



# Restoration of Eastern Native Grasslands And The Repatriation Of The Regal Fritillary Butterfly

08-392

## Background:

The largest population of the rare grassland butterfly, the regal fritillary (*Speyeria idalia*), in the eastern United States occurs at Fort Indiantown Gap (FIG) National Guard Training Center, PA. The only other population is at Radford Army Ammunition Plant, VA. Survival at FIG is dependent on military training disturbances that maintain early successional plant communities and support vegetation essential to survival. These elements include: violets for larvae, nectar sources for adults, and warm season bunch grasses for protection and cover.



A female regal fritillary butterfly at Fort Indiantown Gap.

Due to the rare status of this species, the PA National Guard agreed in 1998 to prohibit training on 219 acres of prime training lands to research the habitat requirements of this butterfly and to stave off increased regulations. Subsequently, a repatriation (return of a native species to its former range) project was created in 2005 to aid in species recovery and to reduce training encroachment at FIG. A pilot attempt to repatriate regals to Gettysburg National Military Park (GNMP) occurred in 2005 (Legacy Project # 05-244) but was unsuccessful. Lessons learned from that initial attempt have molded this more intense, long-term endeavor.

## Objective:

The goal is to ensure regal population stability and to ease training restrictions at FIG. Objectives focus on restoring native grassland habitats at sites with a historical or probable historical occurrence. This includes: 1) identifying land parcels and willing partners 2) restoring and managing critical habitat factors and 3) repatriation and monitoring for success.

## Summary of Approach:

A three-phased approach over a 5-year period is being used for this project. This involves: 1) Identification and assessment of potential grasslands, 2) grassland restoration and monitoring and 3) regal repatriation. Habitat restoration includes herbiciding, mowing, disking, prescribed fire, soil preparation, and supplemental plantings. Repatriation will require the use of reared butterflies and wild females that will be added once a site is adequately restored. Project success will be monitored continuously.



NPS mowing next to vegetation treatment plots at GNMP.

## Benefit:

Grasslands will be restored and the regal will exist at former locations. Restrictions on operations and training will be eased and protected areas can be used once again.

## Accomplishments:

So far, 4 PA state parks and 2 national parks are participating in this project. PA-state parks include Memorial Lake, Swatara, Bald Eagle State Parks, and Boyd Conservation Area. The first three are currently in phase 2 while the last is in phase 1. National parks include Gettysburg National Military Park and Valley Forge National Historical Park. The Gettysburg site is currently in phase 2 while Valley Forge is in phase 1. Two other have been identified as willing partners: Lehigh Valley Gap Nature Center and the Albany Pine Bush Reserve. These sites are currently in phase 1.

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