Seawords
March, 2003
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Number 3

Dedication to Dr. Paul Scheuer

Story by Doreen Seaton

Paul Scheuer was an admirable figure here at the University of Hawai‘i for his devotion and work in integrating the fields of chemistry and marine natural products. He first arrived in the United States from Germany in the time of war. In order to save money for his voyage, he worked as a tanner in Europe, where he first became interested in chemistry. Upon his arrival, he had to make a living with nothing. His journey, along with the struggle for survival in a new country, helped shape his outlook on life that made him the strong, charismatic person he was.

“I would like to encourage students who are drawn to research to persist through difficult times, because it is a very rewarding career. My father overcame many obstacles to become a world-recognized scientist who has left behind a wealth of new knowledge that enriches all of our lives.” — Debbie Scheuer.

At the University of Hawai‘i, Dr. Scheuer helped to shape the Department of Chemistry in many ways. Bringing national recognition to the department, putting it on the map as an important research site, and making chemistry a “people business,” are just a few of his accomplishments. Throughout his career he had written a total of 300 articles relating to his studies. His numerous research projects received the most continuous form of federal funding known to date.

In addition to his research, Dr. Sheuer also helped mentor several MOP students with their projects.

Dr. Scheuer’simpact has not been made only in Hawai‘i, but worldwide. He has had students from every continent. His students, both Masters and PhD, were a big ohana to him.

Besides his student family, he had his family at home. His son Jonathan is the only one of the four children who lives in Hawai‘i, and intends to stay. He has recently completed a doctorate in Environmental Studies from the University of California, Santa Cruz, and is currently working in a postdoctoral position with the Kamehameha Schools in their endowment group. He comments, “In relation to my father’s work, I like to note that I try and protect the biological diversity on which his field depends.”

Scheuer’s daughter, Debbie, who is a MOP alumna, has a Ph.D. in Physiology from the University of California, San Francisco. A Biology major at UH, her MOP project was entitled “Larval Conditioning of the Marine Gastropod, *Phestilla sibogae*.” Debbie is currently an Assistant Professor in the School of Pharmacy at the University of Missouri, Kansas City. Her father was an important factor in her decision to take up a career in scientific research. She mentions, “My parents always encouraged me to pursue a career of my choice at a time when many parents still expected their girls to go into more traditionally female-dominated professions.”

Both Jonathan and Debbie agree that their father’s greatest accomplishment is founding an entire field of study, while succeeding and never giving up despite the challenges he faced.

Another attribute of his success is a story shared by Jonathan, who remembers when his father was the recipient of a national award, the Guenther Award from the American Chemical Society. Jonathan said that out of his father’s “characteristic generosity, he used the prize money to fly us all to San Diego to be with him when he received his award…. I am proud of that for both the achievement and the thoughtfulness he had in accepting it.”

Paul Scheuer lost his struggle to leukemia on January 12th, 2003. He will be remembered here at the University of Hawai‘i as the Father of Marine Natural Products, a dedicated scientist, and an influential role model for all.

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***Seawords* is a monthly newsletter of the Marine Option Program at the University of Hawai'i. Opinions expressed herein are not necessarily those of the Marine Option Program or of the University of Hawai'i.**

UH Mānoa MOP Events

March 3rd	**Deadline for Anna Toy Ng Memorial MOP Scholarship nomination.**
March 14th	**Deadline for MOP Symposium presentation application**
March 24th to 28th	**Spring Break (no classes).**
March 26th	**Prince Kuhio Day (holiday).**
April 5th	**Aquaculture Farm Fieldtrip with Dean Toda, Aquaculture Development Program.**
April 18th	**Good Friday (holiday).**
April 19th & 20th	**MOP Student Symposium, to be held at Maui CC. Includes Field Trip to Kaho'olawe on the 20th.**
April 22nd	**Earth Day (not holiday, but should be). Displays at UHM Campus Center**
April 26th	**UH Undergraduate Research Symposium (see below).**
May 7th	**Last Day of Instruction.**
May 12th to 16th	**Finals Week**
May 16th	**Oahu MOP Graduation**
May 18th	**QUEST begins for MARE 364.**
May 19th	**QUEST begins for MARE 264.**

MOP Student Symposium April 19th and 20th

This year's MOP Student Symposium will be held at Maui Community College. There will also be a snorkeling cruise to Kaho'olawe on Sunday, April 20th. The deadline for receipt of all application materials is March 14th, 2003. For a complete application package, contact your local MOP office or Donna Brown, MCC MOP Coordinator, at phone: 984-3203 or e-mail: <donnabro@hawaii.edu>.

UH Hilo MOP EVENTS

Saturday and Sunday, March 8th and 9th, 2003
MOP Camping/Sailing trip
Tuesday, March 18th, 2003
Gyotaku fish printing
The UH Hilo MOP calendar can be found at: *<http://www.uhhmop.hawaii.edu>.*

UH Mānoa ..... **Telephone: 956-8433**
e-mail: <mop@hawaii.edu>
web: *<http://www2.hawaii.edu/mop/>*

UH Hilo and Hawai'i CC .....
Telephone: 974-7544
email: <uhhmop@hawaii.edu>
web: *<http://www.uhhmop.hawaii.edu/>*

UH West Oahu ..... **Telephone: 454-4715**
e-mail: <hodgson@hawaii.edu>

Honolulu CC ..... **Telephone: 847-9824**
e-mail: <gopalk@hcc.hawaii.edu>

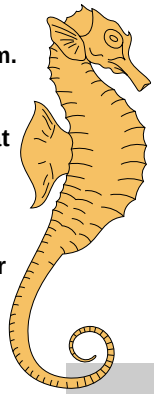
Kauai CC ..... **Telephone: 245-8251**
e-mail: <bushnell@hawaii.edu>

Kapiolani CC..... **Telephone: 734-9389**
e-mail: <moeng@hawaii.edu>

Leeward CC ..... **Telephone: 455-0286**
e-mail: <fstanton@hawaii.edu>

Maui CC ..... **Telephone: 984-3203**
e-mail: <donnabro@hawaii.edu>
web: *<http://www.coralreefs.hawaii.edu/mccmop/mop.html>*

Windward CC ..... **Telephone: 236-9118**
e-mail: <wccmop@hawaii.edu>
web: *<http://www.wcc.hawaii.edu/mop>*



For more information on MOP events, contact your local MOP office. Pre-registration is required for all field trips.

Leeward CC MOP EVENTS

Tuesday, March 4th, 2003
Ms Jill P. Zamzow, UH Mānoa will present
"Fish slime sunscreen: UV-absorbing compounds in the mucus of fishes"

Tuesday, April 1st, 2003
Presenter and Title to be determined
LCC MOP meets the first Tuesday of every month. All meetings are in MS 102 from 12:30 to 1:20. For more information contact Dr. Frank Stanton at 455-0286 or at <fstanton@hawaii.edu>.

Leeward CC MOP also has a new website, which can be viewed at *<http://emedia.leeward.hawaii.edu/mop>*. This web site was Evelyn Kamai's MOP project.

2003 Undergraduate Symposium

The abstract submission form for the UH Undergraduate Syposium is now active and can be accessed from *<http://undergradsymposium.higp.hawaii.edu>*. The deadline for applying is Wednesday, April 2nd, 2003 at 5:00pm.

EVENTS AROUND HAWAI'I

Hanauma Bay Evening Talks

March 13th, 2003 — Surf Forcasting with Pat Caldwell of the Joint Institute for Marine and Atmospheric Research (JIMAR).

March 27th, 2003 — Sea Turtles of Hawaii with George Balazs, turtle researcher with the National Marine Fisheries Service.

All events begin at 6:30pm and are held in the new Hanauma Bay Education Center unless otherwise specified. These are open to the general public and free of charge. Please call Jeff Kuwabara, MOP alum, at 397-5840 if you have any questions.

Hanauma Bay Teacher's Workshops

All Hawai'i's teachers and educators are invited to an introduction to the education resources of Hanauma Bay Nature Preserve.

March 15, 2003 Saturday, 8:30 a.m. - 11:30 a.m.
Focusing on Upper Elementary Levels

March 22, 2003 Saturday, 8:30 a.m. - 11:30 a.m.
Focusing on Secondary Levels

Please RSVP by Monday, March 10th, 2003. For more information, please call Shawn Carrier or Elizabeth Kumabe at the Hanauma Bay Education Program at 397-5840.

Aquaculture Farm Business Management Workshop Postponed

The Workshop scheduled for March 17th and 18th in Hilo at the Komohana Ag Complex and March 21st and 22nd on Oahu at Windward CC in the Hale Kuhina room has been postponed. Stay tuned for rescheduled dates.

HaSTA Spring 2003 Conference

Saturday, April 12th, 9:00 to 1:00pm

The Hawai'i Science Teachers Association will meet at Punahoe School. For more information, contact Randyll Warehime at 943-2276; e-mail <rwarehi@aloha.net>

National Marine Sanctuary (Maui) Free Lecture Series

Tuesday, March 4th, at Wailea Marriot, 3700 Wailea Alanui, Wailea
"Whale Song" by Dr. Jim Darling, President and Founder of the West Coast Whale Research Foundation

Tuesday, March 11th at the Hawaiian Islands Humpback Whale National Marine Sanctuary, 726 South Kihei Road, Kihei
"Wrecks to the Northwest: Our Maritime Legacy in the Hawaiian Archipelago" by Dr. Hans Konrad Van Tilburg , Junior Research Specialist for the UH Marine Option Program.

Lectures begin at 7:00 p.m. For more information, contact Rhonda Van Wingerden at phone (808) 879-2818

Waikiki Aquarium Activities

Preregistration is required for all activities Please call the Education Department for registration materials. Phone: 923-9741 Monday to Friday, 8:00 a.m.- 5:00 p.m. For more information on these and other events visit the Waikiki Aquarium's web site at *<http://www.waquarium.org>*.

Exploring the Reef at Night

Saturday, March 15th, 6:00 to 9:00pm

Experience the reef at night with Aquarium naturalists, getting wet up to your knees as you explore from the shore. Coral reef ecology, reef conservation and shoreline safety are covered. Minimum age 5 years, youngsters must be accompanied by an adult. Registration: $12/adult, $10/child ($10/8 for Aquarium members).

Dive in: Hanauma Bay to Kure Atoll, the Meaning of Marine Sanctuaries

Sunday, March 9th, 8:00am to Noon

This special below and above water experience examines two protected areas — Hanauma Bay and the Northwestern Hawaiian Islands. The event starts with a video presentation from a recent research expedition to the Northwestern Hawaiian Islands — then dive into Hanauma Bay for our own protected area experience. Video taken during our snorkel will allow participants to compare the two areas. For adults and youth; minimum age is 7 years. Participants must be able to function independently in the water with snorkel gear. Registration: $10/person ($8 for Aquarium members)

Aquarium After Dark

Friday, March 7th or April 4th, 7:00 - 9:00 pm

Do fish snooze? Do lobsters sleep? Tour the Waikiki Aquarium at night to find out! You'll discover how coral reefs change as day turns to night. Join us for an after-dark flashlight tour of the Aquarium. Minimum age is 5 years, youngsters must be accompanied by an adult. Registration: $7/adult, $6/child ($6/5 for Aquarium members).

Small Fry

Wednesdays, March 12th
8:30 to 10:00am or 10:30am to Noon

Share ocean discoveries with your 1 to 3-year old this spring. Parents and their young learners discover marine life in five weekly sessions that include craft, song, movement and special tours of the Aquarium's marine life exhibits. Class size is limited, so please give second choice time. Preregistration required. Class fee: $70/ adult & child for all five 5 sessions ($50 members).

Experts at the Palace Series, 2003

Thursday, March 13th "The Japanese Midget Sub: Report of the Discovery" by Terry Kerby, Operations Director, Hawai'i Undersea Research Laboratory UH-NOA and Chris Kelly, HURL Biologist

The presentations in this series are held at the Old Archives Building at 'Iolani Palace. The events are free and begin at noon. Admission is free. For more information, call (808) 956-9546 or visit: *<http://www.iolanipalace.org>*.

The Mangrove Debate

By Elena Millard

The florida red mangrove, *Rhizophora mangle*, was introduced to Molokai purposely in 1902 by the American Sugar Company to help solve local erosion problems. By the 1940's, the mangroves had spread extensively along Molokai's coastlines and had also established themselves in abundance by means of ocean currents on the neighboring island of Oahu. Project manager of Molokai's Keawanui Fishpond, Walter Ritte, explains that "The mangroves were brought here to stop the soil from washing out onto the reef due to overgrazing by ranchers. Their roots took hold and did the job. The problem came when they were not managed. They became a pest. They inundated the native fishponds and made them inaccessible, the roots weakened and broke down the stone walls. They also cut off much access to the ocean. It has been 100 years now since the mangroves were brought here and its time we take a closer look."

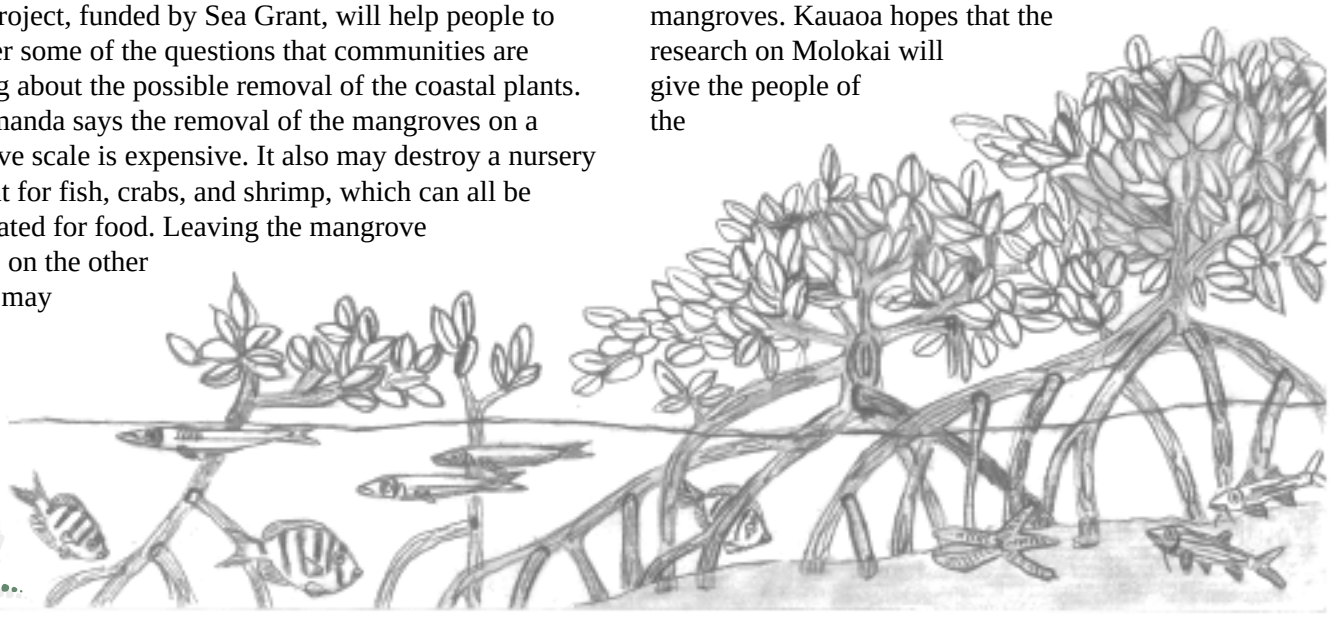
A project under the principal investigation of Dr. Craig Smith and Ph.D candidate Amanda Demopoulos, both of the UH Mānoa Department of Oceanography, aims to assess the impacts that the mangroves are having on coastlines throughout the Pacific. Research is being conducted on Kosrae, Federated States of Micronesia, as well as on Molokai and Oahu, where large areas of mangroves have already been cleared. The researchers hope to identify the proportions of introduced to native organisms that are using the habitat and compare those results to the organisms that inhabit non-mangrove areas. The project, funded by Sea Grant, will help people to answer some of the questions that communities are having about the possible removal of the coastal plants.

Amanda says the removal of the mangroves on a massive scale is expensive. It also may destroy a nursery habitat for fish, crabs, and shrimp, which can all be cultivated for food. Leaving the mangrove alone, on the other hand, may result in a great reduction of native Hawaiian birds such as the Hawaiian stilt, *Himantopus mexicanus*, that require open water spaces for nesting. The tree's destructive effects on the fishponds may put an end to an important piece of Hawaiian culture.

From January 31st to February 3rd, a team of researchers, MOP students, and volunteers conducted the fourth survey of the ichthyofauna and other megafauna that are using the shallow mangrove ecosystem of Molokai's southwest shore. With funding from the USDA Forest Service, Institute of Pacific Islands Forestry and from MOP, MOP student Kauaoa Fraiola, a biology major at UH Mānoa, is assisting with this research on mangroves as his MOP project. In addition to helping with the collection, Fraiola also developed a way to efficiently set up and deploy the large 80 meter collecting net and will be working on identifying the species using taxonomic keys and microscopy.

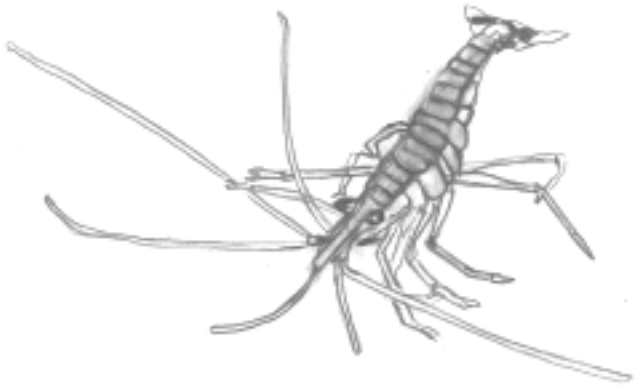
After the perimeter of a 19 meter by 19 meter square plot was cleared of mangrove roots, the poles and net were set up at low tide. At high tide, the net was deployed and secured, and the animals were collected and preserved during the following low tide. The process was conducted again in a non-mangrove mudflat for comparison. The samples were brought back to the UH Mānoa campus for analysis.

Amanda will be conducting stable isotope testing which will give insight on what these animals are eating and if they are benefiting at all from food supplied by the mangroves. Kauaoa hopes that the research on Molokai will give the people of the



island the knowledge to appropriately manage the mangroves that are affecting the fishponds and find ways to use the ecosystems supplied by them for aquaculture.

Eric Kuhina of Molokai supports the research, and explains, “Fishponds united the ancient Hawaiian villages. The community shared the work and the food, and traded what they could not use to communities that grew taro and other crops. Fishponds tied Hawaiians with each other and with the land. Abandoning them means losing an ancient way of life and the opportunity to restore the ponds for food again.” The UH Mānoa team recognizes the generous contributions and help of Walter Ritte, the Kuhina Ohana, and the UH Mānoa and Maui CC MOP students involved in the project.



REVEL Project 2003

The Research and Education: Volcanoes, Exploration and Life (REVEL) Project is inviting highly-motivated 7-12 grade science teachers who want to bring cutting-edge earth and ocean research into their classrooms to apply to the program.

Through the REVEL Project, teachers are immersed in the scientific process as they explore the seafloor of the Juan de Fuca Plate in the Northeast Pacific Ocean. Teachers participate in sea-going field research alongside scientists and in complementary professional development opportunities that help teachers increase their content knowledge, and enhance their teaching skills. Members of a network of researchers and education colleagues passionate about earth and ocean sciences, REVEL teachers transfer their experience to the classroom and many colleagues.

Applications for the 2003 REVEL sea-going season are available at <*http://www.ocean.washington.edu/outreach/revel*> and must be postmarked by 28 March 2003. Applicants must be employed in a K-12 public, private or parochial school in the United States. Minority applicants are especially encouraged to apply.

Knauss Fellowships

The Knauss Marine Policy Fellowship Program, committed to advancing marine-related educational and career goals of participating students and to increasing partnerships between universities and government, is now accepting applications. Application materials are due by May 1st to Hawai'i Sea Grant office HIG 238, University of Hawai‘i at Mānoa, no later than 4:30 p.m. The office’s phone number is (808) 956-7031.

Any student who on April 1st, 2003, is in a graduate or professional program in a marine or aquatic-related field at a United States accredited institution of higher education may apply to the National Sea Grant Office through their local Sea Grant program. Applicants from states not served by a Sea Grant program should obtain further information by contacting the Knauss Fellows Program Manager at the National Sea Grant Office.

The length of assignment is one-year (non-renewable). The inclusive dates of the official fellowship are February 1st, 2004 to January 31st, 2005; however, these dates can be slightly adjusted to accommodate academic semester needs. Interested students in Hawaii should discuss this fellowship with Hawaii Sea Grant Director Gordon Grau. Each Sea Grant program may select and forward to the NSGO no more than five (5) applicants selected according to criteria used by the NSGO in the national competition. The competitive selection process and subsequent notification to the Sea Grant programs will be completed by June 25, 2003.

For further details, visit the Knauss Marine Policy Fellowship Program <*http://www.nsgo.seagrant.org/Knauss.html*>.

MOPers Visit the S.E.A. Program

By Doreen Seaton

Semester program students aboard the SSV *Robert C. Seamans* docked at Pier 9 at the Aloha Tower Marketplace during the first week of January. Last year Seawords covered a story on the ship at its stop at Honolulu during its first trip around the Pacific. Following up on that story, we were able to re-visit the 134-foot steel brigantine designed by Laurent Giles of Hampshire, England and then built by JM Martinac Shipbuilding of Tacoma, Washington. According to the Woods Hole Oceanographic Institution, the SSV *Robert C. Seamans* is "the most sophisticated oceanographic sailing research vessel ever built in the United States."

The Sea Education Association (SEA) is a semester program based at Woods Hole, Massachusetts, which offers an opportunity for students from all over the world to come together for an exciting semester split between on shore and at sea. Although the program has an emphasis on oceanography, nautical science, maritime history, and literature, students with all sorts of majors come to gain the valuable skills taught throughout the semester. Such assets help make the students more employable and more likely to get into graduate school.

MOPers arrived at the SEA reception given on Friday, January 17th by the crew, to investigate the ship as well as the students' experiences. The ship was occupied with 25 undergraduate students and a crew of 11. The positions performed by the students varied from scientists to deck hands. All seemed equally as satisfied with the program, regardless of their position. A current student, who held an engineer position aboard, decided to board the ship after a semester at UH Hilo. He agrees with many other students that the SEA program is a life changing experience. UH Mānoa Student Coordinator Signe Opheim agrees, "The students aboard the ship are extremely fortunate to participate in such a life changing experience while traveling and learning about the Pacific."

SEA offers annual sea-going programs with other institutions to both the Atlantic and Pacific. As the journey begins, students spend an allotted amount of time on shore at Woods Hole, to attend lectures, field trips, labs, and classes. Ashore students learn the important skills that they will need on the ship as well as plan their own at-sea project. After the work ashore has taken place, students board the ship for their sea outing share of the semester.

Sailing experience is not a prerequisite for the program, but learning the ropes of sailing the ship will become a duty for the last remaining weeks at sea. For the period of time just before arriving at the ship's final destination, the crew watch as the students have full responsibility of navigation and sailing operations.

Along with learning to navigate, students take advantage of the technology on the boat and conduct numerous research projects. From topics in biological oceanography, such as tracking patterns of vertical migration in zooplankton, to physical oceanography topics such as studying Pacific equatorial currents, a wide range of biological, chemical, geological, and physical oceanographic research projects are performed.

The main research lab, where students can conduct a wide array of dry experiments and perform detailed analyses with the shipboard computers.

The laboratories on the ship are well-equipped, provided by the National Science Foundation.

Along with learning how to sail the ship, conducting research, and receiving 12 college credits, students on the current cruise attended a Sustainability Workshop on Saturday, January 11th in Honolulu. John Bullard, the current president of SEA, and a guest speaker at the workshop, spoke of his relation with SEA and the organization's role in ocean sustainability. The workshop was a chance for the students to speak of their own concerns on preventing pollution and overfishing.

As part of the tour of the *Seamans*, MOPers were shown the wet lab, which included a winch (to the top right in the picture) that allows scientists to deploy heavy equipment over the side of the boat.

Overall, the night was an educational field trip for MOP students to see one of the many opportunities the ocean world has to offer. As you can see, the program provides a well-rounded educational adventure for all. For more information on SEA semesters to come, go to <*http://www.sea.edu*>.

Waikiki Alien Algae Cleanup

By Doreen Seaton

On Saturday February 1st, 2003, volunteers gathered in an effort to remove alien alga, *Gracilaria salicornia*, from Waikiki. It was first introduced to Waikiki in 1974 for aquaculture purposes, but soon began to take over. When south swells come in, so does the algae, as it spreads by small fragments, and washes up on the beach. Algae covered beaches pose a threat to tourism. Another unwanted effect is the growth of the algae on precious Hawaiian coral reefs, which causes them to die, and has an impact on reef building.

Drawing of Leaf Sea Dragon by Elena Millard

Eric Co, Project Coordinator from The Nature Conservancy of Hawai'i, said there was "an unbelievable amount of help this weekend, we removed 12,200 pounds, over 6 tons, of *Gracilaria salicornia*!" Many local agencies are now trying to set up events such as this one, because other species of alien algae are starting to show up throughout the islands. *Acanthophora spicifera*, *Hypnea musciformis*, *Kappaphycus spp.*, and *Avrainvillea amadelpha*, are a few that have been found to be invading coral reefs and beaches, as they endanger native species.

For more information about upcoming alien algae cleanup events, e-mail Eric Co at <eco@TNC.ORG>. An imformative local web page on alien species created by Jen Smith, a graduate student at UH, can be found at <*http://www.botany.hawaii.edu/GradStud/smith/websites/ALIEN-HOME.htm*>.

A Morning at the Fish Auction

By Doreen Seaton

Sherwood (slightly to the left), showing students and MOPers a collection of fish from the day's catch.

Bright and early in the morning on Friday January 24th, 2003, students from MOP, the Alu Like Native Fishery Observer Program, and Sherwood Maynard's IS 361 People, Ocean, and the Environment class, met at the United Fishing Agency, Ltd. at Kewalo Basin for the fish auction.

At 5:30 am, the auctioneering bell rang to let us know that the fish had been brought in and the bidding was to begin. Entering the building, you try to ignore the smell of the dead fish surrounding you. A chalkboard on the wall indicates which longliners have brought in the fish for the day. The auction is held Monday through Saturday and anyone can participate. On this particular day, only 4 boat names were on the board, which told us that since there were not too many fish, the auction was going to be ending early, probably at about 10:00 am. On a good day, the auction could go into the early afternoon.

Bidding begins auctioning off the tuna first, then the bottom fish, and lastly the swordfish. As fish brokers and distributors bid, you notice that it is more of a silent auction; it's quiet, and hand gestures indicate how willing that person is to buy the fish. Depending on size and type, fish are sold either individually or by the pallet. Before bidding, the buyers go around and make notes of which fish they plan on bidding for. Knowing which particular type of fish they would like to buy, to check how valuable the fish is they cut into the fish and feel for oil content, texture, and fat. A distributor of Honolulu Fish says that he comes to the fish auction every day they are open, Monday through Saturday. He buys between 2,000 to 8,000 pounds of fish, mostly tuna, striped marlin, and monchong; which is then brought directly to chefs at restaurants around the island.

As you venture into the different rooms, you notice the variety of the fish, along with a few characteristics of the fish that you will wonder about. As you look amongst the mahi-mahi, albacore, big eye tuna, striped marlin, moonfish, and others, you see that some fish have what seems to be a tongue sticking out. In actuality what you thought was its tongue is really its stomach. Fish have gas filled swim bladders that act as a natural bouyancy regulator so that they can swim through the depths of the ocean at ease. If a fish is caught by a longline, and doesn't have enough time to come up, its swim bladder expands, explodes and causes the fish's stomach to pop out of the mouth; usually the pressure will break its spine as well. These effects do not determine the quality or pricing of the fish. You will also see Marlins with their bills cut off; this is because of safety concerns when they are caught and brought onto the deck.

On this MOP field trip, we were able to see how the fish auction works and where the islands fresh fish comes from. MOPer and IS 361 student Keeley Belva commented that it was "very interesting to see the behind the scene aspect." Special thanks to Brooks Takenaka of the auction for hosting us.

If a fish is caught in deep water and brought to the surface quiclky, its swim bladder can burst, causing its stomach to pop out of its mouth.

Alu Like Training Cruise

By Doreen Seaton

On Tuesday, January 28th, a training cruise for the Alu Like Native Fishery Observer Program left the dock aboard one of the University of Hawaii'i's boats — the R/V *Klause Wyrtki*. Alu Like is an employment and training program for Pacific Islanders. The NOAA/ National Marine Fisheries Service (NMFS) funds this program, since they have a need for fishery observers, and this is where this specific program for Alu Like begins. MOP's two-week course prepares islanders to enter NMFS's standard three-week course.

Alu Like selected MOP as a subcontractor to assign Irene Kinan and Kevin Kelly as fisheries instructors. There are six students from all over Hawai'i and America Samoa, who have gathered here in Honolulu for a two-week training course to become fishery observers. In order to hold a position as a fishery observer on a longline vessel, a biology degree is normally required. However Alu Like believes that "the natives of the Western Pacific region should not be excluded from the recruitment process for the lack of a degree or experience." They feel that a two-week intense training course will get the job done, along with providing the demand for fishery observers.

On this particular day the students were able to leave the classroom and get out to sea for boat experience. Most of the students have grown up having some knowledge of the types of fish longline vessels reel in, so the boating excursion was a chance for them to see how the longlining procedure works. Since it was a daytime activity, there was not enough time for the boat to reach the regulated distance to set out real longline hooks. Instead, lines with 44 dummy hooks were set out over a mile range. On a real longliner, the line would be set out for 10 to 60 miles, with between 500 and 1,000 hooks. When reeling in the line, identity cards were issued to each student, with information about what was just reeled in. The identity cards revealed not only fish, but protected species. This somewhat challenged the students, for now they had to pay extra attention- especially when transferring information to their data sheet. Fishery observers fill out data sheets to be able to state all necessary records of the outing back to NMFS. The permit number used, port of departure, number of reels, longitude, latitude, and the amount of catch and bycatch are all recorded on the data sheets; along with other applicable material.

Along with learning how longlining works and how to fill out the data sheets, students learned maritime safety. The crew simulated a man overboard by throwing a coconut into the water. Necessary actions were then carried out by the students — turning the boat around; simulating calling the Coast Guard, getting into designated positions stationed throughout the deck, and then after spotting the coconut, the "pointer," the person who saw the coconut stood there and pointed towards that direction. Then a life saver and a net were used to retrieve the man overboard. Other safety procedures learned were a fire drill, how to abandon ship, and how to use an immersion suit. Immersion suits are used when you must go into the water because of a safety hazard on the boat, such as when the ship is on fire or sinking. They help to prevent hypothermia and to keep you afloat. When the boat excursion ended, a written test was given to ensure the skills they learned that day.

For more information about upcoming Alu Like Native Fishery Observer Programs, you can call the Alu Like Headquarters at (808) 535-6700 or contact your local Alu Like office. The Alu Like web page can be found at <*http://www.alulike.org*>.

Students of the Alu Like Native Fishery Observer Program putting on the new immersion suits, designed to protect people from hypothermia if they fall overboard .

EMPLOYMENT

Marine Water Quality Specialist
Washington Sea Grant Program
Marine Advisory Services

Located at Port Orchard, this position involves delivering educational programs and public involvement activities on water quality issues affecting Kitsap county and the Puget Sound region Applications are due by March 14th, 2003. To apply, send a resume and letter describing relevant experience and education to: Marine Water Quality Specialist Search Committee, Washington Sea Grant Program, 3716 Brooklyn Ave N.E., Seattle, WA 98105. For further information, contact Pete Granger (206) 543-6600, e-mail <seagrant@u.washington.edu>, or visit the program website at <*http://www.wsg.washington.edu*>.

Fisheries Biologist
Steward and Associates, WA

For more information, visit <*http://www.stewardandassociates.com*> or email Janne Kaje at e-mail <jkaje@stewardassociates.com>

STUDENT EMPLOYMENT

Program Aide
UH Diving Safety Office

A 10-hour per week position available immediately. This position is not fundamentally diving related, but involves office work, record-keeping and lots of computer data entry. Any diving activity would be ancillary, and only available after the student has completed Scientific Diver qualification. There is room for growth in responsibilities over time, including diving training and evolution to diving status, as the program needs dictate. The opportunity for a MOP skill project is also possible as an extension of the employee's duties after the student is conversant with the duties of the job. UH-Manoa student must be eligible for student employment. Sophomore or junior is strongly preferred, with an informal commitment for a long term of employment, so the program has continuity. Experience with MS Word, Excel, Access, and web site design and web page maintenance is a big plus. Experience with scuba diving is initially valuable only as it helps the employee understand the data and paperwork handled. Dependable, meticulous attention to detail and an ability to work with minimum supervision after initial training is a must. More information is available through the UH-Manoa SECE office. Interested students should send a resume, including contact information for three references, to Dave Pence at email <dpence@hawaii.edu>.

Hawaii Mapping Research Group
Data Technician

HMRG has an opening for a data technician to sail aboard a R/V Thompson to support the DSL-120 sonar. HMRG has travel and salary funds available. The ship will leave Honolulu on March 11th and return May 4th, travelling to Guam.

The objective is to use the DSL-120 phase-difference sidescan sonar to survey serpentine mud volcanoes in the Mariana forearc. Nine or ten sites will be surveyed. After surveying is complete, the sites will be visited with the ROV Jason-2 for sampling/ground truth, using the DSL-120 bathymetry and sidescan imagery as basemaps. Coring will be done too.

Prerequisites include: Familiarity with linux/unix operating systems, willingness to learn about sonars and seafloor mapping. Experience with Generic Mapping Tools (GMT) and shell scripts a plus. If you're interested, contact Bruce Appelgate at phone: (808) 956-9720 or visit <*http://www.soest.hawaii.edu/HMRG*>.

SCHOLARSHIPS

Sigma Xi
Grants-in-Aid of Research

These grants are open to graduate or undergraduate students and are judged on the basis of their scientific merit. Requests from all disciplines of science are eligible for consideration. Sigma Xi grant awards range up tp $1,000, with some special funds permitting larger grants in the fields of astronomy, eye or vision reserach and plasma research. For more information, see the Sigma Xi web site <*http://www.sigmaxi.org*> or send e-mail to <giar@sigmaxi.org>. Deadline for application is March 15th, 2003.

VOLUNTEERING

Haleakala National Park

A wide variety of volunteer and paid opportunities are available at Haleakala National Park. Applications should be sent to the park volunteer coordinator and are due by April 15th. More information can be obtained by contacting Sharon Ringsven, Haleakala National Park Volunteer Program Coordinator, at (808) 572-4487. Additional information is availableb in the "Volunteer" section of the park website, <*http://www.nps.gov/hale*>.

Judges for Hawai'i State Science & Engineering Fair

The Hawai'i Academy of Science is recruiting scientists (including graduate students) to serve as judges at the Science & Engineering Fair, to be held April 1st to 3rd, 2003. For more information, contact Chris Trusty at email: <acadsci@hawaii.edu>. Information on the Academy can be found at <*http://www.hawaii.edu/acadsci*>.

INTERNSHIPS

The Ocean Alliance
Field Research & Environmental Education Internship

The Ocean Alliance is seeking interns for their whale watching program.. The positions are based in Gloucester,MA. There are three interns and one naturalist present on every trip. This team works two trips a day in the spring/summer season and one trip a day in the fall season. Once a week, interns are also expected to enter data from the whale watching trips in the Gloucester office as well as work on an intern project in the Lincoln office. For more information, or to apply, contact The Ocean Alliance, 191 Weston Rd., Lincoln, MA 01773, Attn: Cynde Bierman. You can also email <cyndeb@oceanalliance.org> or phone (781) 259-0423 x10 with any questions. The application deadline for this internship is March 1, 2003. The Alliance's website is <*http://www.oceanalliance.org/*>.

Youth Conservation Corps

The program is currently looking for members (high school sophomores through college sophomores) and team leaders (college juniors, seniors, and recent college graduates) for this year's program. The YCC program teaches students about conservation in Hawaii through service learning activities. Students receive a stipend at the end of the summer and 3 credits from UH botany department (if eligible). I would really appreciate it if you could please pass on the word to past interns, volunteers, or other good candidates. Applications and more information can be found on our website at <*http://www.hawaiiycc.com*>. For more information, contact John Leong at phone: (808) 595-9095; e-mail <john@ponopacific.com>.

Summer internships with the EPA

Various paid internships are available from the EPA at locations around the country. In most cases, the deadline for application is March 28th. For more information, visit <*http://www.epa.gov/ezhire*>.

UH-HIP Recruitment

The University of Hawai'i Hawaiian Internship Program is recruiting host agencies for its 2003 summer program. This summer internship program focuses on giving undergraduates of Native Hawaiian ancestry the opportunity to gain valuable experience in conservation and resource management fields. We hope this program, in combination with other efforts, will encourage more of our local students to pursue courses of study and careers related to our natural resources. If you are interested in hosting an intern, visit <*http://www2.hawaii.edu/~uhintern*> and follow link to UH-HIP. The submission deadline is March 15th for the Internship Request Form.

CONFERENCES & CALLS FOR PAPERS

Tropical Marine Ecosystem Management Symposium
March 24th to 27th, 2003— Manila, Philippines

The conference webpage can be found at <*http://www.icriforum.org/itmems.html*>.

Coastal and Estuarine Habitat Restoration Conference
April 13th to 16th, 2003 — Baltimore, MD

The first national gathering of the coastal and estuarine habitat restoration community. For more information, contact Rick Bates at phone (703) 524-0248; e-mail: <rickbates@estuaries.org> or visit the conference website at <*http://www.estuaries.org*>.

Hawaii Aquaculture Conference
May 8th, 2003 — Kaneohe, HI

The Hawaii Aquaculture Association will present this daylong annual event at Windward Community College, which features technical and experience talks by researchers and producers, and great food including Hawaii aquaculture products. For more information call Jim at 959-9155, email <jszyper@hawaii.edu>, or contact Dean Toda at (808) 587-0030, email <aquacult@aloha.com>.

Using Science to Assess Environmental Vulnerabilities
May 13th to 15th, 2003 — King of Prussia, PA

The conference, sponsored by the EPA, will bring environmental decision makers and researchers together to illustrate practical uses of recently developed approaches, tools, and decision support systems. Details and forms for abstract submission are available from <*http://www.reva-maia.org*>, or by contacting the Coordinator at e-mail: <conference@tpmc.com>.

North American Society for Oceanic History
May 29th to 31st, 2003— Bath, Maine

The 2003 NASOH conference will be held at the Maine Maritime Museum. Check <*http://www.ecu.edu/nasoh*> for upcoming details.

The Oceanography Society and Oceanology International Americas Conference
June 4th to 6th, 2003— New Orleans, Louisiana

The conference will feature presentations in marine science, technology, operational oceanography, policy, and education. For more information, visit <*http://www.tos.org/Meetings/2003mtg.htm*>.

PACON 2003
June 29th to July 2nd, 2003 — Kaohsiung, Taiwan

This symposium will focus on the theme of "Ocean Capital". PACON International is an organization of marine scientists, engineers, industrial organizations, and policy makers dedicated to sharing state-of-the-art marine science and technology and the appropriate applications of this technology. For more information, e-mail the conference organizers at <pacon@hawaii.edu> or visit the conference website at <*http://www.hawaii.edu/pacon/2003Table.html*>.

Hawaii Conservation Conference
July 10th and 11th, 2003 — Honolulu, HI

For more information, visit the conference website at <http://www2.hawaii.edu/scb> or contact Claudia Hamblin-Katnik, Hawaii Conservation Alliance; e-mail: <katnik@hawaii.edu>; phone: (808) 944-7133. Abstracts for papers or posters must be received no later than April 11, 2003..

Coastal Zone Management
July 13th to 17th, 2003 — Baltimore, MD

Topics of the conference include coastal management history, management responses to coastal hazards, and port and harbor management. For information visit <*http://www.csc.noaa.gov/cz2003*>.

Congress on the History of Oceanography
September 8th to 14th, 2003 — Russia

The Kaliningrad Museum of the World Ocean is inviting papers for this conference. The conference website is at <*http://www.vitiaz.ru*>.

Estuarine Research Federation Conference
September 14th to 18th, 2003 — Seattle, WA

The conference will consider the coming together of ocean forces, influences of the land, and the activities of humans. The attributes and influences on Pacific Rim estuaries will provide a special focus for the conference. For more information, contact Joy Bartholomew at e-mail <jbarth@erf.org> or visit <*http://www.erf.org*>.

Oceans 2003 (MTS/IEEE): Past and Future
September 22nd to 26th, 2003 — San Diego, CA

The program will reflect the diversity of the international underwater community. There is also a Student Poster program at the conference to encourage the participation of scientific and engineering students in professional conferences. For more information, visit <*http://www.Oceans2003.com*>.

Remote Sensing of Environment Symposium
November 10th to 14th, 2003 — Honolulu, HI

Sponsored by NASA, the theme of this year's International Symposium on Remote Sensing of Environment is "Information for Risk Management and Sustainable Development." An overview of the conference can be found at <*http://isrse.pdc.org*>.

Environmental Management of Enclosed Coastal Seas Conference, 2003
November 18th to 21st, 2003 — Bangkok, Thailand

The theme of this year's conference is "Comprehensive and Responsible Coastal Zone Management for Sustainable and Friendly Coexistence between Nature and People." Abstract submissions are due by April 30th, 2003. The conference website is at <*http://www.emecs2003.com*>.

The History of Science Society
November 20th to 23rd, 2003 — Cambridge, MA

The History of Science Society is soliciting proposals for sessions and contributed papers for its annual meeting. Submissions on all topics are requested. Proposals must be submitted through the website <*http://www.hssonline.org*> or on the annual meeting proposal forms that are available through the HSS Executive Office. All proposals must be received by April 1st, 2003. The organizers can be reached at e-mail <e-mail <meeting@hssonline.org>.

Ocean Research Conference
February 15th to 20th, 2004— Honolulu, HI

The Ocean Research Conference, sponsored by the American Society of Limnology and Oceanography and The Oceanography Society, will provide a forum for researchers to highlight recent advances with an emphasis on the integration of aquatic sciences as well as the breadth of ocean research including engineering, industrial, public policy and marine research. For more information, visit the conference web site at <*http://www.tos.org/2004OceanResearchConference.htm*> or contact Helen Schneider Lemay, Conference Manager, at phone: (254) 776-3550; e-mail <helens@sgmeet.com>.

Contents

Coming up in the next issues...

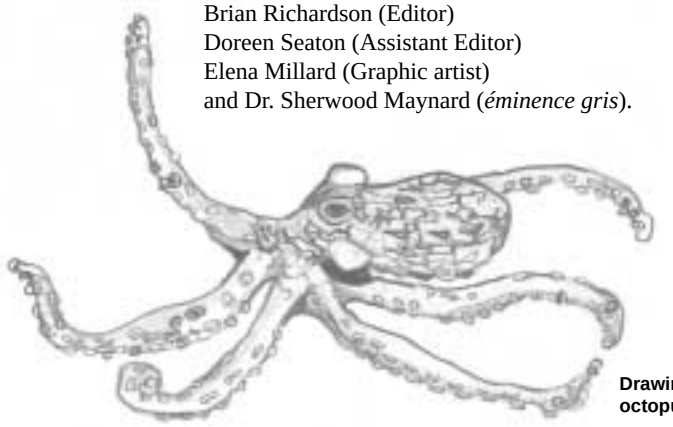
Book Reviews
Marine Related Courses for Fall, 2003

Seawords is the newsletter of the Marine Option Program at the University of Hawai‘i. It is published monthly (more or less).

The bi-weekly electronic calendar has been discontinued.
MOP students — be sure you are on your campus' MOP listserv.

Suggestions and submissions are welcome. Submissions can include articles, photographs, art work, or pretty much anything that would be of interest to the marine community in Hawai‘i and around the world.

Our web pages are located at <*http://www2.hawaii.edu/mop*>.
Our e-mail address is <seawords@hawaii.edu>.
The *Seawords* staff are:
Brian Richardson (Editor)
Doreen Seaton (Assistant Editor)
Elena Millard (Graphic artist)
and Dr. Sherwood Maynard (*éminence gris*).



Drawing he‘e pūloa, ornate octopus, by Elena Millard

March, 2003

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