

[From Fall 2002]

Prescribed Burning

In an effort to manage habitat for Delmarva fox squirrels, CNWR will be studying the effects of a prescribed fire in the mid-Atlantic region. Depending on weather conditions, regional fire crews will conduct a prescribed burn in a 50 acre tract of refuge forest. In addition to managing the habitat for Delmarva fox squirrels, this research will provide valuable information on how fire can affect vegetation structure and fuel loads in the forest.

The endangered Delmarva fox squirrel (*Sciurus niger cenereus*) is a large, heavy-bodied squirrel that prefers to forage and travel on the ground. The species has also been reported to select forests with large mature trees and sparse ground vegetation. The use of prescribed fire may improve habitat for Delmarva fox squirrels by reducing thick shrubs and vines.

In order to assess the preference of Delmarva fox squirrels, refuge staff attached radio-transmitter collars to 20 squirrels in April 2002. Refuge staff and volunteers have been tracking the squirrels' movements and recording the locations using a Geographic Positioning System (GPS). The locations and movements of the squirrels will be compared before and after the fire and between a burned and an unburned site.

Currently, there are few studies on how fire changes habitat in the mid-Atlantic region. Refuge staff and volunteers have collected data on the plant species present, density of the plants, and amount of leaf litter and dead wood. This information will also be compared after the prescribed burn. Reducing the amount of fuel such as leaf litter and woody debris is important to prevent large destructive fires in the future. By determining the effects of fire on vegetation, fuel load and the Delmarva fox squirrels, valuable information will be provided on the use of prescribed fire in managing wildlife habitat.

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