,655	170,760
Interest income	14,497	12,865
Transfer to Waikiki Aquarium	(74,253)	(73,956)
Change in fund balance	69,899	109,669
Fund balance at beginning of year	336,063	226,394
Fund balance at end of year	<u>\$405,962</u>	<u>336,063</u>

EXPENSES FYE 2008

Personnel costs	\$1,944,467
General operating	433,489
Supplies & utilities	627,629
Repairs & Maintenance	375,556
	<u>3,381,141</u>



THE WAIKIKI AQUARIUM'S MISSION:

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

Red lionfish.
Photo: Alice Keesing.



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