

NREL NEWS NOTES

NATURAL RESOURCE ECOLOGY LABORATORY
Colorado State University

No. 5 April 1994

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Announcements

Indy Burke will be visiting the Institute for Ecosystem Studies at Millbrook, NY, on Apr. 11-15 as the Visiting Distinguished Ecologist. She will present an informal seminar to discuss differences in aboveground and belowground disturbances in grassland ecosystems and a formal seminar titled "Effects of Grazing and Cultivation on Grassland Ecosystems."

Carol Simmons co-authored a recently released report titled "Agricultural Experiment Stations and Global Climate Change." This report was written while Carol served on the Ad Hoc Subcommittee on Weather Issues over the past 2 years for the Experiment Station Committee on Organization and Policy.

Diana Freckman has been named Chair of the National Research Council Committee to Review and Evaluate the U.S. Department of the Interior's Biomonitoring of Environmental Status and Trends (BEST) Program. They will meet May 19-20, 1994.

Indy Burke has accepted a position on the NSF Panel to review Synthesis Centers. The panel will review preproposals in April, full proposals in August, and will do site reviews in September.

Diana Freckman has been named a Member, Advisory Planning Board for a National Biodiversity Information Center, chaired by Tom Lovejoy. Diana attended a meeting March 20-22 at the Smithsonian in Washington, DC.

The *new* CSU Visitors Center is now open. It is located at the southwest corner of Pitkin and College. Their purpose is to provide a multitude of information and directions to all visitors at CSU. The Center will have an extensive collection of University-related brochures and maps, as well as complimentary coffee and a telephone for local phone calls. They can also provide Guest Parking Permits for your visitors, so please direct your visitors to the Center for these types of service.

Meetings

On behalf of President Clinton and Vice-President Gore, Diana Freckman and David Schimel were invited to participate in a National Forum on Environment and Natural Resource RD, organized by the Office of Science and Technology Policy in cooperation with the National Academy of Sciences and the National Academy of Engineering, which took place in Washington, DC, from March 2 -10, 1994. The goal of this Forum was to provide the National Science and Technology Council with guidance that can be used both in the development of near-term priorities and in the establishment of a long-term National RD Strategy for Environment and Natural Resources. Principal issues addressed were research in the areas of: Global Change Biodiversity and Ecosystem Management Resource Use and Management Water Resources, Coastal and Marine Environments Air quality Toxic Substances and Hazardous Solid Waste and Natural Disasters.

Jeff Welker presented two invited seminars this month. March 24 at CPER -LTER titled "Tundra and grassland responses to environmental manipulations of climate" and March 2 at the Institute of Arctic and Alpine Research, Univ. Colorado, Boulder titled "Scandinavian arctic ecosystem responses to simulated changes in climate."

Bill Baron was an invited speaker to the Institute for Ecosystem Studies in Millbrook, NY, March 1 -19. During this time she gave two seminars and met with most members of the IES.

Ted Elliott and Keith Paustian were invited participants in an international workshop entitled "Management of the Soil Biota in Sustainable Farming Systems" which was held in Adelaide, Australia, March 15-17. A wide range of topics on ecology and management of both introduced organisms and existing soil biota were covered. Proceedings have been published and copies of papers by both Keith and Ted are available from the NREL Publications Office.

Dennis Ojima participated on a Review Panel for CSRS in Washington, DC, March 26-1.

Bill Baron was invited to a workshop on landscape values and assessment, sponsored by EPA, Environmental Monitoring and Assessment Program, March 2 -10. The goal of this workshop was to formulate a conceptual model linking social values, indicators of these values, and the main processes determining landscape change.

Ericha Courtright met with Dr. Kelly Thomas, Kansas State University, Feb. 2 -12, to continue her thesis work on Antarctic nematode species distributions using molecular techniques. Ericha is Diana Freckman's graduate student.

Bill Parton, Deb Coffin, Bill Lauenroth and Jose Paruelo are in Apeldoorn, The Netherlands, to attend an IGBP workshop on "Application of Forest Stand Models to Evaluate Global Change Issues" from March 2 to April 2.

Mike Coughenour presented a paper which was co-authored by Dexing Chen titled "Linking ecophysiology and ecosystem process models to assess grassland responses to atmospheric change" and participated in the IPCC Vulnerability Studies Workshop at Raleigh, NC, on March 1 -12. Jim Dettinger chaired the Steering Committee and Diana Freckman was a discussion leader at the workshop.

As a member of the Advisory Committee for the Environmental Sciences Division, Oak Ridge National Laboratory, Diana Freckman attended the March 1 -15 meeting in Oak Ridge, TN.

Anthony Galvin presented an invited paper on the Tanzanian project titled "Ecology and Economy of Pastoral Nutrition in Ngorongoro Conservation Area" at the Environmental Studies Seminar Series, U. of Nebraska, Lincoln, on March 9-10.

Diana Freckman and Bob Niles attended the Bodega Field Conference Second Annual Workshop, "Spatial analyses of GIS data: a case study using a California prairie community." The workshop was held March 25-2 at Bodega Marine Laboratory, Bodega Bay, CA.

Laura Powers attended the McMurdo Dry Valley LTER meeting in Boulder, March 29-0.

□ **visitors**

Tom Hobbs will host Dr. Andrew Illius from the Institute of Cell, Animal, and Population Biology, Univ. of Edinburgh, Scotland. Dr. Illius will be here April 24-2.

Dr. Per Lundberg, Department of Wildlife Ecology, Swedish Agricultural University, Umea, Sweden will be in Fort Collins May 5-9. He will be hosted by ohn Gross.

en Hodgkinson will be visiting April 11 -1 to discuss research with M. Coughenour, B. Lauenroth, I. Burke, . Detling and B. Parton. Dr. Hodgkinson is co -leader of the National Rangeland Program of CSIRO, Division of Wildlife and Ecology, Canberra, Australia. He is interested in RD in the area of integration of production and conservation goals, adaptive management research as an approach, and plant-animal interface research. He is also interested in tactical grazing systems based on key species responses in the context of landscape ecology. If you would like to visit with Dr. Hodgkinson, he will be available about 2- 5 pm on the 11th, all day on the 12th, and early on the 1th. Please contact Mike Coughenour at 1 -552.

Carol Simmons sponsored a visit with Pete Commanor, Stan Coloff, Linda Petit Waldner and Al Riebau of the National Biological Survey on March 4 at NREL to discuss project activities.

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David Thomas is sponsored by and working on the CENTURY model with Becky Mceown, Bill Parton and Dennis Ojima. David is a recent graduate of the CSU Math Department where he studied math and actuarial science. He is helping with the testing and maintenance of CENTURY Version 4.0. In the fall he plans to return to school to pursue a graduate degree in Statistics.

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Tom Hobbs was awarded 6 in funds for Research in Undergraduate Education from the NSF Ecology Program.

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By Brown submitted a progress report titled "Testing Models of Plant Canopy Structure and Gas Exchange" for renewal of a NASA Global Change Fellowship on March 24. The object of this study is to test the applicability of simple models of plant-mediated, land surface-atmosphere gas exchange in complex vegetation canopies.

Tom Stohlgren and R. Bachand submitted "The National Biological Survey Global Change Research Program in the Colorado Rockies Biogeographical Area: Second Year Report (199 -1994). PIs include: . Baron, T.G.F. ittel, R. Pielke, D. Schimel, D. Binkley and others.

Tom Stohlgren and A.C. Lizarrage submitted "The National Biological Survey Global Change Research Program in the Central Grasslands Biogeographical Area: Second Year Report (199 - 1994). PIs include: D. Ojima, . Detling and others.

Proposals Submitted

Tom Stohlgren, W.L. Baker, F. Singer, D. Binkley, and M. Coughenour submitted a proposal titled "Landscape-Gap Analysis: A Complementary Geographic Approach for Land Managers" to the National Biological Survey.

Carol Simmons submitted a proposal for the development of a Research Issues Brief, titled "Detecting Long-Term Trends in Precipitation Chemistry Data for the United States: Effects of Choice of Statistical Method" to CSU's Environment and Natural Resources Policy Institute.

Tom Hobbs, John Gross, R. Miller, D. Malkinson, R.B. Gill and D.L. Schrupp submitted "SCoP: A System for Conservation Planning" to the Colorado Division of Wildlife and the Colorado Department of Natural Resources.

John Gross and Tom Hobbs submitted "Maintaining Vertebrate Diversity in Human -Dominated Landscapes" to the Natural Resources Policy Institute in the CFNR.

David Swift submitted "SANREM CRSP Annual Workplan - NREL Modeling Activity and Related Topics" to U of GA/USAID.

Dennis Ojima submitted "Potential Climate Change and CO2 Impact on Forage Production" to Industrial Economics, Inc.

Keith Paustian submitted "Analysis of Production, N Dynamics and Profitability in Complex Cropping Systems" to USDA/NRI/CGP, Agricultural Systems Panel.

Tom Stohlgren and Dave Swift submitted "Support for Global Change Research Program" to U.S. National Park Service.

Mike Coughenour submitted "Landscape-Sensitive Indicators of Grassland Ecosystem Responses to Grazing and Climate" to EPA.

J.M. Welker, D.W. Valentine, E.F. Kelly, D.S. Schimel, W. Parton, E.T. Elliott, A.C. Delany, T.O. Holtzer, B.A. Wunder, and I.C. Burke submitted "Acquisition of an Isotope Facility to Study Atmosphere-Ecosystem Interactions" to NSF. Collaborators include: D.S. Ojima, D.W. Freckman, E.A. Holland, A.R. Townsend, John Gross, D.E. Johnson, Keith Paustian, John Detling, A.R. Mosier, and T.B. Meece.

Dave Bigelow submitted a continuation proposal titled "Quality Assurance Support for the National Atmospheric Deposition Program/National Trends Network Monitoring Program: 1990 -1996" to US EPA.

Bill Parton and Dennis Ojima submitted a continuation proposal titled "Application of Century Model to Evaluate the Ecological Effects of Climate Change" to USDA/FS.

Bill Parton submitted a continuation proposal titled "Testing Models of Plant Canopy Structure and Gas Exchange" to NASA.

Bill Lauenroth, Bill Parton and Deb Coffin submitted a continuation proposal "Coupling Ecosystem Processes and Vegetation Pattern Across Environmental Gradients" to NSF.

Deb Coffin, Indy Burke and Bill Lauenroth submitted a supplement proposal to NSF titled "Long-Term Ecological Research Program: Shortgrass Steppe."

Bill Hunt submitted a revised proposal titled "Analysis of Changes in Soil Carbon Balance" to USDA/ARS.

Memberships

Elliott, E.T. 1994. The potential use of soil biotic activity as an indicator of productivity, sustainability and pollution. Pages 250-256 in C.E. Pankhurst, B.M. Doube, V.V.S.R. Gupta and P.R. Grace (eds.) Soil Biota: Management in Sustainable Farming Systems. CSIRO, East Melbourne, Victoria, Australia.

Paustian, . 1994. Modelling soil biology and biochemical processes for sustainable agriculture research. Pages 12 - 19 in C.E. Pankhurst, B.M. Doube, V.V.S.R. Gupta and P.R. Grace (eds.) Soil Biota: Management in Sustainable Farming Systems. CSIRO, East Melbourne, Victoria, Australia.

Stohlgren, T.. 199. Intra-specific competition (crowding) of giant sequoias (*Sequoiadendron giganteum*). Forest Ecology and Management 59:12 -14.

Stohlgren, T., . Baron and T.G.F. ittel. 1994. Understanding coupled climatic, hydrological, and ecosystem responses to global climate change in the Colorado Rockies Biogeographical Area. In: Proceedings of the George Wright Society's Conference on Science and Resource Management in National Parks, Jackson, FL, Nov. 1 - 1, 1992.

Welker, .M., P.A. Wookey, A.N. Parson, M.C. Press, T.V. Callaghan and .A. Lee. 199. Leaf carbon isotope discrimination and vegetative responses of *Dryas octopetala* to temperature and water manipulations in a high arctic polar semi-desert. Oecologia 95:46 -469.

Personals

Jack and Betty Lou Hautaluoma will travel to San Diego, CA, April 2, to attend the official presentation of "The Outstanding Lawyer Award" to their daughter,odi, in recognition of an excellent job done on her first court trial.

Connor Stohlgren (age 11 /4, 6th grade) was awarded "Best of Fair" at the Timnath Elementary School 1994 Science Fair. His seven week project entitled "Will the Greenhouse Affect Grass Species" involved types of grasses, two watering regimes, and 24 jam jars (four replicates each). His father, Tom, who never won a prize for his research, just stayed out of the young scientist's way. Connor competes in the PR-1 District Science Fair next week.

Thought for the Day

Ecosystem management without ecosystem science is like a 6- year-old Little League team without a coach. Let's Play Ball

The NREL NEWS NOTES will be published the first week of each month. Please give your news items to Kay by the last Monday of each month.

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