



NEWS RELEASE

Sequoia National Forest and the Giant Sequoia National Monument

1839 S. Newcomb Street, Porterville, CA 93257

Centennial 1908 - 2008

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For Immediate Release

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Southern Sierra Science Symposium planned for Visalia

Porterville, CA..... Four land management agencies are proud to announce the First Southern Sierra Science Symposium, September 4-5, in Visalia, California at the Visalia Convention Center, from 9:00 a.m. - 5:30 p.m. The theme for the symposium is “*Agents of Change Affecting the Southern Sierra Ecosystems.*” This event will bring together premier scientists for what will be an outstanding educational and networking opportunity.

The science symposium will be organized around broad scale environmental "agents of change" affecting the Southern Sierra Ecosystems which include giant sequoia groves. The array of topics focus on five areas or agents of change: climate change, fire, forest management, pollutants and invasive species.

<>**Day 1** of the symposium is open to the public and kicks off with keynote speaker Dr. Anthony L. Westerling from the University of California, Merced. Welcome by Tina Terrell, Forest Supervisor, Sequoia National Forest/Giant Sequoia National Monument and Craig Axtell, Superintendent, Sequoia Kings Canyon National Parks.

The day full agenda will include facilitated science panel presentations based on resource areas or ecosystem topics. At days end there will be clarification on what are the research gaps and challenges facing the southern Sierra Nevada ecosystems in relation to climate change.

Exhibits and poster sessions will be on display with additional related science topics dealing with: fire behavior and ecology, invasive species, air/water pollution, climate change, forest management practices and the social aspects of natural resource management.

<>**Day 2** will include a committee of scientists and resource managers working to develop a research plan for the Southern Sierra Nevada. This will include an overall outline for the research needs, a priority list, identification of the next step in the collaborative process, and an initial working group to initiate next steps. This workday is not open to the public; however the draft research plan will be available to the public.

<>**Day 3** will provide an opportunity to attend the *Celebrate Sequoias Festival*, Saturday, September 6, on the Hume Lake Ranger District of the Giant Sequoia National Monument.

Who should attend: Academia, community members interested in the future of the Sierra Nevada, students studying environmental science, non-profit organizations and federal agencies.

What you will receive: Symposium manual with lectures.

Tuition: Free

Media: Press interested in attending should call Mary Chislock, Public Affairs Officer at 559-784.1500 x1112 to reserve a seat.

Website: For more information about the Southern Sierra Science Symposium you can visit:

www.fs.fed.us/psw/southernsierrascience.

Accessibility: Anyone needing special accommodations (auxiliary aids or services) please contact Mary Chislock, Public Affairs Officer at (559) 784.1500 x1112.

Sidebar: Local High Schools Attending - Redwood High School Class and Sequoia Middle School

Students from the Redwood and Mount Whitney High Schools in Visalia will attend the first day of the symposium as part of an interdisciplinary advanced placement environmental science class that includes guest speakers and field trips as part of the curriculum. The 12 to 20 participating students will receive conference packets and attend scientists' presentations. They will then develop a semester-long research agenda that parallels the plan scientists attending the symposium will draft. "The symposium can serve as a springboard for part of our curriculum," said Redwood High School Teacher Paul Olson. "It will be interesting to gain students' perspective and see what they would like the research to entail."

Sequoia Middle School in Porterville will also be attending. Instructor Marti Phipps will be escorting numerous students.

Speakers will include:

CLIMATE CHANGE AND FOREST WILDFIRE IN CALIFORNIA

ANTHONY WESTERLING - *Sierra Nevada Research Institute, University of California, Merced*

Dr. Anthony Westerling is an Assistant Professor of Environmental Engineering and Geography at UC Merced. His research interests include applied climatology; climate-wildfire interactions; statistical modeling for seasonal forecasts, paleofire reconstructions, and climate change impact assessments; and resource management and policy. Dr. Westerling holds a B.A. from University of California, Los Angeles; and a Ph.D. from University of California, San Diego. Prior to coming to Merced, he worked for six years as a researcher at Scripps Institution of Oceanography. He is a principle investigator with the NOAA Regional Integrated Science and Assessment program for California, the USDA Forest Service's Pacific Southwest Research Station, and the California Energy Commission's California Climate Change Center.

CLIMATE CHANGE EFFECTS ON THE SIERRA NEVADA

NATHAN L. STEPHENSON - *USGS Western Ecological Research Center, Sequoia – Kings Canyon Field Station*

Nate Stephenson is a Research Ecologist with the U.S. Geological Survey, stationed in Sequoia and Kings Canyon National Parks since 1979. His research has focused on climatic controls of vegetation distribution, consequences of lengthy fire exclusion on forests, use of prescribed fire as a tool for forest restoration, and environmental controls of forest dynamics. He has served as a contributing scientist on the Sierra Nevada Ecosystem Project, the Science Advisory Board for the new Giant Sequoia National Monument, and the steering committee for the National Study of the Consequences of Fire and Fire Surrogate Treatments. Additionally, he is a founding member and steering committee member of CIRMOUNT (the Consortium for Integrated Climate Research in Western Mountains). His current research efforts are primarily in concert with USGS's Western Mountain Initiative, a global change research project centered on national parks in the mountainous western U.S.

CURRENT STATE OF FIRE SCIENCE IN THE SOUTHERN SIERRA NEVADA

JAN VAN WAGTENDONK - *USGS, Western Ecological research center, Yosemite Field Station*

Although a native of California, Dr. van Wagtendonk grew up in Indiana, where he began his study of forestry at Purdue University. Summer seasonal work as a smokejumper for the Forest Service and the Bureau of Land Management convinced him to finish his undergraduate work at Oregon State University, where he received his B.S. in Forest Management in 1963. After serving four and a half years as an officer in the U.S. Army with the 101st Airborne Division and as an advisor to the Vietnamese army, he entered graduate school at the University of California, Berkeley. There Dr. van Wagtendonk obtained his M.S. in Range Management in 1968 and his Ph.D. in Wildland Resource Science with a specialty in fire ecology in 1972. From 1972 through 1993 he was employed as a research scientist with the National Park Service at Yosemite National Park. Since 1994, Dr. van Wagtendonk has been employed as a research scientist with the U. S. Geological Survey at Yosemite. His areas of research have included prescriptions for burning in wildland ecosystems, recreational impacts in wilderness, and the application of geographic information systems to resources management. His work currently focuses on the role of fire in Sierra Nevada ecosystems.

SCIENCE GUIDING FIRE MANAGEMENT RESPONSE IN THE SIERRA NEVADA

SCOTT STEPHENS

Associate Professor of Fire Science

Co-director, UC Center for Fire Research and Outreach

Department of Environmental Science, Policy, and Management, UC Berkeley

Dr. Stephens is a native of California, first living in the tiny town of Scotia in Humboldt County and then Napa. He earned a B.S. degree in Electrical Engineering from Sacramento State University in 1985, a M.S. in Bioengineering from Sacramento State in 1988, and then attended graduate school at UC Davis from 1988-1991 studying hydrology, soil science, and plant science. He earned a PhD degree in Wildland Resources Science from UC Berkeley in 1995 specializing in fire science. After graduating he worked as a post-doc researcher with the USFS Pacific Southwest Research Station for 2 years and then was an assistant professor of forest ecology at Cal Poly San Luis Obispo from 1997-2000. From 2000 to the present he has been a fire science professor at UC Berkeley. Stephens' general interests are in the interactions of wildland fire and ecosystems. This includes how prehistoric fires once interacted with

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ecosystems, how current wildland fires are affecting ecosystems, and how future fires and management can change this interaction. He is also interested in wildland fire policy and how it can be improved to meet the challenges of the coming decades; how fire will be affected by changing climates is another research area. Stephens' recently returned from a sabbatical in Australia where he studied fire science and fire management for 4 months and has given invited testimony to the US Congress on 3 occasions.

CURRENT SCIENCE IN FOREST ECOLOGY AND MANAGEMENT OF SIERRAN FORESTS

Malcolm North

Pacific Southwest Research Station, USDA Forest Service

Malcolm is a research scientist with the USFS Sierra Nevada Research Center and an associate professor in the Department of Plant Sciences at U.C. Davis. He received his PhD at the University of Washington in 1993 studying under Dr. Jerry Franklin. His research interests are the effects of disturbance on forest ecosystem structure, composition and function.

BUILDING FOREST RESILIENCY IN THE ERA OF GLOBAL CHANGE: AN APPROACH TO MANAGING GIANT SEQUOIA POPULATIONS IN THE SOUTHERN SIERRA NEVADA

John J. Battles and Robert A. York

UC Berkeley, Center for Forestry

John Battles is an associate professor of forest ecology in the Department of Environmental Science, Policy, and Management and co-director of the Center for Forestry at UC Berkeley. His research focuses on the community ecology and population dynamics of temperate forests.

Rob York is the manager of UC Berkeley's research forests and an adjunct assistant professor of forestry in the Department of Environmental Science, Policy, and Management at UC Berkeley. His research focuses on applied forest ecology and management of Sierran mixed conifer forests.

MANAGING FOR POLLUTANT EFFECTS ON PLANTS AND ECOSYSTEMS

NANCY GRULKE

US Forest Service, Pacific Southwest Research Station

Nancy Grulke is a research plant physiologist for the Pacific Southwest Research Station, US Forest Service, in Riverside, CA. She has investigated conifer and oak response to ozone, excess nitrogen deposition, and drought stress over the last 20 years.

TOWARDS UNDERSTANDING THE CURRENT AND FUTURE EFFECTS OF INVASIVE ORGANISMS ON ECOSYSTEMS IN THE SIERRA NEVADA: ASSESSMENTS; COMPLEXITIES, PERSPECTIVES, AND APPROACHES

ROBERT KLINGER

USGS-BRD, Yosemite Field Station-Bishop Office

Robert Klinger is an ecologist with the USGS whose primary research interests are plant-animal interactions, invasive species (principally feral animals and non-native plants), fire, and climate change.

His main focus in these areas are population and community dynamics and species-distribution modeling.

SCIENCE-BASED MANAGEMENT OF INVASIVE SPECIES

MATTHEW BROOKS

US Geological Survey, Western Ecological Research Center, Yosemite Field Station

Matt Brooks received his PhD in Biology from U.C. Riverside. He is currently a Research Botanist for the US Geological Survey, Western Ecological Research Center, in El Portal California. Matt's personal research emphasis is on the ecology and management of alien plants and fire. His research staff who are located in El Portal, Wawona, and Bishop focus on these themes, plus climate change, wildlife ecology, rare plants, ecological restoration, and the ecological effects of various land-use regimes.

HOW THE FIVE AGENTS OF CHANGE MAY AFFECT THE VERTEBRATES OF THE SOUTHERN SIERRA NEVADA

GRABER, DAVID M.

Chief Scientist, Pacific West Region, National Park Service

David has been an ecologist and science manager working for the National Park Service for more than 30 years. He presently serves as the Chief Scientist for the Pacific West Region of NPS, which includes the 6 western-most states and territories south of Alaska. He has long been based at Sequoia and Kings Canyon National Parks, in the Sierra Nevada of California. During much of his career, David was a field research biologist with NPS as well as USGS, studying species-habitat relationships and exploring the use of extensive field inventories combined with GIS for improved environmental analyses. In more recent years, his efforts have been concentrated on better informing park and reserve conservation and management, as well as the management of broader mixed-use landscapes, through science. This has included the management of plant and animal populations, wilderness stewardship, biotic inventories, and environmental monitoring. Over the years, David has served on a variety of Congressional, agency, and NGO advisory panels, including the Sierra Nevada Ecosystem Project; Giant Sequoia National Monument Science Advisory Committee; National Wilderness Steering Committee; Sierra Nevada Forest Plan amendment Science Panel; Trust for Public Land Science Advisory Panel. He also serves on several endangered species recovery teams. He was awarded the U.S. Department of Interior Meritorious Service medal in 2000. David graduated from the University of California with a B.A. in Political Science (1970). After several years of work and adventure, he returned to U.C. Berkeley's College of Natural Resources to obtain an M.S. (1976) and then Ph.D. (1981) in Wildland Resources Science. His doctoral dissertation was Ecology and management of black bears in Yosemite National Park.

HUMAN SYSTEMS RESPONSE TO SOUTHERN SIERRA ECOSYSTEM STRESSORS

MARK NECHODOM

Pacific Southwest Research Station; USDA Forest Service

Mark Nechodom (nék-o-dum) is the Climate Science Policy Coordinator for the Pacific Southwest Region of the USDA Forest Service and a research scientist at the Pacific Southwest Research Station.

Dr. Nechodom is actively involved in the development of policy and research in support of California's Global Warming Solutions Act, or AB 32, and serves as a federal liaison to state agencies and Non Government Organizations (NGO). He also serves on several national-level climate policy efforts, and represents the Washington Office in a number of state and regional climate initiatives.

His current research uses life cycle assessment modeling (LCA) to identify the economic and environmental impacts of biomass-to-energy production. He also leads teams of researchers focused on carbon cycling in forest ecosystems, including wildfire effects and greenhouse gas emissions.

Over the last decade, he served as lead Social Scientist for the Sierra Nevada Framework, which directs management of 11 million acres of national forest land in California. Nechodom also led the social science team involved in the Lake Tahoe Basin Science Assessment, a major synthesis of scientific information related to the environmental conditions of the basin, as well as the Tahoe Regional Planning Agency's 20-year regional plan revision for 2007.

In the 1990s, he established the Natural Resources Policy and Education Program at California State University, Sacramento, and subsequently co-founded and directed the Land Use and Natural Resources Program at the University of California, Davis. He is currently a visiting scholar and occasional lecturer at the University of California, Davis.

Nechodom spent several years as an agricultural and environmental policy adviser, consultant and researcher in Mexico and Latin America working with clients such as U.S. AID, the United Nations and other NGO development agencies.

Nechodom holds a Ph.D. in political science and environmental policy from the University of California, Santa Cruz.

Background: In January 2008, the Forest Service (Sequoia National Forest and Giant Sequoia National Monument along with the Pacific Southwest Research Station) signed a historic partnership agreement with the Sequoia and Kings Canyon National Parks, and the U.S. Geological Survey to work together to better understand climate change and its effects on the Southern Sierra Nevada ecosystem. The long-term goal of this partnership is to establish a Research Learning Center.

The purpose of the Southern Sierra Science Symposium is to explain and design the research science agenda for the future in the southern Sierras according to the partnership agreement or Memorandum of Understanding (MOU).

The MOU states, "The parties to this agreement recognize and agree to collaboratively develop a program of research, resources management, and public education to help mitigate the impacts from and adapt to climate change effects on ecosystems of the southern Sierra Nevada."

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