

Quarterly Report
for
Experimental Restoration of a Limestone Glade and Dry Upland Forest:
a project funded through the
Wildlife Preservation Fund

Submitted by
Sharon Cline

26 September 1994

The above project is a two-year experimental restoration project being carried out at Fults Hill Prairie Nature Preserve in Monroe County. The project was designed as Master's degree research project which will provide management and management information and recommendations for the area studied.

The main focus of the project is to compare the difference between the changes which occur in the herbaceous and woody components of the plant communities studied as the result of two management treatments. The original proposal identified three communities for study: grass-dominated limestone glades, wooded limestone glades and dry upland forest. The dry upland forest was deleted from the project after field work began due to the small size of the community within the research site.

Data collection for the first field season began June 1994. Permanent plots are currently being established and the percent cover of herbaceous and woody vegetation is being recorded. This stage of the research project is to be completed by mid-October. When completed, there will be a total of 48 permanent plots. The original proposal indicated that the plots would be .02 ha in size. It was necessary to reduce plot size to .01 ha due to the small size of the communities being studied.

Management work is slated to begin in late October. Scott Ballard, District Heritage Biologist, has scheduled a two day mini-swath for October 20 and 21 to begin removal and herbiciding of encroaching woody species on the site. Volunteers will assist with moving cut brush off of the research area.

Second Quarterly Report
for
Experimental Restoration of a Limestone Glade
a project funded through the
Wildlife Preservation Fund

Submitted by
Sharon Cline

15 December 1994

Vegetation sampling was completed on October 3, 1994. From October 3 to 19, each plot was photographed using slide film to establish a permanent record of the site and the research site was flagged and mapped for upcoming management work.

A mini-swat was conducted on Thursday and Friday, October 20 and 21 to carry out restoration work. Six IDOC personnel participated, using chain saws, herbicide, and brush cutters. Forty volunteers from Southern Illinois University Carbondale assisted with brush cutting and brush removal over the 2 day period. IDOC personnel logged approximately 54 man-hours of on-site restoration work. Volunteers logged approximately 136 man-hours of on-site restoration work. Work was concentrated on the following plots (see attached map):

Cutting: LWG RITA, LWG RITB, UWG RITB, UGG RITB

Herbiciding: LWG RITB, UWG RITB, UGG RITB

The purpose of the mini-swat was to accomplish the management portion of the research project. Due to the size of the site and the amount of management work proposed, however, only a portion of the planned management objectives were actually completed during the mini-swat. Therefore, additional management workdays were scheduled. The following workdays were slated solely for red cedar removal. Scott Ballard, District Heritage Biologist, operated a chain saw. Volunteers either cut cedars with hand tools or removed cedars from the research site. The following work was accomplished (see attached map):

Date: Saturday, October 29

Number of man-hours of on-site restoration work: 80

Cutting: LWG RITA, LWG RITB, LGG RITA, LGG RITB, UWG RITB

Date: Saturday, November 12

Number of man-hours of on-site restoration work: 75

Cutting: same as above, plus UGG RITA

A workday scheduled for Saturday, December 10 was cancelled due to bad

weather.

Management work plans for the future are to conduct 3 more Saturday workdays on February 11 and 18 and March 4, 1995 using volunteers from SIUC. Prior to these workdays, I will evaluate work accomplished and, based on that, determine what the objectives will be for these workdays. One thing is quite clear: there is not enough manpower available to meet the original management objectives. Therefore, it will be necessary to downscale these objectives to best meet research objectives while still accomplishing as much management on the site as possible.

Following these workdays, prescribed burning will be carried out on appropriate plots. This is tentatively scheduled for the week of March 13, 1995.

Analysis of sampling data collected during the 1994 field season will begin in 1995.

Third Quarterly Report
for
Experimental Restoration of a Limestone Glade
a project funded through the
Illinois Wildlife Preservation Fund

Submitted by
Sharon Cline

8 May 1995

Vegetation management continued into 1995 on the limestone glade at
Fults Hill Prairie where ecological restoration research is being carried out.
The site was evaluated in late January to determine future management
work needs.

Organized workdays scheduled in February and March used volunteers to
accomplish the following (see attached map for plot locations):

Date: Saturday, February 11

Number of volunteers: 2

Number of man-hours of on-site restoration work: 12 hours

Work completed: cut red cedars on plots UGG R1TA and UGG R1TB

Date: Saturday, February 18

Number of volunteers: 14

Number of man-hours of on-site restoration work: 63 hours

Work completed: cut red cedars on and removed them from plots UGG
R1TA, UGG R1TB, LGG R1TA, LGG R1TB, LWG R1TA, and LWG R1TB

TOTAL VOLUNTEER MAN-HOURS FOR FEBRUARY: 75 HOURS

Date: Saturday, March 4

Number of volunteers: 10

Number of man-hours of on-site restoration work: 37.5 hours

Work completed: cut red cedars on plots UGG R1TA, LWG R1TA, and LWG
R1TB; removed red cedars from plots UGG R1TA and UGG R1TB

Date: Monday, March

Number of volunteers: 1

Number of man-hours of on-site restoration work: 6 hours

Work completed: removed red cedars from plots UGG R1TA, LWG R1TA, and LWG R1TB

TOTAL VOLUNTEER MAN-HOURS FOR MARCH: 42.5 HOURS

After trees were cut and removed, the burn treatment plots (see attached map) were prepared for a prescribed burn. Fire lines were put in on Wednesday, March 8. Lines were expanded and cleaned on Thursday and Friday, March 9 and 10. A prescribed burn was carried out on the burn treatment plots on March 10.

On Wednesday, March 15 and Thursday, March 23, following the prescribed burn, data was collected to help assess the effect and intensity of the burn. The following post-burn data was collected on each .01 ha circular plot within the burn treatments: 1) photos (slides) from at least two cardinal directions were taken (following the same methodology used in October 1994 to document pre-treatment plot appearance), 2) burn pattern was mapped, and 3) percent cover and intensity of the burn was estimated. Fire intensity was low to moderate. The surface soil, duff, and lower leaf litter were damp at the time of burning. In areas where leaf litter did burn, only the top layer burned. Grassy areas burned more thoroughly. Overall, the burn was patchy; as much as 50% of the area may not have burned.

An organized workday scheduled in April accomplished the following (see attached map for plot locations):

Date: Saturday, April 22

Number of volunteers: 2

Number of man-hours of on-site restoration work: 9

Work completed: cut red cedars on and removed them from plots UWG R1TB, LGG R1TB, and LWG R1TB

TOTAL VOLUNTEER MAN-HOURS FOR APRIL: 9

In addition to on-site management work, the following project-related activities occurred:

As a result of the newspaper article concerning this project which appeared in the *Southern Illinoisan* in December, 1994 (attached), I was asked to speak at the Grant Workshop for Graduate Students sponsored by the Office of Research and Development and The Graduate and Professional Student Council at SIUC on Thursday, March 2.

A reporter from the *Daily Egyptian* called concerning this project. The information given to him was almost correctly reported in an article which appeared in the Monday, March 6 issue of the *D. E.* on the Illinois Wildlife Preservation Fund (attached).

Also attached is a copy of the second article I am required to submit to the local newspaper describing this project.

Finally, I submitted an application to the Illinois Wildlife Preservation Fund Small Project Program for FY96, requesting \$1000 to help defray mileage costs for travel to Fults Hill Prairie Nature Preserve to complete the second year of vegetation sampling associated with this project.

Fourth Quarterly Report
for
Experimental Restoration of a Limestone Glade
a project funded through the
Illinois Wildlife Preservation Fund

Submitted by
Sharon Suchecki

12 July 1995

Due to the nature of this project, a quarterly report is being submitted in lieu of a final report. The final report for this project will be a master's thesis submitted upon completion.

This project is an ecological restoration research project being carried out on a limestone glade at Fults Hill Prairie Nature Preserve, in Monroe County, Illinois. Data collection, which consists primarily of vegetation sampling, requires two field seasons. Currently, only one field season of data collection has been completed. In addition, most of the restoration work associated with the research project has been completed.

Since submission of the last quarterly report:

Two dates were scheduled with Scott Ballard, District Heritage Biologist, to finish management work on the cut and herbicide research plots at the site. Both dates were canceled, one due to rainy weather and the other due to a schedule conflict. This unfinished management work will be completed during the summer of 1995.

A response was received from Carl Becker acknowledging the receipt of the Small Project Proposal submitted for this project for FY96.

Upcoming research activities:

The second field season of vegetation sampling for this research project will begin this week and is slated to be completed by October 1, 1995.