Humboldt

The Magazine of Humboldt State University | Spring 2011

POSITIVE ENERGY

Students and faculty researchers from the Schatz Energy Research Center are building a renewable future today

Humboldt

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BACKGROUND PHOTO: Wildcat Ridge in southern Humboldt County, seen here from Mattole Road, is being considered as a potential site of a wind farm. The area, including nearby offshore sites, offers what researchers are calling "world class" wind resources. The wind farm could be a key component in a plan being developed by HSU's Schatz Energy Research Center for Humboldt County to meet nearly 100 percent of its energy demand with renewables within the next few decades.

ON THE COVER: HSU Schatz Energy Fellow and graduate student Meg Harper and a fuel cell test station designed and built by the Schatz Lab.

Spring 2011

from the President

TWENTY YEARS AGO, LOUIS Schatz had a vision related to hydrogen energy and was able to connect with an HSU professor who shared his interest. Who could have guessed where this partnership would lead?

With start-up funding from Schatz, Professor Peter Lehman and his students began work on a solar hydrogen project at HSU's marine lab in near-by Trinidad. Soon they were working to develop a better hydrogen fuel cell. Eventually, Schatz established a multi-million-dollar endowment at HSU which funds the Schatz Energy Research Center.

Today, the Schatz Lab has a new research building, 12 student researchers and 12 full-time staff members, and its successes include building the nation's first street-legal hydrogen car. It also designed a portable fuel cell and a hydrogen energy education program, each of which is used at other universities, and it built a hydrogen fueling station on campus. Teams from the Lab have worked on energy projects in developing nations.

I enjoy telling people about the Schatz Lab (see cover story, page 24), and not just because of its scientific breakthroughs.

For me, it is a great example of how one person's passion and desire to make a difference can impact so much and so many: scientific knowledge, how we live in the world, our students and our faculty who get to explore new ideas and apply them in meaningful ways. Schatz knew that his support of HSU would not only change HSU, it would change the world.

There are innumerable ways that you can make a difference at HSU, too. Gifts from individuals who are passionate about HSU provide the foundation which makes the difference between a good university and a great university. It is particularly gratifying to me that this is what happens, every day, through gifts we receive from our extremely generous alumni, parents and friends.

Each year, thousands of you respond to our letters and phone calls. These gifts—ranging from $20.11 to many thousands—support the student experience in vital ways. They fund equipment in our labs, special speakers, workshops and student research projects and presentations at conferences.

In addition, individuals create endowments to fund scholarships, often for students with interests or majors that they are particularly passionate about. Others, including many HSU faculty and staff, add to existing scholarship funds and to funds supporting specific academic programs. And last year, one parent, whose daughter has had a really good experience at HSU, handcrafted seven hardwood coffee tables for the student residence halls.

Your support is increasingly important as public universities, including HSU, transition to less reliance on public funding. Thank you to all of you who have made a gift to Humboldt, and please know that your donation is having a positive and lasting impact.

Sincerely,

Rollin C. Richmond
President

Humboldt

The Magazine of Humboldt State University

humboldt.edu/magazine

Humboldt magazine is published twice a year for alumni and friends of Humboldt State University and is produced by University Advancement. The opinions expressed on these pages do not necessarily reflect the official policies of the university administration or those of the California State University Board of Trustees.

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[Feedback]

THANK YOU FOR THE first-rate job bringing the diverse quilt that is HSU back to life for alumni, no matter how recently or long ago we graduated! From 9,000 miles away working as a Peace Corps volunteer in rural Thailand, I am lucky to have a mom who remembers to drop my issue of *Humboldt* magazine in the mail to me. From your engaging writing and excellent photography, I don't have to feel so distant from the university I still think of as "my school."

In particular, I was happy to see coverage of the Relight Redwood Bowl project in the Fall 2010 issue. I had the privilege to work alongside the likes of Sarah Schneider, quoted in the issue, as well as Profs. Steven Hackett and John Meyer and the rest of the HEIF team to secure funding for and promote the project during my time with Green Campus Program. Your acknowledgment of student and alumni successes is fantastic, and if the rest of the magazine weren't enough to hit upon my nostalgia, my friend Vitek jumped out at me from the inside back cover in the "Meet Humboldt" section.

Whether as a source of inspiration to work further to follow my dreams after graduation, or as a way to catch up on the great things my friends are doing, *Humboldt* magazine paints a picture any HSU alum can be proud of. Keep up the good work!

Kale Roberts ('09)
Peace Corps volunteer, Thailand 2010-1012

MANY THANKS FOR DAVID Lawlor's article "Fertile Minds" discussing the botany program at Humboldt St. I received my B.A. in botany in 1969 and studied with some of the legends who built the department—Largent, Anderson, Sawyer, Rasmussen, Jamison, and Walker, all of whom I consider my friends. When I got to Berkeley in the fall of 1969 I had such a strong background in botany that I didn't even have to take the courses required of other botany grads. I became a professor of botany and then later left academics and developed a career as a science writer, which I have done for over 30 years. I give all the credit for the success of my career to my teachers at Humboldt and Cal, but it was the astounding education I got at Humboldt to which I give most of the credit. I took courses that most universities didn't and still don't offer, from professors of almost magical dedication. Looking back, my decision to go to Humboldt St. (it was still a college then) and major in botany was one of the finest, and luckiest decisions in my life. Many thanks to Professor Lu and others who are carrying on this powerful academic tradition.

Dan Franck ('69)
Spencertown, NY

P.S. Your magazine should have more pictures of the campus for those of us who have moved far away.

EDITOR'S NOTE: *What an inspiring letter. Thanks! As for photos, check out a sample of our latest shots on Flickr at* ***www.flickr.com/humboldtstate****.*

LETTERS ARE WELCOME and may be published in upcoming issues of *Humboldt* magazine. Letters may be edited for length and clarity.

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A Summer of Sludge

Student Rehabs Oiled Birds in Wake of BP Disaster

Photo courtesy of © BP p.l.c.

WHEN BP'S DEEPWATER HORIZON RIG exploded in the Gulf of Mexico last April, it left thousands of oiled sea birds in its wake. Last summer, HSU Wildlife junior Stephany Helbig joined the rescue and rehabilitation efforts.

Stephany Helbig

At 20 years old, Helbig has spent nearly half of her life caring for animals. "I've been riding horses since I was 7, and being a veterinarian is something I've always wanted to do," she says.

When Helbig entered high school, she volunteered with the WildCare center in San Rafael, Calif. Although her school only required 20 hours of service, Helbig dedicated herself to the center for seven years as a volunteer, an intern and eventually a paid employee.

"One day, my boss told me I'd been nominated to go to Louisiana," Helbig says. "She said, 'You'll be working 12- to 14-hour days with one day off for three weeks minimum.

Once in Louisiana, Helbig experienced long, eventful days. "I was supervisor of the dry room where the birds come after they're washed," she says. There, she would tube feed the birds Emeraid —a specially formulated food for critically ill animals— and check their temperatures. "If I got a bird with a body temperature under 100 degrees, that bird was considered to be in critical condition."

The center in Louisiana was set up in a large warehouse. "The whole place had this smell of rotten fish, oil, bird droppings and Dawn soap," Helbig says. "The birds would come from 'Oiled World' to 'Wash World,' to 'Dry World,' to 'Clean World.' That's what we named the different areas in our center."

For three weeks, Helbig's world was one of non-stop activity, feeding birds and checking their temperatures every hour. Then there was the paperwork, keeping a chart for every animal she cared for, recording times, temperatures and feedings.

Despite the long days, Helbig enjoyed her work. Birds she cared for included laughing gulls, white and brown pelicans, snowy egrets and roseate spoonbills. "You get to see how beautiful and how powerful they are with your own eyes," she says.

A northern gannet is cleaned at the Theodore Oiled Wildlife Rehabilitation Center in Theodore, Ala.

Revitalizing Wildland Education

THE U.S. DEPARTMENT OF AGRICULTURE has awarded over $45,000 to Humboldt State's Wildland Resources program to help recruit students, assess course materials and adopt new technologies.

HSU currently has the only undergraduate Wildland Resources degree program in the state.

The overall goal of the project is to push rangeland education into the future, says Susan Marshall, professor of Forestry and Wildland Resources at Humboldt State. HSU's portion of the project will focus on recruitment and course assessment.

"Wildland" describes wide-open spaces, including meadows, prairies, deserts and tundra. Students who study these areas learn how to manage and conserve these important ecosystems and the services they offer.

Federal agencies that work with wildland, such as the U.S. Forest Service, predict that half of their workforce will retire in the next 5 to 10 years, creating an immense demand for qualified graduates. However, the project hopes to not only graduate students, but to give them a cutting-edge education.

"Our students get jobs," Marshall says. "They're in high demand and they have the skills, but we want to be even more progressive." For Marshall, that means adopting technological advances to complement traditional teaching methods.

"Technology can do amazing things. With satellite data, you can get a really good idea of the effects of drought, for example. But it's also essential to have people on the ground, who know what they're doing and what they're talking about. Professional judgment based on experience is invaluable. The primary focus is to train highly competent professionals," Marshall says.

In addition to revitalizing wildland resources education throughout the nation, Marshall sees the project as a way to strengthen the program at Humboldt State. "We intend to increase enrollment by 40 percent over the next five years with this boost from the USDA and collaboration with our sister institutions," she says.

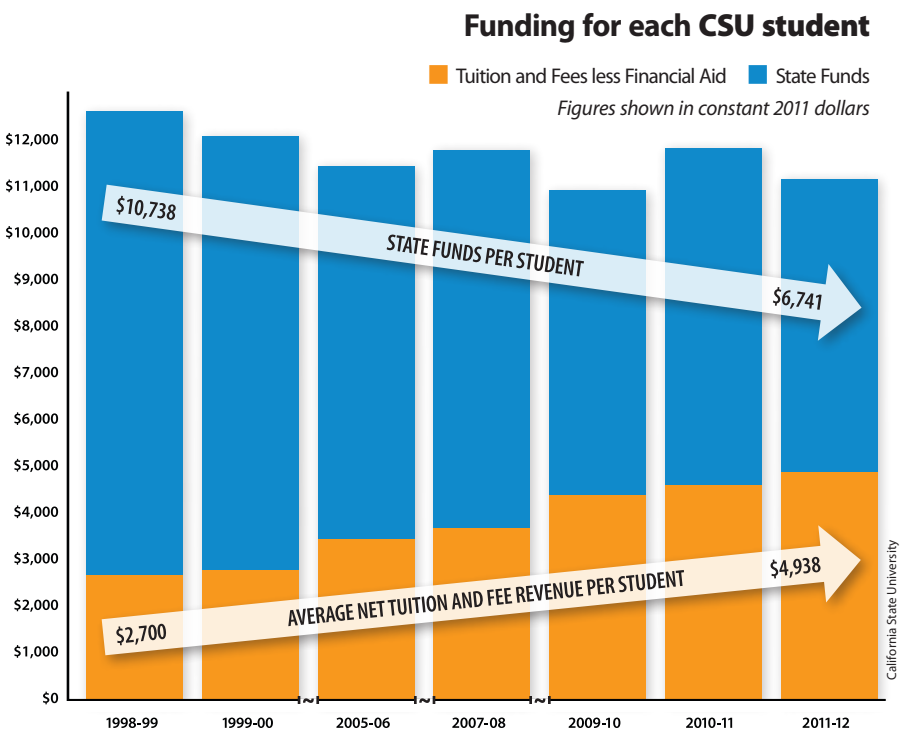
Humboldt County rancher Peter Bussman discusses grass quality with Wildland Resources students in Arcata Bottoms. Students will take samples and analyze the grass for nutrient contents.

State Higher Ed Faces Severe Budget Cuts

EVEN AS THE ECONOMY is starting to recover, California's public universities are facing severe budget cuts in the upcoming year. State leaders are working to address an estimated $28 billion shortfall. In January, newly elected Governor Jerry Brown proposed a $500 million reduction for both the California State University system (which includes HSU) and the University of California system. The governor also proposed a $400 million reduction for the state's community colleges.

The cuts would reduce CSU funding to about $2.2 billion, the same level as 1999 even as the system serves 70,000 more students. And it may be a "best case" scenario. The governor plans to ask voters to extend temporary tax increases, and has warned that higher education could face additional cuts if the effort fails.

CSU Chancellor Charles B. Reed said the impact will be felt well beyond the campuses. "While we understand the administration has limited options, higher education is the state's main economic driver, and we cannot improve our economy without an educated workforce," he said. "The magnitude of the budget reduction in one year will have serious impacts on the state's economy, limit access for students seeking entrance into our universities, and restrict classes and services for our current students."



As state support declines, students shoulder an increasing share of the cost of their education.

Collectively, the state's three systems of public higher education graduate 272,000 students each year, and educate more than 3.5 million. The economic impact of CSU-related spending alone supports nearly 150,000 jobs and generates $1 billion in tax revenue for state and local governments.

Bear-Proof? Student Tests Wilderness Food Containers

Photo Courtesy of Kate McCurdy

Kate McCurdy

IN THE OLD "YOGI BEAR" cartoons, you had to be "smarter than the average bear" to steal a camper's food. But Kate McCurdy ('06, M.S. NRPI), found that improperly stored food can attract even the average bear to a backpacker's campsite.

In 2004, when Yosemite National Park began requiring backpackers in certain areas to use bear-resistant food canisters, McCurdy, a bear biologist at the park, was confronted with the question of whether the canisters were actually effective. She came to work with Steve Martin at Humboldt State to try and find the answer. Recently, the findings of her thesis research were published in the peer-reviewed journal, *International Journal of Wilderness*.

"Kate understood the biology part of it. She realized she needed to understand the human dimension better," Martin says. "This study is a really good example of what we do well in this department—at the graduate level, but also the undergraduate level—we bridge the natural sciences and the social sciences really well."

Data relating to park visitors' uses of and attitudes toward bear canisters were collected using trailhead and internet-based surveys. From that information, McCurdy found that bear-resistant food canisters could be very effective if used properly. However, she found that overflow or improper use limited the containers' effectiveness.

After McCurdy completed her thesis, the she and Martin produced a pair of articles: one focuses on theory and the other on application.

"It has such useful implications for public land managers. It looks at how canisters are being used and what the issues are, and makes a number of concrete recommendations" Martin says. "We know now that simply requiring bear-resistant food canisters isn't enough. That's a real useful piece of information."

Kelly Givins organizes and maintains fossil specimen drawers for student labs in her role as curator of the Department of Geology's fossil collection.

HSU Student Gives New Life to Prehistoric Fossils

A COLLECTION OF CENOZOIC vertebrate fossils from Humboldt State University's Department of Geology has a new home at the University of California Museum of Paleontology (UCMP), thanks in part to graduate student Kelly Givens.

HSU's fossil collection had been waiting for a student like Givens to come along when she volunteered to manage the department's fossil specimens, which include several specimens used for teaching.

The Cenozoic vertebrate collection is a unique contribution to the museum. "It's important because it's from this region, which might not already be represented at UCMP," Givens says. "It benefits everybody if scientists can access these fossils for study."

The collection contains specimens from vertebrates from about 5.4 million years ago to 12,000 years ago, during the Pliocene and Pleistocene Epochs. It includes fossils of late Cenozoic birds, sea otters and sharks. The collection also presents a mystery.

According to Geology Professor William Miller, most of the formations where the specimens were collected are shelly deposits. Such deposits are considered high-energy because they are shaped by the constant motion of tides and waves. However, in this collection there are fragile bird bones mixed in with these high-energy, shallow marine shelly deposits.

"It's a paleontologic puzzle," Miller says. "I don't know how any of those delicate bird bones would have gotten mixed up and churned up like that." Miller hopes that by opening the collection up to scientists, some answers might be found.

Read about HSU's world-class vertebrate collection on page 18.

This Pliocene era shark tooth was recovered on a class field trip in 1969, just south of Bridgeville.

Homecoming

Bigger, Better, More Humboldt

A BIG THANKS TO the hundreds of alumni, parents, families and students who made their way to campus for the 2010 Homecoming & Family Weekend. We had a great time and hope you did too. It was great catching up over campus tours, the Arts Showcase, the pregame festivities and, of course, the big game. The Jacks won big over Dixie State and the party went all night at the Homecoming Dance in the Depot.

Mark your calendar for the 2011 Homecoming & Family Weekend.

Sept. 30 – Oct. 2, 2011

Events and activities include:

- **Golden Grad Celebration**
- **Campus Tours**
- **All Alumni Reception**
- **BBQ & Tailgate Party**
- **Jacks Football**
- **Arts Showcase**

Make plans to join us at this year's homecoming! Check out **humboldt.edu/homecoming** for photos, schedules and more!

Pathway to Success

Social Work Offers HSU's First Online Degree

HSU IS CHANGING THE way students can earn a degree, thanks to the efforts of the Department of Social Work. Designed to help rural and tribal social workers already on the job, the Title IV-E Pathway Project will offer the University's first fully online degree.

Social service offices in tribal and rural areas of Humboldt and Del Norte counties are often understaffed because of their geographical isolation. Turnover is high for many social workers from outside the community. Those within the community face hurdles like long commutes to school, full-time jobs and family life.

For students enrolled in the Pathway Project, like Merris Obie, the chance to earn a degree online poses a unique opportunity and challenge. For the past 15 years Obie has been running substance abuse prevention programs, primarily with the Hoopa, Wiyot, Yurok and Karuk tribes.

"I'm a returning student and, after 20 years away, this technology is new to me. I've never taken an online class before," Obie says. "It's uniquely challenging."

Obie, who took time off from school to raise her family, is now in college at the same time as her 23-year-old son and 20-year-old daughter, who is also majoring in Social Work. "I've always taught my children that if you're not part of the solution in your community, you're part of the problem," Obie says.

Currently, the California Social Work Education Center at UC Berkeley, the nation's largest state coalition of social work educators and practitioners, is working with the HSU Social Work Department to move all required classes online. The pilot is funded by grants from the center. Humboldt State, CSU Chico and CSU San Bernardino have teamed up to launch this new program that seeks not only to help people earn degrees, but to also ensure quality service in rural, underserved areas.

"Studies have demonstrated that when we have degree-holding social workers in public child welfare, we have fewer children taken away from their families," says Pamela Brown, Pathway Project coordinator and professor of Social Work at HSU.

Teela Robison, manager of the Temporary Assistance to Needy Families for the Yurok Tribe (right) with Delores Maylassen and her young niece.

The initial cohort in the project consists of 22 students. Both CSU Chico and San Bernardino have six students each. HSU has 10 students enrolled: five county and five tribal social workers.

Students in the project have their tuition and textbook fees covered and are given tutoring and a mentor for support. In exchange, students agree to work for county Child Welfare or Indian Child Welfare for six months per every 15 units they take.

The program is not just about improving social work in underserved areas, it also aims to build bridges between formal social work education and tribal culture.

Geneva Shaw, assistant director of social services for the Yurok Tribe, earned her master's in Social Work the traditional way and is keenly aware of the difficulties faced by tribal social workers pursuing degrees. As a mentor for students in the Pathway Project, she helps address the inconsistencies between formal social work and the needs of tribal communities.

"For example, a lot of times our kids are literally in class with other children in our case load," Shaw says. "This is a relationship in Native communities that formal social work doesn't consider."

Shaw says that educating others about the unique, cultural needs of tribal members receiving social services benefits everyone involved – especially tribal members. Cole Cross, an Indian Child Welfare Act advocate, agrees. "Without that understanding of life on the reservation, social workers can actually scare tribal families. A lot of times, our presence can bridge that gap. It can be very spiritual and very cultural."

> **The new program seeks not only to help people earn degrees, but to also ensure quality service in rural, underserved areas.**

Anticipating the success of both the online bachelor's degree program and the original Pathway Project students, the Department of Social Work is also creating an online master's degree program, which could launch spring 2012.

campus
scene

Morning at the College Creek complex

THE NEW COLLEGE CREEK COMPLEX is made up of 97 apartments, complete with kitchens and furnished living areas, all located next to a community center and NCAA soccer field.

The apartments are designed to make life easier for all residents. Their location on the southwest corner of campus offers convenient access to the school's academic core and recreational areas, while the proximity to downtown Arcata makes it a breeze to get around on foot or bicycle.

- Three stories, 430 residents and a great place to sit next to the fire. The complex features a common area complete with a massive indoor/outdoor fireplace.

- Built to NCAA standards, the artificial turf field is constructed from recycled rubber and is 20 yards longer than the Redwood Bowl field.

- The women's soccer team took on Sonoma State in a 1-1 draw in the first game played on the new field. In addition to soccer, intramural teams and club sports have access to the field, as do students looking for a pick-up game of Ultimate Frisbee.

▶ The 15,000-square-foot Great Hall, located behind the big clock, is the newest gathering space on campus.

▶ Just in time: The College Creek complex opened its doors on Aug. 23. The same day HSU welcomed nearly 1,300 freshman to campus.

▶ "This is definitely the best dorm on campus," resident Joseph Uglick told *The Lumberjack*, HSU's student paper.

▶ This year 2,012 students live on HSU's campus. Thanks to the new apartments, that's up from last year's 1,570.

▶ Included in the complex is the College Creek Marketplace, which opened in February. It features fresh produce, prepared foods and lots of convenient meals to fuel late night study sessions.

steel crazy

25 Years With The Exuberant HSU CALYPSO BAND

by Jarad Petroske

"IT'S SUPER FUN TO DANCE TO," says Laura Emerson in the lobby of the John Van Duzer Theatre. She's there with fellow Anthropology student Uri Grunder, and the pair will be working up a sweat when the Humboldt State Calypso Band takes the stage.

The two are part of a growing crowd out front on the night of the fall semester percussion concert. For the Calypso Band, tonight means gearing up for the big 25th anniversary show, "Masters of the Steel Drum," set for April 30. But right now, eager audience members are waiting out the next 15 minutes until percussion students take the stage and guide listeners through an evening of classical and contemporary percussion works. The audience will get an auditory tour from South America, to Cuba to India, with a stopover in Africa, all before landing in Trinidad and Tobago, the birthplace of the calypso sound.

Hands move in unison as melodies and rhythms are pounded out during the Fall Percussion Concert in the Van Duzer Theatre.

TONIGHT'S SHOW IS JUST one venue for catching the Humboldt State Calypso Band. The group regularly plays shows throughout the county and is a fixture of the biannual percussion concerts. Even their rehearsals attract attention when musical notes drift from the Van Duzer Theatre out into the art quad.

Calypso and its use of steelpans create a distinctive, complex and widely appealing sound. It has its roots in the blending of African, indigenous Caribbean, Spanish, French and British cultures. The sound created by the early Calypsonians was as musically revolutionary as it was socially—its origins can be traced back to the emancipation of Caribbean slaves and their struggle to integrate with white society.

Today, calypso has risen to become the national symbol of the Trinidadian and Tobagonian people. That calypso should find a place at Humboldt State is due to the effort of a dedicated group of student musicians led by a passionate professor, Eugene Novotney.

Photo courtesy of Eugene Novotney

Professor Eugene Novotney, lower right, plays the band's first, and at the time, only, steelpan. Accompanying him are Mike LaBolle on vibraphone, David Peñalosa on congas, Demetreous Bogdonos on drumset and Gary Davidson on electric bass. The group now has more than 30 pans and only uses acoustic instruments.

The journey began for Novotney while he was in graduate school. He had spent years studying music and percussion in the European tradition, and while he found the traditional definition of percussion fulfilling, it was also limiting. "In so many cases, the percussionist is one guy by himself at the back of the band, moving from triangle to wood block to cymbals," he says.

When he was growing up, Novotney had a couple encounters with the sound of steelpans in popular culture (thanks to a record album purchased by friends while on a Caribbean cruise, and the always-illuminating "Sesame Street"). When he began his graduate studies in Percussion, Composition and Ethnomusicology at the University of Illinois at Urbana-Champaign, he was able to experience the real deal—a growing movement of university-based steel bands whose sound matched as closely as possible that of the indigenous melodies and rhythms of the original Caribbean players. This wasn't Disney's Little Mermaid stuff, this was real steelpan music happening at the university level—in the Midwest of all places.

"It was totally exotic in my mind and I thought, man, that sound only exists in the Caribbean, but there I was in a cornfield in Champaign, and there's a full steelband," Novotney says.

Novotney's commitment to the art form would be solidified when he was introduced to Clifford Alexis, a Trinidadian who had toured the United States with the National Steel Orchestra of Trinidad and Tobago. At the time Alexis was establishing the steel pan scene in the Minneapolis and Chicago areas and came to campus to tune the University's drums.

Novotney recalls, "We had this room where all the steel pans were set up. I took Cliff down there and opened the door. Instantly he's touching the drums, inspecting them, this that and the other." At this point, all of Novotney's attempts at conversation had been met with gruff yesses and noes.

"My last attempt at small talk with him was this: 'Cliff, which instrument are you gonna tune first?' He turned around and looked at me like I was the dumbest person he ever met. He just pointed to them all, and said 'dis one, man.'"

In other words, to Alexis, that whole room full of instruments was one thing. He didn't think of it as going from instrument to instrument, he was there to tune the whole band.

"That moment right there was one of the defining moments of my life. Right then and there I knew I had to make this a large part of my life," Novotney says. "I had access, not only to these instruments, but to this guy who was the real thing. I still keep in really close contact with Cliff; he's become a mentor figure in my life."

Fast forward to 1985 and Novotney is a part-time music instructor at Humboldt State.

After some wheeling and dealing (literally—it included selling a Chevy Nova), Novotney and a group of seven players had pieced together the forerunner of the Humboldt State Calypso Band, complete with a single steelpan. The rest of the ensemble was made up of instruments the university already owned: marimba, vibraphone, electric bass, congas and drum set. But there was something in the air, and the HSU community was eager to hear more of this steelpan sound. Soon crowds were sitting in on rehearsals and, despite

CLOCKWISE FROM TOP LEFT: Modern instruments typically bear a chrome finish like these instruments, but it's not unusual to see pans still wearing their original paint. ⋮ Nick Duckworth feels the grove as he hammers out the bass line. ⋮ Professor Eugene Novotney leads the band through rehearsal. ⋮ Sounds from band practice fill the Fulkerson Recital Hall.

"I'll never forget the feeling we had when we cranked into the music at the first concert. The room exploded with energy."

Professor Eugene Novotney

Show your support for Calypso at HSU

"THE PANS ARE TUNED with a hammer and they're played with mallets. Every time they're struck, they get a little more out of tune," says Eugene Novotney, Humboldt State Calypso Band director. Add to that the damp coastal climate of the North Coast and you've got a recipe for quickly deteriorating pans. That's why the Calypso Band is busy raising funds to refurbish the entire collection, which includes more than 30 hand-crafted instruments.

You can help ensure the sounds of calypso continue to resonate across the hills and stairs of HSU.

If you would like to support the Calypso Band and help repair their instruments, please send your donation to the Gift Processing Center, Humboldt State University, 1 Harpst St, Arcata, CA 95521 or go online to **humboldt.edu/giving**. Be sure to mention the Calypso Band in the memo line.

THE FIRST 250 INDIVIDUALS who contribute $50 or more will receive a copy of the Calypso Band's 20th Anniversary CD recorded live in concert at HSU in 2006. (For tax purposes, the CD's value of $10 will be deducted from your gift).

the fact that Novotney was unsure if the group was ready for a public performance, the group was on the program for that year's big end-of-the-year percussion concert.

"After the first set we took an intermission and came back with this band. And it was an unbelievable response. I'll never forget the feeling we had when we cranked into the music at that first concert. The room exploded with energy."

The Calypso Band quickly became a fixture at HSU and eventually Novotney was hired as a full-time faculty member. The group, made up mostly of students with a major or minor in Music at HSU, has since participated in every campus percussion ensemble performance in addition to touring extensively throughout the West Coast.

Novotney's passion for music and teaching was recognized in 2006 with a prestigious Wang Family Excellence Award by the California State University Board of Trustees. He used the $20,000 prize money to continue building up HSU's store of exotic instruments, buying a 12-piece Balinese Gamelan (Gamelan is an Indonesian word that signifies an ensemble of gongs and metallophones). And Novotney's commitment to Calypso continued, stronger than ever, through a dozen trips to Trinidad and Tobago, including stints performing in Trinidad's National Panorama Competition and judging for Pan Trinbago, Trinidad and Tobago's national steelband organization.

NOW, 25 YEARS AFTER the group's founding, the mood backstage at the Van Duzer is one of relaxed anticipation. Long rows of steelpans catch stage lights as everything falls into place behind the curtain. Tucked into dressing rooms and quiet corners, performers work on the final touches of the group's five-song set.

Many of the Calypso Band's players are also appearing with the night's first two groups, the HSU Percussion Ensemble, also led by Novotney, and the HSU World Percussion Group, directed by Music instructor Howard Kaufman. The musicians have been rehearsing since 9:30 that morning.

"I practice my butt off, pretty much. Generally these little forearm muscles get really, really sore," says Hannah Franzen, a three-semester Calypso Band member. She says the workout is well worth it.

"It's the whole experience: playing with the people, Eugene directing it—because he's an amazing instructor," says Franzen, who plays Double Seconds, two drums with 15 notes in each. "I've never been a part of anything like this before. It's phenomenal being a part of this sound."

Tricia Baxter, one of the group's four bass players ("bass" meaning its steelpan equivalent, see sidebar), offers her take on the group's appeal. "I particularly like playing with this group because we're representing the traditional sound, whereas a lot of other people take it in another direction."

The crowd has come prepared. At the intermission, stagehands lower the orchestra pit to make room for dancers at the foot of the stage. Eager audience members fling aside fleece jackets and change into strappy sandals or just go barefoot.

Soon, the 39 members of the band are in place and Novotney counts off. Drumset player John Thomas kicks off the rhythm on the high hat and in just a few measures—boom!—the room explodes in a wall of sound and a massive cheer lets up from the dancing audience. The Calypso Band had begun, and anyone within a hundred yards of the Van Duzer Theatre knows it.

Dissecting calypso

THE CALYPSO BAND GETS its unique sound from the famous steelpans of Trinidad and Tobago. But musicians don't consider it a drum. The name comes from the raw 50-gallon steel oil drums that are deconstructed and transformed into fine-tuned instruments. Once the process is complete they are properly called steelpans, or just, pans.

There are several pans that make up a traditional steel orchestra. Here's what can be found in the Humboldt State Calypso Band:

TENOR The tenor pan is formed from a single barrel and includes 28 chromatic notes arranged in a "circle-of-fifths" pattern. It is the soprano voice of the steelband, and its primary function is to play the melody.

DOUBLE TENOR Double Tenors are formed from a pair of barrels, and like tenor pans, are struck with thin rubber mallets. Their range is slightly lower than that of the tenors, and they provide the mezzo-soprano voice. Their function is to reinforce the melody and play countermelodies.

DOUBLE SECONDS This instrument is also a double drum setup, with an alto range. It is the instrument that plays the chords and provides the harmonies to the arrangements.

CELLO Focusing on the lower harmony as well as low counter-melody, the cello has a pitch of baritone. It has a three-drum configuration and is played with thick rubber mallets.

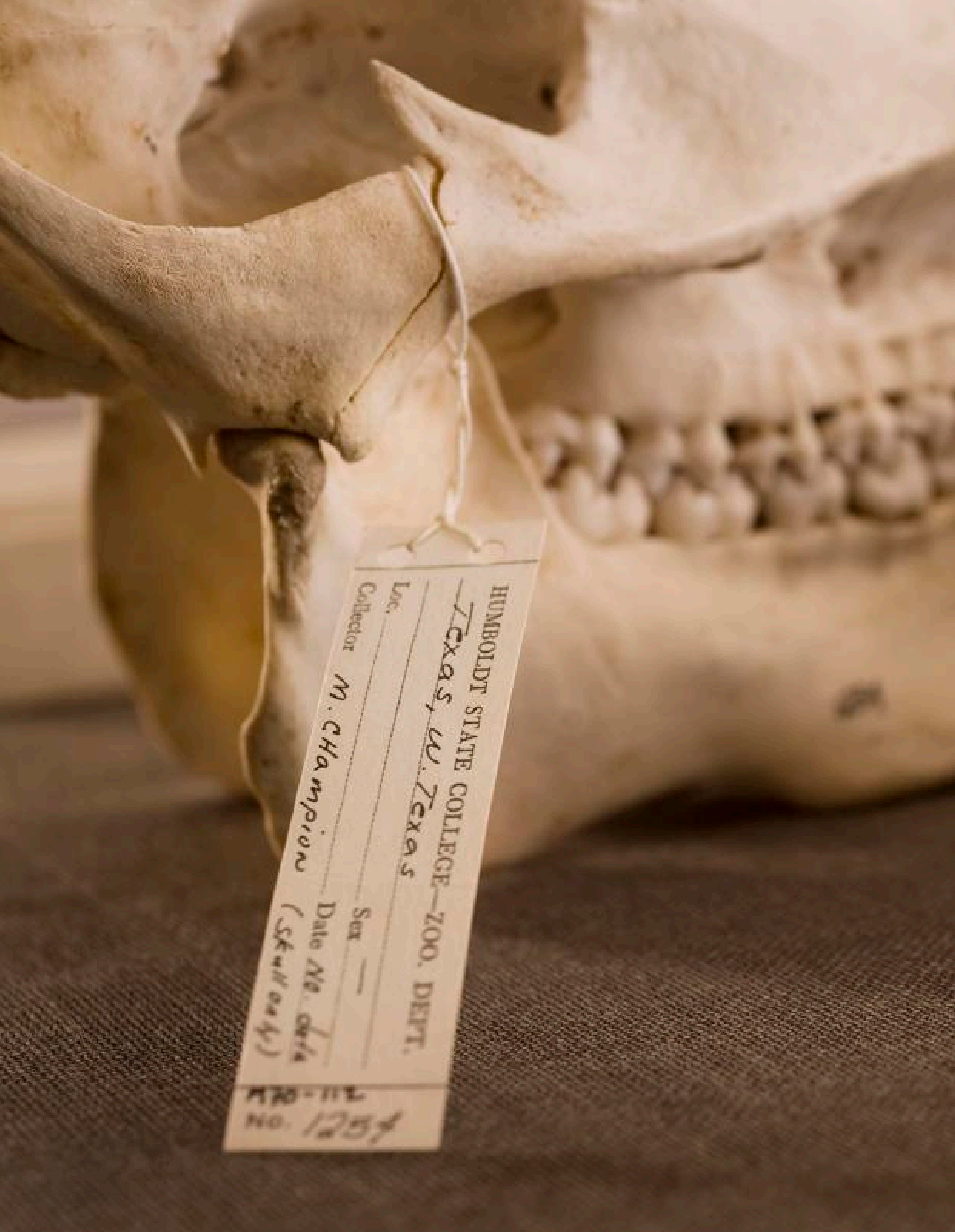
BASS Like all steelpan instruments, the bass pans were developed in the mid-20th century, making steelpans the most recent addition to the catalog of acoustic instruments. Bass pans are struck with large mallets topped with large, sponge rubber balls. They are responsible for bass lines and are the foundation of the steelband.

BUT WAIT THERE'S MORE HSU's Calypso Band also includes drumset, conga and a host of percussion instruments that give the band its immersive sound. Collectively, the rhythm section is known as the **"ENGINE ROOM"** of the steelband.

Celebrate the Humboldt Calypso Band's 25th anniversary performance with the special presentation, Masters of the Steel Drum, featuring Clifford Alexis, on Saturday, April 30 at 8 p.m.

For tickets visit **www.humboldt.edu/centerarts** or dial 707-826-3928.

Hear the Humboldt Calypso Band in action and download ringtones to your phone at **magazine.humboldt.edu**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DOWN TO THE Bone

World-Class Vertebrate Collection Named for Longtime Manager

by Sharon Levy

Humboldt State University Vertebrate Museum

TOP LEFT: Anna Ulch holds the tiny skeleton of a marsh shrew. Ulch meticulously rearticulated the skeleton as part of her work with the collection.

TOP RIGHT: Timothy Lawlor managed HSU's vertebrate museum for 32 years.

BOTTOM: Zoology students Kylie Washer and Anna Ulch inspect a piece of the lower jaw of Hubb's beaked whale.

No.

THERE'S A NEW AND unwieldy addition to HSU's vertebrate collection: the complete skeleton of a young gray whale. Thor Holmes, the collection manager, is working with two student volunteers to find the best way to store it. And as they grapple with the great streamlined skull and pack away the vertebral discs—wide as dinner plates—the students are doing more than an interesting project related to their area of study. They're carrying on a longstanding Humboldt tradition.

Humboldt State's impressive vertebrate collection—dominated by mammals, though a significant number of samples are from reptiles or amphibians—has been built over these many years through the efforts of students. It's a unique culture of collecting and curating specimens that was started by Tim Lawlor, a professor who oversaw the university's collection for 32 years. Among his many students was Holmes.

Under Lawlor's long leadership, the vertebrate collection grew into a major asset, expanding from fewer than 800 holdings to more than 8,000. Today the collection contains more than 15,000 specimens.

The secret was Lawlor's uncanny ability to recruit student assistants who possessed just the right stuff—who had a fascination with natural history that made the work of cleaning bones a thrill, and who considered the stink of rotting carcasses irrelevant.

Lawlor passed away last April, and this year the collection was renamed the Timothy E. Lawlor Mammal Collection in his honor.

During his time on the HSU faculty (1969 - 2001), Lawlor gave students the opportunity to manage the Humboldt mammal collection themselves, under his exacting direction. Many have gone on to become professional biologists and collection managers at prominent museums and universities. Among them: Jim Dines, now at the Los Angeles Museum of Natural History; Bob Jones, now retired from UC Berkeley's Museum of Vertebrate Zoology; Paula Guthrie, curator at the University of Wisconsin's museum; and Bill Gannon, collection manager at the Museum of Southwestern Biology, at the University of New Mexico at Albuquerque.

Holmes, who now manages the collection, recalls arriving at HSU as a mammal-obsessed but otherwise aimless graduate student in the 1970s. Then he met Lawlor, the man he affectionately calls "coach," whose influence transformed his life.

"The coach demanded excellence, and he drew it out of us," Holmes says.

After his intense, hands-on experiences working on the HSU collection, Holmes went on to earn his doctorate at the University of Kansas. He spent most of his career there managing the mammal collection, which is one of the most extensive in the world. After he retired he came back to Humboldt as a part-time faculty member. He says the chance to shepherd the collection that had launched his career, and to teach in what had once been Lawlor's mammalogy course, was one he couldn't turn down.

Bill Stanley went straight from his master's work at Humboldt to the position of collection manager for mammals at the Field Museum in Chicago, a job he still enjoys more than 20 years later.

Stanley recalls the way Lawlor's student crew rescued him from despair during his undergraduate days in the 1980s. He had grown up in Kenya and had dreams of working with big game animals, but the standard wildlife management coursework left him wanting more. He was walking past the Science C building one afternoon when he saw a group of students cleaning a whale skull and asked if he could help. Once all the flesh had been scraped from the skull, Stanley asked what else he could do. Bill Gannon, then a graduate student acting as collection manager, pointed him toward a line of 55-gallon drums, each of which held a rotting seal carcass, and suggested he clean the meat off the bones.

"I was enthralled," Stanley says, "because I was able to produce a clean skull or skeleton out of decaying goop. I was enthralled that the data we were gathering would contribute to our understanding of the pinnipeds of the world. And I was enthralled mostly because of the band of misfit geeks that hung out at the museum and encouraged me to do all this."

The Timothy E. Lawlor Mammal Collection contains many rare and exotic specimens, including: (clockwise from below left) a duck-billed platypus, a hollow-faced bat, a feather-tailed glider, a tarsier, an echidna and a golden lion tamarin.

Stanley fondly remembers walking into the collection room to find Gannon working. "I couldn't believe he could be so off the wall, and at the same time be taking such good care of this important collection. It was then relatively small, with regard to numbers of specimens, but already held one of the best existing collections of marine mammal skeletons, and of Great Basin mammals."

Lawlor's students enjoyed what they were doing, sometimes in eccentric ways, but all were driven to do serious work studying or curating mammals. Because so many biologists Lawlor mentored went on to work as museum professionals, he was able to trade specimens and build up an unusually diverse teaching collection. Mammalogy students at Humboldt can hold the skulls and skeletons of rare creatures from around the world—including platypus, tree sloth, lemur and wombat.

Students often joined Lawlor on field trips to trap and collect small mammals. He used his specimens to chart the rise and fall of different animals as habitats shifted through time, and to understand the modern impacts of logging and climate change. The collection room in Science C holds thousands of skins of mice, shrews, chipmunks and squirrels, carefully labeled with the animals' physical details and location.

"Some people see this as a room full of bad karma," Holmes says. "But these specimens are priceless, in the sense that they represent a slice of time to which we can never return. They are vouchers for the existence of that creature in that moment, in that place. They're not only key to our understanding of how animal populations change through space and time, they hold the answers to questions we haven't even thought of yet."

Stanley, who uses techniques he learned from Lawlor to study small mammal populations in the mountains of Tanzania, agrees. New tools, like analyses of DNA and isotopes of carbon and nitrogen from stored bones or skins, can now reveal ecological change at a level of detail that became possible only recently. "I'll pick up dead squirrels by the roadside on my way to work," he says. "People ask, when will you have enough squirrels? The answer is never, because it takes large samples to test hypotheses about the ways populations change."

Anna Ulch, who graduated last fall with honors in zoology, is a prime example of the kind of student drawn to work with the collection. She first glimpsed some of the specimens when her mammalogy class took a tour.

"That day I got my hands on a lion skull," she remembers, "and I knew I wanted to do this." Her first task as a volunteer was to label clean chipmunk bones (using her tiniest handwriting), and she soon worked her way up to preparing newly dead specimens. The delicate skeleton of a shrew is one of Ulch's contributions.

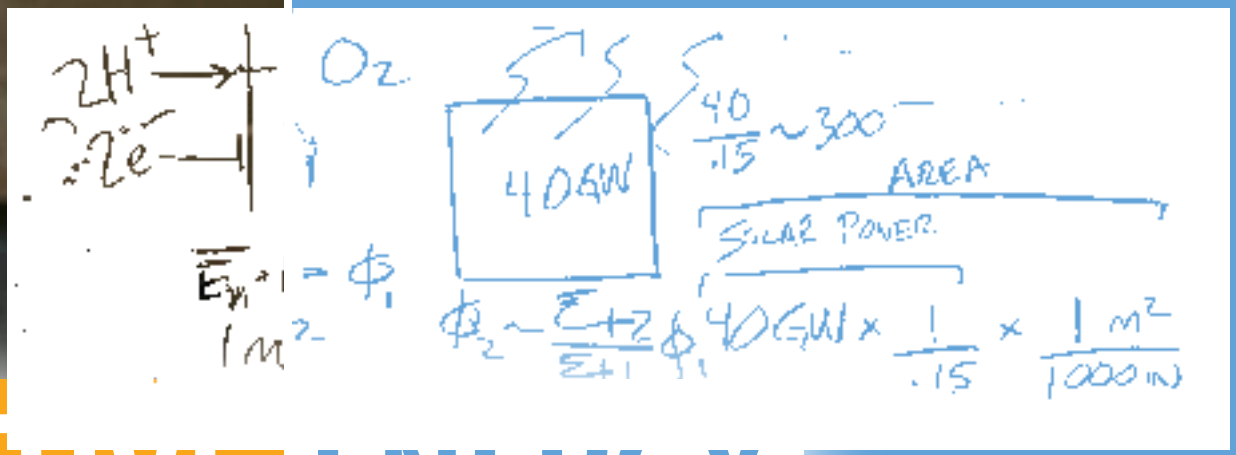
Ulch displays the skull of a young beaked whale, a rarity that she helped to collect. The youngster had a row of vestigial teeth, fascinating because beaked whales gulp their food—usually squid—whole. In this species, teeth are just for show, a way for males to attract mates.

Her work with such specimens has given Ulch new direction. She always knew she was interested in animals, but her experiences with the collection have given her a strong focus on understanding the lives of marine mammals. She'll be going out into the job market with some unusual skills, including an ability to necropsy dead seals and whales.

Perhaps most memorable for Ulch was the trip she and another student made with Holmes to document the carcass of a blue whale that washed up on the Mendocino coast in October of 2009. They waded through surf to reach the whale, and found that it had died of wounds suffered in a collision with a ship. They collected blubber samples and made measurements. Ulch climbed onto the whale's flukes, then walked the length of its great body. Holmes recalls watching his two mesmerized students exploring the giant carcass as one of the high points of his teaching career. Says Ulch, "I never thought I'd get this chance."

ABOVE: Vertebrate Museum Collection Manager Thor Holmes handles a polar bear skull. RIGHT: Biological Sciences student Amanda Coleman, foreground, prepares for an exam in her mammology course. Students must identify 83 North American specimens for their final test.

FACING PAGE FAR LEFT: Student Anna Ulch and the skeleton of a Risso's dolphin that she and other students assembled. The process of rearticulation, as it is known, was for a comparative anatomy project. RIGHT: Large collections of a single species, in this case California sea lion skulls, can reveal variations that appear in populations over time.



POSITIVE ENERGY

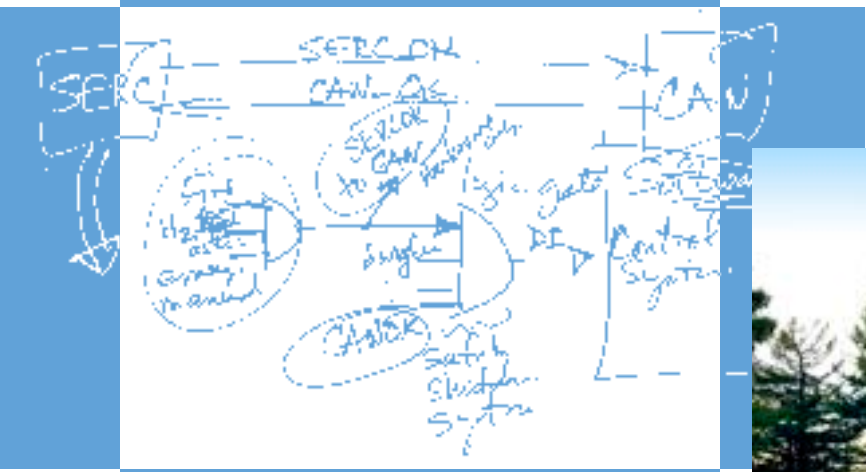
The Schatz Energy Research Center is Building a Renewable Future Today

By Jarad Petroske

STEP INTO THE MAIN office of the Schatz Energy Research Center, and it's easy to get swept up in the buzz of activity. Researchers at computer stations are busy analyzing data or poring over government regulations. Students run experiments at banks of hydrogen fuel cells. The center's director, Peter Lehman, is finishing a proposal to analyze a method of producing cheap, clean and readily available biomass fuels (a process called torrefaction; more on that later.)

For 20 years, cutting edge research into renewable energy has been taking place behind the modest façade of the University Annex, a sprawling building that served as Arcata's Trinity Hospital until 1968. Over the course of two decades, the lab has grown to include 12 full-time staff members, 12 graduate and undergraduate research assistants and operates with a yearly budget of about $1 million. Now, the Schatz Lab has moved into its own state-of-the-art building, just across from the Campus Center for Appropriate Technology. The new building has more breathing room, bigger lab spaces, a central-campus location and serves as a showcase to the center's commitment to sustainability—the facility is built to LEED (Leadership in Energy and Environmental Design) Gold-equivalent standards. The new structure is HSU's first donor-funded building, drawing on funds from the estate of Louis Schatz, the man who started it all with a gift in 1989. It represents a turning point in a 20-year existence that has steadily built on one success after another.

Graduate students and Schatz Energy Fellows Brendon Mendonca (left) and Tirian Mink perform a Water Boiling Test on an energy-efficient "StoveTec" cookstove. Approximately 2.4 billion people worldwide burn biomass inside their homes for cooking, primarily over inefficient open fires; more efficient stoves will improve indoor air quality and reduce deforestation.



"The best thing about the program is that it puts students in touch with real life problems and modern technology. We focus on 'issue oriented' science. We take something from the modern world and relate it to what's going on in class."

~ Peter Lehman

ABOVE: The Schatz Lab's new 6,000-square-foot facility, is also the campus's first donor-funded building. BELOW: SERC co-director Peter Lehman by the entrance to the Schatz building. Lehman describes the new space as "a dream come true.""

THE SCHATZ LAB CAUGHT the attention of the nation when it rolled out the country's first hydrogen fuel cell-powered car licensed to drive in the United States. The project grew out of a $3.9 million project funded by the U.S. Department of energy and the South Coast Air Quality Management District. Working with the SunlineTransit agency in Thousand Palms, Calif., Schatz engineers outfitted the area with a fleet of hydrogen fuel cell powered vehicles and the accompanying fueling infrastructure.

The vehicle's debut was a hit, and it wasn't long before the Schatz Lab was being featured in Scientific American and Popular Science.

For years the center pushed further into researching fuel cells, going as far as to secure two patents for its work on the proton exchange membrane fuel cells and a registered trademark for the Stack-in-a-box®—a portable fuel cell capable of pumping out 125 Watts of on-the-go power. The group steadily built a reputation for producing high quality fuel cells that were known for besting the competition in the lab tests and real world trials. The University of Alaska at Fairbanks, the University of Michigan, Kettering University and Auburn University in Alabama are all recipients of Schatz-built fuel cells. "We were able to give those schools exactly what they wanted for their graduate students to conduct their research," says Greg Chapman, senior research engineer at the Schatz Lab.

In October 2008, the group was granted $395,000 from the Department of Energy to develop the Hydrogen Energy in Engineering Education program, which focuses on providing hands-on hydrogen energy education to engineering students in the CSU and UC systems. An additional $15,000 was awarded in 2010 to build 30 additional bench-top electrolyzer/fuel cell experiment kits destined for campuses around California.

"The best thing about the program is that it puts students in touch with real life problems and modern technology," says Lehman. "We focus on 'issue oriented' science. We take something from the modern world and relate it to what's going on in class."

In a way, for the Schatz Lab to move from developing fuel cells for graduate level research and into classrooms across the state (and even the country—the New York-based company Labaids is developing curriculum resources based on the Schatz fuel cell), is a natural extension of their early work as a university research center. "As far as seriously studying renewable energy goes, Schatz Lab was one of the first in the nation," says Lehman.

Before bringing fuel cells to the state's engineering students, the Schatz Lab was putting its hydrogen expertise to work. One major project, overseen by Chapman and developed from the ground up by a group of dedicated student researchers is California's first rural hydrogen fueling station.

It was a team of environmental Resources engineering students, with guidance from the Schatz Lab, who had the first creative spark that led to the station. The Humboldt State team went on to win an international design contest sponsored by the National Hydrogen Association, which paved the way for the station's opening in 2008.

Now, the station provides fuel for a pair of test vehicles—a modified Toyota Prius and a state-of-the-art fuel cell-powered Toyota Highlander—and is poised to receive a significant upgrade, says Schatz Energy Fellow and HSU graduate student Meg Harper. "We're looking into upgrading the station's capacity from 5,000 psi to 10,000 psi, which would allow us to use all the potential fuel capacity of the Toyota highlander," says Harper. "The upgrade will give the highlander a range of over 400 miles, about the same as a regular gasoline powered passenger car."

Ongoing work with the hydrogen fueling station is just part of Harper's work with the center. She has also worked with the Schatz Lab to explore energy issues in the developing world, where improving economies are often outpacing the infrastructure's ability to provide adequate energy resources.

Last spring, Harper and her HSU teammates competed against teams from many wellknown universities and won a $75,000 award at the Environmental Protection Agency's national Sustainable Design Expo in Washington, D.C. In the summer, Harper traveled with two other student researchers to Bhutan to investigate energy issues in the landlocked Asian nation. Many Bhutanese villages use a local mini-hydro system for electrical power. "Basically, after work, everybody comes home and plugs in their rice cookers and water boilers and there isn't enough power so you wind up with brownouts," she says. "We were looking for a technical solution to the problem as well as developing education to teach people to stagger their energy use to make the best use of their grid."

The team Harper was a part of developed GridShare, a device designed to be installed near a home's electrical meter and encourage smarter energy use in two ways: by indicating the readiness of the grid to the user and by cutting power to large appliances during brownouts. And the results were promising. The student-designed device was able to reduce the duration of brownouts and further research, still ongoing at the Schatz Lab, aims to alleviate the brownouts altogether.

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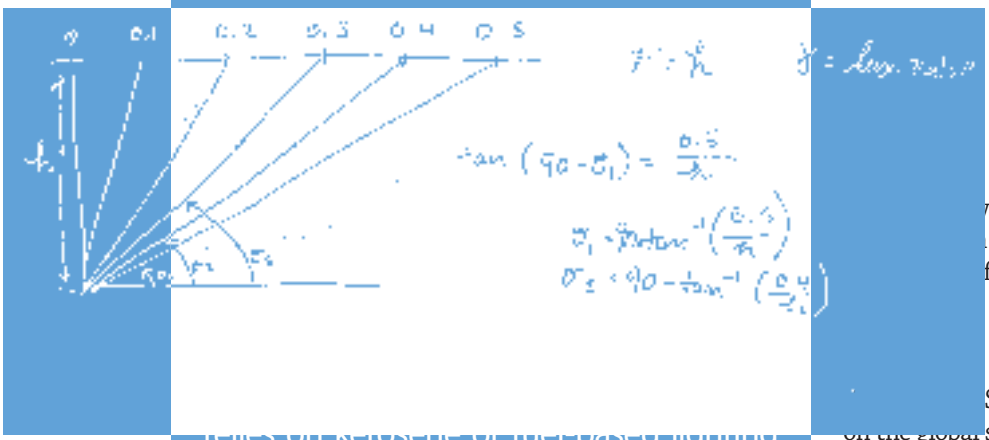
ELSEWHERE ON THE INTERNATIONAL front, the Schatz Lab is making an impact with its research into off-grid lighting.

Professor Arne Jacobson, Schatz Lab co-director and faculty member in the Environmental Resources Engineering Department, has led the Off-Grid Lighting Project, which is developing design standards to boost the availability of affordable, high-quality off-grid lighting systems in Sub-Saharan Africa.

In places like Kenya, much of the population relies on kerosene or fuel-based lighting and there are profound



relies on kerosene or fuel based lighting and there are profound effects. "It's dirty, it's dangerous, it generates indoor air pollution, and it's inefficient."

~ Arne Jacobson, SERC Co-Director

effects. "It's dirty, it's dangerous, it generates indoor air pollution, and it's inefficient. It ends up being pretty costly—you put in a lot of money and get a little amount of light," explains Jacobson. To combat these issues, the project is developing standards for manufacturers to build reliable and safe LED-based lamps and flashlights for the developing-world market.

Jacobson's project not only promises to deliver clean, safe lighting to much of the world, it also provides ample opportunities for Humboldt State students to engage in the hands-on research of important contemporary issues.

Patricia Lai is an Environmental Resources Engineering undergraduate pursuing her second degree after earning a bachelor's in International Development at UC Berkeley. In the lighting lab, within Harry Griffith Hall, much of the work on lighting design standards is being conducted. There, Lai can often be found testing and retesting dozens of LED lighting systems.

The tests include analyzing battery capacity, solar charging efficiency and visual inspections to look for signs of obvious low quality ("We drop them and some just fall apart," says Lai). One goal of the project is to develop a seal of approval that indicates the lamp that customers are about to buy has undergone rigorous testing and meets all qualifications. "We're trying to encourage these product designers to improve their lights by providing quality assurance carrots to move them along," Lai says.

The off-grid lighting project is part of the World Bank/International Monetary Fund-sponsored program, Lighting Africa. Humboldt State has counterpart labs in China and Germany conducting similar research.

The work has taken Jacobson to Washington, D.C., where he's currently on sabbatical from Humboldt State. In Washington, he's working with a team of researchers to expand the Lighting Africa project to a global scale. The other portork includes the Climate Ready initiative, a dollar program to transfer renewable energy fficiency technologies to developing countries.

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SCHATZ LAB is earning big points for its work on the global scene, it's also intensely focused on local energy issues. That commitment is embodied by the group's work on the Renewable Energy Secure Communities project (RESCO). The goal for the RESCO project is to develop a strategic plan that, by 2030, will have Humboldt County getting 75 to 100 percent of its energy from renewable sources.

In a packed auditorium in the Behavioral and Social Sciences Building, Schatz researchers Peter Alstone and Colin Sheppard recently presented their research as part of the RESCO group.

"Schatz's role is developing the technical and economic research to figure out what's going on in Humboldt County's energy profile," explains Alstone.

In order to uncover that data, Alstone and Sheppard, working with RESCO project manager and Schatz senior researcher Jim Zoellick, devised a computer modeling system that analyzed the county's energy sources and uses. The model can be tweaked by researchers looking for outcomes to specific questions. "We really focused on asking useful questions to home in on a model that will either minimize emissions or costs, depending on what you're looking for," says Sheppard.

So far the results have been promising. Humboldt County currently produces a considerable amount of the energy it consumes, with biomass plants, hydroelectric power, and a natural gas-powered plant. Any remaining energy needed comes in via transmission wires from Redding, Calif. Further development into renewables, could expand run-of-the-river based hydro-electric (reportedly safer for wildlife than traditional dam-based hydro-electric), biomass, and wind power. The research team is working with the model and is partnering with Pacific Gas & Electric Co. and local stakeholders to explore the economic impacts of developing renewables on the North Coast.

• • •

BACK IN THE LAB, Chapman is showing off one of the latest areas of interest for Schatz researchers. After investigating the viability of using biomass for producing gaseous fuels (while the technology definitely works, the process is not suitable for remote locations in the western U.S.), the group is now running tests on torrefied wood.

In a nutshell, torrefaction is the process of heating wood chips and or other biomass to between 280 and 300 degrees

Schatz Success Stories

THE STUDENTS AND RESEARCHERS at the Schatz Energy Research Center have been working on projects that focus on creating a cleaner environment. As Director Peter Lehman puts it: "We ask ourselves this before we begin every project: Does this promote clean and renewable energy? If the answer is yes, we'll pursue it."

Here's a look at just a few of the projects that have highlighted the center's 20-year history.

Nation's first fully-licensed PEM fuel cell-powered vehicle ▶

THE SCHATZ LAB CAUGHT the nation's attention when they unveiled the U.S.'s first hydrogen fuel cell-powered car in 1998. Power was supplied by a 10 kW proton exchange membrane fuel cell that took in hydrogen fuel and emitted only water. Eventually the center provided a fleet of fuel cell vehicles and a solar powered hydrogen dispensing station for the SunLine Transit Agency in Thousand Palms, Calif.

◀ Stack-in-a-Box®

IN 2002 THE SCHATZ LAB received a trademark for its Stack-in-a-Box® Portable Power Supply, a completely portable fuel cell generator custom designed and manufactured by the center.

Since then, the Stack-in-a-Box® has become an indispensible education tool. The 16-cell proton-exchange membrane fuel cell has a peak power of 125 watts and, with a small inverter onboard, can power a range of small appliances.

The first rural hydrogen fueling station ▶

IN 2008, THE SCHATZ LAB achieved another milestone when it unveiled the first rural station in California's "Hydrogen Highway." The idea for the fueling station began with students competing in the National Hydrogen Association's H2U International Design Competition. The fueling outpost is now part of an expanding network of stations statewide and nationwide—27 in California, 70 across the country—with Humboldt State's site powering a hydrogen-fueled Toyota Prius and Toyota Highlander advanced fuel cell vehicle.

◀ International Work

ENERGY ISSUES ARE A global matter and the Schatz Lab has been quick to seek out international collaborations. Led by co-director Arne Jacobson, international projects range from developing quality standards for LED lights sold in the developing world to students working to maximize the efficiency of a rural Bhutanese power grid. Another collaboration sent Senior Research Engineer Richard Engel abroad to El Salvador as a Fulbright Scholar. Recently, the Schatz Lab hosted the Mexican Interdisciplinary Group for Appropriate Rural Technology to team up on the construction of an eco-friendly Patsari cookstove.

CLOCKWISE FROM TOP LEFT: Engineering undergraduate and Schatz student research assistant Patricia Lai tests the illumination level of an LED light destined for the African market. ⋮ A portion of the many lighting products being tested as part of the Lighting Africa program. ⋮ A fuel cell test station and fuel cell built by the Schatz Lab as part of the Hydrogen Energy in Engineering Education (H_2E^3) project funded by the Department of Energy. The test station is designed to be part of senior level engineering design courses and labs. ⋮ Graduate student Chhimi Dorji and the GridShare destined for installation in Bhutan. Dorji graduated in December 2010 and now works as an engineer for Bhutan's Department of Energy. He is working with HSU students to install 90 GridShares in the Himalayan village of Rakubji this summer.

Celsius in the absence of air. The result is a product that's energy-rich and half its original weight due to the loss of evaporated water.

The challenge now is developing markets for this wood product, something that could easily be done here on the North Coast where forest products are abundant. Closer scientific scrutiny is necessary to maximize the efficiency of this product and this is where Lehman's proposal comes in. In a well-ventilated metal outbuilding near the lab, torrefaction equipment stands at the ready.

With another area of renewable energy about to open up for research, one thing is clear, the lab's new 6,000-square-foot facility is definitely needed. The building includes an exterior laboratory, two indoor labs, a machine shop, a conference and demonstration room and offices for staff and graduate students. All this will be essential in welcoming the next generation of researchers to the lab, where they'll begin the work that could bring the world closer to a future built on clean, renewable and safe energy.

HSU senior engineering student, River Hume, works with the H_2E^3 fuel cell test station as part of his Advanced Thermodynamics lab.

Future-Minded Philanthropy

IT STARTED WITH A phone call in 1989.

Louis Schatz, founder and president of the successful General Plastics Manufacturing Company in Tacoma, Wash., reached out to Humboldt State University because he was interested in exploring what would turn out to be a revolutionary concept.

"He came up with the idea himself to utilize hydrogen as an energy storage medium for solar energy, as a way to move us towards a clean energy society," recalls Peter Lehman, director of the Schatz Energy Research Center.

At the time, HSU had a renewable energy program, though there was no hydrogen curriculum. But it did have Lehman, who had been developing ideas along the same lines as Schatz. "I'd been telling my students that as we progress towards renewable energy we'll need a storage medium and I think it will be hydrogen."

After receiving Lehman's initial proposal and discussing details with him, Schatz sent along a check for $75,000—and so began the Schatz Solar Hydrogen Project at the Telonicher Marine Laboratory in Trinidad, Calif.

The success of the hydrogen project depended on a working hydrogen fuel cell and Lehman grew frustrated with the company he had hired to produce one. At one point, the matter came down to plastics. "When they screwed up the plastic molding, that was it for Mr. Schatz. He knew plastics. 'Get rid of those guys!' he told me. 'Build your own.'

This time a check came in from Schatz for $300,000 with a note attached, "Get to work." And so Lehman and his team set to refurbishing the University Annex, where the group would produce successes like the fuel cell for the Trinidad solar hydrogen project and the first licensed hydrogen fuel cell-powered automobile.

Schatz stayed closely involved with the center as he and Lehman built a strong working relationship until Schatz's death in 2001. In total, the Schatz family has donated more than $16 million to HSU, which includes the L.W. Schatz Demonstration Tree Farm. Most recently, a portion of that money has been put toward the construction of the Schatz Lab's new 6,000-square-foot facility, the university's first donor-funded building.

Photo courtesy of David Hanson, University of Minnesota

MEET THE GENIUS BEHIND HONEYBEES

Beekeeping has long been a passion for Marla Spivak ('78, Biological Sciences). And recently, her ground-breaking research with bees has created plenty of buzz.

In September, Spivak, a professor of Entomology and head of The Bee Lab at the University of Minnesota, won a "genius award"—a $500,000, no-strings-attached grant from the John D. and Catherine T. MacArthur Foundation.

The award recognizes her pioneering work in protecting honeybee populations from devastation—the "colony collapse" that has made headlines in recent years.

By Desiree Perez

Photo courtesy of David Hansen, University of Minnesota

Photo courtesy of David Hansen, University of Minnesota

ONE OF SPIVAK'S MOST practical accomplishments is the breeding of the Minnesota Hygienic. It's a strain of bees that uses olfaction to "sniff out" infected pupae and remove them from the hive before they can spread disease to the rest of the colony.

But disease is likely just one of the problems plaguing these important pollinators, Spivak says. It's hard to tell what the main cause of colony decline is, but Spivak believes that there are a few factors.

"Bees are in decline for three interconnected reasons," Spivak says. "There are not enough flowers out there that secrete pollen and nectar, so the bees are not getting proper nutrition. Then, the flowers that they do encounter often are contaminated with pesticides. It's a combination of poor nutrition, pesticides and brood disease."

She sees her MacArthur Fellowship as a way to continue to spread awareness about the plight of bees. "I consider the award to be not about me," she says, "but about bringing attention to the bees and what others can do to help them out."

Bees were certainly the entryway to Spivak's own career path. Although she already had an interest in bees when she came to Humboldt State from Arizona, she wasn't necessarily interested in studying them.

"I was just more interested in learning new things, and I was happy about anything that took me outdoors," Spivak says. "For example, I had never lived near the ocean. So, at Humboldt, I was learning about the invertebrates in intertidal ecology. We took a lot of field trips. I remember going out before dawn or during full moons to study."

During her undergraduate studies, Spivak took a semester off to volunteer with Steve Taber, a renowned honeybee researcher. Taber reignited Spivak's interest in studying bees, and as soon as she completed her degree, she was off to do bee research in South America.

Spivak traveled from Venezuela to Kansas to Peru, from Costa Rica back to Arizona and on to Minnesota doing research. "I'm a hands-on learner," she says. "I need to experience things and then I get ideas about how and what to research." During that time, she was also persuaded to complete her Ph.D. in Entomology at the University of Kansas. "I went to graduate school kind of kicking and screaming," she admits.

"I LOVE BEES"

All beekeepers really love their bees"

Currently, Spivak is a mentor and advisor to graduate students at the University of Minnesota. Her students are researching several topics related to bee health, including certain tree resins that can boost bee immune systems, as well as Nosema disease and its role in colony collapse disorder.

"I help with the research and find the grant money," Spivak says. "Sometimes I oversee independent projects. But it's more interesting to me now to help students establish their careers in lines they're interested in."

Although she hasn't decided how to use all the grant money, she does intend to assist her students' research efforts.

"I would like to establish a bee center here at the University of Minnesota," Spivak says. "The public could come in and learn about bees. Bees are like a portal: When you start studying them you're learning about many different topics such as agriculture, pesticides, landscape diversity and food safety."

Even after all her travels, Spivak still finds connections to HSU. Currently, she is co-adviser to Ph.D. student Judy Wu ('05, Zoology) who is studying the effects of pesticides on bees.

One thing is certain: the "genius" grant will give Spivak more resources to help investigate and ease the threats to bee health.

"I love bees. All beekeepers really love their bees. And seeing bees suffer is really difficult," Spivak says. She says she hopes that her and her students' research will help revive bee populations not only by developing practical applications to promote their health, but also by spreading awareness about their plight. "People hear that bees are dying, and most people want to know how they can help."

One simple solution Spivak offers: Plant more flowers.

PREVIOUS PAGE: Marla Spivak gets up close with her honeybees.
LEFT: The Minnesota Hygienic is a strain of bee that Spivak breeds to "sniff out" infected larvae and protect the hive from collapse.

For more information on Professor Spivak's work, see **www.extension.umn.edu/honeybees**

Photo courtesy of David Hansen, University of Minnesota

A 4-year-old Cannot Do This

How to Look at an Abstract Painting

By Professor Julie Alderson

ONE OF MY GREATEST joys in teaching art is helping students approach challenging work with an open mind. Particularly with abstract art, students often react by saying "That's not art!" or "My 4-year-old cousin could do that!" Learning how to think more deeply about abstract art—discovering how and why some artists choose to work this way—offers students a truly transformative experience. Understanding how to engage with such art helps them to think critically when exposed to any artwork, abstract or otherwise.

One of the simplest ways to approach a work of art is to examine its "formal" qualities—details such as color, line, shape and space. Such a visual analysis is the first way to engage with a piece, as one must *see* the work deeply before being able to construct a meaningful analysis. With an abstract work in particular, thinking about its basic visual components is an easy way to "get to know" the painting.

The next step often includes exploring a work's subject matter. What is depicted? How does the artist choose to portray the subject? In an abstract work, the subject may be less obvious than a tree or a clear figure, but if you look carefully, you can generally pick out key details to help understand the artist's intentions and meaning.

The final perspective, and the one which I personally find the most rewarding, is to consider the work's broader context. This is the meaty "Why?" of art. How does what you see reflect the artist's interests and ideas? How does it connect with the artist's biography? Does it illustrate the time and place in which it was made? This contextual analysis is often the source of our deepest appreciation for art, especially for abstract work that does not necessarily offer up its intentions easily.

When looking at a specific example, such as HSU Professor Teresa Stanley's *Half an Eight* (on the facing page), we can move through these steps toward a deeper understanding. A visual analysis reveals its particular colors and forms. An attention to subject matter teases out schematic diagram elements, as well as the central half-formed "8" of the work's title. Finally, we can explore the context in which the work was created. Of her reasons for working in abstract art, Stanley says, "Early on, I was suspicious of what I thought was the meaningless formalism of abstraction and was drawn instead to a more confessional and narrative style of painting. Once I was lured by the charms of abstraction, I found that it was unnecessary to leave my narrative sensibilities behind. I continue to this day to fuse together a personal investigation of the self and the physical world with an interest in the formal qualities of space and color."

One thing to remember, however, is that while an analysis of an abstract painting can lead to interesting and logical conclusions, there is often also something elusive about this art. As Stanley says, "I love the immediacy of the paint, the way that colors, when worked in layers and in conjunction with one another, startle and confound, the paint's obstinate refusal to obey and the way that after a long struggle, the painting is suddenly resolved in a way that you cannot entirely explain."

For more information on Professor Stanley's work, see **www.teresastanley.com**

1 POURED CIRCLES • Stanley uses a variety of techniques to explore the formal qualities of space. Earlier works included areas that were literally cut out of the painting, creating holes across its surface. Recent pieces include poured elements, such as those seen here, which are formed separately and then collaged into the painting during its creation. As Stanley notes: "Instead of creating space by cutting into the picture plane, I am pushing outwards by building areas up—literally."

2 DIAGRAM ELEMENTS • Stanley's recent works often incorporate diagrams, a reference to her late father, a radio astronomer. After his death, she discovered various inventions and experiments in his workshop and now her work often includes elements such as rubbings of his circuit boards, as well as the lighting grids and architectural plans seen here. She says, "Both my and my father's imagery create structures within which to measure and document our experience of the world." By using his imagery, Stanley sees her paintings as a form of collaboration with her father.

***Half an Eight*, 2010, acrylic on wood panel, 48" x 48"**

3 **THE "8" OF THE TITLE** • Stanley is interested in the idea that, while numbers can have a very specific meaning, they can also function in irrational, superstitious ways. Numbers often have particular symbolic references, and can have personal meaning ("lucky numbers"). Here, Stanley uses the number 8, which she identifies with the concept of prosperity. Only the upper half of the number is complete, however, which symbolizes limited fortune.

4 **LAYERING** • Various colors and forms overlap across the surface of the work. Stanley uses such layering to explore and challenge the painting's two-dimensional surface. This creates a push/pull effect that generates a sense of space. Through the creation of this space, Stanley aims to create a type of landscape within the canvas, though not a traditional, recognizable view of nature.

A Closer Look at Award-Winning Student Art

PROFESSOR JULIE ALDERSON OFFERS a look at four pieces of student art that received the 2010 Martin Wong Scholarship. Wong, ('68, Art) was an important part of the vibrant Humboldt arts scene from the late 1960s through the early 1980s until he moved to New York City in 1982 and established his national reputation. His triptych, *Portrait of Bill McWhorter in Convertible with Boy and Dog* (1975), hangs in the lobby of the HSU Library.

Painting, 1st Prize

Breathe
Abel Raola Torres,
2010, ink, acrylic and collage on paper

TORRES' WORK IS AN abstraction, even more loose and gestural than Teresa Stanley's *Half an Eight*. For this artist, abstraction allows for ambiguity: "It is the wondering and the uncertainty which I try for the most. If there is a question as to what it is and why it is, then that's good." Raola Torres hopes that viewers will question the work, pause to look closely at it, "and think or hopefully just wonder." This careful awareness helps us to better understand the world: "Let's slow down. In our attempts to reach the moon, we fail to see the person next to us and the things under our feet."

The Martin Wong Foundation is accepting submissions for this year's scholarships through April 1. For guidelines, visit **martinwong.org**

Painting, 2nd Prize

Lucy and Dewey
Malia Penhall,
2010, acrylic, fabric and thread

PENHALL'S WORK IS A mixed-media painting. In addition to paint, the artist incorporates non-traditional materials—the green patterned background is fabric, while the black outlines of the dog forms are embroidered into the canvas. Penhall says, "For me, even more than the financial support, winning the Wong Scholarship is about receiving validation for my work. As a young artist, it's important to be encouraged, to have someone tell you that what you're doing is worthwhile."

Ceramics, 1st Prize

A Necessary Emigration
Michael Lawler,
2010, mid-range ceramic

THIS CERAMIC SCULPTURAL PIECE fancifully juxtaposes a whale form with a wheeled apparatus support. Both elements are highly detailed and carefully constructed. According to the artist, "*A Necessary Emigration* is part of my ongoing interest in exploring themes of modernity and isolation through industrial and animal-oriented imagery. Train forms can serve as metaphors for inevitable forward movement, a theme prevalent in both society's development and the condition of being human. The use of animals conveys emotion and can be less polarizing than depicting humans. An air of ambiguity leaves the observer with grounds for reflection and new questions upon each viewing." Lawler's work is a "mid-range" ceramic, which refers to the temperature at which the clay form matures in the kiln.

Ceramics, 2nd Prize

Tea Cupboard
Heather Cruce,
2009, low fire ceramic

CRUCE'S CONCEPTS ARE ILLUSTRATED in traditionally "feminine" imagery: the housewife's apron; the dishes and shelving that evoke a rustic kitchen. Says the artist, "My subject matter addresses realities of the female experience. I draw inspiration from my own experiences as well as those of friends, family and the occasional stranger. The narratives are my way to examine the role that I play as a peer, daughter, sister, girlfriend, colleague, aunt, role model and woman." Here, subject matter speaks to the artist's desire to explore what it is to be female in contemporary society.

Andy Lewis takes a self-portrait as he walks a one-inch wide slackline overlooking Upper Yosemite Falls at 3,000 feet up.

Photo courtesy of Andy Lewis

Andy Lewis Livin' the Slacklife

NOT MANY PEOPLE CONSIDER walking over a waterfall on a one-inch-wide strap of nylon webbing at 150 feet up. But the sport known as "slacklining" has been growing in popularity recently. And for Andy Lewis ('08, Recreation Administration), it's more than just a sport—it's a way of life.

Lewis, who has been slacklining since 2004, is arguably the world's foremost male slackliner. Whether his rig is set up low to the ground for "tricklining," or hundreds of feet in the air for "highlining," Lewis is constantly testing his limits.

"It feels really awesome, doing what you didn't think you could," Lewis says. "When you get to the end of the line there's a feeling of almost enlightenment. It wipes away your stresses. You feel free."

Although Lewis was already an accomplished slackliner before he came to HSU, having already landed a balanced backflip on the line, being among the redwoods helped him bring his skills to new heights.

"I read the book "The Wild Trees" about HSU professor Stephen Sillett. It had a huge impact," Lewis says. Sillett has climbed the world's tallest trees as part of his groundbreaking research.

Currently, Lewis holds the world record for longest highline walk at 340 feet long and 360 feet up.

"To a normal person, it would be terrifying, but to us it's just normal," Lewis says. "Fear is a natural response, and normally it's good for you. But when you're highlining you've got to tell your brain to shut up."

For Lewis and his friends, looking at the world in terms of slacklining is something they can't just turn off.

"There is this lifestyle that goes along with slacklining and we've started calling it slacklife," Lewis says. "We're redefining what's possible. That's definitely part of slacklife. Refining what's possible for yourself.""

And the slacklife is catching on.

"It's really a global sport now," Lewis says. "You get people from all walks of life: ballet, break dancing, gymnastics. And now it's all being done on the slackline. It's evolving into a sport that I think will end up in the X-Games and the Olympics. I want to spend my life helping to make this a sport that will go on for generations."

Class Notes

Submit a class note: **humboldt.edu/classnotes**
or email: **alumni@humboldt.edu**

1950s

Ken Sadler, '50 Wildlife, lives with Jane, his wife of 68 years, on eight acres outside Columbia, Mo. His work won him national recognition for heading up the state's wild rabbit program, and he retired from the Missouri Department of Conservation in 1986. In retirement, he and Jane have been very active in the Columbia Garden Club.

1960s

Fernando Elizondo, '66 Biology and Physical Education and '67 Credential Program, retired in 2004 after 38 years in education, during which time he was superintendent at various schools for 15 years. In 1989, he started the California Association of Latino Superintendents and Administrators and served as its president and executive director until his retirement in 2009. In 2004, he started Elizondo Educational Strategies, Inc. and serves as president/CEO. He received his master's degree from Baylor University and Ed.D from University of Southern California. He currently lives in Salinas in Monterey County, Calif.

Douglas Moore, '68 Biology, joined the staff of New Leaders In Fertility & Endocrinology in Pensacola, Fla, in August 2008. He has 20 years of experience in assisted reproductive technology. For six and a half years Douglas served as the embryology supervisor for Stanford University. He is renowned throughout the country for his expertise and understanding of both practical and theoretical laboratory science.

1970s

Art by Suk Choo Kim

Suk Choo Kim, '72 Art, is a photographer who has explored the use of Polaroid SX-70 film since the 1970s. This self-developing, instant film is no longer manufactured but this hasn't stopped Kim from continuing to experiment with the medium. Kim was first attracted to what he calls "the emotional tonal quality" of the original SX-70 and its unique color rendering. He was at the forefront in experimenting with the color distortions and emulsion transfers that the film allows. Many of his original images are in private collections including with the Polaroid Corp.

Don Wise, '72 Natural Resources, is the Education Administration Program coordinator at Fresno State University. He teaches classes in instructional supervision, site-based leadership and peer assistance and review techniques. After graduating from HSU, Wise joined the Peace Corps where he served in Colombia, South America, for four years. He then served as a teacher, principal and superintendent at schools in Mexico, Panama, Colombia and Ecuador. He returned to California recently with his wife and two children. His interests include jogging, tennis, camping and fishing with his family.

Photo courtesy of Wagner College

Devorah Lieberman

Top Job at LaVerne

DEVORAH LIEBERMAN ('75, Communication Studies) has been tapped to become the 18th president of the University of La Verne, a private university near Los Angeles founded in 1891 by the Church of the Brethren. Lieberman, whose tenure begins July 1, will be the school's first female president, and also the first president who is not a member of the church.

Lieberman, from Covina, in Southern California, has led a 30-year career in higher education. She currently serves as provost and vice president for academic affairs at Wagner College, in Staten Island, N.Y.

Now, as she's poised to join the 7,500-student university, Lieberman sees plenty of opportunity in returning to her home state. "What I love about California is the sense of diversity, the sense of inclusivity—and the unique challenges the state faces. I'm looking forward to doing my part to find a solution," she says.

"At La Verne, you have students who are excited to be in college. It is the university's responsibility to engage them in the love of learning and to graduate these students who continue on to contribute to make their communities and the world a better place."

Growing up, Lieberman says, her parents instilled her with an "insatiable curiosity," and that helped when she enrolled as an undergraduate at Humboldt State. "I was a very serious student focused on going to graduate school," she says. She became involved with the intersection between academic and administrative worlds, serving as student representative to the Communications Department faculty committee.

Lieberman also holds a master's degree in Intercultural Communication from San Diego State University and a Ph.D in Intercultural Communication and Gerontology from the University of Florida.

Photo courtesy of Brian Greene

Brian Greene Inspired to Help

WHAT'S IT LIKE TO FEED 137,000 people each week—and to know at least half of them are children living below the poverty line?

Brian Greene ('86, Economics), the 47-year-old president and CEO of the Houston Food Bank, will tell you "providing dinner each evening to kids who would otherwise go hungry is all the motivation I need."

As the head of a massive food-distribution program that serves 18 counties in southeastern Texas, Greene is responsible for collecting, storing and dispensing over 40 million pounds of donated food each year, all while directing 20 employees and nearly 28,000 volunteers.

Greene has been at the Houston Food Bank since 2005, and spent 12 years as the executive director of the Second Harvest Food Bank of Greater New Orleans. Since his arrival in Texas, he's been amazed to see how many people are now going hungry. "The problem has gotten worse as more workers lose jobs in the recession," he says.

But before coming to work at a food bank, Greene had his sights set on academia, and was working on a Ph.D. in economics. After volunteering at a local charity, he left the doctorate program and hasn't looked back.

"That experience changed my life," he says. "All at once, I saw how important the food we distributed was to the hungry people we served. Somehow, that kind of work seemed a lot more important than writing a dissertation."

John Mattson, '73 B.A. Art, '75 M.A. Art, joined Angelo State University in San Angelo, Texas, as a lecturer in Art. He teaches Drawing I and Design I. Mattson is a painter and photographer and has shown his work throughout the U.S. and Europe. He has also self-published three books of his photography. Mr. Mattson is also employed as museum preparator at the San Angelo Museum of Fine Arts.

Elizabeth Prange, '73 Political Science, is currently a "nomad" traveling in her motor home. She works at fun, seasonal jobs, like driving a '36 yellow tour bus in Yellowstone on photo safaris.

Robert Wood, '76 English, is a widely published tax lawyer and founder of the law firm Wood & Porter in San Francisco. He is the author of the newly released "Legal Guide to Independent Contractor Status," as well as numerous other books and articles. Wood hosts The Legal Broadcast Network's Tax Law Channel, and is the tax columnist for Forbes.com. He has practiced full-time for 30 years and is often named among the short list of preeminent tax lawyers in the United States.

Craig Chase, '77 Fisheries, works at Lockheed Martin in software quality.

Delmonte Walters, '77 Forestry, has retired after 39 years with the California Department of Forestry and Fire Protection, in order to care for his ailing wife. Before becoming the state's fire chief, Walters served as the agency's executive officer, assistant region chief and staff chief of operations for the Northern Region and deputy chief of the Shasta-Trinity Unit.

1980s

Rick Baroway, '80 Political Science, has joined the Portland, Ore., law firm of Farleigh Wada Witt. He will maintain a diverse practice assisting businesses, financial service providers, real estate parties and nonprofit organizations with their real estate, business, finance and debtor-creditor needs. Baroway has particular expertise in real estate law where his practice includes commercial purchases and sales, financing transactions, development and commercial leasing work for large and small properties.

Roy Bergstrom, '82 Forest Management, is the district ranger in the Wild Rivers Ranger District of the Rogue River-Siskiyou National Forest. Bergstrom, who started his Forest Service career in 1979 in the Klamath National Forest, has two adult sons with his wife, Donna. He looks forward to getting his drift boat out on local rivers.

Jon Asselanis, '83 Geology, is a materials scientist and concrete photographer for Applied Materials & Engineering.

Barry P. Weaver, '83 Sociology and Social Welfare, has a new book out: "Green Within Reach: A Practical Guide to Green Property Management." Written for property managers, owners, builders and tenants with limited income, the book is a how-to guide on building green with limited cash. Weaver holds the Leadership in Energy and Environmental Design, an Accredited Professional designation from the U.S. Green Building Council and the National Association of Realtors' Green Designation.

"Give Me Your Lunch Money," shot during a machine gun and flamethrower demonstration at an annual gun show in Knob Creek, Ky., is one of Stephanie Burke's favorite pieces.

Photos courtesy of Stephanie Dawn Burke

Stephanie Dawn Burke Anything But 'Still' Life

RECENT GRADUATE STEPHANIE DAWN BURKE ('07, Studio Art, Anthropology) is finding that her only still moments are the ones captured in her photographs.

Since earning her Masters of Fine Arts degree at the Art Institute in Chicago, Burke has become a busy and recognizable figure in the windy city's art scene.

After first moving to Chicago, Burke and her husband, Jeriah Hildwine ('02, Studio Art, History), were excited to explore the city's deeply varied art scene. But they found it difficult to navigate. "That's what inspired me to do the blog," she says.

Burke's blog, "The Gallery Crawl," became the comprehensive source for art exhibits and openings that Chicago's scene lacked. And the art community recognized her efforts.

"I was called by someone who had seen my blog," Burke says, about being approached to work for Art Talk Chicago. She soon became Editor in Chief of the publication.

Stephanie Dawn Burke, self portrait

Burke has also been Managing Editor of Chicago Art Magazine, and is currently a columnist for the Bad at Sports art website and an art teacher with Wilbur Wright Community College and Hyde Park Art Center.

"It's insanity," Burke says. "I work all the time. I have very little down time. We have to leave town periodically just revamp."

In her free time, Burke works on her own art. Her current work focuses on two main themes.

One is related to gun culture, largely inspired by the annual firearms display she and Hildwine attend in Knob Creek, Ky. The two are also working on a project called "Shooting with Artists," Burke says. "We take our friends who are artists and teach them to shoot."

The other area of Burke's current work is more sentimental, she says. "I'm going to places that have personal history to me and showing how they've decayed."

Despite her current frenzy of projects, Burke envisions a long-term future in art. "I just want to find some way to work forever in art," she says. And she offers her own advice on how to make that happen.

"The moral of the story is you have to be everywhere constantly," Burke says. "There's a degree of 'right place, right time.' But you don't get to there without persistence and networking. I'm there when things are discussed and I make sure people can't ignore me."

Photo courtesy of Gary Coyne

Gary Coyne
Fired Up About Glassblowing

SEEING HIS FIRST BANANA SLUG may be Gary Coyne's favorite Humboldt memory, but it was folk dancing that forever altered his career path.

While directing a Hungarian folk dance troupe, Coyne ('73, Oceanography) wanted the women to do a dance that required balancing bottles on their heads. But the closest Coyne could come to a Hungarian-style wine bottle was a triangular lab beaker. The only problem? The bottom needed to be cupped, rather than flat, to fit on the dancers' heads.

So Coyne approached emeritus Chemistry Professor Jack Russell, who taught a glassblowing class. To use the equipment, Coyne had to enroll in the class. He did, they altered the beaker, and the dance was a success.

"After several months, Professor Russell told me I was doing amazingly well and that I might consider doing this as a profession. I finished my degree and went straight into glassblowing," said Coyne.

He has since worked in Cal State Los Angeles's chemistry program for over 26 years, and is currently the only scientific glassblower in the CSU system. He's even published a textbook about safety with glass and chemistry, "The Laboratory Companion".

Scientific glassblowing is unique in that the time to construct a new apparatus can take less than a minute or it can take weeks. It might be as simple as constructing a glass rod, or as complex as making a water-cooled cell that can be irradiated with UV light.

"My job is to craft the glassware that's needed for the researchers to do their work and if necessary, help them design the glassware. They know their science—I know glass," says Coyne.

Marty Cavalluzzi, '85 Fisheries, is the vice president for instruction and chief academic officer at Edmonds Community College, a position he has held for four years. Cavalluzzi earned both a doctorate and a master's degree in marine science from the College of William and Mary.

Hernan E. Garcia, '85 Oceanography, is a chemical oceanographer at NOAA. He completed a MS, PhD, and a post-doctorate position before joining NOAA. Hernan is married with one child.

Douglas Harding, '85 Geography, enjoys helping children with cancer through Hope Flight Foundation. He is currently president and chief pilot.

Enrique Esparza, '86 Physical Education, was named 2010 Humboldt Middle School Teacher of the Year. As such, he will represent the county as its nominee for 2011 California Teacher of the Year. A former athletic director and physical education teacher at St. Bernard's Elementary School in Eureka, Esparza has been a teacher at McKinleyville Middle School since 1998.

Stephen Olsen, '87 Physics, is a technical marketing engineer for Mentor Embedded in Wilsonville, Ore. He has over 20 years of embedded software experience.

Terry Escarda, '88 Environmental Resource Engineering, is a hazardous substances engineer at Cal-EPA's hazardous waste regulatory agency, the Dept. of Toxic Substances Control in Sacramento, Calif. He works on cleaning up military bases and coordinating DTSC's climate change adaptation strategy. He has been married for 20 years to Christyl Sanzo, a fellow HSU ERE alum. They have a son, Matthew, who's now starting college.

Scot Johnson, '88 Communications, is sports director at TV5/WNEM in Saginaw, Mich. Through his more than 20 years in broadcasting, Scot has done sports play-by-play, on location radio and TV shows, news anchoring, ad sales—he has even sold popcorn during halftime. When Scot is not trying to sneak into a game, you can find him losing money at the poker table. If he's not there, you'll catch him at the beach with his two sons Andrew and Mathew. Scot's only wish is a cure for autism.

Kathleen Baker, '89 Psychology, recently began working at Seattle University as the director of Housing and Residence Life.

Erin Gotcher, '89 Art, recently completed her special education credential and started her new career as a high school teacher at Golden Valley High School, in Bakersfield, Calif. She is teaching Government, World History, and Life Skills in a special ed environment.

1990s

Matthew Samia, '90 Art, is senior director of cinematics for Blizzard Entertainment, Inc. Samia joined the company in 1995 as a 3D artist, and has worked on every title from the game "Warcraft® II: Tides of Darkness™" onward. In his current role, he oversees the cinematics team as it develops each piece from concept and storyboards to a complete work. Before joining the company, Samia was a professional musician, playing guitar and singing in several bands.

Karen Young, '90 Nutrition and Wellness, says, "I'm in Boston! I'm a full-time community artist/activist teaching and performing Japanese taiko drums. Our troupe is the first Asian women's troupe in the country and I never would have known about the art form if I hadn't seen Shasta Taiko play at HSU in 1987. Thank you HSU!"

Craig Tolmie, '92 Forestry, was awarded the Medal of Honor from Gov. Arnold Schwarzenegger. The medal is California's highest honor for public service. In February 2010, Tolmie was serving an interagency search warrant when the suspect opened fire, wounding and trapping

a detective. At great risk to himself, he left his position of cover to deliver ammunition and a shotgun to the Deputy.

Kurt Mccray, '93 Forestry, was awarded the Medal of Honor from Gov. Arnold Schwarzenegger. The medal is California's highest honor for public service. As a CAL FIRE Forester, McCray and others arrived at the scene of a serious accident. They descended a steep slope and used their own bodies to protect the two injured victims from falling rocks for two hours before securing and moving the patients.

Ben Shuman, '93 Environmental Resource Engineering, is a senior environmental engineer at the U.S. Department of Agriculture in Washington, D.C. There, he has oversight, training, and policy development responsibilities and acts as team leader for about 65 engineers nationwide. He holds an M.S. in Environmental Engineering Management from the Air Force Institute of Technology, which he attended on a full Air Force scholarship.

Jack Haase, '94 Multiple Subjects, '00 PBCRED Multiple Subjects, was chosen to be part of an officiating crew for a California State Championship game. Haase has worked prep football games for the past 31 years. He teaches third and fourth grades at South Bay Elementary School in Eureka.

Tara Roddy, '94 Psychology, is a high school counselor. She earned her Masters in Education in 2010 and is enjoying her career change to helping high school students live up to their full potential. She is also a CASA volunteer working with older foster teens with the goal to getting their high school diploma and becoming successful adults.

Amanda Lloyd, '98 English, is Deputy Attorney General in the State of California Office of the Attorney General.

Mark Rayner, '99 Recreation & Natural Resources, joined the Peace Corps and married another volunteer. Now they have a 6-month-old future HSU grad. Rayner is a Park Ranger in San Jose, Calif.

2000s

Ben Bray,'00 Environmental Resources Engineering, is an assistant water resource specialist in Oakland, Calif. He holds a Ph.D from UCLA.

Kendra Zien, '00 Liberal Studies/Recreation Administration, works with seniors and youth as a volunteer coordinator at the family fun center Playland-Not-At-The-Beach in El Cerrito, Calif.

Hillary Arthur, '01 Kinesiology, is the head women's soccer coach at Willamette University in Salem, Ore. She was a Lumberjack for the women's soccer team 1996-1999, during which time they advanced to the NCAA Tournament Playoffs. She received her Master's in Sports Psychology from Chico State University, where she was the assistant coach for the women's soccer program. She spent three year's in Carson City, Nev., where she built a Division I NJCAA women's soccer program from the ground up.

Jes Kettratad, '01 Fisheries, is a lecturer for the Department of Marine Science at Chulalongkorn University.

Erick Leif, '01 Environmental Science, works as a project manager for the international environmental consulting firm Bureau Veritas North America in San Ramon, Calif.

Anna Keay, '02 Art, lives in Kula, Maui, and can be found most days of the week at her studio. A professional painter, she spent many years at her sister's Hana flower farm, creating replicas of the beauty she found there. She exhibits her work in the Hana Coast Gallery in Hana and Images gallery in Lahaina.

Jessica Wang, '02 Journalism, recently shared her journalism experiences in China with HSU journalism students via videoconference. Wang was the restaurant editor and writer for *That's Beijing*, an entertainment weekly written in English. She told students about the differences between Chinese and U.S. media and discussed her experiences with censorship.

William Bond, '03 MBA Business Administration, is the Northern California regional sales manager for Frederick Wildman & Sons, LLC, a New York-based importer of fine wines and spirits in operation since 1934.

Keith Hamilton, '03 Liberal Studies and Christine (Lewis) Hamilton '02, Studio Art, live in Portland, Ore., with their tiny labrador, Bailey. Since working on campus in the Department of Marketing & Communications, they've moved on to different fields, Keith practicing Mac/Unix administration at the ad firm Wieden+Kennedy and Christine working as a producer at a graphic design firm that focuses primarily on Nike point-of-sale graphics.

Jamie Lavigne, '03 Psychology, recently got engaged and is beginning a masters program at Chico State University.

William Samuels, '03 Fisheries, works for the California Department of Water Resources as an environmental scientist working on State Water Project issues.

Cuauhtemoc Carboni, '04 Kinesiology, is an assistant professor in Kinesiology at CSU San Bernardino. He is excited to be in California once again after living in New Mexico and Utah.

Ramsey Hanafi, '04 Studio Art, recently joined Kumin Sommers LLP in San Francisco as a new associate attorney. He primarily practices civil rights, land use, and employment law, with a current emphasis on medical cannabis litigation.

Christina Casaneda, '05 Political Science, married fellow alum Steve Hull in June 2010. They have managed to keep in touch with many of their friends from HSU, including Maid of Honor Courtney Loder.

Anne Dudley, '05 Psychology, graduated with her MSW from UC Berkeley in 2009 and now practices clinical social work with a supportive housing agency in San Francisco. She married fellow alum Ramsey Hanafi (Studio Art, '04) in 2008. They still love visiting Humboldt County where it all began!

Katie Mccluskey, '05 English and German, is a global client services advisor for Bank of America.

Cherie Cornelison, '07 Biology, works for Alliance Analytical Inc., as inventory associate.

Jason Terhune, '07 Philosophy, is a personal banker at Chase Banking.

Andrew Quinn, '07 Wildlife, was promoted to director of education at Zoo Med, a manufacturer of products for reptiles, amphibians, birds and aquatic pets. He will expand Zoo Med's educational materials, including best practices and training videos for pet shop employees, as well as work with state fish and game departments on current and future reptile-related laws.

Joe Clerici, '08 Journalism, designs copy and layout at the San Francisco Examiner.

Elise Haas, '09 Psychology, won a 2010-2011 William R. Hearst/Razi CSU Trustees' Award for Outstanding Achievement. As part of her HSU master's thesis, Haas works with teenage mothers and adolescents in the local juvenile justice system. Haas volunteers as a children's advocate with Humboldt County's CASA program, and through Humboldt State's Y.E.S. (Youth Educational Services) program, she has served in the Homelessness Network.

Remembering Frank "Bud" Van Deren

Former Jacks Coach Led Team to '68 Camellia Bowl

FORMER HUMBOLDT STATE HEAD COACH Frank "Bud" Van Deren passed away in September at the age of 85. Van Deren guided the Jacks' program for 20 seasons

"Bud's time as head coach of Humboldt State football will always represent a remarkable era in our program's history," Jacks' head coach Rob Smith said. "His commitment and dedication to HSU will always be remembered."

Van Deren served as the Lumberjacks' head coach from 1966 to 1985. His accomplishments earned him honors as league coach of the year in 1968, 1975 and 1979, and induction into Humboldt State's Athletics Hall of Fame in 1994.

Perhaps his greatest accomplishment as a head coach came in 1968, when Van Deren

Photos courtesy of HSU Athletics

Frank "Bud" Van Deren

led HSU to the West Region Championship. The Jacks' 29-14 win over Fresno State in the Camellia Bowl capped a 10-1 season.

After serving at HSU as an assistant coach in 1962 and 1963, Van Deren was hired in the same capacity at his alma mater, the University of California, Berkeley. He returned to HSU in 1966 to take over the reigns of the Lumberjack program.

As a player at Cal, Van Deren starred at defensive end in 1947 and 1948, and was named to the All-Coast team both years. In 1983 he was selected to Cal's all-time football team as part of the football program's 100th anniversary celebration.

In the years since his career as a coach ended, Van Deren has been recognized with induction into at least four collegiate athletics' halls of fame. He was honored by Santa Rosa Junior College, Yuba College, and Humboldt State for his coaching skills, and inducted into the Cal Hall of Fame for his prowess as a player.

MARK YOUR Calendar

HSU Softball Home Games

March 22 • 12 p.m.
vs. University of Hawai'i Hilo

• • •

March 25 • 1 p.m.
vs. Cal State Dominguez Hills

• • •

March 26 • 11 a.m.
vs. Cal State Dominguez Hills

• • •

March 27 • 11 a.m.
vs. Cal State Dominguez Hills

• • •

April 21 • 1 p.m.
vs. Cal State San Bernardino

• • •

April 22 • 1 p.m.
vs. Cal State San Bernardino

• • •

April 23 • 11 a.m.
vs. Cal State San Bernardino

David Crosby & Graham Nash

April 1 • 8 p.m.
Van Duzer Theatre
Tickets: (707) 826-3928

Animal Collective and Special Guests

April 11 • 9 p.m.
Kate Buchanan Room
Tickets: (707) 826-3928

13th Annual Ten Minute Play Festival

April 7-9; 14-16 • 7:30 p.m.
Gist Hall Theater
Tickets: (707) 826-3928

Opera Workshop Performance: The Magic Flute

by W.A. Mozart

April 21, 22, 23 • 8 p.m.
Gist Theater
Tickets: (707) 826-5436

Masters of the Steel Drum

featuring Clifford Alexis

Humboldt State Calypso Band
25th Anniversary Performance

April 30 • 8 p.m.
Van Duzer Theatre
Tickets: (707) 826-3928

44th Annual Humboldt Film Festival

May 1-7
Van Duzer Theatre
Tickets: (707) 826-3928

HSU Commencement

May 14
beginning at 8:30 a.m.
Redwood Bowl

Kinetic Grand Championship

May 28 • Arcata Plaza
kineticgrandchampionship.com

Humboldt Crabs Season Opener

June 4 • 12:30 p.m.
Arcata Ballpark
Humboldtcrabs.com

8 THINGS

[Taking it on the go]

We've spotted students hauling around quite a bit more than backpacks and messenger bags.

meet humboldt

ELISE HAAS ('09, PSYCHOLOGY), a current HSU graduate student, grew up in rural Ukiah, Calif. At age 11, her mother left and her father became abusive. Haas persevered through hardships, including homelessness, and pursued education as a way to help others living with trauma. She was recently named a CSU Hearst scholar, among the highest recognitions for student achievement in the CSU system. In addition to pursuing her graduate degree at HSU, Haas is applying to Ph.D. programs in clinical psychology.

SMALL MIRACLES "Working with children can sometimes be very frustrating. You feel like you aren't making a big enough difference. Most of the time, I'm grateful for the little miracles. If you can say, 'So-and-so didn't hit his brother today,' then that was a good day."

NOTES FROM THE FIELD "I've had a lot of good professors. One of them, Professor Dupree, teaches a class on family therapy. He's been working in the field so long that he brings a lot of depth to each lesson."

PSYCHOLOGY … AND ZEBRA FISH "I worked for a year in a behavioral neural science lab with Professor Ethan Gahtan. We worked with larval zebra fish and studied stress response. The way their systems operate, they can be used to make generalizations about other organisms—like people—easily."

STRONG CONSTITUTION "Working with children and families, as well as being a researcher in psychology, takes a great deal of perseverance. I have a strong constitution. You have to, to be able to do this work. It's an unwillingness to accept failure as an option. It's what helped me when I was living in a tent. And it's why I'm able to do what I do."

meet more humboldt students

humboldt.edu/meet

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Clifford Petroske—son of alumni Jarad and Angie Petroske and HSU class of 2032.