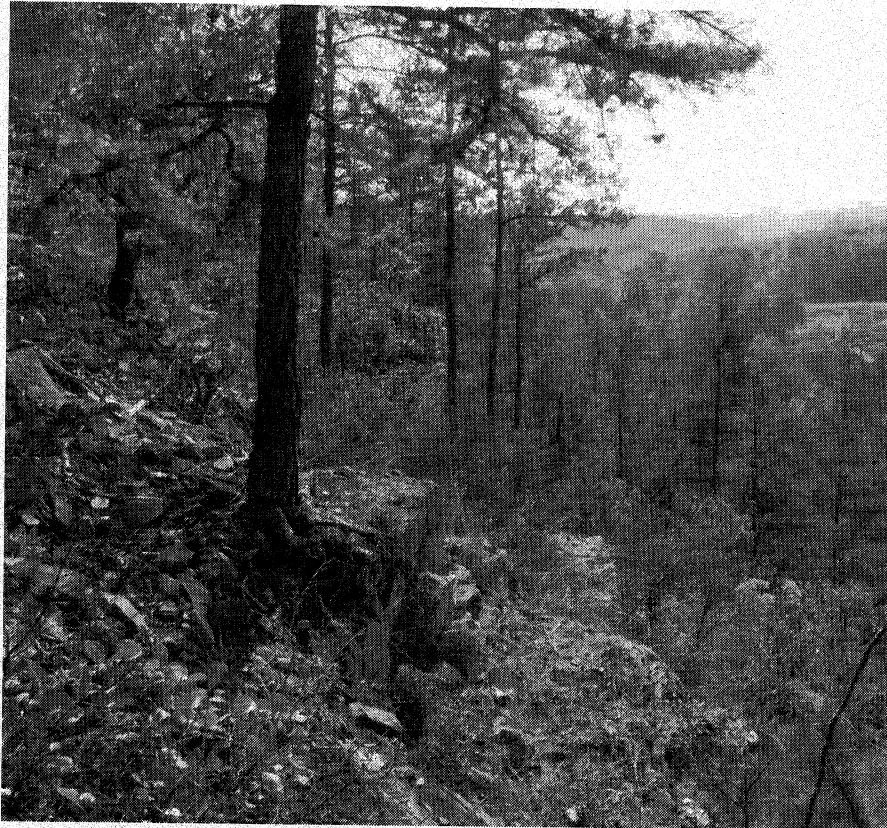


AN INVENTORY OF THE SIGNIFICANT NATURAL AREAS OF STANLY COUNTY, NORTH CAROLINA

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Stanly County Natural Area Inventory

MORROW MOUNTAIN NATURAL AREA Significant Natural Heritage Area

Site Number: 12

Site Significance: National

Quadrangle: Morrow Mountain, Badin

Size: 3761 acres

Ownership: N.C. Division of Parks and
Recreation, private

SIGNIFICANT FEATURES: Morrow Mountain Significant Natural Heritage Area (SNHA) ranks high due to a combination of features: bald eagle nesting and foraging habitat; high quality examples of rare communities (8 community types are tracked by NCNHP); 9 N.C. rare plant species including the Federal Candidate and State Threatened Yadkin River goldenrod (*Solidago plumosa*); and Federal Species of Concern ravine sedge (*Carex impressinervia*), one of the two largest populations known. Also, the SNHA contains highly significant archeological sites and Indian stone quarries.

LANDSCAPE RELATIONSHIPS: This section of the Yadkin/Pee Dee River is an important foraging habitat for bald eagles (*Haliaeetus leucocephalus*) (see Pee Dee River Bald Eagle Habitat SNHA description). Across the river from the State Park lies the Uwharrie National Forest, also nationally significant. South and southwest are other Significant Natural Heritage Areas: Stony Hill Church Hardwoods, Stony Mountain, River Haven Ridge, and Union Chapel Enon Knolls. Together these areas form a landscape of very high biodiversity and importance.

SITE DESCRIPTION: This SNHA includes much of the State Park plus some adjacent private land. It lies within the Uwharrie Mountains region immediately west of Yadkin/Pee Dee River. The Yadkin becomes the Pee Dee where the former joins the Uwharrie River, opposite the Park boat launch. The Park is mountainous, with rounded peaks and ridges that rise 500-600 feet above surrounding lowlands. At 936 feet Morrow Mountain is the highest point. A major stream, Mountain Creek, drains the west and south sides of the Park and has created a narrow floodplain south of Morrow Mountain. Sugarloaf Creek and several other seasonal creeks drain the uplands. The geology of the Park is volcanic in origin; eastern mountains and ridges generally produce acidic soils, whereas Biles Mountain to the west produces circumneutral soils. Rocks and boulders are a prominent feature of the land surface.

Forests of the uplands are mostly dry oak-hickory, usually with a significant pine component. White oak (*Quercus alba*), post oak (*Q. stellata*), pignut hickory (*Carya glabra*), red maple (*Acer rubrum*), black gum (*Nyssa sylvatica*), shortleaf pine (*Pinus echinata*), and Virginia pine (*P. virginiana*) are dominant. North-facing slopes and ravines are usually clothed with dense thickets of mountain laurel (*Kalmia latifolia*). Most summits support a Piedmont Monadnock Forest of chestnut oak (*Quercus montana*), white oak, pignut hickory, sourwood (*Oxydendrum arboreum*), red maple, and scattered pines. Sparkleberry (*Vaccinium arboreum*) and hillside blueberry (*V. pallidum*) are common shrubs. However, the shrub and the herb layers have been severely depleted by deer overbrowsing; there is a sharp browse line about 6-7 feet above ground throughout the Park. Small inter-mountain flats and depressions in saddles collect water and

support Upland Depression Swamp Forest communities; five have been documented to date. Willow oak (*Quercus phellos*) and some red maple form a loose canopy over dense sedges (*Carex joorii* and other species) and various wetland herbs.

In the higher pH soils of Biles Mountain (which is 2/3 within the Park, 1/3 out), the oak-hickory forest is modified by having less post oak, red maple, and fewer pines (sometimes none), but instead has southern shagbark hickory (*Carya carolinae-septentrionalis*) in the canopy and chalk maple (*Acer leucoderme*), hop hornbeam (*Ostrya virginiana*), and redbud (*Cercis canadensis*) in the understory. Herbs, especially grasses, are locally plentiful where they are not overbrowsed. Natural communities here include Basic Oak-Hickory Forest and Xeric Hardpan Forest. The Xeric Hardpan Forest on Biles is the largest such community in the state and one of the best.

Lower slopes and lowlands tend to have somewhat more nutrient-rich soils and produce Dry-Mesic Oak-Hickory Forest or, locally along creeks, Mesic Mixed Hardwood Forest. These are notable in having large populations of an uncommon grass, longleaf spikegrass (*Chasmanthium sessiliflorum*). Red oak (*Quercus rubra*), ironwood (*Carpinus caroliniana*), and other species of mesic or moist soils are prominent. Good examples are along Kron Creek and tributaries of Mountain Creek. Mountain Creek overflows on occasion and has a well-developed but narrow floodplain forest of green ash (*Fraxinus pennsylvanica*), sycamore (*Platanus occidentalis*), river birch (*Betula nigra*), and tulip poplar (*Liriodendron tulipifera* var. *tulipifera*). It grades into the mesic hardwoods community, producing a diverse woody canopy and a subcanopy of ironwood and scattered cucumber magnolia (*Magnolia acuminata*). Herbs and sedges and grasses tend to form dense carpets, notably ravine sedge.

MANAGEMENT AND PROTECTION: Deer pose the greatest threat to the ecology of the area. 1) There is practically no tree recruitment, and a sharp browse line extends to 6-7 feet over the Park. 2) There is a very large tick population, which may present a threat of tick-borne diseases. 3) Herb diversity is severely suppressed over most of the SNHA but especially within it.

NATURAL COMMUNITIES: Basic Oak-Hickory Forest, Dry Oak-Hickory Forest, Dry-Mesic Oak-Hickory Forest, Mesic Mixed Hardwood Forest, Piedmont/Low Mountain Alluvial Forest, Piedmont/Coastal Plain Heath Bluff, Piedmont Monadnock Forest, Upland Depression Swamp Forest, Xeric Hardpan Forest.

RARE PLANTS: Carolina birdfoot-trefoil (*Acmispon helleri*), piedmont indigo-bush (*Amorpha schwerinii*), terrestrial starwort (*Callitriche terrestris*), Bush's sedge (*Carex bushii*), ravine sedge (*C. impressinervia*), ringed witchgrass (*Dichanthelium annulum*), crested coralroot (*Hexalectris spicata*), glade milkvine (*Matelea decipiens*), Yadkin River goldenrod (*Solidago plumosa*).

RARE ANIMALS: Timber rattlesnake (*Crotalus horridus*), bald eagle (*Haliaeetus leucocephalus*).

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