# Natural Heritage Resources Fact Sheet

## Virginia's Rare Natural Environments

### Pocosins

**Description**

Pocosins are a rare natural community characterized by peaty soils and heath-like vegetation. Often tucked between coastal freshwater marshes and deepwater swamp forests of the Atlantic Coastal Plain, pocosins are one of Virginia's rarest wetlands. A high water table, an abundance of sphagnum moss, and the slow decay of dead vegetation contribute to the deep peat and acidic soils of these areas. These conditions, along with nutrient poor soils and frequent fires, are common features of pocosin communities. The landscape of this wetlands grades from shrubby, low pocosins dominated by a dense layer of low heath vegetation and occasional open herbaceous areas to higher forested pocosins with sparse to dense small trees and shrubs.

The low vegetation is maintained by fire, the high water table, and the naturally low nutrient levels in the soil. Some species, such as Atlantic white cedar, depend on fire to curb the growth of competing vegetation and stimulate seed germination. Presently, habitat loss and a less frequent incidence of fire has altered the structure of pocosins and may threaten their continued existence in Virginia.

**Distribution**

Pocosins are found throughout the Atlantic Coastal Plain from southeastern Virginia to northern Florida, and west to Mississippi. In Virginia, pocosins have never been common, but have historically been found in the Great Dismal Swamp and along the lower Blackwater, Northwest, North Landing, and Nottoway rivers. Currently, they are limited in Virginia to remnant communities in the Great Dismal Swamp and along the North Landing River.

**Flora and Fauna**

In Virginia, red maple, Atlantic white cedar, and pond pine are the dominant tree species in high pocosins. Atlantic white cedar is a rare and valuable lumber tree which have been steadily declining across much of its range because of harvesting, fire suppression, and habitat loss. A dense understory of fetterbush, sheep laurel, inkberry, sweet bay, and red bay grows beneath the trees. Throughout the pocosin is a thick tangle of greenbrier vine, and Virginia chain fern is the dominant herbaceous plant. Several rare plants can be found in these wetlands, especially in openings in the lowest pocosins. These rarities include spreading pogonia and Walter's sedge. Few surveys have been conducted on the animal species found in pocosins, however, rare butterflies such as Hessel's hairstreak are known to inhabit these wetlands.

**Threats**
It has been estimated that less than 30 percent of pocosin communities throughout the Atlantic Coastal Plain remain in their natural condition. Virginia has fared even worse with only 17 percent of its pocosins remaining today. Ditching, draining, and peat mining have taken their toll on water and nutrient cycling in these environments, and the suppression of fire has allowed the growth of woody species to go unchecked. Atlantic white cedar is in need of protection and thrives in pocosin habitats. The return of this rare and valuable tree will depend on protecting and managing its wetland home.

**Protection**
The pocosins along the North Landing River are protected by the Nature Conservancy and the Virginia Department of Conservation and Recreation as part of the state's Natural Area Preserve System. The Great Dismal Swamp National Wildlife Refuge also protects some important pocosin communities. Despite great success in land acquisition realized by natural resource agencies and land conservation organizations, long-term survival of pocosin communities, and the rare plants and animals living within them, will depend on management efforts focused on maintaining the community in its natural state. The two driving ecological forces within these wetlands are fire and the cycling of water. Today, unrestrained fire represents a hazard to public safety and property, but the benefits of carefully prescribed and controlled fire can be realized. Studies are underway to learn more about the flow of water through theses wetlands and the influence of adjacent land use on water quality. A plan to restore and maintain clean water flow through the wetland, and the reintroduction of fire will greatly increase the chances for survival of this endangered ecosystem.