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Department of Geography

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UTK GEOGRAPHY

Newsletter of the University of Tennessee Department of Geography

Winter 2005



Headspeak

by Bruce Ralston

During the past academic year, the Department of Geography underwent an academic program

review. Conducted once every ten years, an academic program review is a major undertaking. Departments must conduct a self-study, looking at what they have done since the last review, honestly assessing their strengths and weaknesses, and mapping out what they would like to accomplish in the next ten years. A review team consisting of people from within the University of Tennessee and geographers from other universities visits the department over a three day period and conducts extensive interviews with faculty, students, and administrators. The findings from the review process can affect a department's standing within the University and the College, and can influence funding decisions within the University.

When I first contemplated putting together the self-study document I was overwhelmed. I did not look upon the task as something to enjoy. As I compiled the information about our activities of the past decade and began to reflect on decisions we have made concerning curricular development, research directions, hiring decisions, and the like, I became more enthusiastic about the task. As I studied our committee structures, the seriousness with which we handle advising, and the various outreach activities in which we participate, I was impressed by how our departmental governance has been based

on the sound decisions of my predecessors. Gathering the measures of departmental quality filled me with a good deal of pride, and I was awe-struck by the generosity of our friends and alumni. Reviewing the history of the Department left me feeling fortunate that Geography has been so blessed to have dedicated people throughout the history of the University. One fortunate aspect of the timing of our academic program review was that it coincided with the Association of American Geographer's Centennial Celebration. Sid

Jumper wrote a wonderful chapter entitled "Geography at the University of Tennessee: 1794-2003" which appeared in the AAG's publication *The South's Role in the Making of American Geography*.

There is indeed a rich history to the Department. Geography

classes date back to 1794 when Blount College was established. In 1840, the first named Professor of Latin and Geography, Rev. William J. Keith, was appointed. Geography classes have been offered continuously since 1907. Over the 20th century, Geography benefited from the dedication of many individuals. The accomplishments of the men and women who shaped our Department are impressive. The history of the Department reflects the dedication to geography by people such as Harold Clyde Amick, Lillian Stimson, and Sidney Jumper. A small group of faculty and staff, helped enormously by the generosity of friends and alumni, has shown what dedicated professionals can accomplish when working toward common goals. If you would like to read more about our departmental

"I was awe-struck by the generosity of our friends and alumni."



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304 Burchfiel Bldg.
Knoxville, TN 37996

Continued on Page 2



history, visit our web site at <http://web.utk.edu/~utkgeog>. I have posted the Departmental History section of our self-study document there for all to read. Just follow the Departmental History link.

The successes of the present faculty, staff, and students also are impressive. The self-study confirmed what I already knew. The recent history of the Department of Geography has been marked by strong hires, more interdisciplinary research, expanded service activities, and increased external funding. The lists of awards, books, articles, grants, contracts, student achievements, and other measures of quality are impressive. However, lists of honors tell only part of the story. The strongest indicator of quality can be drawn from the level of engagement of the faculty and staff in serving our teaching, research, and service missions. With a faculty of 12 and 4 staff members, we run productive research programs, solid general educational and major programs, carefully administered, cutting edge graduate programs, and an outreach program that exemplifies the best of what public universities are about.

The review went very well. The qualities I see in the people around me were echoed by the review team. I have received several “warm-fuzzy” compliments from various people around the University. When the review was completed, I wrote the following in an email to Sid Jumper: “We are walking in tall cotton these days. . . . Thanks for the investment in thought, hope, and courage you made in all of us.” (I also told him not to expect too many sappy emails from me!) These same comments apply to the faculty and staff with whom I work every day.

The academic program review also made us look at some hard realities. We are currently suffering growing pains, as more students choose to be Geography majors. We need more faculty members and graduate assistants and our staff and graduate assistants deserve better funding. We are hopeful of improvements. We believe that we have shown that investments in Geography pay

high dividends. With your support we should continue to move forward.

On a personal note, the review process made me realize how fortunate we are to work in a discipline we enjoy along side a never ending supply of bright young people. At the risk of sounding corny, I realize more than ever that it is a privilege to be an educator and that privilege exists because of the hard work and support of many people, past and present.



Water Resources Class Partners with Community Groups

In spring 2004, Carol Harden’s Water Resources class (Geog. 436) joined with the Beaver Creek Task Force to assess the condition of Beaver Creek and its tributaries. Specialists from TVA provided maps and other resources for the project and trained students to use the Center for Watershed Protection protocols for stream reaches and their contributing areas. Student presentations, data, and reports were distributed to the agencies that comprise the Beaver Creek Task Force, including TVA, Knox County Engineering, the Beaver Creek Watershed Association, several local utilities, and UT’s Water Resources Research Center.

For the students, the project offered a chance to combine learning with assisting the local community. Outside interest in their projects increased the professionalism of the students’ work. For the Beaver Creek Task Force, student participation offered the possibility of greatly enlarging the knowledge and database. Students also helped TVA test an early (and not completely user-friendly) version of a digital database that is being developed to allow inter-institutional data-sharing.

The project was highlighted in the College’s Academic Outreach publication in spring 2004. And, yes, there are beavers in Beaver Creek, which flows from east to west in north Knox County.

Investment Opportunities in Geography

Gifts to the Geography Department may be designed for a specific purpose or fund or given to the department's Enrichment Fund as discretionary funding. Be assured that it will make a difference! Existing funds are shown below. Please contact Bruce Ralston if you would like more information or if you would like to target your gift for a purpose not shown. The Development Offices of the College and University would be pleased to have you ask about other forms of giving, such as bequests, charitable lead trusts, and gifts of the remainder interest in a personal residence or farm, and they are set up to help you evaluate the tax benefits of different gift options. All contributors making gifts of a hundred dollars or more are eligible for University recognition via the Gift Club.

The Tennessee Geography Education Fund –

This endowment began in 1997 with gifts from J. Harrison Livingston and the Tennessee Geographic Alliance that were matched by the National Geographic Society. Another endowment is being established and the National Geographic Society can match an additional \$500,000.

Stewart K. McCroskey Memorial Fund –

Established by the McCroskey family after Stewart's death. This fund supports field research and professional travel by Geography students and faculty.

Sid Jumper Teachers' Scholarship Fund –

Established in 1995 when Sid Jumper stepped down from the role of Head of the department, this fund supports graduate training for K-12 teachers.

Bill & Donna Cobble Geography Enhancement Endowment –

Proceeds from this fund, established in 1995 by Bill & Donna Cobble in support of undergraduate education in Geography at UTK, are used to enhance the educational experiences of undergraduate students.

Edwin H. & Elizabeth H. Hammond Endowment Fund in Geography –

Established to honor Professor Hammond, who retired in 1987 and who continues to match gifts to the fund, this endowment brings a distinguished lecturer to the department each year.

Robert G. Long Outstanding Graduate

Student Award Fund – The Robert G. Long Award, established to honor Professor Long who retired in 1979, honors one or two graduate students each year for superior scholarship and service to the department. The students are recognized on a plaque and receive checks of \$50.

Geography Department Scholarship Fund –

This fund provides one or more tuition scholarships to outstanding undergraduate geography majors.

The Geography Department Enrichment

Fund – This fund may be used to meet special needs as determined by the department faculty. In recent years, it has supplemented our operating budget and provided travel support to professional meetings for faculty and students.

The Geography Technological Enrichment

Fund – Established in 1995 by two anonymous donors, the funds are used to provide our computer research labs and classrooms with up to date equipment and software.

Geography Endowment Fund – Donations are invested by the university. The principal generates quarterly interest to the Geography Enrichment Fund.

Please send your gift to: Department of Geography, 304 Burchfield Geography Building, University of Tennessee, Knoxville, TN 37996-0925. **Make checks payable to: University of Tennessee, but also use the memo line on the check to indicate "Geography" and, if you wish, to indicate a specific fund.**





Tennessee Teacher Experiences the Excitement of Costa Rican Fieldwork

The sediment that builds up on the bottoms of lakes contains pollen grains, diatoms, and charcoal fragments that can be studied to chart the history of lakes and their surroundings over time, thereby contributing to basic understanding about past and potential future global change. Fifth-grade schoolteacher Christina (Chris) Lafrenz of Knoxville, Tennessee, learned how these sediment records are collected and analyzed as a participant in an NSF-supported program. The project is using evidence from lake sediments to document climate, fire regimes, and human disturbance within tropical dry forest ecosystems of northwestern Costa Rica. As a member of a field team led by Professor Sally Horn and Ph.D. Candidate Marty Arford, Chris helped build, position, and anchor a floating coring platform made of wooden planks and truck tire inner tubes. She used the platform to recover cores of lake sediment using a piston sediment corer, and she collected samples of modern surface soils whose pollen content can help reveal how different vegetation types and land uses might be recorded by microfossils in ancient sediments. After returning from Costa Rica, Chris participated in analysis of the sediment cores in the Paleoenvironmental Research Lab (see article elsewhere in this newsletter) and wrote about her adventures in the Newsletter of the Tennessee Geographic Alliance (see August 2003 newsletter at <http://web.utk.edu/~tga>). She also developed several classroom exercises drawn from her experiences.

The participation of Chris in this NSF-funded project brings to eleven the number of K-12 school teachers who have participated in research projects led by Sally and by colleagues Ken Orvis and Carol Harden in Costa Rica (2 teachers), the Dominican Republic (6) and Ecuador (3). The Tennessee Geographic Alliance has provided key logistical and financial help to support teacher involvement in UT research,

and we plan more such experiences in the future. The Costa Rican research project provided Chris with horizon-broadening international field experience and first-hand knowledge of scientific research. Too many teachers in our nation's schools think of "research" as a library- or internet-based process of summarizing what other people have already learned. These teachers have not had the opportunity to experience the excitement of research as discovery, and as a result, they have trouble developing inquiry-based learning assignments for their own students. By providing the opportunity for Chris and others to engage in scientific field research and discovery, Geography faculty have increased these teachers' interest in and capacity for providing research opportunities for their students that can help integrate the scientific curriculum in K-12 schools.



Fifth grade teacher Christina Lafrenz helps remove a sediment core from a lake in northwestern Costa Rica.

Geography Department Serves as a Pipeline to Local Planning



If you were to visit the Tennessee Local Planning Assistance Program office in Knoxville, you would quickly come to realize the influence the Department of Geography has on its day-to-day operation. The Community Planning Director responsible for managing the Program statewide is Dan Hawk (MS, 1986). The Community Planning Regional Director, Bart Hose (MS, 1987), oversees the Knoxville Regional office. Dave Williams (MS, 1982) and Matthew Lambert (BA, 2001) are Community Planning Principal Planners and Amy Hill (all but Master's Thesis) is a Community Planner in the office.

The mission of the Local Planning Assistance Program is to strengthen the planning, analytical and community development processes of local government in Tennessee through a program of technical assistance in the areas of comprehensive planning and community development activities. Balanced by a concern for the environment, efficiency in the use of resources and esthetic community design, the basic economic development objectives the Local Planning Program are designed to address are community infrastructure and the enhancement of "quality of life" features that make communities desirable places to locate new businesses or expand those already there. Services are delivered from six regional offices located in Chattanooga, Cookeville, Jackson, Johnson City, Knoxville, and Nashville.

The ties to the Geography Department don't end with the Knoxville Regional Office. Patrick Schipani (BA, 1977) is a Community Planning Principal Planner in the Nashville office. In addition, seven other alumni have previously worked at the Program; Susie Fisher Butefish (MS, 1985), Kendrick Curtis (MS, 2003), George James (MS, 1968), Danny Kirby (BA, 1995), Kate Newton (BA, 1993), Tim Thompson (BA, 1992) and Ruth Viergutz Hawk (MS, 1985). Kendrick Curtis has since returned to the Department to work on his Ph.D. Ruth Hawk is still in planning serving as the Community Planning Director for the Town of Farragut, TN as is George James, who is City Planner for Springfield, TN.

Dan Hawk also identified 14 other employees of the Local Planning Assistance Program that have geography degrees,

most from East Tennessee State University. So what makes geographers attractive to the Program? According to Dan Hawk, "geographers, particularly those with graduate training, have consistently possessed the tools necessary to research and analyze demographic, environmental, land use, infrastructure, and facilities information and can describe their conclusions both in written reports and oral presentations. Communicating the spatial significance of this data is critical when developing sound public policy for regulations and spending in the cities and counties we serve."

David Williams who started with Local Planning in 1983 agrees. He states, "My geography background has helped me in urban and regional planning to think spatially when preparing plans and examining planning issues. A geographic approach is especially important when considering the locations and interaction of the various land uses within a community." David also credited his development of a thesis, under the direction of Dr. Charles Aiken, as invaluable preparation in his career as a planner.

Amy Hill, who began work at the office in June of this year stated, "My time at UT has prepared me for my current job in three important ways. First, by taking classes in urban geography, rural geography, and special topics courses in urban sprawl and field research, I developed a strong background in the dynamics and consequences of land conversion. That knowledge has made it far easier to adapt to a planning environment. Second, experience with the department's technical resources has prepared me for work with GIS in this office, particularly identifying GIS products that planners can put to use. Third, completing a variety of seminar classes and research projects honed skills important to any job: the ability to approach a question from all angles, thoroughly research a topic, and present the information clearly."

Dan and Ruth Hawk are invited annually to address Dr. Tom Bell's *Proseminar in Geography* to discuss opportunities for geography graduates in planning with the senior undergraduates. With all of these ties to the Department, it looks as though the pipeline to planning could be open for many years to come.



The Alliance Continues Its Stellar Performance

The Tennessee Geographic Alliance (TGA) now has over 4,800 members, a large majority of whom are Tennessee Teachers. It has active chapters in Memphis, Nashville, Murfreesboro, Gallatin, Lawrenceburg, Johnson City, Chattanooga, and Knoxville. Base funding for the Alliance comes from the Tennessee State Department of Education and an endowment administered by the National Geographic Society Education Foundation (NGSEF). This past year the Alliance learned that the University would no longer continue to provide its annual monetary support for the organization because of system-wide funding constraints. While this news was a blow to the Alliance, the immediate future looks good for carrying on the vital mission of improving geography education for K-12 teachers across the state.

During the summer of 2003, the Alliance completed the second year of the *Building a Toolbox of Skills: Immersing Teachers and Students in Experiential Learning* project. The TGA teamed up with the Great Smoky Mountains Institute at Tremont, UT's Math and Science Regional Center (MSRC), Discover Life in America (DLIA) and the North Carolina Geographic Alliance to give 44 MSRC students and 43 teachers from North Carolina and Tennessee an opportunity to do field research with scientists from the University of Tennessee Geography Department, DLIA, and the Great Smoky Mountains National Park. The project was supported in part through a \$59,837 Grosvenor Grant from the National Geographic Education Foundation.

That summer also saw the Alliance host 24 teachers in a *Geography and Educational Technology Workshop* in Cleveland, TN and 23 teachers in a workshop on *Tennessee in a Globalizing World: Immigration, Ethnicity and the Global Economy* at the Department in Knoxville. This last workshop was designed and presented by the dynamic duo of Drs. Carol Harden and Anita Drever.

In the summer of 2004, the Alliance and Geography Department welcomed 25 teachers from all over the U.S. to the

Knoxville campus for a four-week institute on *Cultural Diversity of the American South*. The institute was funded by a \$168,808 grant from the National Endowment for the Humanities with additional support coming from the National Geographic Society Education Foundation. The teachers came from as far away as Washington, Florida, New Hampshire and Louisiana, and included four from Tennessee. Dr. Charles Aiken and Kurt Butefish were co-directors. Dr. John Rehder coordinated an ambitious field trip itinerary. Guest speakers were drawn from many units on campus including the English, Anthropology, History and Political Science Departments and the College of Law.

In April, the Alliance was awarded a \$113,000 Grosvenor Grant for *Teaching and Learning Geography*. During the summer of 2005, the grant will fund college-level courses for Tennessee middle and high school teachers that focus on preparing them to pass the PRAXIS Geography Exam and to meet the "highly qualified" standards required for teachers under the No Child Left Behind Act. The courses, which will also assist teachers with improving the quality of geography lessons offered to students in their classes, will be offered in Memphis, Chattanooga, Nashville, and Knoxville.

The Alliance continues to annually award two Geography Teacher of the Year Awards. This year the Beverly Award for K-6 teachers went to Betty Hawkins of Cascade Elementary School in Shelbyville. The Mullane Award for teachers in grades 7-12 went to Susan Gratz of Morristown West High School.

The Alliance also remains active in the statewide Geography Bee held annually in Nashville, Geography Action! (formerly Geography Awareness Week), Earth Science Day, and many other geography programs for students and teachers. If you would like more information or a copy of the latest Alliance newsletter, please visit our web site at <http://web.utk.edu/~tga/> or contact Kurt Butefish at (865) 974-4841 or kbutefis@utk.edu.

Spotlight on the Department of Geography's Laboratory of Paleoenvironmental Research

Over the last few years we have developed many new facilities in Geography for research and teaching, both in the Burchfiel Geography Building and in the Science and Engineering building, located on "The Hill" next to our department's former home in the Geology and Geography building (now known as the Earth and Planetary Sciences building). One such facility is the Laboratory of Paleoenvironmental Research, co-directed by Drs. Sally Horn and Ken Orvis, which we spotlight here.

The Laboratory of Paleoenvironmental Research is a suite of interconnected and adjacent laboratories on the fourth floor of the Science and Engineering building. These include facilities for the study of ancient soils and sediments—and the plant and other fossils they contain—as recorders of past environmental conditions including past climate, vegetation, fire, and human history; study of modern soils and sediments and their environmental relationships; and study of modern and historic landscapes and climate. The analysis and modeling of contemporary patterns and processes are of interest in their own right, and are also fundamental to our ability to understand evidence of past conditions preserved in soils and sediments and to apply it to questions of future global change. The Laboratory of Paleoenvironmental Research originally included a small tree-ring lab, which was subsequently spun off and developed by Dr. Henri Grissino-Mayer into the Laboratory of Tree-Ring Science (of which Grissino-Mayer is Director and Horn and Orvis are Associate Directors). The Laboratory of Paleoenvironmental Research collaborates with the Laboratory of Tree-Ring Science, with the isotope and geochemistry labs directed by Dr. Claudia Mora and Dr. Maria Uhle in the Department of Earth and Planetary Science, and with other labs at UTK that are linked as part of the Global Environmental Change Research Group (GECRG).

To our knowledge, the Paleoenvironmental Research Laboratory is the most extensive and well-equipped facility of its kind within any Geography Department in the United States. The Laboratory of Tree-Ring Science down the hall is of similar stature, and both labs together have helped establish the reputation of UT Geography as a very strong department for physical geography research. Research equipment in both labs has been funded by a combination of internal (UT) funds, external grants and contracts, and gifts from individuals and corporations. The lab rooms and current functions of spaces in the Laboratory of Paleoenvironmental Research are as follows:

416: Walk-in Cold Room (kept at 5° C): Sediment-Core and Sample Storage.

417: Sediment-Core Cutting, Macrophotography, Water Purification (see Photo 1)



Photo 1. Professor Ken Orvis and former Ph.D. student Lisa Kennedy (now Dr. Kennedy of Virginia Tech) slicing open an aluminum coring tube (containing bog sediment from the Dominican highlands) using a specialized router in the Paleoenvironmental Research Laboratory.





- 418: Landscape Climatology Modeling, Cosmogenic-Isotope Landform Dating
- 419: Automated Microscopic Charcoal Analysis, Image-Based Landform and Vegetation Analysis, Data and Project Management
- 420: Microfossil Analysis, Automated Macroscopic Charcoal Analysis, Microfossil Reference, and Research Collections

The two lab spaces below connect to SERF 420:

- 433: Tropical Palynology, ¹⁴C Sample Preparation, Sedimentology (see Photo 2)
- 434: Modern Pollen Extraction, Quartz Microtexture Analysis, Sediment Micromorphology Sample Preparation, Charcoal Reference Preparation



Photo 2. M.S. student Dave West and undergraduate geography major Jessica Brogden preparing pollen samples in the Paleoenvironmental Research Laboratory.

- 421: Temperate Palynology, Diatom Extraction, Preparation of Stable Isotope Samples
- 422: Particle Size Analysis, Cosmogenic-Isotope Sample Preparation, Quartz Microtexture Sample Preparation

Current Projects in the Lab include the following:

Physical and Biotic Evidence of Glacial Ice and Climate in the Cordillera Central, Dominican Republic, Ken Orvis and Sally Horn along with Mike Clark in Earth and Planetary Sciences, and former Ph.D. student Lisa Kennedy, now at Virginia Tech. This project has been funded by UT, the National Geographic Society (NGS), the Tennessee Geographic Alliance, and the National Science Foundation (NSF).

Holocene Climate and Environmental History in the Dominican Republic, Ken Orvis, Sally Horn, Ph.D. student Chad Lane, undergraduate Geography student Jason Graham, Claudia Mora of Earth and Planetary Sciences, and Kurt Haberyan of NW Missouri State. This project focuses on reconstructing Holocene climate within different climate zones of the Dominican Republic, based on analyses of pollen, charcoal, stable carbon and oxygen isotopes, and other proxy indicators in sediment cores. Dave West and former students Duane Cozadd and Sarah Deane also assisted with this project, which has been funded by two grants to K. Orvis from the National Geographic Society.

Paleoclimates and Ancient Glaciers in Costa Rica, Ken Orvis, Sally Horn, and Carol Harden along with Kurt Haberyan of NW Missouri State, Ph.D. student Chad Lane, and former students Duane Cozadd and Brandon League. This project has been funded by UT, GEORG, and NGS; Orvis, Horn, and Maria Uhle of Earth and Planetary Sciences have a proposal pending for support from NSF's Paleoclimate Program.

Climate History from Paleosols in Costa Rica, Sally Horn, Ken Orvis, former EPS faculty member Steven Driese (now chair of Geology and Geography at Baylor University), and Guillermo Alvarado of the Volcanology Division of the Costa Rican Electricity Institute. Ph.D. student Lisa Wilkins has also participated in this project, which has been funded by GEORG and The A.W. Mellon Foundation.

Lake-Sediment Records of Holocene Droughts, Indigenous Agriculture, and Prehispanic Vegetation and Fire Regimes in Northwestern Costa Rica,

Sally Horn, Ph.D. student Marty Arford, M.S. student Kyle Schlachter, and Kurt Haberyan of NW Missouri State. This project, funded by NSF, focuses on lake-sediment records from a series of small lakes on the lower slope of Miravalles Volcano that formed about 8000 years ago associated with lava and tephra eruptions (Photo 3). Ph.D. student Chad Lane, M.S. students Dave West and Joe Burgess, and undergraduate Jessica Brogden have also contributed to this project. Fieldwork in summer 2003 included a school teacher, Chris Lafrenz, whose participation was facilitated by the Tennessee Geographic Alliance (see related story on page 4).



Photo 3. Professor Sally Horn and Ph.D. student Marty Arford coring the sediments of a lake in northwestern Costa Rica. The core tube, full of sediment after a successful drive, is being removed from the drill string and sealed for return to the Paleoenvironmental Research Lab. A new, empty tube will then be attached so that the coring can continue.

PreColumbian Disturbance and Forest History in Central and Southern Costa Rica,

Sally Horn, Ph.D. student Chad Lane, Claudia Mora of EPS, Ken Orvis, Maureen Sánchez of the University of Costa Rica, Kurt Haberyan of NW Missouri State, M.S. students Zack Taylor and Joe Burgess, and former students Duane Cozadd and Kevin Anchukaitis. Work on this topic is funded by The A. W. Mellon Foundation, and involves the analysis of multiple proxies in sediment cores and surface samples from a series of sites in southern Pacific Costa Rica and on the Central Caribbean Slope. These studies are designed to help us untangle the signals of climate and human history in late Holocene sediment records, and to bolster our understanding of how different proxies might be affected by such limnological parameters as basin shape and the distance between the core site and shoreline.

Particle Mineralogy and Particle Size Distributions as Proxies of Prehistoric Human Disturbance in Costa Rican Watersheds, Ken Orvis, Sally Horn, and undergraduate student Jessica Brogden. This project, developed as a “side project” to the Miravalles work described above, is funded by an NSF REU supplement to Horn and Orvis. It supports work by Jessica that will form the basis of her undergraduate honors thesis, directed by Ken Orvis.

Long-term Fire and Vegetation History in Highland Ecuador, Sally Horn and Ken Orvis, with help from M.S. student Joe Burgess and former student Duane Cozadd. The objective of this project, funded by The A. W. Mellon Foundation and the GECSRG, is to develop a 10,000 year record of fire and vegetation history from the Ecuadorian páramo that can be compared with records developed by Horn and former student Brandon League in the Costa Rican páramos. Former UT students Colin Wolf and Chris Fleming assisted with field work.

Lake-Sediment Evidence of Late Holocene Environmental History in Bolivia, M.S. student Zack Taylor along with Sally Horn, Ken Orvis, Claudia Mora of Earth and Planetary





Sciences, and Lee Cooper of Ecology and Evolutionary Biology. This study of mineral sediments, pollen, and stable isotopes in a lake sediment core is funded by a grant to Horn from the A.W. Mellon Foundation and by GECRG. Field work, completed in the summer of 2003, was directed by Marty Arford with assistance from Zack and Ph.D. student Lisa Boulton.

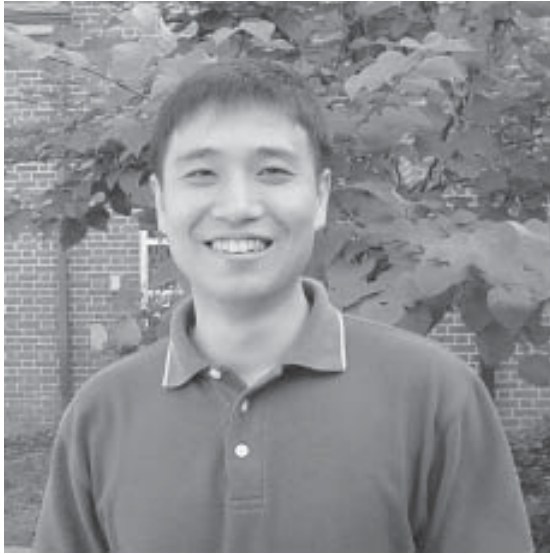
Fire and Vegetation History in the Bahamas, Sally Horn, Ken Orvis, Henri Grissino-Mayer, Claudia Mora, and M.S. students Allison Stork and Dave West. With funding from GECRG, we have been able to recover sediment cores from two sites on Greater Abaco Island. Our hope is to link the results of sediment studies (carried out by Allison Stork and Dave West for their M.S. theses) with ongoing analyses of tree-rings and fire scars by M.S. student Alison Miller, former student Daniel Lewis, and by Grissino-Mayer, Orvis, and Horn. Ph.D. student Lisa Wilkins and M.S. student Allison Stork participated in Fall 2003 sediment coring, along with Horn and Orvis; M.S. student Dave West visited the core sites in October 2004 while conducting a study of charcoal deposition following controlled burns on the island. Dave's work is funded by a McCroskey grant and by funds made available by Chris Bergh of The Nature Conservancy.

Holocene Vegetation and Climate Dynamics in the Knoxville Area, Ph.D. student Lisa Wilkins, along with Sally Horn and Ken Orvis, is investigating lake sediment records of vegetation and climate preserved in local Knoxville lakes (Photo 4). We are presently trying to obtain funding for this work, and are interested in sponsors, should the idea appeal to you! There are many more lakes in Knoxville than you might realize. Interestingly, even the ones located at busy highway intersections and right along I-40 are apparently natural lakes that long predate today's busy thoroughfares. Some of them may have a layer of recent sediment from highway construction, but we can pound our way through that material, which has served to protect the valuable older sediments underneath!



Photo 4. Ph.D. students Lisa Wilkins and Mary Arford return to shore with a short core of near-surface sediments recovered from Fox Lake in Knoxville.

UT Geography Student Wins International Award



At the Third International Conference on Geographic Information Science, Hongbo Yu, a Ph.D. candidate in Geography, received the *Cartography and Geographic Information Science Award* in the Student Paper Competition. Mr. Yu was recognized for his paper "Spatio-Temporal GIS Design for Exploring Interactions of Human Activities." He received a certificate, a cash prize, and a travel scholarship to attend the conference. Mr. Yu is currently working on his dissertation under the direction of Dr. Shih-Lung Shaw.



Degrees Granted Since 2001 (Through May 2004)

The following is a list of the Ph.D. and Masters Degrees awarded by the Department since 2001. The person granted the degree, dissertation or thesis title, and committee chair are included.

PhD

Tankersley, Jr., Roger (May 2002)
Geography of Stopover Habitats and Migratory Pathways for Neotropical Migratory Forest Birds in the Eastern United States
K.H. Orvis

Brown, Roger W. (August 2002)
Paleoecological Evidence of Pre-Contact Human Impacts on Fire and Vegetation in Northern New York State, USA
S.P. Horn

Xin, Xiaohong (May 2003)
An Exploratory Data Analysis Approach for Land Use-Transportation Interaction: The Design and Implementation of TRANSLAND Spatio-temporal Data Model
S.L. Shaw

Cornebise, Michael W. (Dec. 2003)
The Social Construction of Tourism in Cuba: A Geographic Analysis of the Representations of Gender and Race During the Special Period
L.M. Pulsipher

Grable, Judith L. (Dec. 2003)
Effects of Urbanization on a Small Perennial Stream: Second Creek in Knoxville, Tennessee
C.P. Harden

Kennedy, Lisa M. (Dec. 2003)
Fire and Forest in the Highlands of the Cordillera Central, Dominican Republic: Modern Dynamics and Long-Term History
S.P. Horn

Masters

Armbrister, Michael R. (May 2002)
Changes in Fire Regimes and the Successful Status of Table Mountain Pine (*Pinus Pungens* Lamb) In the Southern Appalachians, USA
H. Grissino-Mayer

Mann, David F. (May 2002)
The Dendroarchaeology of the Swaggerty Blockhouse, Cocke County, Tennessee
H. Grissino-Mayer

Parish, Esther S. (May 2002)
Linking Channel Instability to Urbanization in the Upper Beaver Creek Watershed, Knox County, Tennessee
C.P. Harden





Reding, William M. (May 2002)
Assessment of Spatial and Temporal Patterns
of Log Structures in East Tennessee
C.S. Aiken

Anchukaitis, Kevin J. (August 2002)
A 2000-Year History of Forest Disturbance in
Southern Pacific Costa Rica: Pollen, Spore,
and Charcoal Evidence from Laguna Santa
Elena
S.P. Horn

Holderfield, Lindsey (August 2002)
Heritage Tourism as a Revitalization Strategy
in Antigua, West Indies
L.M. Pulsipher

Kemp, Donald J. (August 2002)
Land Use Change and Fluvial System Dynam-
ics in Upper North Potato Creek, Copper
Basin, Tennessee
C.P. Harden

Cseke, Jacob J. (May 2003)
A Dendroecological Approach for Dating
Individual Small-Scale Canopy Disturbance
Events, Great Smoky Mountains National
Park, Tennessee, USA
H.D. Grissino-Mayer

Tharpe, Jessica A. (May 2003)
Sustainable Transportation: A Case Study of
Telework and Carpool in Atlanta, Georgia
S.L. Shaw

Chatterjee, Moinak (May 2003)
Providing Customized Real Time Traffic
Information Through the Internet: Implemen-
tation Using GIS
S.L. Shaw

Lane, Chad S. (May 2003)
The Paleoecological Significance of Stable
Carbon Isotopes in Lake Sediments From the
Chirripo Paramo of Costa Rica
S.P. Horn

Crider, Kimberly K. (August 2003)
The Effects of Pine-Hardwood Forest Regen-
eration and Woody Species Diversity at the
Savannah River Site, South Carolina, USA
K.H. Orvis

League, Brandon L. (August 2003)
Patterns of Recent Charcoal Accumulation in
Sediments of a Glacial Lake in the Paramo of
Parque Nacional Chirripo, Costa Rica
S.P. Horn

Lewis, Daniel B. (August 2003)
Fire Regimes of Kipuka Forests in El Malpais
National Monument New Mexico
H.D. Grissino-Mayer

Scruggs, Paul D. (August 2003)
Initial results of In Situ Infiltration Rates in the
Luquillo Experimental Forest, Puerto Rico, and
Recommendations for Future
Research
C.P. Harden

Vazzana, Melinda R. (August 2003)
A GIS Implementation of A Time-dependent
Traveling Salesman with Independent Travel
Events
B.A. Ralston

Arthur, Benjamin B. (Dec. 2003)
Testing the Transfer of Hydrologic Model
Parameters Across Scales: Modeling the
Emory River, Daddy's Creek, and Crooked
Fork Watersheds
C.P. Harden

Curtis, Kendrick J. (Dec. 2003)
Effects of Economic Transition on Income,
Occupation, and Racial Distributions in
Birmingham, Alabama 1970-1990
C.S. Aiken

Atchley, Elizabeth A. (May 2004)
Effects of Habitat Alteration on the Growth
and Vitality of *Torreya Taxifolia* Arn. in
Northwestern Florida, USA: A
Dendroecological Study
H.D. Grissino-Mayer

Moniodes, Christopher A. (May 2004)
Export Coefficient Modeling of Water Pollut-
ants with Geographic Information Science:
An Examination of Geographic Scale
C.P. Harden



Faculty and Staff News



Charles Aiken. Charles and Kurt Butefish were awarded their second grant from the National Endowment for the Humanities for a 2004 Summer Institute for Teachers on Cultural Diversity in the American South. NEH designated Cultural Diversity in the American South a *We the People Institute* and did not reduce the \$168,808 requested. The 25 teachers in the four-week institute were from various parts of the nation.

Charles was invited to present a paper at the annual William Faulkner Conference at the University of Mississippi in July 2004. The theme of the 2004 conference was "Faulkner and Material Culture." Charles' paper, "Faulkner and the Old Agrarian Culture," will be published by the University Press of Mississippi in a forthcoming book. Charles' revised book manuscript on Faulkner's geography was submitted in August.

Charles' article "Race as a Factor in Municipal Underbounding," which was published in the *Annals of the Association of American Geographers* in 1987, was discovered by demographers and members of the law faculty at the University of North Carolina, Chapel Hill. Some small municipalities in North Carolina refuse to annex adjoining residential areas comprised of Blacks. Municipal underbounding by nonmetropolitan cities and towns was one of the discoveries Charles made during his 1985-1987 research on population redistribution in the Yazoo Delta. His research, which was funded by a grant from the National Science Foundation, is the only substantial investigation of the underbounding problem in nonmetropolitan areas. *Invisible Fences: Municipal Underbounding and Minority Exclusion* was the topic of a symposium sponsored by the Center for Civil Rights at the University of North Carolina School of Law in November 2004. Charles presented a paper on the history and continuation of the exclusion of Blacks by certain municipalities in the South.

Charles will lead a guided tour through the Fort Sanders neighborhood as part of a James Agee conference to be held during the 2005 Dogwood Arts Festival. Agee, one of Knoxville's best known writers, died in 1955 at

the age of 45. His novel, *A Death in the Family*, is set in Fort Sanders in 1915. Humanities Tennessee awarded the College of Arts and Sciences \$5000, part of which is for drafting a map and printing a large number of copies of Charles' self-guided tour, which is keyed to passages in the novel. The self-guided tour will be available at Knoxville and Tennessee welcome centers.

Charles read papers at the 2003 and 2004 National Meetings of the Association of American Geographers. He also presented a paper at the 2003 meeting of the Southeastern Division, Association of American Geographers.

After 32 years at 852 Dorset Drive in Crestwood Hills, in October 2002, the Aikens moved to a new house in the Wentworth subdivision in Farragut. Charles and Amy, the Aikens' son and daughter-in-law, still live in New York. Both having passed the New York bar examination, it appears that New York will continue to be their home for the foreseeable future. The Aikens' son John received his B.S. degree in Aeronautical Science from Embry Riddle Aeronautical University, Daytona Beach in August 2003. He is a member of the *One Hundred Years of Flight* class, and he graduated with his multi-engine commercial license and flight instructor license. John, who plans to be a commercial pilot, is building his flying hours working as a flight instructor at Volunteer Aviation at the Knoxville airport. He received his private pilot's license at Volunteer his senior year of high school.

Tom Bell and Peggy Gripshover.

The last time a departmental newsletter was produced, we shared our "blurb" space so we are continuing that "tradition". We continue to share research topics of mutual interest, but have also branched out a bit on separate research efforts. Since the last newsletter a couple of research projects have drawn to a close—the research on the rise and demise of the onion industry in Tom's hometown (Pleasant Valley, Iowa) has culminated in a manuscript submitted for publication in the *Annals of Iowa*. Another project that keeps us in



the sweet-smelling state of Iowa is studying 30 years of changing retail structure. For this study we dusted the cobwebs from Tom's dissertation and actually went into the field (gasp!) and visited dozens of towns in the Des Moines area. The fieldwork came as quite a shock to Tom's logical positivist roots, but he is getting over it. All that was needed to entice him to move past the heavily modeled approach of his dissertation and get in the car were two words, "pork" and "tenderloin." Papers pertaining to our Iowa retailing study have been presented at the Philadelphia AAG meeting and will scintillate the masses at forthcoming SEDAAG and AAG meetings. In addition, a manuscript entitled "The Concept of the Urban Corona: An Analogy for Retail Viability of Small Towns in Central Iowa" will appear as a chapter in Ben Ofari-Amoah, ed., *Beyond the Metropolis* (University Press of America 2005). Two other book chapters that we developed have been published. The first is "Economic Geography and Globalization" in Robert Bednarz, ed., *Teacher's Resource Guide to the Advanced Placement Examination in Human Geography* available in the Pathway Series from NCGE and the second is "Pop Goes the Geographer: Synergies Between Geography and Popular Culture" in *The Necessity of Popular Culture in the Classroom*, Ray Browne, ed., Popular Press 2004.

Tom and Peggy are also pursuing separate lines of research interest. Peggy continues her research on horses and mules, but is also exploring the changing societal roles of pets in general and dogs in particular. She will be presenting papers at SEDAAG in Biloxi and AAG in Denver on the diffusion of dog agility sporting events. And, in a good ethnographic manner, Peggy has started our Australian shepherd, Sophie, in dog obedience and agility classes to get the "insider's" perspective. We don't want to brag, but Sophie is, of course, the best dog in her class—with the blue eyes and athletic abilities of her "mother" and the gray hair and napping talents of her "father"!

Tom continues pursuing his interests in the music industry as a form of cultural capital. He is working with UT graduate Ola Johansson, now on the geography faculty of the University of Pittsburgh at Johnstown, on a music geography paper for the 2005 AAG

meeting. He and Ola previously collaborated on an article about Nashville in the forthcoming *Encyclopedia of Southern Culture* (2nd edition). They hope to revitalize music geography and plan to organize a special session devoted to the topic at the 2006 AAG meeting.

And, speaking of music, Tom's son Brian produced a CD this year with his side project band Space Twins ("The End of Imagining") and is currently in the studio working on refinements to Weezer's fifth album due out around Christmas time. Once the CD is available, Brian will be going on tour with Weezer, the band's first national tour in almost two years. Tom's daughter, Leia, is also involved indirectly with the music industry. She and her partner Phil Sherburne run a music venue in Salt Lake City (Kilby Court) and she has gained quite a reputation in the world of poster art for her silk-screened posters of regional, and increasingly, national musical acts. Her art will soon be featured in Paul Grushkin and Dennis King's volume *Art of Modern Rock: The Poster Explosion* (Chronicle Books 2004). She was recently voted as one of the most important up-and-coming artists in the Salt Lake area. She and Grandpa Bell are most proud, though, of her two sons, Cortez Cooper and Ivan Fox Sherburne. The 'Coop' is going on three and 'Ike' will be one in January.

Kurt Butefish is in his fifth year as Coordinator of the not-for-profit Tennessee Geographic Alliance housed in the Department of Geography. The primary mission of the Alliance is to improve the quality of geography education in Tennessee's K-12 schools. Kurt has B.A. (1984) and M.S. (1986) degrees in Geography from the Department and was hired in June 2000 after 14 years in business development at the Intergraph Corporation in Huntsville, AL. His primary responsibilities include running the Alliance office, procuring funding for programs, and coordinating Alliance sponsored events such as teacher professional development workshops. Under his direction, the Alliance has successfully teamed with the Department of Geography to obtain grants from the Dwight D. Eisenhower Teacher Professional Development Program, the National Endowment for the Humanities, National Geographic Society Education Foundation and the National Council for the Social Studies.

Anita Drever is still making frequent trips to Germany to do research and present her work. She was invited by the German Institute for Economic Research in Berlin (DIW) to present a paper on Turkish neighborhoods during the summer of 2003. Shortly thereafter, the DIW offered her a fellowship to spend both the summer of 2004 and 2005 at the institute.

Anita's ethnic neighborhood research in Germany was also the focus of her 2003 presentation at the American Association of Geographers annual meeting and at the Migration, Integration, and Minorities conference in Leipzig, Germany. Her work in this area also appeared as the lead article in this July's issue of *Urban Studies*.

Presently Anita's interest in German immigration is moving towards exploring how segregation impacts the development of social capital in immigrant communities. The results of this research were presented this past summer at the 6th International German Socio-Economic Panel Users Conference in Berlin and at the 2nd International Conference on Population Geographies in St. Andrews, Scotland. She and her co-author in Germany are presently readying an article on this topic for submission.

In addition, Anita is bringing her interest in immigrant settlement patterns to bear on the burgeoning Latino population in the South. She presented a paper entitled "Dixie Barrios: the Residential Geography of Latinos in the South" at the 2004 American Association of Geographers Annual meeting. This work led to the writing of a chapter on Latino migration to Tennessee for an edited volume entitled *The New South: Latinos and the Transformation of Space*, scheduled for publication in the summer of 2005.

Anita has also been active in service for the department and university. She and Carol Harden organized a week-long workshop for K-12 teachers entitled "Tennessee in a Globalizing World: Immigration, Ethnicity and the Global Economy". She has participated in the University's "Life of the Mind" program, a Knox County Schools In-service and been a guest lecturer for German Culture Night at the International House as well as in the German Department's interdisciplinary course "The City with Scars -Berlin in the 20th Century."

Ron Foresta has continued in his role as head of the Undergraduate Program Committee and in Shih-Lung's absence, he is temporary head of the Graduate Program Committee. In connection with the former, he led an initiative to rationalize and integrate the department's human geography offerings. That initiative led to several new courses, including one in Field Research in Human Geography, which Ron taught for the first time this fall. His dissertation student Ola Johanson successfully defended this year and he has taken on several new students. Ron has been putting the finishing touches on his "Buried Terrain: The Land Between the Lakes and the Lost Progressive Future." He presented a paper on it at the Philadelphia meeting of the AAG in March. His paper on "Mass War to Mass Peace: World War Two and the American Consumer Suburb" recently appeared in the proceedings of the Second International Conference on Societies in the Aftermath of War. Around the University, he is serving on the faculty advisory committees of the Urban Studies Program and the new Global Studies Program. He has served on various interview committees for the Center for International Education. Farther a field, he is on the advisory board of Virginia Tech's School of Natural Resources. In May he will head for Quito, Ecuador as part of a small UT group to negotiate a Fulbright-sponsored continuing exchange program with the Universidad Andina de Simon Bolivar.

Carol Harden received a Fulbright research award and spent three months of 2004 in and near the Andean city of Cuenca, Ecuador. The research had two objectives: 1) to interpret the glacial history of one important watershed in Cajas National Park, and 2) to better understand the water-holding characteristics of soils at elevations between 10,000 and 14,000 ft in the region. In spite of unusually wet weather, Carol enjoyed the chance to be out in the mountains much of the time. Students and faculty from two Ecuadorian universities participated in the field work. Carol and her Ecuadorian colleague, geography professor Dr. Ana Luz Borrero, are working to maintain an ongoing collaboration and initiate student and faculty exchanges between UT and the Universidad de Cuenca. In the summer of 2003, partly supported by an AAG research grant, Carol began a related project on the morphology of watersheds upstream from Cuenca and did reconnaissance that led to the 2004 Fulbright award.





Carol Harden continues in a 3-yr term as Publication Officer of the International Association of Geomorphologists (IAG). She was co-opted for the post when the elected officer resigned for health reasons in 2003. As Publication officer, she prepares a quarterly newsletter, which is published in a dozen major journals as well as on the IAG website, and serves as a member of the organization's executive committee. She attended the regional IAG meeting in Mexico City in November 2003 (including the Day of the Dead) and an IAG-BGRG conference in Scotland in August 2004 held in conjunction with the International Geographical Congress. At UT, she completed a 3-year term on the College of Arts and Sciences Promotion and Tenure committee, a year on the Chancellor's Review and Restructuring Task Force. She presently serves on the search committee for dean of the College of Arts and Sciences.

Carol presented the paper "Fluvial response to land use change in the southern Appalachian region: A century of investigation" at the Centennial AAG meeting in Philadelphia in March 2004. The paper is forthcoming in a special issue of *Physical Geography*. She also presented "Persistent effects of land use change on a stream channel: Upper North Potato Creek in the Copper Basin, Tennessee" (co-author D. Kemp) at the Tennessee meeting of the American Water Resources Association Conference in April 2004 (published in the proceedings of the meeting) and "Temporal and spatial aspects of the geomorphic response of an Appalachian Valley and Ridge stream to urbanization" (co-author J. Grable) at the IGC/IAG.BGRG conference in Glasgow, Scotland in August 2004 (in preparation for a special issue of *Earth Surface Processes and Landforms*).

During the past year, she presented three invited talks in Ecuador and two at the University of Tennessee. Other recent publications include "Hillslope hydrology in three mountain environments" (with P.D. Scruggs, *Geomorphology* 55: 5–24); "Partnering for student stream monitoring yields more than data" (with R. Milam, pp. 3C-10 –3C-14 in *Proceedings of the Thirteenth Annual Tennessee Water Resources Symposium*, April 9-11, 2003); "The 1993 landslide dam at La Josefina in Southern Ecuador: a

review of *Sin Plazo Para La Esperanza*" (*Engineering Geology* 74:157-161); "Review of *The Physical Geography of North America*" (*Annals of the Association of American Geographers* 93(3):751-753), and "Fluvial Terraces," (Goudie, A. [ed.] *Encyclopedia of Geomorphology*, Routledge, London, 2004).

Throughout the fall of 2003, Carol led a project to monitor streamflow and take water quality samples weekly in 16 rivers and streams that flow into Fort Loudoun Lake. A group of graduate students, primarily Martin Lafrenz, Lisa Boulton, Bert Britton, and Mark Boulton, participated in the monitoring project, which was supported by and provided data for the Tennessee Department of Environment and Conservation.

Sally Horn has kept busy pursuing a large number of research projects focused on climate, fire, and vegetation history in Central and South America, in the Caribbean and tropical Atlantic, and even right here in Knoxville. These projects involve several other faculty at UT and elsewhere and a large number of graduate and undergraduate students (for information on current projects, see spotlight elsewhere in this newsletter on the Laboratory of Paleoenvironmental Research, which Horn co-directs with Ken Orvis, a collaborator on many of the projects). Her edited book with Maarten Kappelle of The Nature Conservancy on Costa Rica's high-elevation páramo plant communities is almost ready to go to press; several papers, most co-authored with students, are in review or in press. Sally received the Carl O. Sauer Distinguished Scholarship Award from the Conference of Latin Americanist Geographers in 2003, and in 2004 was elected as a Fellow of the Section on Geology and Geography of the American Association for the Advancement of Science.

C.W. (Bud) Minkel completed a three-year assignment as Interim Head of the Department of Urban and Regional Planning in 2003 and is now engaged full-time in geographic research and writing. Since resolution of the long-standing Peru/Ecuador boundary dispute in 1998, he has been involved in research to support integration and development of the boundary region. In 2002, he was awarded an

Honorary Professorship by the Universidad Nacional Mayor de San Marcos (Lima, Peru) and in 2004 an honorary doctorate (Doctor Honoris Causa) by the National University of Piura. He is currently President, U.S. National Section, and U.S. National Member, Pan American Institute of Geography and History; Chairman, Board of Trustees, South-East consortium of International Development; and member, Academic Council, Pan American Center for Geographic Teaching and Research (Quito, Ecuador).

Ken Orvis has been working on several enjoyable projects. An experimental class on Terrain Analysis in Fall 2003 was so much fun that Ken is planning to make it a regular offering at the 400 level. It brings the traditional topographic map interpretation course of yesteryear into the 21st century with analysis of digital elevation models (DEMs), including seamless data sets and submarine geomorphology, using the real-time fly-through capabilities of modern software. New collaborative research in the Bahamas shows a lot of promise, and Ken is interested enough in the potential of drowned wood there, both in karst and in the ocean, to yield paleoenvironmental records that he's gotten his scuba certification. Collaborative research in Costa Rica and the Dominican Republic continues. The high altitude tree ring record from the Dominican Republic now extends a couple of hundred years with great promise for a longer record. The two papers on his desk at the moment focus on Holocene dynamics of highland Dominican Republic climate, especially evidence of a big shift that occurred a few thousand years ago, and a record of hurricane activity that extends from 5,000 to 10,000 years ago. All these efforts are collaborations variously with Sally Horn, Henri Grissino-Mayer, other faculty here at UT and elsewhere, and lots of great students! (For some of that, see the Laboratory of Paleoenvironmental Research spotlight). The more you look at this world, the more fascinating things you find!

Bruce Ralston is in his fifth year as Department Head. During the past year he wrote two major works. The first was the Academic Program Review Self-Study. Writing the document required great effort,

but Bruce reports that he had a good deal of help from members of the department. The second major writing project was a new book entitled *GIS and Public Data*. Published by OnWord Press in April 2004, the book covers the major public domain data sets developed by USGS, the US Census Bureau, and EPA. The book also contains several popular software packages Bruce has written and PowerPoint presentations for lectures on each chapter. (They make great stocking stuffers.) Bruce also coauthored a book chapter on transportation geography for the tome *Geography in America at the Dawn of the 21st Century*. In an effort to live his life, rather than having his life live him, Bruce stepped down as North American editor of the *Journal of Transport Geography* after six years of service. Papers presented at meetings this past year include a paper on critical transportation infrastructure (presented at the AAG meeting) and one on GIS and educational outreach (coauthored with Kurt Butefish and presented at the ESRI Education Conference). Bruce enjoys working students—I mean “working *with* students”. This semester, he is advising teams of students as they work on GIS “consulting projects” for the East Tennessee Historical Society, Humanities Tennessee, and the Tennessee Electronic Atlas. The students, who work for free, are called the RCLCC—the Ralston Cheap Labor Consulting Company.

John Rehder began his thirty-eighth year this fall in 2004 at the University of Tennessee's Department of Geography. Always busy researching and writing books, John published a scholarly book entitled *Appalachian Folkways* for the Johns Hopkins University Press in June. The nine-chapter tome of 354 pages and 95 illustrations covers topics on the region's identity, physical geography, cultures and migration, folk architecture, ways of making a living, food ways, belief systems, music-crafts-festivals, dialects and more. The book has everything from biscuits to baptisms to banjos, dogtrots to dulcimers, Melungeons to moonshine, and snake-handling to smokehouses to sawmill gravy. This makes his second book published in five years. John's 1999 book, *Delta Sugar: Louisiana's Vanishing Plantation Landscape* received the Abbott Lowell Cummings Award in 2000





awarded by the Vernacular Architecture Forum.

John is busy on another book project on *Log Architecture in Tennessee* to be published through the Center of American Places and the University of Virginia Press. On this project, he has already accumulated data on hundreds of log structures. In the field he has encountered intact buildings, ruins of log structures, and most recently a timber rattler.

John serves on the editorial board and on the advisory board of the University of Tennessee Press. This summer, he worked with Charles Aiken and Kurt Butefish on the Tennessee Geographic Alliance's NEH Institute on *Cultural Diversity in the South*. He still teaches Cultural Geography 320, Appalachia 365, Folk Societies 412, and the World Regional courses in 101 and 102. The Rehders enjoy their house and view of the Great Smoky Mountains and Lake Loudon. John still finds time to golf (terribly high scores) with his son Ken, to trout fish occasionally, and always be "Opah" to his two grandchildren, Allen (5) and Emma (3) who are Ken and Angie's kids. Ken's dental practice is in Lenoir City, TN. Judy is now the new principal at Fountain City Elementary School near the duck pond and Litton's. Karen is an eighth-grade English teacher at Farragut Middle School.

Shih-Lung Shaw, has been on leave from the Geography Department during the fall semester of 2004. The Institute of Geographic Sciences and Natural Resources Research at the Chinese Academy of Sciences in Beijing, China invited him to be a visiting professor from August to December 2004. His research in China focuses on transportation and geographic information science (GIScience). Shih-Lung first visited China in 1993, followed by another trip in 1995. Today's China is very different from what it was ten years ago. Beijing now looks very much like most big cities in the U.S., except that you will see some old, traditional Chinese buildings (and of course more people). Traffic in Beijing is bad. With the rapidly growing number of automobiles, traffic congestion is a common scene in Beijing on weekdays as well as on weekends. Traffic rules are in place; however, they are not

respected and followed (e.g., Don't ever expect automobiles will yield to pedestrians even in pedestrian crosswalk!). Market economy no doubt has significantly improved the wealth of many people in China. In the meantime, many urban, economic, transportation, and social problems experienced in the western world also have been imported into China, but with some noticeable differences due to the different cultural and political environments.



Shih-Lung Shaw at Kanas Lake (elevation: 1,374 m) in the Altai Mountains in Xinjiang Province, China near the borders between China, Kazakhstan, and Russia.

Shih-Lung stayed busy in the past two years. In November of 2002, he was invited along with 30 researchers from Europe and North America to attend the "Action-Oriented Approaches in Geographic Information Science Workshop", which was held in Holden, Maine and was funded by the U.S. National Science Foundation (NSF). In May of 2003, he was invited to join 25 researchers from Europe and North America to give a presentation at the "Second Focus Group Meeting on Information and Communication Technologies, Innovation and the Transport System", which was held in Newcastle, UK and was funded by the European Commission and the NSF. In April of 2004, he was again invited along with 30 researchers from Europe and North America to give a presentation at the "Third Focus Group Meeting on Information and Communication Technologies, Innovation and the Transport System" that was held in Budapest, Hungary and was funded by the European Commission and the NSF. Shih-Lung was one of 18 researchers from Europe and North America invited to give a paper at the "Information and Communications Technologies (ICT): Mobilizing Persons, Places,

and Spaces” Specialist Meeting, which was held in Doorn, The Netherlands in November of 2004. During his stay in China, he also received invitations to be a visiting professor in Hong Kong and to run a GIS for transportation (GIS-T) workshop in China next year. It appears that Shih-Lung puts his research specialty in transportation into practice by traveling around the world.

Graduate students who worked with Shih-Lung also did very well in the past two years. Dr. Xiaohong Xin (Ph.D. 2003) won the “Best Ph.D. Dissertation Award” from the Transportation Geography Specialty Group of the Association of American Geographers (AAG) at the 2003 AAG annual meeting. Jessica Tharpe (M.S., 2003) won the “Best Master’s Thesis Award” from the Transportation Geography Specialty Group at the 2004 AAG annual meeting. Hongbo Yu (Ph.D. candidate) has been selected as one of the three finalists, among nineteen submissions from different universities, to compete in the University Consortium for Geographic Information Science (UCGIS) Best Student Paper session at the GIScience 2004 meeting. Their accomplishments demonstrate the competitiveness of our GIS-T program at the national level.

In addition to paper presentations at invited meetings and professional conferences, Shih-Lung had publications in *Journal of Transport Geography*, *Annals of the Association of American Geographers*, *Journal of Regional Science*, and *ESRI Conference Proceedings* during the last two years. He also received over \$275,000 in funded projects in 2002-2004. Most recently, a grant proposal of “Grid Computing for Ecological Modeling and Spatial Control”, submitted by a team of Dr. Lou Gross (PI, Department of Ecology and Evolutionary Biology), Dr. Michael Berry (Department of Computer Science), Dr. Suzanne Lenhart (Department of Mathematics), and Dr. Shih-Lung Shaw (Department of Geography) was awarded by the U.S. National Science Foundation ITR Program with a total budget of \$1,416,610 for the 3-year period of 2004-2007.

In the Geography Department, Dr. Shaw served as Chair of the Graduate Program Committee and Associate Head of the Department.

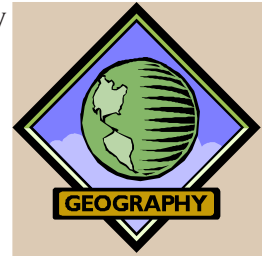
Denise Stansberry joined the Geography Department in May 2003. She is the Accounting Assistant III for the department. Denise previously worked in the Earth & Planetary Sciences Department here at UT for 17 years. She has a 12 year old daughter, Allison and they live in Seymour, TN.

Will Fontanez, Lydia Pulsipher, Henri Grissino-Mayer, and Pam Sharpe were unable to contribute to this newsletter. However, please know that they are all well and remain integral to the success of the Department.

Graduate Student News

Martin (Marty) Arford, is applying for academic jobs and busily writing his Ph.D. dissertation, with plans to graduate in May 2005. Funded by an NSF grant to Dr. Sally Horn, Marty’s doctoral research focuses on the analysis of pollen and charcoal in sediment cores from six lakes on the lower Pacific slope of Miravalles volcano, Costa Rica, as a means of reconstructing local and regional environmental history over the last ~8000 years. Among other exciting finds are evidence of major dry periods during the mid-Holocene, and pollen grains that constitute the earliest botanical evidence of maize agriculture in Costa Rica. Marty has presented his research at AAG and SEDAAAG meetings, and at the 3rd International Limnogeology Congress, and has a paper in press (with S. Horn) in the *Journal of Latin American Geography*. In 2003 and 2004, Marty led field expeditions for Dr. Horn in Bolivia and Costa Rica that included graduate students Zack Taylor, Lisa Boulton, and Joe Burgess. He received a Chancellor’s Citation for Extraordinary Professional Promise from UT in 2003, and in 2004 he received a first place award in the Sigma Xi Honor Society Graduate Student Competition, and an honorable mention in the Biogeography Specialty Group Student Paper Competition.

Toby Martin Applegate is a third year M.S. student. After receiving a B.A. in philosophy and classical history from Emory and Henry College in 1992, he worked for a transportation logistics for a trucking company,





then computing support and network administration for UT, before becoming a full-time graduate student in 2003. His area of study is Central and Southeastern Europe with a focus on Slovenia. He studies how Slovenian ethnic and national identity is represented through a Slovene vernacular architectural form called the *kozolec* or hayrack. Toby has presented papers at the Association of American Geographers Annual meetings on his research and was a presenter at the 2004 International Geographical Union Congress in Glasgow, Scotland. His research is supported by grants from The W.K. McClure Fund and the Stewart McCroskey Memorial Fund. He won the George and Viola Hoffman Award from the AAG in 2003 for his research. In his spare time, Toby is an avid cyclist and advocates for alternative transportation forms in the Knoxville area.

Lisa Boulton, a Ph.D. student working with Dr. Carol P. Harden, is in the final stages of completing her degree. Having completed all exams and course work required, Lisa is currently working on the first draft of her dissertation titled, "Spatio-Temporal Patterns of Geomorphic Adjustment in Tributary Streams of the Hatchie River Basin, West Tennessee." Her research is supported by a National Science Foundation Doctoral Dissertation Research Improvement Grant and by the Tennessee Department of Environment and Conservation. In addition to working on a dissertation draft, Lisa has enjoyed teaching lecture sections of Geography 131 and 132: Introduction to the Natural Environment. She has presented papers at conferences, including the Joint Meeting of the 30th International Geographical Congress and the Royal Geographical Society held in Glasgow, Scotland during the past year. While focused on completing her dissertation, Lisa is looking forward to finding a job in academia at the end of her studies and starting new research.

Steve Brown is a non-traditional, first year M.S. student. He received his B.A. in English, with concentrations in technical and creative writing, and a minor in Geography from The University of Tennessee in the spring of 2004. He is currently part of a team working on a GIS-based visualization of cultural changes for the East Tennessee

Historical Society, and hopes to parlay that experience into his thesis work. His long-term goal is to teach Geography at the college level. He previously worked in the private sector (wholesale/retail tractor trailer parts) for more years than he cares to remember. He is married and has a step-daughter who will be entering UT in the fall of 2005 as a Geography major.

Joe Burgess is a first-year M.S. student working in the Paleoenvironmental Research Lab. His M.S. research will focus on modern pollen distribution in lakes in Costa Rica, as affected by distance from shore and other factors. These data are critical for interpreting signals of past environmental change preserved in sediment cores. Joe visited study sites in October 2004 along with graduate students Marty Arford and Zack Taylor. He was most impressed with the poisonous snakes he encountered.

Michelle Brym is a second year Ph.D. student. She received her B.A. in Diplomacy and Foreign Affairs with a minor in Latin American Studies from Miami University in 2000. She also received her M.A. in geography from Miami University in 2002. Her thesis, "Is Ecotourism a Form of Sustainable Community Development: A Case Study of Four Ecotourism Destinations in Bahia, Brazil," explored the relationship between ecotourism operations, local communities, and conservation projects. Her dissertation topic will explore cultural and demographic changes in Poland as a result of post-communist capitalist development and its May 2004 entrance into the European Union.

Anna M. Compton is a second year M.S. student. She earned her B.S. from the University of Tennessee in Logistics and Transportation with a minor in Geography. GIS, remote sensing, and cartography are her primary research interests. She has worked in the Cartographic Services Lab since August of 2003. In the summer of 2004, she participated in a project with the Archaeological Research Laboratory involving the Townsend area of East Tennessee. Currently, she is working on the creation of an animated topographical video for the East Tennessee Historical Society, the video will display the

physical and cultural progressions of East Tennessee, from 1700 to the present.

Kendrick Curtis, a native of Troy, Alabama, is a first year Ph.D. student. He graduated with a B.S. from the University of North Alabama in the spring of 2000. Kendrick spent the summer of 2000 as a Pioneer Farm Intern at George Washington's Historic Mount Vernon. In December 2003 he graduated with a MS in geography from the University of Tennessee. From 2002 until 2004 Kendrick was employed as a Community Planner for the Tennessee Department of Economic and Community Development, Local Planning Assistance Office. Kendrick's areas of interest include land development on the urban/rural fringe and GIS. Beginning coursework in pursuit of his doctorate this fall, he is researching the relationship between utility infrastructure extension and land use development.

Jeff Dahoda is a second year M.S. student focusing on GIS/GPS and remote sensing applications in water resources. His thesis proposal involves creating a GPS and remote sensing predictive tool. This tool will help to more efficiently allocate resources, by identifying high priority stream TMDL reclamation catchments in areas of surface mining. He received a B.A. in Geology from Miami University of Ohio in 1980, and an M.S. in Exercise Physiology from the University of Wyoming in 1996. Following a 16- year strength and conditioning coaching career, he entered the Geography graduate program in 2003. This past summer Jeff worked for the Southeastern Water Policy Initiative, performing GIS to map databases of elements important to clean coal power production for the Southern States Energy Board. Previous work experiences include Exxon Coal Resources, Mobil Nufuels Exploration, ARCO and Chevron Exploration Divisions (oil & gas), The Wyoming State Archeologist Office, and Larson-Tibesar Archeological Consulting, Inc.

Joseph Guttmann is a third year Ph.D. student. He earned dual M.A. degrees in Geography and Secondary Education from Marshall University and a B.A. in History from Wake Forest University. Originally from Des Plaines, IL, he spent his childhood in

Orange, CA and Hedgesville, WV. He describes himself as a human geographer and his interests include urban, rural, southern, Appalachian, sport, and religious issues. Last year at the Conference on Appalachian Geography, he presented a paper titled "High in the Mountains: OxyContin Usage in Southwest Virginia." He also presented a poster, "Pinning it to the Map: Explaining Parkersburg, West Virginia's Prep Wrestling Success" at the AAG meeting in Philadelphia. During this past summer he worked as a park ranger at Mammoth Cave National Park in Kentucky. It was his fourth season as a park ranger, having previously worked three seasons at the Jefferson National Expansion Memorial in St. Louis. Joe has enjoyed success at numerous World Geography Bowl competitions, and has won one National MVP and three SEDAAG MVP awards. Now "retired" from competition, he is honored to be a member of the World Geography Bowl Committee.

Kelley Hall is a second year M.S. student. She received her B.A. in Geography with a minor in Philosophy from the University of Iowa in the spring of 2002. After working as an AmeriCorps volunteer in the Knoxville area for a year, she entered the geography department in the fall of 2003. Her current research is focused on the emerging trend of neotraditionalism thought in the fields of planning and architecture. Specifically, she is researching the politics and power involved in adopting a municipal ordinance based on neotraditionalism, using the suburban town of Huntersville, North Carolina as a case study. This past summer she worked on a project funded by the USGS involving the development of an online portal dedicated to environmental inventory and monitoring along the Appalachian Trail, focusing primarily on the production of GIS maps. Currently, she is working on the creation of an animated topographical video for the East Tennessee Historical Society, displaying the physical and cultural progressions of East Tennessee, from 1700 to the present.

Justin Hart is a first year Ph.D. student with concentrations in Biogeography and Forest Ecology under Dr. Grissino-Mayer. He received a B.S. in Environmental and





Earth Science in 2002 from the University of Memphis. In 2004 he received an M.S. with concentrations in Biogeography and Environmental Science under David Shankman at the University of Alabama. His M.S. research investigated the regeneration of eastern hemlock at its southern range limit on the Appalachian Plateau. Justin has two ongoing projects initiated at the University of Alabama, one investigating the cumulative effects of alien species on forest decline, and the other relating vegetation patterns to physiography. Both of these projects are centered in the southeastern U.S. His dissertation will investigate forest canopy gaps in the southern Appalachians. Justin is married to Sara (M.S. in Geography, University of Alabama) who works as the Recycling Coordinator for Knox County.

Claire Jamieson is an M.A. student. She received her B.A. in History from Clemson University in the spring of 2001. Claire is interested in the American South, Rural Geography, and Urban Geography. She is studying the effect of recent textile mill closures between 1880 and 1940, researching a number of mill towns across Upstate South Carolina. This past summer, Claire worked for the National Endowment for the Humanities Summer Institute on Cultural Diversity in the American South developed by Dr. Charles Aiken in conjunction with the Tennessee Geographic Alliance. She has also enjoyed teaching Geography 101 this fall.

Sara Beth Keough is a second year PhD student. In 2000, she received a B.S. in History and a B.A. in Spanish from Jacksonville University. In 2003, she earned a M.S. in Geography from Virginia Tech. Her master's thesis explored rural and urban differences among community band members in terms of their sense of community. Currently, her research interests include music, urban, social and Canadian geography. Her dissertation topic is focused on the role that radio technology plays in rural life in the province of Newfoundland and Labrador Canada and how communities in these areas have developed around this technology. Sara Beth has presented numerous papers at both the SEDAAG and AAG conferences; "Acid Rain and Lake Acidification in the Adirondack Park, NY"

(SEDAAG 2002), "Community Bands and Sense of Community in Virginia" (SEDAAG 2003), "Constructing a National Identity: The Case of Music in Newfoundland and Labrador, Canada" (SEDAAG 2004), "Spatial Variations in Community Band Participation in Virginia" (AAG 2003), and "Quality of Life vs. Quality of Rhetoric: The Case of Neighborhood Parks in the Better Jacksonville Plan" (AAG 2004). In addition to conducting lectures at Jacksonville University and for the Pi Mu Epsilon Society, she coordinated Geographic Awareness Week in 2003. She currently enjoys teaching Geography 101.

Martin Lafrenz is in the final year of his Ph.D. research. He received an M.S. and a B.S. degree from Portland State University in Portland, Oregon. His research interests are in geomorphology, water resources, and GIS. He recently developed a watershed classification system based on headwater catchments in Great Smoky Mountains National Park. Much of his research was funded by a grant from the Tennessee Department of Environment and Conservation (TDEC). Part of this funding involved working with TDEC to collect water quality samples from all of the tributaries that drain into Ft. Loudon Lake. This effort provided numerous field work opportunities for Martin and several other geography students. Martin also was funded by the National Geographic Society in conjunction with the Tennessee Geographic Alliance to teach during the last two summers for the Upward Bound Math and Science Regional Center, a program for underprivileged and underrepresented students that gives them the tools and confidence to go on to college. Martin received the Robert E. Long outstanding graduate student award in 2003 as well as several teaching awards. He is currently teaching in the Geography Department at Portland State University. Martin has presented results from his UT research activity at several annual conferences including the Association of American Geographers, Tennessee Chapter of the American Water Resources Symposium, the All Taxa Biodiversity Inventory, and the Southern Appalachian Man in the Biosphere. He continues to promote geographic tools for landuse management and conservation both in the Highland South and the Pacific Northwest.

Chad Lane is a second year Ph.D. student. He received his M.S. in Geography from the University of Tennessee in the spring of 2003 and received his B.S. in Environmental Science from the University of Denver in the spring of 2001. Chad is interested in human-environment interactions, variations in tropical vegetation through time, and climate change. Past variations in climate have had drastic impacts on human populations and vegetation worldwide and will continue to do so well into the future. Understanding these climatic variations and their environmental impacts is essential for predicting and preparing for future climatic changes. His study sites are small lakes located at mid-elevations on the southern flank of the Cordillera Central in the Dominican Republic. He is analyzing stable isotopes in organic matter and calcareous deposits, fossil pollen grains, and fossil charcoal fragments in sediment cores from multiple lakes in order to reconstruct human, climate, and vegetation history. His dissertation research grew from a National Geographic Society-funded project on environmental history in the Dominican Republic directed by Professors Ken Orvis and Sally Horn. Chad is also working with Professors Claudia Mora and Maria Uhle in the Department of Earth and Planetary Sciences. Chad is currently a Teaching Associate for Geography 131: Geography of the Natural Environment.

Evan Larson is a second year M.S. student. He graduated from Willamette University in Salem, Oregon in 2002 with a B.A. in Environmental Sciences and a minor in Environmental Policy. His undergraduate thesis utilized dendrochronological methods to reconstruct the fire history of the naturally fragmented landscape of the Lava Cast Forest, in central Oregon. Following graduation, Evan spent a year as a substitute teacher in the Nay Ah Shing school system on the Mille Lacs Band of Ojibwa Indian reservation in central Minnesota. Over the course of the year, he taught K-12 students how to make snowshoes, canoes, tap maple trees, chop wood, and start fires. In the fall of 2003, Evan enrolled in the Master's program in the Geography Department at the University of Tennessee. His Master's thesis research, directed by Dr. Henri Grissino-Mayer, exam-

ines the spatial and temporal dynamics of fire regimes in high elevation, whitebark pine forests on three mountains in western Montana. He plans to use his results as a framework to evaluate current fire management policies affecting this at-risk keystone species.

David Mann is a second year Ph.D. student. His M.A. research focused on dendroarcheological investigations at the Swaggerty Blockhouse in Cocke County, Tennessee. His current focus is on environmental processes in the Subalpine ecosystem of western Montana. Specifically he is researching the response by high-elevation trees to both recent and past climate variability caused by oceanic-atmospheric circulation patterns (such as the Pacific Decadal Oscillation) which operate across hemispheric spatial scales. His doctoral dissertation assesses how climate shifts have caused treelines to advance upslope or retreat downslope in the Northern Rocky Mountains. Objectives of his research include the assessment of short-term (<100 yrs) variability in air temperatures in a high elevation mountain ecosystem, development of an understanding of the response by trees to monthly and seasonal climate variability and the reconstruction of the climatic history and variability of the ecosystem as they relate to broad scale changes in ocean-atmospheric circulation patterns. In the summer of 2004, David conducted fieldwork in western Montana to collect wood samples from living trees and remnant wood at high elevation sites. Three hundred sixty one samples were collected at eight sites. Wood samples were processed during August 2004 and resulted in a base line tree-ring chronology dating from AD1250 to AD2003 in western Montana.

Leah Manos is finishing up her dissertation on tourism development in Sevier County, Tennessee. She is currently in her third year as an assistant professor of Geography at Northwest Missouri State University in Maryville, Missouri. She is a member of both the Geology and Geography departments.

Paul McDaniel is a first year M.S. student from Birmingham, AL. He received his B.S. in Geography from Samford University in the spring of 2004. He has many





research interests, all of which primarily center on cultural geography and human-environment interactions. Paul plans to focus his research on Hispanic migration and transnational issues in the Southeastern United States.

Young-Sook Noh is a first year M.S. student. In 2000, she earned her Masters of Engineering from the University of Yonsei in Seoul, Korea in Food and Biotechnology. Her primary research interests are involved with GIS and transportation, particularly the development of more efficient transportation routing systems for emergency response. Young-sook previously conducted research for a food company in Korea. Currently, she is working on the creation of an animated topographical video for the East Tennessee Historical Society, displaying the physical and cultural progressions of East Tennessee, from 1700 to the present.

Melany Noltenius is a first year Ph.D. student. She received her B.S. in Communications in 1990 and M.S.P. in Planning in 2004 from the University of Tennessee. Her thesis was titled "Transit Oriented Development, Park and Ride, and Transit Station Placement along Bus Rapid Transit Corridors: A Study of the Sevier County, Tennessee Route." She hopes to continue studying transportation planning issues, specifically the transportation options selected during emergency evacuations. She won first place in the 2003 district wide technical paper competition sponsored by the Institute of Transportation Engineers (ITE), and has lead a discussion on the possibility of passenger rail in East Tennessee at the Tennessee Chapter ITE meeting.

Kyle Schlachter is a second-year M.S. student and graduate research assistant in the Paleoenvironmental Research Laboratory. He is collaborating with Dr. Sally Horn, Ph.D. student Martin Arford, and Dr. Kurt Haberyan of NW Missouri State University on a National Science Foundation-funded research project on Holocene lake-sediment records in northwestern Costa Rica. Kyle is analyzing macroscopic charcoal in an 8000-year sediment record from a lake near Volcán Miravalles. By sampling at contiguous 1-cm

intervals he will produce a high-resolution macroscopic charcoal record that will provide a detailed fire history on a local scale. Kyle's high-resolution charcoal data will be compared to microscopic charcoal, pollen, and diatom data from the same core, and with archaeological evidence from the site and region. These comparisons will allow for a greater understanding of long-term interactions between fire, climate, vegetation, and human activity in this tropical dry forest region.

Allison Stork is a second year M.S. student working with Professors Horn, Orvis, and Grissino-Mayer to unravel the environmental history of Great Abaco Island in the Bahamas. She received her B.A. in Geography and English from the State University of New York at Geneseo in May 2003. She is currently conducting paleoecological research using sediment cores collected from West Pond, a shallow pond that she helped core in 2003 from a unique, underwater coring platform (see photo). Allison is conducting pollen and charcoal analyses of the cores in the Paleoenvironmental Research Laboratory to determine vegetation change, fire history, and any anthropogenic influences on the landscape. One goal is to try to tie the fire record in the sediments to tree-ring evidence of fire in the surrounding watershed.



Jody Sumner is an M.A. candidate specializing in GIS and transportation. He is currently researching GIS logistics applications for DeRoyal Industries in Powell, TN. During his time at UT, he has worked as a teaching

assistant for the Geography Department and served as the department's representative in the Graduate Student Senate. He has also had the privilege to work as an Upward Bound instructor through the Tennessee Geographic Alliance and help lead GIS workshops for teachers in Great Smoky Mountains National Park.

Zack Taylor is a second year M.S. student. He graduated from the University of Denver with a B.S. in Environmental Science in the spring of 2003. Zack's research is focused on multi-proxy paleoenvironmental reconstruction. His thesis, co-directed by Dr. Sally Horn and by Dr. Claudia Mora of Earth and Planetary Sciences, involves analyzing pollen, sediment particle size, and stable carbon isotope ratios in a sediment core from Laguna Yaguarú, a lake in Eastern Bolivia. The lake is located in such a remote area that nearby locals speak only their native language as opposed to Spanish, making it an exciting place for research and exploration.

Elizabeth Trail is a first year M.S. student. She received her B.S. in Political Science from the University of Tennessee in the summer of 2003. She is interested in issues related to urban planning and sprawl and will concentrate her thesis work on Urban Geography.

Chris Underwood is a second year M.S. student. He received his B.S. in Environmental Health from East Tennessee State University in the fall of 1997. His current research is focused on climate reconstruction, utilizing dendroclimatology in the Pacific Northwest.

Saskia L. van de Gevel is a second year Ph.D. student working in the Laboratory of Tree-Ring Science under Dr. Henri Grissino-Mayer. She received her B.S. in Forest Science from Pennsylvania State University in 2000 while working on dendroecological projects in Marc Abram's Forest Ecology Lab. In 2002, Saskia received an M.S. in Forest Ecology from Southern Illinois University under Dr. Charles M. Ruffner. Her thesis research investigated the influence of land-use history on the forest development of the Illinois Ozark Hills. Saskia

has also worked on research projects in eastern hardwood forests (Harvard Forest, Petersham, MA) and southeastern pine ecosystems (Tall Timbers Research Station, Tallahassee, FL). Currently, her dissertation research investigates the complex stand dynamics and stand history of endangered whitebark pine ecosystems in the northern Rocky Mountains.

Lisa B. Wilkins is in her second year of the Geography Ph.D. program and is specializing in biogeography and environmental history/landscape change. She earned her B.S. in Biology from George Mason University in 1997 and her M.S. in Environmental Studies from Longwood University in 2003. Working under the guidance of Drs. Horn and Orvis in the Paleoenvironmental Research Laboratory, Lisa's research will center on examining sediment cores collected from lakes and ponds in Eastern Tennessee to determine vegetation change, fire history, and human impacts on the environment in the area. Before coming to U.T. she acquired 14 years of business experience at a biotechnology laboratory and at a manufacturing facility for exotic pet products. Her extracurricular activities include kayaking, canoeing, hiking, and companion birds. She also enjoys volunteering and will present a GPS workshop for Upward Bound students in December 2004.

Georgina Wight is a third year Ph.D. student. Her dissertation research involves the reconstruction of historic fire regimes and stand structure in yellow pine stands in the Central Appalachian Mountains of Virginia. She hopes to determine how frequently fires occurred in yellow pine stands in the past, how stand structure has changed, and if any climatic variables are influencing the fire regime. In 2004, she presented this research at the Philadelphia meeting of the Association of American Geographers and presented in November at the Southern Man and the Biosphere Conference in Gatlinburg. The USDA Joint Fire Science Program funds her research. Her article "Dendroarchaeological dating of an Antebellum Period house, Forsyth County, Georgia, U.S.A." will appear in the December issue of Tree-Ring Research. Georgina earned her M.S. in Geography from Louisiana State





University in 2001. Her thesis was entitled “Bottomland Forest Reconstruction and Classification Using General Land Office Surveys, Remote Sensing, and Geographic Information Systems.” An article featuring her master’s thesis research is currently in review.

Andrew Wunderlich is a second year M.S. student in Geography. He received a B.A. in Geography from the University of Tennessee in the spring of 2002. His graduate work has focused primarily on urban planning and development utilizing GIS analysis. Current research projects include overseeing GIS analysis and cartographic production for the Beaver Creek Green Infrastructure design plan. This project is part of an ongoing effort to help plan and manage the natural and community resources of a rapidly developing suburban watershed in north/northwest Knox County. The plan is being developed under the guidance of two professors in the School of Architecture and Design at U.T. In the fall of 2003 and the spring of 2004, Andrew was an intern and contract employee of the National Geographic Society Maps Division as a GIS analyst at their headquarters in Washington, D.C. Projects there included page maps and foldout supplement maps published in the *National Geographic Magazine*, as well as data quality control and creation of thematic maps for the *National Geographic Atlas of the World, Eighth Edition*. Additionally, Andrew has worked as a cartographer in the Cartographic Services Laboratory since the summer of 2000, and is currently a teaching assistant for the introductory cartography class.

Hongbo Yu is in the fourth year of his Ph.D. program. Originally from China, he received his B.S. in Geography from Peking University in 1997 and Master of Philosophy in Geography from The Chinese University of Hong Kong in 2001. His dissertation concentrates on GIS and transportation geography. He is proposing a spatio-temporal GIS framework that can accommodate extended concepts developed from time geography to support exploration of spatio-temporal pattern of human activities. He attempts to use this framework to study spatial and temporal characteristics of individual activities in both conventional physical space and the emerging

virtual space enabled by information and communication technologies. His paper on this topic recently won the best paper award in the Student Paper Competition in The University Consortium for Geographic Information Science (UCGIS) Annual Assembly 2004. Hongbo works as a Teaching Assistant for Geography 411 (Computer Mapping and GIS) and as a GIS lab assistant. He also has worked for the Tennessee Electronic Atlas Project (<http://tnatlas.geog.utk.edu>) and the department’s web pages during the past summers.



Outreach to K-12 Teachers

One of the great strengths of this department is the passion everyone shares for geography education. Here are a couple of pictures of our faculty involved in academic outreach.



Charles Aiken leads a walking tour of James Agee's Knoxville during the 2002 institute on the Cultural Diversity of the American South. The NEH funded program allowed the department to showcase its faculty, facilities, and local resources to teachers from Tennessee and across the U.S.



Carol Harden visits with a participant in the institute on the Cultural Diversity of the American South. Tennessee Geographic Alliance sponsored programs provide teachers opportunities to interact with faculty and to provide their students with the most up-to-date curriculum content.

Please Keep Us Up To Date

Please share your news with us, and other alumni, *especially if you have a new address*. Return this form to Kurt Butefish, 304 Burchfiel Geography Building, Knoxville, TN 37996-0925, or email to kbutefis@utk.edu. We'll include your update in the next newsletter.

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"The institution welcomes and honors people of all races, creeds, cultures, and sexual orientations, and values intellectual curiosity, pursuit of knowledge, and academic freedom and integrity."

The Newsletter of the University of Tennessee Department of Geography

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