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Missouri Dept. of Conservation



FEBRUARY 9TH - NOON EST

SNAP - State Natural Areas Program

The Role of State Natural Areas in Invertebrate Conservation

Presented by Chris Newbold

natural
areas
ASSOCIATION

The Role of State Natural Areas in Invertebrate Conservation

From the “Insect Apocalypse” to the precarious state of many important pollinator species, invertebrates have gotten deservedly more press in recent years. As E.O. Wilson has stated, ...” *these organisms, the little things that run the world, comprise a disproportionate total of native biological diversity and are critical for the functioning of our ecosystems*”. So, it stands to reason that state natural areas with their biologically significant lands and waters that are more commonly known for their native plant diversity are host to a significant share of our world’s native invertebrate diversity. This webinar will initiate what we hope will become the focus of future discussions regarding the role of state natural areas in invertebrate conservation. Included in this will be a focus on inventory, monitoring, and management towards conserving these “little things.”

Abstract:

The regal fritillary (*Speyeria idalia*) butterfly is a tallgrass prairie endemic that is currently declining across much of its range, primarily due to habitat loss. Considering their declining status and a current status assessment review being conducted by the U.S. Fish and Wildlife Service, assessing the distribution and size of remaining regal fritillary populations in Missouri is important. From 2018-2020, we conducted transect surveys on 36 prairie parcels that were located in 6 West and Southwest Missouri prairie geographies. Prairie parcels included both private and public lands owned by private individuals, the Missouri Department of Conservation, the Missouri Prairie Foundation, and The Nature Conservancy. The objectives of the surveys were to: 1.) test the feasibility of using count surveys and N-mixture modeling to estimate regal fritillary populations, and 2.) provide information on the status of regal fritillaries within each prairie “complex.” Surveys were conducted using a combination of dependent-double observer line transect count and distance-from-observer methodologies. Regal fritillaries were documented at 5 or the 6 prairie “complexes” surveyed. Dependent double observer count data generated detection rates of regal fritillaries that ranged from 0.6563 – 0.7313. Abundance estimates ranged between 0 – 16.7 regals/HA with a mean abundance of 3.11 regals/HA. Spatial variation in abundance estimates suggest that remnant prairie quality, connectiveness and management play an important role in shaping regal fritillary populations.

A Survey of Regal Fritillary (*Speyeria idalia*) on Select Southwest and West Missouri Prairies



Chris Newbold

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This webinar will include a presentation by Chris Newbold (Missouri Department of Conservation) on the topic of “Regal Fritillary (*Speyeria idalia*) Surveys on Remnant Tallgrass Prairies of Missouri: Methods, Populations Estimates and Future Work.” The presentation will be followed by discussion and invited short presentations by representatives of state natural area programs regarding topics of invertebrate conservation in their state.

Presenter Contact

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