

# **John D. Shaw**

Forest Inventory and Analysis (RWU-4801)  
Rocky Mountain Research Station  
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## **Education**

Ph.D. Forest Ecology, 2002, Utah State University

M.S. Natural Resources Management, 1994, University of Alaska Fairbanks

B.S. Natural Resources Management, 1991, University of Alaska Fairbanks

## **Professional Affiliations and Activities**

Chair-elect, Utah Chapter of the Society of American Foresters, 2004-2005.

Affiliate Assistant Professor of Forestry, School of Agriculture and Land Resources Management, University of Alaska Fairbanks, Fairbanks, AK, 2002-present.

Member, Silviculture Instructors' Sub-Working Group of the Society of American Foresters, 1994-present.

Organizing Chair, GIS Committee of the Fort Bragg / Pope Air Force Base Regional Land Use Advisory Commission, Fayetteville, NC, 1996-1997.

Local Host and Field Trip Leader, University of New Hampshire Department of Natural Resources, Silviculture and Forest Management Field Trip, 1996.

U.S. Army Representative, Federal Interagency Committee of the North Carolina Geographic Information Coordinating Committee, 1994-1997.

Hosting Chair and Field Trip Leader, *Impacts of Research on Forest Management: Past and Future*, North Carolina Division, Appalachian Society of American Foresters Summer Meeting, Southern Pines, NC, June 1995.

Chair, NC Sandhills Chapter of the Society of American Foresters, 1994-1995.

## **Professional Memberships**

Society of American Foresters

Società Italiana di Selvicoltura ed Ecologia Forestale

The Wildlife Society

Ecological Society of America

## **Professional Certifications**

Certified Forester (CF), Society of American Foresters

## **Professional Experience**

2003-present Analyst, Forest Inventory and Analysis, Rocky Mountain Research Station, U.S. Forest Service, Ogden, UT

Responsibilities: Analyze status and trends of the forests of the Intermountain West using Forest Inventory and Analysis data and auxiliary information. Research and develop tools and methods relevant to management of western U.S. forest types. Present results of research and analysis to a broad audience through presentations and a variety of publication types.

2001-2003 Research Scientist (Extension), Department of Forest, Range, and Wildlife Sciences, Utah State University, Logan, UT

Responsibilities: Develop workshops and web-based educational materials directed at forest landowners, loggers, and other audiences with interest in forest management. Topics include silvicultural systems, best management practices, forest ecology, and wildlife habitat. Participate in workshops and other direct-contact situations.

1997-2001 Graduate Research Assistant, Department of Forest Resources, Utah State University, Logan, UT

Responsibilities: Conduct independent research on the application of silvicultural systems to achieve multiple objectives at stand to landscape scales. Develop expert system (computer simulation model) that evaluates effectiveness of management toward achieving landscape structure goals. Conduct fieldwork to quantify wildlife habitat characteristics. Lead crew of 2 to 6 in fieldwork related to dissertation research.

1992-1997 Forester/GIS Specialist, Directorate of Public Works and Environment,  
XVIII Airborne Corps and Fort Bragg, Fort Bragg, NC

Responsibilities: Perform forestry fieldwork (e.g., forest inventory, wildlife habitat measurements, fire management). Perform a wide variety of duties relating to the acquisition, storage, and processing of forest inventory data and geographic information. Develop computer programs to evaluate forest inventory data for use in biological assessments. Direct implementation of a distributed computing system for the purpose of land management. Instruct users on use of geographic information systems (GIS) and other computer applications.

1989-1992 Graduate Research Assistant, Department of Forest Science, University of  
Alaska Fairbanks, Fairbanks, AK

Responsibilities: Work as part of field measurements team in ongoing silviculture and growth and yield research. Conduct independent research on growth and yield of *Populus* species in Alaska. Lead crew of 2 to 3 in fieldwork related to thesis research.

### **Teaching Experience**

1999-2002 Instructor, Silviculture (FRWS4270, 4 cr.), Department of Forest, Range,  
and Wildlife Sciences, Utah State University

Responsibilities: Currently have full teaching responsibility for class while regular instructor is on sabbatical. In previous years, developed and taught 2-week module on use of the Forest Vegetation Simulator, Suppose, and Stand Visualization System software for silvicultural applications.

1999-2002 Instructor, Forest Ecology (FRWS3250, 4 cr.), Department of Forest,  
Range, and Wildlife Sciences, Utah State University

Responsibilities: Currently have full teaching responsibility for class while regular instructor is on sabbatical. In previous years, developed and taught soils and nutrient cycling modules.

2002 Instructor, Forest Vegetation Simulator / Stand Modeling (NRM F495P, 1  
cr.), School of Agriculture and Land Resources Management, University  
of Alaska Fairbanks

Responsibilities: Develop and teach short course on use of the Forest Vegetation Simulator for management and teaching applications.

2000-2001 Teaching Assistant, Forestry Summer Camp, Department of Forest Resources, Utah State University

Responsibilities: Co-lead four-week camp with regular faculty member. Designed and taught modules on forest measurements, computer applications, GIS/GPS, map and compass skills, and soil description and analysis. Coordinated curriculum with other module instructors. Improved integration of subject modules.

### **Scholarships and Research Grants**

Information Technology Development Grant, Dean's Office, College of Natural Resources, Utah State University. Inquiry-Based Learning Project: *Understanding Forest Stand Dynamics Through Simulation and Visualization*. 2000-2001, \$2,200.

Graduate Research Stipend, Ecology Center, Utah State University. *Silvicultural Systems for Maintenance of Structure in a Forest Landscape*. 2000-2001, \$12,000.

Graduate Research Fellowship, Ecology Center, Utah State University. *Structural Characteristics of Northern Goshawk Nest Stands*. 1999-2001, \$4,800.

Research Grant, Utah Wildlife Society. *Management of Lodgepole Pine Density for Snowshoe Hare Habitat*. 1999, \$1,000

### **Awards**

Silver Award, 2004, *Forestry Extension Web Page*, Association of Natural Resource Extension Professionals.

Most Outstanding Student in Forest Science, 1989-90, 1990-91, School of Agriculture and Land Resources Management, University of Alaska Fairbanks, Fairbanks, AK

### **Refereed Publications**

Shaw, John D. In preparation. Drought-related mortality in piñon-juniper woodlands: a test case for the FIA annual inventory system. *J. For.*

White, Michael and John D. Shaw. In preparation. Validation of the MODIS Vegetation Continuous Field in the Intermountain West using Forest Inventory and Analysis Data. (?)

Long, James N. and John D. Shaw. In preparation. A density management diagram for even-aged longleaf pine stands. *South. J. Appl. For.*

Shaw, John D. and James N. Long. In preparation. Consistent estimation of maximum stand density index for pure and mixed forest types of the western U.S. (Forest Science or Forest Ecology and Management)

Shaw, John D. In preparation. Canopy cover models for forest and woodland types of the Intermountain West. (?)

Shaw, John D. In preparation. Crown width equations for forest and woodland trees of the Intermountain West. West. J. Appl. For.

Shaw, J.D., and E.C. Packee. In preparation. Site index of birch in Alaska. Northern Journal of Applied Forestry

Long, J.N., and J.D. Shaw. In review. A density management diagram for even-aged ponderosa pine stands. Western Journal of Applied Forestry

Shaw, John D. In revision. Differences in cottonwood growth between a losing and a gaining reach of an alluvial floodplain: comment. (?)

Shaw, J.D., and E.C. Packee. In revision. Site index of aspen in Alaska. Northern Journal of Applied Forestry

Shaw, J.D. and J.N. Long. In revision. Structure and dynamics of goshawk nesting stands in the Uinta Mountains, Utah.

Shaw, J.D. and J.N. Long. In revision. Structure of young lodgepole pine stands used by snowshoe hares.

Shaw, J.D., E.C. Packee Sr., and C.-L. Ping. 2001. Growth of balsam poplar and black cottonwood in Alaska in relation to landform and soil. Canadian Journal of Forest Research 31(10):1793-1804.

Shaw, J.D. 2000. Application of stand density index to irregularly structured stands. Western Journal of Applied Forestry 15(1):40-42.

Shaw, J.D. and E.C. Packee. 1998. Site index of balsam poplar and black cottonwood in Interior and Southcentral Alaska. Northern Journal of Applied Forestry 15(4):174-181.

### **Thesis and Dissertation**

Silvicultural systems for maintenance of structure in a forest landscape, Ph.D. dissertation, Utah State University, Logan, UT, 2002.

Growth patterns of balsam poplar and black cottonwood in interior and southcentral Alaska, M.Sc. thesis, University of Alaska Fairbanks, Fairbanks, AK, 1994.

## Proceedings

Shaw, John D. 200x. Drought-related mortality in piñon-juniper woodlands: a test case for the FIA annual inventory system. Monitoring Science and Technology Symposium, September 20-24, 2004 - Denver, CO.

Shaw, John D. Analysis of aspen stand structure and composition in the western U.S.: implications for management. Managing Aspen in Western Landscapes Conference, September 21-23, 2004, Cedar City, UT.

Shaw, John D. 2004. Detecting drought-related mortality using FIA annual inventory data. Proceedings of the Fifth Joint Meeting of the Western Forest Insect Work Conference and the Western International Forest Disease Work Conference, April 26-30, 2004 San Diego, CA. (presentation in discussion panel [Disease, insect, and management issues associated with the pinyon-juniper type in the West, B. Steed, and W. Jacobi, moderators]; summary in web-published proceedings)

Shaw, John D. 2004. Models for estimation and simulation of crown and canopy cover. Proceedings of the 2003 FIA Symposium, November 11-15, 2003, New Orleans, LA. U.S. Forest Service, North Central Experiment Station Gen. Tech. Rep. NC-GTR-xxx.

Shaw, J.D. and J.N. Long. 2002. FVS Lessons on the web: a resource for users and instructors. P. 5-7, in N.L. Crookston and R.N. Havis (comps.). Proceedings of the Second Forest Vegetation Simulator Conference, February 12-14, 2002, Fort Collins, CO. USDA Forest Service Proceedings RMRS-P-25.

Shaw, J.D. 2002. Using the Forest Vegetation Simulator as a teaching tool. Fourth Biennial Conference on University Education in Natural Resources, March 14-17, 2002, Raleigh, NC. < <http://www.cnr.usu.edu/uenr/ncsu/Proceedings.pdf>> (abstract).

Baker, F.A. and J.D. Shaw. 2002. Developing a field experience for natural resource majors. Fourth Biennial Conference on University Education in Natural Resources, March 14-17, 2002, Raleigh, NC. < <http://www.cnr.usu.edu/uenr/ncsu/Proceedings.pdf>> (abstract).

Shaw, J.D. and J.N. Long. 2002. Silvicultural restoration and maintenance of structure in a disturbed forest landscape. P 247-262 in Proceedings: Society of American Foresters 2001 National Convention, September 13-17, 2001, Denver, CO. Society of American Foresters, Bethesda, MD.

Shaw, J.D. 1996. Using GIS to delineate interfluves as landscape management units in the North Carolina Sandhills, Southern Forestry GIS Conference, University of Georgia, Athens, GA, October 1996.

## Poster Presentations

Shaw, John D. Aspen Stand Structure and Composition in the Western U.S.: Implications for Management. Canadian Institute of Forestry / Society of American Foresters Joint 2004 Annual General Meeting and Convention. October 2-6, 2004. Edmonton, Alberta, Canada. (poster abstract to be published in proceedings)

Shaw, John D. Detecting Drought-related Mortality using FIA Annual Inventory Data. Fifth Joint Meeting of the Western Forest Insect Work Conference and the Western International Forest Disease Work Conference, April 26-30, 2004, San Diego, CA. (poster abstract in web-published proceedings)

Shaw, John D. Alta Mortalità dei Pini di Pinoli Causò da Siccità in la Sudoccidentale Americana. IV Congresso Nazionale, Società Italiana di Selvicoltura ed Ecologia Forestale (SISEF), October 7-10, 2003, Potenza, Italy. (poster abstract in published proceedings)

Shaw, J.D., and R.A. O'Brien. Interior West Forest Inventory and Analysis: IWFIA and Pinyon Mortality. 2003 Drought Summit, Flagstaff, AZ, May 2003.

Shaw, J.D., and E.C. Packee. A Forest Vegetation Simulator Variant for Non-coastal Alaska. Alaska Society of American Foresters Annual Meeting, Fairbanks, AK, May 2002.

Packee, E.C. and J.D. Shaw. Stand Density Indices for Pure and Mixed Northern Forest Stands. Alaska Society of American Foresters Annual Meeting, Fairbanks, AK, May 2002.

Shaw, J.D. Site Index of Balsam Poplar and Black Cottonwood in Interior and Southcentral Alaska, Society of American Foresters National Convention, Anchorage, AK, 1994. (poster abstract in published proceedings)

George, D., E.S. Bebb, J.D. Shaw and P.J. Wefel. Using GIS to Evaluate Red-cockaded Woodpecker Habitat on Military Land. GRASS GIS User's Conference, Reston, VA, 1993. (poster abstract in published proceedings)

## Web Resources

Understanding Forest Stand Dynamics Through Simulation and Visualization: Web-Based Exercises Using FVS, SVS, and Suppose.

<<http://www.cnr.usu.edu/online/simulation/>> (site developer and webmaster)

Utah State University Forestry Extension Web Site. <<http://extension.usu.edu/forestry/>> (site developer and webmaster)

## **Reports**

Shaw, John D. 200x. Forest Resources of the Lincoln National Forest. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station: 13 p.

Shaw, John D. 200x. Forest Resources of the Gila National Forest. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station: 13 p.

Shaw, John D. 2004. Forest Resources of the Tonto National Forest. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station: 13 p.

Shaw, John D. and James N. Long. Lodgepole pine prescriptions for the Island Park Ranger District, Targhee National Forest, Idaho. May 1999. (unpublished report)

Shaw, John D. Seed production methods for Alaska tree genera. 1990. (contract report for Alaska Reforestation Council)

## **Presentations and Workshops**

Effects of man-made disturbances on forest ecosystems. Public information series on forest health and management. October 22, 2002, Moab, UT (invited speaker)

Using the Forest Vegetation Simulator as a teaching tool. Fourth Biennial Conference on University Education in Natural Resources, March 14-17, 2002, Raleigh, NC. (workshop leader)

Forest ecology for loggers. Education for Professional Loggers workshop. March 6, 2002, Provo, UT. (module instructor)

Using the Forest Vegetation Simulator as a teaching tool in silviculture. Society of American Foresters Silviculture Instructors' Sub-working Group Tour, September 8-12, 2001, Custer, SD. (workshop leader)

Stand structure and dynamics in goshawk and snowshoe hare habitat. Wildlife Habitat – Silviculture Workshop, Ashley National Forest, February 28-March 1, 2001, Vernal, UT. (workshop leader)

Managing structure of young lodgepole pine stands for the snowshoe hare. Lynx Workshop. November 2-3, 2000, Big Piney, WY. (invited speaker)

Modeling forest growth and silvicultural treatments: using the Forest Vegetation Simulator in the classroom, University of Alaska Fairbanks, February 8, 2001, Fairbanks, AK. (invited speaker)

Structure and dynamics of goshawk nest stands in the Uinta Mountains. Utah Wildlife Society Annual Meeting, February 21-23, 2001, St. George, UT.

Stand to landscape silvicultural systems: opportunities to sustain goshawk and snowshoe hare habitat. Utah Wildlife Society Annual Meeting, March, 2000, Vernal, UT. (invited speaker)

Silvicultural systems at the landscape level: management opportunities on the Targhee National Forest. Targhee National Forest, August 28-29, 1998, Island Park, ID. (invited speaker)

Local Government and Geographic Information Systems: Serving Eastern North Carolina. December 1996, Wilmington, NC. (invited panelist)

Programming for GRASS in the DOS Environment. U.S. Army Integrated Training Area Management (ITAM) Annual Conference. 1994.

### **Reviews for Refereed Journals**

Canadian Journal of Forest Research (2)  
Forest Science (2)  
Western Journal of Applied Forestry (2)

### **Graduate Committees**

Carolyn Rosner, M.S. (completed 2004), University of Alaska Fairbanks  
Thomas Malone, M.S. (current), University of Alaska Fairbanks