

# THE BIOGEOGRAPHER

Newsletter of the Biogeography Specialty Group of the Association of American Geographers  
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## President's Column

### Biogeography is neither a social nor a physical science

“Are you a human or a physical?” This shorthand question was one of the first I heard as I toured universities when I was pondering a switch from the biology program I was in for my master’s to a geography program for my doctoral degree. I made the transition with no regrets, but I have often reflected since on the nature of biogeography, and how biogeographers fit into biological and geographical paradigms.

The identity question directed my way was meant to speed up a determination of who I was and what interests and background I had. It would be followed by useful advice identifying which faculty and students had interests most similar to mine and which courses I should take. But like all simple schemes, it left a lot unsaid. For example, if a core research area of geography includes human-environment relations, why is the first step so often to separate those two domains?

Nowadays it is more likely that the identity question would come posed in a tripartite form: “human, physical or techniques?” And this sorting into categories is prominent in the way that such things as geography courses are organized or in how the *Annals of the AAG* is presented. It is manifest in hiring decisions and sometimes in how faculties vote.

Living organisms are subject to physical forces. Climatology, geomorphology, and soil science all offer methods and insights into the interactions that result. An overview of these factors allows for teaching a lively Physical Geography course and helps structure the start of a course on Biogeography. The synthesis of research agendas from those areas will continually offer insights to biogeographers looking for topics to investigate. Exciting areas of overlap and collaboration exist between hydrology & geomorphology and biogeography, and between climate & other environmental change and biogeography (see Gregory et al., 2002, *Trans. Inst. Br. Geogr.* NS 27: 136-154).

Yet it is also important to consider chemistry and biology, for example in measuring which ions are available to plant roots, or for explaining physiological adaptations and adjustments in plants and animals to shifts in temperature. For that matter, many biogeographers are grappling with the flood of new information that originates in molecular biology and is driving a revolution in the applicability of genetic approaches. The genetic ties between individuals in populations or among generations seem to have no clear parallels with strictly physical systems. The changes in gene frequencies can become expressed in species distributions and, given enough time, in evolutionary patterns and processes.

The social sciences concentrate on one animal species, *Homo sapiens*, of particular concern and importance. Many different disciplines are brought to bear on the culture, economics, and behavior of this species (i.e. us). And perhaps biogeography has a contribution to make here, but the most common practice is for biogeographers to borrow from some of these disciplines in order to help address questions arising in applied biogeography and biodiversity conservation.

So, I conclude that biogeographers and biogeography are something apart from other endeavors in geography. Biogeography is a biological science, inspired by and interacting with the physical and social sciences. Because many biogeographers use interesting techniques, their answer to the identity question posed in many geography programs might well be “yes, all of the above, and more”.

Kenneth R. Young

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## BSG Business

### BSG Annual Business Meeting: Los Angeles

The BSG met on March 22nd, 2002, in Los Angeles.

#### Finances:

Ken Young opened the meeting with a presentation of Scott Mensing's Treasurer's Report (Scott was unable to attend). He noted that 95% of dues redistributed as (mostly student) awards.

<u>Date</u>	<u>Description</u>	<u>Receipts</u>	<u>Disbursements</u>	<u>Balance</u>
11/30/01	Balance Forward			1,183.20
02/28/02	Dues 2001-2002	2,426.00		3,609.20
03/14/002	Joan Welch - Awards Plaques		492.77	3,116.43
04/15/02	Kathryn Hrinkevich - Research Support		300.00	2,816.43
04/15/02	Rosemary Sherriff - Research & Paper		800.00	2,016.43
04/15/02	Jacqueline Smith - Paper Award		100.00	1,916.43
<b>04/15/02</b>	<b>Account Balance</b>			<b>1,916.43</b>

Receipts for the year 2001-2002 were higher than average because the AAG has moved to a staggered system for billing. Below is the text of a message from Paul Abel, AAG financial officer for specialty groups explaining the new system for dues.

*The dues reflect more than one year's worth. People are paying ahead as we move in to the staggered system. One twelfth are paying for 23 months, one twelfth for 22, one twelfth for 21, etc. So you have more money now but will get less for a time. The first group will not need to renew until December of 2003, the second in November, the third in October, etc. After December of 2003 you will see the income number matching the membership number again as each pays for a year at a time.*

The result is that after paying for all awardees this year, we are financially quite sound, but we need to be careful with spending for the next year because income will be less. Our typical annual expenditures are approximately \$1,350.00 for the research grants, paper awards and plaques. This is less than our annual income, however I do not have sufficient records to know how much less. I would suggest that we not add further expenses until we have a better idea of what the average annual income is.

#### **Newsletter:**

Duane Griffin pointed out that the newsletter is published twice per year. Four features in particular depend on submissions: News and the Research, Field, and Class notes.

#### **Institutional memory:**

As a related point, Mark Cowell brought up the issue of institutional memory. The history of BSG over its 25 years is difficult to reconstruct, especially in the late 80s when Newsletter was sent out via e-mail only. Mark sought help in filling in gaps.

[Note: since the LA business meeting Mark has created a webpage that is now included as part of the BSG homepage. It lists the recipients of the awards presented by the BSG, including the Parsons award, the Cowles award, and the student research and paper awards: <http://www.geog.ucla.edu/~bsg/bsgrecep.htm>. There is also a new page with a list of the officers that have served the specialty group at <http://www.geog.ucla.edu/~bsg/bsgofficer.htm>. Mark notes that there some gaps in these lists - particularly for the mid-1980s - for which he was unable to turn up information on the award recipients or board members. An extra thanks to Glen MacDonald for posting these pages, and continuing the task of maintaining this site for the BSG.]

#### **Election results:**

Jim Dyer announced that Karen Arabas and Lori Daniels have been elected to the BSG board. Lori and Karen replace Jim Dyer and Joan Welch and will serve for two years, beginning in June 2002. **Thanks to Jim and Joan for their two years' service to the BSG!**

#### **Communication problems:**

The root of the communication problem is that the BSG listserv membership is not identical to the BSG membership, so for some important communications the BSG board is also sending emails directly to the BSG membership, especially with issues such as elections. Everybody at the business meeting was on both the listserv and BSG listing, so perhaps the communication problem is less than first seemed. As one solution, all BSG members could be put on the BSG listserv.

#### **Proposed name change:**

Ken Young had suggested in a President's column in the BSG newsletter that we consider adding "landscape ecology" to our specialty group name. However, there was enough opposition in the comments sent by email to make this a questionable proposition. In addition, the apparent drop in membership that motivated, in part, this suggestion turns out to be a fluke from the new way that AAG updates the membership lists. In conclusion, there will be no name change for BSG.

#### **BSG membership:**

The trends in membership were discussed. We are at about the same level (280 members) as for the last decade.

#### **Student research awards:**

Susy Ziegler reported that there were 14 submissions for graduate student research awards for 2002 (4 MA, 10 PhD), all of high quality. Judges were Mary Ann Cunningham, Sally Horn, Al Parker, and Alan Taylor. Winners of the 2002 grant competition: Kathryn Hrinkevich (Portland State University) for the Masters (\$300), and Rosemary Sherriff (University of Colorado at Boulder)

for PhD \$700). [Click here.](#)

#### Student paper awards:

Mark Cowell reported that there were 10 participants in the student paper award competition this year. He thanked the judges for helping. Last year's winners were Jonathan Price and Amy Bloom. [Click here.](#)

#### Parson & Cowles awards and plaques:

Joan Welch announced the awards and distributed plaques to present and past winners. The Parson award for distinguished career went to Martin Kellman and the Cowles award for excellence in publication went to Jim Speer. Both awards are reviewed and decided by the BSG Board, based on nominations and information provided by the BSG membership. [Click here.](#)

#### International Biogeography Society:

Ken Young announced for Glen MacDonald that the International Biogeographical Society is in the process of being established.. The Society's first meeting will be Jan 4-8 2003 in Mesquite, NV. BSG may become an Institutional member. [Click here.](#)

#### Additional topics:

Lori Daniels announced the establishment of a Biogeography Image Library and suggested that people send her biome and "biogeography" images, which she will compile and return (in SASE) via CD. [Click here.](#)

#### Next year's AAG sessions and fieldtrips:

A variety of possible sessions were mentioned. In addition there was a complaint about overlapping BSG sessions. Suggestion was made to make sure BSG member is on Programming Committee to ensure this doesn't happen. Note too that session organizers can specify day/time/non-overlapping requests in the application process.

Ken Young adjourned the meeting and relocated all personnel to a swank Irish Pub (sort of) for a party celebrating the publication of Glen MacDonald's new textbook, *Space, Time and Life: The Science of Biogeography*, published by John Wiley & Sons. Unfortunately, Glen was participating in the great Los Angeles tradition of being stuck in traffic and couldn't attend. Somehow, we managed without him.

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## Awards



Student Award Winners Kathryn Hrinkevich and Rosemary Sherriff.



Jim Speer, accepting the 2002 Cowles Award



Lesley Rigg and Trudy Kavenagh accepting the 2002 Parsons Award for Martin Kellman

## 2002 BSG Student Awards

Each year the BSG awards two competitive Student Research Grants to support research for Master's (\$300) and Ph.D. (\$700) theses, and two Student Paper Awards for the best presentation by a Master's and a Ph.D. student at the annual meeting of the American Association of Geographers.

### Research Grant Winners

**Kathryn Hrinkevich**, Portland State University, for her Master's thesis project, *Forest Edge Dynamics in a Naturally Fragmented Landscape*.

**Rosemary Sherriff**, University of Colorado-Boulder, for her Ph.D. research, *The Historical Range of Variability of Fire in the*

*Montane Zone of the Northern Colorado Front Range: Past Fire Types and Fire Effects.* Congratulations!

## Paper Award Winners

Master's Award: **Jacqueline Smith**, University of Arizona, "Predicting montane community distribution using classification tree analysis for southern Arizona.

Ph.D. Award: **Rosemary Sherriff**, University of Colorado-Boulder, "Fire history at high elevation in the Colorado FrontRange" "

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## Cowles Award

The Cowles Award honors the best paper or book published in biogeography each year. The award is named for the eminent 19th and early 20th century biogeographer and ecologist Henry C. Cowles. The 2002 Cowles Award goes to **James H. Speers, T.W. Swetnam, B.E. Wickman** and **A. Youngblood** for their paper "Changes in pandora moth outbreak dynamics during the past 622 years" (*Ecology* 82:679-697. 2001)

## Parsons Award

The Parsons Award, named in honor of the 20th century biogeographer and cultural geographer Jim Parsons, is awarded to recognize the careers and contributions of distinguished biogeographers. Past winners include Clarissa Kimber (1998), Thomas Vale (2000), and Julian Scejz (2001). **Martin Kellman** joined this distinguished group at the 2002 AAG meeting in Los Angeles.

### Excerpt from letters nominating Martin Kellman

Martin's accomplishments in research, teaching, and student mentoring are outstanding. Martin is a Professor Emeritus in the Department of Geography at York University. He has previously held positions at Simon Fraser University and visiting professorships and research appointments internationally, at University of California, Berkeley and Australian National University. Martin has published widely and his most recent research examines tropical gallery forests as models of long-isolated forest fragments. He is also conducting research on nutrient depletion in successional dune systems of Australia, and on colonization dynamics at the boreal-deciduous forest ecotone in Northern Ontario.

Martin's scholarly contributions are extensive and outstanding. He has published over 60 papers in refereed journals (including, *Journal of Ecology*, *Journal of Applied Ecology*, *Biotropica*, *Journal of Tropical Ecology*, *Journal of Biogeography*, *Canadian Journal of Botany*, *Forest Ecology and Management*, and *Global Ecology and Biogeography Letters*), and 3 books (including *Plant Geography* and *Tropical Environments: the Functioning and Management of Tropical Systems*, co-authored with Rosanne Tackaberry) His most recent book on tropical environments is a landmark publication in the fields of tropical ecology, biogeography, and biological conservation. The depth and breadth of treatment of both the human and "natural" environment in this work sets it apart from other such works on tropical environmental conservation. His publication record testifies to the high quality of Martin's research and his commitment to his work and the scientific community. He has made his research available to the widest and potentially most influential audience. Martin has not just produced a series publications, he has built his career on a well thought out research path of increasing complexity and thought-provoking findings.

Martin's top-notch research record has resulted in his receiving grants from the National Science and Engineering Research Council of Canada (NSERC), the Guggenheim Foundation and the National Geographic Society. Martin's reputation as a world-class researcher is evidenced by his appointment to grant selection panels of NSERC and the editorial advisory boards of the *Journal of Biogeography* and *Global Ecology and Biogeography Letters*.

In his career he has influenced the work of many successful biogeographers, among them Tom Veblen and Neal Enright. We are humbled and grateful to have been under his wing at different times in our careers. As co-nominators, our past experiences as Martin's students although somewhat different (undergraduate professor to Lesley Rigg and Ph.D. advisor to Nina Hewitt), lead us both to think of him as a mentor who helped mold and focus our careers and someone who continues to be apart of our lives as a colleague, friend, and our greatest critic. We have experienced first-hand his dedication to education in ecology and biogeography, his skills as a field ecologist and biogeographer and his commitment to applied field science. Martin has an incredible breadth of knowledge combined with a thoughtfulness and sense of what is important versus what is secondary.

For both of us, one of the most important lessons we learned from Martin was the importance of using fieldwork as a primary means of informing our theoretical framework. Martin's research is well informed by seasons spent in the field. And while his practiced skills of field observation provide direction for his research, his research is not purely empirical. Rather, he applies innovative research designs and techniques to test his hypotheses; the sorts of tools that allow for "strong inference" including field experimentation, highly effective sampling designs to test specific questions, in addition to genetic, lab and computer studies that build on field studies. Thus, Martin's attention to real-world patterns and processes in vegetation communities is beautifully paired with innovative methodological approaches for investigating them.

Anyone who is familiar with Martin will know that he is not one to "blow his own horn". He does not seek out accolades. His aversion to self-promotion notwithstanding, Martin's distinguished career deserves recognition of the type that this award would afford. We are therefore very excited to nominate Martin for this award.

Nina Hewitt  
Assistant Professor  
Department of Geography

Lesley Rigg  
Assistant Professor  
Department of Geography

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## Calls for Nominations and Participation

### Nominations for Cowles and Parsons Awards

Please consider submitting nominations for the Henry Cowles Award for Excellence in Publication and the James J. Parsons Distinguished Career Award. To submit a nomination for the Cowles Award, please simply send the name of the person and the name of their paper/book. To nominate a person for the Parsons Award, send a short letter of nomination stating some of the candidate's most significant achievements. Please submit nominations by January 31, 2003. Information can be submitted via snail mail, e-mail or fax to:

Lori Daniels  
Department of Geography  
University of British Columbia  
217-1984 West Mall  
Vancouver, B.C. V6T 1Z2

fax: 604-822-6150  
[daniels@geog.ubc.ca](mailto:daniels@geog.ubc.ca)

### BSG Board Nominations

The Spring 2003 issue of The Biogeographer will include election information for one president and two new BSG board members to serve from June 2003 to June 2005. Please send nominations to Karen Arabas by January 31st.

Karen Arabas  
Dept of Environmental and Earth Sciences  
900 State Street  
Willamette University  
Salem, OR 97301

tel: 503/370-6666  
fax: 503/370-6773  
[karabas@willamette.edu](mailto:karabas@willamette.edu)

### BSG 2003 Student Research Grants

The aim of the BSG graduate student research grant competition is to provide partial support for graduate students to conduct quality biogeographic research projects for their Master's thesis or doctoral dissertation. The awards are competitive, and proposals are judged individually on the basis of: 1) scientific merit of the project, including biogeographic significance of the research question and quality of the methodology; 2) organization and clarity of the proposal; and 3) qualifications of the student to conduct the proposed work. Each applicant must be a student member of the AAG, and the proposed project should be part of her/his thesis or dissertation research. Normally, awards are made to one master's and one doctoral student each year. Applicants may join the AAG now and become eligible for the grants competition if not already a student member.

To download the grant competition application form, [click here \(pdf file\)](#).

**THE APPLICATION FORM AND ABSTRACT MUST BE RECEIVED BY JANUARY 10, 2003.**

For more information, contact:

Susy S. Ziegler  
Department of Geography  
University of Minnesota  
414 Social Sciences Building  
267 19th Avenue South  
Minneapolis, MN 55455

email [ziegler@atlas.socsci.umn.edu](mailto:ziegler@atlas.socsci.umn.edu)

### BSG 2003 Student Paper Award

The Biogeography Specialty Group sponsors this annual award to foster recognition of outstanding student research and encourage student participation in the meetings. Competition for the award is open to undergraduates, graduate students and Ph.D.'s within a year after the dissertation defense. Two awards will be given

– one to the best Undergraduate / Masters student paper and one to the best Ph.D. student paper. The student must be either the sole

author or the primary author

of the paper, and must be the presenter at the meeting. Illustrated posters are eligible for the award. Judging criteria include the significance and originality of research question, the creativity and quality of the methodology, the validity of the conclusions drawn from the results, and the clarity of the presentation.

If you wish to be considered for the award, please send the application form ([click here](#) for MS Word document) and a copy of the abstract that you sent to the AAG in August/September 2001 to:

Dr. Mark Cowell  
Department of Geography  
8 Stewart Hall  
University of Missouri  
Columbia, MO 65211

**THE APPLICATION FORM AND ABSTRACT MUST BE RECEIVED BY JANUARY 31, 2003.**

Confirmation of receipt of your application will be sent by email.

Further inquiries can be made to Mark Cowell: [MCowell@missouri.edu](mailto:MCowell@missouri.edu)

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## News

### Biogeographers in the News

*Denver Post* writer Theo Stein quoted **Bill Baker** in his article "Experts say high altitude forests don't need thinning," published September 18, 2002 (Page A-03). The article focuses on a letter signed by twenty one of "the nation's top wildfire researchers," including Baker and biogeographers **Richard Minnich**, **Tom Vale**, and **Tom Veblen**, advising President Bush and Congress on the scientific basis for forest-thinning efforts and avoiding a one-size-fits-all approach to reducing fire hazards ([Click here](#) to download a copy of the letter). [Thanks to Steve Norman and Matthew Beaty.]

**Henri Grissino-Mayer** made a media splash with his recent efforts to clear up a few things for music historians. Yes, that's right, music historians (you might want to revisit Ken's column at this point.). Henri travelled to Oxford's Ashmolean Museum to take a look at "the Messiah," a violin believed to have been made by Antonio Stradivari, but recently alleged to be a later copy. Henri, along with **Malcolm Cleaveland** (University of Arizona) and **Paul Sheppard** (University of Arkansas), settled the matter by dating the Messiah using dendrochronology. You can read about the biogeomusical heroics in this [Associated Press article](#) or this one from the [Daily Beacon](#). But you'll probably get more from this exceptionally well done interview for [Soundpost Online](#).

#### **Our man in the field.**

Henri Grissino-Mayer may be the only BSG member who has ever done fieldwork wearing white gloves and a tie and presented his findings at the annual meeting of the Violin Society of America. Is that an increment borer near his left hand?



## International Biogeography Society Update

The newly founded International Biogeography Society has been officially incorporated and is running full steam ahead for an exciting inaugural meeting at the Oasis Resort in Nevada on Jan. 4 to 8, 2003. The meeting includes a stellar assemblage of the world's top biogeographers covering topics ranging from plate tectonics, to macroecology, conservation, to prehistoric human dispersal. As the invited plenary speakers come from many different disciplines this is an unique opportunity to see such an eminent group at one time in one place.

Make a little history and become an Original Member of the IBS and attend the Inaugural Meeting. Full online details are now available at the ISB Web Site ([www.biogeography.org](http://www.biogeography.org)).

Lets assure the continued voice of geographers in the wider realm of biogeography by having a strong contingent out for the meeting!

[Glen MacDonald](#)  
Treasurer IBS

## Biogeography Image Exchange

You are invited to contribution images depicting all aspects of biogeography to be used for undergraduate teaching in the classroom and on-line. Images may depict plants, animals, abiotic-biotic interactions, human impacts, research techniques etc. – as long as they relate to biogeography research and learning.

[Instructions and submission forms are available on-line.](#) We will accept up to 1000 images (maximum 10 images from each contributor). Contributions should be sent to Lori Daniels at the University of British Columbia by December 31, 2002. Include a self-addressed, stamped envelope to receive a free copy of the final CD!

This invitation is extended to all biogeographers – please forward it to colleagues who may not receive this newsletter!

## Department News

The GEOGRAPHY DEPARTMENT AT MIAMI UNIVERSITY, OHIO is pleased to announce expanded opportunities for graduate study in biogeography. **Mary Henry** and **John Maingi** just joined the department with strong expertise in remote sensing and vegetation analyses. Mary is interested in developing analytical techniques in remote sensing to study vegetation patterns at the landscape scale as influenced by fire and other disturbances. Her prior research focused primarily on Mediterranean shrubland in California and montane forests in Arizona, but she will begin studies on vegetation systems east of the Mississippi (welcome to the Corn Belt). John's research interests include inventory and monitoring techniques for natural resources using satellite data and applying remote sensing and GIS in forest management. His recent research projects include using remotely sensed data to map wildfires within the deciduous forest of the eastern United States, land cover mapping and change detection, and monitoring forest damage resulting from insect outbreaks. **Kim Medley** continues field studies on why forests vary geographically in their structure, composition, and dynamics, and how an understanding of this variation may be best applied to resource conservation. She is particularly interested in environmental versus human influences on local patterns of diversity, the role of forest resources in human-dominated landscapes, and gender relations with resource ecology. We envision developing collaborations that will provide opportunities for landscape research in biogeography across the United States and in East Africa. Please check out our web site at [www.muohio.edu/geography](http://www.muohio.edu/geography), and do not hesitate to contact one or all of us with any questions regarding research topics or opportunities for graduate assistantships.

**Katherine Yansa** recently joined the Michigan State Geography Department. Her interests include paleobiogeography (pollen & plant macrofossil analysis) and plant geography in northern North America (northern Great Plains, Midwest, and Northeast). Plans for the next few years include working on cores from 11 lakes in the lower peninsula of Michigan and 7 lakes in New York and New England.

## New Biogeographers

Deanna McCay and Susy Ziegler are pleased to announce their latest contributions to the long and fruitful tradition of collaboration between biogeographers and our colleagues in biology and geology. On July 11, Deanna and biologist Tim McCay welcomed Thomas Franklin McCay to the world. Three days later, Timothy Stone Ziegler made his debut on planet Earth, welcomed by Susy, husband/geologist Dick, and big brother Thomas. Susy reports that "Timothy is growing like a ruderal!"

## Recent Publications

Bailey, Robert. 2002. *Ecoregion-Based Design for Sustainability*. New York: Springer Verlag. See <http://www.springer-ny.com/detail.tpl?ISBN=0387954309> for information.

Bekker, Matthew F., and Alan H. Taylor. 2001. Gradient analysis of fire regimes in montane forests of the southern Cascade Range, Thousand Lakes Wilderness, California, USA. *Plant Ecology* 155: 15-28.

Kulakowski, D. and T. T. Veblen. 2002. Influences of fire history and topography on the pattern of a severe wind blowdown in a Colorado subalpine forest. *Journal of Ecology* 90: 806-819.

MacDonald, Glen. 2001. *Biogeography : Introduction to Space, Time, and Life*. Wiley. See <http://www.wiley.com/cda/product/0..0471241938.00.html> for information

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## Notes

# Research Notes

## Portland State Tree Ring Lab

Keith Hadley (PSU) and Karen Arabas (Willamette University) have established the Biogeography and Tree Ring Lab at Portland State University. Take a virtual tour of the lab and read about the lab's three active research projects at [http://geog.pdx.edu/tree\\_ring/](http://geog.pdx.edu/tree_ring/). Karen has also organized, for the second year, a Forest Futures Conference being held at Willamette University: [http://www.willamette.edu/publicpolicy/forest\\_futures/](http://www.willamette.edu/publicpolicy/forest_futures/).

## Grant

**Franco Biondi**, University of Nevada-Reno, received a five-year, \$400,000 National Science Foundation Career Award through the Paleoclimate Program for **Learning in the Woods - Decadal Climate, Water Supply, and Fire Frequency in the Great Basin**.

This award funds the 'Learning in the Woods' project which aims to use a multi-faceted approach to integrate research and education on environmental change at interannual to interdecadal scales in the Great Basin, where rapid population growth is testing the vulnerability of natural and human-dominated ecosystems to climatic fluctuations.

The primary goal of the research is to obtain a baseline representation, over the last millennium, of interannual to interdecadal changes in water supply and fire regime. The spatial and temporal patterns of wildfire will be analyzed in the context of climatic fluctuations. Tree-ring chronologies from moisture-sensitive species will be developed for selected watersheds, including the Truckee, Carson, Walker, Owens, and Humboldt River Basins. The annual to seasonal resolution of such natural archives allows for accurate calibration with instrumental records, so that multi-century long proxy series of annual to seasonal precipitation and stream flow can be obtained.

In addition, a four-day science experience for K-12 teachers and students will be held every year, and aimed at Hispanic middle- and high-school students in Nevada. The specific scientific and educational objectives include testing the spatial coherence of decadal-scale variability in Great Basin hydroclimatology, determining the amplitude of interannual to interdecadal fluctuations of freshwater input to selected watersheds of the Intermountain West over the past millennium, examining spatial and temporal changes of fire regime in connection to local and regional climate at annual resolution for several centuries, educating new generations on the dynamic relationships that exist both in space and in time between climate and surface processes such as precipitation, runoff, and wildfire, developing a web-based information system showing the spatial variability of precipitation, stream flow, and fire regime over Great Basin watersheds for the period of instrumental observations and for the period of proxy climatic records, and providing under-represented groups an incentive, early in their educational careers, for pursuing science careers.

## Donate your computer cycles for species mapping.

The Informatics Biodiversity Research Center at the University of Kansas has developed the Lifemapper project, a distributed computing project for mapping species distributions and invasibility potential. "It uses the Internet and leading-edge information technology to retrieve records of millions of plants and animals in the world's natural history museums. Lifemapper analyzes the data, computes the ecological profile of each species, maps where the species has been found and predicts where each species could potentially live." Sign up, download the screensaver, and you can contribute to this research project. [Click here to go to the Lifemapper home page.](#)

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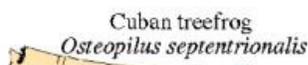
## Course Notes

This edition of Course Notes features **Eric P. Perramond's Biogeography course, Geography 405** at Stetson University in DeLand, Florida.

With 17-18 students per semester, Eric's class is large by Stetson's standards (the student-faculty ratio is 11-1). About half of the students are Geography and Environmental Science majors; the others are generally Biology, Chemistry, and Education majors. Some students take the course to develop an understanding of the scientific reasoning for conservation and restoration ecology initiatives, others to fill major or certification requirements. The greatest challenges Eric faces are a lack of specialized equipment to delve in-depth techniques now currently popular in biogeography classes (a palynology lab, for example), and staffing requirements that preclude his teaching the course with a lab section. Eric does include fieldwork in his courses, and gets around the lack of lab sections by devoting one class session per week during the second half of the semester to lab activities.

**Sample materials from Eric's Spring 2002 Course:**

### Syllabus Introduction



**G**eography 405 is an upper-division natural science course. Students should have

had GY 102 or By 101, 102, or 152. Biogeography is the study of the spatial distribution of plants and animals on the surface of the earth. How have patterns of biodiversity and life changed in the 500 million years of "life on earth"? Why are species where they are today? These are the central questions of the class. Biogeography is taking on new relevance because of currently shifting patterns of vegetation and wildlife migrations globally. It is of central concern not just to geographers and biologists, but also to wildlife managers, park rangers and planners. Like all good geography, much of the material in biogeography is visual.

***There is some amount of fieldwork expected in this class.*** If this is problematic because of a physical disability, you are to inform the instructor on the first day of class, so that we can make arrangements and accommodations. The first half of the class will ensure that everyone has the empirical knowledge necessary, the foundations so to speak, and the second half will be run as a lecture (Tuesday) and lab class (Thursdays).

#### Texts

Quammen, D. 1994. *Song of the Dodo*.  
Myers and Ewel. 1990. *Ecosystems of Florida*.

#### Schedule of topics

Introduction & Organization  
Biogeography as a field  
Paleoecology  
Paleoecology, II  
History of Biogeography  
Biogeographic Concepts  
Species Distributions  
Species-Area Relationship  
Quantitative Beginnings  
A developing theory  
Theory of Island Biogeography  
Fragmented Worlds  
The Sixth Wave?  
Island Biogeography, applied  
Biogeography of Florida  
Historical Biogeography  
Scrub and High Pine  
Lakes, Rivers, Mangroves  
Pine Flatwoods and Dry Prairies  
Scrub and High Pine  
Cultural Biogeography

*I have included a couple of different assignments I use in Geography 405.*

*The first is an assignment that involve mapping the current range of the FL panther through mortality data. The second exercise is one that I do early in the course to force students to engage with the campus around them to try and recognize native versus exotic species, and then use these as a starting point for the next lecture on invasive species (particularly relevant for us here in Florida). I hope they are of interest and of use to some.*

Eric Perramond

Links to Sample Materials:

- [Complete Syllabus](#) (MS Word document)
- [Florida Panther Range Mapping](#) (Adobe pdf document)
- [Campus Biogeography](#) (MS Word document)

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## Field Notes

**A high point of the 2002 AAG meeting was the San Jacinto Mountain field trip, organized by UCLA's Hart Walter and Tom Gillespie.**



Hart (center) explains the chaparral.

Now THAT's a ponderosa pine.



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## Internet Resources

Charles H. Smith, Science Librarian at Western Kentucky University has compiled two sites that should be of interest to anybody interested in the history of biogeography:

**Early Classics in Biogeography, Distribution, and Diversity Studies: To 1950**

<http://www.wku.edu/~smithch/biogeog/>

**The Alfred Russel Wallace Page**

<http://www.wku.edu/~smithch/index1.htm>

**MAMMFAUN: A Bibliography Concerning the Geographical Distribution of Mammals**

<http://www.wku.edu/~smithch/mamm/MAMMFAUN.htm>

**HERPFAUN: A bibliography concerning the geographical distribution of reptiles and amphibians** <http://www.embl-heidelberg.de/~uetz/db-info/HERPFAUN.html>

**The U.S. Forest Service Inventory and Monitoring Institute (IMI)**

<http://www.fs.fed.us/institute/>

Includes a download page with links to ArcInfo export format maps of Bailey's ecoregions.

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The following links and descriptions are taken or adapted from The NSDL Scout Report, Copyright Internet Scout Project 1994-2002. <http://scout.cs.wisc.edu/>

**Remote Sensing and Image Analysis** online textbook by Peng Gong, Department of Environmental Science, Policy and Management at the University of California Berkeley (a good online reference)

<http://www.cnr.berkeley.edu/~gong/textbook/>

**New Conifer Genus and Species Discovered in Vietnam**

<http://www.nsf.gov/od/lpa/news/02/pr0251.htm>

and

<http://www.rhs.org.uk/publications/pubs/garden0202/newsconifer.asp>

**Earth Trends: The Environmental Portal.** Global data on a broad range of environmental topics, searchable by subject or region.  
<http://earthtrends.wri.org/index.cfm>

**The Polar Bear Tracker.** Online maps track movements of two radio-collared polar bears and ice status, together with commentary. Animation is neat, but best done as manual step-through.  
<http://www.panda.org/polarbears/>

**Enature.com** Online field guides, maps, images, custom checklists (not perfect, but a good start), and more.  
<http://www.enature.com/>

**Issues in Evolution.** Intended as a resource for those engaged in countering the propoganda deployed by "intelligent design" supporters, this site includes a number of excellent essays on themes related to evolution and purported controversies surrounding it. The same site also includes a Biodiversity and an Environment collection.  
<http://www.actionbioscience.org/evolution/index.html>

**Cloud Forest Alive.** Educational site devoted to cloud forests.  
<http://www.cloudforestalive.org/>

**UN Atlas of the Oceans.** Databases and information about on the world's oceans and seas, gathered by various national and international agencies.  
<http://www.oceansatlas.com/index.jsp>

**Bibliography of Articles on the Effects of Air Pollution on Trees and Forests.** From the Committee for the National Institute for the Environment and focused mainly on the Southern Appalachian Mountains and the eastern US. Somewhat dated, but useful.  
<http://www.cnie.org/nle/treebib/treetop.htm>

**Trees of Alabama and the Southeast** from Auburn University's School of Forestry and Wildlife Sciences. Multiple photos of different tree parts to aid in identification.  
<http://sofserv.forestry.auburn.edu/samuelson/dendrology/>

**BirdSource** from the Audubon Society and the Cornell Laboratory of Ornithology allows users to participate in data gathering. Mapped results from public bird surveys. Good source of student biogeography projects.  
<http://www.birdsource.org/>

**Cornell Laboratory of Ornithology.** Download a copy of the CLO's study linking acid rain to songbird declines, among other things.  
<http://www.birds.cornell.edu/>

**The Fungi of California.** Identification help, images, and other information.  
<http://www.mykoweb.com/CAF/intro.html>

**Oklahoma Biological Survey.** Wealth of information on the flora, fauna, and ecological communities found throughout the state. The site offers a variety of databases and literature collections on a variety of subjects including rare species, woody plants, breeding birds, and much more.  
<http://www.biosurvey.ou.edu/>

**American Turkey** from the Carnegie Museum of Natural History. Happy Thanksgiving.  
[http://www.carnegiemuseums.org/cmnh/turkey/american\\_turkey.html](http://www.carnegiemuseums.org/cmnh/turkey/american_turkey.html)

**All Species Foundation.** A non-profit organization dedicated to the complete inventory of all species of life on Earth. So far, searchable database of over 1 million species.  
<http://www.all-species.org/>

**The Natural History of the San Gabriel Mountains.** Detailed information on the region's plants, animals, weather conditions, etc., including road guides, and links to other sites that offer useful photos.  
<http://home.earthlink.net/~teunice/sgm/index.html>

**GLOBIO (Global Methodology for Mapping Human Impacts on the Biosphere)** relates thousands of scientific studies on environmental impacts to risk on ecosystems. Interesting maps, but unfortunately, no data sets. A joint project of the Norwegian Institute for Nature Research and the United Nation's Environmental Programme  
<http://www.globio.info/>

Collections of links:

## Orchids

1. OrchidWeb  
<http://orchidweb.org/>
2. The Family Orchidaceae  
<http://www.esf.edu/resorg/rooseveltwildlife/Research/Orchid/Fam/Family.htm>
3. Internet Orchid Species Photo Encyclopedia  
<http://www.orchidspecies.com/>
4. Native Orchids of Canada  
<http://www.rbg.ca/orchids/orchids2.html>
5. BibliOrchidea  
<http://www.bibliorchidea.net/main.php>
6. Discover Orchids  
<http://www.si.edu/gardens/orchids/start.htm>
7. Orchid Kingdom  
[http://library.thinkquest.org/25368/e\\_whatorchid.html?tqskip1=1&tqtime=0710](http://library.thinkquest.org/25368/e_whatorchid.html?tqskip1=1&tqtime=0710)
8. Orchid Smuggling and Conservation  
<http://www.american.edu/TED/ORCHID.HTM>

## Fossils

1. Fossils! Behind the Scenes at the Museum  
<http://www.rom.on.ca/quiz/fossil/>
2. Learning from the Fossil Record  
<http://www.ucmp.berkeley.edu/fosrec/>
3. Fossils, Rocks, and Time  
<http://pubs.usgs.gov/gip/fossils/contents.html>
4. Petrified Wood  
<http://www.geo.arizona.edu/geos256/azgeology/pwood/index.html>
5. Dating Rocks and Fossils  
<http://www.museum.vic.gov.au/dinosaurs/fossdate.stm>
6. Fossil Detectives  
<http://www.bbc.co.uk/dinosaurs/howdoweknow/q44.shtml>
7. Fossil Preparation and Conservation  
<http://www.flmnh.ufl.edu/natsci/vertpaleo/resources/prep.htm>
8. Photographs of Fossils Found on KPS Fieldtrips  
<http://www.uky.edu/OtherOrgs/KPS/pages/fossilphoto.html>

## Human Evolution

1. Skulls Found in Africa and in Europe Challenge Theories of Human Origins  
<http://www.nytimes.com/2002/08/06/science/06SKUL.html?ex=1029640957&ei=1&en=c3fe06572f3725b9>
2. Is Human Evolution Finally Over?  
<http://www.observer.co.uk/international/story/0.6903.644002.00.html>
3. Human Evolution  
<http://www.handprint.com/LS/ANC/evol.html>
4. Hominid Evolution  
<http://www.hunterian.gla.ac.uk/museum/hominid/hominid.html>
5. Fossil Hominids: The Evidence for Human Evolution  
<http://www.talkorigins.org/faqs/homs/>
6. Human Evolution: The Fossil Evidence in 3D  
<http://www.anth.ucsb.edu/projects/human/>
7. Becoming Human  
<http://www.becominghuman.org/>
8. Human Evolution  
<http://www.pbs.org/wgbh/aso/tryit/evolution/>

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## Editor's Note

As you might have noticed, this is the largest and most extensive and elaborate edition of the new electronic version of *The Biogeographer* thus far, with a full compliment of features and, thanks to Ken Young, photographs.

Thanks to everybody who contributed, and as always, **Send Me Material!** Email is the best way to do this (by far). Please put

"Biogeographer:" followed by a brief description in the subject line to make sure I don't overlook your message in the daily pile. If you sent me something and it didn't make it into the newsletter, please accept my apologies and let me know so I can add it next time. I'm gradually evolving a system for keeping track of submitted materials (across four different computers and three server locations), but it's far from perfect. Please bear with me.

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