

CANDIDATE ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: *Panicum hirstii*

COMMON NAME: Hirsts= panic grass

LEAD REGION: Region 5

INFORMATION CURRENT AS OF: February 2002

STATUS/ACTION (Check all that apply):

New candidate

Continuing candidate

Non-petitioned

Petitioned - Date petition received:___

90-day positive - FR date:___

12-month warranted but precluded - FR date:___

Is the petition requesting a reclassification of a listed species?

Listing priority change

Former LP:___

New LP:___

Latest date species first became a Candidate: _____

Candidate removal: Formal LP:___ (Check only one reason)

A - Taxon more abundant or widespread than previously believed or not subject to a degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

F - Range is no longer a U.S. territory.

M - Taxon mistakenly included in past notice of review.

N - Taxon may not meet the Act's definition of *Species*@

X - Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Plant, Poaceae

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: NJ, DE, NC, GA

CURRENT STATES/COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE: NJ, DE, NC

LEAD REGION CONTACT: Diane Lynch, (413) 253-8628

LEAD FIELD OFFICE CONTACT: New Jersey Field Office, Annette Scherer, 609-646-9310

SUPPORT FIELD OFFICE(S): Asheville Field Office, 828-258-3939

BIOLOGICAL INFORMATION:

Panicum hirstii occurs in Coastal plain intermittent ponds, usually in wet savanna or pine barren habitats. The species requires habitats that are at least intermittently wet, receiving full sun to light shade, and with substrates that are organic but firm. The plant occurs in flat-bottomed depressions with substantial water-level fluctuations dependent on rainfall. The species relies on periods of standing water to keep competing species at a minimum. Individual populations can vary dramatically in size from year to year. In some years, plants may not appear (Kral, 1982; Schuyler, 1996).

Currently, *Panicum hirstii* occurs at only one site in Delaware and two sites in North Carolina. The species' historic range included seven sites within New Jersey, Delaware, North Carolina, and Georgia. *Panicum hirstii* has not been observed at the known sites in Sumter and Calhoun Counties, Georgia, for over 30 years and may now be extirpated at the two known Atlantic County, New Jersey sites. Of the two sites in New Jersey (Barkwoods Pond and Labounsky Pond, collectively known as Hirsts Ponds), the species has not been seen at Barkwoods Pond since 1992; the last report from Labounsky Pond was in 1985 (Schuyler, 1998). Thorough surveys of the Hirsts Ponds were conducted in 2001 with negative results (Schuyler, pers. comm, 2001).

Populations at the remaining known sites are small. During a 1999 survey of the Delaware site (Assawoman Pond), 164 individual plants were identified (McAvoy and Bennett, 2000). The two sites in North Carolina occur on the Camp Lejeune Marine Corps Base. One site, referred to as Lyman Road Cypress Savanna, consists of plants scattered over an area of approximately 25 x 20 meters. The other site, referred to as Starretts Meadow, occurs over an area of about 20 x 15 meters (Schuyler, 1998).

THREATS:

A. The present or threatened destruction, modification, or curtailment of its habitat or range:

In New Jersey, *Panicum hirstii* habitat at Labounsky Pond has been impacted by an illegally constructed ditch. This ditch drains surface water from a construction parking / heavy equipment storage yard into Labounsky Pond. Runoff of oil, fuel, and lubricants from this storage yard poses a threat to water quality within the pond (Eisenhauer, pers. comm., 1998; Patt, pers. comm., 2000). At both ponds in New Jersey, there is a growing population of resident Canada geese (*Branta canadensis*). Grazing by these geese is impacting vegetation in the ponds and fecal matter may be contributing to formation of dense algal mats (Schuyler, pers. comm., 1998; Patt, pers. comm., 2000). In Delaware, an adjacent sandpit and agricultural ditching in the area may be lowering water levels at the sites, threatening the hydrology of the site. Encroachment of woody vegetation is an ongoing problem. This woody vegetation includes primarily, red maple (*Acer rubrum*) and secondly, sweet gum (*Liquidambar styraciflua*). Encroachment is also occurring by straw-colored sedge (*Carex striata*) (Bennett, pers. comm., 1998; McAvoy, pers. comm., 1998). Though there are no immediate threats to the two North Carolina populations, both sites are within areas zoned for military training exercises (LeBlond, pers comm., 1998). There is no permanent habitat protection at any of these sites.

B. Overutilization for commercial, recreational, scientific, or educational purposes:

Not a major threat to the species. Potential for ORV disturbance.

C. Disease or predation:

Not a known threat.

D. The inadequacy of existing regulatory mechanisms:

The State of Delaware does not have a state endangered species act. The State maintains a list of rare plants and a rare plant conservation program. However, no legal protection is given to plants; any protection is strictly voluntary. *Panicum hirstii* is included on Delaware=s rare plant list.

The State of New Jersey maintains a list of rare and endangered plant species; however, the State provides no regulatory protection for species in the list. It is against State law to collect plant species occurring on state land, but private landowners with endangered plants on their property have no restrictions. *Panicum hirstii* is listed as endangered by the State of New Jersey.

The State of North Carolina=s Plant Conservation Program maintains a list of threatened and endangered plant species. Any person wishing to collect a listed plant species must have written permission from the property owner as well as a permit from the North Carolina Department of Agriculture=s Plant Conservation Program. If species are illegally collected, the penalty is a fine of up to \$2,000 per plant collected. *Panicum hirstii* is proposed as endangered by the State of North Carolina.

E. Other natural or manmade factors affecting its continued existence:

Competition from rhizomatous perennials that dominate the turf covering the pond bottoms, particularly *Eleocharis robbinsii*, is a threat in Hirst Ponds, New Jersey. Dense growth of *Utricularia fibrosa* and algae may be retarding growth of *Panicum hirstii* plants at Barkwoods Pond when water is present (Schuyler, pers. comm., 1998). At Assawoman, *Panicum hirstii* does not occur in areas dominated by *Sclerolepis uniflora*, a rhizomatous perennial, although both species are in proximity there. Similar observations were made at the Camp Lejeune sites in North Carolina. At one site in North Carolina, where *Utricularia inflata* and algae in the water were present, plants of *Panicum hirstii* were much smaller than at the other site in North Carolina which had deeper and clearer water (Schuyler, 1998).

FOR RECYCLED PETITIONS: N/A

- a. Is listing still warranted? ___
- b. To date, has publication of a proposal to list been precluded by other higher priority listing actions? ___
- c. Is a proposal to list the species as threatened or endangered in preparation? ___
- d. If the answer to c. above is no, provide an explanation of why the action is still precluded.

LAND OWNERSHIP (Percentage Federal/state/private, identify nonprivate owners):

North Carolina populations both occur on Federal lands. The Delaware population occurs on a

State-owned wildlife refuge. Former New Jersey populations occur on lands owned by The Nature Conservancy.

PRELISTING (Describe status of conservation agreements or other conservation activities):

The Delaware Division of Fish and Wildlife has conducted periodic removal of encroaching *Carex striata* and woody vegetation at the Assawoman Pond site. The Delaware Natural Heritage Program has effectively managed the *Carex striata* threats to *Panicum hirstii* at Assawoman Pond through 2000. It is presumed that the Delaware Natural Heritage Program will continue to deal with existing and future threats to the species. However, concerns from encroachment by *Acer rubrum* and *Liquidambar styraciflua* and changes to hydrology of the site remain (McAvoy and Bennett, 2000).

The Marine Corps has cooperated in *Panicum hirstii* protection efforts in recent years by avoiding activities that would adversely affect the species at the Camp Lejeune, North Carolina sites. One site at Camp Lejeune is within a protected zone maintained for red cockaded woodpecker (LeBlond, pers. comm., 1998).

A status survey for the species in New Jersey and Delaware was prepared for the Service in 1998 by Alfred Schuyler of the Academy of Natural Sciences (Schuyler, 1998).

In New Jersey, the Service and TNC are working with the construction company near Labounsky Pond to eliminate impacts from the illegally constructed ditch. Experimental treatments of the pond bottoms at Labounsky and Barkwoods Ponds were initiated in 1999 in an attempt to stimulate any naturally occurring seed bank of *Panicum hirstii* at these sites (Patt, pers. comm., 2000). As of summer 2001, these treatments have been unsuccessful (Schuyler, pers. comm., 2001).

REFERENCES:

- Kral, R. 1982. *Panicum hirstii* Swallen. In: A.F. Robinson (editor) Endangered and threatened species of the Southeastern United States including Puerto Rico and the Virgin Islands. U.S. Fish and Wildlife Service, Atlanta, Georgia. 6 pp.
- McAvoy, W.A. and K. Bennett. 2000. Survey and protection of federally listed and candidate plant species in Delaware, 1999-2000 Project Report, Federal Aid Project E-2-15. Delaware Department of Natural Resources and Environmental Control, Natural Heritage Program, Smyrna, Delaware. 22 pp.
- Schuyler, A.E. 1996. Taxonomic status of *Panicum hirstii* Swallen. *Bartonia* 59:95-96.
- Schuyler, A.E. 1998. Status Survey for *Panicum hirstii* (Hirsts = Panic Grass) in New Jersey and Delaware. Report prepared for U.S. Fish and Wildlife Service.

Personal Communications

- Bennett, K. 1998. Delaware Natural Heritage Program, Smyrna, Delaware.

Eisenhauer, S. 1998. The Nature Conservancy, Eldora, New Jersey.

LeBlond, R. 1998. North Carolina Natural Heritage Program, Richlands, North Carolina.

McAvoy, W. 1998. Delaware Natural Heritage Program, Smyrna, Delaware.

Patt, J. 2000. The Nature Conservancy, Delmont, New Jersey.

Schuyler, A. E. 1998. Academy of Natural Sciences, Philadelphia, Pennsylvania.

Schuyler, A. E. 2001. Academy of Natural Sciences, Philadelphia, Pennsylvania.

LISTING PRIORITY (* after number)

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5 *
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

Rationale for listing priority number:

Magnitude:

Imminence:

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes to the candidate list, including listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all additions of species to the candidate list, removal of candidates, and listing priority changes.

Approve: Mamie Parker March 24, 2003
Regional Director, Fish and Wildlife Service Date

Concur: _____
Director, Fish and Wildlife Service Date

Do not
concur: _____
Director, Fish and Wildlife Service Date

Director=s Remarks: _____

Date of annual review: February 21, 2002

Conducted by: Annette Scherer, USFWS, NJFO

Comments: _____

