

**NATURAL AREA INVENTORY**  
**OF**  
**SAMPSON COUNTY, NORTH CAROLINA**

by

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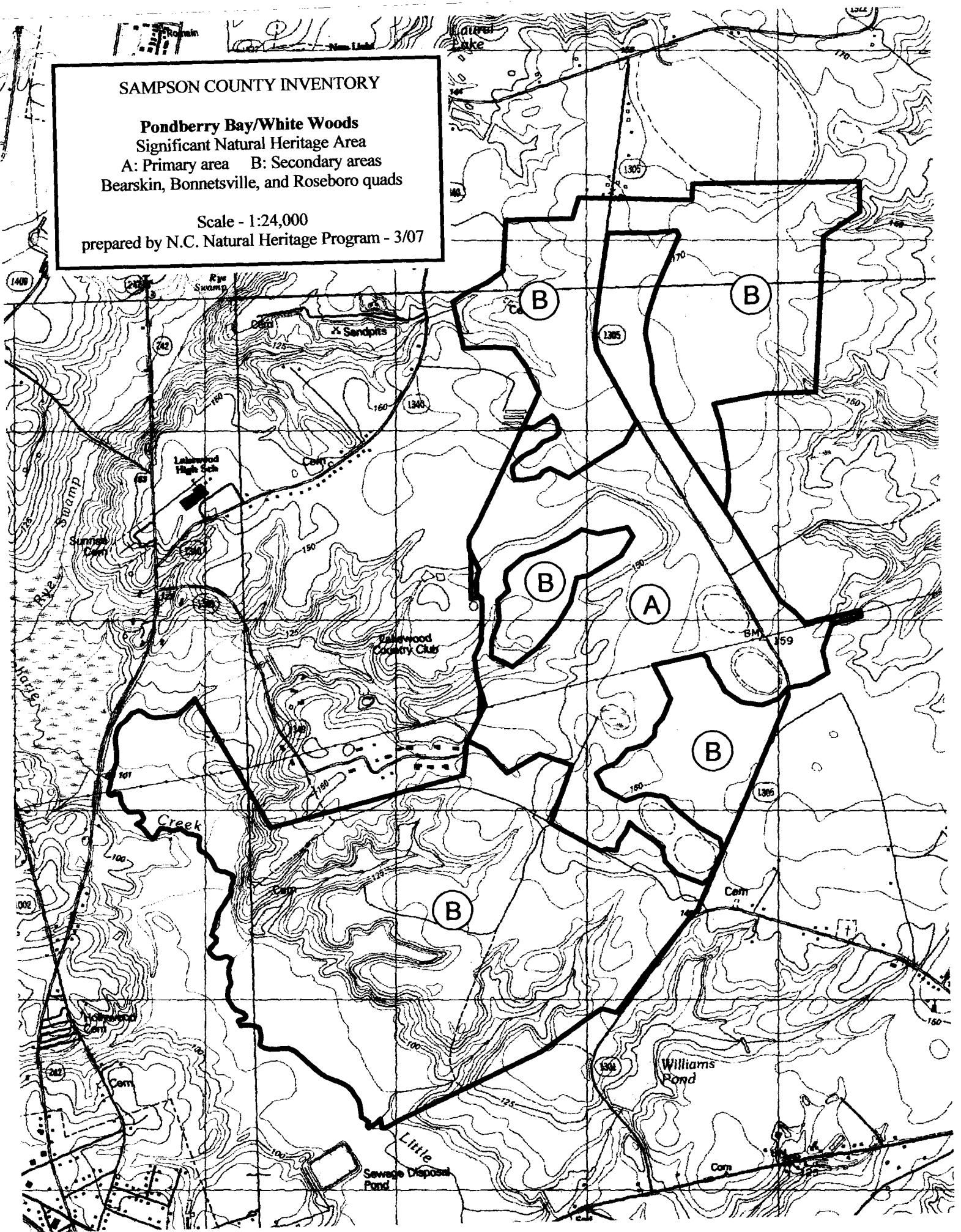
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**SAMPSON COUNTY INVENTORY**

**Pondberry Bay/White Woods**  
Significant Natural Heritage Area  
A: Primary area B: Secondary areas  
Bearskin, Bonnetsville, and Roseboro quads

Scale - 1:24,000  
prepared by N.C. Natural Heritage Program - 3/07



## Sampson County Natural Area Inventory

### PONDBERRY BAY/WHITE WOODS Significant Natural Heritage Area

**Site significance:** National                      **Size:** 2,067 acres (608 primary acres, 1,459 secondary acres)  
**Quadrangles:** Bearskin, Bonnetsville, Roseboro  
**Ownership:** N.C. Department of Agriculture and Consumer Services; private

**SIGNIFICANT FEATURES:** Pondberry Bay/White Woods natural area comprises a diverse longleaf pine ecosystem with uncommon to rare natural communities and several uncommon to globally very rare plants and animals. Most significant is a large population of pondberry (*Lindera melissifolia*), a Federal and State Endangered plant known currently from only three populations in the state. Among the rare animals are Federal and State Endangered red-cockaded woodpecker (*Picoides borealis*) and Federal Species of Concern Bachman's sparrow (*Aimophila aestivalis*). Altogether, the site supports populations of six rare plants, seven rare animals, seven Watch List plants, and two Watch List animals. Among the rare plants are three Federal Species of Concern plants: Sandhills milk-vetch (*Astragalus michauxii*, also State Threatened), pondspice (*Litsea aestivalis*), and awned meadow-beauty (*Rhexia aristosa*, also State Threatened). Pine barren boneset (*Eupatorium resinosum*) is a State Threatened–Special Concern plant that occurs at the natural area. The site contains one of the very few known occurrences of the Cypress Savanna natural community on the Coastal Plain east of I-95.

**LANDSCAPE RELATIONSHIPS:** This natural area is found in west-central Sampson County northeast of Roseboro. Located within a largely agricultural area, the site is isolated from other natural areas. Upper South River Floodplain natural area lies about 3¼ miles to the southwest, while Great Coharie Creek Swamp natural area lies nearly 4½ miles to the east. Streamheads on the site drain westward into Little Coharie Creek, and from there to Great Coharie Creek and Black River in the southern part of the county. This floodplain habitat benefits the movement of some animal groups. Within the natural area, the primary boundary includes habitat in good natural condition and/or with other exceptional biological values, while the secondary boundary includes areas of lesser natural value, but which buffer primary habitat and/or have good restoration potential.

**SITE DESCRIPTION:** Pondberry Bay/White Woods is primarily a longleaf pine ecosystem located on a broad interstream sandy terrace. Scattered among the pines are several wetland features, including small Carolina Bays and a few streamheads. Pine/Scrub Oak Sandhill Mixed Oak Variant is the most frequent natural community on the dry upland soils, although some areas have been altered by past timber management. Longleaf pine (*Pinus palustris*) is the dominant tree, and canopy age varies from young to mature, with larger trees reaching 16 inches diameter. Three oaks are prominent in the understory: turkey oak (*Quercus laevis*), bluejack oak (*Q. incana*), and sand post oak (*Q. margarettiae*). This oak diversity reflects a slightly higher soil fertility than that found in the Xeric Sandhill Scrub community. Dwarf indigo-bush (*Amorpha herbacea*) is a common shrub, while Carolina wiregrass (*Aristida stricta*) is the dominant grass. Composites and legumes are important members of the ground community, especially sandhill chaffhead

(*Carphephorus bellidifolius*), grassleaf blazing-star (*Liatris pilosa*), and goat's rue (*Tephrosia virginiana*).

Nestled within the sandhill community area a few small Carolina bays supporting the rare Cypress Savanna natural community. This community occurs in bays with a layer of clay in the soil, and are typically flooded during winter and spring, then become exposed later in the growing season. However, some years they can be flooded year-round. These small basins are characterized by a diverse ground layer of grasses, sedges, and wildflowers, with or without an open canopy of pond cypress (*Taxodium ascendens*). The Cypress Savanna depressions at this site have few or no cypress, and loblolly pine (*Pinus taeda*) has seeded in during extended droughts. Higher water levels in more recent years have killed off many of the pines. Prominent in the diverse ground layer are maidencane (*Panicum hemitomon*), redroot (*Lachnanthes caroliniana*), and Wright's witch grass (*Dichantheium wrightianum*). The very rare pondberry is an important shrub in one of the bay savannas.

Another small isolated depression supports the Small Depression Pocosin community. Like other pocosin communities, it has a dense shrub layer with an open canopy of pond pine (*Pinus serotina*). Swamp red bay (*Persea palustris*) forms a sparse subcanopy over the crowded shrubs of blueberry (*Vaccinium* species), inkberry (*Ilex glabra*), gallberry (*I. coriacea*), and common greenbrier (*Smilax rotundifolia*). This community differs from the related Pond Pine Woodland community by its small size and isolated situation. Small headwater streams on the site also support pocosin vegetation, with Atlantic white cedar (*Chamaecyparis thyoides*) and loblolly bay (*Gordonia lasianthus*) often prominent in the canopy.

**MANAGEMENT AND PROTECTION:** The great majority of Pondberry Bay/White Woods is in Pondberry Bay Preserve, a Dedicated state nature preserve managed by the N.C. Plant Conservation Program, an office of the N.C. Department of Agriculture and Consumer Services. The site is managed to maintain and restore natural community structure and composition. Prescribed burning is a primary tool to accomplish these goals by reducing woody vegetation dominance and promoting greater graminoid and forb diversity. A small area is privately owned and not protected.

**NATURAL COMMUNITIES:** Cypress Savanna, Pine/Scrub Oak Sandhill Mixed Oak Variant, Small Depression Pocosin.

**RARE PLANTS:** Sandhills milk-vetch (*Astragalus michauxii*), pine barren boneset (*Eupatorium resinosum*), pondberry (*Lindera melissifolia*), pondspice (*Litsea aestivalis*), awned meadow-beauty (*Rhexia aristosa*), Georgia nutrush (*Scleria georgiana*). Watch List: flaxleaf gerardia (*Agalinis linifolia*), pinebarrens goober grass (*Amphicarpum amphicarpon*), narrowleaf bluestem (*Andropogon perangustatus*), erectleaf witch grass (*Dichantheium erectifolium*), blackfruit spikerush (*Eleocharis melanocarpa*) three-angle spikerush (*E. tricostata*), Small's yellow-eyed-grass (*Xyris smalliana*).

**RARE ANIMALS:** Vertebrates - Bachman's sparrow (*Aimophila aestivalis*), Mabee's salamander (*Ambystoma mabeei*), chicken turtle (*Deirochelys reticularia*), red-cockaded woodpecker (*Picoides*

*borealis*). Invertebrates - Hessel's hairstreak (*Callophrys hesseli*), Meske's skipper (*Hesperia meskei*), Edwards' hairstreak (*Satyrrium edwardsii*). Watch List: Vertebrates - pine woods snake (*Rhadinaea flavilata*), southeastern fox squirrel (*Sciurus niger niger*). Invertebrates - King's hairstreak (*Satyrrium kingi*).

**REFERENCES:**

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