Postdoctoral researcher – Population ecology and conservation of grassland butterflies in working landscapes

**Position description:**

A postdoctoral research position is available through the Sewall Lab (http://sites.temple.edu/bjsewall/) in the Department of Biology at Temple University (https://bio.cst.temple.edu/) to investigate the population ecology and conservation of grassland butterflies in working landscapes. Research will focus primarily on statistical analysis of existing data that have been collected over the past 23 years on butterfly species of conservation concern that occur on actively managed grasslands and rangelands used for military training. The research will focus on ecological data from the Fort Indiantown Gap National Guard Training Center (http://www.portal.state.pa.us/portal/server.pt/community/ft__indiantown_gap/7269 and http://www.portal.state.pa.us/portal/server.pt/community/environmental/22021) in central Pennsylvania, a 17,100-acre area of working landscapes, native eastern deciduous forest, and rare remnant Pennsylvania grasslands.

Primary objectives of the research are to understand the ecology and behavior of grassland butterflies, to clarify long-term population trajectories and spatial distributions of grassland butterflies, and to evaluate the effects of wildfire and prescribed fire on grassland butterflies and their larval host and nectar plants, all within the context of an active military training installation. If funding permits extension into a second or subsequent years, additional objectives will be to create predictive models and develop strategies to improve species and ecosystem management at Fort Indiantown Gap, and to broaden spatial focus to include analyses of data from military installations across a regional scale.

A special focus will be on the regal fritillary butterfly *Speyeria idalia*, a subspecies of grassland butterfly for which the only viable remnant population occurs onsite at Fort Indiantown Gap, and for which an exceptionally rich and detailed long-term dataset is available. A secondary focus will be on monarch butterflies and other grassland butterflies within this landscape. Opportunities may also be available to extend research to a broader suite of species of conservation concern, including other invertebrates, vertebrates, and plants. The postdoctoral researcher may also have opportunities to participate in mentoring of undergraduate or graduate students.

Fort Indiantown Gap is home to 18 state-listed plant communities of concern and over 118 Pennsylvania species of concern. Wildlife surveys have documented 40 mammal, 119 bird, 38 reptile and amphibian, 34 fish, 67 butterfly, and 858 plant species occurring on the 17,100 acre installation. Fort Indiantown Gap is also the largest occurrence of native grassland in Pennsylvania.
Timing:

The position will begin on or after October 1, 2015. The position will be a full-time position for one year, with opportunity for renewal dependent on funding availability.

Location:

The researcher will be based primarily at the Fort Indiantown Gap National Guard Training Center, located near Annville, Pennsylvania. This center is about 100 miles northwest of Philadelphia, and about 22 miles northeast of Harrisburg, Pennsylvania. The researcher will regularly visit the Sewall Lab of the Department of Biology on the main campus of Temple University in downtown Philadelphia, Pennsylvania.

Qualifications – required

Required qualifications are:

- Ph.D. degree in statistics, entomology, ecology, conservation biology, or related field
- Expertise in statistical analysis and modeling
- Expertise in Geographic Information Systems and spatial analysis
- Expertise in population and community ecology and conservation biology
- Expertise in entomology
- Experience publishing research in peer-reviewed journals
- Ability to establish a close and productive working relationship with faculty and students in an academic setting, and with civilian and military personnel on a military installation
- Ability to work independently and in teams

Application

To apply, please send:

- a cover letter describing your interest in and qualifications for this position along with dates of availability,
- a current curriculum vitae (cv),
- pdfs of one or more relevant publications, and
- contact information for 3 references familiar with your qualifications
Application materials should be sent to Dr. Brent Sewall by email at bjsewall@temple.edu. Please write “Postdoctoral research – Data analyst” in the subject line. Evaluation of applications will continue until the position is filled.