

Appendix A. Federal and state rarity statuses and global and state ranks.

FEDERAL STATUSES

(Legislative Authority: The Endangered Species Act of 1973)

Endangered – a species in danger of extinction throughout all or a significant portion of its range.

Threatened – a species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

DCNR STATE RARITY STATUSES

(Legislative Authority: Title 25, Chapter 82, Conservation of Native Wild Plants, amended June 18, 1993, Pennsylvania Department of Environmental Resources)

The state rarity statuses and state element ranks can be dynamic and may be amended as new data become available as the result of continuing field surveys and research.

- PE - Pennsylvania Endangered - Plant species which are in danger of extinction throughout most or all of their natural range within this Commonwealth, if critical habitat is not maintained or if the species is greatly exploited by man. This classification shall also include any populations of plant species that have been classified as Pennsylvania Extirpated, but which subsequently are found to exist in this Commonwealth.
- PT - Pennsylvania Threatened - Plant species which may become endangered throughout most or all of their natural range within this Commonwealth, if critical habitat is not maintained to prevent further decline in this Commonwealth, or if the species is greatly exploited by man.
- PR - Pennsylvania Rare - Plant species which are uncommon within this Commonwealth. All species of native wild plants classified as Disjunct, Endemic, Limit of Range and Restricted are included within the Pennsylvania Rare classification.
- PX - Pennsylvania Extirpated - Plant species believed by the Department to be extinct within this Commonwealth. These plant species may or may not be in existence outside this Commonwealth. If plant species classified as Pennsylvania Extirpated are found to exist, the species automatically will be considered to be classified as Pennsylvania Endangered.
- PV - Pennsylvania Vulnerable - Plant species which are in danger of population decline within Pennsylvania because of their beauty, economic value, use as a cultivar, or other factors which indicate that persons may seek to remove these species from their native habitats.
- TU - Tentatively Undetermined - Plant species which are believed to be in danger of population decline, but which cannot presently be included within another classification

due to taxonomic uncertainties, limited evidence within historical records, or insufficient data.

- N - None - Plant species which are believed to be endangered, rare, or threatened, but which are being considered by the required regulatory review processes for future listing.

#### NatureServe GLOBAL ELEMENT RANKS

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
- G2 = Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
- G3 = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range or because of other factors making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.
- G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- GH = Of historical occurrence throughout its range, i.e., formerly part of the established biota, with the expectation that it may be rediscovered (e.g., Bachman's Warbler).
- GU = Possibly in peril range wide but status uncertain; need more information.
- GX = Believed to be extinct throughout its range (e.g., Passenger Pigeon) with virtually no likelihood that it will be rediscovered.

#### NatureServe STATE ELEMENT RANKS

- S1 = Critically imperiled in state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation from the state.

- S2 = Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.
- S3 = Rare or uncommon in state (on the order of 21 to 100 occurrences).
- S4 = Apparently secure in state, with many occurrences.
- S5 = Demonstrably secure in state and essentially ineradicable under present conditions.
- SA = Accidental in state, including species which only sporadically breed in the state.
- SE = An exotic established in state; may be native elsewhere in North America (e.g., house finch).
- SH = Of historical occurrence in the state with the expectation that it may be rediscovered.
- SN = Regularly occurring, usually migratory and typically non-breeding species for which no significant or effective habitat conservation measures can be taken in the state.
- SR = Reported from the state, but without persuasive documentation which would provide a basis for either accepting or rejecting (e.g., misidentified specimen) the report.
- SRF = Reported falsely (in error) from the state but this error persisting in the literature.
- SU = Possibly in peril in state but status uncertain; need more information.
- SX = Apparently extirpated from the state.

Note: A "T" appearing in either the G Rank or S Rank indicates that the intraspecific taxa is being ranked differently than the species. A "Q" in the rank indicates that there is taxonomic uncertainty about a taxa being ranked (i.e., taxa is being accepted as a full species or natural community in this list but may be treated as a variety or form by others). A "?" after a "G" or "S" indicates that the rank is uncertain at this time.



Appendix B. Vegetation associations in Gettysburg National Military Park and Eisenhower National Historic Site (adapted from Perles et al. 2006).

Agricultural Field

When these fields are planted to grasses, they are often near monocultures of one of following species: timothy (*Phleum pratense*), meadow ryegrass (*Lolium pratense*), or wheat (*Triticum aestivum*). Other common associates include wild garlic (*Allium vineale*), garden yellow rocket (*Barbarea vulgaris*), redbud (*Agrostis gigantea*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), quackgrass (*Elymus repens*), red fescue (*Festuca rubra*), orchard grass (*Dactylis glomerata*), Canada bluegrass (*Poa compressa*), common dandelion (*Taraxacum officinale*), sweet vernal grass (*Anthoxanthum odoratum*), narrowleaf plantain (*Plantago lanceolata*), spreading dogbane (*Apocynum androsaemifolium*), and Kentucky bluegrass (*Poa pratensis*). Fallow fields usually contain a mixture of species that colonize bare soil, such as prairie fleabane (*Erigeron strigosus*), mouse-ear cress (*Arabidopsis thaliana*), common mouse-ear chickweed (*Cerastium fontanum*), bristlegrass (*Setaria* spp.), and other annual weeds. The invasive species Canadian thistle (*Cirsium arvense*) can be abundant in the fallow fields and present in the planted fields. Woody plants and vines are generally absent from these fields. These fields may contain inclusions of wet meadow vegetation along the linear drainages and swales that run through the fields.

Agricultural Field/Wet Meadow

A blend of the Agricultural Field and Wet Meadow vegetation associations.

Bottomland Mixed Hardwood Forest

Due to the small fragmented nature of the stands and their disturbance history, the canopy composition can be extremely variable. The canopy can be dominated by one or more of the following species: green ash (*Fraxinus pennsylvanica*), pin oak (*Quercus palustris*), swamp white oak (*Quercus bicolor*), black walnut (*Juglans nigra*), or shagbark hickory (*Carya ovata*). A wide range of associates can be found in the canopy and subcanopy, such as: red maple (*Acer rubrum*), American elm (*Ulmus americana*), eastern redbud (*Cercis canadensis*), box-elder (*Acer negundo*), eastern red-cedar (*Juniperus virginiana*), Shumard's oak (*Quercus shumardii*), black cherry (*Prunus serotina*), silver maple (*Acer saccharinum*), sweet cherry (*Prunus avium*), and tuliptree (*Liriodendron tulipifera*). The canopy varies from open woodland to closed canopy (25-80% cover) and extends 20-30 m in height. Subcanopy trees usually range from 10-15 m in height and cover 15-70% of the stand. Northern spicebush (*Lindera benzoin*), along with the invasive plants multiflora rose (*Rosa multiflora*), autumn-olive (*Elaeagnus umbellata*), Morrow's honeysuckle (*Lonicera morrowii*), and European privet (*Ligustrum vulgare*) compose the tall-shrub layer that covers 20-60% of the stand. Common short shrubs are Japanese barberry (*Berberis thunbergii*), wineberry (*Rubus phoenicolasius*), black raspberry (*Rubus occidentalis*), northern dewberry (*Rubus flagellaris*), Allegheny blackberry (*Rubus allegheniensis*), and seedlings of the canopy and subcanopy species. The herbaceous layer is typically moderately dense to dense (50-99% cover) and contains jewelweed (*Impatiens capensis*), mannagrass (*Glyceria* sp.), spring avens (*Geum vernum*), Jack-in-the-pulpit (*Arisaema triphyllum*), broadleaf enchanter's-nightshade (*Circaea lutetiana* ssp. *canadensis*), eastern star sedge (*Carex radiata*), common yellow wood sorrel (*Oxalis stricta*), eastern narrowleaf sedge (*Carex amphibola*), rough

bluegrass (*Poa trivialis*), Canadian wild ginger (*Asarum canadense*), wild garlic (*Allium vineale*), marsh blue violet (*Viola cucullata*), false nettle (*Boehmeria cylindrica*), and sensitive fern (*Onoclea sensibilis*). The invasive species Japanese stiltgrass (*Microstegium vimineum*), Japanese honeysuckle (*Lonicera japonica*), creeping jenny (*Lysimachia nummularia*), and garlic mustard (*Alliaria petiolata*) can be abundant in the herbaceous layer. Vines such as poison-ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), frost grape (*Vitis vulpina*), and common moonseed (*Menispermum canadense*) are typical and cover 10-60% of the stand.

#### Chestnut Oak Forest

The closed canopy is dominated by chestnut oak (*Quercus prinus*) with associates of black oak (*Quercus velutina*), scarlet oak (*Quercus coccinea*), and/or white oak (*Quercus alba*). Other canopy and subcanopy tree species include mockernut hickory (*Carya alba*), pignut hickory (*Carya glabra*), red hickory (*Carya ovalis*), common serviceberry (*Amelanchier arborea*), sassafras (*Sassafras albidum*), blackgum (*Nyssa sylvatica*), black cherry (*Prunus serotina*), and red maple (*Acer rubrum*). Canopy trees tend to extend 25-30 m in height, while subcanopy trees are typically 10-15 m in height. A sparse tall-shrub layer contains eastern redbud (*Cercis canadensis*), white ash (*Fraxinus americana*), and species from the canopy. The short-shrub layer contains mostly ericaceous species, predominantly Blue Ridge blueberry (*Vaccinium pallidum*), with occasional mountain laurel (*Kalmia latifolia*), northern lowbush blueberry (*Vaccinium angustifolium*), deerberry (*Vaccinium stamineum*), and black huckleberry (*Gaylussacia baccata*). Mapleleaf viburnum (*Viburnum acerifolium*) is another prominent short shrub, along with northern dewberry (*Rubus flagellaris*) and seedlings of canopy trees. Owing largely to the thick, resistant oak/ericad leaf litter, the herbaceous layer is generally sparse. Common constituents include white snakeroot (*Ageratina altissima* var. *altissima*), wreath goldenrod (*Solidago caesia*), Solomon's-seal (*Polygonatum biflorum*), feathery false lily-of-the-valley (*Maianthemum racemosum* ssp. *racemosum*), and whitetinge sedge (*Carex albicans*). Virginia creeper (*Parthenocissus quinquefolia*) may be an abundant vine in this forest type.

#### Dry Oak Mixed-Hardwood Forest

The canopy is dominated by white oak (*Quercus alba*) and/or northern red oak (*Quercus rubra*), with associates pignut hickory (*Carya glabra*), black oak (*Quercus velutina*), white ash (*Fraxinus americana*), mockernut hickory (*Carya alba*), and shagbark hickory (*Carya ovata*). Disturbed stands of this forest type can also have tuliptree (*Liriodendron tulipifera*) as a codominant. Eastern white pine (*Pinus strobus*) can be an occasional canopy associate. Canopy trees usually extend from 20-35 m in height and cover 60-90% of the area. In stands where clearing has occurred, the canopy will be more open, resembling a woodland. The subcanopy reaches from 5-20 m in height and can cover 25-50% of the area. Typical subcanopy trees include red maple (*Acer rubrum*), shagbark hickory (*Carya ovata*), pignut hickory, sweet cherry (*Prunus avium*), black cherry (*Prunus serotina*), American elm (*Ulmus americana*), sassafras (*Sassafras albidum*), and blackgum (*Nyssa sylvatica*). Dead or declining subcanopy eastern redcedar (*Juniperus virginiana*) are common in disturbed stands. The tall-shrub layer can be sparse (5-20% cover) or dense (40-60% cover) and contains flowering dogwood (*Cornus florida*), blackhaw (*Viburnum prunifolium*), spicebush (*Lindera benzoin*), American witch-hazel (*Hamamelis virginiana*), and species from the canopy and subcanopy. White ash seedlings, spicebush, northern dewberry (*Rubus flagellaris*), eastern redbud (*Cercis canadensis*), and

mapleleaf viburnum (*Viburnum acerifolium*) are common species in the short-shrub layer that covers 10-50% of the area. The invasive species multiflora rose (*Rosa multiflora*) and Japanese barberry (*Berberis thunbergii*) can also be abundant in the short-shrub layer in disturbed examples of this type. The herbaceous layer is generally sparse and covers approximately 30% of the area, although the percent cover of the herbaceous layer can vary from 15-90%. Common constituents include broadleaf enchanter's-nightshade (*Circaea lutetiana* ssp. *canadensis*), jewelweed (*Impatiens capensis*), licorice bedstraw (*Galium circaezans*), Jack-in-the-pulpit (*Arisaema triphyllum*), rue anemone (*Thalictrum thalictroides*), Virginia springbeauty (*Claytonia virginica*), feathery false lily-of-the-valley (*Maianthemum racemosum* ssp. *racemosum*), Solomon's-seal (*Polygonatum biflorum*), naked-flower tick-trefoil (*Desmodium nudiflorum*), lopseed (*Phryma leptostachya*), and upland boneset (*Eupatorium sessilifolium*). Virginia creeper (*Parthenocissus quinquefolia*) is a typical vine. The invasive species Japanese honeysuckle (*Lonicera japonica*), garlic mustard (*Alliaria petiolata*), Japanese stiltgrass (*Microstegium vimineum*), and oriental lady's-thumb (*Polygonum caespitosum*) may be abundant in this forest type.

#### Modified Successional Forest

This association is variable both in vegetation structure and species composition. Land-use history as well as past and current management greatly affect the composition of each forest stand. In general, the canopy and subcanopy are dominated by early-successional and weedy species, often with small diameters at breast height (<15 cm). Eastern red-cedar (*Juniperus virginiana*) is often abundant in the subcanopy, although these trees may experience decline as they are shaded by canopy trees. Common canopy and subcanopy trees include white ash (*Fraxinus americana*), black cherry (*Prunus serotina*), black walnut (*Juglans nigra*), black locust (*Robinia pseudoacacia*), eastern redbud (*Cercis canadensis*), sassafras (*Sassafras albidum*), American elm (*Ulmus americana*), red maple (*Acer rubrum*), honey locust (*Gleditsia triacanthos*), white pine (*Pinus strobus*), quaking aspen (*Populus tremuloides*), catalpa (*Catalpa speciosa*), and several oak species (*Quercus rubra*, *Quercus velutina*, *Quercus palustris*). Canopy trees typically extend 20-30 m in height and cover 30-70% of the stand. Subcanopy trees usually range from 5-15 m in height and cover 20-80% of the stand. Blackhaw (*Viburnum prunifolium*), northern spicebush (*Lindera benzoin*), eastern redbud, and flowering dogwood (*Cornus florida*) make up the tall-shrub layer (20-50% cover). The short-shrub layer (20-50% cover) is composed of black raspberry (*Rubus occidentalis*), Allegheny blackberry (*Rubus allegheniensis*), northern dewberry (*Rubus flagellaris*), and seedlings of the canopy trees. The herbaceous layer (20-80% cover) is composed of jewelweed (*Impatiens capensis*), eastern narrowleaf sedge (*Carex amphibola*), wild garlic (*Allium vineale*), broadleaf enchanter's-nightshade (*Circaea lutetiana* ssp. *canadensis*), sweet vernal grass (*Anthoxanthum odoratum*), eastern star sedge (*Carex radiata*), common yellow wood sorrel (*Oxalis stricta*), white snakeroot (*Ageratina altissima* var. *altissima*), Jack-in-the-pulpit (*Arisaema triphyllum*), licorice bedstraw (*Galium circaezans*), Indian strawberry (*Duchesnea indica*), and common selfheal (*Prunella vulgaris*). Invasive species are abundant in the tall-shrub, short-shrub and herbaceous layers of this forest type. The most common invasives include Japanese honeysuckle (*Lonicera japonica*), multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata*), European privet (*Ligustrum vulgare*), Morrow's honeysuckle (*Lonicera morrowii*), and wineberry (*Rubus phoenicolasius*). Vines can be sparse or abundant (10-70% cover), with such common species as Virginia creeper (*Parthenocissus quinquefolia*), grape (*Vitis* spp.), and poison-ivy (*Toxicodendron radicans*).

### Pasture

The vegetation in these fields is often heavily browsed. The species composition is variable, although most species are annual weeds or adapted to colonizing bare soil. Common species include meadow ryegrass (*Lolium pratense*), Kentucky bluegrass (*Poa pratensis*), timothy (*Phleum pratense*), white clover (*Trifolium repens*), red clover (*Trifolium pratense*), annual ragweed (*Ambrosia artemisiifolia*), sweet vernal grass (*Anthoxanthum odoratum*), and path rush (*Juncus tenuis*). Other associates include prairie fleabane (*Erigeron strigosus*), Queen Anne's-lace (*Daucus carota*), narrowleaf plantain (*Plantago lanceolata*), common dandelion (*Taraxacum officinale*), and orchard grass (*Dactylis glomerata*). Widely scattered trees may be present in the pastures or line the edges of the field. Possible species include eastern red-cedar (*Juniperus virginiana*), cherry (*Prunus* spp.), white ash (*Fraxinus americana*), black walnut (*Juglans nigra*), black locust (*Robinia pseudoacacia*), eastern redbud (*Cercis canadensis*), sassafras (*Sassafras albidum*), American elm (*Ulmus americana*), red maple (*Acer rubrum*), honey locust (*Gleditsia triacanthos*), and oaks (*Quercus* spp.).

### Pasture/Wet Meadow

A blend of the Pasture and Wet Meadow vegetation associations.

### Successional Old Field

These successional fields are typically dominated by a diverse mix of grasses and forbs with woody species establishing intermittently throughout the fields. Shrubs and saplings can be absent or cover up to 80% of the field. The most common tall shrub is eastern red-cedar (*Juniperus virginiana*), with sweet cherry (*Prunus avium*) and white ash (*Fraxinus americana*) as other common woody plants. Short shrubs can cover 5-40% of the field. Common short shrubs include Allegheny blackberry (*Rubus allegheniensis*), smooth sumac (*Rhus glabra*), eastern red-cedar, eastern redbud (*Cercis canadensis*), and northern dewberry (*Rubus flagellaris*). In areas of the field without dense shrubs, the herbaceous layer is typically dense (60-95% cover) and contains a diverse mix of grasses and forbs. The most common species include sweet vernal grass (*Anthoxanthum odoratum*), red fescue (*Festuca rubra*), meadow ryegrass (*Lolium pratense*), early goldenrod (*Solidago juncea*), wrinkleleaf goldenrod (*Solidago rugosa*), narrowleaf mountainmint (*Pycnanthemum tenuifolium*), American burnweed (*Erechtites hieraciifolia*), common yellow wood sorrel (*Oxalis stricta*), fuzzy sedge (*Carex hirsutella*), yellow Indiangrass (*Sorghastrum nutans*), St. John's-wort (*Hypericum punctatum*, *Hypericum perforatum*), garden yellow rocket (*Barbarea vulgaris*), Queen Anne's-lace (*Daucus carota*), panicked-leaf tick-trefoil (*Desmodium paniculatum*), wild garlic (*Allium vineale*), flat-top goldentop (*Euthamia graminifolia*), Virginia strawberry (*Fragaria virginiana*), and wild mint (*Mentha arvensis*). Invasive species can be abundant in the tall-shrub, short-shrub and herbaceous layers, including Japanese honeysuckle (*Lonicera japonica*), Morrow's honeysuckle (*Lonicera morrowii*), multiflora rose (*Rosa multiflora*), and autumn-olive (*Elaeagnus umbellata*). Vines such as poison-ivy (*Toxicodendron radicans*) and grape (*Vitis* spp.) are typical and can cover 0-40% of the stand.

### Successional Old Field/Wet Meadow

A blend of the Successional Old Field and Wet Meadow vegetation associations.

### Sycamore-Mixed Hardwood Floodplain Forest

The canopy is typically dominated by sycamore (*Platanus occidentalis*), with associates black walnut (*Juglans nigra*), bitternut hickory (*Carya cordiformis*), silver maple (*Acer saccharinum*), shagbark hickory (*Carya ovata*), box-elder (*Acer negundo*), and shellbark hickory (*Carya laciniosa*). The subcanopy is composed of American elm (*Ulmus americana*), box-elder, silver maple, and green ash (*Fraxinus pennsylvanica*). The closed canopy extends 25-35 m in height, while subcanopy trees usually range from 5-15 m in height and cover 30-60% of the stand. The tall- and short-shrub layers are sparse, usually composed of saplings and seedlings of canopy and subcanopy trees, as well as other weedy hardwood species. The herbaceous layer is typically dense (about 90% cover) and contains false mermaidweed (*Floerkea proserpinacoides*), jewelweed (*Impatiens capensis*), broadleaf enchanter's-nightshade (*Circaea lutetiana ssp. canadensis*), Canadian wild ginger (*Asarum canadense*), green dragon (*Arisaema dracontium*), spreading sedge (*Carex laxiculmis*), and Solomon's-seal (*Polygonatum biflorum*). Invasive species are abundant in the herbaceous layer, including garlic mustard (*Alliaria petiolata*), Japanese stiltgrass (*Microstegium vimineum*), Japanese honeysuckle (*Lonicera japonica*), oriental lady's-thumb (*Polygonum caespitosum*), and Asiatic tearthumb (*Polygonum perfoliatum*). Vines such as poison-ivy (*Toxicodendron radicans*) and Virginia creeper (*Parthenocissus quinquefolia*) are typical and cover 5-20% of the stand.

### Tuliptree Forest

Tuliptree (*Liriodendron tulipifera*) is dominant in the canopy and subcanopy, covering greater than 50% of the forest canopy. Common canopy associates include oaks (*Quercus velutina*, *Quercus rubra*, *Quercus alba*, *Quercus prinus*) and mockernut hickory (*Carya alba*), while subcanopy associates are white ash (*Fraxinus americana*) and red maple (*Acer rubrum*). Canopy trees usually range in height from 30-35 m, and subcanopy trees reach 10-25 m in height. Northern spicebush (*Lindera benzoin*) is typically dominant in the tall- and short-shrub layers, which can be sparse to moderately dense (20-60% cover). Other common shrubs include blackhaw (*Viburnum prunifolium*), witch-hazel (*Hamamelis virginiana*), and seedlings and saplings of the canopy trees. The invasive species multiflora rose (*Rosa multiflora*), Japanese barberry (*Berberis thunbergii*), and wineberry (*Rubus phoenicolasius*) can also be abundant in the short-shrub layer. The herbaceous layer is composed of broadleaf enchanter's-nightshade (*Circaea lutetiana ssp. canadensis*), Jack-in-the-pulpit (*Arisaema triphyllum*), wild comfrey (*Cynoglossum virginianum*), licorice bedstraw (*Galium circaezans*), jewelweed (*Impatiens capensis*), perfoliate bellwort (*Uvularia perfoliata*), and downy yellow violet (*Viola pubescens*). Virginia creeper (*Parthenocissus quinquefolia*) is often present as a vine. The invasive species Japanese honeysuckle (*Lonicera japonica*), garlic mustard (*Alliaria petiolata*), Japanese stiltgrass (*Microstegium vimineum*), and oriental lady's-thumb (*Polygonum caespitosum*) may be abundant in this forest type.

### Wet Meadow

This association is dominated by a diverse mix of hydrophilic graminoids, predominantly sedges (*Carex* spp.). Common sedges include broom sedge (*Carex scoparia*), fox sedge (*Carex vulpinoidea*), yellowfruit sedge (*Carex annectens*), Bush's sedge (*Carex bushii*), owlfruit sedge (*Carex stipata*), squarrose sedge (*Carex squarrosa*), shallow sedge (*Carex lurida*), blunt broom sedge (*Carex tribuloides*), tussock sedge (*Carex stricta*), and woolly sedge (*Carex pellita*). The graminoid and herbaceous vegetation is typically dense (>90% cover). Other common species

are common rush (*Juncus effusus*), path rush (*Juncus tenuis*), reed canary grass (*Phalaris arundinacea*), rough bluegrass (*Poa trivialis*), rice cutgrass (*Leersia oryzoides*), green bulrush (*Scirpus atrovirens*), Indian hemp (*Apocynum cannabinum*), meadow ryegrass (*Lolium pratense*), red fescue (*Festuca rubra*), arrowleaf tearthumb (*Polygonum sagittatum*), harvestlice (*Agrimonia parviflora*), bluntleaf bedstraw (*Galium obtusum*), woolgrass (*Scirpus cyperinus*), jewelweed (*Impatiens capensis*), fowl mannagrass (*Glyceria striata*), and many others. Short shrubs can be scattered throughout the wet meadow vegetation, including swamp rose (*Rosa palustris*), common elderberry (*Sambucus nigra ssp. canadensis*), willows (*Salix* spp.), and tree seedlings such as pin oak (*Quercus palustris*), swamp white oak (*Quercus bicolor*), red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), and American elm (*Ulmus americana*). The invasive species creeping jenny (*Lysimachia nummularia*) and multiflora rose (*Rosa multiflora*) are frequent associates in this vegetation type.

Appendix C. Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Family	Scientific Name	Common Name
Aceraceae	<i>Acer campestre</i>	hedge maple
Aceraceae	<i>Acer negundo</i>	boxelder
Aceraceae	<i>Acer platanoides</i>	Norway maple
Aceraceae	<i>Acer rubrum</i>	red maple
Aceraceae	<i>Acer saccharinum</i>	silver maple
Aceraceae	<i>Acer saccharum</i>	sugar maple
Acoraceae	<i>Acorus calamus</i>	Calamus
Agavaceae	<i>Yucca</i> sp.	Yucca
Alismataceae	<i>Alisma subcordatum</i>	American water plantain
Anacardiaceae	<i>Rhus copallinum</i>	flameleaf sumac
Anacardiaceae	<i>Rhus glabra</i>	smooth sumac
Anacardiaceae	<i>Toxicodendron radicans</i>	eastern poison ivy
Annonaceae	<i>Asimina triloba</i>	Pawpaw
Apiaceae	<i>Cicuta maculata</i>	spotted water hemlock
Apiaceae	<i>Conium maculatum</i>	poison hemlock
Apiaceae	<i>Cryptotaenia canadensis</i>	Canadian honewort
Apiaceae	<i>Daucus carota</i>	Queen Anne's lace
Apiaceae	<i>Osmorhiza longistylis</i>	longstyle sweetroot
Apiaceae	<i>Sanicula canadensis</i>	Canadian blacksnakeroot
Apiaceae	<i>Sanicula odorata</i>	clustered blacksnakeroot
Apiaceae	<i>Thaspium barbinode</i>	hairyjoint meadowparsnip
Apiaceae	<i>Zizia aptera</i>	Meadow zizia
Apiaceae	<i>Zizia aurea</i>	golden zizia
Apocynaceae	<i>Apocynum cannabinum</i>	Indianhemp
Apocynaceae	<i>Vinca minor</i>	Common periwinkle
Aquifoliaceae	<i>Ilex verticillata</i>	Common winterberry
Araceae	<i>Arisaema dracontium</i>	green dragon
Araceae	<i>Arisaema triphyllum</i>	Jack in the pulpit
Araceae	<i>Symplocarpus foetidus</i>	skunk cabbage
Araliaceae	<i>Hedera helix</i>	English ivy
Aristolochiaceae	<i>Aristolochia serpentaria</i>	Virginia snakeroot
Aristolochiaceae	<i>Asarum canadense</i>	Canadian wildginger
Asclepiadaceae	<i>Asclepias incarnata</i>	swamp milkweed
Asclepiadaceae	<i>Asclepias purpurascens</i>	purple milkweed
Asclepiadaceae	<i>Asclepias quadrifolia</i>	fourleaf milkweed
Asclepiadaceae	<i>Asclepias syriaca</i>	Common milkweed
Asclepiadaceae	<i>Asclepias tuberosa</i>	Butterfly milkweed
Asclepiadaceae	<i>Asclepias viridiflora</i>	green comet milkweed
Aspleniaceae	<i>Asplenium platyneuron</i>	ebony spleenwort
Asteraceae	<i>Achillea millefolium</i>	Common yarrow
Asteraceae	<i>Ageratina altissima</i> var. <i>altissima</i>	white snakeroot

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Asteraceae	<i>Ambrosia artemisiifolia</i>	annual ragweed
Asteraceae	<i>Ambrosia trifida</i>	great ragweed
Asteraceae	<i>Antennaria howellii</i>	Howell's pussytoes
Asteraceae	<i>Antennaria neglecta</i>	field pussytoes
Asteraceae	<i>Antennaria parlinii</i>	Parlin's pussytoes
Asteraceae	<i>Antennaria plantaginifolia</i>	woman's tobacco
Asteraceae	<i>Arctium minus</i>	lesser burdock
Asteraceae	<i>Artemisia annua</i>	sweet sagewort
Asteraceae	<i>Bidens cernua</i>	Nodding beggartick
Asteraceae	<i>Bidens frondosa</i>	devil's beggartick
Asteraceae	<i>Bidens tripartita</i>	threelobe beggarticks
Asteraceae	<i>Centaurea biebersteinii</i>	spotted knapweed
Asteraceae	<i>Cichorium intybus</i>	Chicory
Asteraceae	<i>Cirsium arvense</i>	Canada thistle
Asteraceae	<i>Cirsium discolor</i>	field thistle
Asteraceae	<i>Cirsium pumilum</i>	pasture thistle
Asteraceae	<i>Cirsium vulgare</i>	bull thistle
Asteraceae	<i>Conyza canadensis</i>	Canadian horseweed
Asteraceae	<i>Eclipta prostrata</i>	false daisy
Asteraceae	<i>Erechtites hieraciifolia</i>	American burnweed
Asteraceae	<i>Erigeron annuus</i>	eastern daisy fleabane
Asteraceae	<i>Erigeron philadelphicus</i>	Philadelphia fleabane
Asteraceae	<i>Erigeron pulchellus</i>	robin's plantain
Asteraceae	<i>Erigeron strigosus</i>	prairie fleabane
Asteraceae	<i>Eupatorium fistulosum</i>	trumpetweed
Asteraceae	<i>Eupatorium perfoliatum</i>	Common boneset
Asteraceae	<i>Eupatorium purpureum</i>	sweetscented joeypyeweed
Asteraceae	<i>Eurybia divaricata</i>	white wood aster
Asteraceae	<i>Eurybia macrophylla</i>	bigleaf aster
Asteraceae	<i>Euthamia graminifolia</i>	flat-top goldentop
Asteraceae	<i>Helenium autumnale</i>	Common sneezeweed
Asteraceae	<i>Helianthus divaricatus</i>	woodland sunflower
Asteraceae	<i>Heliopsis helianthoides</i>	smooth oxeye
Asteraceae	<i>Hieracium caespitosum</i>	Meadow hawkweed
Asteraceae	<i>Hieracium venosum</i>	rattlesnakeweed
Asteraceae	<i>Krigia virginica</i>	Virginia dwarfdandelion
Asteraceae	<i>Leucanthemum vulgare</i>	oxeye daisy
Asteraceae	<i>Packera aurea</i>	golden ragwort
Asteraceae	<i>Packera paupercula</i>	balsam groundsel
Asteraceae	<i>Prenanthes altissima</i>	tall rattlesnakeroot
Asteraceae	<i>Prenanthes serpentaria</i>	lion's-foot; cankerweed
Asteraceae	<i>Pseudognaphalium obtusifolium</i> ssp. <i>obtusifolium</i>	rabbittobacco
Asteraceae	<i>Rudbeckia fulgida</i>	eastern coneflower; orange coneflower

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Asteraceae	<i>Rudbeckia hirta</i>	blackeyed Susan
Asteraceae	<i>Rudbeckia laciniata</i>	cutleaf coneflower
Asteraceae	<i>Rudbeckia triloba</i>	browneyed Susan
Asteraceae	<i>Silphium trifoliatum</i>	whorled rosinweed
Asteraceae	<i>Solidago bicolor</i>	white goldenrod
Asteraceae	<i>Solidago caesia</i>	wreath goldenrod
Asteraceae	<i>Solidago</i> $\square$ <i>anadensis</i> var. <i>scabra</i>	Canada goldenrod
Asteraceae	<i>Solidago gigantea</i>	giant goldenrod
Asteraceae	<i>Solidago juncea</i>	early goldenrod
Asteraceae	<i>Solidago nemoralis</i>	gray goldenrod
Asteraceae	<i>Solidago rugosa</i>	wrinkleleaf goldenrod
Asteraceae	<i>Solidago ulmifolia</i>	elmleaf goldenrod
Asteraceae	<i>Sonchus asper</i>	spiny sowthistle
Asteraceae	<i>Symphotrichum lanceolatum</i> ssp. <i>Lanceolatum</i> var. <i>lanceolatum</i>	white panicle aster
Asteraceae	<i>Symphotrichum lateriflorum</i> var. <i>lateriflorum</i>	calico aster
Asteraceae	<i>Symphotrichum patens</i> var. <i>patens</i>	late purple aster
Asteraceae	<i>Symphotrichum pilosum</i> var. <i>pilosum</i>	hairy white oldfield aster
Asteraceae	<i>Symphotrichum prenanthoides</i>	crookedstem aster
Asteraceae	<i>Symphotrichum undulatum</i>	waxy leaf aster
Asteraceae	<i>Taraxacum officinale</i>	common dandelion
Asteraceae	<i>Verbesina alternifolia</i>	wingstem
Asteraceae	<i>Vernonia noveboracensis</i>	New York ironweed
Asteraceae	<i>Xanthium strumarium</i>	rough cocklebur
Balsaminaceae	<i>Impatiens capensis</i>	jewelweed
Berberidaceae	<i>Berberis thunbergii</i>	Japanese barberry
Berberidaceae	<i>Podophyllum peltatum</i>	mayapple
Betulaceae	<i>Alnus glutinosa</i>	European alder
Betulaceae	<i>Carpinus caroliniana</i>	American hornbeam
Betulaceae	<i>Corylus americana</i>	American hazelnut
Betulaceae	<i>Ostrya virginiana</i>	hophornbeam
Bignoniaceae	<i>Campsis radicans</i>	trumpet creeper
Bignoniaceae	<i>Catalpa speciosa</i>	northern catalpa
Boraginaceae	<i>Cynoglossum virginianum</i>	wild comfrey
Boraginaceae	<i>Echium vulgare</i>	common vipersbugloss
Boraginaceae	<i>Hackelia virginiana</i>	beggarslice
Boraginaceae	<i>Lithospermum canescens</i>	hoary puccoon
Boraginaceae	<i>Myosotis laxa</i>	bay forget-me-not
Boraginaceae	<i>Myosotis verna</i>	spring forget-me-not
Brassicaceae	<i>Alliaria petiolata</i>	garlic mustard
Brassicaceae	<i>Arabis canadensis</i>	sicklepod
Brassicaceae	<i>Barbarea vulgaris</i>	garden yellowrocket

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Brassicaceae	<i>Capsella bursa-pastoris</i>	shepherd's purse
Brassicaceae	<i>Cardamine bulbosa</i>	bulbous bittercress
Brassicaceae	<i>Cardamine concatenata</i>	cutleaf toothwort
Brassicaceae	<i>Cardamine hirsuta</i>	hairy bittercress
Brassicaceae	<i>Cardamine parviflora</i>	sand bittercress
Brassicaceae	<i>Hesperis matronalis</i>	dames rocket
Brassicaceae	<i>Rorippa nasturtium-aquaticum</i>	watercress
Callitrichaceae	<i>Callitriche heterophylla</i>	twoheaded water-starwort
Callitrichaceae	<i>Callitriche terrestris</i>	terrestrial water-starwort
Campanulaceae	<i>Lobelia cardinalis</i>	cardinalflower
Campanulaceae	<i>Lobelia inflata</i>	Indian-tobacco
Campanulaceae	<i>Lobelia siphilitica</i>	great blue lobelia
Campanulaceae	<i>Lobelia spicata</i>	palespike lobelia
Campanulaceae	<i>Triodanis perfoliata</i>	clasping Venus' looking-glass
Caprifoliaceae	<i>Lonicera japonica</i>	Japanese honeysuckle
Caprifoliaceae	<i>Lonicera maackii</i>	Amur honeysuckle
Caprifoliaceae	<i>Lonicera morrowii</i>	Morrow's honeysuckle
Caprifoliaceae	<i>Lonicera</i> sp.	Honeysuckle
Caprifoliaceae	<i>Sambucus nigra</i> ssp. <i>Canadensis</i>	common elderberry
Caprifoliaceae	<i>Symphoricarpos orbiculatus</i>	coralberry
Caprifoliaceae	<i>Triosteum angustifolium</i>	horse-gentian; yellowfruit horse-gentian
Caprifoliaceae	<i>Viburnum acerifolium</i>	mapleleaf viburnum
Caprifoliaceae	<i>Viburnum dentatum</i> var. <i>lucidum</i>	southern arrowwood
Caprifoliaceae	<i>Viburnum prunifolium</i>	blackhaw
Caprifoliaceae	<i>Viburnum</i> sp.	Viburnum
Caryophyllaceae	<i>Arenaria serpyllifolia</i>	thymeleaf sandwort
Caryophyllaceae	<i>Cerastium arvense</i>	field chickweed
Caryophyllaceae	<i>Cerastium fontanum</i>	common mouse-ear chickweed
Caryophyllaceae	<i>Dianthus armeria</i>	Deptford pink
Caryophyllaceae	<i>Myosoton aquaticum</i>	giantchickweed
Caryophyllaceae	<i>Paronychia canadensis</i>	smooth forked nailwort
Caryophyllaceae	<i>Silene caroliniana</i>	sticky catchfly
Caryophyllaceae	<i>Silene stellata</i>	widowsfrill
Caryophyllaceae	<i>Stellaria graminea</i>	grasslike starwort
Caryophyllaceae	<i>Stellaria longifolia</i>	longleaf starwort
Caryophyllaceae	<i>Stellaria media</i>	common chickweed
Celastraceae	<i>Celastrus orbiculata</i>	Asian bittersweet
Celastraceae	<i>Euonymus alata</i>	winged burning bush
Celastraceae	<i>Euonymus americana</i>	strawberry bush
Celastraceae	<i>Euonymus atropurpurea</i>	eastern wahoo
Cistaceae	<i>Helianthemum bicknellii</i>	hoary frostweed; Bicknell's hoary rockrose
Cistaceae	<i>Lechea</i> sp.	Pinweed
Clusiaceae	<i>Hypericum mutilum</i>	dwarf St. Johnswort

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Clusiaceae	<i>Hypericum perforatum</i>	common St. Johnswort
Clusiaceae	<i>Hypericum prolificum</i>	shrubby St. Johnswort
Clusiaceae	<i>Hypericum punctatum</i>	spotted St. Johnswort
Commelinaceae	<i>Commelina communis</i>	Asiatic dayflower
Commelinaceae	<i>Tradescantia virginiana</i>	Virginia spiderwort
Convolvulaceae	<i>Calystegia sepium</i>	hedge false bindweed
Convolvulaceae	<i>Ipomoea pandurata</i>	man of the earth
Cornaceae	<i>Cornus amomum</i>	silky dogwood
Cornaceae	<i>Cornus florida</i>	flowering dogwood
Cornaceae	<i>Cornus racemosa</i>	gray dogwood
Crassulaceae	<i>Penthorum sedoides</i>	ditch stonecrop
Crassulaceae	<i>Sedum sarmentosum</i>	stringy stonecrop
Cucurbitaceae	<i>Sicyos angulatus</i>	oneseed burr cucumber
Cupressaceae	<i>Juniperus virginiana</i>	eastern redcedar
Cuscutaceae	<i>Cuscuta gronovii</i>	scaldweed
Cyperaceae	<i>Carex aggregata</i>	glomerate sedge
Cyperaceae	<i>Carex albicans</i>	whitening sedge
Cyperaceae	<i>Carex amphibola</i>	eastern narrowleaf sedge
Cyperaceae	<i>Carex annectens</i>	yellowfruit sedge
Cyperaceae	<i>Carex blanda</i>	eastern woodland sedge
Cyperaceae	<i>Carex bromoides</i>	bromelike sedge
Cyperaceae	<i>Carex bushii</i>	Bush's sedge
Cyperaceae	<i>Carex buxbaumii</i>	brown sedge; Buxbaum's sedge
Cyperaceae	<i>Carex cephalophora</i>	oval-leaf sedge
Cyperaceae	<i>Carex conjuncta</i>	soft fox sedge
Cyperaceae	<i>Carex conoidea</i>	openfield sedge
Cyperaceae	<i>Carex crinita</i>	fringed sedge
Cyperaceae	<i>Carex digitalis</i>	slender woodland sedge
Cyperaceae	<i>Carex festucacea</i>	fescue sedge
Cyperaceae	<i>Carex frankii</i>	Frank's sedge
Cyperaceae	<i>Carex glaucodea</i>	blue sedge
Cyperaceae	<i>Carex granularis</i>	limestone meadow sedge
Cyperaceae	<i>Carex grayi</i>	Gray's sedge
Cyperaceae	<i>Carex grisea</i>	eastern narrowleaf sedge
Cyperaceae	<i>Carex hirsutella</i>	fuzzy wuzzy sedge
Cyperaceae	<i>Carex laxiculmis</i>	spreading sedge
Cyperaceae	<i>Carex laxiflora</i>	broad looseflower sedge
Cyperaceae	<i>Carex lupulina</i>	hop sedge
Cyperaceae	<i>Carex lurida</i>	shallow sedge
Cyperaceae	<i>Carex normalis</i>	greater straw sedge
Cyperaceae	<i>Carex pellita</i>	woolly sedge
Cyperaceae	<i>Carex pennsylvanica</i>	Pennsylvania sedge
Cyperaceae	<i>Carex prasina</i>	drooping sedge
Cyperaceae	<i>Carex radiata</i>	eastern star sedge

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Cyperaceae	<i>Carex rosea</i>	rosy sedge
Cyperaceae	<i>Carex scoparia</i>	broom sedge
Cyperaceae	<i>Carex scoparia</i>	broom sedge
Cyperaceae	<i>Carex shortiana</i>	Short's sedge
Cyperaceae	<i>Carex squarrosa</i>	squarrose sedge
Cyperaceae	<i>Carex stipata</i>	owlfruit sedge
Cyperaceae	<i>Carex stricta</i>	upright sedge
Cyperaceae	<i>Carex swanii</i>	Swan's sedge
Cyperaceae	<i>Carex tetanica</i>	rigid sedge
Cyperaceae	<i>Carex tribuloides</i>	blunt broom sedge
Cyperaceae	<i>Carex umbellata</i>	parasol sedge
Cyperaceae	<i>Carex vulpinoidea</i>	fox sedge
Cyperaceae	<i>Carex willdenowii</i>	Willdenow's sedge
Cyperaceae	<i>Cyperus echinatus</i>	globe flatsedge
Cyperaceae	<i>Cyperus strigosus</i>	strawcolored flatsedge
Cyperaceae	<i>Eleocharis obtusa</i>	blunt spikerush
Cyperaceae	<i>Eleocharis palustris</i>	common spikerush
Cyperaceae	<i>Eleocharis tenuis</i>	slender spikerush
Cyperaceae	<i>Schoenoplectus tabernaemontani</i>	softstem bulrush
Cyperaceae	<i>Scirpus atrovirens</i>	green bulrush
Cyperaceae	<i>Scirpus cyperinus</i>	woolgrass
Cyperaceae	<i>Scirpus georgianus</i>	Georgia bulrush
Cyperaceae	<i>Scirpus pendulus</i>	rufous bulrush
Cyperaceae	<i>Scirpus polyphyllus</i>	leafy bulrush
Cyperaceae	<i>Trichophorum planifolium</i>	bashful bulrush
Dennstaedtiaceae	<i>Dennstaedtia punctilobula</i>	eastern hayscented fern
Dennstaedtiaceae	<i>Pteridium aquilinum</i>	western brackenfern
Dioscoreaceae	<i>Dioscorea quaternata</i>	fourleaf yam
Dioscoreaceae	<i>Dioscorea villosa</i>	wild yam
Dipsacaceae	<i>Dipsacus fullonum</i> ssp. <i>Sylvestris</i>	Fuller's teasel
Dryopteridaceae	<i>Dryopteris carthusiana</i>	spinulose woodfern
Dryopteridaceae	<i>Dryopteris intermedia</i>	intermediate woodfern
Dryopteridaceae	<i>Dryopteris marginalis</i>	marginal woodfern
Dryopteridaceae	<i>Onoclea sensibilis</i>	sensitive fern
Dryopteridaceae	<i>Polystichum acrostichoides</i>	Christmas fern
Dryopteridaceae	<i>Woodsia obtusa</i>	bluntlobe cliff fern
Ebenaceae	<i>Diospyros virginiana</i>	common persimmon
Elaeagnaceae	<i>Elaeagnus umbellata</i>	autumn olive
Equisetaceae	<i>Equisetum arvense</i>	field horsetail
Ericaceae	<i>Vaccinium pallidum</i>	Blue Ridge blueberry
Ericaceae	<i>Vaccinium stamineum</i>	deerberry
Euphorbiaceae	<i>Acalypha rhomboidea</i>	Virginia threeseed mercury
Euphorbiaceae	<i>Euphorbia corollata</i>	flowering spurge
Fabaceae	<i>Amphicarpaea bracteata</i>	American hogpeanut

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Fabaceae	<i>Baptisia tinctoria</i>	horseflyweed
Fabaceae	<i>Cercis canadensis</i>	eastern redbud
Fabaceae	<i>Desmodium glutinosum</i>	pointedleaf ticktrefoil
Fabaceae	<i>Desmodium marilandicum</i>	smooth small-leaf ticktrefoil
Fabaceae	<i>Desmodium nudiflorum</i>	nakedflower ticktrefoil
Fabaceae	<i>Desmodium paniculatum</i>	panickedleaf ticktrefoil
Fabaceae	<i>Desmodium perplexum</i>	perplexed ticktrefoil
Fabaceae	<i>Desmodium rotundifolium</i>	prostrate ticktrefoil
Fabaceae	<i>Gleditsia triacanthos</i>	honeylocust
Fabaceae	<i>Gymnocladus dioicus</i>	Kentucky coffeetree
Fabaceae	<i>Kummerowia striata</i>	Japanese clover
Fabaceae	<i>Lespedeza cuneata</i>	Chinese lespedeza
Fabaceae	<i>Lespedeza procumbens</i>	trailing lespedeza
Fabaceae	<i>Lespedeza virginica</i>	slender lespedeza
Fabaceae	<i>Medicago lupulina</i>	black medick
Fabaceae	<i>Melilotus officinalis</i>	yellow sweetclover
Fabaceae	<i>Robinia pseudoacacia</i>	black locust
Fabaceae	<i>Senna hebecarpa</i>	American senna
Fabaceae	<i>Stylosanthes biflora</i>	pencilflower; sidebeak pencilflower
Fabaceae	<i>Trifolium aureum</i>	golden clover
Fabaceae	<i>Trifolium hybridum</i>	alsike clover
Fabaceae	<i>Trifolium pratense</i>	red clover
Fabaceae	<i>Trifolium repens</i>	white clover
Fagaceae	<i>Quercus alba</i>	white oak
Fagaceae	<i>Quercus bicolor</i>	swamp white oak
Fagaceae	<i>Quercus coccinea</i>	scarlet oak
Fagaceae	<i>Quercus montana</i>	chestnut oak
Fagaceae	<i>Quercus palustris</i>	pin oak
Fagaceae	<i>Quercus rubra</i>	northern red oak
Fagaceae	<i>Quercus shumardii</i>	Shumard's oak
Fagaceae	<i>Quercus stellata</i>	post oak
Fagaceae	<i>Quercus velutina</i>	black oak
Fumariaceae	<i>Corydalis flavula</i>	yellow fumewort
Gentianaceae	<i>Gentiana clausa</i>	bottle gentian
Gentianaceae	<i>Sabatia angularis</i>	rosepink
Geraniaceae	<i>Geranium maculatum</i>	spotted geranium
Grossulariaceae	<i>Ribes americanum</i>	American black currant
Grossulariaceae	<i>Ribes missouriense</i>	Missouri gooseberry
Hamamelidaceae	<i>Hamamelis virginiana</i>	American witchhazel
Hippocastanaceae	<i>Aesculus flava</i>	yellow buckeye
Hydrocharitaceae	<i>Elodea canadensis</i>	Canadian waterweed
Iridaceae	<i>Belamcanda chinensis</i>	blackberry lily
Iridaceae	<i>Hypoxis hirsuta</i>	common goldstar

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Iridaceae	<i>Iris germanica</i>	German iris
Iridaceae	<i>Sisyrinchium angustifolium</i>	narrowleaf blue-eyed grass
Iridaceae	<i>Sisyrinchium mucronatum</i>	needletip blue-eyed grass
Juglandaceae	<i>Carya alba</i>	mockernut hickory
Juglandaceae	<i>Carya cordiformis</i>	bitternut hickory
Juglandaceae	<i>Carya glabra</i>	pignut hickory
Juglandaceae	<i>Carya laciniosa</i>	shellbark hickory
Juglandaceae	<i>Carya ovalis</i>	red hickory
Juglandaceae	<i>Carya ovata</i>	shagbark hickory
Juglandaceae	<i>Juglans cinerea</i>	butternut
Juglandaceae	<i>Juglans nigra</i>	black walnut
Juncaceae	<i>Juncus acuminatus</i>	tapertip rush
Juncaceae	<i>Juncus biflorus</i>	grass-leaved rush; bog rush
Juncaceae	<i>Juncus brachycarpus</i>	short-fruited rush; whiteroot rush
Juncaceae	<i>Juncus effusus</i>	common rush
Juncaceae	<i>Juncus marginatus</i>	grassleaf rush
Juncaceae	<i>Juncus tenuis</i>	poverty rush
Juncaceae	<i>Luzula multiflora</i>	common woodrush
Lamiaceae	<i>Clinopodium vulgare</i>	wild basil
Lamiaceae	<i>Collinsonia canadensis</i>	richweed
Lamiaceae	<i>Cunila origanoides</i>	common dittany
Lamiaceae	<i>Glechoma hederacea</i>	ground ivy
Lamiaceae	<i>Hedeoma pulegioides</i>	American false pennyroyal
Lamiaceae	<i>Lamium purpureum</i>	purple deadnettle
Lamiaceae	<i>Leonurus cardiaca</i>	common motherwort
Lamiaceae	<i>Lycopus americanus</i>	American water horehound
Lamiaceae	<i>Lycopus uniflorus</i>	northern bugleweed
Lamiaceae	<i>Mentha ×piperita</i>	peppermint
Lamiaceae	<i>Mentha arvensis</i>	wild mint
Lamiaceae	<i>Mentha spicata</i>	spearmint
Lamiaceae	<i>Perilla frutescens</i>	beefsteakplant
Lamiaceae	<i>Prunella vulgaris</i>	common selfheal
Lamiaceae	<i>Pycnanthemum incanum</i>	hoary mountainmint
Lamiaceae	<i>Pycnanthemum tenuifolium</i>	narrowleaf mountainmint
Lamiaceae	<i>Pycnanthemum virginianum</i>	Virginia mountainmint
Lamiaceae	<i>Scutellaria elliptica</i>	hairy skullcap
Lamiaceae	<i>Scutellaria integrifolia</i>	helmet flower
Lamiaceae	<i>Scutellaria nervosa</i>	veiny skullcap
Lamiaceae	<i>Scutellaria parvula</i> var. <i>missouriensis</i>	Leonard's skullcap
Lamiaceae	<i>Stachys</i> sp.	hedgenettle
Lamiaceae	<i>Teucrium canadense</i>	Canada germander
Lauraceae	<i>Lindera benzoin</i>	northern spicebush
Lauraceae	<i>Sassafras albidum</i>	sassafras

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Lemnaceae	<i>Lemna minor</i>	common duckweed
Liliaceae	<i>Allium canadense</i>	meadow garlic
Liliaceae	<i>Allium cernuum</i>	nodding onion
Liliaceae	<i>Allium vineale</i>	wild garlic
Liliaceae	<i>Asparagus officinalis</i>	garden asparagus
Liliaceae	<i>Convallaria majalis</i>	European lily of the valley
Liliaceae	<i>Erythronium americanum</i>	dogtooth violet
Liliaceae	<i>Hemerocallis fulva</i>	orange daylily
Liliaceae	<i>Lilium superbum</i>	turk's-cap lily
Liliaceae	<i>Maianthemum racemosum</i> ssp. <i>racemosum</i>	feathery false lily of the vally
Liliaceae	<i>Maianthemum stellatum</i>	starry false lily of the vally
Liliaceae	<i>Narcissus poeticus</i>	poet's narcissus
Liliaceae	<i>Narcissus pseudonarcissus</i>	daffodil
Liliaceae	<i>Ornithogalum umbellatum</i>	star of Bethlehem
Liliaceae	<i>Polygonatum biflorum</i>	smooth Solomon's seal
Liliaceae	<i>Polygonatum biflorum</i> var. <i>commutatum</i>	smooth Solomon's seal
Liliaceae	<i>Polygonatum pubescens</i>	hairy Solomon's seal
Liliaceae	<i>Uvularia perfoliata</i>	perfoliate bellwort
Limnathaceae	<i>Floerkea proserpinacoides</i>	false mermaidweed
Linaceae	<i>Linum virginianum</i>	woodland flax
Lythraceae	<i>Cuphea viscosissima</i>	blue waxweed
Magnoliaceae	<i>Liriodendron tulipifera</i>	tuliptree
Monotropaceae	<i>Monotropa uniflora</i>	Indianpipe
Moraceae	<i>Maclura pomifera</i>	osage orange
Moraceae	<i>Morus alba</i>	white mulberry
Nymphaeaceae	<i>Nuphar lutea</i>	yellow pond-lily
Nyssaceae	<i>Nyssa sylvatica</i>	blackgum
Oleaceae	<i>Fraxinus americana</i>	white ash
Oleaceae	<i>Fraxinus nigra</i>	black ash
Oleaceae	<i>Fraxinus pennsylvanica</i>	green ash
Oleaceae	<i>Ligustrum</i> sp.	privet
Onagraceae	<i>Circaea lutetiana</i>	broadleaf enchanter's nightshade
Onagraceae	<i>Epilobium coloratum</i>	purpleleaf willowherb
Onagraceae	<i>Ludwigia palustris</i>	marsh seedbox
Onagraceae	<i>Oenothera biennis</i>	common evening-primrose
Onagraceae	<i>Oenothera fruticosa</i>	narrowleaf evening-primrose
Onagraceae	<i>Oenothera perennis</i>	little evening-primrose
Ophioglossaceae	<i>Botrychium dissectum</i>	cutleaf grapefern
Ophioglossaceae	<i>Botrychium virginianum</i>	rattlesnake fern
Ophioglossaceae	<i>Ophioglossum</i> sp.	adderstongue
Orchidaceae	<i>Aplectrum hyemale</i>	puttyroot; Adam and Eve
Orchidaceae	<i>Cypripedium pubescens</i>	yellow lady's slipper
Orchidaceae	<i>Epipactis helleborine</i>	broadleaf helleborine

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Orchidaceae	<i>Galearis spectabilis</i>	showy orchid
Orchidaceae	<i>Spiranthes lacera</i> var. <i>gracilis</i>	northern slender ladies'-tresses
Orchidaceae	<i>Tipularia discolor</i>	cranefly orchid; crippled cranefly
Oxalidaceae	<i>Oxalis stricta</i>	common yellow oxalis
Oxalidaceae	<i>Oxalis violacea</i>	violet woodsorrel
Papaveraceae	<i>Chelidonium majus</i>	celandine
Papaveraceae	<i>Sanguinaria canadensis</i>	bloodroot
Phytolaccaceae	<i>Phytolacca americana</i>	American pokeweed
Pinaceae	<i>Larix kaempferi</i>	Japanese larch
Pinaceae	<i>Pinus rigida</i>	pitch pine
Pinaceae	<i>Pinus strobus</i>	eastern white pine
Pinaceae	<i>Pinus sylvestris</i>	Scotch pine
Pinaceae	<i>Pinus virginiana</i>	Virginia pine
Pinaceae	<i>Tsuga canadensis</i>	eastern hemlock
Plantaginaceae	<i>Plantago lanceolata</i>	narrowleaf plantain
Plantaginaceae	<i>Plantago rugelii</i>	blackseed plantain
Plantaginaceae	<i>Plantago virginica</i>	Virginia plantain
Platanaceae	<i>Platanus occidentalis</i>	American sycamore
Poaceae	<i>Agrostis gigantea</i>	redtop
Poaceae	<i>Agrostis perennans</i>	upland bentgrass
Poaceae	<i>Andropogon gerardii</i>	big bluestem
Poaceae	<i>Andropogon virginicus</i>	broomsedge bluestem
Poaceae	<i>Anthoxanthum odoratum</i>	sweet vernalgrass
Poaceae	<i>Arrhenatherum elatius</i>	tall oatgrass
Poaceae	<i>Arthraxon hispidus</i>	small carpgrass
Poaceae	<i>Brachyelytrum erectum</i>	bearded shorthusk
Poaceae	<i>Bromus commutatus</i>	meadow brome
Poaceae	<i>Bromus inermis</i>	smooth brome
Poaceae	<i>Bromus japonicus</i>	Japanese brome
Poaceae	<i>Bromus kalmii</i>	Kalm's brome grass; arctic brome
Poaceae	<i>Bromus latiglumis</i>	earlyleaf brome
Poaceae	<i>Bromus pubescens</i>	hairy woodland brome
Poaceae	<i>Bromus sterilis</i>	poverty brome
Poaceae	<i>Bromus tectorum</i>	cheatgrass
Poaceae	<i>Cinna arundinacea</i>	sweet woodreed
Poaceae	<i>Dactylis glomerata</i>	orchardgrass
Poaceae	<i>Danthonia spicata</i>	poverty oatgrass
Poaceae	<i>Digitaria ischaemum</i>	smooth crabgrass
Poaceae	<i>Digitaria sanguinalis</i>	hairy crabgrass
Poaceae	<i>Echinochloa crus-galli</i>	barnyardgrass
Poaceae	<i>Elymus hystrix</i>	eastern bottlebrush grass
Poaceae	<i>Elymus repens</i>	quackgrass
Poaceae	<i>Elymus riparius</i>	riverbank wildrye
Poaceae	<i>Elymus villosus</i>	hairy wildrye

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Poaceae	<i>Elymus virginicus</i>	Virginia wildrye
Poaceae	<i>Eragrostis hypnoides</i>	teal lovegrass
Poaceae	<i>Eragrostis spectabilis</i>	purple lovegrass
Poaceae	<i>Festuca rubra</i>	red fescue
Poaceae	<i>Festuca subverticillata</i>	nodding fescue
Poaceae	<i>Glyceria septentrionalis</i>	floating mannagrass
Poaceae	<i>Glyceria striata</i>	fowl mannagrass
Poaceae	<i>Holcus lanatus</i>	common velvetgrass
Poaceae	<i>Leersia oryzoides</i>	rice cutgrass
Poaceae	<i>Leersia virginica</i>	whitegrass
Poaceae	<i>Lolium pratense</i>	meadow ryegrass
Poaceae	<i>Microstegium vimineum</i>	stilt grass; Nepalese browntop
Poaceae	<i>Muhlenbergia schreberi</i>	nimblewill
Poaceae	<i>Muhlenbergia sobolifera</i>	rock muhly
Poaceae	<i>Panicum acuminatum</i> ( <i>Dichanthelium</i> in USDA)	tapered rosette grass
Poaceae	<i>Panicum anceps</i> ( <i>Dichanthelium</i> in USDA)	beaked panicgrass
Poaceae	<i>Panicum boscii</i> ( <i>Dichanthelium</i> in USDA)	Bosc's panicgrass
Poaceae	<i>Panicum clandestinum</i> ( <i>Dichanthelium</i> in USDA)	deertongue
Poaceae	<i>Panicum commutatum</i> ( <i>Dichanthelium</i> in USDA)	variable panicgrass
Poaceae	<i>Panicum depauperatum</i> ( <i>Dichanthelium</i> in USDA)	starved panicgrass
Poaceae	<i>Panicum dichotomiflorum</i>	fall panicgrass
Poaceae	<i>Panicum dichotomum</i> ( <i>Dichanthelium</i> in USDA)	cypress panicgrass
Poaceae	<i>Panicum gattingeri</i>	Gattinger's panicgrass
Poaceae	<i>Panicum microcarpon</i> ( <i>Dichanthelium</i> in USDA)	cypress panicgrass
Poaceae	<i>Panicum oligosanthos</i> ( <i>Dichanthelium</i> in USDA)	Heller's panic grass; Scribner's rosette grass
Poaceae	<i>Panicum rigidulum</i>	redtop panicgrass
Poaceae	<i>Paspalum laeve</i>	field paspalum
Poaceae	<i>Paspalum setaceum</i>	thin paspalum
Poaceae	<i>Phalaris arundinacea</i>	reed canarygrass
Poaceae	<i>Phleum pratense</i>	timothy
Poaceae	<i>Poa annua</i>	annual bluegrass
Poaceae	<i>Poa compressa</i>	Canada bluegrass
Poaceae	<i>Poa pratensis</i>	Kentucky bluegrass
Poaceae	<i>Poa trivialis</i>	rough bluegrass
Poaceae	<i>Schizachyrium scoparium</i>	little bluestem
Poaceae	<i>Setaria faberi</i>	Japanese bristlegrass

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Poaceae	<i>Setaria parviflora</i>	marsh bristlegrass
Poaceae	<i>Setaria pumila</i>	yellow bristlegrass
Poaceae	<i>Setaria viridis</i>	green bristlegrass
Poaceae	<i>Sorghastrum nutans</i>	Indiangrass
Poaceae	<i>Sphenopholis intermedia</i>	slender wedgescale
Poaceae	<i>Sphenopholis nitida</i>	shiny wedgescale
Poaceae	<i>Sporobolus vaginiflorus</i>	poverty dropseed
Poaceae	<i>Tridens flavus</i>	purpletop tridens
Poaceae	<i>Vulpia octoflora</i>	sixweeks fescue
Polemoniaceae	<i>Phlox maculata</i>	wild sweetwilliam
Polemoniaceae	<i>Phlox pilosa</i>	downy phlox
Polygonaceae	<i>Polygonum amphibium</i>	water knotweed
Polygonaceae	<i>Polygonum caespitosum</i>	oriental ladythumb
Polygonaceae	<i>Polygonum lapathifolium</i>	curlytop knotweed
Polygonaceae	<i>Polygonum perfoliatum</i>	Asiatic tearthumb
Polygonaceae	<i>Polygonum persicaria</i>	spotted ladythumb
Polygonaceae	<i>Polygonum punctatum</i>	dotted smartweed
Polygonaceae	<i>Polygonum sagittatum</i>	arrowleaf tearthumb
Polygonaceae	<i>Polygonum scandens</i>	climbing false buckwheat
Polygonaceae	<i>Polygonum virginianum</i>	jumpseed
Polygonaceae	<i>Rumex acetosella</i>	common sheep sorrel
Polygonaceae	<i>Rumex crispus</i>	curly dock
Polygonaceae	<i>Rumex obtusifolius</i>	bitter dock
Polypodiaceae	<i>Polypodium virginianum</i>	rock polypody
Portulacaceae	<i>Claytonia virginica</i>	Virginia springbeauty
Primulaceae	<i>Anagallis arvensis</i>	scarlet pimpernel
Primulaceae	<i>Lysimachia ciliata</i>	fringed loosestrife
Primulaceae	<i>Lysimachia lanceolata</i>	lanceleaf loosestrife
Primulaceae	<i>Lysimachia nummularia</i>	creeping jenny
Primulaceae	<i>Lysimachia quadrifolia</i>	whorled yellow loosestrife
Pteridaceae	<i>Adiantum pedatum</i>	northern maidenhair
Pyrolaceae	<i>Chimaphila maculata</i>	striped prince's pine
Pyrolaceae	<i>Chimaphila umbellata</i>	pipsissewa
Ranunculaceae	<i>Anemone virginiana</i>	tall thimbleweed
Ranunculaceae	<i>Clematis terniflora</i>	sweet autumn virginsbower
Ranunculaceae	<i>Clematis virginiana</i>	devil's darning needles
Ranunculaceae	<i>Hepatica nobilis</i> var. <i>obtusata</i>	roundlobe hepatica
Ranunculaceae	<i>Ranunculus abortivus</i>	littleleaf buttercup
Ranunculaceae	<i>Ranunculus acris</i>	tall buttercup
Ranunculaceae	<i>Ranunculus bulbosus</i>	St. Anthony's turnip
Ranunculaceae	<i>Ranunculus hispidus</i> var. <i>caricetorum</i>	bristly buttercup
Ranunculaceae	<i>Ranunculus hispidus</i> var. <i>hispidus</i>	bristly buttercup
Ranunculaceae	<i>Ranunculus pusillus</i>	low spearwort

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Ranunculaceae	<i>Ranunculus recurvatus</i>	blisterwort
Ranunculaceae	<i>Thalictrum pubescens</i>	king of the meadow
Ranunculaceae	<i>Thalictrum revolutum</i>	waxy leaf meadow-rue
Ranunculaceae	<i>Thalictrum thalictroides</i>	rue anemone
Rhamnaceae	<i>Ceanothus americanus</i>	New Jersey tea
Rosaceae	<i>Agrimonia parviflora</i>	harvestlice
Rosaceae	<i>Agrimonia</i> sp.	agrimony
Rosaceae	<i>Amelanchier arborea</i>	common serviceberry
Rosaceae	<i>Crataegus</i> spp.	hawthorn
Rosaceae	<i>Duchesnea indica</i>	Indian strawberry
Rosaceae	<i>Fragaria virginiana</i>	Virginia strawberry
Rosaceae	<i>Geum canadense</i>	white avens
Rosaceae	<i>Geum laciniatum</i>	rough avens
Rosaceae	<i>Geum vernum</i>	spring avens
Rosaceae	<i>Physocarpus opulifolius</i>	common ninebark
Rosaceae	<i>Potentilla canadensis</i>	dwarf cinquefoil
Rosaceae	<i>Potentilla recta</i>	sulphur cinquefoil
Rosaceae	<i>Potentilla simplex</i>	common cinquefoil
Rosaceae	<i>Prunus americana</i>	American plum
Rosaceae	<i>Prunus avium</i>	sweet cherry
Rosaceae	<i>Prunus serotina</i>	black cherry
Rosaceae	<i>Prunus virginiana</i>	chokecherry
Rosaceae	<i>Rosa carolina</i>	Carolina rose
Rosaceae	<i>Rosa multiflora</i>	multiflora rose
Rosaceae	<i>Rosa palustris</i>	swamp rose
Rosaceae	<i>Rubus allegheniensis</i>	Allegheny blackberry
Rosaceae	<i>Rubus flagellaris</i>	northern dewberry
Rosaceae	<i>Rubus occidentalis</i>	black raspberry
Rosaceae	<i>Rubus phoenicolasius</i>	wine raspberry
Rubiaceae	<i>Cephalanthus occidentalis</i>	common buttonbush
Rubiaceae	<i>Galium aparine</i>	stickywilly
Rubiaceae	<i>Galium circaeazans</i>	licorice bedstraw
Rubiaceae	<i>Galium concinnum</i>	shining bedstraw
Rubiaceae	<i>Galium lanceolatum</i>	lanceleaf wild licorice
Rubiaceae	<i>Galium mollugo</i>	false baby's breath
Rubiaceae	<i>Galium obtusum</i>	bluntleaf bedstraw
Rubiaceae	<i>Galium pilosum</i>	hairy bedstraw
Rubiaceae	<i>Galium tinctorium</i>	stiff marsh bedstraw
Rubiaceae	<i>Galium triflorum</i>	fragrant bedstraw
Rubiaceae	<i>Houstonia caerulea</i>	azure bluet
Rubiaceae	<i>Mitchella repens</i>	partridgeberry
Rutaceae	<i>Zanthoxylum americanum</i>	common pricklyash
Salicaceae	<i>Salix nigra</i>	black willow
Santalaceae	<i>Comandra umbellata</i>	bastard toadflax

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Saxifragaceae	<i>Heuchera pubescens</i>	downy alumroot
Saxifragaceae	<i>Saxifraga virginensis</i>	early saxifrage
Scrophulariaceae	<i>Agalinis tenuifolia</i>	slenderleaf false foxglove
Scrophulariaceae	<i>Chelone glabra</i>	white turtlehead
Scrophulariaceae	<i>Gratiola neglecta</i>	clammy hedgehyssop
Scrophulariaceae	<i>Linaria vulgaris</i>	butter and eggs
Scrophulariaceae	<i>Lindernia dubia</i>	yellowseed false pimpernel
Scrophulariaceae	<i>Mimulus alatus</i>	sharpwing monkeyflower
Scrophulariaceae	<i>Mimulus ringens</i>	Allegheny monkeyflower
Scrophulariaceae	<i>Pedicularis canadensis</i>	Canadian lousewort
Scrophulariaceae	<i>Penstemon digitalis</i>	talus slope penstemon
Scrophulariaceae	<i>Penstemon hirsutus</i>	hairy beardtongue
Scrophulariaceae	<i>Penstemon laevigatus</i>	smooth beardtongue; eastern smooth beardtongue
Scrophulariaceae	<i>Scrophularia marilandica</i>	carpenter's square
Scrophulariaceae	<i>Verbascum blattaria</i>	moth mullein
Scrophulariaceae	<i>Verbascum thapsus</i>	common mullein
Scrophulariaceae	<i>Veronica arvensis</i>	corn speedwell
Scrophulariaceae	<i>Veronica officinalis</i>	common gypsyweed
Scrophulariaceae	<i>Veronica peregrina</i>	neckweed
Selaginellaceae	<i>Selaginella apoda</i>	meadow spikemoss
Simaroubaceae	<i>Ailanthus altissima</i>	tree of heaven
Smilacaceae	<i>Smilax herbacea</i>	smooth carrionflower
Smilacaceae	<i>Smilax pulverulenta</i>	downy carrionflower
Smilacaceae	<i>Smilax rotundifolia</i>	roundleaf greenbrier
Solanaceae	<i>Solanum carolinense</i>	Carolina horsenettle
Solanaceae	<i>Solanum dulcamara</i>	climbing nightshade
Staphyleaceae	<i>Staphylea trifolia</i>	American bladdernut
Thelypteridaceae	<i>Thelypteris palustris</i>	eastern marsh fern
Tiliaceae	<i>Tilia americana</i>	American basswood
Typhaceae	<i>Typha latifolia</i>	broadleaf cattail
Ulmaceae	<i>Celtis occidentalis</i>	common hackberry
Ulmaceae	<i>Ulmus americana</i>	American elm
Ulmaceae	<i>Ulmus rubra</i>	slippery elm
Urticaceae	<i>Boehmeria cylindrica</i>	smallspike false nettle
Urticaceae	<i>Pilea pumila</i>	Canadian clearweed
Verbenaceae	<i>Phryma leptostachya</i>	American lopseed
Verbenaceae	<i>Verbena hastata</i>	swamp verbena
Verbenaceae	<i>Verbena simplex</i>	narrowleaf vervain
Verbenaceae	<i>Verbena urticifolia</i>	white vervain
Violaceae	<i>Viola conspersa</i>	American dog violet
Violaceae	<i>Viola hirsutula</i>	southern woodland violet
Violaceae	<i>Viola palmata</i>	early blue violet
Violaceae	<i>Viola pubescens</i>	downy yellow violet

Appendix C (continued). Vascular plant taxa observed during the field surveys in Gettysburg National Military Park and Eisenhower National Historic Site, 2004-2005

Violaceae	<i>Viola sagittata</i>	arrowleaf violet
Violaceae	<i>Viola sororia</i>	common blue violet
Vitaceae	<i>Parthenocissus quinquefolia</i>	Virginia creeper
Vitaceae	<i>Vitis aestivalis</i>	summer grape
Vitaceae	<i>Vitis labrusca</i>	fox grape
Vitaceae	<i>Vitis riparia</i>	riverbank grape



Appendix D. Data from labels of voucher specimens of species of special concern collected in Gettysburg National Military Park and Eisenhower National Historic Site, 1987-2005.

Species	Date	Collector	Location	Habitat	Herbarium
<i>Aplectrum hyemale</i> (Willd.) Nutt.	2005 Apr 13	Kunsmann 16733	Adams County: ca 394715N x 771430W; east side of South Confederate Avenue; watershed of Plum Run; ca 3.03 air miles S by slightly SW of the center square, Gettysburg	well drained mixed forest with diabase boulders on west slope of Big Round Top; elevation ca 560 feet.	PNHP, Middletown
<i>Bromus kalmii</i> Gray	1996 Jun 24	Kunsmann 13854	Adams County: former Welcome Traveler campground, ca 1.5 miles SSE of Gettysburg	successional graminoid/shrub/small tree old field with diabase substrate; elevation ca 470 feet.	Academy of Natural Sciences, Philadelphia
<i>Carex buxbaumii</i> Wahlenb.	2005 Jun 15	Kunsmann 16814	Adams County: ca 394745N x 771419W; ca 2.43 air miles SSW of the center square, Gettysburg	seasonally damp meadow south of Wheatfield Road, east side of Plum Run; elevation ca 520 feet.	PNHP, Middletown
<i>Carex shortiana</i> Dewey	2005 Jun 9	Kunsmann 16806	Adams County: ca 394716N x 771445W; ca 3.06 air miles SSW of the center square, Gettysburg	in wet meadow southeast of Granite Farm, watershed of Plum Run; elevation ca 480 feet.	PNHP, Middletown
<i>Carex tetanica</i> Schkuhr	2005 Jun 9	Kunsmann 16805	Adams County: ca 394712N x 771450W; ca 3.16 air miles SSW of the center square, Gettysburg	with numerous graminoids in wet meadow south of Granite Farm, watershed of Plum Run; elevation ca 480 feet.	PNHP, Middletown
<i>Carex tetanica</i> Schkuhr	2005 Jun 15	Kunsmann 16812	Adams County: ca 394803N x 771419W; ca 2.1 air miles SSW of the center square, Gettysburg	seasonally damp meadow between US Avenue and Wheatfield Road, watershed of Plum Run; elevation ca 530 feet.	PNHP, Middletown
<i>Helianthemum bicknellii</i> Fern.	1991 Jul 17	Kunsmann 9850	Adams County: ca 1.2 miles SE of Gettysburg	dry clearing (Pardee Field) on west facing hillside; elevation ca 500 feet.	Carnegie Museum, Pittsburgh
<i>Juncus biflorus</i> Ell.	1987 Jul 25	Kunsmann 8962	Adams County: ca 0.25 mile N of the summit of Little Round Top	wet little-grazed field; elevation ca 520 feet.	Academy of Natural Sciences, Philadelphia
<i>Juncus brachycarpus</i> Engelm.	1987 Jul 25	Kunsmann 8963	Adams County: ca 0.25 mile N of the summit of Little Round Top	wet little-grazed field; elevation ca 520 feet.	Penn State University, University Park

Appendix D (continued). Data from labels of voucher specimens of species of special concern collected in Gettysburg National Military Park and Eisenhower National Historic Site, 1987-2005.

Species	Date	Collector	Location	Habitat	Herbarium
<i>Lithospermum canescens</i> (Michx.) Lehm.	2004 May 10	Kunsmann 16499	Adams County: 394858N x 771317W; west of Pardee Field, ca 1.16 air miles SSE of the center square, Gettysburg	dry scrubby diabase "glade"; elevation ca 510 feet.	PNHP, Middletown
<i>Panicum oligoanthos</i> Schultes	2004 Jun 21	Kunsmann 16577	Adams County: ca 394910N x 771452W; south of McMillen Woods and west of West Confederate Avenue, ca 1.17 air miles SW of the center square, Gettysburg	graminoid and herb dominated field with well drained diabase substrate; elevation ca 560 feet.	PNHP, Middletown
<i>Panicum oligoanthos</i> Schultes	2005 Jun 23	Kunsmann 16829	Adams County: ca 394749N x 771436W; ca 2.4 air miles SSW of the center square, Gettysburg	well drained graminoid and herb dominated old field; The Wheatfield; watershed of Plum Run; elevation ca 520 feet.	PNHP, Middletown
<i>Penstemon laevigatus</i> Ait.	2001 Jul 25	Kunsmann 15726	Adams County: ca 1.6 air miles SE by slightly S of the center square, Gettysburg	small opening with dense and diverse herbaceous vegetation in young redcedar and hardwood forest with rocky diabase substrate; watershed of Rock Creek; elevation ca 480 feet.	Academy of Natural Sciences, Philadelphia
<i>Prenanthes serpentaria</i> Pursh	2004 Oct 6	Kunsmann 16718	Adams County: ca 395004N x 771507W; ca 1.13 air miles W by slightly NW of the center square, Gettysburg	well drained diabase hardwood forest at Reynolds Woods; watershed of Willoughby Run; elevation ca 540 feet.	Academy of Natural Sciences, Philadelphia
<i>Prenanthes serpentaria</i> Pursh	2005 May 11	Kunsmann 16754	Adams County: ca 394757N x 771521W; just south of the Observation Tower, east side of West Confederate Avenue, ca 2.55 air miles SSW of the center square, Gettysburg	frequent in open hickory/oak/redcedar woods; watershed of Willoughby Run; elevation ca 580 feet.	PNHP, Middletown

Appendix D (continued). Data from labels of voucher specimens of species of special concern collected in Gettysburg National Military Park and Eisenhower National Historic Site, 1987-2005.

Species	Date	Collector	Location	Habitat	Herbarium
<i>Quercus shumardii</i> Buckley	2004 Jul 14	Kunsmann 16614	Adams County: ca 394718N x 771442W; east side of Plum Run, ca 3.0 air miles SSW of the center square, Gettysburg	mixed hardwood forest at the base of the west slope of Big Round Top, with moist diabase derived soil; elevation ca 480 feet.	PNHP, Middletown
<i>Quercus shumardii</i> Buckley	2004 Oct 7	Kunsmann 16722	Adams County: ca 394711N x 771452W; ca 3.2 air miles SSW of the center square, Gettysburg	with <i>Quercus bicolor</i> , at interface of woodlot and marshy field on the south side of Granite Farm; watershed of Plum Run; elevation ca 480 feet.	Academy of Natural Sciences, Philadelphia
<i>Quercus shumardii</i> Buckley	2005 Sep 22	Kunsmann 16900	Adams County: ca 394802N x 771417W; ca 2.1 air miles S by slightly SW of center square, Gettysburg	mixed hardwood (mostly oak and hickory) forest; watershed of Plum Run; elevation ca 520 feet.	PNHP, Middletown
<i>Quercus shumardii</i> Buckley	2005 Sep 22	Kunsmann 16901	Adams County: ca 394754N x 771416W; ca 2.26 air miles S by slightly SW of center square, Gettysburg	mixed hardwood (mostly oak and hickory) forest; watershed of Plum Run; elevation ca 520 feet.	PNHP, Middletown
<i>Ranunculus pusillus</i> Poir.	2005 Jun 9	Kunsmann 16807	Adams County: ca 394711N x 771447W; south of Granite Farm, ca 3.06 air miles SSW of center square, Gettysburg	along margin of small pool in drainage ditch in wet meadow watershed of Plum Run; elevation ca 480 feet.	PNHP, Middletown
<i>Ribes missouriense</i> Nutt.	1991 May 1	Kunsmann 9732	Adams County: ca 1.5 air miles WNW of Gettysburg	abundant in moist woods along Willoughby Run; elevation ca 540 feet.	Penn State University, University Park
<i>Rudbeckia fulgida</i> Aiton	2004 Jul 19	Kunsmann 16621	Adams County: ca 394754N x 771408W; north side of Wheatfield Road and south side of US Avenue, ca 2.25 air miles S by very slightly SW of the center square, Gettysburg	with <i>Sorghastrum nutans</i> , <i>Agrimonia parviflora</i> , <i>Fragaria virginiana</i> , and <i>Carex bushii</i> in damo grassy meadow with diabase substrate; watershed of Plum Run; elevation ca 530 feet.	PNHP, Middletown
<i>Stylosanthes biflora</i> (L.) BSP.	1994 Jul 6	Kunsmann 12178	Adams County: ca 1.2 miles SE of Gettysburg	dry clearing (Pardee Field) on west facing hillside; elevation ca 500 feet.	Academy of Natural Sciences, Philadelphia

Appendix D (continued). Data from labels of voucher specimens of species of special concern collected in Gettysburg National Military Park and Eisenhower National Historic Site, 1987-2005.

Species	Date	Collector	Location	Habitat	Herbarium
<i>Triosteum angustifolium</i> L.	2005 May 11	Kunsman 16755	Adams County: ca 394757N x 771521W; just south of the Observation Tower, east side of West Confederate Avenue, ca 2.55 air miles SSW of the center square, Gettysburg	open hickory/oak/redcedar woods; watershed of Willoughby Run; elevation ca 580 feet.	PNHP, Middletown
<i>Triosteum angustifolium</i> L.	2001 Jul 5	Kunsman 15726	Adams County: ca 1.6 air miles SE by slightly S of the center square, Gettysburg	small opening with dense and diverse herbaceous vegetation in young red cedar and hardwood forest with rocky diabase substrate; watershed of Rock Creek; elevation ca 480 feet.	Academy of Natural Sciences, Philadelphia

As the nation's primary conservation agency, the Department of the Interior has responsibility for most of our nationally owned public land and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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