
**ONE-YEAR STUDY OF FIRE
EFFECTS ON *RHAMNUS*
FRANGULA L.**

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Glossy buckthorn (*Rhamnus frangula*) is a serious management problem in Illinois and Indiana. Disseminated by birds, this introduced shrub is capable of quickly establishing itself and dominating the native vegetation of our preserves. For further information, refer to the stewardship abstract of this species prepared by The Nature Conservancy.

In September 1986, a 4 m² plot subdivided into 1 m² plots was established in dry sand prairie at the Clark and Pine Nature Preserve in northwest Indiana. All stems of *Rhamnus* were recorded in four height classes: less than 2 inches, 2 to 6 inches, 6 to 12 inches, and greater than 12

inches. This study plot was burned in October 1986. As a result, all stems of *Rhamnus* were top killed.

The study plot was sampled again in October 1987. Results showed an overall increase of 33 percent in total stems in the plot. All size classes showed an increase in stems from 1986 to 1987. Specifically, there was a 56 percent increase in the less than 2-inch class, a 9 percent increase in the 2- to 6-inch class, a 40 percent increase in the 6- to 12-inch class, and a 42 percent increase in the greater than 12-inch class.

Results show that a single burn does not offer a reasonable method for controlling this plant. It appears that the burn prevented greater seed production than if the plot had not been burned. However, this was based on observation only with no data gathered to substantiate it.

The plot is scheduled for a spring 1988 burn with data to be collected in fall 1988. This will be an ongoing study to determine what, if any, fire rotation is successful for controlling this plant.