

PARKERS CREEK RIDGES

Survey Site Number: 28

Natural Area Name (Number):
Parkers Creek Ridges

Size: 127 acres [measured by GIS]

Biodiversity Rank: B4

Locality: Chatham County

Site Significance: D (County)

Quadrangle: Merry Oaks

Quadrangle Code: 3507961

Location: Between SR 1941 (Seaforth Road) and Big Woods Road (SR 1715) on the west and the Parkers Creek arm of Jordan Lake on the east, ranging north from US 64 for 3/4 mile and south of US 64 for about a mile. This site incorporates the previously identified Windfall Branch Oak Slopes Registered Natural Heritage Area.

NATURAL HERITAGE RESOURCES SUMMARY TABLE

ELEMENT NAME	GLOBAL	STATE			ELEMENT	SIZE (ACRES)
	RARITY RANK	RARITY RANK	USFWS STATUS	NC STATUS	OCCURRENCE RANK	

COMMUNITIES:

Dry Oak-Hickory Forest	G5	S4	-	-	B	65
Basic Oak-Hickory Forest	G4	S3	-	-	CD	10

PLANTS:

none

ANIMALS:

none

Site Description: The slopes and ridges located west of the now flooded Parkers Creek are rather dry compared to other parts of the Jordan Lake project. US 64 bisects the "natural area", and the unfortunate widening of this highway to four lanes has caused the complete destruction of one of the few mountain laurel (*Kalmia latifolia*) slopes in the project area. This slope was a north-facing one along Windfall Branch, facing US 64. There are a number of east-west ridges south of US 64, and several north of the highway. Hurricane Fran damaged a few ridges in fall 1996, but for the most part there still remains mature hardwood forests on the ridges.

The ridges south of US 64 are covered mostly in Dry Oak-Hickory Forest natural community. A ridge approximately 1 mile south of the highway suffered considerable blowdown. However, there seems to have been little or no weedy plant invasion. Still remaining are a

number of large trees reaching 80' tall and 12-24" dbh. White oak (*Quercus alba*) dominates this and all ridges. Other canopy trees include red maple (*Acer rubrum*), southern red oak (*Q. falcata*), and scarlet oak (*Q. coccinea*). Sourwood (*Oxydendrum arboreum*) is a common understory tree. Shrubs include sparkleberry (*Vaccinium arboreum*), fringetree (*Chionanthus virginicus*), and lowbush blueberry (*V. pallidum*). Herbs are very sparse.

Several ridges to the north, about ½-mile south of US 64, is a long east-west ridge with a well-trodden trail. This ridge has an abundance of dangleberry (*Gaylussacia frondosa*) in the shrub layer. The high-quality forest extends along this ridge for close to ½ mile. The next ridge to the north is the southernmost included in the Windfall Branch Oak Slopes Registered Natural Heritage Area. This ridge is dominated by white oak, with pignut hickory (*Carya glabra*), black oak (*Q. velutina*), southern red oak, and scarlet oak also in the canopy. The understory and shrub layers are similar to the other ridges. A ridge farther north has a population of black huckleberry (*Gaylussacia baccata*), which is uncommon in the Jordan Lake area. The farthest north ridge has been impacted by the road construction.

North of US 64, the ridges east of SR 1715 (Big Woods Road) are shorter, as most of the extent of the ridges lies west of the road (on private property and not examined). Some of the ridges and lower slopes in this area have been burned by a controlled fire, with firebreaks. There is a telephone line clearing along the ridgetops, paralleling Big Woods Road, that impact the ridges. However, two ridgetops contain mature hardwoods. Surprisingly, the soil is somewhat circumneutral here, and the communities lean to Basic Oak-Hickory Forest. White oak again dominates, but both shagbark hickory (*Carya ovata*) and southern shagbark hickory (*C. carolinae-septentrionalis*) are found on the ridges. The somewhat circumneutral character of the ridges is also shown by the presence of hop-hornbeam (*Ostrya virginiana*), redbud (*Cercis canadensis*), and coralberry (*Symphoricarpos orbiculatus*).

The ravines contain mostly a mix of Dry-Mesic Oak-Hickory Forest and Mesic Mixed Hardwood Forest natural communities. However, the trees are surprisingly not as mature as those on the ridgetops, and the ravines are rather dry and somewhat "uninteresting" from a floristic standpoint.

Boundary Justification: The definition of boundaries for this "site" is difficult. The site consists mainly of five or six ridges, but I am connecting the ridges with the ravines. There are a few disturbed areas between several ridges, such as a field south of US 64. Thus, the boundaries, especially along the eastern edge, are poorly defined.

Threats: There is already the threat and loss from road construction. Hurricane Fran has damaged several ridge tops. Thus, there is a threat of further damage by hurricanes and high winds.

SITE NAME: Old Quarry Creek

SIGNIFICANCE: County

INTEGRITY: Good

THREATS: Low -- timbering

PROTECTION STATUS: Part of the area is protected as a Jordan Lake Natural Area, the rest is unprotected.

JURISDICTION: Williams Township

OWNERSHIP: Federal and private

SUMMARY OF SIGNIFICANT FEATURES:

1. This is the site of the only known population of sweet pinesap (Monotropsis odorata) growing in Chatham County. This species is a state candidate for threatened or endangered status.
2. The mesic mixed hardwoods and bottomland forest present at this site are some of the more mature woodlands occurring in the county.

GENERAL SITE DESCRIPTION:

As is true for Herndon Creek, Robeson Creek, and other streams crossing the western edge of the Triassic Basin, Old Quarry Creek has cut a series of steep bluffs along the point where it transects the fault line. This site also marks another junction; it occurs at the southern edge of the large granite pluton that forms Edwards Mountain and Boothe Hill. The rock formation here is a schist, a type of metamorphic rock that is typically found where plutonic rocks have intruded into older series.

The steep north-facing slopes above the creek contain a good example of mesic mixed hardwood forest. The canopy is composed predominantly of beech (Fagus grandifolia), red oak (Quercus rubra), and white oak (Q. alba), and the understory and shrub layers contain such characteristic species as black gum (Nyssa sylvatica), maple leaf viburnum (Viburnum acerifolium), and witch hazel (Hamamelis virginiana). Herbs are fairly sparse, but one significant species is present, the sweet pinesap (Monotropsis odorata). This species is rare within the state generally, and is found more often in the mountains than the piedmont. In our region, this species is more-or-less restricted to steep north-facing slopes. Wintergreen (Gaultheria procumbens) has also been reported to occur at this site. Although not as rare as the pinesap, it has a similar distribution and habitat preference and is known from only one other site in Chatham County.

In addition to the slope community, this site has a reasonably well-developed bottomland forest. Although sections have been cut in the recent past and the presence of barbed wire fences indicates that grazing may still occur in some areas, this community contains many large trees, some of which are indicators of rich soil conditions. These include bitternut hickory (*Carya cordiformis*), northern shagbark hickory (*C. ovata*), and cherrybark oak (*Quercus pagoda*). The herb layer, however, is relatively depauperate, perhaps indicating continued disturbance. The dominant herb is the introduced Japanese grass (*Microstegium vimineum*).

Few animals were observed during the two survey trips made to this site, possibly reflecting the proximity of residential areas on both the north and south sides of this tract. Both visits were made outside the breeding season, however, and a large number of birds can be expected to occur in this relatively extensive area of mature forest.

CONSERVATION RECOMMENDATIONS:

This area receives some protection as a designated Jordan Lake Natural Area but private lands border it on both sides. Conservation easements are needed in order to provide buffer strips, particularly on the ridge above the steep, north-facing slopes.

SITE SURVEY REPORT

Site name: Old Quarry Creek

County: Chatham

Date(s): 25/VIII/88, 27/X/88

Surveyors:

Stephen P. Hall, Ph.D
NC Natural Heritage Program
P.O. Box 27687
Raleigh, NC 27611-7687
(919) 733-7701

Marjorie Boyer
NC Plant Conservation Program
P.O. Box 27647
Raleigh, NC 27611
(919) 733-3610

Size: 99 primary acres + 26 secondary acres = 125 total acres

Quad: Farrington

Province: Piedmont

Watershed: Old Quarry Creek --> Jordan Lake --> Haw River --> Cape Fear River

Location and directions: Large ravine located west of SR 1716 at north end of the Big Woods

Landowners and addresses:

Owners contacted and attitude:

General landscape description: See Site Description

Physical description

Aspect: North

Slope: 10-35

Topographic position: Upper slope to bottomland

Hydrology: Terrestrial

Moisture: Moist

Elevation: 250 - 350'

Geology: Schist

Soils: Georgeville Stony Silt Loam, White Store Fine Sandy Loam (eroded phase)

Comments on physical description: Contains a fairly large area of steep, north-facing slopes

SITE SURVEY REPORT**Site name:** Big Woods Wilderness**County:** Chatham**Date(s):** 11/VI/88, 25/VIII/88**Surveyors:**

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P.O. Box 27687
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Size: 4,430 acres**Quad:** Farrington**Province:** Piedmont**Watershed:** Jordan Lake --> Haw River --> Cape Fear River**Location and directions:** Bounded roughly by Bush Creek on the north, Big Woods Road on the east, US 64 on the south, and Mount Gilead Church Road on the west**Landowners and addresses:****Owners contacted and attitude:****General landscape description:** See Site Description**Physical description****Aspect:** Various**Slope:** Mostly 5-10, but 10-35 on steepest slopes**Topographic position:** Crest to lower slope**Hydrology:** Terrestrial**Moisture:** Moist to dry**Elevation:** 250 - 605'**Geology:****Soils:** Georgeville Gravelly Silt Loam, Goldston Gravelly Silt Loam**Comments on physical description:** large, relatively unbroken block of rugged uplands

Biological description**Community # 1: Dry-mesic Oak-hickory forest****Vegetation structure: Forest****Position in landscape and relation to other communities: Crest****Quality and condition: Fair****Size:****Dominants (*) and important species:****Canopy:**

Carya glabra
Carya ovalis
Liriodendron tulipifera
Pinus echinata
Quercus alba
Quercus coccinea
Quercus falcata
Quercus rubra
Quercus velutina

Shrubs and vines:

Ilex opaca
Nyssa sylvatica
Parthenocissus quinquefolia
Prunus serotina
Ulmus alata
Vaccinium sp.
Viburnum acerifolium
Viburnum prunifolium

Subcanopy:

Acer rubrum
Cornus florida
Ilex decidua
Juniperus virginiana
Oxydendrum arboreum

Herbs:

Chimaphila maculata

Community # 2: Basic Oak-hickory Forest**Vegetation structure:** Forest**Position in landscape and relation to other communities:** Diabase dike cutting across low slopes and creek bottom**Quality and condition:** Fair**Size:****Dominants (*) and important species:**Canopy:

Acer floridanum
Carya carolinae-septentrionalis
Carya tomentosa
Fraxinus sp.
Juglans nigra
Liquidambar styraciflua
Liriodendron tulipifera
Nyssa sylvatica
Pinus taeda
Platanus occidentalis
Quercus alba
Quercus falcata
Quercus rubra

Subcanopy:

Acer rubrum
Carpinus caroliniana
Cercis canadensis
Cornus florida
Ilex opaca
Juniperus virginiana
Ostrya virginiana
Oxydendrum arboreum
Ulmus alata

Shrubs and vines:

Aesculus sylvatica
Alnus serrulata
Amelanchier arborea
Chionanthus virginicus
Hamamelis virginiana
Parthenocissus quinquefolia
Prunus serotina
Rhus radicans
Rubus sp.
Smilax sp.
Vaccinium sp.
Viburnum acerifolium
Viburnum prunifolium
Viburnum rafinesquianum
Vitis sp.

Herbs:

Chimaphila maculata
Dioscorea villosa
Euonymus americanus
Hepatica americana
Iris cristata
Polystichum acrostichoides
Tiarella cordifolia
Uniola latifolia

Special status species

State-listed species: None observed

Potential for other special status species: Low

Other noteworthy species or features: Largest unbroken tract of forested uplands left in the county; of regional importance in maintaining significant populations of wildlife

Animals:

rr *Anolis carolinensis*

Site condition

Site integrity: Fair

Average DBH of canopy trees:

Maximum DBH of canopy trees:

Fire regime: Natural

Logged: Within last 20 years

Evenness of canopy: Mixed-age

Ditched/draind: No

Stream channelized: No

Dredged/filled: No

Understory cleared: No

Grazed: No

ORV damaged: No

Other disturbances: Clear-cuts and new housing developments

Adjacent Land Uses: Forest and residential

Significance of site: County

Discussion: See Site Description

Protection considerations and management needs: In order to maintain the integrity of a tract this large, county planning must be employed

Determination of survey boundaries: Encloses upland area of strongest relief between Old Quarry Creek on the north, Parker's Creek on the south, and Big Woods Road on the east; the western boundary was determined more arbitrarily through use of the 1981 photorevision of the USGS quad map

Priority for further study: Medium; surveys were only made along the margins of this very large tract, leaving the possibility that significant features remain to be discovered.

Specimens collected:

Photographs:

Others knowledgeable about the site:

References:

Topo map: Attached

Sketch map: None