

THE BIOGEOGRAPHER

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

Biogeography and Landscape Ecology

Because of the increasing profile of research and teaching that is labeled as “landscape ecology” it is important for biogeographers and specifically members of the Biogeography Specialty Group to consider some of the implications. The approaches, techniques, publications, and journals utilized by landscape ecologists are reminiscent of those used by many biogeographers examining ecological topics.

This overlap is, of course, an incredible opportunity to heighten the visibility of geographical contributions to the understanding of landscapes. The significant productivity of biogeographers is sometimes overlooked, perhaps because the need to publish in both geographical and ecological journals dilutes their effect. The increasing popularity of landscape ecology is also a vindication for those who felt that soil and topographic heterogeneity had to be included in explanations of vegetation and habitat change. The “language” of landscape ecology offers shared communication routes among biologists, geographers, foresters, modelers, and landscape architects, who study similar environments but do not always do so in similar fashions. In addition, there are many researchers within geography who find that landscape ecology offers an approach and vocabulary that connects the data available from satellite imagery and GIS layers to features that characterize natural landscapes.

We also have an important educational mission. As more biology programs focus on molecular approaches, it is important that biogeographers continue to offer courses on entire plant communities, ecosystems, landscapes, and regions. There is an increasing number of jobs at state and federal levels that are to be filled by landscape ecologists, presumably including our own graduates. A landscape ecology course at the undergraduate level is a challenging but rewarding way to solidify the ecological and geographical knowledge of students. A similar course at the graduate level allows students to evaluate and begin to use the techniques available. This is also an excellent means to reach out to students interested in protected areas or in natural resources, for example through forestry or range

management.

There is likely to be some confusion and conflict because biogeographers can easily trace back an academic history of concern with landscapes that predates by 50 years the rise of landscape ecology as a concern among many biologists. Perhaps we should make a special point of citing examples in our publications so that the previous intellectual contributions of geographers become more recognized.

In addition, biogeography is much broader than landscape ecology. The contributions of paleo/historical biogeography may or may not be relevant to landscape ecology. These studies do keep reminding researchers of the need to understand historical ranges of variation. However, the goal is often to increase knowledge of Earth history and in particular of the nature of past climate changes, rather than documenting the histories of specific landscapes. There are also cultural biogeographers interested in landscape-level changes associated with human influences and lands use. But, at the same time, there are cultural biogeography studies that do not need landscape ecology as a perspective because the focus is on the use of particular plant species, as an example. Other biogeographers might resist the landscape ecology label because their research is consistently multi-scaled in approach.

In general, we (BSG) should strive to be as inclusive as possible. Within the AAG this can be done by continuing to promote shared sessions in professional meetings with human and physical geographers, and with those interested in the applications of particular techniques. Those of us doing research that looks like landscape ecology should join and participate in the relevant professional societies.

In that spirit, allow me to make a specific suggestion: I think we should consider renaming our specialty group to include "landscape ecology". The Biogeography and Landscape Ecology Specialty Group is a mouthful, but no longer than the names of many other specialty groups of the AAG. A new name would send a message to those outside geography that landscape concerns are addressed (many biologists wrongly consider "biogeography" to be limited to historical biogeography). It would serve to draw attention from others within geography who might be discovering the usefulness of landscape ecology but who have not yet connected that approach with biogeography and with the BSG; this might be particularly true of those who are applying tools from remote sensing and geographic information science. Even though landscape ecology is but one of the several strong themes within biogeography, this might be a way to increase our visibility.

Maybe we can discuss this in the BSG business meeting in Los Angeles (Friday, 22 March, 7 PM). I would be happy to receive and collate reactions and comments to this suggestion---positive and negative. Write to kryoung@mail.utexas.edu

Kenneth R. Young

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Election

BSG Board Members: **Vote Now!**

The following candidates have been nominated to serve on the BSG Board for a two-year term (June 2002-2004). Please vote for two of them by sending an e-mail, fax, or post (deadline: March 15, 2002) to:

James Dyer

Associate Professor, Department of Geography
Ohio University
Athens OH 45701-2979

phone: (740) 593-1142 fax: (740) 593-1139
e-mail: dyer@ohio.edu

The Candidates:

Karen B. Arabas (Ph.D. The Pennsylvania State University, M.A. George Washington University, B.A. Wesleyan University) is an Assistant Professor of Geography in the Department of Environmental and Earth Sciences at Willamette University, Salem, Oregon. Her research interests include the structure, composition and disturbance regimes of forests, focusing on human disturbance and fire. She conducts her research in a variety of settings including serpentine barrens and kipuka (forest islands) in central Oregon. Undergraduate research projects Karen has mentored include an oak restoration project, a fire history study, and edge effects study, and a pandora-moth outbreak study. She has published in *The Journal of the Torrey Botanical Society* and *Castanea*.

David Cairns has a B.A. in Genetics with a minor in Geography from the University of California, Berkeley (1989), a M.S. in Geography from the University of Florida (1991), and a Ph.D. in Geography (1995) from the University of Iowa. He taught for three years at the University of South Carolina and is in his fourth year of teaching at Texas A&M University. His research interests are primarily in the areas of ecotone dynamics and landscape ecology. He has employed simulation modeling and GIS to investigate questions of ecotone stability and form at the alpine treeline ecotone in Glacier National Park, Montana and at the deciduous-coniferous ecotone in Great Smoky Mountains National Park. He teaches courses in Earth System Science, Biogeography and Vegetation Response to Climate Change. He has served the BSG as the chair of the student research proposal competition and has been a reviewer in the student paper competition. He has published papers in *Geografiska Annaler*, *Physical Geography*, *Geographical and Environmental Modelling*, the *Journal of Vegetation Science*, *Plant Ecology* and *Ecoscience*.

Lori D. Daniels is an Assistant Professor of Geography at University of British Columbia. Lori received her PhD in Geography from the University of Colorado at Boulder in 2000. Her MSc is from the University of British Columbia (Forest Sciences, 1994) and her BSc is from the University of Manitoba (Ecology, 1991). She is highly committed to teaching and learning in Geography. At UBC, she has taught Introductory Physical Geography, Geography of Ecosystems, Physical Environments of British Columbia, and at the Geography Field School. She plans to introduce two new Biogeography courses (theory and research methods) in the coming academic year. Lori's research addresses questions related to forest dynamics and disturbance regimes. Her dissertation investigated the influences of inter-annual to decadal variations in climate on tree populations growing at altitudinal treeline in Patagonia. Her work in British Columbia includes projects west and east of the Coast Mountains. In coastal old-growth forests, she uses dendroecological techniques to analyse spatio-temporal attributes of canopy gap dynamics; information that is used to guide adaptive, ecosystem management. Her work in the dry forests of interior BC investigates fire-insect-climate interactions and disturbance regimes. She is a co-author of the Biogeography chapter in the forthcoming *Geography in America at the Dawn of the 21st Century* and has published papers in *Physical Geography*, *Northwest Science* and the *Canadian Journal of Forest Research*.

David Goldblum received his M.A. and Ph.D. at the University of Colorado, and was a lecturer at the University of Melbourne (Australia) from 1994-1997. He is currently an Assistant Professor at the University of Wisconsin-Whitewater where he's been since 1998. Current research sites are in the

South Pacific (New Caledonia) and Canada (Ontario). The former research focuses on the regeneration dynamics of several endangered conifers, and the work in Canada addresses the potential impacts of changing climate on the northern limit of sugar maple. He has been a member of the AAG and BSG since 1990.

Deanna H. McCay is an Assistant Professor in the Geography Department at Colgate University. Her research interests include invasive species, landscape ecology and human impacts on vegetation. She regularly teaches physical geography, biogeography and geographic information systems. Deanna received a PhD in geography in 1998 from the University of Georgia. She has recently published in *Ecosystems* and *Landscape Ecology*.

Steve Yool, an applied biogeographer and remote sensing scientist, earned the Ph.D. in Geography from the University of California, Santa Barbara (1985). Steve's research, teaching and service reflect personal and professional interests in the natural landscape. He believes that geography provides the framework within which to synthesize information about interactions between natural and cultural systems, and provides a useful and intellectually satisfying context to pursue his main interests in biogeography. Steve has closely-related interests in global change, space-time variability of natural vegetation communities at different scales, and the impacts of human or natural disturbances on Earth's biosphere. He has developed remote sensing and geographic information system (GIS) techniques as tools for inquiry into biogeographic patterns and processes. At a professional level, Steve's career objective is to advance spatial knowledge about our natural environment, to increase understanding of spatial patterns and processes in biological systems, which translates ultimately into information that can be useful for setting a policy agenda in natural resource management. Dr. Yool joined The University of Arizona Department of Geography and Regional Development in 1992 after a decade of research in government laboratories, and has pursued an active teaching and research agenda in Biogeography. He developed and teaches a lower division general education course Our Diverse Biosphere, and has 4 current Ph.D. students conducting research in ecosystem sustainability, fire disturbance and pattern analysis. Recent and forthcoming papers appear in *GeoCarto International*, *Aerobiologia*, *Photogrammetric Engineering & Remote Sensing*, *Computers and Geosciences*, and *Ecological Applications*.

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News

Formation and Inaugural Meeting of the International Biogeographical Society

January 4-8, 2003. Mark Your Calendars!

Following meetings in Santa Barbara over the past two years, a group of biogeographers from biology, geography, geology and paleontology have joined together to create the International Biogeographical Society. The Society aims to use various means to bring together biogeographers from these different areas and form a real interdisciplinary community. The Society is not intended to compete with biogeography activities within AAG, ESA or other organizations, but to be the one place where ALL biogeographers might join together to find commonalities in their research. The preliminary Board is listed below and displays the international and interdisciplinary nature of the Society:

- President - Jim Brown
- Vice-President for Conferences - Brett Riddle
- Vice-President for Public Affairs & Communication - Paul Giller
- Vice-President for Development & Awards - Larry Heaney
- Secretary - Dov Sax
- Treasurer - Glen MacDonald
- Director-at-large - Vicki Funk
- Director-at-large - Klaus Rohde

Other people that are well know to you, such as Mark Lomolino, Robert Whittaker and Julio Betancourt to name a few are also involved in the formation of the Society.

One of the main activities of the IBS will be to host focused biennial meetings. The first such meeting will be held Jan 4-8, 2003 at the Oasis in Mesquite. the program will focus on themes with a few invited speakers and contributed posters the themes for Mesquite will be:

- Dynamics of Species Diversity
- Biogeography of the Sea
- Phylogeography
- Conservation Biogeography
- Paleo-Biogeography

The Oasis in Mesquite is a really nice and relatively new spa-casino that is two hours drive northeast of Las Vegas and really close to the North Rim of the Grand Canyon, Zion National Park and Cedar Breaks National Park. If you've not seen this part of the country you'll be amazed.

I think it is really important for Geographers to be a big part of the IBS. I have put my money where my mouth is by taking up the job of Treasurer. I encourage all members of the BSG to consider becoming founding members of the ISB and to attend to founding meeting at Mesquite (your chance to make history). Details on the meeting and membership as this develops is posted at <http://www.esf.edu/biogeography/>. Please have a look at the site. I will provide updates on the IBS and the Meeting via the BSG Newsletter and the Listserver. Please contact me if you have questions (macdonal@geog.ucla.edu).

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News

Biogeographers in Los Angeles

BSG Business Meeting.

Plan on attending the social hour (or three) afterwards too!

Friday, March 22 Time: 7:00 p.m. - 8:00 p.m. Room: Santa Anita C

Field Trips

(For full descriptions and registration information, see the [Preliminary Program](#)).

Saturday, March 23

CHAPARRAL, PINES, AND PALMS: A BIOGEOGRAPHIC TRANSECT OF THE S. JACINTO MOUNTAINS NEAR PALM SPRINGS

\$75 (Box lunch included)

Organizers: Hartmut S. Walter, UCLA, Thomas W. Gillespie, UCLA

Two other field trips that may be of interest, both on Tuesday, March 19th:

9:00 am – 5:00 pm

GEOGRAPHY OF THE SANTA MONICA MOUNTAINS. \$40 (Meals not included, please bring spending money)

Organizer: William A. Selby, Santa Monica College. Capacity: 40

8:00 am – 6:00 pm

CONSERVATION OF NATURAL LANDS AND OPEN SPACE ACROSS SOUTHERN CALIFORNIA. \$57.50 (Meals not included, please bring spending money). Sponsors: Coachella Valley Association of Governments and Sustainable Cities Program, University of Southern California
Organizers: Jim Sullivan, Coachella Valley Association of Governments, Stephanie Pincetl, University of Southern California, Andy Jonas, University of Hull, Michael Kellner, Agua Caliente Band of Cahuilla Indians, Tom Scott, University of California. Capacity: 40

BSG-Sponsored Paper and Poster Sessions

(For those of you who may not have received it, this is the slightly modified text of an e-mail message that Ken Young sent to the BSG mailing list on 1/15/02. As Ken notes, the AAG's new interactive search interface makes listing all sessions and presentations superfluous, so I won't reproduce them here.)

For the 2002 annual AAG meeting in Los Angeles, CA, the BSG is officially sponsoring...19 paper sessions. These are listed below to help in your planning. The official sponsorship helps to reduce simultaneous sessions of interest to the membership. It also is a nice way to promote sessions that are sponsored by more than one specialty group, thus fostering integration and interaction.

Please note that there are many other sessions of interest to biogeographers. Because the program for the meeting can now be [searched interactively](#), you can go to "Browse Topic Areas" and put in "biogeography", giving you the complete list of anybody doing a paper on a topic related to biogeography. The list is too long to repeat here, but use the web site and check out all the research being done.

I would like to thank in name of the BSG all the people who did so much work in organization for the meeting this year. See you in LA.

---Ken Young, president, BSG.

Illustrated Paper Session:

4216. Forest Dynamics and Ecological Restoration

Date: Wednesday, March 20 Time: 10:00 a.m. - 11:40 a.m.

Room: San Pedro

Organizer: Susy Svatek Ziegler, University of Minnesota. Chair: John A. Kupfer, University of Arizona.

Paper Sessions:

4111. Positions in dendrochronology and dendroclimatology: session one.

Date: Wednesday, March 20 Time: 8:00 a.m. - 9:40 a.m.

Room: Palos Verdes

Organizers: Mary Gagen, University of Wales Swansea; Henri D. Grissino-mayer, University of Tennessee; James H. Speer, Indiana State University. Chairs: Henri D. Grissino-mayer, University of Tennessee; Kurt F. Kipfmüller, The University of Arizona Laboratory of Tree-Ring Research.

4113. Grassland Biogeography

Date: Wednesday, March 20 Time: 8:00 a.m. - 9:40 a.m.

Room: San Gabriel A

Organizer: Catherine H. Yansa, Dept. of Geography, University of Wisconsin-Madison.

4211. Positions in dendrochronology and dendroclimatology: session two

Date: Wednesday, March 20 Time: 10:00 a.m. - 11:40 a.m.

Room: Palos Verdes

Organizers: Mary Gagen, University of Wales Swansea; Kurt F. Kipfmüller, The University of Arizona Laboratory of Tree-Ring Research; James H. Speer, Indiana State University. Chair: James H. Speer, Indiana State University.

4213. Paleorecords of Changing Climate Variability (I)

Date: Wednesday, March 20 Time: 10:00 a.m. - 11:40 a.m.

Room: San Gabriel A

Organizer: Franco Biondi, Department of Geography, University of Nevada-Reno.

4411. Positions in dendroecology

Date: Wednesday, March 20 Time: 1:00 p.m. - 2:40 p.m.

Room: Palos Verdes

Organizers: Mary Gagen, University of Wales Swansea; Kurt F. Kipfmüller, The University of Arizona Laboratory of Tree-Ring Research; Henri D. Grissino-mayer, University of Tennessee. Chairs: Kurt F. Kipfmüller, The University of Arizona Laboratory of Tree-Ring Research; Henri D. Grissino-mayer, University of Tennessee.

4415. Hurricanes I: Paleotempestology and Biophysical Processes

Date: Wednesday, March 20 Time: 1:00 p.m. - 2:40 p.m.

Room: San Gabriel C

Organizer: Kam-biu Liu, Louisiana State University. Chair: Kam-biu Liu, Louisiana State University.

5622. Genetic Research in Biogeography

Date: Thursday, March 21 Time: 5:00 p.m. - 6:40 p.m.

Room: Santa Barbara C

Organizers: Lesley S. Rigg, Northern Illinois University, Department of Geography; Mark A. Blumler,

Dept. of Geography, SUNY-Binghamton. Chair: Lesley S. Rigg, Northern Illinois University, Department of Geography.

6113. Paleograssland Biogeography

Date: Friday, March 22 Time: 8:00 a.m. - 9:40 a.m.

Room: San Gabriel A

Organizer: Catherine H. Yansa, Dept. of Geography, University of Wisconsin-Madison.

6131. Monitoring Sudden Oak Death in California

Date: Friday, March 22 Time: 8:00 a.m. - 9:40 a.m.

Room: Marriott - 305

Organizers: Nina M. Kelly, UC Berkeley; Ross K. Meentemeyer, Sonoma State University. Chair: Nina M. Kelly, UC Berkeley.

6206. The Fire Session

Date: Friday, March 22 Time: 10:00 a.m. - 11:40 a.m.

Room: Avalon

Organizers: Stephen R. Yool, The University of Arizona; Michael J. Medler, Western Washington University. Chairs: Stephen R. Yool, The University of Arizona; Michael J. Medler, Western Washington University.

6213. Paleorecords of Changing Climate Variability (II)

Date: Friday, March 22 Time: 10:00 a.m. - 11:40 a.m.

Room: San Gabriel A

Organizer: Franco Biondi, Department of Geography, University of Nevada-Reno.

6503. Vegetation Change in Forests through Time and Disturbance/Fire

Date: Friday, March 22 Time: 3:00 p.m. - 4:40 p.m.

Room: Sacramento

Organizer: Barbara A. Holzman, San Francisco State University.

Chair: Barbara A. Holzman, San Francisco State University.

6526. Ecological response to sub-millennial variations in climate as evidenced from long-term records I

Date: Friday, March 22 Time: 3:00 p.m. - 4:40 p.m.

Room: La Cienega

Organizers: Andrea Brunelle-Daines, University of Oregon; Colin J. Long, University of Oregon; Mitchell J. Power, University of Oregon. Chairs: Andrea Brunelle-Daines, University of Oregon; Colin J. Long, University of Oregon.

6610. Presettlement Forest Research

Date: Friday, March 22 Time: 5:00 p.m. - 6:40 p.m.

Room: Santa Anita C

Organizers: Yi-Chen Wang, State University of New York at Buffalo; Chris Larsen, Department of Geography, SUNY Buffalo. Chair: Chris Larsen, Department of Geography, SUNY Buffalo.

6626. Ecological response to sub-millennial variations in climate as evidenced from long-term records II

Date: Friday, March 22 Time: 5:00 p.m. - 6:40 p.m.

Room: La Cienega

Organizers: Andrea Brunelle-Daines, University of Oregon; Colin J. Long, University of Oregon; Mitchell J. Power, University of Oregon. Chair: Thomas A. Minckley, Department of Geography,

University of Oregon.

7116. Changing Forests, Changing Landscapes: Cultural Ecology and Biogeography in Latin America

Date: Saturday, March 23 Time: 8:00 a.m. - 9:40 a.m.

Room: San Pedro

Organizers: Martha A. Works, Portland State University; Keith S. Hadley, Portland State University.

Chair: Keith S. Hadley, Portland State University.

7239. Surface-Atmosphere Interactions I (Sponsored by Climate Specialty Group, Biogeography Specialty Group, Remote Sensing Specialty Group).

Date: Saturday, March 23 Time: 10:00 a.m. - 11:40 a.m.

Room: Marriott Grande Ballroom - Salon 2

Organizers: Hans Peter Schmid, Indiana University; Sue Grimmond, Indiana University; Mark D. Schwartz, University of Wisconsin-Milwaukee.

7432. Human-Environment Interaction in Arid Lands

Date: Saturday, March 23 Time: 2:00 p.m. - 3:40 p.m.

Room: Marriott - 306

Organizer: Michael J. Starr, Southern Illinois University Edwardsville.

Chair: Michael J. Starr, Southern Illinois University Edwardsville.

7439. Surface-Atmosphere Interactions II

Date: Saturday, March 23 Time: 2:00 p.m. - 3:40 p.m.

Room: Marriott Grande Ballroom - Salon 2

Organizers: Hans Peter Schmid, Indiana University; Sue Grimmond, Indiana University; Mark D. Schwartz, University of Wisconsin-Milwaukee.

7539. Surface-Atmosphere Interactions III

Date: Saturday, March 23 Time: 4:00 p.m. - 5:40 p.m.

Room: Marriott Grande Ballroom - Salon 2

Organizers: Hans Peter Schmid, Indiana University; Sue Grimmond, Indiana University; Mark D. Schwartz, University of Wisconsin-Milwaukee.

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Biogeography-related amusements in LA

Visit LA and see the world! - Botanically speaking

The Los Angeles area, due in large part to its mild climate, is blessed with a number of really excellent botanical gardens that allow you to see plants ranging from tropical rainforest species to the most exotic desert xerophytes in very beautiful and peaceful settings. The biggest and most spectacular is the Huntington Library and Botanical Gardens located in San Marino near Pasadena. It is a huge estate with a simply magnificent gardens that covers many, many acres. The Huntington Library and Museum is a fantastic Italianate Mansion that houses amongst other things the famous Blue Boy painting. No botanical trip here is completed without a visit! Other very good gardens include the Los Angeles Arboretum, the collections scattered throughout the LA Zoo in Griffith Park and the Mildred Mathias Botanical Gardens on the UCLA campus. The Shermin Gardens is right on the coast and features plants from the Pacific Southwest.

To see native California vegetation you have many options: For coastal plant communities (including chaparral) one can hike the trails of Griffith Park or for a real treat venture up the Pacific Coast Highway to Leo Carrillo State Park and see tidal pools (plus the site where literally hundreds of films, TV shows and commercials have been filmed) and then hike inland to enjoy the flora typical of the massive Santa Monica National Recreation Area. Sandstone Peak is the highest point at just under 4000 feet and is an easy hike. If you want to see high alpine vegetation (and need a dose of winter snow) you can drive up to Mount Baldy Ski Area. The summit is over 10,000 (although you cannot drive that high). If you do venture into the high mountains - remember they get good amounts of snow and chains are required if it is snowing - check the weather first. For desert vegetation - the best place to visit in Joshua Tree National Park - simply fantastic.

There is enough biogeography in Southern California to last a lifetime -enjoy a sample or two while you are here!

--Glen MacDonald

Web links to some highlights:

[Huntington Library and Botanical Gardens](#) (absolutely fantastic huge gardens-just beautiful, plus a wonderful art museum in a huge mansion-like building), the [UCLA Mathais Botanical Gardens](#) (lovely gardens right on UCLA campus). Also the [Arboretum of Los Angeles County](#), and the [Sherman Library and Gardens](#)

For slightly wilder fare, try [Griffith Park](#) (one of largest urban wildlands in US - includes the [LA Zoo](#)). Further afield are the [Santa Monica Mountains National Recreation Area](#) (national park area -biodiversity hotspot), [Mount Baldy](#) (high alpine forest) or [Joshua Tree National Park](#) (best desert area just beautiful).

For the ocean-inclined: [Leo Carrillo Sate Beach](#) (tidal pools and hikes inland to Calif. coastal plant communities), the [Long Beach Aquarium of the Pacific](#), the [Cabrillo Marine Aquarium](#), and the [Ocean Discovery Center](#).

And finally, don't forget the [Page Museum at the La Brea Tar Pits](#) (Quaternary paleontology and ecology to die for--thousands did) and the [Natural History Museum of Los Angeles County](#).

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News

Recent BSG Member Publications.

Beaty, R. M., and A. H. Taylor. 2001. Spatial and temporal variation of fire regimes in a mixed conifer forest landscape, southern Cascades, California, USA. *Journal of Biogeography* 28: 955-966.

Butler, David R., 2001. Geomorphic process-disturbance corridors: a variation on a principle of landscape ecology. *Progress in Physical Geography* 25(2), 237-248.

Butler, David R., 2001. Zoogeomorphology. In: *Oxford Companion to the Earth* (P. Hancock, ed.), Oxford University Press, Oxford, England, 1117-1118.

Dixon, Richard W., David R. Butler, and Kate McAfee, 2001. The use of remotely sensed imagery as a pedagogic tool for natural hazards education. *Geocarto International* 16(3), 71-74.

Baer, Leonard D., and David R. Butler, 2000. Space-time modeling of grizzly bears. *The Geographical Review* 90(2), 206-221.

Malanson, George P., Ningchuan Xiao, Kathryn Alftine, Matthew Bekker, David R. Butler, Daniel G. Brown, David M. Cairns, Daniel Fagre, and Stephen J. Walsh, 2000. Abiotic and biotic controls of spatial pattern at alpine treeline. *Proceedings, 4th International Conference on Integrating GIS and Environmental Modeling (GIS/EM4): Problems, Prospects and Research Needs*, Banff, Alberta, 11 pages on CD ROM.

Rodríguez, L. O. and K. R. Young. 2000. Biological diversity of Peru: determining priority areas for conservation. *Ambio* 29: 329-337.

Speer, J.H., Swetnam, T.W., Wickman, B.E., and Youngblood, A. 2001. Changes in pandora moth outbreak dynamics during the past 622 years. *Ecology* 82(3): 679-697.

Young, K. R. and B. León. 2000. Biodiversity conservation in Peru's eastern montane forests. *Mountain Research and Development* 20: 208-211.

Young, K. R. and P. L. Keating. 2001. Remnant forests of Volcán Cotacachi, northern Ecuador. *Arctic, Antarctic, and Alpine Research* 33: 165-172.

Young, K.R. and B. León. 2001. Perú. Pp. 549-580 in M. Kappelle & A. D. Brown (eds.). *Bosques Nublados del Neotrópico*. INBio, Heredia, Costa Rica.

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Research Notes

BSG Student Research Award Winners

Karen Eisenhart, University of Colorado

I used the Student Research Award that I received from the Biogeography Specialty Group to purchase field equipment for data collection last summer. I was working in the Black Canyon of the Gunnison National Park in Colorado, where the outer canyon is covered with beautiful, old-growth pinyon-juniper woodlands. Preliminary ring counts suggest that the oldest woodland stands are more than 700 years old!

This work is just one phase of my dissertation research. The working title of my dissertation proposal is "Historic Range of Variability and Stand Development in Pinyon Pine Woodlands of Western Colorado." I am also collecting tree-ring data from the Uncompahgre Plateau, which is located to the west of the Black Canyon in Colorado. However, the oldest stands on the Uncompahgre Plateau appear to be younger than some of those found in the Canyon (400 years as opposed to 600-700 years).

The age of stands in the Canyon, in combination with the semiarid climate, makes the Black Canyon an

excellent source of dead wood, some of which cross-dates to the 11th century. Many of the samples from dead trees were collected from wilderness areas within the National Park or from Wilderness Research Areas managed by the Bureau of Land Management. Because of wilderness designation, all of the samples from fallen trees were collected with handsaws. The research award was put towards the purchase of increment borers and bowsaw blades.

Matthew Beaty, The Pennsylvania State University

My dissertation, *Multiscale Analysis of Disturbance and Vegetation Dynamics in the Central Sierra Nevada*, focuses on developing and integrating high-resolution and low-resolution data sources to quantify relationships between environmental heterogeneity, disturbance regimes, climate, and vegetation change in the mixed conifer forests of the Lake Tahoe Basin in the central Sierra Nevada Mountains. This project uses multiple spatial scales (from stand to landscape) and temporal scales (from decades to millennia) of analysis and addresses three main questions.

- How are landscape level patterns of vegetation and vegetation dynamics influenced by topography, climate, disturbance, and land-use change? (I am addressing this question with historical aerial photography (1939-1998), image processing and geographic information systems (GIS) linked with a spatially explicit ca. 400-year record of fire disturbance and vegetation response reconstructed from sampled fire scarred trees and forest stands.)
- How does forest stand level composition, structure, and dynamics vary across environmental and disturbance gradients? (This part of my dissertation uses detailed stem mapping, stand structural analysis and site specific disturbance histories.)
- What is the long-term relationship between fire regimes and vegetation dynamics and how are these changes related to climatic variability? (Long term changes in fire regimes and vegetation are being reconstructed with a high temporal resolution fossil pollen and charcoal records from a sediment core.)

Last summer I completed my field work and am working on processing and analyzing the data. Fortunately everything is coming together nicely and I should be able to address the things I described above. I am using the BSG Research Grant to support the pollen and charcoal component of my work by purchasing lab supplies and Lead 210 dates for the core. I have completed the other requirements of the PhD program (currently ABD) and expect to graduate Spring 2003.

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Field Notes

The Upland Pine Forests of Nicaragua

Regarding your editor's [Field Note](#) in the last edition of *The Biogeographer*, Bill Denevan wrote to point out that "the situation on the volcano at El Sauce...is different of course from that of the main pine uplands in terms of geology and soils. The pines in Nueva Segovia, Matagalpa, and Jinotega do occur both on and off ridge tops." He added that the only ecological research on the forests that he knows of is Bill Taylor's 1963 paper "An Outline of the Vegetation of Nicaragua," in *Journal of Ecology* (51: 27-54). Taylor's interpretation of the pine forests as "disclimax" communities is consistent with Denevan's interpretation of human agency.

Bill concluded his letter by agreeing that "It would be great if someone...would do a careful study of the

upland pines."

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Internet Resources

AAAS Evolution Resources.

<http://www.aaas.org/spp/dser/evolution/>

The AAAS provides these "accessible presentations of contemporary evolutionary theory as well as scientific responses to so-called criticisms of the theory." Useful materials suitable for undergraduate biogeography courses, or if you find yourself having to defend Darwin in your local schools (as your editor did last summer).

Abstracts (1987-1997) and Key Papers (1987-1992) from *Landscape Ecology*

<http://landscape.forest.wisc.edu/LandscapeEcology/>

Pdf versions of papers that the editors have identified as being especially important in the development of American landscape ecology.

A Climate Change Atlas for 80 Forest Tree Species of the Eastern United States

<http://www.fs.fed.us/ne/delaware/atlas/index.html>

Fantastic resource. Includes "distribution maps and tables for different climate change scenarios, life-history and disturbance attributes, ecological attributes, forest type maps and sorted list of species importance values by state/county for different climate change scenarios, and more for 80 species in the eastern half of the United States (east of the 100th meridian)"

Biodiversity and WORLDMAP.

<http://www.nhm.ac.uk/science/projects/worldmap/>

From the Biogeography & Conservation Lab at the Natural History Museum (NHM) in London. WORLDMAP is a free GIS system for "exploring geographical patterns in diversity, rarity and conservation priorities from large biological datasets."

Biomes of North America Lecture Notes

<http://www.inform.umd.edu/PBIO/biome/lec35.html>

Nicely organized set of lecture notes by James L. Reveal (Professor, Emeritus, Norton-Brown Herbarium, University of Maryland). Many spectacular images and useful maps.

The Scout Report Special Reports

Good news! As part of the (National Science, Technology, Engineering, and Mathematics Education Digital Library) project, the [Internet Scout Report](#) once again has reports dedicated specifically to the life and physical sciences (a free subscription will deliver them--but no junk e-mail--to your mail box every other week). Below are some gleanings from the first two editions.

Rare, Endangered, and Vulnerable Plants of the Republic of Georgia [.pdf]

<http://www.mobot.org/MOBOT/Research/georgia/welcome.shtml>

The Republic of Georgia is a biodiversity hot spot. This site hosts a list of 1200 at-risk species together with information on habitat and geographic distribution.

Moths of North America

<http://www.npwrc.usgs.gov/resource/distr/lepid/moths/mothsusa.htm>

State distribution maps of many moth species, county checklists and more.

The Convention on Biological Diversity Database and New Zealand's Agricultural Biodiversity
<http://www.maf.govt.nz/mafnet/publications/cbdsearch.htm>

GIS Projects From the Royal Botanic Gardens, Kew

<http://www.rbgekew.org.uk/gis/index.html>

Potentially useful, especially if they add more projects. Some ArView shapefile to download.

Aquatic Ecosystems and Global Climate Change: Potential Impacts on Inland Freshwater and Coastal Wetland Ecosystems in the United States [.pdf]

<http://www.pewclimate.org/projects/aquatic.cfm>

The latest report by the Pew Center for Global Climate Change (seventh in a series of on potential climate change impacts.

CSIRO Land and Water

<http://www.clw.csiro.au/>

Good source of information (and many photos) on Australia.

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Editor's Note

Thanks again to everybody who sent comments on the last issue, and especially those who provided material for this one. Keep sending news items and member publications. (Format the latter as you would for the *Annals*). If you previously sent a message with your recent publications and never saw them in the newsletter, let me know--I've suffered occasional e-mail account deletions and may have lost your message (I now back up the important stuff!).

Also, drop a line about your research and field work for the **Research Notes** and **Field Notes** features (photos welcome), or send a syllabus or URL for your course web site for **Course Notes** (notice there isn't one in this issue). Guest columns, articles, book reviews, or anything else you think might be of interest to the BSG membership are also welcome. Don't be shy.

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