Dr. Thomas W. Swetnam Director & Professor of Dendrochronology Laboratory of Tree-Ring Research University of Arizona Tucson, AZ 85721 (520) 621-2112 office (520) 621-8229 fax email: <u>tswetnam@ltrr.arizona.edu</u> webpage: tree.ltrr.arizona.edu/~tswetnam

Dr. Swetnam studies natural and cultural disturbances of forest ecosystems across a broad range of temporal and spatial scales. He uses dendrochronology (tree rings) in combination with other natural archives and documentary sources to reconstruct the histories of fire, insect outbreaks, human land uses, and climate. He also studies demographic patterns of forest and woodland tree species in relation to disturbance and climate histories. Much of this work is aimed at providing historical and ecological perspectives for land management planning. Dr. Swetnam has carried out forest ecology and climate studies throughout the Southwestern United States and the Sierra Nevada of California. He also collaborates with forest scientists on research in northern Mexico, Northern Rockies of Idaho and Montana, Blue Mountains of Oregon, Southern Rockies in Colorado, Patagonia region of Argentina, and the Central Plateau of Siberia, Russia. Dr. Swetnam was recently appointed Director of the Laboratory of Tree-Ring Research at the University of Arizona.

Degress and Professional History:

B.S. University of New Mexico 1977, Biology
M.S. University of Arizona 1983, Forestry-Watershed Management
Ph.D. University of Arizona 1987 Watershed Management-Dendrochronology
Assistant Professor, 1988-94; Associate Professor, 1994-2000, Professor, 2000-present
Director, Laboratory of Tree-Ring Research, 2000-present

Professional Service:

Associate Editor of *International Journal of Wildland Fire*, 1993-present Associate Editor of *Ecoscience*, 1994-1998 Co-Editor with J. Dean and D. Meko on special issue of *Radiocarbon*, 1996 Associate Editor, *Canadian Journal of Forest Research*, 1998 Editorial Board, *Ecological Applications*, 1998-1999 Editor, *Tree Ring Bulletin*, elected by the Tree-Ring Society, 1999

Awards, Honors:

A. E. Douglass Scholarship, University of Arizona 1983

Visiting Scientist at Aldo Leopold Wilderness Research Institute, Missoula Montana, 1994 Walter Orr Roberts Lecturer, Aspen Global Change Institute, Aspen Colorado, August 1999 Weaver Lecturer, School of Forestry and Wildlife Science, Auburn University, January 2000 Areas of Research Interest:

Disturbance Ecology, Dendrochronology, Forest Ecology, Landscape Ecology. Interactions of climate, ecosystems, and people at time scales of seasons to millennia, and spatial scales of forest stands to landscapes. Application of historical-ecological data and theory to ecosystem management.

Selected Publications:

- Swetnam, T. W., and J. L. Betancourt. 1990. Fire-Southern Oscillation relations in the Southwestern United States. *Science* 249:1017-1020.
- Swetnam, T. W. 1993. Fire history and climate change in giant sequoia groves. Science. 262:885-889.
- Swetnam, T. W. and A. M. Lynch. 1993. Multi-century, regional-scale patterns of western spruce budworm history. *Ecological Monographs* 63(4):399-424)
- Swetnam, T. W., and J. L. Betancourt. 1998. Mesoscale disturbance and ecological response to decadal climatic variability in the American Southwest. *Journal of Climate* 11:3128-3147.
- Swetnam, T. W., C. D. Allen, and J. L. Betancourt. 1999. Applied historical ecology: Using the past to manage for the future. *Ecological Applications* 9(4):1189-1206.
- Kaye, M. W. and T. W. Swetnam. 1999. An assessment of fire, climate, and Apache history in the Sacramento Mountains, New Mexico, USA. Physical Geography 20(4):305-330.
- Grissino-Mayer, H. D., and T. W. Swetnam. 2000. Century-scale climate forcing of fire regimes in the American Southwest. *The Holocene* 10(2):207-214.
- Speer, J. H., T. W. Swetnam, B. E. Wickman, and A. Youngblood. In press. Changes in pandora moth outbreak dynamics during the past 622 years. Ecology.
- Kitzberger, T. T. W. Swetnam, and T. T. Veblen. In press. Interhemispheric synchrony of forest fires and the El Nino-Southern Oscillation. Global Ecology and Biogeography.

Current Collaborators and Students:

- Collaborators: Craig Allen, USGS, BRD; Ann Lynch, USFS RM Station; Boyd Wickman USFS, PNW Station; Julio Betancourt, USGS; Jerry Gottfried, USFS, RM Station; Nate Stephenson, USGS BRD; Lisa Graumlich, Montana State Univ.; Andrew Barton, Univ. of Maine; Chris Fastie, Univ. Wyoming; Jim Gosz, Univ. of New Mexico; Tony Caprio, Nat. Park Service, Sequoia Nat. Park; Esteban Muldavin, TNC, NM Heritage; Penny Morgan, Univ. of Idaho; Cathy Whitlock, Univ. of Oregon; Dean Urban, Duke Univ.; Thomas Kitzberger, Argentina; Thomas Veblen, Univ. of Colorado; Jonathan Overpeck, Univ. of Arizona; Steve Yool, University of Arizona
- Students (current and former): Don Falk UA, Lab. of Tree-Ring Research (LTRR); Mark Kaib, UA, LTRR; Kurt Kipfmueller UA, LTRR; Matt Rollins, USFS, RM Station; Peter Brown, Rocky Mtn. Tree-Ring Lab; Henri Grissino-Mayer, Univ. Tennessee; Margot Kaye, Colo. State Univ.; James Speer, Univ. of Tennessee; Dana Perkins, Utah State Univ.