

# THE BIOGEOGRAPHER

Newsletter of the Biogeography Specialty Group of the Association of American Geographers  
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## BSG Executive Board

**Joy Nystrom Mast** (President), Carthage College  
Mary Ann Cunningham Vassar College; David Cairns, Texas A&M University;  
Charles Lafon, Texas A&M University; Jim Speer, Indiana State University  
Taly Drezner (Secretary-Treasurer), University of Wisconsin-Milwaukee;  
Duane Griffin (Editor), Bucknell University

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## President's Column

Greetings fellow biogeographers and thanks to the many who attended the 2006 Annual Biogeography Specialty Group business meeting in Chicago. Currently, the BSG is one of the largest specialty groups in the AAG with ca. 500 members. The BSG wishes to thank outgoing board members David Cairns and Mary Ann Cunningham for their two years of service, and welcome new board members Catherine Yansa and Rosemary Sherriff and re-elected student representative Chad Lane. I want to share with you all the highlights of the BSG for 2005 and gather input for 2006.

In 2005, the Biogeography Specialty Group focused on outreach to the biogeography community. First, we revived the BSG website. The new site is housed through South Carolina run by John Kupfer (<http://people.cas.sc.edu/kupfer/bsg.html>). At this website you can find links to The Biogeographer: The Official Newsletter of the BSG run by Duane Griffin, [current and past](#) officers, awards and competitions (Henry Cowles Award for Excellence in Publication, James J. Parsons Distinguished Career Award, Competition, and the Graduate Student Paper Competition). The new BSG website also includes a link to the International Biogeography Society, including the announcement for the 2007 IBS Meeting in the Canary Islands. Second, we established a new BSG listserv ([BSG-AAG@listserv.utk.edu](mailto:BSG-AAG@listserv.utk.edu)) through the University of Kentucky run by Henri Grissino-Mayer. Third, we increased student involvement and support in the BSG. We added a BSG board position for a student, and funded this student representative (\$500) to cover attendance at the national AAG meetings. We created a student BSG listserv for students only, currently run by Chad Lane (see website to join). We increased student funding for grants (\$1000 and \$500) and presentation awards (\$200 each), as well as added a best poster award (\$100). Chad Lane, the current BSG student representative on the board, organized a special BSG-sponsored session on employment as a biogeographer at the Chicago meeting. Fourth, we organized many venues for interactions at the annual AAG meeting, including sponsoring thirty-five sessions, organizing a behind-the-scenes tour of the Field Museum led by Ken Young, hosting a very well attended BSG social at the Exchequer Pub following our annual business meeting, and contributing to the physical geography reception party at the Palmer House.

For 2006, we would like to continue the mission of the Biogeography Specialty Group by promoting interactions between biogeographers, stimulating active research and teaching development in biogeography, and facilitating the exchange of ideas. To this end, the BSG board is open to suggestions for programs and ways to fulfill our mission. To get the ball rolling, I am suggesting we create a link on the BSG website for biogeography teaching material, particularly syllabi. To help organized this effort, I will serve as the contact person to put the teaching material together for a link on the BSG website. To contribute, send an e-mail with your introductory biogeography syllabus (word document or html) attached to [jmast@carthage.edu](mailto:jmast@carthage.edu). Feel free to also send any other biogeography teaching materials you wish to share with the BSG community, such as labs, powerpoints, and case studies, as well as other "advanced" biogeography courses syllabi and materials. By seeing how other biogeographers are teaching the introductory class, we can generate ideas and discussions on important themes and provide new biogeography professors a valuable resource for organizing their own courses. Please consider sending me a quick e-mail with your biogeography syllabus attached, and then enjoy seeing how your fellow members teach at their institutions. Thanks in advance for your input and help.

*Joy Nystrom Mast, BSG President 2005-07*

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## **BSG Business**

# **BSG Annual Business Meeting: Chicago**

## **Minutes of the Annual Meeting of the Biogeography Specialty Group, Association of American Geographers, March 8, 2006, Chicago, IL**

*Submitted by Taly Drezner, Secretary-Treasurer*

### **Welcome**

Joy Mast, President of the BSG, opened the meeting at 7:05pm. She noted that the BSG has over 500 members and is one of the top specialty groups in terms of number of members.

### **New Website**

Joy Mast thanked John Kupfer for taking care of the official AAG-BSG webpage, including housing syllabi online for biogeography courses. The website is: <http://people.cas.sc.edu/kupfer/bsg.html>

### **New Listserv**

Joy Mast thanked Henri Grissino-Mayer for hosting our listserv. The listserv is: [BSG-AAG@LISTSERV.UTK.EDU](mailto:BSG-AAG@LISTSERV.UTK.EDU).

### **New Graduate Representative**

Joy thanked Chad Lane for his service and for getting the BSG student listserv up and running. Graduate students that wish to be added may email him. Joy noted that Chad also did a great job putting together today's employment session and other special sessions focusing on student issues for the AAG meeting. Let Chad know if you have any ideas for sessions for next year. Also be sure to submit any articles or additions for the newsletter.

### **Newsletter**

Joy thanked Editor Duane Griffin for all of his work on the BSG newsletter. Duane asked that any materials of interest to be sent to him to add to the newsletter. Duane and Joy both thanked Publications Editor Henri Grissino-Mayer for compiling recent publications for the newsletter, which now appears in every issue. Duane will be away next fall and a volunteer to guest editor is wanted. Henri will also help, so send references and publications to him. Also, there is still room in the spring newsletter, if you have any submissions.

### **Cowles Award**

Joy thanked Mary Ann Cunningham for organizing, as both thanked the judges. Mary Ann reminded the attendees to submit papers for next year's competition as folks read papers. She then presented the 2006 Henry Cowles Excellence in Publishing award in Biogeography, given to Kathryn Alftine and George Malanson for their recent paper published in the *Journal of Vegetation Science*, entitled, "Directional Positive Feedback and Pattern at an Alpine Tree Line." Congratulations Kathryn and George! A plaque was given to George Malanson, and a second plaque will be sent to Kathryn. George thanked the committee and the Biogeography Specialty Group, and also noted that the project was part of a larger group project, for which he also thanks D. Cairns, D. Butler, and M. Becker. This paper was recognized as one of the best papers of the year in the *Journal of Vegetation Science*.

### **Student Research Grant Awards**

Joy thanked Charles Lafon for organizing, and both thanked all nine judges. Charles presented the winners, noting that there were many good research proposals. The two winners were announced and offered congratulations:

Masters: Ranya Henson of the University of Hawaii (\$500)

Ph.D.: Scott Markwith of the University of Georgia (\$1000)

### **Student Presentation Awards**

Joy thanked Jim Speer for organizing, and thanks to all of the judges. This year's winners could not be announced since judging was still in progress, with 2 M.A. and 8 Ph.D. contenders. Jim presented winners from last year's competition:

Masters: C. Kolden of the University of Nevada, Reno

Ph.D.: J. Sibold of the University of Colorado, Boulder

Scott Mensing accepted the award for C. Kolden in her absence.

### **BSG Elections**

Joy thanked David Cairns for organizing the election. David announced the winners:

Two new board members: Rosemary Sherriff (University of Hawaii, Hilo) and Katherine Yansa (Michigan State University), replacing David and Mary Ann Cunningham.

Graduate student rep: Chad Lane, University of Tennessee was reelected to his second and final term.

David reminded the group to please vote, and congratulations to all of the winners!

### **BSG Finances – Treasurer's Report**

Joy thanked Taly Drezner for serving as BSG Treasurer. Taly gave the treasurer's report ([attached](#)), and noted that the BSG membership brought in \$2820 in the most recent 12 months for which we have completed records. Taly also informed the group about new changes voted upon by the board in their meeting prior to the present specialty group business meeting, specifically, changes to awards and funding. The funding for the student research grant awards, starting this year, will be raised to \$1000 for the Ph.D. and \$500 for the Masters. The best M.A. and Ph.D. presentations will be increased to \$200 each. In addition, the BSG will provide \$500 to the graduate student representative on the board for support for travel to the AAG annual meeting. Although there were no competitors this year, the new best student poster winner will receive \$100.

### **BSG Sponsored Sessions**

This year, 35 sessions were sponsored or co-sponsored by the BSG. Members are encouraged to come up with ideas for sessions for next year's meeting in San Francisco, as well as any field trip ideas.

### **BSG Field Trip**

Joy thanked Ken Young for organizing the 2006 field trip, "Fieldwork! A Behind-the-Scenes Tour of the Field Museum's Biodiversity Programs" on Friday, from 9am to noon.

### **BSG Social**

Following the business meeting, Joy invited all members to meet at the Exchequer Pub and Restaurant, at 226 S. Wabash Avenue (and E. Adams) only one block from the conference hotel.

### **Physical Geographers Reception**

The annual physical geography party was held Friday night, from 8-midnight in the Monroe of the conference hotel. Joy invited all biogeographers to attend. The BSG has co-sponsored this event.

### **Discussion for BSG**

Joy asks BSG members to share their hopes for the future of the specialty group and their concerns. She asks how might we move into new growth and better serve our membership. The board is open to hearing what you think!

### **Journal of Mountain Science**

Donald Friend announced that a new journal (named the *Journal of Mountain Science*) dedicated to research on mountains has been started by the Chinese Academy of Science and submissions are encouraged, particularly from international scientists.

### **Quaternary Specialty Group**

Rob Dull suggested starting a new specialty group dedicated to Quaternary Science. There were already two sessions at this meeting and many biogeographers were involved. Rob questioned whether this would fracture the BSG, though he thought it would facilitate discussion and people would be equally involved.

### **Position for Biogeographer at the University of the West Indies (in Jamaica)**

Chad Lane announced an opening for a biogeographer in the U. of the West Indies and they have received no applications! He said he will put this on the BSG listserv.

### **San Francisco Annual Meeting**

Scott Mensing announced that he is a co-chair for the arrangements in next year's meeting in San Francisco. He asked if anyone has any field trip ideas or ideas for sessions, organizing sessions, etc., to let him know.

### **New Ph.D. Program at the University of Nevada, Reno**

Scott Mensing announced that a new Ph.D. program was just approved and the department is taking applications for the Fall of 2007. He brought fliers for interested parties.

### **International Biogeography Society**

Duane Griffin promoted attendance to the International Biogeography Society in January 4 – 7, 2007 in Tenerife, in the Canary Islands. The last meeting was in West Virginia and was very good. This is an excellent organization, made up primarily of biologists, and a few British geographers. North American geographers are notably underrepresented, despite Glen MacDonald from UCLA being instrumental in getting it going.

### **New *Physical Geography* Biogeography Editor**

George Malanson informed the group that he is the new biogeography editor of *Physical Geography*, replacing Al Parker who stepped down. The journal is seen by many people and has a good turn around time, and George encourages submissions.

### **North American Dendroecology Fieldweek**

Jim Speer announced the one-week dendroecology fieldweek, which covers everything from fieldwork to presentation. This is an NSF funded program, so now there is support for undergraduates (3) as well as some international awards.

### **CDAG Meeting**

Amy Hessel of West Virginia University is hosting CDAG in Morgantown and encourages attendance.

### **GSA Meeting**

Sally Horn announced (in place of Katherine Yansa who was unable to attend) the upcoming GSA meeting, in which Katherine is organizing a paleoenvironment session. If you are interested, let Katherine know and you can be invited to the special session.

## Adjournment

The meeting was adjourned to the Exchequer Restaurant and Pub at 7:35 pm.

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## Awards

### Cowles Award

The Cowles Award, established in 1998, honors Henry Cowles, whose Presidential Address, "Causes of Vegetation Cycles" was the first paper published in the *AAG Annals* (1911). The award is to be given annually in recognition of the best biogeographical publication of the year, honoring either books or papers. This year's award winner is particularly in keeping with Cowles's original theme. The BSG is pleased to honor Kathryn Alftine and George Malanson of the University of Iowa for their paper "Directional positive feedback and pattern at an alpine tree line" (*Journal of Vegetation Science* Vol. 15, pages 3–12).

#### Abstract

The spatial pattern at alpine tree line may be part of a feedback process in which wind plays a central role. The basic aspects of such a feedback were embedded in a cellular automaton. Spatial metrics of the patterns generated by this simulation and those of observed patterns at a windy tree line site were ordinated using Principal Component Analysis. Only the simulations that included a directionally weighted feedback fell close to the observed sites in ordination space. MANOVA indicated that the directionally weighted feedback is most important in structuring the tree line pattern, but that random hotspots for establishment and the overall steepness of the environmental gradient from forest to tundra in space also have an effect. The importance of wind in determining feedback with the spatial pattern of a canopy indicates that non-linear reactions to climatic change are likely.

Congratulations Kathryn and George!

### 2006 BSG Student Awards

As always, submissions for the 2006 BSG Student Paper and Research Grant competitions were of extremely high quality, and a great deal of hand-wringing went into the award decisions. The four winning papers and projects are particularly interesting in that they represent cutting-edge work in biogeography that are, nonetheless, firmly grounded in geographical biogeography's traditional core concerns and linkages to the broader field of physical geography. The future of the subdiscipline looks bright indeed!

#### MS Paper Competition Winner

**Chelsea Teale** (Syracuse University) for her paper **Holey Ground: The Distribution and Status of Earthworm Populations in Yukon Territory, Canada**  
co-authored with Susan Millar, PhD - (Syracuse University)

#### Abstract:

The effects of earthworms (order Oligochaeta) on pedogenesis, nutrient cycling, and vegetation dynamics are recognized to be substantial and often detrimental to forest health. These effects are most pronounced in previously worm-free areas, where Oligochaetes can alter forest dynamics by blending soil profiles. These effects are most noticeable in glaciated regions where native Oligochaetes are rare or absent but non-native species have been introduced. To assess the status of introduced species in Yukon Territory, Canada, I made a preliminary survey of the region and analyzed dispersal trends using field samples and informal interviews/surveys conducted throughout Summer 2005. All individuals found were in the capital city of Whitehorse, of the species *Eisenia foetida* (red wiggler or manure worm). Anecdotal evidence suggests they are distributed for vermicomposting as well as through imported soils. It was found that they are anthropochores with ranges restricted to areas modified by humans. It was hypothesized that these non-native species are limited to urban areas in southern Yukon, similar to patterns shown in studies done elsewhere. As

a surface-dwelling epigeic species, *Eisenia foetida* has little potential for significantly altering soil profiles. At the time of fieldwork it was also determined that this Lumbricid species does not present an immediate invasional threat due to minimal urbanization, climate restrictions, and slow natural colonization rates. Various climate amelioration scenarios, however, suggest that dispersal and fecundity of other Lumbricids may increase in coming years. The currently worm-free forests of the Yukon may therefore experience dramatic change as non-native *Oligochaetes* become established.

## PhD Paper Competition Winner

**Kevin John Anchukaitis** (University of Arizona) for his paper **Calibrating annual isotope chronologies in *Ocotea tenera* (Lauraceae) from the Monteverde Cloud Forest, Costa Rica** co-authored with Michael N Evans (University of Arizona), Nathaniel T Wheelwright (Bowdoin College), and Daniel P Schrag (Harvard University)

### Abstract

In temperate regions, networks of tree-ring chronologies provides proxies for paleoclimatic analysis. Many tropical trees do not form reliably annual rings, making it difficult to develop chronologies in these regions. We seek to establish high-resolution proxy paleoclimate records from trees without annual rings using stable isotope dendroclimatology. We apply our protocols to trees from the Monteverde Cloud Forest, where changes in ecology and hydrometeorology are related to variability in the tropical ocean-atmosphere system and climate change. Because they are associated with specific hydroclimatic conditions, cloud forests may be particularly sensitive to climate variability and change, such that proxy records from these sites record the behavior of the tropical ocean-atmosphere system. The calibration of an age model for trees without rings is a prerequisite for paleoclimate reconstructions. Our approach uses microsampling, rapid cellulose preparation, and CFIRMS to identify isotope cycles in wood which are associated with the change in the delta-<sup>18</sup>O of water sources used by trees over a year. Trees of known age and growth increment were sampled in plantation sites to test our age model. High-resolution stable isotope measurements reveal coherent delta-<sup>18</sup>O cycles up to 10 permil. The growth rates derived from the isotope timeseries match those from measurements. These data support our hypothesis that isotope cycles can be used to provide chronological control in the absence of rings. The ability of trees to record interannual climate variability is evaluated using the isotope signal from multiple trees and sites, and meteorological and climate field data for well-observed warm ENSO events.

*Thanks to James Speer*

## 2006 BSG Student Research Grants

The MS Research Grant goes to **Ranya Henson** (University of Hawaii), \$500 for her study, **Genetic Structure in the Hawaiian Intertidal Zone: Space, Scale and Disturbance**. ([Click here](#) for Ranya's project proposal)

The Ph.D. Research Grant winner is **Scott Markwith** (University of Georgia), \$1000 for his project, **Application of Hydrologic Modeling for Investigating Hydrochory in the Aquatic Macrophyte *Hymenocallis coronaria***. ([Click here](#) for Scott's project proposal)

Congratulations Ranya and Scott!

*Thanks to Charles Lafon*

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## Graduate Student Representative's Column

As many of you know as the graduate student representative for the Biogeography Specialty Group (BSG) I was responsible for arranging a special session for student members of the BSG at the annual meeting of the

Association of American Geographers (AAG) in Chicago this year. After speaking to my colleagues here at the University of Tennessee and colleagues from other institutions, it quickly became apparent that the best topic for this session would be employment as a biogeographer. In my humble opinion, the panel session was a great success and I sincerely thank everyone involved! Panel members included Dr. Karen Arabas, Dr. Matt Beaty, Dr. Glen MacDonald, Dr. Kimberly Medley, Dr. Shelly Rayback, and Dr. Jim Speer.

The session included very insightful discussions between the audience and the panel regarding preparation for employment as biogeographer, avenues of employment in the field of biogeography, and tips on excelling as a professional biogeographer. In particular, the discussion revolved around the diversity of job opportunities available to biogeographers preparing to enter the workforce. Drs. Kimberly Medly and Matt Beaty did a fantastic job of outlining opportunities that are available to biogeographers who would like to work with non-profit organizations, non-governmental organizations, and government agencies. Dr. Glen MacDonald offered the valuable perspective of a department head who has been involved with hiring numerous faculty members at the University of California-Los Angeles, a top research oriented institution. Drs. Karen Arabas, Shelly Rayback, and Jim Speer offered insight into teaching and conducting research at smaller, teaching-oriented institutions.

In my opinion, the biggest message to come out of the discussion was that students should not rush into any one particular rigid career path unless they are sure it is their desired professional path. All of the panelists urged students to take their time and explore the many employment opportunities available to them such as internships and temporary positions with non-profit organizations, non-governmental agencies, and governmental agencies. The panelists stressed the importance and the advantages of getting into these very extensive social networks, which can often land you a more permanent position.

For those students that have already decided that they would like to become professionals in the world of academia the panel offered several suggestions. Beyond the obvious suggestion of building a strong CV with solid publications, grants, and teaching experience, the panel also suggested that students be very patient. The hiring process in academia is very unpredictable and a flawless CV is not always enough to get you the job you most desire. Academic positions typically come with very specific requirements, like particular specializations or geographic regions of interest, which may not be your focus. In addition, Dr. Glen MacDonald made the point that even if you do get invited for interviews with a very strong CV, you are more likely to lose the job during the interview than get it. In other words, do not lean on your CV to get you the job, be sure that you are familiar with the department in which you are interviewing and can sell yourself (by being prepared to explain how you are the best person for the job no matter the perspective of the interviewer) to every member of that department on an individual basis. This must have struck home with several of the attending students because a request was made that we hold mock job interviews at the annual meeting next year in San Francisco (please let me know if you would like for this to happen and I will try and organize something).

In the end, the message coming through from the panelists seemed to be, don't rush into any rigid career path you are not absolutely sure you want to be a part of, work hard, make lots of connections, and most importantly, be patient with the opportunities that become available to you. The panelists seemed very confident that taking this approach would maximize your chances of obtaining a job as a biogeographer in any one of a myriad of different settings.

If you have any ideas for a special session at next year's AAG meeting in San Francisco please let me know ASAP. So far, I have had requests for a session regarding job interviews, a session regarding grant opportunities available to graduate students, or maybe even another employment session like the one we held in Chicago. If you have an idea for a special session, please e-mail me at [clane6@utk.edu](mailto:clane6@utk.edu) and I'll see what I can do!

*Chad Lane, Grad Student Rep, 2005-2007*

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## News

### ***Biotropica* Online for Students**

Student members of the Biogeography Specialty Group with interests in tropical organisms and habitats may be interested in a new offer from the Association of Tropical Biology. The ATB is now offering free online subscriptions to *Biotropica* to students. Although it is possible to download articles from this journal from many libraries, often it is not possible to get the last year or two of issues. So the online subscription could be quite helpful even to students whose University libraries subscribe to *Biotropica*. And undoubtedly it will be helpful to students who have no library access to the journal.

(If you are on the editorial board of a journal, perhaps you would want to consider asking that journal to follow *Biotropica*'s lead in making journals available online to students).

Here is the announcement from the recent "Tropinet" newsletter:

#### FREE BIOTROPICA ONLINE

For the first time, *Biotropica* is offering free online subscriptions for all students. This gives you rapid internet access to the journal (but not the other advantages of ATBC membership, such as receiving hard copies of *Biotropica*, free page charges for publications, and discounts for annual meetings). The free student memberships are valid for three years.

To receive free online access, send your name, full institutional address, email address, and proof of your status as a student (either a photocopy of your current student ID or a signed letter from your thesis advisor or another department member) to:

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*Sally Horn, Department of Geography, The University of Tennessee*

### **International Biogeography Society**

The 3rd biennial conference of IBS will be held 9-13 January 2007 on the island of Tenerife, Canary Islands. The main focal point of IBS meetings are plenary symposia on specific topics, which are augmented by poster sessions, workshops, and field trips. The past two meetings have been fantastic. For more information, visit the [IBS web site](#).

Membership in the IBS is \$40 (\$30 for students) and, in addition to supporting the society, provides three benefits: 1) reduced cost of registration fees to attend IBS conferences, 2) discounts (up to 20%) on [books published in association with IBS](#), and 3) **free online access** to Blackwell Publishing's three biogeography journals: [Journal of Biogeography](#), [Global Ecology & Biogeography](#), and [Diversity & Distributions](#), three journals covering all aspects of biogeography and ecology, and 4) 20% discount on additional Blackwell Publishing journals [Oikos](#), [Ecography](#), and [Journal of Avian Biology](#).

For more information on the society, visit the [IBS home page](#).

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## Notes

# Research Notes

### Ecoregion Mapping and Boundaries

Robert G. Bailey  
USDA Forest Service  
Rocky Mountain Research Station

#### Abstract

Ecoregion maps show the earth's surface subdivided into identifiable areas based on macroscale patterns of ecosystems. These ecoregions delimit large areas within which local ecosystems recur more or less throughout the region in a predictable pattern. For example, trees are found on north-facing slopes throughout the semi-arid mountains of the American West. This presentation summarizes the rationale I used in identifying ecoregion boundaries on maps of the United States, North America, and the world's continents. The geographic reasoning used in drawing boundaries involves 20 principles, which are presented to stimulate discussion and further understanding. ([Click here for the full pdf document.](#))

## Course Notes

Istanbul University Field Trip to Lake Terkos, February 4, 2006

Meral Avci  
Istanbul University  
Department of Geography



The diversity of Istanbul and its surrounding is profound from a biogeographical point of view. Lake Terkos, located northwest of Istanbul, is an important drinking water source, and is surrounded primarily by deciduous forests, shrublands, wetlands and coastal dunes. This is one of the most important plant diversity areas in Turkey, supporting 575 taxa. It is also an important area for bird diversity.

The Terkos forests are managed under a traditional system for timber harvest and charcoal production, which provides income for some villages in the area (foto: Near Karamanli village).



Lake Terkos is a lagoon. Coastal dune vegetation is present on the barrier beach where it is possible to find endemic and precious dune plants. However, a dune-stabilization afforestation campaign begun by the French in 1885–1887 and continued by Turkish Ministry of Forest from 1960s onward introduced exotic species such as *Acer negundo*, *Pinus maritima*, *Robinia pseudoacacia* and *Cytisus scoparius*.

Istanbul University undergraduate and graduate students examined sites and debated these issues on the field trip.

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## Field Notes

### Fieldwork! A Behind-the-Scenes Tour of the Field Museum's Biodiversity Programs

Kenneth Young organized and led a field trip sponsored by the BSG during the Chicago AAG meeting. What to do in March in Chicago? He decided a indoor “field” experience would be the best bet given the unpredictable “spring” weather to be found on the shores of Lake Michigan in that month.

The field trip was entitled “Fieldwork! A Behind-the-Scenes Tour of the Field Museum’s Biodiversity Programs” and was attended by about 20 participants.

As background, the Field Museum of Chicago was founded in 1893 and works to increase scientific knowledge and awareness through their anthropology, botany, geology, and zoology collections and exhibits.

The “behind-the-scenes” part of the tour was able to examine the challenges in managing information about biological diversity, making it available in useful forms, while maintaining the original specimens for future generations.

The visit began among the bird collections, with explanations on how specimens are maintained and what kinds of research are being done with them. Collections manager David Willard is shown in these pictures demonstrating a bird of paradise (Figure 1), a passenger pigeon (Figure 2), an ivory billed woodpecker (Figure 3), and how skeletons are cleaned and preserved for later study (Figure 4).



Figure 1. Examining a bird of paradise in the bird collections.



Figure 2. The bird collections include extinct species, such as this passenger pigeon.

The group then heard about the local and international programs for biodiversity conservation, which are located in the Division of Environment, Culture, and Conservation of the Field Museum. Betsy Quail and Kirk Anne Taylor explained the Chicago Wilderness consortium, which is a model system of how to do biodiversity conservation in large urban area.



Figure 3. Dave Willard, the bird collections manager, talks of stalking evidence of the ivory-billed woodpecker (shown here) in the swamps of Arkansas



Figure 4. The bird specimens are processed and stored as study skins, skeletons, and as tissues to be used for genetic analyses.

Robin Foster described the ECP's international programs, including the use of satellite imagery and field trips by multi-disciplinary teams to evaluate biological diversity and its surrounding social and legal context in isolated "wilderness" areas of the tropics and subtropics. Many of the places their teams have surveyed (Figure 5) have later been made into conservation protection areas, some managed by national governments, some by conservation nongovernmental organizations, and still others by indigenous groups.



Figure 5. Robin Foster explaining how priority areas are chosen for conservation efforts in the tropics of the world.



Figure 6. Plant specimens and colorful photographs made into field guides are some of the materials maintained and distributed through Field Museum programs.

He also demonstrated how plant specimens stored in the herbarium are being scanned so that they are accessible through the web. In addition, he has designed a series of “quick guides” that allow for the rapid identification of plants and other organisms through colorful photographs (Figure 6). Christine Niezgodna then described the goals and functioning of the main herbarium, with its several million plant specimens and a mandate to maintain those collections for the future while providing access to interested researchers. The final message to the visitors came from Edna Davion, from Academic Affairs of the Field Museum, who mentioned the world-class collections also to be found in the museum for mammals, reptiles and amphibians, fishes, invertebrates, and many kinds of fossils, not to mention the non-biodiversity strengths of research in geology and anthropology.

Throughout the trip, it was clear that there are many possible roles for biogeographers to participate in the investigation and subsequent communication about biodiversity as represented in the materials stored in natural history museums, particularly as their staff and curators attempt to use that biodiversity information to help with conservation planning decisions.

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## Ecology in the Wake of Hurricane Katrina

On August 29, Hurricane Katrina made landfall near the Mississippi-Louisiana border with sustained wind speeds of ca. 125 mph and a storm surge that exceeded 25-30 feet and penetrated more than 3 miles inland in some places. Rainfall rates exceeded 1 inch/hour across a large area of the Gulf Coast, and precipitation analysis from NOAA's Climate Prediction Center show that rainfall accumulations exceeded 8-10 inches along and to the east of the hurricane's track. Peak wind gusts of 100 mph and sustained hurricane force winds persisted nearly 100 miles inland, resulting in widespread damage as far as Hattiesburg and Laurel, MS. In terms of forest damage, preliminary estimates were that Katrina damaged or destroyed ca. 19 billion board feet of timber with an estimated value of roughly \$5 billion on five million acres in Mississippi, Alabama and Louisiana. Forest inventories indicate that nearly 90 % of all damaged forestland was < 60 miles from the coast, and one-third of the timber damaged was concentrated in 8 counties in southern Mississippi. For example, estimates of damage on the DeSoto Ranger District of the DeSoto National Forest included 142,000 acres of heavy damage, 108,000 acres of moderate damage and 132,000 acres of light damage.



Pine damage resulting from the effects of storm surge and salt spray near Long Beach, MS.



Chair of the Southern Miss Geography Department and “closet biogeographer” Skeeter Dixon takes a quick break from helping out with forest sampling near Pass Christian, MS

Ecologically, post-hurricane forest recovery is a function of the effects of the hurricane on the preexisting community coupled with a range of factors determining the community’s response to newly imposed environmental conditions. To clarify how forest ecosystems in southern Mississippi were affected by Katrina and how they are likely to respond, John Kupfer (Univ. of South Carolina) and colleagues Scott Franklin and Reza Pezeshki (Dept. of Biology, Univ. of Memphis) initiated a multi-scale study that incorporates field-based research, greenhouse studies and remote sensing. Much of their work thus far has focused on documenting and contrasting damage inside and outside of the storm surge zone around St. Louis Bay, MS, including repeat sampling of soils to assess changes in soil properties such as salinity, nutrient status, and redox potential. Also, as part of a graduate seminar that John is teaching at USC this spring, he took 10 graduate students to conduct assessments of forest damage patterns in coastal Mississippi, with a particular focus on assessing controls of damage at scales ranging from trees and stands to entire landscapes. This research, funded initially by a Rapid Response grant through the Coastal Resiliency Information Systems Initiative for the Southeast (CRISIS) program, is expected to continue throughout the next several years.

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## Recent Publications

*Compiled by Henri Grissino-Mayer, Publications Editor*

### **Karen B. Arabas**

Arabas, K.B., Hadley, K.S., and Larson, E.R. 2006. Fire history of a naturally fragmented landscape in central Oregon. *Canadian Journal of Forest Research* 36: 1108–1120.

### **Meral Avci**

Avci, M. 2005. Diversity and endemism in Turkey vegetation. *Ýstanbul Üniversitesi Edebiyat Fakültesi Coğrafya Bölümü Coğrafya Dergisi* 13: 27–55 (in Turkish, with English abstract).

### **Henri D. Grissino-Mayer**

Grissino-Mayer, H.D., DeWeese, G.G., and Williams, D.A. 2005. Tree-ring dating of the Karr-Koussevitzky double bass: A case study in dendromusicology. *Tree-Ring Research* 61(2): 77–86.

## **Keith S. Hadley**

Frenzen, P.M., Hadley, K.S., Major, J., Weber, M.H., Franklin, J.F., Hardison, J., and Stanton, S. 2005. Geomorphic change and vegetation development on the Muddy River mudflows. Pp. 75–91. In: Dale, V.H., Swanson, F., and Crisafulli, C.(eds.). *Ecological Recovery of Mount St. Helens after the 1980 Eruption*. Springer-Verlag, New York.

Weber, M.H., Hadley, K.S., Frenzen, P.M., and Franklin, J.F. 2006. Forest succession following mudflow burial, Mount St. Helens, Washington. *Canadian Journal of Forest Research* 36: 437–449.

## **John Kupfer**

Kupfer, J.A. 2006. National assessments of forest fragmentation patterns in the U.S. *Global Environmental Change A - Human and Policy Dimensions* 16: 73–82.

Kupfer, J.A., Malanson, G.P. and Franklin, S.B. 2006. Not seeing the ocean for the islands: The influence of matrix-based processes on forest fragmentation effects. *Global Ecology and Biogeography* 15: 8–20.

Kipfmueller, K.F. and Kupfer, J.A. 2005. Complexity of successional pathways in subalpine forests of the Selway-Bitterroot Wilderness Area, USA. *Annals of the Association of American Geographers* 95: 495–510.

## **Yi-Chen Wang**

Wang, Y-C. 2005. Presettlement land survey records of vegetation: geographic characteristics, quality and modes of analysis. *Progress in Physical Geography* 29: 568-598.

Wang, Y-C. and Larsen, C.P.S. 2006. Do coarse resolution U.S. presettlement land survey records adequately represent the spatial pattern of individual tree species? *Landscape Ecology* 21: 1003-1017

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## **Editor's Note**

If you read the business meeting minutes closely, you'll notice that we were looking for a guest editor for the fall 2006 edition of *The Biogeographer*, and that I was still accepting materials for the spring edition, which was running late. In the absence of a volunteer for substitute editor, and swamped by duties as co-director of Bucknell's London program, I decided I'd settle for a single combined 2006 edition, which I'd try to edit over the summer or pull together with help from Joy Mast and Henri Grissino-Mayer by long distance. In retrospect, both plans were laughably ambitious, and we went sans newsletter for 2006, until now. Thanks to the new mailing list system that Joy Mast initiated and to John Kupfer's diligent webmastering, I don't think the BSG has suffered my absence. We should be back on schedule now, with the spring '07 edition scheduled to go live in early April.

One item that does seem to have fallen through the cracks is Joy's effort to create a web repository of syllabi and other biogeography teaching materials, as described in her president's column. John has created a link and page, but at this point, it isn't populated. This is a great idea that deserves our support. Please contribute links to your syllabus and materials you've developed for teaching biogeography.

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