October 1999

CLASnotes

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The Dean's Musings

The Keene Faculty Center

Our faculty have long deserved a place of their own. Since last November, they have had just that in the form of the Keene Faculty Center, located in Dauer Hall. If you have not seen this facility and taken advantage of it, do yourself a favor and come by for a visit.

The Keene Faculty Center, arguably one of the most beautiful venues on campus, was designed to provide an attractive, inviting space for faculty to use in a variety of ways. First and foremost, it is a quiet get-away spot where faculty can retreat to read, converse with other faculty, or simply relax between classes. A Java Hut cart in the lobby serves specialty coffees, teas, and bagels. Packaged lunches are available for those who frequent the Center at mid-day, but you should also feel free to brown-bag it. Inside the Center, you will find the *New York Times* and *Gainesville Sun* available daily and the *Chronicle of Higher Education* weekly. The Ethan Allen chairs and couches are plentiful and comfortable. You can even plug in your laptop and access the internet. And if there are other things you would like to see in the Center (affordable by CLAS), let us know. We have a Faculty Advisory Group to provide input, but we welcome individual comments as well.

In addition to the large ground floor of the Keene Faculty Center, the facility features a spacious gallery overlooking the main hall. Here smaller meetings can be held, including lunches of up to about 15 people. A reconditioned baby grand piano is available in the gallery for recitals. Indeed, the acoustics of the Keene Faculty Center make it an attractive venue for chamber music performances.

Note that this is not a Faculty Club. There are no dues, nothing to join, no

*See **Musings,** page 12*

From the Depths of the Earth

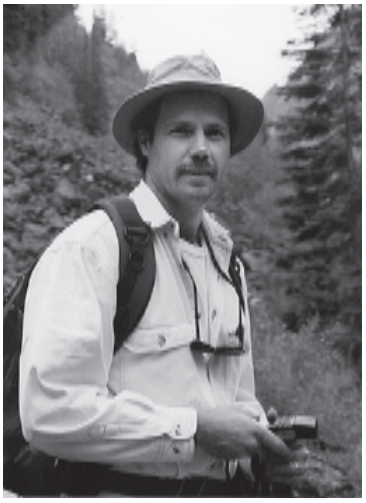
Geologist David Foster studies birth and death of mountains

Though the Bitterroot Mountains on the Montana-Idaho border may not be as flashy as some—at 10,200 feet, the range's tallest peak is hardly a Denali, much less an Everest—geologist David Foster considers them one of the most important mountain ranges in North America.

"The Bitterroots are interesting because they expose rocks that formed in the earth's middle crust at depths somewhere around 20-30 kilometers (12-18 miles) below the surface," Foster says. "The rocks formed there mainly between 90 and 50 million years ago when Western Montana was part of a mountain range (known as the northern Sevier Orogen) more like the Andes, much higher and more extensive than it is today."

Fifty million years ago, the Sevier Mountains were torn apart by the extension or thinning of the continental crust. As the earth's crust thinned and the mountain belt collapsed, portions of the middle crust were transported upward to the surface on very large faults that are well exposed in a flank of the Bitterroot Range. "So by studying this mountain complex," explains Foster, "we can understand what happens at the middle part of the crust during the formation and destruction of many large mountain ranges. Additionally, we can use the Bitterroots as a proxy for what's now going on deep within the crust in the Andes or to understand what's occurring within the mountain ranges of the Himalayas and Tibetan Plateau."

This is especially valuable, says Foster, because recent evidence indicates that in Tibet, the middle crust is unusually thick and has build up enough heat that it may have started to partially melt. The presence of magma could weaken the crust enough that the mountain belt may eventually collapse, mimicking the evolution of the Bitterroots.



Foster is pictured above using GPS (Global Positioning System) to obtain the location of a sample from the Bitterroot fault zone. GPS uses signals from 12 satellites to calculate specific locations.

During the collapse phase of a mountain belt, the chances for large earth quakes, volcanic eruptions, landslides and other large scale geological hazards are greater because the rate of movement on faults is more rapid. "Certainly the recent events in Turkey are a reminder of just how unstable the earth's crust is," says Foster. "In the middle crust, rocks are the boundary between where layers of the crust fail and break by brittle fracture at shallower depths and where they start to flow like plastic at deeper levels," he explains. "It's a natural breaking point." Since many of the large earthquakes along major faults like the San Andreas are propagated from the same mid-crustal depths Foster studies, his work may potentially help pinpoint new areas prone to earthquakes or other geological disasters.

Foster's tectonic research is not restricted to Montana. "Over past eight to ten years I've been working on a very large scale project aimed at reconstructing the evolu-

*See **Mountains,** page 6*

This month's focus: **Geological Sciences**

Around the College

DEPARTMENTS

English

Chris Snodgrass was invited to write the special 100-year retrospective on scholarship about Aubrey Beardsley, a major late-Victorian artist whose Centennial year was 1998. This long essay, which was also responsible for assessing the position of Beardsley in current Victorian studies as well as reviewing all recent scholarship on Beardsley, appeared as the lead article in *English Literature in Transition, 1880-1920*.

History

Geoffrey Giles was a Fellow this summer in the US Holocaust Memorial Museum's first Research Workshop for Scholars. The eight participants spent two weeks at the museum's Center for Advanced Holocaust Studies in Washington, DC, discussing papers and carrying out further research in the Center's archives and library, as well as in the National Archives. The theme of this first workshop was "SS Racial Policies in Occupied Europe."

Philosophy

Greg Ray presented a paper entitled "Is There a Problem about Vagueness?" (coauthored with Kirk Ludwig) at the annual meeting of the Society for Exact Philosophy, Lethbridge, Canada, in May. Ray will host the next meeting of this international organization here at UF.

Kirk Ludwig presented his paper "Logical Form" at the annual meeting of the Society for Exact Philosophy. Dr. Ludwig presented the coauthored paper "Is There a Problem about Vagueness?" at the Pacific Meeting of the American Philosophical Association, held in Berkeley, California, in April.

John Biro, president of the Hume Society, presented the paper "Hume on Memory" at the Society's annual meetings in Ireland in July. In August he gave a series of lectures on fallacies at the University of Turku, Finland. He is coediting a volume of essays on Spinoza to be published this year by Oxford University Press.

Psychology

Robin Lea West, Director of the Center for Gerontological Studies, gave an invited address at the American Psychological Association (APA) meeting in Boston in August, 1999. Her lecture was entitled "Controlling Your Memory: Lessons from Aging Research." West is a member of the Executive Committee of APA's Division 20 (Adult Development and Aging), and is serving as chair of the Division 20 awards program.

Romance Languages and Literatures

Bernadette Cailler was invited to present a paper at an international conference on "Caribbean Writing in French: Place and Displacement" at University College, Dublin, Ireland (Sept. 2-4). Her paper was titled "De 'Gabelles' aux 'Grands Chaos': une étude de la désode des sans-abri."

Women's Studies Hosts Art Exhibit

"DUAFE: A Sister in Primary Colors" by **Patricia Hilliard-Nunn** (Women's Studies) is currently showing at the Center for Women's Studies and Gender Research. Hilliard-Nunn's multimedia artwork incorporates jewelry, cowry shells, paint, fabric and wood to convey the many facets of womanhood. DUAFE will be on display until December 20, 1999.

The duafe (hair comb) *pictured left* is a symbol used in Asante printed textiles that represents goodness, feminine qualities, love and care.

History Lecture Series Created in Memory of Gus Burns

In order to recognize the outstanding contributions of "a master teacher and scholar," friends and colleagues of history professor Gus Burns, who died April 30, 1999, have established an annual history lecture series in his name. "It is our hope that the Gus Burns Memorial Lecture Fund will attract outstanding scholars to the University of Florida," says Florida Studies Director Julian Pleasants, a long-time colleague of Burns. Each invited scholar will give one public address and will also meet with graduate and undergraduate classes. Tax deductible donations to the fund (#007613) can be made through the University of Florida Foundation.

Women's Studies Opening Reception

(Left) Vasudha Narayanan, interim director of the Center for Women's Studies and Gender Research, addressed the assembly; (*Right*) Kendal Broad, Danaya Wright, Maureen Turim, Kim Emery and Tace Hedrick at the reception.

Around the College

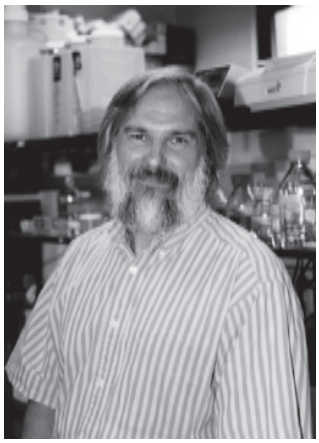
On-line Journal for Undergraduate Research *Posts First Issue*

Edited by CLAS physicist Henri VanRinsvelt, the new online *Journal for Undergraduate Research* (*JUR*) will highlight the impressive work of UF's first class of 250 University Scholars. Each month, *JUR* will include a handful of undergraduate research papers as well as feature articles on published Scholars. The issues will also include up to 15 research updates from Scholars at work around UF. Kim Pace (Dean's Office) will maintain the electronic publication, and John Elderkin (CLAS Publications, see below) will contribute features. The Provost and Dean Harrison encourage all CLAS faculty, staff and students to check out *JUR*'s inaugural issue this week at **<web.clas.ufl.edu/CLAS/jur/>**

African Studies Opening Reception: Scholars Introduced, Artists-in-Residence Perform

Michael Chege (*right*), director of African Studies, made the opening remarks. Artist-in-residence Mamadou Dahoué from the Ivory Coast (*above*) danced for the crowd accompanied by UF musicians and his fellow artist-in-residence, drummer Tra-Bi Lizie.

Alumni Association Honors Zoology Professor



Zoologist **Lou Guillette** has been selected as the eleventh Distinguished Alumni Professor.

Guillette, whose research on endocrine-disrupting contaminants and their effect on wildlife reproduction has received international attention, was named Blue Key Distinguished Professor in 1997 and UF Teacher/Scholar of the Year in 1997-98.

Distinguished Alumni Professors serve a two-year term and are asked to work with the Alumni Affairs office in the recruitment of National Merit Scholars. In return, the Alumni Association awards recipients a $10,000 stipend (over the two-year term); additional support is provided by the office of Academic Affairs.

Nominations are made by former students, administrators and members of the faculty. The selection committee includes current faculty, alumni and community representatives.

Successful candidates like Guillette have been on the UF faculty for more than ten years; have gained a reputation among students and alumni for being superior, highly influential teachers; and have conducted "truly beneficial" work and service that has brought significant distinction to the University.

Former CLAS recipients include **Mike Gannon** (History), **Alex Smith** (Astronomy), **David Chalmers** (History), **Karelisa Hartigan** (Classics), **Bruce Edwards** (Mathematics), and **Carolyn Tucker** (Psychology).

Dean's Office News

John Elderkin recently joined the CLAS Publications staff in 2008 Turlington. An alumnus of University of North Carolina at Chapel Hill, Elderkin has worked as a freelance writer and public school teacher. He spent the last two years on a Fulbright teaching exchange in London. John's responsibilities will include writing for University Scholars-related publications and writing about and promoting Liberal Arts and Sciences research. "I hope to be in close touch with all College chairs and directors in order to facilitate greater exposure for CLAS research and teaching."

CLAS Computing: Web Help for Faculty

A message from Jack Sabin, CLAS Director of Information Technology

Jack Sabin

It's time to welcome two more folks to the CLAS technology fold.

As you know, we are continually encouraged to upgrade the level of technology that we use in our teaching and service activities. For example, all faculty now have a Gatorlink account, which will soon be the only possible method for submitting grades. Please note that your Gatorlink e-mail address, which you automatically get with your account, is the only address usually listed in the UF directory, so it's important, if you don't use your Gatorlink mail, to have it auto-forwarded to one of your active accounts. This is very easy to do quickly online at <www.gatorlink.ufl.edu>.

Another aspect of our increasing integration of technology into our jobs is the use of Web based resources in classes and the proliferation of educational Web pages. We UF professors are now expected to have a Web page for each course, containing the syllabus at a minimum. Soon these pages will be connected to the UF catalogue by hot links, so prospective students or those registering online can access course content in real time. Examples of the beginnings of these pages can be found at <www.reg.ufl.edu/99-20catalog/coll-liberal-arts.html>. In addition we are encouraged to use the Web and e-mail to interact with our students.

Many faculty and graduate students also have professional personal Web pages, normally accessible from their departmental home pages, which offer contact information and details about their professional lives, publications, etc. Examples can be found at <www.clas.ufl.edu/users-dept.html>.

Preparation of a personal or class Web page is not, in principle, difficult, as there is a plethora of editors available that help in writing the HTML (Hyper Text Markup Language). In addition, OIR provides courses each semester in Web page preparation at the Faculty Support Center. We highly recommend that, if you are an HTML novice, you attend an OIR training session and become familiar with the basics of Web page preparation. The problem here is that, after you learn how to prepare a Web page at the Center, you may have a different machine in your office running different software than that used in the training session. To help you over that barrier, we have hired two undergraduate Web experts, who will come to your office and help you adapt the information you learned at the OIR course to your office system. These students will work out of UCET and be supervised by Dr. Connie Shehan. They will each be available several hours a week starting immediately. You may make an appointment to have one of them visit you by calling 846-1574. Let me introduce them to you:

Amano Kazumi

"In my new position, I look forward to helping CLAS faculty create and maintain effective Web pages."

Amano (Joseph) **Kazumi** (Douze) is a fifth year senior from West Palm Beach majoring in East Asian languages and literatures, with a Japanese concentration. In addition to making personal Web pages as a hobby, Kazumi worked at CIRCA for four years and has been a Webmaster at the college of business for three years.

Meghan Gill is a junior from Boca Raton majoring in decision information systems (computer programming and business) and international economics. Her experience includes Cobal and Programming in C, and she does database management for the Alzheimer's Association.

"I am really excited to get the chance to work with the faculty as well as improve my computer skills."

Meghan Gill

Exploring the Ocean Floor

An interview with Elizabeth Screaton, Geological Sciences

Cn: What is your geological area of specialty?
ES: I am a hydrogeologist—one area that I work on is water and plate tectonics and the role of fluids at subduction zones on the ocean floor (where an oceanic plate slides under another tectonic plate).

Cn: How do geologists track how these giant plates move over time?
ES: We combine a lot of different methods to get a clear profile of what is happening and what has already happened. We use remote methods and geophysical methods (looking at the source areas of earthquakes allows you to track the subducting plate). Closer to the surface, we can actually use seismic reflections, in which we create a shaking that is transmitted through the earth and it bounces off the boundaries between layers and comes back up to the surface giving us an image similar to an ultrasound. This allows us to get a look at what's down there without drilling into it.

We can estimate how much sediment is being subducted, and we've got an idea how much water is in that sediment. We know that the fluid has to be getting out somehow when the sediment is compacted, so we use computer models to tell us what ways are possible for it to be getting out, and how that's going to affect pressures. Fluid pressures play an important role in allowing plates to slide past each other and in generating earthquakes.

We can drill holes at these sites to take a look at core samples. We also make observations by going down to the seafloor [*see MBARI photographs in Jon Martin's article, page 7*]. At this level, you can locate places where you've got fluid expulsion because you often get communities of clams and sometimes tube worms that live there and feed off the methane and hydrogen sulfide that gets carried up in the water.

Cn: Are certain areas of the ocean floor more desirable to work on?
ES: A lot of areas around the world have active subduction zones (the Ring of Fire, for example), and many of these areas are being worked on by different people. The area under Japan, for example, is fairly well marked out. Dr. Perfit (Geology) is working along some of the ridges where new ocean plate is forming, and I am looking at the other end, where a plate is disappearing.

Cn: How do geologists travel to these areas?
ES: There is currently only one large drilling ship, so the whole international community of geologists splits up time. The year is divided up into six two-month trips—only six a year—so when you apply for time, you have to make a really strong case as to why this is an important place to study and what scientific goal it fulfills. There are a lot of different aspects to drilling the ocean floor that compete for the ship's time (besides subduction issues) such as studying paleoclimates (ancient climates). Dr. Hodell (Geological Sciences) works in this area, which helps us to understand how climate might change in the future.

Cn: Do geologists hope to be able to predict earthquakes eventually?
ES: I don't know if we will ever be able to predict an earthquake like a weather forecast, but we hope be able to say what areas are ready for or overdue for an earthquake. We also hope to find out why some earthquakes generate tsunamis, and why others don't. Tsunamis depend on some sort of disruption in the seafloor that acts as reason to start the wave.

Cn: On a completely different note, you're also doing groundwater work here in Florida, right?
ES: Yes, I'm starting a project going with Jon Martin right now to look at (among other things) what happens at the Santa Fe River between where it disappears underground and comes back up. When the water goes down and comes back up, is it the same water? Is it mixing with the ground water around there? What does that mean for its vulnerability to contamination from surface water? The aquifers around here are pretty important to us, so this should be a really interesting project.✎

Before Screaton, an assistant professor of geology, joined the UF faculty in 1997, she conducted postdoctoral research at the University of Colorado-Boulder, and worked as a groundwater consultant in California's Bay Area.

Water and Geology, *continued from page 7*

centrations of carbon dioxide and methane, both greenhouse gases. Consequently, circulation through subduction zones may play a role in the greenhouse warming of the earth. The volume of water and gases venting from subduction zones is poorly known because individual vents are small, although widespread. Continued research should ultimately define the volumes of water and gas that vent from subduction zones.

Although geology can be broken into many sub-disciplines, including hydrogeology, essentially all geologists working on recent earth processes study the physical and chemical effects of water on the earth. As such, water is probably the most important, however improbable, of all geological materials.✎

Geological Sciences Staff

Construction in the new Geological Sciences office in Williamson Hall is finally finished. The department's office staff (pictured outside their new space) includes **Mary Rowland** (*left*), Senior Secretary; **Ileana McCray** (*center*), Program Assistant; and **Ron Ozbun** (*right*), Office Manager.

Mountains, *continued from page 1*

pictured above: Folded and tilted layers of sandstone and shale that were once part of a large mountain range in eastern Australia that is now eroded down to sea level.

tion of eastern Australia, from the time sediments were deposited on the ocean basin some 500 million years ago through a series of large collisions between that continent and oceanic island chains that occurred between 440 and 300 million years ago. During all of this time Australia was part of the super-continent of Gondwana, attached to India, Antarctica, Africa, and South America."

Those collisions formed major mountain ranges in eastern Australia, which, now worn down and nearly flat, contain some of the largest gold deposits in the world. "Our main objective is to examine the evolution of the mountain belts there because they are an ancient example of the current geologic activity in southern Alaska, but secondary follow-up research allows mineral companies to pinpoint areas where exploring for gold and other minerals would be more prospective."

But tectonics work is only half of what Foster does. He also utilizes temperature-sensitive isotopic dating methods or 'thermochronologic methods' in his research, allowing him to measure the temperature and time history of rocks. "Since most geological processes involve heat," he explains, "if we know when a rock was at certain temperature, it tells us about how it formed and about the history of the mass of rocks around it. This technique also gives us insight into the whole mountain building process, the extension and breaking apart of the continents, and the erosion process."

As part of the renovation of their new home in Williamson Hall, Foster and his geological sciences colleagues plan to establish a thermochronology lab here at UF. "The lab will feature a large mass spectrometer for measuring noble gases," Foster says, which will work in tandem with two other proposed labs that use additional thermochronological methods. "Each lab will allow us to look at different temperature intervals of a rock's thermal history. We'll be able to track the history a rock from temperatures of >500C to, effectively, surface conditions. Most of the lab applications will be to look at tectonic processes, but the lab will also be used to help the petroleum industry determine which sedimentary rocks are prospective for petroleum exploration."

The other thing these labs will be able to do, says Foster, is to date the precise age of volcanic eruptions, which will help establish the age of many geological events, as well as determine the periodic eruption intervals of certain volcanoes. Resulting research will also help geologists to understand the age of different parts of the sea floor and to date fossil localities, particularly Hominoid sites.

The department has made fundraising for the new labs a priority. "We're partly funded by UF, but we're seeking external matching funds from NSF or other outside sources for the remainder," says Foster. "In the next two years, we hope to have all this up and running."✎

The Bitterroot Mountains, on the Montana-Idaho border.

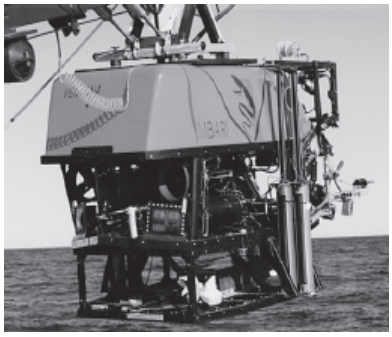
Water and Geology

An improbable but important link
by Jon Martin, Department of Geological Sciences

John Martin (*left*) with fellow geologists on deck of the French research vessel R/V Pt. Lobos.

Most people probably think of a geologist as someone myopically focused on rocks, not water. But water influences the physical and chemical evolution of the earth (the essence of geology), probably making it the most important material in all geological processes.

The influence of water can be seen in many common processes, such as erosion of mountains through stream runoff, slow grinding of glaciers, and frost wedging during freeze-thaw cycles. A good Floridian example of the erosive power of water comes from the destructive force of hurricanes (I am writing this article during my forced evacuation from Turlington Hall because of Hurricane Floyd). In addition to causing erosion, however, water is important as a precious commodity similar to another valuable liquid, oil. For example, Florida's economy is essentially based on water, from tourism to agriculture. And like oil, more than 95% of all fresh water is located underground, leading to many important problems.



Useful to the work of both Martin and Elizabeth Screaton [see p. 5], the remotely-operated vehicle MBARI is lowered from research vessel to sea floor, where it takes underwater core samples from sediment on fault lines.

Most water in Florida is located in a group of limestone rocks, called the Floridan aquifer, that provides nearly all water for drinking and irrigation in the northern half of the state. Limestone rocks are made of the easily dissolved mineral calcite. Dissolution of calcite occurs when acidic surface water flows underground and leads to the widespread formation of a landform called karst. Karst is common to Florida and makes the state world-renowned for cave diving and sinkholes. Karst also leads to a series of interesting questions that I have been working on lately, such as how and at what rate does water infiltrate the aquifer, where does it flow through the subsurface, and what are the resulting chemical changes to the water and rocks during its flow?

A common belief among karst hydrogeologists (geologists interested in water flow through karst areas) is that caves act as primary reservoirs and flow paths for water in the subsurface. This belief, now almost dogma, comes about because most well-studied karst occur in old regions (more than 150 million years) of North America and Europe. Some of my recent work shows, however, that the relatively young Floridan aquifer (about 55 million years old) does not behave this way. Instead water flows through the Floridan aquifer in both large conduits and microscopic pore spaces contained within the matrix rocks surrounding the caves. The difference between the Floridan and older karst aquifers appears to result from recrystallization and loss of porosity of the older karst rocks. The distinction between water flowing in conduits versus matrix may seem trivial, but it is very important because it controls the length of time that water remains underground, referred to as residence time. Residence time, in turn, controls the extent of dissolution and the frequency of cave and sinkhole formation. It also controls the distribution of pollutants that flow into the aquifer along with the recharged water. And ultimately, it controls where those pollutants emerge back to the surface, for example, in springs, estuaries, or perhaps your kitchen sink.

Many other important geological processes involve water, but are rarely experienced in everyday life. A good example is provided by hydrothermal vents at mid-ocean ridges. These submarine springs are sufficiently active to circulate all seawater through the crust every ten years. This process changes the chemical composition of the water, and thus controls the concentration of salts in seawater, supports non-photosynthetic biological communities, and because conditions at the vents are similar to those of the early earth, may have provided the setting for the origin of life.

Less commonly known, however, is that water is also important at subduction zones, the other end of the plate tectonic conveyor belt. In these areas, high water pressure lubricates faults and allows the plates to slide freely past each other. Most free water is squeezed from the rocks by about 13 km below the surface. At this point rocks can break brittlely, causing large earthquakes with catastrophic results, such as the recent events in Turkey and Greece.

Clams and other life that doesn't need sunlight thrive in mid ocean ridge areas by feeding off material spewed from vents.

Water that is squeezed from rocks in subduction zones also carries dissolved salts and other components into the oceans. Another aspect of my research thus involves trying to understand the mechanisms that drive water from the rocks, to determine the origin of this water, and the volume of the water that is vented. It is possible that some of the water venting from subduction zones is recirculated seawater, similar to the mid-ocean ridge hydrothermal vents, in which case subduction zones could play an important role in the chemical evolution of seawater. Subduction zones also commonly contain high con-

*See **Water and Geology,** page 5*

Ninth Annual Fall Convocation

On September 23, CLAS recognized over 600 student scholars at the Ninth Annual Fall Convocation Ceremony. During the program, **Earl Lewis** (Dean of the Graduate School at the University of Michigan) addressed the crowd, as did **President John Lombardi. Sheila Dickison** recognized our new class of Merit Scholars, National Hispanic and National Achievement Scholars, and **Dean Harrison** introduced each of the 420 Anderson Scholars and 85 CLAS Scholars by name.

History instructor Antoinette Emch-Deriaz and McLaughlin Scholar Nathalia Christie visit with CLAS Associate Dean **Harry Shaw** and Convocation guest speaker **Earl Lewis**.

Anderson Scholar **Amanda Ries**, a junior in Communication Sciences and Disorders, enjoys the reception with her parents.

Anderson Scholar and honors classics major **Jennifer Blackwell** with Honors Program Director **Sheila Dickison** (Classics) at the reception.

New Chair

Chris Stanton, Chair
Physics Department

As we approach the year 2000 and look back at the scientific achievements impacting society over the last 100 years, it is safe to say that physics has played a major role. While the role of physics is obvious in areas such as the development of the transistor and laser, it is less obvious in other realms. For instance, fundamental research in solid state, atomic and nuclear physics has lead to the development of modern medical imaging techniques such as Computed Axial Tomography (or CAT Scan), Magnetic Resonance Imaging (MRI), Ultrasound, and Positron Emission Tomography (PET Scan). The Global Positioning System or GPS resulted from research designed to test Einstein's theory of relativity. The $1.5 trillion/year telecommunications industry responsible for the information super highway was aided by early physics research. Physicists developed new materials, electronics and lasers, which in turn lead to fiber optics and cellular communications. In addition, though not well known, particle physicists designed the World Wide Web as a means for scientific communication with colleagues.

It is clear that physics will play a fundamental role in many of the new technologies that emerge in the next century. It is our goal as a department to train and educate the students who will be making contributions and competing in a highly technical society. To meet that goal, the department has changed dramatically in the last 20 years. When I was an undergraduate student here in 1979, the department had 22 faculty members. Today, we have over 50 tenure track faculty members, almost half of whom were hired since the fall of 1988. The excellence of our faculty is demonstrated by the fact that the department has had six National Science Foundation Presidential Young Investigator/Early Career Award recipients, two Cottrell Scholars, two Sloan Fellows, three Guggenheims and two Jesse Beams Medal winners. The recruitment of faculty has enabled the department to establish active research groups in astrophysics, cosmology and gravitation, condensed matter physics (experimental, theoretical and computational), low temperature physics, elementary particle physics (experimental and theoretical) and more recently biophysics. Excellence in the faculty has translated down to excellence in our students. Two of our undergraduate students have been finalists for the American Physical Society Apker Award (given to the top research project by an undergraduate student in the US) with one student winning the award outright.

These improvements have enabled our department to move into the top quarter of all physics departments nationwide according to the National Research Council's rankings. Like the university as a whole, however, we are not content with this level of distinction and want to move onto the list of top 10 public university physics departments. The New Physics Building will be a valuable resource in attaining this goal. In addition, we must continue to recruit the best faculty from around the world, and to increase our external funding. This will allow us to further improve our graduate and undergraduate programs while securing our position at the forefront of research.

New Faculty

Miklos Bona, assistant professor of mathematics, earned his PhD at the Massachusetts Institute of Technology in 1997. He has held postdoctoral positions at the Institute for Advanced Study in Princeton, New Jersey and at the University of Quebec at Montreal. Bona conducts research in enumerative, bijective and algebraic combinatorics, involving the study of permutations, partitions, graphs and partially ordered sets. He teaches Introductory Combinatorics and Business Calculus. His outside interests include fine arts, classical music, literature, and ball games.

Rena Torres Cacoullos, an assistant professor in romance languages and literatures, just received her PhD in Spanish linguistics from the University of New Mexico. She's interested in language variation and change, language contact, and Spanish in the US. Her current projects include a comparison of grammatical innovations in Puerto Rican and Mexican Spanish and the role of word frequency in sound change. She teaches courses in Spanish, general linguistics and sociolinguistics. Torres Cacoullos' outside interests include reading literature, watching films, listening to music and talking to friends.

Tim Johnson, an assistant professor of classics, taught at Baylor for five years before coming to UF this fall. He completed his PhD work in classical philology at the University of Illinois in 1993. He works in Greek lyric poetry, Roman poetry of the Augustan period (especially Horace), and Roman historiography. Johnson is currently writing a book-length study on exile poetry in the Augustan period. He teaches courses in Roman comedy, Roman satire, Roman history and New Testament criticism. In his spare time, Johnson enjoys carpentry, gardening and playing soccer with his daughter.

Assistant professor **Kathrin Koslicki** completed her PhD in philosophy at MIT in 1995. After three years as an assistant professor of philosophy at the University of New Orleans, she held an Andrew Mellon postdoctoral fellowship in linguistics and philosophy at the University of Southern California. Her research interests include metaphysics, philosophy of language and ancient Greek philosophy. Kathrin is currently working on a classical problem in metaphysics known as "the problem of constitution," which concerns the relation between a thing and what it is made of. In addition to philosophy, she enjoys riding her motorcycle, playing volleyball, reading and playing guitar.

Assistant professor of mathematics **Sergei Pilyugin** comes to UF from Georgia Tech and Emory where he held a joint postdoctoral fellowship after receiving his PhD from Emory in 1997. His research involves ordinary and partial differential equations, mathematical biology and mathematical modeling. Pilyugin's current projects include designing theoretical modeling of immune memory and the cell cycle. Academia aside, Pilyugin enjoys outdoor activities, especially sports and mountaineering.

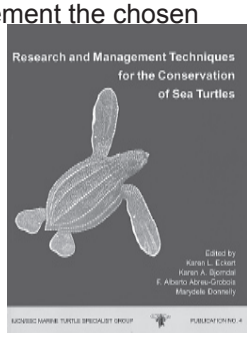
Assistant professor of English **Blake Scott** just received his PhD in English, rhetoric and composition, from Penn State University, where he taught business, technical, and scientific writing courses. Scott's research interests include the rhetorics of science and technology, rhetorical theory, and professional writing. He is currently working on a book-length rhetorical and cultural study of HIV testing in the United States. In addition to teaching undergraduate writing courses and graduate courses in composition theory and rhetoric, Scott will further develop the English Department's writing internship program. His interests include running, hiking, reading, and volunteer work.

Grants (through the Division of Sponsored Research) **August 1999 Total: $3,783,459**

Investigator	*Dept.*	*Agency*	*Award*	*Title*
Corporate	***$102,298***			
Katritzky, A.	CHEM	Centaur Pharmaceuticals Inc.	65,000	Centaur Pharmaceuticals research agreement.
Katritzky, A.	CHEM	Dow Chemical Company	7,455	Dowelanco compounds agreement.
Katritzky, A.	CHEM	Dupont Agricultural Products	19,540	Dupont Agricultural Products.
Wagener, K.	CHEM	Lord Corporation	6,000	Miscellaneous donors.
Randles, R.	STAT	Archimica Inc.	4,303	Archimica (formerly PCR) statistical internship.
Federal	***$3,534,698***			
Stratford, B. Burns, A.	ANTH	Cntrs. For Disease Ctrl. & Prvnt.	93,749	The patient adherence support systems: development & evaluation of an intervention to improve adherence to HAART.
Elston, R.	AST	NASA	12,500	A complete NICMOS map of the Hubble deep field.
Harmon, A.	BOT	NSF	102,002	A bacterial two-hybrid system for studying CDPK-substrate interaction.
Chege, M.	CAS	US DOE	198,115	Administrative: National Resource Center & Foreign Language & Area Studies fellowships.
Bartlett, R. Cheng, H.	CHEM	NSF	2,200,000	Multi-scale simulation of materials behavior through integrated computational hierarchies.
Benner, S.	CHEM	NIH	138,037	Evolution of the ribonuclease superfamily.
Williams, K.	CHEM	NSF	41,625	ICP-AES in the analytical & physical chemistry laboratories.
Winefordner, J.	CHEM	NSF	2,958	Advanced measurements & characterization.
Winefordner, J.	CHEM	US DOE	100,000	Atomic emission absorption & fluorescence in the laser induced plasma.
Channell, J. Opdyke, N.	GEOL	NSF	26,038	Acquisition of thermal & alternating field demagnetizers.
Garvan, F.	MATH	NSF	5,000	Conference: symbolic computation number theory special functions physics & combinatorics.
Mitchell, W. Larson, J.	MATH	NSF	90900	Set theory: combinatorics & large cardinals.
Cheng, H.	PHY	US DOE	40,000	Nano-machining via coulomb explosion.
Mitselmakher, G. Korytov, A.	PHY	US DOE	333,681	Endcap MUON system development for the CMS project.
Rinzler, A. Hebard, A.	PHY	NSF	87,893	Construction of a nanotube tip mounting workbench for generation of nanoscale probes.
Tanner, D. Hebard, A.	PHY	NSF	30,996	US-Hungary research on the optical properties of fullerenes.
Tanner, D. Hebard, A.	PHY	NSF	25,704	US-Hungary research on the optical properties of fullerenes.
Bjorndal, K. Bolten, A.	ZOO	US DOC	5,500	Productivity & biodiversity in seagrass ecosystems.
Foundation	***$46,480***			
Burns, A.	ANTH	UF Foundation	8,000	Zora Neale Hurston fellowship.
Bjorndal, K. Bolten, A.	ZOO	UF Foundation	8,480	Sea turtle conservation.
Holling, C.	ZOO	J. & C. Macarthur Foundation	15,000	UF Foundation account for C. S. Holling.
Holling, C.	ZOO	J. & C. Macarthur Foundation	15,000	UF Foundation account for C. S. Holling.
State	***$8,870***			
Oliver-Smith, A. Lopez, M.	ANTH	Florida International Univ.	4,000	Engendering post-disaster resettlement: survival strategies in the Honduran-Caribbean lowlands.
Stansbury, J.	ANTH	Florida International Univ.	4,870	Post-hurricane nutritional status in Honduras: under-five child growth in three affected zones.
Miscellaneous	***$91,113***			
Brandt, S.	ANTH	Leakey Foundation	11,968	Baldwin fellowship for Agazi Negash.
Burns, A.	ANTH	Univ. of Notre Dame	12,000	Pew Younger Scholars graduate fellows program.
Oliver-Smith, A. De Vries, G.	ANTH	Inter-American Foundation	2,350	Livelihood strategies in the Honduran *mosquitia*: household responses to post-hurricane agricultural change.
Schober, T. Norr, L.	ANTH	A. Papathanasiou	9,690	Bioarchaeological analysis of the neolithic changes in health, subsistence, & funerary ritual of the Alepotrypa cave site.
Bowes, G.	BOT	Ctr. For Intl. Forestry Research	3,375	Miscellaneous donors.
Tan, W.	CHEM	Am. Chemical Society	20,000	Molecular nanostructures & their applications.
Tinsley, H.	PSY	Southern Illinois University	10,530	Journal Of Vocational Behavior—Editorship.
Brockmann, J.	ZOO	Miscellaneous Donors	1,200	Miscellaneous donors.
Emmel, T.	ZOO	Assoc. For Tropical Lepidoptera	20,000	Miscellaneous donors.

Research and Management Techniques for the Conservation of Sea Turtles
Edited by Karen L. Eckert, **Karen A. Bjorndal** (Zoology), F. Alberto Abreu-Grobois and Marydele Donnelly
Marine Turtle Specialist Group

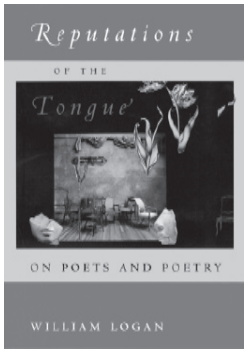
(from preface)
To ensure the survival of sea turtles, it is important that standard and appropriate guidelines and criteria be employed by field workers in all range states. Standardized conservation and management techniques encourage the collection of comparable data and enable the sharing of results among nations and regions. This manual seeks to address the need for standard guidelines and criteria, while at the same time acknowledging a growing constituency of field workers and policy-makers seeking guidance with regard to when and why to invoke one management option over another, how to effectively implement the chosen option, and how to evaluate success.



(excerpt)
Knowledge of the effects of human activities on sea turtles in foraging habitats are clearly a high priority for the management and conservation of sea turtles. Current levels of directed take of sea turtles on foraging grounds and the effect of these harvests on population stability should be assessed. The opinion that sea turtle populations can sustain harvests on their foraging grounds as long as they are protected at their nesting beaches reflects a lack of understanding of just how unrelenting and efficient such harvests can be.

Reputations of the Tongue: On Poets and Poetry
William Logan (English)
University Press of Florida

(from book jacket)
William Logan is the most dangerous poetry critic since Randall Jarrell. Intense and savagely witty, he is the most irritating and strong-minded reviewer of contemporary poetry we have. A survey of American, British, and Irish poetry in the eighties and early nineties, *Reputations of the Tongue* is a book of poetry criticism more honest than any since Jarrell's *Poetry and the Age....*



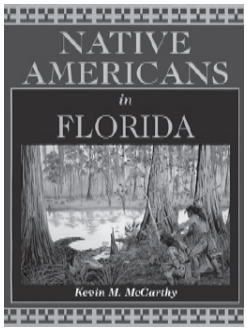
Logan's reviews have been noted for their violence, intelligence, candor, and humor. Many aroused tempers on first publication, leading one Pulitzer Prize winner to offer to run the critic over with a truck.

(excerpt)
A book of selected poems is a monument to middle age. It may revive a flagging career or embalm an overvalued one. As a sign of respectability, or as a device to return to print poems long out of it, a selected poems is an unendurable temptation for poets who have not received their due (and even great poets fear they have not received their due). Though a clever poet can obscure his old sins or alter his alliances (early Yeats, in our standard texts, is often late Yeats in sheep's clothing), revising with a liver-spotted hand the radical errors of youth, these monumental designs usually falter, like those of public statuary, between ingratiation and ingratitude. Most poets should rest on their laurels or read their old reviews.

Native Americans in Florida
Kevin McCarthy (English)
Pineapple Press

(from book jacket)
The book begins with a discussion of several basic areas of interest to those studying Native Americans in Florida. The author explores the importance of archaeology in preserving the past for future generations, how archaeologists do their work, and even how young people can gain hands-on experience on a real dig. The different types of Indian mounds–burial mounds, shell middens, and platform mounds–and their uses are explained, as well as Indian languages and reservations.

(excerpt)
Today in Florida only two languages are still spoken among the Seminole people. These are Maskóî (erroneously called "Creek" by English speakers) and a Hitchiti dialect called Misiksúkî. But 50 years ago, seven languages were still in use, and 150 years ago, there may have been a dozen or more. The only trace of the original languages spoken in Florida for several thousand years is in a few place names that the Europeans borrowed from the Indians. It was usually easier for the new explorers to use an Indian name for a lake, river, valley, or settlement than to make up a new name. The Europeans might ask friendly Indians what they called a certain place. The Indians would tell the Europeans what the Indian name was, and the Europeans would listen to the word and then pronounce it in their own language as close to the Indian pronunciation as they could.



Musings *continued from page 1*

responsibilities. It was funded by private support by Mr. and Mrs. Kenneth Keene, with state matching funds. By use of non-state monies, we were able to create a Faculty Center of unusual beauty and quality, in keeping with the Keenes' wishes. The room itself goes back to 1937, when it was built as part of the first UF Student Union, which eventually became the Arts and Sciences Building and later, Dauer Hall. In its earliest days, the Center was known as the University Banquet Hall, but archival photos show many types of events taking place there in the 1940s and 50s. Thus, a rich history precedes its reincarnation as the Keene Faculty Center.

In addition to individual use by faculty, the Keene Center finds extensive demand as a site for dinners, lunches, receptions, and various types of organization activities. Its popularity is growing rapidly. Associate Dean Joe Glover oversees the Center, schedules events, and makes appropriate decisions for its use. Please see him if you have questions or take a look at the Keene Faculty Center Web site <www.clas.ufl.edu/dean/center> for more information.

Soon we will begin Phase II of the Center renovation process, which will add more hardwood floors in the upper lobby and extend this treatment down the Dauer hallway to connect with the McQuown Room, a site for smaller meetings and conferences. Future plans call for development of a landscaped courtyard to the north of the Keene Faculty Center.

The Center is sponsored and funded by CLAS, but we encourage participation by those from other colleges as well, so that it may serve as a central meeting site for faculty across UF. I hope you are already enjoying and taking advantage of the Keene Faculty Center, a rare and marvelous facility that recognizes and honors our faculty.

See you at the Keene.

Will Harrison, Dean
<harrison@chem.ufl.edu>

A Note From the Chair

Paul Mueller, Chair
Geological Sciences

The Geological Sciences constitute a diverse array of disciplines directed towards improving our understanding of the origin and history of the Earth and the life it holds. True to this definition, faculty and students in the Department of Geological Sciences pursue research and teaching programs ranging from climatology to volcanology. Taking the broad definition of life to include homo sapiens, we also study humankind's influence on our planet, including the impact of our continuing pursuit and consumption of non-renewable natural resources; the implications of geologic systems and hazards for land use (e.g., sinkholes, groundwater contamination, etc.); and the debate about global warming. In order to meet these challenges to our future, the Department of Geological Sciences has developed well integrated educational and research programs that address the most fundamental and topical issues in the earth sciences. Current areas of emphasis include geochemistry, geophysics, hydrology, and environmental geology. We also have begun to develop a new instructional/research program that focuses on the history of the Earth from a systems perspective, and emphasizes studies of ancient climates as a guide to understanding how anthropogenic activity may affect our planet's future. Growing enrollments in our graduate and undergraduate courses, strong interest in our graduates from employers in Florida and nationally, and record levels of extramural support of both our research and instructional programs speak to the quality of these programs. Most recently, our research efforts in geological oceanography were recognized in the form of an invitation to become one of only 14 institutions that comprise J.O.I. (Joint Oceanographic Institutions). J.O.I. operates the $46M Ocean Drilling Program (the world's largest multi-national earth science research program) for the National Science Foundation. In addition, we are implementing a $1,000,000 National Science Foundation grant to renovate research space in Williamson Hall that will cap a gratifying year that began in late 1998 with a celebration of the 50th anniversary of an independent Department of Geological Sciences at the University of Florida. The next fifty years will no doubt prove most interesting for our students and faculty as they strive to meet the challenges posed by the ever increasing demands that society places on our planet.✎

> *"...the Department of Geological Sciences has developed well integrated educational and research programs that address the most fundamental and topical issues in the earth sciences."*
> *–Paul Mueller*

UNIVERSITY OF FLORIDA

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