

NREL NEWS NOTES

NATURAL RESOURCE ECOLOGY LABORATORY
Colorado State University

No. 14 News coverage for August, September & October 1995

- [Announcements](#)
- [Graduate Student News](#)
- [Grants Funded](#)
- [Manuscripts Published](#)
- [Meetings](#)
- [Open Positions](#)
- [Proposals Submitted](#)
- [NREL Seminars](#)
- [Visitors](#)
- [Previous NREL News Notes](#)

Scientific Societies

Society of Nematologists

Diana Freckman was elected a Fellow of the Society of Nematologists and attended the awards ceremony in Little Rock, AR in August.

Ecological Society of America

Alan Covich has been named Chair of the Ecological Society of America, Special Committee on Membership. Some of the questions and issues they will be addressing are: (1) Can or should anything be done about the rather high (ca. 10%) annual turnover in membership? (2) Many people who are members of the Society do not subscribe to any of our subject matter journals. Who are these people and why have they become members even if they do not take one of our journals? What do they tell us about the current meaning of membership in ESA? (3) What incentives, if any, should be offered in the future to induce people to become/remain members of ESA? Should specific efforts be made to encourage types of people who are not now members to join ESA? How large is the pool of potential members?

National Research Council

Diana Freckman was appointed to the National Research Council Board on Environmental Studies and Toxicology (BEST). Her appointment is effective August 1, 1995 to June 30, 1998.

Diana Freckman, Chair, National Research Council Committee on the Valuation of Biodiversity: Ecosystem Management, led a Workshop on Issues in the Valuation of Biodiversity, at the National Academy of Sciences, Washington, DC, in early October. The NRC Committee includes ecologists and economists. They are: Carl Bock, Univ. Colo.;

Herman Daly, Univ. Maryland; Tom Dietz, George Mason Univ.; Perry Hagenstein, Resource Issues, Inc., Mass.; Sharon Haines, Int'l Paper, Inc., Georgia; Tony Krzysik, U.S. Army-Const. Eng. Res., Illinois; Robert Paine, Univ. Washington; Stuart Pimm, Univ. Tenn.; Alan Randall, Ohio State; Walt Reid, World Resources Inst., Washington, DC; Mark Sagoff, Univ. Maryland; Bill Schulze, Cornell

Univ.; Rebecca Sharitz, Savannah River Ecol. Lab, Georgia; Dale Toweill, Idaho Dept. Fish Game; Peter Vitousek, Stanford Univ.; and David Wake, Univ. California, Berkeley.

Bill Parton has been reappointed as a member of the NRC Committee on Geographical and Environmental Data, chaired by Francis Bretherson (Univ. Wisconsin, Madison).

North American Benthological Society

Alan Covich has been elected President of the North American Benthological Society.

MacArthur Foundation Fellowships

Pamela A. Matson, an environmental scientist at the University of California, Berkeley (a member of the NREL Scientific Advisory Committee) was a recipient of this year's John D. And Catherine T. MacArthur Foundation Fellowship (popularly known as the "genius awards"). Congratulations

announcements

Diana W. Freckman, Director, has announced changes in the NREL administrative structure. The Associate Director position for NREL will be shared by Dan Binkley and current Associate Director and Research Scientist Ted Elliott. Dan is a faculty member of Forest Sciences and the Director of the Graduate Degree Program in Ecology (GDPE), and he will provide coordination and linkages for NREL, primarily in education. This will officially be effective at the end of academic year 1995/9.

New NREL Member

NREL is please to welcome Dr. Richard Flagler as a new member of the NREL Senior Staff. Richard is the NADP/NTN Program Coordinator, as well as Co-PI on the USEPA grant, "Assessing the Response of Three Pine Species to Ozone Utilizing the Antioxidants Ethylenediurea and Sodium Erythorbate." His research interests include physiological responses of plant species to drought and ozone.

Dave Schimel, Gene Kelly (Department of Soil and Crop Science), Jeff Welker, Dave Valentine, Bill Parton, T. Delany (NCAR), Bruce Wunder (Biology Department), T. Holtzer (Department of Entomology), Indy Burke and Ted Elliott are proud to announce that the long anticipated installation of the CSU Stable Isotope Facility supported by NSF, the CSU Office of the Vice-President, the Director of the Agriculture Experiment Station, the Dean of the College of Natural Resources, the College of Agriculture and the College of Natural Sciences along with support from the Natural Resource Ecology Laboratory has officially commenced. The facility is housed in the NESB. Without the efforts of Diana Freckman and others, this accomplishment would not have been possible. Jeff Welker, Gene Kelly and Dave Schimel are planning to use the facility as the foundation of an experimental course to be offered in the Spring of 199 titled: "Isotope Biogeochemistry: Principles and Practices."

A -year Progress Report on the EOS Interdisciplinary Project titled, "Using Multi-Sensor Data to Model Factors Limiting Carbon Balance in Global Arid and Semiarid Lands", has been completed and submitted to NASA by Dave Schimel et al. This report addresses the causes and consequences of environmental change in the world's arid and semi-arid lands in the context of global change to terrestrial ecosystems. A copy of the report is available in the NREL Publications Office if you wish to sign it out for informative reading.

The annual NREL Retreat was held September at the University Park Holiday Inn. A variety of different topics and approaches were addressed by different sectors of the Lab. The purpose of the retreat was strategic planning.

Tom Stohlgren was an instructor for the Smithsonian Institute's, Man and the Biosphere, Third International Biodiversity Measuring and Monitoring Course, Front Royal, VA, to train 35 summer students and international scientists in standardized methods to measure and monitor plant diversity (Sep-Oct 1995). The "BioMon" course is designed to establish a global network of permanent, long-term biodiversity monitoring plots in biosphere reserves and threatened forests.

OME

NREL is pleased to announce the debut of its World Wide Web site. The site is designed to provide information on the research and monitoring programs at NREL. The site is available for viewing on the end of October. The site is available to our information on NREL sites. The site is available to our direct contact of the NREL database. The site is available to our direct contact of the NREL database.

Jeff Welker and Andy Parsons' NSF-sponsored research was featured in a large Sunday Seattle Times article, published 17 September, 1995. The Times had a reporter at Toolik Lake for two weeks examining the research efforts of the LTER program and other groups such as the ITE program. The article featured numerous color photos including one of Jeff and Andy's snow fence site. A copy of the article is posted on the NREL Bulletin Board.

Lisa Schell, Geneva Chong, and field crews continue to help the City of Fort Collins and Larimer County with the botanical survey of the Cathy Fromme Prairie Open Space in southwest Fort Collins. The work is greatly appreciated

by city officials, and the effort links with USFS, CSU, and local governments.

Krista Alper and April Owen are making substantial progress on the National Parks Bibliography project and have collected over 15,000 citations from National Parks, with work continuing in parks in Colorado and in Yellowstone and Grand Teton National Parks.

Tom Stohlgren served on a National Biological Service/National Park Service review committee to evaluate the long-term ecological monitoring program in Great Smokies National Park (July 9-19). He also worked with Ingolf Kuehn, Ph.D. student from Germany, on assessing plant diversity of tundra in Rocky Mountain National Park.

Some of you may remember Scott Denning (Dept. of Atmospheric Science, CSU), who worked at NREL for several years. Scott recently published in Nature on the results of his Ph.D. research: Denning, A.S., I. Fung, and D. Randall. 1995. Latitudinal gradient of atmospheric CO₂ due to seasonal exchange with land biota. Nature 37:240 -243.

Cynthia Melcher is a new research associate at NREL who previously worked for the National Biological Service. She is working on the Division of Wildlife Vertebrate Ranking Project with John Gross. Cynthia is an outstanding field biologist with extensive experience throughout the Rocky Mountain region.

Visiting Scientist Chuluun Togtohy presented a talk on Mongolian and North American Grasslands to park interpreters and the general public at Theodore Roosevelt National Park, South Unit, Medora,

SD, on August 17.

Jill Baron presented a seminar to the Colorado School of Mines Department of Environmental Engineering on October 5. An audience of 50 people heard the presentation titled "Sources and sinks of inorganic nitrogen in the Colorado Front Range: Results from biogeochemical studies in Rocky Mountain National Park."

Serita Frey, David Valentine and Jeff Welker participated by covering the desk for NREL at the NR Career Day held October 11.

Meetings

Diana Freckman met in Paris as a member of the Consultative Group for DIVERSITAS. The 10 international members wrote a draft of DIVERSITAS: The Next Phase, Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) at the meeting on 4-8 September. DIVERSITAS is an integrated and collaborative effort at the international level (ICSU, SCOPE, UNESCO, IUMS, IGBP/GCTE, IUBS) organized to review, coordinate and expand scientific understanding in key areas of biodiversity (origin, maintenance and loss, ecosystem functioning, inventorying and classification, assessment and monitoring, conservation and sustainable use).

The Capital Development Committee (CDC) met in the NREL Conference Room on October 3, with President Bates, Vice President for Research Jud Harper, Provost David Young, and Vice President for Administrative Services Gerri Bomotti attending. The CDC is the group of State Legislators responsible for determining use of state funds for building projects like the NESB. Short presentations were given by Ted Elliott and Tom Hobbs.

A Global Change in Terrestrial Ecosystem (GCTE) meeting on Plant-Soil Carbon Belowground: the Effects of Elevated CO₂ was held in Oxford, England in September. NREL scientists presenting papers included: Ted Elliott, "*SOM formation under elevated CO₂: the raw material*"; Diana Freckman, "*Root carbon losses to grazers*"; Keith Paustian, "*Formation and turnover of stabilized soil organic matter: Integration of management, climate and CO₂ effects*"; Bill Parton, "*The ecosystem impact of enhanced atmospheric CO₂ levels*."

Alan Covich attended the AIBS Board of Directors meeting in San Diego, CA in August.

Diana Freckman, member of the Scientific Advisory Board, National Center for Ecological Analysis and Synthesis, attended the Panel meeting in Santa Barbara, CA, October 23 and 24. She then flew to Washington, DC to attend a meeting of the past presidents and Board of the American Institute of Biological Sciences to plan scientific strategy on October 25.

Beth Holland serves on Steering Committees for NASA's Distributed Active Archive Center-Oak Ridge National Laboratory for In Situ Data sets (ORNL DAAC UWG); Biosphere-Atmosphere Research Training Grant to EPOB, University of Colorado; U.S. Trace Gas Network, part of IGC/IGBP project 5.2-Trace Gas Exchange between Mid-Latitude Terrestrial Ecosystems and Atmosphere (TRAGE); and NCAR's Student Employment Program for Minority Students.

NREL scientists attending a Global Change in Terrestrial Ecosystem meeting in Cedar Creek, Minnesota in September included Indy Burke, Jim Ellis, Diana Freckman and Bill Lauenroth. Papers presented were: Indy Burke, "*Landscape Structure and Ecosystem Functioning*"; Diana Freckman, "*Belowground Diversity and Ecosystem Function*"; and Bill Lauenroth, "*Ecological Complexity and the Structure of Ecosystems*."

Jeff Welker has been invited to attend an NSF-sponsored workshop titled "Human Dimensions of the Arctic System" being held in Tucson, AZ at the end of October. He will be sharing his research and

his interest in comparing plant-animal-human interactions in Alaska-Canada and those in Scandinavia.

Dave Swift just returned from a 3-week trip to China where he is a consultant to the Asian Development Bank, working on a project funded through the Consortium for International Development. Dave is acting as an advisor to the Bank which is engaging in a feasibility study of a loan designed to provide capital for the improvement of grasslands and livestock production in Liaoning Province and the Inner Mongolian Autonomous Region in northern China.

Beth Holland (NCAR, Boulder) attended the Aspen Global Change Institute meeting, "Metro agroplex as a geographical unit of analysis for regional and global environmental change, August 1995.

Cathy Copeland, Bill Davis and Martin Fowler attended the 9th USENI LISA Systems Administration Conference in Monterey, CA, September 18-22.

Frank Singer and Mike Coughenour attended the conference "Greater Yellowstone Predators: Ecology and conservation in a Changing Landscape" at Yellowstone National Park. Frank presented a paper on the carnivore prey base. Mike also visited Bighorn Canyon NRA where he is conducting modeling research for the Pryor Mountain

Wild Horse Range. He and Troy Gerhardt, a student of Jim Detling's inspected some of the field research sites.

Bob Niles presented an invited seminar titled "Striking a balance between decomposition and plant-parasitism in avocado and citrus agroecosystems" at the Departments of Plant Pathology/Weed Science and Entomology on Oct. 2.

Dennis Ojima and Bill Parton sponsored an Asian Steppe Joint Research meeting on October 3-4 at the NREL. Those attending were: Jim Ellis, Kathy Galvin, Mike Coughenour, Dave Schimel, Laura Stretch, Chuluun Togtohyun, Kevin Price (University of KS, Lawrence), Re-yang Lee (University of KS, Lawrence), Larry Tieszen (Augustana College, Sioux Falls, SD), Bruce Wylie (Augustana College, Sioux Falls, SD), Jim Tucker (Goddard Space Flight Center, Greenbelt, MD), Jim Reardon-Anderson (Georgetown University, Washington, DC), Dennis Ojima and Bill Parton.

A meeting with PI's from Oregon State University on the joint NIGEC research project was sponsored by Dennis Ojima and held at NREL on Oct. 10-11. Those attending from OSU were: Chris Daly, Jim Lenihan, Jesse Chaney, and Dominique Bachelet.

Richard Flagler, Gary Lear, Bob Gilpin, Dave Bigelow, Molly Welker, Mark Wotawa and Linda Bandhauer attended the NADP Technical meeting in Toronto, Canada, the week of Oct. 1. The theme of the meeting was "Continental-scale atmospheric pollution affecting local-scale environments," with technical sessions on "CAPMoN and NADP: Merging data sets for joint analysis", "Trans-boundary transport and deposition", and "Lake and watershed effects."

Indy Burke, Dan Milchunas (CPER/LTER) and graduate student Sarah Spaulding (of the McMurdo LTER) attended the LTER Coordinating Committee Meeting in Cedar Creek, Minnesota on October 20-22.

Bill Parton sponsored a Joint Project Meeting (MMIA/NIH) at the NREL on Oct. 1 -18. Those in attendance were: Bill Parton, Myron Guttman (University of Texas), Jeff Cunfer (University of Texas), Lenny Bohren (Dept. Industrial Sciences), Indy Burke, Kathy Galvin, Bill Riebsame (Univ. Colo.), Tom Kirchner, and Dennis Ojima.

Papers Presented

Posters Presented

—

RESEARCH ASSOCIATE

(TAXONOMY)

Research Associate, Natural Resource Ecology Laboratory and Department of Rangeland Ecosystem Science. Research projects are focussed on elucidating the function of nematode biodiversity in managed and unmanaged ecosystems (for example, Antarctic Dry Valleys, Central Plains Experimental Range (CPER)-Long Term Ecological Research (LTER) site, and Michigan State University-Kellogg Biological Station LTER)

QUALIFICATIONS:

M.S. preferred in microbiology, plant pathology, entomology, or a related field. Background in soil ecology or nematology desired, but not required.

JOB DESCRIPTION:

Primary responsibility will be to identify and enumerate free-living and plant parasitic nematodes in a soil ecology laboratory. Nematode extraction, preservation and identification in a soil ecology laboratory. Specific responsibilities include the following:

- Extract and preserve nematodes from plant and soil samples.
- Identify and enumerate free-living and plant parasitic nematodes.
- Curate a nematode slide collection.
- Maintain documentation of all laboratory methods.
- Train laboratory assistants and visitors in nematode identification.

The successful candidate will have extensive experience in microscopy and will possess strong organizational skills. It is essential that the candidate possess interpersonal and communication skills for working with other members of the laboratory in a team effort. The successful candidate will also participate in the establishment and maintenance of laboratory, greenhouse and field experiments and besides skills in nematode identification, will possess one or more of the following skills:

- Curation of microscope slide collection.
- Isolation, purification and maintenance of nematode-microbial cultures.
- Knowledge of experimental methods in soil ecology and/or nematology.
- Use of computers for image analysis, word processing, education and communications.

BEINGIN DATE: January

SALARY RANGE: - dependent on experience.

APPLICATIONS:

Applications will be received until December, . Forward complete curriculum vitae, including academic transcripts, description of research interests and goals, and the names, addresses and phone numbers of three references to:

Dr. Diana Freckman & Dr. Robert Niles
Natural Resource Ecology Laboratory
Colorado State University
Fort Collins, CO

() - FAX

Additional information may be obtained by contacting Dr. Robert Niles, ()
 or by e-mail at bohn@rel.colostate.edu.

Colorado State University does not discriminate on the basis of race, age, color, religion, national origin, gender, sexual orientation, veteran status or disability, or handicap. The University complies with the Civil Rights Act of , related Executive Orders and , Title IX of the Education Amendments Act of , Sections and of the Rehabilitation Act of , Section of the Vietnam Era Veterans Readjustment Act of , the Age Discrimination in Employment Act of , as amended, American Disabilities Act of , and all civil rights laws of the State of Colorado. Accordingly, equal opportunity for employment and admission shall be extended to all persons and the University shall promote equal opportunity and treatment through a positive and continuing affirmative action program. The Office of Equal Opportunity is located in Spruce Hall. In order to assist Colorado State University in meeting its affirmative action responsibilities, ethnic minorities, women, and other protected class members are encouraged to apply and to so identify themselves.

RESEARCH ASSOCIATE

Technician: Open-Top CO-Enrichment Chamber Facility

The NSF-Interagency sponsored research in Terrestrial Ecology and Global Change has funded a three-year project to investigate responses of the shortgrass steppe to CO enrichment. The work is to be performed at the USDA-ARS Central Plains Experimental Range near Nunn, Colorado, with principal investigators located with USDA-ARS and Colorado State University in Fort Collins, CO. Six open-top chambers will be constructed to evaluate

how \times ambient CO₂ concentrations influence plant and soil responses. Three of the chambers will operate at present ambient CO₂ concentrations, and the other three will be enriched with CO₂ to twice current ambient concentrations. The person hired for this position will be responsible for the construction and day-to-day operation of the open-top chamber facility. They will also be responsible for some data collection and data processing. After an initial orientation of various micrometeorological and gas exchange equipment, the person hired will be responsible for integrating plant-soil-atmospheric monitoring equipment into a data acquisition-control system. They will also be responsible for data collection, summarization, and reporting to principal investigators.

The candidate must have at least a B.S. degree and some experience in an engineering or scientific discipline. The incumbent should have a strong knowledge of computers and electronic data collection, and should have some fabrication skills. A general knowledge or background in electronic scientific equipment is also necessary. A background in scientific field work in the natural sciences is preferred, as is experience with installation and operation of any kinds of field scientific equipment. Funding is for 12 months, with the possibility of extension pending on project needs and securing continued support. Salary will be in range of \$18,000 - \$22,000, plus benefits.

Please furnish current resume and the names, addresses and phone numbers of three persons familiar with your professional experience. Send materials to Arlene Boaman, Natural Resource Ecology Lab., Colorado State Univ., Ft. Collins, CO 80523-1000, no later than Dec. 31, 1988. Must be available for interview in Fort Collins.

Colorado State University does not discriminate on the basis of race, age, color, religion, national origin, gender, sexual orientation, veteran status or disability, or handicap. The University complies with the Civil Rights Act of 1964, related Executive Orders 11246 and 11375, Title IX of the Education Amendments Act of 1972, Sections 504 and 508 of the Rehabilitation Act of 1973, Section 806 of the Vietnam Era Veterans' Readjustment Act of 1974, the Age Discrimination in Employment Act of 1967, as amended, American Disabilities Act of 1990, and all civil rights laws of the State of Colorado. Accordingly, equal opportunity for employment and admission shall be extended to all persons and the University shall promote equal opportunity and treatment through a positive and continuing affirmative action program. The Office of Equal Opportunity is located in 11 Spruce Hall. In order to assist Colorado State University in meeting its affirmative action responsibilities, ethnic minorities, women, and other protected class members are encouraged to apply and to so identify themselves.

RESEARCH ASSOCIATE
(LAB MANAGER)

Research Associate, Natural Resource Ecology Laboratory and Department of Rangeland Ecosystem Science. Research projects are focussed on elucidating the function of nematode biodiversity in managed and unmanaged ecosystems (for example, Antarctic Dry Valleys, Central Plains Experimental Range (CPER)-Long Term Ecological Research (LTER) site, and Michigan State University-Kellogg Biological Station LTER).

QUALIFICATIONS:

M.S. preferred in ecology, microbial ecology, biogeochemistry, plant pathology, or a related field. Background in soil ecology or nematology desired, but not required.

JOB DESCRIPTION:

Supervision, coordination, and maintenance of soil ecology laboratory.

Responsibilities include the establishment and maintenance of field, laboratory, and greenhouse experiments, in addition to:

- Supervision of research associates and student workers
- Collecting and processing soil samples to determine biotic, chemical and physical properties
- Identify and enumerate free-living and plant parasitic nematodes
- Maintain laboratory equipment
- Coordinate data entry, assist with data analysis
- Participation in preparing research proposals and papers

The successful applicant must have supervisory experience and strong organizational skills. Further, it is essential that the candidate possess interpersonal and communication skills for working with other members of the laboratory in a team effort. Additional preferred skills include experience in one or all of the following:

- Nematode and/or soil microbial extraction methods.
- Statistical analysis.
- Isolation, purification, and maintenance of laboratory microbial cultures.
- Utilization of computer software for spreadsheet analysis, word processing, routine statistical analysis, graphics, and communications.
- Biogeochemical soil analysis.
- Molecular applications in soil ecology

EXPECTED START DATE: February 2000

SALARY RANGE: 200,000 - 25,000

APPLICATIONS:

Applications deadline extended to January 15, 2000. Forward complete curriculum vitae, including academic transcripts, description of research interests and goals, and the names, addresses, and phone numbers of three references to:

Dr. Diana Freckman & Dr. Robert Niles
Natural Resource Ecology Laboratory
Colorado State University
Fort Collins, CO 80523-1000
FAX: (970) 491-5000

Additional information may be obtained by contacting Dr. Robert Niles at (970) 491-5000 or by e-mail at bobn@nrel.colostate.edu.

Colorado State University does not discriminate on the basis of race, age, color, religion, national origin, gender, sexual orientation, veteran status or disability, or handicap. The University complies with the Civil Rights Act of 1964, related Executive Orders 11246 and 11375, Title IX of the Education Amendments Act of 1972, Sections 504 and 508 of the Rehabilitation Act of 1973, Section 8902 of the Vietnam Era Veterans' Readjustment Act of 1974, the Age Discrimination in Employment Act of 1967, as amended, American Disabilities Act of 1990, and all civil rights laws of the State of Colorado. Accordingly, equal opportunity for employment and admission shall be extended to all persons and the University shall promote equal opportunity and treatment through a positive and continuing affirmative action program. The Office of Equal Opportunity is located in 100 Spruce Hall. In order to assist Colorado State University in meeting its affirmative action responsibilities, ethnic minorities, women, and other protected class members are encouraged to apply and to so identify themselves.

Page last modified: March 22, 2002

[Back to Newsnotes List](#)

[Who We Are](#) - [What We Do](#) - [About NREL](#) - [Products](#) - [News](#)
[Graduate Study](#) - [Opportunities](#) - [Contact Us](#) - [Search](#) - [Site Map](#)

[Disclaimer](#) | [Equal Opportunities](#)

[Natural Resource Ecology Laboratory](#)

Colorado State University
Fort Collins, CO 80523-1499

webmaster@nrel.colostate.edu