PhD Assistantship, Forest Landscape Modeling of Climate Change, Drought, and Insects
PhD Assistantship, Forest Landscape Modeling of Fire Ecology
PhD Assistantship, Forest Landscape Modeling of Forest Planning

1) PhD Assistantship, Forest Landscape Modeling of Climate Change, Drought, and Insect.

We are looking for a PhD graduate research assistant in the Department of Forestry at the University of Missouri to model effects of Climate Change, Drought, and Insects on Oak Pine Forests in the Ozarks. This position will be part of a team consisting of Drs. Martin Spetich (US Forest Service Southern Research Station), Hong He, Brice Hanberry, and Wen Wang for a project funded by the US Forest Service Southern Research Station. The objective of the project is to quantify and model oak decline in the Ozarks, forecast oak decline under climate change scenarios, and develop the insect module of LANDIS PRO. Qualified applicants will have knowledge and skills in modeling programs such as LANDIS or FVS and computer programming skills (i.e. R, SAS, Python), as well as knowledge of forest ecology. Applicants should have a M.S. in forestry, ecology, biology, or a closely related discipline, a GPA > 3.2, and combined verbal and quantitative GRE scores > 1100. Position start date is January 2014. Salary is competitive and includes health insurance and tuition waiver. Review of applications begins immediately and continues until the positions are filled. Please submit an application including 1) a cover letter describing your interest and experience in these areas, 2) a resume, and 3) names and contact information of three references, 4) copies of transcripts and GRE scores (unofficial at this time are acceptable).

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2) PhD Assistantship, Forest Landscape Modeling of Fire Ecology

We are looking for a PhD graduate research assistant in the Department of Forestry at the University of Missouri to model effects of fuels treatments on reduction of fire risk and restoration of oak-pine forests in Central Hardwood Forest landscapes. This position will be part of a team consisting of Drs. Hong He, Ben Knapp, and Brice Hanberry (Forestry), and Dr. John Kabrick (US Forest Service Northern Research Station) for a project funded by the Joint Fire Science Program. The objective of the project is to determine how strategic landscape placement of fuels treatments can limit the severity of large wildfires to minimize fire risk and maximize ecological restoration of oak and pine forests and woodlands. We will use field-based studies from multiple prescribed burn plots to quantify the effects of fuels treatments on forest composition and structure and to parameterize and validate FVS-FFE and LANDIS PRO. We then will answer four questions through simulation of the following scenarios: 1) How does the amount and configuration of fuels treatments across landscapes influence intensity, rate of spread, or patterns of

severity for subsequent large wildfires?, 2) How does fire risk vary with characteristics of fuels treatments, climatic variables, and environmental conditions?, 3) What landscape fuels treatment strategies are most effective at reaching restoration objectives for forest structure and composition?, and 4) How can landscape fuels treatment strategies maintain effectiveness over the short-term (<20 years), mid-term (20-50 years), and long-term (50-150 years)? Qualified applicants will have knowledge and skills in modeling programs such as LANDIS or FVS and computer programming skills (i.e. R, SAS, Python), as well as knowledge of forest ecology. Applicants should have a M.S. in forestry, ecology, biology, or a closely related discipline, a GPA > 3.2, and combined verbal and quantitative GRE scores > 1100. Position start date is January 2014. Salary is competitive and includes health insurance and tuition waiver. Review of applications begins immediately and continues until the positions are filled. Please submit an application including 1) a cover letter describing your interest and experience in these areas, 2) a resume, and 3) names and contact information of three references, 4) copies of transcripts and GRE scores (unofficial at this time are acceptable).

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3) PhD Assistantship, Forest Landscape Modeling of Forest Planning

We are looking for a PhD graduate research assistant in the School of Natural Resources at the University of Missouri to work on a project Forecasting Landscape Change under Savannah and Woodland Restoration in Mixed Forest Ownerships. The candidate will test the applicability of LANDIS-PRO forest landscape model for analysis of forest planning alternatives, using the new forest-level data sets that were developed to support carbon assessments. In particular, these data sets capture the history of landscape-scale disturbances (harvesting, fire, insects, etc.) for each forest, as well as many other attributes both spatial and non-spatial, establishing a basis for modeling the possible future trajectories of outcomes of forest plans given the initial stand conditions and probabilities of future disturbances. The results of the LANDIS-PRO simulations will be compared with the results of other models (both empirical and process-based) on vegetation structure and carbon stocks. This modeling study will be done on a national forest to be selected as the study planning progresses. This position will be part of a team consisting of Drs. Hong He, Drs. Stephen Shifley and Richard Birdsey (US Forest Service Northern Research Station).
Qualified applicants will have knowledge and skills in modeling programs such as LANDIS and computer programming skills (i.e. R, SAS, Python), as well as knowledge of forest ecology. Position start date is January 2014. Salary is competitive and includes health insurance and tuition waiver. Review of applications begins immediately and continues until the positions are filled. Applicants should have a M.S. in forestry, ecology, biology, geography

or a closely related discipline, a GPA > 3.2, and combined verbal and quantitative GRE scores > 1100. Please submit an application including 1) a cover letter describing your interest and experience in these areas, 2) a resume, and 3) names and contact information of three references, 4) copies of transcripts and GRE scores (unofficial at this time are acceptable).

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