

Files: ① *Echinacea laevigata*
② *Isotria medeoloides*
(Comments emailed to Lori Duncan, Chism.)
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5/1/01

BIOLOGICAL ASSESSMENT FOR SMOOTH CONEFLOWER AND SMALL WHORLED POGONIA HABITAT ENHANCEMENT

Andrew Pickens Ranger District
May, 2001-May, 2006

Project Title: Habitat Enhancement for Smooth Coneflower and Small Whorled Pogonia

Project Location: Two sites occur in proximity to the Burrell's Ford Rd., three sites near Cedar Creek Rifle Range, three sites near Cedar Creek Road, one site near Cassidy Bridge Road, and one site near Long Nose Mtn. on the Andrew Pickens Ranger District in Oconee County, SC.

Project Description: Chainsaw felling and/or girdling of overstory and midstory pine and hardwood trees during October-May; prescribed burning as needed; activities conducted as much as twice in the next five years.

Introduction

The purpose of a biological evaluation is to document the potential effects of projects occurring on National Forest land on proposed, endangered, threatened, and sensitive (TES) species and their habitats. This information is made available to the decision maker prior to making land management decisions. Addressed are threatened, endangered, and proposed species included on the 2001 USFWS County Distribution Records for Oconee County, and sensitive species included on the Regional Forester's approved sensitive species list for the Sumter National Forest (Appendix A).

The district is proposing to increase light availability at 10 sites, including three small whorled pogonia sites and seven smooth coneflower sites, through the limited removal of woody species by chain-saw felling or tree girdling during the dormant or early growing season. Each site will be no more than .5 acres in size. The desired condition at these sites will be a woodland or savanna habitat, decreasing shade from 80-100% down to 30-60% shade to stimulate the growth of understory herbaceous federally listed plants.

Current Condition

The dependence of smooth coneflower on open conditions has been noted in species status reports (Gaddy, 1991, 1985), recovery plans (Murdock, 1995), and as a result of population and habitat monitoring (Emanuel, 1996; Huffman, 2000). Smooth coneflower is known from 9 "populations" across the Andrew Pickens Ranger district. At least four of these are showing declines due to competition with successional vegetation. Since these sites have gone a long time in the absence of fire, the manual control of vegetation is needed prior to prescribed burning. Declines are occurring at the following seven sites (four populations) as follows:

- 1). Cedar Creek Rifle Range Road, three sites - 46 plants in 1993 and 17 in 2000.
- 2). Cedar Creek Road, one site - 9 plants in 1980, 40 plants in 1991, 43 plants in 1993, 32 in 2000.
- 3). Barton Creek, two sites - 193 plants in 1980, 322 plants in 1993, and 198 plants in 2000.

4). Long Nose Mountain, one site - 9 plants in 1993 and 0 plants in 2000.

The benefits of canopy removal on small whorled pogonia have been demonstrated in New Hampshire and Maine (Sperduto, personal comment). Small whorled pogonia is known from eight sites "populations" on the Andrew Pickens Ranger district. The small whorled pogonia occurring at three sites proposed for management are all showing declines (Gaddy, 1982-1991; Roecker, 1995-2000), as follows:

1). Burrell's Ford Road, two sites - "Upper King" - 8 plants in 1982, 6 in 1985, 1987, 1988, and 1989; 3 in 1991; 2 in 1995; 0 in 1998 and 2000; "Lower King" - 8 plants in 1982; 6 plants in 1985, 1987, 1988, 1989; 3 in 1991, 2 in 1995, 0 in 1998 and 2000.

2). Cassidy Bridge Road, one site - "Bone Camp" - 7 plants in 1998 and 2 in 2000.

The areas proposed for management have been visited by numerous individuals including Chick Gaddy, Rick Huffman, Perry Shatley, Robin Roecker, Chuck Andrews, and Karlan Emanuel. It is therefore concluded that no additional surveys for proposed, threatened, endangered, or sensitive species are needed. Potential habitat does occur for other threatened, endangered, or sensitive species as listed in Appendix A.

Proposed Project Effects

Direct effects include the possible crushing of individuals of smooth coneflower or small whorled pogonia by woody debris or trampling in conjunction with habitat management activities. Woody debris will be moved off the site following tree felling. Since the individuals conducting the work will be well trained in plant identification, and since the activities will be conducted early in the growing season, direct effects to smooth coneflower and small whorled pogonia will be negligible. No other rare species are known to occur in the project area and therefore will not be directly affected by project activities. Populations for Manhart's sedge and mountain witch alder occur in proximity to proposed activities but will not be directly affected.

Indirect effects include benefits to open woodland habitat and associated species, as this will be created and maintained on up to 5 acres. Openings in oak-hickory and mixed mesic forest habitats will increase the availability of light at the forest floor and promote the growth of understory herbaceous species. Effects to aquatic habitats will be negligible since little or no soil disturbance is anticipated.

The cumulative effects of project activities are expected to be beneficial. Other projects on the district which have the potential to provide open woodland and savanna habitat for species such as smooth coneflower, include the proposed Toxaway Creek project, thinning, pine beetle salvage, and ongoing prescribed burning activities on the district. Projects which result in the opening of the forest canopy comprise a small percentage of the district.

Smooth coneflower populations on the district which are thriving include one which has been logged and burned since it was discovered in 1980, which had 8 plants in 1980 and has increased to 350 plants today. Another population, which had been logged and

burned in 1982, and burned 3 more times since, has increased from 150 plants in 1991 to 657 plants today.

Few projects are conducted in the mixed mesic and hardwood forests typical of small whorled pogonia as population locations have been protected from management for several years. However, all sites for small whorled pogonia on the Sumter National Forest are exhibiting declines, and some seem to have disappeared. The cumulative project effects appear to benefit small whorled pogonia and smooth coneflower, and have no effect on other species addressed.

It is determined following this evaluation that the project is not likely to adversely affect (beneficial effect) smooth coneflower and small whorled pogonia and will have no impact on any sensitive species. This determination was made in coordination with the U.S. Fish and Wildlife Service as per correspondence dated 1/31/2001. In turn, the U.S. Fish and Wildlife Service was consulted informally on the determination made in this final biological assessment.

DETERMINATION OF EFFECT

NOT LIKELY TO ADVERSELY AFFECT, BENEFICIAL EFFECTS Smooth
Coneflower and Small Whorled Pogonia
NO IMPACT – All Sensitive Species

Prepared by /s/ Robin Roecker Date May 1, 2001

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Appendix A – Species Considered and Evaluated

The State Heritage Program element occurrence records (last updated in January 2001) for threatened, endangered and sensitive species locations within or near the proposed project areas were reviewed. U.S. Fish and Wildlife Service distribution records in South Carolina, by county, for Endangered, and Threatened species dated March 5, 2001, and the approved 1996 Regional Forester Sensitive species list was also reviewed. The following species were not reviewed in this biological evaluation due to the absence of their habitat in the area: bald eagle, persistent trillium, bachman's sparrow, mountain bittercress, shoal's spider lily, Virginia quillwort, Oglethorpe oak, sun-facing coneflower, Clingman's hedge nettle, faded trillium, southern nodding trillium, and sweet white trillium. Threatened, endangered, and sensitive species from the Andrew Pickens Ranger district of the Sumter National Forest are listed below, with either + = meets criteria or - = does not meet criteria for population occurrence, habitat occurrence, or evidence that the proposed project is in the range of the species.

SPECIES	HABITAT	Occurs	Habitat	Range
BALD EAGLE (<i>Haliaeetus</i> <i>leucocephalus</i>)	Perennial rivers and lakes, nesting in dominant or codominant pines 3 km or less from open water	-	-	+
SMOOTH CONEFLOWER (<i>Echinacea laevigata</i>)	Early successional sites and open stands or rights-of-way with grassy understories along the Brevard Geologic Belt	+	+	+
SMALL WHORLED POGONIA (<i>Isotria</i> <i>medeoloides</i>)	Mixed mesic mixed pine/hardwood forests, usually in association with old logging roads.	-	+	+
PERSISTENT TRILLIUM (<i>Trillium</i> <i>persistens</i>)	Mixed mesic mixed pine/hardwood forests in the vicinity of Lake Tugaloo	-	-	+
GEORGIA ASTER (<i>Aster georgianus</i>)	Early successional sites and open stands usually in association with old logging roads or powerline rights-of-way, limited by shade	-	+	+
BACHMAN'S SPARROW (<i>Aimophila aestivalis</i>)	Early successional sites and open stands with herbaceous understories	-	-	-
BROOK FLOATER (<i>Alasmidonta varicosa</i>)	Small streams with gravel bottoms; known from the Chattooga River	-	+	+
EASTERN SMALL FOOTED MYOTIS (<i>Myotis leibii</i>)	Hollow trees and loose bark near stream courses	-	+	+
MOUNTAIN BITTERCRESS (<i>Cardamine flagellifera</i>)	Rich cove communities	-	-	+
FORT MOUNTAIN SEDGE (<i>Carex communis</i> <i>var. amplisquama</i>)	Dry, open woodlands	-	+	+

MANHART'S SEDGE (<i>Carex manhartii</i>)	Cove forests and montane oak-hickory forests, primarily at mid- to high-elevations.	-	+	+
MOUNTAIN WITCH ALDER (<i>Fothergilla major</i>)	Oak-hickory forests	-	+	+
SHOAL'S SPIDER LILY (<i>Hymenocallis coronaria</i>)	Rocky shoals near the fall-line	-	-	-
VIRGINIA QUILLWORT (<i>Isoetes virginica</i>)	Known from streams in Virginia	-	-	-
FRASER'S LOOSESTRIFE (<i>Lysimachia fraseri</i>)	Permanent openings	-	+	+
OGLETHORPE OAK (<i>Quercus oglethorpensis</i>)	Streamsides and occasionally in upland habitats within the Carolina Slate Belt	-	-	-
SUN-FACING CONEFLOWER (<i>Rudbeckia heliopsisidis</i>)	Permanent openings near Lake Cherokee	-	-	+
OCONEE BELL (<i>Shortia galacifolia</i>)	Mixed mesic forests at higher elevations near Lake Jocassee	-	+	+
CLINGMAN'S HEDGE NETTLE (<i>Stachys clingmanii</i>)	Rich coves at higher elevations	-	-	+
FADED TRILLIUM (<i>Trillium discolor</i>)	Rich coves and oak-hickory communities in the Savannah River drainage system	-	-	+
SOUTHERN NODDING TRILLIUM (<i>Trillium rugelli</i>)	Rich wooded slopes over mafic or calcareous rocks	-	-	+
SWEET WHITE TRILLIUM (<i>Trillium simile</i>)	Rich wooded slopes over mafic or calcareous rocks	-	-	-
PIEDMONT STRAWBERRY (<i>Waldsteinia lobata</i>)	Mixed mesic hardwood forests	-	+	+