



## Restoring the Historic Landscape in the Great Meadows



Alien species of plants have invaded the historic battlefield of Fort Necessity and a different brand of warfare is being waged. When the first battle of the French and Indian War occurred here on July 3rd, 1754, the landscape of the Great Meadows looked different from what you are seeing today. The hillsides were covered with huge trees and the Great Meadows was a large, open S-shaped wetland about 1-1/2 miles long and 200 yards wide. George Washington had described the Great Meadows as “a charming field for an encounter.” He liked the meadow because there was grass for livestock, water for men and animals, and the open terrain allowed him to use line tactics against the French. Sixteen years after the battle, Washington purchased the Great Meadows. He owned it until his death in 1799.

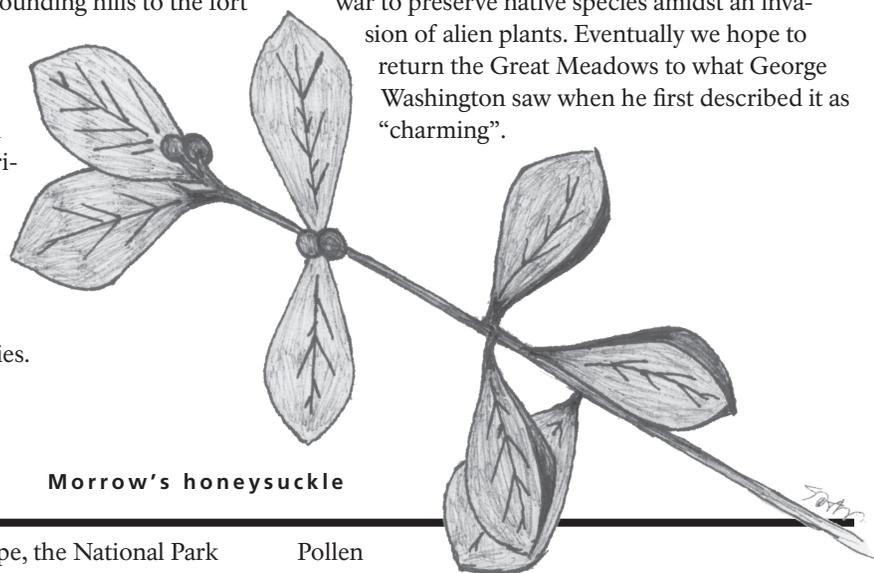
### A New Battle in the Great Meadows

When Washington’s heirs sold the property, the Great Meadows began to change. Subsequent owners timbered and farmed the land around the battlefield area. The streams were straightened. Ditches and drain tiles were installed to drain the meadow.

In the 1930’s the Civilian Conservation Corps planted evergreen trees to control erosion and brought tons of fill dirt from the surrounding hills to the fort area. The non-native pine plantations you see today were not here in the 18th century. The fill dirt created a drier, open landscape. Agricultural practices and other human disturbances introduced alien plant species. These species thrive in the new environment, to the detriment of the native species.

The introduction of Morrow’s honeysuckle (*Lonicera morrowi* L.) has also inhibited the return of the historic forest/meadow landscape. These land use changes and alien plant invasions make it difficult for visitors to imagine the landscape at the time of the battle.

There is still a battle raging around Fort Necessity. A war to preserve native species amidst an invasion of alien plants. Eventually we hope to return the Great Meadows to what George Washington saw when he first described it as “charming”.



Morrow’s honeysuckle

### Historic Pollen

Before restoring the landscape, the National Park Service had to determine what plant life was in the Great Meadows over 250 years ago. The first step was researching 18th century accounts of people who visited the area before the significant changes from human activity. From the archeology done by J. C. Harrington in 1953 we know the original fort was made of white oak logs. In 1994 soil cores were taken from the battlefield and surrounding area. Analysis of the pollen found within these samples confirmed the dominant tree on the hillside was oak. Some of the other pollen found was from chestnut, beech, walnut, hickory, alder, hazelnut, and maple.

Pollen samples showed the ground near the fort was a marsh dominated by sedges and grass. A mixture of shrubs and herbs, with a grass understory, occupied the portion of the meadow between the forest and the marsh. Washington mentioned removing bushes from the meadow for his soldiers to have a clear field of fire. Most of the bushes that Washington removed appeared to have been alders, arrowwood and hawthorns. At the fringe of the forest were alders. Grass, meadow rue, goldenrod and ironweed were on the driest ground closer to the fort.

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## Rehabilitation Work

The Great Meadows needs rehabilitation to preserve its historic character. One option for rehabilitating the historic landscape is mowing or pulling out the alien species. This method has been used here for over 20 years. Once an area is cleared of alien plant life, however, native species must be planted to prevent re-infestation of alien species. Another option is applying herbicides.

Work planned for 2007 includes both methods. The alien shrubs will be mowed in late winter or early spring to reduce the amount of “canopy” foliage. A National Park Service approved herbicide will be applied in August. This method allows more acreage to be treated with herbicide. It also allows the spray to reach the smaller alien plants beneath the canopy.

After treatment this area will look brown. The dead honeysuckle plants will be left in place temporarily to keep the hillside from eroding and to discourage deer from browsing on young native plants trying to thrive. The soil will be tested for nutrient content and fertilizer will be applied if needed. Once the site is prepared, native trees from the Park’s nursery and other sites within the park will be planted. Plastic fencing will be used to protect the saplings from the deer.

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## Helping Species of ‘Special Concern’

Fort Necessity is home to a variety of plants and wildlife. Many species of birds and animals commonly seen include turkey, deer, squirrel and groundhog. Other animals seldom noticed by visitors are fox, bear, bobcat, and fishers. We recently conducted a flora and fauna survey within the park’s American Woodcock habitat. Found were several ‘species of concern.’ Habitat loss is the biggest reason plants and animals become endangered. Returning the historic forest/meadow landscape will be beneficial to the native plant and animal species

listed as ‘special concern’ by the US Fish and Wildlife Service. Please remember that Fort Necessity is a wildlife sanctuary and all plants, reptiles, birds and animals are protected.

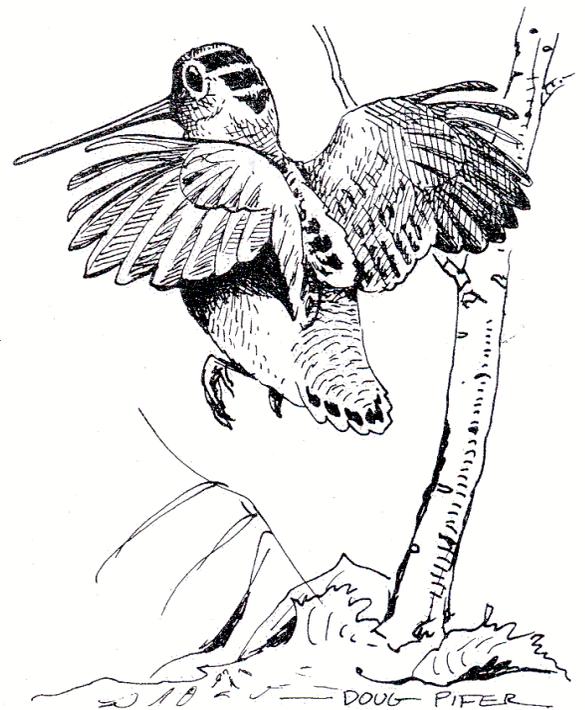
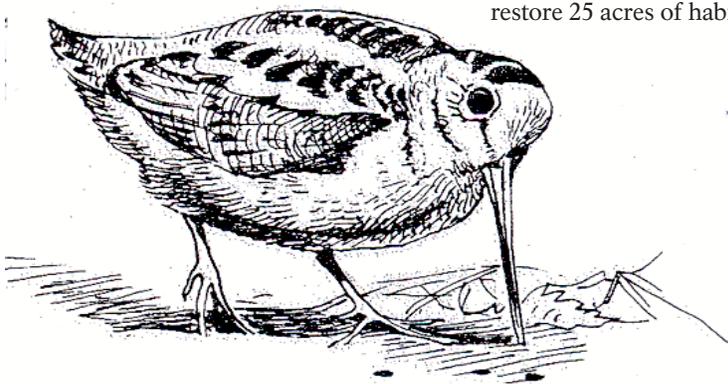
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## American Woodcock Habitat Restoration Project

The American Woodcock, or Timberdoodle, (*Scolopax minor*) is becoming more uncommon due to habitat loss. This long billed, “chunky” little bird enjoys eating almost his weight daily in earthworms, insects and seeds in early evening and before dawn. Although they have other songs, during the mating season from early March to mid-May the male uses his distinct “peent” sound to attract a female.

During the courtship ritual, the male will fly up to 300 feet making a whistling sound, then spiral back to earth warbling a song as he returns. For nesting, woodcocks are attracted to edges of moist woodlands with alder, aspen, hawthorn, and crab apples. To help this uncommon bird, the American Woodcock Habitat Restoration Project will restore 25 acres of habitat in the Park. This

project is being conducted through a partnership with West Virginia University and the Great Lakes/Northern Forest Cooperative Ecosystem Studies Unit (CESU).



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## How You Can Help!

You can help with the historic forest/meadow rehabilitation project. If you or your group would like to contribute your time or resources to this project, please contact the Park’s Volunteer Coordinator at 724-329-5473 or the Park’s Natural Resource Specialist at 724-329-5818.

You can also help fight the alien invasion by removing exotic plants from your yard and replacing them with native plant species, and encouraging others to do the same.