

Citizen-Based Monitoring Program Report

Violet Monitoring Training (The Prairie Enthusiasts)

Spring 2012

PURPOSE

The purpose of this project was to engage citizen volunteers in long-term monitoring of violet populations (the only host plants for the larvae of the endangered regal fritillary butterfly) in prairie settings across a large number of sites. The data collected will be used to assess violet, and thus habitat quality for regal fritillary butterflies, response to management methods over time. The data will also be used to map violet occurrence and density across preserves that have regal fritillaries. This information let's managers know what proportion of a site's violet population will be affected by proposed prescribed burns, and thus in turn what proportion of the regal fritillary population.

ACTIONS TAKEN

Using the CBM funds TPE hired Ruth Kearley to

- 1) develop standardized survey protocol (methods) and survey forms
- 2) plan survey transects
- 3) solicit volunteers
- 4) train volunteers
- 5) compile the initial survey results

Ruth worked with TPE, TNC, and DNR in selecting sites, laying out the trial survey transects, developing the protocol and forms, and soliciting volunteers. She worked independently in training the volunteers and compiling the results.

CBM funds were also used to acquire marker flags, material for quadrat frames, and to cover Ruth's mileage.

Surveys

A total of 20 areas, totaling 60 acres, were selected for trial surveys. The surveys were done in late April to mid May. All the surveyed areas had been burned that spring. This allowed for maximum detection of violets. More areas were planned for trial survey work. However, TNC was not able to get many sites burned, thus the available pool of sites was greatly reduced for this year. If all goes well, the number of areas available for survey work and the pool of trained volunteers will be expanded next year.

Survey Protocol & Forms

Working with DNR Science Services, Ruth developed survey forms and standardized survey protocols for all participating organizations to use. These are attached.

Solicit Volunteers

Ruth solicited volunteers to participate in the monitoring program. Notices were placed in newsletters and sent via e-mail to members of The Prairie Enthusiasts, The Nature Conservancy, Blue Mounds area Project, and the Southern Wisconsin Butterfly Association. An example article is attached.

Train Volunteers

Ruth held training sessions in the field, showing volunteers how to identify the various violet species and to layout and conduct survey transects. A total of 9 surveyors were trained and directed. A total of 50 volunteer hours were contributed by the surveyors in 2012.

Summary Results of Trial Surveys

Two types of surveys ended up being employed (see protocol). A walk through technique was used on units where the violets were very low in numbers or highly aggregated. On units with higher numbers of violets, or at least with more uniformly distributed populations, 0.5m² quadrat frames were placed on the ground at a predetermined regular spacing interval, and the number of violet plants by species were counted and tallied in each quadrat placement. Forty-seven percent (28 acres) of the total surveyed area (60 acres) was surveyed with the walk through method (across 9 units), and 53% (32 acres) was done with quadrats (across 11 units).

A total of 674 quadrats were sampled. The violets averaged 3.4 per m² in the quadrat surveyed areas. The proportion of plants by species was 65% prairie violet, 22% wood violet, 10% hybrid between wood and prairie violet, and 3% birdfoot violet.

In the walk through areas, the violet density averaged 0.03 per m². The proportion of plants by species was 48% marsh violet, 32% wood violet, 20% prairie violet.

Richard Henderson
9/30/2012