

Natural Heritage Resources Fact Sheet

Virginia's Rare Natural Environments

Bald Cypress-Water Tupelo Swamp



Description

The cypress-tupelo swamps bordering the rivers of southeastern Virginia contain some of the largest and most impressive trees found anywhere in the eastern United States. These swamps are the wettest and deepest forested wetlands which form in low-lying areas; commonly in depressions, floodplains, abandoned river channels, or sloughs following a major river channel. Although normally separated from a river, much of the land is flooded year round with the water standing up to several feet deep. In Virginia, bald cypress and water tupelo are often found together in these deepwater swamps and have developed a variety of adaptations for surviving flooded conditions. Bald cypress trees produce the familiar "knees" which rise above the water helping to stabilize the tree in the soft soil and, possibly supplying oxygen to the roots. Water tupelo produces very wide,

buttressed lower trunks for stability in the standing water. Regular flooding of the swamp produces oxygen-poor soils and drives the subsequent complex processes that are used to extract and circulate nutrients and oxygen within the community.

Distribution

Bald cypress-water tupelo swamps are most common in the southeastern coastal plain where extensive river systems and flat topography combine to create prolonged flooding. In Virginia, large, undisturbed tracts of bald cypress-water tupelo swamps are rare and occur mainly in the southeastern part of the state where bald cypress approaches its northern range limit. The Blackwater River in Isle of Wight and Southampton Counties supports several examples of old-growth bald cypress-water tupelo swamps. Other southeastern rivers supporting this type of vegetation include the Nottoway and Meherrin Rivers, and Fontaine Creek.

Flora and Fauna

Bald cypress and water tupelo trees grow to over 150 feet tall with a trunk diameter of six feet. Older ones are estimated to be at least 600 years old. These swamps are host to many other wetland plant and animal species. Typical shrubs and herbs associated with the bald cypress-water tupelo swamps of Virginia include water ash, buttonbush, swamp rose, Virginia willow, lizard's tail and cardinal flower. On the water's surface, duckweed and water fern are common members of the swamp community.

The swamps are also an important habitat for many species of waterfowl. Wood duck and mallards breed here, as do several heron species, warblers and other songbirds. These swamps

contain abundant crayfish and mussels, and are also home to beavers, muskrat and numerous other animal species.

Values

Besides hosting important plant and animal species, bald cypress-water tupelo swamp forests have several important functions. Primarily, these low swamps act as a sink for floodwater and protect higher areas during floods. They have a role in filtering river water and removing sediments. They also function in erosion control and groundwater recharge. Finally, these swamp forests are a pleasing wetland environment for recreation and enjoyment of nature.

Threats

The primary threat to bald cypress-water tupelo swamps in Virginia is disruption of the habitat by human activity. Logging has encroached on some of the unprotected old-growth forests along the Blackwater River. Continued thinning of the trees could alter the light levels of the forest, increase the frequency of blow-downs, and encourage the spread of invasive or exotic species. Ditching, draining, or damming a swamp can result in the disruption of water flow and sediment cycling of the swamp. Road and bridge construction or improvement activities should be carefully planned and monitored to minimize impacts in swamps. Preserving the natural flow of the river is critical to the long-term maintenance of these forests.

Protection

Bald cypress-water tupelo forests are irreplaceable natural heritage resources in Virginia. Protection will require limiting logging and prohibiting development activities in these wetlands. Protection from water contamination, pollution, and disturbance will require a comprehensive planning approach.