responsible for the AMH ranges from between 2.8-2.9 g/cm^3.

CONCLUSIONS

A reasonable first-approximation geophysical model for the AMH would be a marginally mafic intrusion with a lower than average magnetite content flush with the felsic crystalline basement. The Adams intrusive body may be the result of magma injection along a fault related to the Ste. Genevieve Fault as it extends into soutwest Kentucky.

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A CHECKLIST OF THE VASCULAR PLANTS ON THE DEPARTMENT OF ENERGY OAK RIDGE RESERVATION

L. K. MANN, THOMAS S. PATRICK[a] AND H. R. DESELM[a]
Oak Ridge National Laboratory
Oak Ridge, Tennessee 37830

ABSTRACT

Plants have been collected on the Department of Energy Oak Ridge Reservation for over 30 years in conjunction with environmental research at Oak Ridge National Laboratory. The site includes a wide diversity of habitats, ranging from open water to mesic forests, including several cedar barrens. The vascular plant checklist of the site contains 114 families, 458 genera, and 842 species, subspecies, and varieties, and includes a number of rare species. A summary of numbers of species in different habitats indicates that the greatest diversity occurs in open woods or thickets or mesic sites.

DESCRIPTION OF THE STUDY AREA

The Department of Energy (DOE) Oak Ridge Reservation, including the Oak Ridge National Environmental Research Park (NERP), consists of approximately 15,000 ha in Anderson and Roane counties, Tennessee (Fig. 1). The reservation, purchased from individual landowners in 1942 for the Manhattan Project, provides buffer zones for nuclear production and research facilities operated for DOE at Oak Ridge. Environmental research has been conducted at the site for many years. The area is bordered on the south, west, and east by the Watts Bar and Melton Hill Lake impoundments of the Clinch River and on the north and northeast by Black Oak Ridge and the city of Oak Ridge. The study area includes most of the originally purchased reservation land, except for that occupied by the residential portion of the city of Oak Ridge.

The reservation lies within the Ridge and Valley Province of the southern Appalachians and is characterized by parallel southwest-northeast ridges of sandstone, shale, and cherty dolomite separated by valleys underlain by less weather-resistant limestone and shale (McMaster, 1963). Elevations range from approximately 230 m along the river to over 400 m at the crest of Copper Ridge, one of the six major ridges traversing the site. The gently sloping valleys are at approximately 260 m. Soils are primarily Ultisols with Inceptisols in the major drainages (Mann and Kitchings, 1982).

The general ecology of the area was previously described (Kitchings and Mann 1976) and will only be outlined in this paper. Except for forest management, the reservation has been relatively undisturbed since the early 1940's, although it was extensively farmed prior to that time. Approximately one-third of the total acreage either has been planted in pine, primarily *Pinus taeda*, or is in natural pine (*Pinus echinata* and *P. virginiana*). In many locations the natural pine is being replaced by upland hard-

[a]Department of Botany, University of Tennessee, Knoxville, TN 37916-1100.

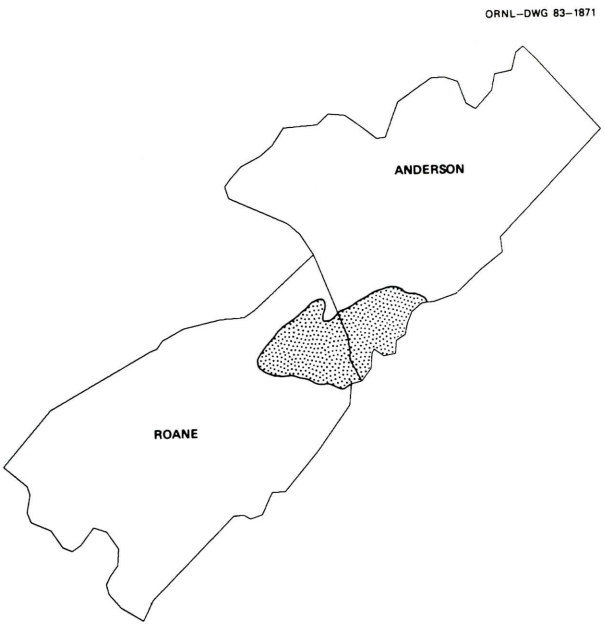

FIG. 1. *Location of Oak Ridge Reservation, TN.*

woods, dominated by *Quercus* spp., primarily *Quercus prinus*, with *Carya* spp., *Nyssa sylvatica*, *Oxydendrum arboreum*, and occasionally *Pinus strobus* being abundant. Some areas, such as pipeline and power-line rights-of-way and a few field research sites, are maintained as open fields.

Several of the more sheltered coves and bluffs support vegetation more typical of mesic escarpment forests of the nearby Cumberland Plateau, with *Fagus grandifolia*, *Tsuga canadensis, Tilia americana, Magnolia tripetala, M. acuminata,* and *Acer saccharum* as common dominants. Although most narrow, steep-sided, perennial stream drainages on the reservation have this mesophytic vegetation, it is well developed and extensive on only a few steep north-facing slopes and bluffs. Mesic bluff sites occur only along the Clinch River and its major embayments and Poplar Creek, a large tributary which originates in the Cumberland Plateau to the north. All of these bluffs are of Knox dolomite.

Many of the more uncommon species are restricted to shallow, droughty soils on Chickamauga limestone (Patrick et al. 1983). In general appearance and floristics, these areas are similar to the limestone cedar barrens of middle Tennessee (DeSelm et al. 1969) and contain prairie-like vegetation often interspersed with thickets of *Juniperus virginiana* and oaks.

Methods

Prior to 1966, a herbarium was started at Oak Ridge National Laboratory for the Oak Ridge area. Collections for the herbarium were made from several parts of the reservation for specific projects (DeSelm and Shanks 1962, Nease 1953, Ellis 1961, Hedge 1979, Patrick et al. 1983) and sporadically by many individuals (including the authors, J. S. Olson, E. E. Clebsch, F. Williams, S. Hale, G. Cristofolini, S. Cristofolini, F. G. Taylor, P. D. Parr, M. Pelton, and P. Neuman) with an interest in identifying and documenting the flora of the reservation. A preliminary list of species known to occur on the Oak Ridge Reservation and in the surrounding counties was published in 1966 (Olson et al. 1966), based on specimens from the University of Tennessee herbarium at Knoxville, the herbarium at Oak Ridge National Laboratory at Oak Ridge, and sight records. Recause of the desultory manner in which collections were added to the Oak Ridge herbarium, collections from surrounding counties were included in this initial checklist to comprise a 'probable' species list. Species names, order and family codes, and county data were stored on computer cards.

To increase the utility of this listing as well as to provide a partially updated version, general habitat information was added to the checklist when it was revised in 1975 (Mann and Bierner 1975). Species were categorized by habitat according to successional stage and moisture conditions, resulting in 14 general groupings (Fig. 2). Habitat designations are based on a combination of personal observations and descriptions obtained from botanical manuals (Small 1933, Fernald 1950, Hitchcock 1950, Gleason 1952, Cronquist 1980, Radford et al. 1968). Because moisture requirements of many species that occur in disturbed areas were not available, these species were usually assigned to all moisture categories except that of open water. There is considerable overlap of taxa from one category to another; no attempt was made to limit a species to a particular category in which it most commonly occurs. This information was added to the original computer file.

Although a few new species have been added to the checklist since 1975, many species originally reported only from surrounding Morgan, Knox, and Loudon counties have since been collected at Oak Ridge, justifying the inclusion of these species in the initial 'probable' checklist. However, species from these three surrounding counties are not included in the present list for two reasons: (1) the ORNL herbarium has been expanded such that it contains a more accurate representation of the Oak Ridge Reservation flora than the original listing, and (2) the flora of Knox and Morgan counties, while very similar in many respects to that of Oak Ridge, also contains several unusual species (e.g., *Conradina verticillata* Jennison from Morgan County) and a disproportionately large number of species not likely to be found on the reservation. Of species collected from Anderson and Roane counties, an additional 280 species are in the University of Tennessee herbarium from locations outside the reservation. Many of these species probably do occur on the reservation but are not included due to a lack of documentation.

Results

Included in the Oak Ridge checklist are 114 families, 458 genera, and 842 species, subspecies, and varieties. Several rare species are listed as endangered, threatened, or of special concern in Tennessee (TN Dept. of Conservation, 1983). The documented species are *Delphinium exaltatum* Ait., *Solidago ptarmicoides* (Nees) B. Boivin, *Cimicifuga rubifolia* Kearn, *Fothergilla major* Loddig., *Hydrastis canadensis* L., *Panax quinquefolius* L., *Lilium canadense* L., *Saxifraga careyana* Gray, *Spiranthes ovalis* Lindl.,

SERAL STAGE

Highly disturbed ——— Forested

MOISTURE

Wet

		1. Water		
	2. Disturbed	3. Open swamp	7. Swampy thickets	11. Forested swamps
		4. Wet fields	8. Wet or low thickets	12. Floodplain forests
		5. Fields	9. Rich open woods and thickets	13. Rich woods
		6. Dry fields	10. Dry open woods and thickets	14. Dry woods

Dry

FIG. 2. *Matrix of plant habitats by seral stage and relative moisture gradient.*

Tomanthera auriculata (Michx.) Raf., *Liatris cylindracea* Michx., *Aureolaria patula* (Chapm.) Pennell, *Platanthera flava* (L.) Lindl., and *Diervilla lonicera* Mill.

Delphinium exaltatum, although more widespread outside the state, is currently known only from the vicinity of Oak Ridge in Tennessee. There is a small population outside the reservation in Anderson County and another small population in Roane County within previous reservation boundaries. The largest known population in the state is on the reservation in Anderson County and covers several hectares including woodland, roadbanks, and pipeline and power-line rights-of-way. This species is restricted to cedar barrens as are *Solidago ptarmicoides, Tomanthera auriculata,* and *Liatris cylindracea* at Oak Ridge. Occurrence of the other rare species at Oak Ridge is documented elsewhere (Parr and Taylor 1979, Patrick et al. 1983, Parr, 1984).

An analysis of species richness in relation to habitat data at Oak Ridge (Fig. 3) shows decreasing numbers of species in habitats with a closed canopy. The greatest variety of species occurs in open woods or thickets on mesic sites. Curiously, numbers of species on floodplains and other areas of often saturated soils closely parallel numbers of species on xeric sites. This may reflect a similar level of stress in these sites and a tendency for there to be a fewer species with ecological strategies especially adapted for exploiting such habitats (McNaughton and Wolfe 1979).

In Table 1, species are listed alphabetically within families. Families are arranged alphabetically within great groups. Nomenclature follows the National List of Scientific Plant Names (USDA/SCS 1982) with the following exceptions: *Scutellaria pseudoserrata* Epling (Collins 1976), *Silphium trifoliatum* (Cronquist 1980), *Trillium sulcatum* Patrick (Patrick 1984), *Erythronium americanum* Ker-Gawl. (Parks and Hardin 1963).

The checklist of species at Oak Ridge has provided individuals engaged in environmental research and land-use planning at the site with a readily accessible reference of species distribution. The computerized data file of species occurrence and habitat makes possible the identification of species most likely to occur in a given area or habitat. In addition, potentially suitable species for different moisture conditions can be selected.

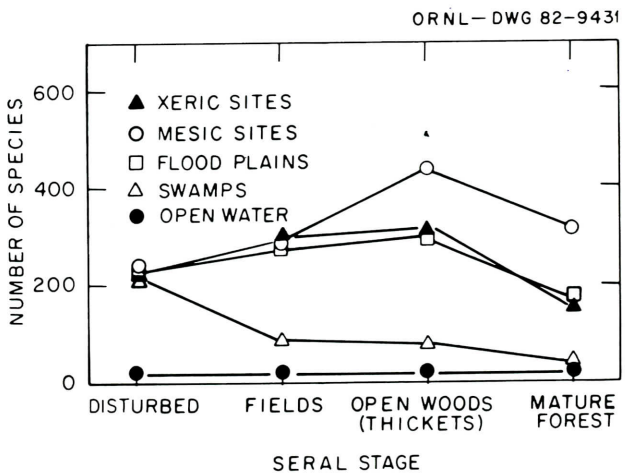

FIG. 3. *The relationship of species richness to seral stage and moisture.*

TABLE 1. *Checklist of the vascular plants on the Department of Energy Oak Ridge Reservation*

FERNS AND ALLIES

ADIANTACEAE
ADIANTUM PEDATUM

ASPLENIACEAE
ASPLENIUM MONTANUM
ASPLENIUM PLATYNEURON
ASPLENIUM RESILIENS
ASPLENIUM RHIZOPHYLLUM
ASPLENIUM RUTA-MURARIA
ASPLENIUM X EBENOIDES
ATHYRIUM FILIX-FEMINA
SUBSP ASPLENIOIDES
ATHYRIUM PYCNOCARPON
ATHYRIUM THELYPTEROIDES
CYSTOPTERIS BULBIFERA
CYSTOPTERIS PROTRUSA
DRYOPTERIS INTERMEDIA
DRYOPTERIS MARGINALIS
ONOCLEA SENSIBILIS
POLYSTICHUM ACROSTICHOIDES
WOODSIA OBTUSA

DENNSTAEDTIACEAE
PTERIDIUM AQUILINUM

EQUISETACEAE
EQUISETUM HYEMALE

LYCOPODIACEAE
LYCOPODIUM DIGITATUM
LYCOPODIUM LUCIDULUM

OPHIOGLOSSACEAE
BOTRICHIUM BITERNATUM
BOTRICHIUM DISSECTUM
BOTRYCHIUM VIRGINIANUM
OPHIOGLOSSUM VULGATUM
VAR PYCNOSTICHUM

OSMUNDACEAE
OSMUNDA CINNAMOMEA
OSMUNDA REGALIS
VAR SPECTABILIS

POLYPODIACEAE
LYCODIUM PALMATUM
PELLAEA ATROPURPUREA
PELLAEA GLABELLA
POLYPODIUM POLYPODIOIDES

SELAGINELLACEAE
SELAGINELLA APODA

THELYPTERIDACEAE
THELYPTERIS HEXAGONOPTERA
THELYPTERIS NOVEBORACENSIS
THELYPTERIS THELYPTEROIDES

GYMNOSPERMS

CUPRESSACEAE
JUNIPERUS VIRGINIANA

PINACEAE
PINUS ECHINATA
PINUS STROBUS
PINUS TAEDA
PINUS VIRGINIANA
TSUGA CANADENSIS

DICOTS

ACANTHACEAE
JUSTICIA AMERICANA
RUELLIA CAROLINIENSIS
RUELLIA HUMILIS
RUELLIA STREPENS

ACERACEAE
ACER NEGUNDO
ACER RUBRUM
ACER SACCHARINUM
ACER SACCHARUM

AIZOACEAE
MOLLUGO VERTICILLATA

AMARANTHACEAE
AMARANTHUS SPINOSUS

ANACARDIACEAE
RHUS AROMATICA
RHUS COPALLINUM
RHUS GLABRA
TOXICODENDRON RADICANS

ANNONACEAE
ASIMINA TRILOBA

APIACEAE
ANGELICA VENENOSA
CHAEROPHYLLUM TAINTURIERI
CICUTA MACULATA
CRYPTOTAENIA CANADENSIS
DAUCUS CAROTA
ERIGENIA BULBOSA
LIGUSTICUM CANADENSE
OXYPOLIS RIGIDIOR
SANICULA CANADENSIS
SANICULA GREGARIA
SANICULA SMALLII
ZIZIA APTERA

APOCYNACEAE
AMSONIA TABERNAEMONTANA
APOCYNUM CANNABINUM
VINCA MINOR

AQUIFOLIACEAE
ILEX BEADLEI
ILEX MONTANA
ILEX OPACA

ARALIACEAE
ARALIA SPINOSA
HEDERA HELIX
PANAX QUINQUEFOLIUS

ARISTOLOCHIACEAE
ARISTOLOCHIA SERPENTARIA
ASARUM ARIFOLIA
ASARUM CANADENSE

ASCLEPIADACEAE
AMPELAMUS ALBIDUS
ASCLEPIAS AMPLEXICAULIS
ASCLEPIAS INCARNATA
ASCLEPIAS SYRIACA
ASCLEPIAS TUBEROSA
ASCLEPIAS VARIEGATA
ASCLEPIAS VERTICILLATA
ASCLEPIAS VIRIDIFLORA
MATELEA GONOCARPA

ASTERACEAE
ACHILLEA MILLEFOLIUM
AGERATINA ALTISSIMA
AMBROSIA ARTEMISIIFOLIA
AMBROSIA TRIFIDA
ANTENNARIA PLANTAGINIFOLIA
ANTENNARIA SOLITARIA
ARNOGLOSSUM ATRIPLICIFOLIA
ARNOGLOSSUM RENIFORME
ASTER CORDIFOLIUS
ASTER DIVARICATUS
ASTER DUMOSUS
ASTER INFIRMUS
ASTER LAEVIS
ASTER LATERIFLORUS
ASTER OBLONGIFOLIUS
ASTER ONTARIONIS
ASTER PATENS
ASTER PATERNUS
ASTER PILOSUS
ASTER SAGITTIFOLIUS
ASTER SHORTII
ASTER SIMPLEX
ASTER SOLIDAGINEUS
ASTER UNDULATUS
BIDENS FRONDOSA
BIDENS POLYLEPIS
BIDENS TRIPARTITA
BRICKELLIA MOSIERI
CENTAUREA CYANUS
CENTAUREA MACULOSA
CICHORIUM INTYBUS
CIRSIUM DISCOLOR
CIRSIUM MUTICUM
CIRSIUM VULGARE
CONOCLINIUM COELESTINUM
CONYZA CANADENSIS
COREOPSIS AURICULATA
COREOPSIS LANCEOLATA
COREOPSIS MAJOR
COREOPSIS TINCTORIA
COREOPSIS TRIPTERIS
ECHINACEA PURPUREA
ECLIPTA ALBA
ELEPHANTOPUS CAROLINIANUS
ELEPHANTOPUS TOMENTOSUS
ERECHTITES HIERACIFOLIA
ERIGERON ANNUUS
ERIGERON PHILADELPHICUS
ERIGERON PULCHELLUS
ERIGERON STRIGOSUS
EUPATORIADELPHUS PURPUREUS
EUPATORIUM HYSSOPIFOLIUM
EUPATORIUM PERFOLIATUM
EUPATORIUM ROTUNDIFOLIUM
EUPATORIUM SEROTINUM
EUPATORIUM SESSILIFOLIUM
FLEISHMANNIA INCARNATA
GALINSOGA QUADRIRADIATA
GAMOCHAETA PURPUREA
GNAPHALIUM HELLERI
GNAPHALIUM OBTUSIFOLIUM
HELENIUM AMARUM
HELENIUM AUTUMNALE
HELENIUM FLEXUOSUM
HELIANTHUS ANGUSTIFOLIUS
HELIANTHUS DECAPETALUS
HELIANTHUS HIRSUTUS
HELIANTHUS MAXIMILIANI
HELIANTHUS MICROCEPHALUS
HELIANTHUS OCCIDENTALIS
HELIANTHUS STRUMOSUS
HELIANTHUS TUBEROSUS
HELIANTHUS X LAETIFLORUS
HELIOPSIS HELIANTHOIDES
HETEROTHECA CAMPORUM
HETEROTHECA GRAMINIFOLIA
HETEROTHECA MARIANA
HIERACIUM GRONOVII
HIERACIUM VENOSUM
KRIGIA BIFLORA
KRIGIA VIRGINICA
LACTUCA CANADENSIS
LACTUCA FLORIDANA
LACTUCA SALIGNA
LACTUCA SERRIOLA
LEUCANTHEMUM VULGARE
LIATRIS ASPERA
LIATRIS CYLINDRACEA
LIATRIS SQUARROSA
PARTHENIUM INTEGRIFOLIUM
PLUCHEA CAMPHORATA
POLYMNIA CANADENSIS
PRENANTHES ALTISSIMA
PYRRHOPAPPUS CAROLINIANUS
RATIBIDA PINNATA
RUDBECKIA FULGIDA
RUDBECKIA HIRTA
RUDBECKIA LACINIATA
RUDBECKIA TRILOBA
SENECIO ANONYMUS
SENECIO OBOVATUS
SILPHIUM TEREBINTHINACEUM
SILPHIUM TRIFOLIATUM
SMALLANTHUS UVEDALIA
SOLIDAGO ALTISSIMA
SOLIDAGO CAESIA
SOLIDAGO CANADENSIS
SOLIDAGO ERECTA
SOLIDAGO FLEXICAULIS
SOLIDAGO GIGANTEA
SOLIDAGO NEMORALIS
SOLIDAGO ODORA
SOLIDAGO PTARMICOIDES
SOLIDAGO RIGIDA
SOLIDAGO SPHACELATA
SOLIDAGO ULMIFOLIA
SONCHUS ASPER
TARAXACUM OFFICINALE
VERBESINA ALTERNIFOLIA
VERBESINA OCCIDENTALIS
VERBESINA VIRGINICA
VERNONIA GIGANTEA

BALSAMINACEAE
IMPATIENS CAPENSIS
IMPATIENS PALLIDA

BERBERIDACEAE
BERBERIS CANADENSIS
CAULOPHYLLUM THALICTROIDES
JEFFERSONIA DIPHYLLA
PODOPHYLLUM PELTATUM

BETULACEAE
ALNUS SERRULATA
CARPINUS CAROLINIANA
CORYLUS AMERICANA
OSTRYA VIRGINIANA

BIGNONIACEAE
BIGNONIA CAPREOLATA
CAMPSIS RADICANS
CATALPA BIGNONIOIDES
CATALPA SPECIOSA

BORAGINACEAE
CYNOGLOSSUM VIRGINIANUM
HACKELIA VIRGINIANA
LITHOSPERMUM ARVENSE
LITHOSPERMUM CANESCENS
MYOSOTIS MACROSPERMA
MYOSOTIS VERNA

BRASSICACEAE
ARABIDOPSIS THALIANA
ARABIS LAEVIGATA
BARBAREA VERNA
BARBAREA VULGARIS
VAR ARCUATA
BRASSICA NAPUS
CAPSELLA BURSA-PASTORIS
CARDAMINE BULBOSA
CARDAMINE CONCATENATA
CARDAMINE DIPHYLLA
CARDAMINE HIRSUTA
DRABA VERNA
ERYSIMUM CHEIRANTHOIDES
LEPIDIUM CAMPESTRE
LEPIDIUM VIRGINICUM
NASTURTIUM OFFICINALE
RORIPPA SESSILIFLORA
SIBARA VIRGINICA
THLASPI PERFOLIATUM

BUXACEAE
BUXUS SEMPERVIRENS
PACHYSANDRA PROCUMBENS

CACTACEAE
OPUNTIA HUMIFUSA

CALYCANTHACEAE
CALYCANTHUS FERTILIS

CAMPANULACEAE
CAMPANULA AMERICANA
CAMPANULA DIVARICATA
LOBELIA CARDINALIS
LOBELIA INFLATA
LOBELIA PUBERULA
LOBELIA SIPHILITICA
LOBELIA SPICATA
TRIODANIS PERFOLIATA

CAPRIFOLIACEAE
DIERVILLA LONICERA
LONICERA JAPONICA
SAMBUCUS CANADENSIS
SYMPHORICARPOS ORBICULATUS
TRIOSTEUM ANGUSTIFOLIUM
VIBURNUM ACERIFOLIUM
VIBURNUM PRUNIFOLIUM
VIBURNUM PUFIDULUM

CARYOPHYLLACEAE
AGROSTEMMA GITHAGO
CERASTIUM GLOMERATUM
CERASTIUM VULGATUM
DIANTHUS ARMERIA
HOLOSTEUM UMBELLATUM
PARONYCHIA FASTIGIATA
SAPONARIA OFFICINALIS
SILENE STELLATA
SILENE VIRGINICA
STELLARIA MEDIA
STELLARIA PUBERA

CELASTRACEAE
CELASTRUS SCANDENS
EUONYMUS AMERICANUS
EUONYMUS ATROPURPUREUS

CHENOPODIACEAE
CHENOPODIUM AMBROSIOIDES

CONVOLVULACEAE
CALYSTEGIA SEPIUM
CUSCUTA CAMPESTRIS
CUSCUTA GRONOVII
IPOMOEA COCCINEA
IPOMOEA HEDERACEA
IPOMOEA LACUNOSA
IPOMOEA PANDURATA
IPOMOEA PURPUREA

CORNACEAE
CORNUS AMOMUM
CORNUS FLORIDA
CORNUS FOEMINA

CRASSULACEAE
PENTHORUM SEDOIDES
SEDUM PULCHELLUM
SEDUM TERNATUM

DIPSACACEAE
DIPSACUS SYLVESTRIS

EBENACEAE
DIOSPYROS VIRGINIANA

ERICACEAE
EPIGAEA REPENS
GAULTHERIA PROCUMBENS
GAYLUSSACIA BACCATA
KALMIA LATIFOLIA
LYONIA LIGUSTRINA
OXYDENDRON ARBOREUM
RHODODENDRON PERICLYMENOIDES
VACCINIUM ARBOREUM
VACCINIUM CORYMBOSUM
VACCINIUM STAMINEUM
VACCINIUM VACILLANS

EUPHORBIACEAE
ACALYPHA GRACILENS
ACALYPHA RHOMBOIDEA
ACALYPHA VIRGINICA
CROTON GLANDULOSUS
EUPHORBIA COROLLATA
EUPHORBIA DENTATA
EUPHORBIA MACULATA
EUPHORBIA MERCURIALINA
EUPHORBIA NUTANS
EUPHORBIA PUBENTISSIMA
PHYLLANTHUS CAROLINIENSIS

FABACEAE
ALBIZIA JULIBRISSIN
AMORPHA FRUTICOSA
AMPHICARPA BRACTEATA
APIOS AMERICANA
ASTRAGALUS CANADENSIS
CASSIA FASCICULATA
CASSIA MARILANDICA
CASSIA NICTITANS
CASSIA OBTUSIFOLIA
CENTROSEMA VIRGINIANUM
CERCIS CANADENSIS
CLITORIA MARIANA
CROTALARIA SAGITTALIS
DESMODIUM CANADENSE
DESMODIUM CANESCENS
DESMODIUM CILIARE
DESMODIUM DILLENII
DESMODIUM GLUTINOSUM
DESMODIUM LAEVIGATUM
DESMODIUM MARILANDICUM
DESMODIUM NUDIFLORUM
DESMODIUM NUTTALLII
DESMODIUM PANICULATUM
DESMODIUM PAUCIFLORUM
DESMODIUM ROTUNDIFOLIUM
DESMODIUM VIRIDIFLORUM
GALACTIA VOLUBILIS
GLEDITSIA TRIACANTHOS
LATHYRUS LATIFOLIUS
LESPEDEZA CAPITATA
LESPEDEZA CUNEATA
LESPEDEZA HIRTA
LESPEDEZA INTERMEDIA
LESPEDEZA PROCUMBENS
LESPEDEZA REPENS
LESPEDEZA STIPULACEA
LESPEDEZA STRIATA
LESPEDEZA VIOLACEA
LESPEDEZA VIRGINICA
MEDICAGO LUPULINA
MEDICAGO SATIVA
MELILOTUS ALBA
MELILOTUS OFFICINALIS
PSORALEA ONOBRYCHIS
PUERARIA LOBATA
RHYNCHOSIA DIFFORMIS
RHYNCHOSIA LATIFOLIA
RHYNCHOSIA TOMENTOSA
ROBINIA HISPIDA
ROBINIA PSEUDOACACIA
SCHRANKIA MICROPHYLLA
STROPHOSTYLES HELVOLA
STROPHOSTYLES UMBELLATA
STYLOSANTHES BIFLORA
TEPHROSIA VIRGINIANA
TRIFOLIUM CAMPESTRE
TRIFOLIUM HYBRIDUM
TRIFOLIUM PRATENSE
TRIFOLIUM REPENS
VICIA CAROLINIANA
VICIA DASYCARPA

FAGACEAE
CASTANEA DENTATA
FAGUS GRANDIFOLIA
QUERCUS ALBA
QUERCUS BICOLOR
QUERCUS COCCINEA
QUERCUS FALCATA
QUERCUS MARILANDICA
QUERCUS MUEHLENBERGII
QUERCUS PRINOIDES
QUERCUS PRINUS
QUERCUS RUBRA
QUERCUS SHUMARDII
QUERCUS STELLATA
QUERCUS VELUTINA

GENTIANACEAE
GENTIANA SAPONARIA
GENTIANA VILLOSA
GENTIANELLA QUINQUEFOLIA
OBOLARIA VIRGINICA
SABATIA ANGULARIS

GERANIACEAE
GERANIUM MACULATUM
GERANIUM SPHAEROSPERMUM

HAMAMELIDACEAE
FOTHERGILLA MAJOR
HAMAMELIS VIRGINIANA
LIQUIDAMBAR STYRACIFLUA

HIPPOCASTANACEAE
AESCULUS FLAVA
AESCULUS SYLVATICA

HYDROPHYLLACEAE
HYDROPHYLLUM CANADENSE
PHACELIA BIPINNATIFIDA
PHACELIA PURSHII

HYPERICACEAE
ASCYRUM HYPERICOIDES
VAR MULTICAULE
HYPERICUM DENSIFLORUM
HYPERICUM DENTICULATUM
HYPERICUM DOLABRIFORME
HYPERICUM GENTIANOIDES
HYPERICUM MUTILUM
HYPERICUM PERFORATUM
HYPERICUM PUNCTATUM

JUGLANDACEAE
CARYA CORDIFORMIS
CARYA GLABRA
CARYA OVALIS
CARYA OVATA
VAR OVATA
CARYA OVATA
VAR AUSTRALIS
CARYA TOMENTOSA
JUGLANS CINEREA
JUGLANS NIGRA

LAMIACEAE
AGASTACHE NEPETOIDES
BLEPHILIA CILIATA
COLLINSONIA CANADENSIS
COLLINSONIA VERTICILLATA
HEDEOMA PULEGIOIDES
LAMIUM AMPLEXICAULE
LEONURUS CARDIACA
LYCOPUS AMERICANUS
LYCOPUS RUBELLUS
LYCOPUS VIRGINICUS
MENTHA X PIPERITA
MONARDA FISTULOSA
PHYSOSTEGIA VIRGINIANA
PRUNELLA VULGARIS
SUBSP VULGARIS
PRUNELLA VULGARIS
SUBSP LANCEOLATA
PYCNANTHEMUM INCANUM
PYCNANTHEMUM LOOMISII
PYCNANTHEMUM PILOSUM
PYCNANTHEMUM TENUIFOLIUM
PYCNANTHEMUM VIRGINIANUM
SALVIA LYRATA
SALVIA URTICIFOLIA
SATUREJA VULGARIS
SCUTELLARIA ELLIPTICA
VAR HIRSUTA
SCUTELLARIA INCANA
VAR PUNCTATA
SCUTELLARIA INTEGRIFOLIA
SCUTELLARIA LATERIFLORA
SCUTELLARIA LEONARDII
SCUTELLARIA PARVULA
VAR PARVULA
SCUTELLARIA PARVULA
VAR AUSTRALIS
SCUTELLARIA PSEUDOSERRATA
TEUCRIUM CANADENSE
TRICHOSTEMA BRACHIATUM
TRICHOSTEMA DICHOTOMUM

LAURACEAE
LINDERA BENZOIN
SASSAFRAS ALBIDUM

LINACEAE
LINUM MEDIUM
VAR TEXANUM
LINUM STRIATUM
LINUM SULCATUM
LINUM VIRGINIANUM

LOGANIACEAE
SPIGELIA MARILANDICA

LORANTHACEAE
PHORADENDRON FLAVESCENS

LYTHRACEAE
CUPHEA VISCOSISSIMA
ROTALA RAMOSIOR

MAGNOLIACEAE
LIRIODENDRON TULIPIFERA
MAGNOLIA ACUMINATA
MAGNOLIA TRIPETALA

MALVACEAE
HIBISCUS LAEVIS
HIBISCUS MOSCHEUTUS
SIDA SPINOSA

MENISPERMACEAE
COCCULUS CAROLINUS
MENISPERMUM CANADENSE

MORACEAE
MACLURA POMIFERA
MORUS RUBRA

NYSSACEAE
NYSSA SYLVATICA

OLEACEAE
CHIONANTHUS VIRGINICUS
FRAXINUS AMERICANA
VAR AMERICANA
FRAXINUS AMERICANA
VAR BILTIMOREANA
FRAXINUS PENNSYLVANICA
VAR PENNSYLVANICA
FRAXINUS PENNSYLVANICA
VAR SUBINTEGERRIMA
FRAXINUS QUADRANGULATA
LIGUSTRUM SINENSE
LIGUSTRUM VULGARE

ONAGRACEAE
CIRCAEA LUTETIANA
SUBSP CANADENSIS
EPILOBIUM COLORATUM
GAURA BIENNIS
GAURA FILIPES
LUDWIGIA ALTERNIFOLIA
LUDWIGIA DECURRENS
LUDWIGIA PALUSTRIS
OENOTHERA BIENNIS
OENOTHERA FRUTICOSA
OENOTHERA LACINIATA

OROBANCHACEAE
CONOPHOLIS AMERICANA
EPIFAGUS VIRGINIANA

OXALIDACEAE
OXALIS DILLENII
OXALIS STRICTA
OXALIS VIOLACEA

PAPAVERACEAE
SANGUINARIA CANADENSIS
STYLOPHORUM DIPHYLLUM

PASSIFLORACEAE
PASSIFLORA EDULIS
PASSIFLORA LUTEA

PHRYMACEAE
PHRYMA LEPTOSTACHYA

PHYTOLACCACEAE
PHYTOLACCA AMERICANA

PLANTAGINACEAE
PLANTAGO ARISTATA
PLANTAGO LANCEOLATA
PLANTAGO MAJOR
PLANTAGO RUGELII
PLANTAGO VIRGINICA

PLATANACEAE
PLATANUS OCCIDENTALIS

POLEMONIACEAE
PHLOX AMOENA
PHLOX AMPLIFOLIA
PHLOX DIVARICATA
PHLOX GLABERRIMA
PHLOX MACULATA
VAR PYRAMIDALIS
PHLOX PANICULATA
PHLOX PILOSA
POLEMONIUM REPTANS

POLYGALACEAE
POLYGALA CURTISSII
POLYGALA SANGUINEA
POLYGALA SENEGA
POLYGALA VERTICILLATA
VAR VERTICILLATA
POLYGALA VERTICILLATA
VAR AMBIGUA

POLYGONACEAE
POLYGONUM HYDROPIPEROIDES
VAR HYDROPIPEROIDES
POLYGONUM HYDROPIPEROIDES
VAR SETACEUM
POLYGONUM LAPATHIFOLIUM
POLYGONUM PENSYLVANICUM
POLYGONUM PERSICARIA
POLYGONUM PUNCTATUM
POLYGONUM SAGITTATUM
POLYGONUM SCANDENS
VAR SCANDENS
POLYGONUM SCANDENS
VAR CRISTATUM
POLYGONUM VIRGINIANUM
RUMEX ACETUSELLA
RUMEX CRISPUS
RUMEX OBTUSIFOLIUS

PORTULACACEAE
CLAYTONIA CAROLINIANA
CLAYTONIA VIRGINICA

PRIMULACEAE
ANAGALLIS ARVENSIS
DODECATHEON MEADIA
LYSIMACHIA CILIATA
LYSIMACHIA LANCEOLATA
LYSIMACHIA NUMMULARIA
LYSIMACHIA QUADRIFOLIA
SAMOLUS PARVIFLORUS

PYROLACEAE
CHIMAPHILA MACULATA
HYPOPITYS MONOTROPA
MONOTROPA UNIFLORA

RANUNCULACEAE
ACONITUM UNCINATUM
ACTAEA PACHYPODA
ANEMONE QUINQUEFOLIA
ANEMONE VIRGINIANA
AQUILEGIA CANADENSIS
CIMICIFUGA RACEMOSA
CIMICIFUGA RUBIFOLIA
CLEMATIS VIORNA
CLEMATIS VIRGINIANA
DELPHINIUM EXALTATUM
DELPHINIUM TRICORNE
HEPATICA NOBILIS
VAR ACUTA
HEPATICA NOBILIS
VAR OBTUSA
HYDRASTIS CANADENSIS
RANUNCULUS ABORTIVUS
RANUNCULUS BULBOSUS
RANUNCULUS CAROLINIANUS
RANUNCULUS FASCICULARIS
RANUNCULUS HISPIDUS
RANUNCULUS RECURVATUS
RANUNCULUS REPENS
RANUNCULUS SCELERATUS
RANUNCULUS SEPTENTRIONALIS
THALICTRUM DIOICUM
THALICTRUM REVOLUTUM
THALICTRUM THALICTROIDES

RHAMNACEAE
BERCHEMIA SCANDENS
CEANOTHUS AMERICANUS
RHAMNUS CAROLINIANA

ROSACEAE
AGRIMONIA PARVIFLORA
AGRIMONIA PUBESCENS
AGRIMONIA ROSTELLATA
AMELANCHIER ARBOREA
ARUNCUS DIOICUS
CRATAEGUS CRUS-GALLI
CRATAEGUS MARSHALLII
DUCHESNEA INDICA
FRAGARIA VIRGINIANA
GEUM CANADENSE
GEUM VIRGINIANUM
MALUS PUMILA
PORTERANTHUS TRIFOLIATUS
POTENTILLA CANADENSIS
POTENTILLA NORVEGICA
POTENTILLA RECTA
POTENTILLA SIMPLEX
PRUNUS AMERICANA
PRUNUS ANGUSTIFOLIA
PRUNUS MUNSONIANA
PRUNUS PERSICA
PRUNUS SEROTINA
PYRUS COMMUNIS
ROSA CAROLINA
ROSA MULTIFLORA
ROSA SETIGERA
RUBUS ARGUTUS
RUBUS BETULIFOLIUS
RUBUS FLAGELLARIS
RUBUS HISPIDUS
RUBUS OCCIDENTALIS
SPIRAEA DOUGLASII
SPIRAEA TOMENTOSA
WALDSTEINIA FRAGARIOIDES
VAR PARVIFLORA

RUBIACEAE
CEPHALANTHUS OCCIDENTALIS
DIODIA TERES
DIODIA VIRGINIANA
GALIUM APARINE
GALIUM CIRCAEZANS
GALIUM PILOSUM
GALIUM TINCTORIUM
GALIUM TRIFLORUM
HOUSTONIA CAERULEA
HOUSTONIA CANADENSIS
HOUSTONIA LONGIFOLIA
HOUSTONIA NIGRICANS
HOUSTONIA PURPUREA
VAR PURPUREA
HOUSTONIA PURPUREA
VAR CALYCOSA
MITCHELLA REPENS

SALICACEAE
POPULUS ALBA
POPULUS DELTOIDES
POPULUS X JACKII
SALIX EXIGUA
SUBSP INTERIOR
SALIX HUMILIS
SALIX NIGRA

SAURURACEAE
SAURURUS CERNUUS

SAXIFRAGACEAE
HEUCHERA AMERICANA
HEUCHERA VILLOSA
HYDRANGEA ARBORESCENS
ITEA VIRGINICA
PHILADELPHUS HIRSUTUS
PHILADELPHUS INODORUS
SAXIFRAGA CAKEYANA
TIARELLA CORDIFOLIA

SCROPHULARIACEAE
AGALINUS PURPUREA
AGALINUS TENUIFOLIA
AUREOLARIA FLAVA
AUREOLARIA LAEVIGATA
AUREOLARIA PATULA
AUREOLARIA VIRGINICA
CHELONE GLABRA
LINARIA VULGARIS
LINDERNIA ANAGALLIDEA
LINDERNIA DUBIA
MECARDONIA ACUMINATA
MIMULUS ALATUS
MIMULUS RINGENS
PAULOWNIA TOMENTOSA
PEDICULARIS CANADENSIS
PENSTEMON LAEVIGATUS
TOMANTHERA AURICULATA
VERBASCUM BLATTARIA
VERBASCUM THAPSUS
VERONICA ANAGALLIS-AQUATICA
VERONICA ARVENSIS
VERONICA OFFICINALIS
VERONICA PEREGRINA
VERONICA SERPYLLIFOLIA
VERONICASTRUM VIRGINICUM

SIMAROUBACEAE
AILANTHUS ALTISSIMA

SOLANACEAE
DATURA STRAMONIUM
NICANDRA PHYSALODES
PHYSALIS LONGIFOLIA
VAR SUBGLABRATA
PHYSALIS PUBESCENS
VAR INTEGRIFOLIA
PHYSALIS VIRGINIANA
SOLANUM CAROLINENSE
SOLANUM PTYCANTHUM

STAPHYLEACEAE
STAPHYLEA TRIFOLIA

TILIACEAE
TILIA AMERICANA

ULMACEAE
CELTIS LAEVIGATA
CELTIS OCCIDENTALIS
CELTIS TENUIFOLIA
ULMUS ALATA
ULMUS AMERICANA
ULMUS RUBRA

URTICACEAE
BOEHMERIA CYLINDRICA
PILEA PUMILA

VALERIANACEAE
VALERIANELLA RADIATA

VERBENACEAE
PHYLA LANCEOLATA
VERBENA SIMPLEX
VERBENA URTICIFOLIA

VIOLACEAE
HYBANTHUS CONCOLOR
VIOLA AFFINIS
VIOLA BICOLOR
VIOLA CANADENSIS
VIOLA CONSPERSA
VIOLA CUCULLATA
VIOLA HASTATA
VIOLA HIRSUTULA
VIOLA PALMATA
VIOLA PALMATA
VIOLA PAPILIONACEA
VIOLA PENSYLVANICA
VIOLA PUBESCENS
VIOLA SAGITTATA
VIOLA SORORIA
VIOLA STRIATA
VIOLA TRILOBA
VIOLA TRIPARTITA
VAR GLABERRIMA

VITACEAE
AMPELOPSIS CORDATA
PARTHENOCISSUS QUINQUEFOLIA
VITIS AESTIVALIS
VITIS CINEREA
VITIS RIPARIA
VITIS ROTUNDIFOLIA
VITIS VULPINA

MONOCOTS

ALISMATACEAE
ALISMA SUBCORDATUM
SAGITTARIA CALYCINA
SAGITTARIA LATIFOLIA
VAR OBTUSA
SAGITTARIA MONTEVIDENSIS

AMARYLLIDACEAE
HYMENOCALLIS OCCIDENTALIS
HYPOXIS HIRSUTA
NARCISSUS PSEUDONARCISSUS

ARACEAE
ACORUS CALAMUS
ARISAEMA DRACONTIUM
ARISAEMA TRIPHYLLUM
ORONTIUM AQUATICUM

COMMELINACEAE
COMMELINA COMMUNIS
COMMELINA VIRGINICA
TRADESCANTIA SUBASPERA

CYPERACEAE
BULBOSTYLIS CAPILLARIS
CAREX ABSCONDITA
CAREX AMPHIBOLA
CAREX ARTITECTA
CAREX ATLANTICA
VAR INCOMPERTA
CAREX BAILEYI
CAREX BUSHII
CAREX CAROLINIANA
CAREX CEPHALOPHORA
CAREX COMPLANATA
CAREX CRINITA
CAREX DIGITALIS
CAREX EBURNEA
CAREX EMMONSII
CAREX FLACCIDULA
CAREX FRANKII
CAREX GRACILESCENS
CAREX GRACILLIMA
CAREX GRANULARIS
CAREX GRAYI
CAREX HIRSUTELLA
CAREX INTUMESCENS
CAREX LAXICULMIS
CAREX LAXIFLORA
CAREX LUPULINA
CAREX LURIDA
CAREX MUHLENBERGII
CAREX NIGROMARGINATA
CAREX NORMALIS
CAREX PENSYLVANICA
CAREX RADIATA
CAREX RETROFLEXA
CAREX SHORTIANA
CAREX SQUARROSA
CAREX STRIATULA
CAREX SWANII
CAREX TEXENSIS
CAREX TRIBULOIDES
CAREX VULPINOIDEA
CAREX WILLDENOWII
CYPERUS ESCULENTUS
CYPERUS FERRUGINESCENS
CYPERUS FLAVESCENS
VAR POAEFORMIS
CYPERUS LANCASTRIENSIS
CYPERUS OVULARIS
CYPERUS STRIGOSUS
ELEOCHARIS ERYTHROPODA
ELEOCHARIS OBTUSA
ELEOCHARIS TENUIS
FIMBRISTYLIS AUTUMNALIS
SCIRPUS ATROVIRENS
SCIRPUS CYPERINUS
SCIRPUS PENDULUS
SCIRPUS POLYPHYLLUS
SCIRPUS VALIDUS
VAR CREBER
SCLERIA OLIGANTHA
SCLERIA TRIGLOMERATA

DIOSCOREACEAE
DIOSCOREA BATATAS
DIOSCOREA HIRTICAULIS
DIOSCOREA QUATERNATA

IRIDACEAE
GLADIOLUS X GANDAVENSIS
IRIS CRISTATA
IRIS X GERMANICA
SISYRINCHIUM ANGUSTIFOLIUM
SISYRINCHIUM ATLANTICUM
SISYRINCHIUM MUCRONATUM

JUNCACEAE
JUNCUS ACUMINATUS
JUNCUS BIFLORUS
JUNCUS BUFONIUS
JUNCUS CORIACEUS
JUNCUS DEBILIS
JUNCUS EFFUSUS
VAR SOLUTUS
JUNCUS MARGINATUS
JUNCUS SECUNDUS
JUNCUS TENUIS
VAR TENUIS
JUNCUS TENUIS
VAR DUDLEYI
LUZULA ACUMINATA
VAR ACUMINATA
LUZULA ACUMINATA
VAR CAROLINAE
LUZULA BULBOSA
LUZULA ECHINATA
LUZULA MULTIFLORA

LILIACEAE
ALLIUM AMPELOPRASUM
ALLIUM CANADENSE
ALLIUM CERNUUM
ALLIUM VINEALE
AMIANTHIUM MUSCAETOXICUM
ASPARAGUS OFFICINALIS
CAMASSIA SCILLOIDES
CHAMAELIRIUM LUTEUM
DISPORUM LANUGINOSUM
ERYTHRONIUM AMERICANUM
ERYTHRONIUM UMBILICATUM
HEMEROCALLIS FULVA
LILIUM CANADENSE
MANFREDA VIRGINICA
MEDEOLA VIRGINIANA
POLYGONATUM BIFLORUM
SMILACINA RACEMOSA
SMILAX BONA-NOX
SMILAX ECIRRATA
SMILAX GLAUCA
SMILAX PULVERULENTA
SMILAX ROTUNDIFOLIA
STENANTHIUM GRAMINEUM
TRILLIUM CUNEATUM
TRILLIUM FLEXIPES
TRILLIUM LUTEUM
TRILLIUM SULCATUM
TRILLIUM VASEYI
UVULARIA GRANDIFLORA
UVULARIA PERFOLIATA
YUCCA FILAMENTOSA
VAR SMALLIANA

ORCHIDACEAE
CORALLORRHIZA ODONTORHIZA
CORALLORRHIZA WISTERIANA
CYPRIPEDIUM ACAULE
GALEARIS SPECTABILIS
GOODYERA PUBESCENS
HEXALECTRIS SPICATA
LIPARIS LILIIFOLIA
MALAXIS UNIFOLIA
PLATANTHERA CLAVELLATA
PLATANTHERA FLAVA
VAR HERBIOLA
SPIRANTHES LACERA
SPIRANTHES OVALIS
SPIRANTHES VERNALIS
TIPULARIA DISCOLOR

POACEAE
AGROPYRON REPENS
AGROSTIS HYEMALIS
AGROSTIS PERENNANS
AGROSTIS STOLONIFERA
ALOPECURUS CAROLINIANUS
ANDROPOGON ELLIOTII
ANDROPOGON GERARDII
ANDROPOGON TERNARIUS
ANDROPOGON VIRGINICUS
ARISTIDA LONGESPICA
ARISTIDA OLIGANTHA
ARISTIDA VIRGATA
ARTHRAXON HISPIDUS
ARUNDINARIA GIGANTEA
BRACHYELETRUM ERECTUM
BROMUS COMMUTATUS
BROMUS JAPONICUS
BROMUS PUBESCENS
CHASMANTHIUM LATIFOLIUM
CINNA ARUNDINACEA
CYNODON DACTYLON
DACTYLIS GLOMERATA
DANTHONIA SPICATA
DIARRHENA AMERICANA
DICHANTHELIUM ACUMINATUM
DICHANTHELIUM BOSCII
DICHANTHELIUM CLANDESTINUM
DICHANTHELIUM COMMUTATUM
DICHANTHELIUM DEPAUPERATUM
DICHANTHELIUM DICHOTOMUM
DICHANTHELIUM OLIGOSANTHES
DICHANTHELIUM SCOPARIUM
DICHANTHELIUM SPHAEROCARPON
VAR SPHAEROCARPON
DICHANTHELIUM SPHAEROCARPON
VAR ISOPHYLLUM
DIGITARIA ISCHAEMUM
DIGITARIA SANGUINALIS
ECHINOCHLOA CRUSGALLI
ECHINOCHLOA MURICATA
ELEUSINE INDICA
ELYMUS VILLOSUS
ELYMUS VIRGINICUS
VAR VIRGINICUS
ELYMUS VIRGINICUS
VAR GLABRIFLORUS
ELYMUS VIRGINICUS
VAR HIRSUTIGLUMIS
ERAGROSTIS CAPILLARIS
ERAGROSTIS CILIANENSIS
ERAGROSTIS CURVULA
ERAGROSTIS HYPNOIDES
ERAGROSTIS SPECTABILIS
ERIANTHUS ALOPECUROIDES
EULALIA VIMINEA
FESTUCA PRATENSIS
FESTUCA OBTUSA
GLYCERIA STRIATA
HYSTRIX PATULA
LEERSIA ORYZOIDES
LEERSIA VIRGINICA
LOLIUM PERENNE
VAR MULTIFLORUM
MELICA MUTICA
MUHLENBERGIA SCHREBERI
MUHLENBERGIA TENUIFLORA
PANICUM ANCEPS
PANICUM CAPILLARE
PANICUM DICHOTOMIFLORUM
PANICUM FLEXILE
PANICUM PHILADELPHICUM
PANICUM RIGIDULUM
PASPALUM BOSCIANUM
PASPALUM DILATATUM
PASPALUM LAEVE
VAR LAEVE
PASPALUM LAEVE
VAR PILOSUM
PASPALUM PUBIFLORUM
VAR GLABRUM
PASPALUM SETACEUM
VAR MUHLENBERGII
PHLEUM PRATENSE
POA AUTUMNALIS
POA COMPRESSA
POA CUSPIDATA
POA PRATENSIS
SCHIZACHYRIUM SCOPARIUM
SETARIA GENICULATA
SETARIA GLAUCA
SETARIA VIRIDIS
SORGHASTRUM ELLIOTTII
SORGHASTRUM NUTANS
SORGUM HALEPENSE
SPHENOPHOLIS NITIDA
SPHENOPHOLIS OBTUSATA
SPOROBOLUS ASPER
SPOROBOLUS NEGLECTUS
SPOROBOLUS VAGINIFLORUS
TRIDENS FLAVUS
TRITICUM X AESTIVUM
VULPIA OCTOFLORA

POTAMOGETONACEAE
POTAMOGETON CRISPUS
POTAMOGETON FOLIOSUS

TYPHACEAE
TYPHA LATIFOLIA

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MUCUS TRAIL FOLLOWING BY THE SLUG *DEROCERAS LAEVE* (MULLER)

David A. Pillard*
North Texas State University
Denton, Texas 76203

Abstract

Mucus trails of the slug *Deroceras laeve* were marked on the underside of a glass plate as they moved across the top. Tracings were used to produce permanent records for analytical comparisons. Individual slugs were found to occasionally follow their own trails as well as the trails of conspecifics. However, the degree of following in the experiments was not significantly different from the control tests for this species, indicating potential effects of aggression and habitat utilization.

Introduction

The phenomenon of mucus trail following has been observed and studied in several species of gastropods. It may, in fact, be a common characteristic of most gastropods (Wells and Buckley, 1972). Some of the earlier studies examined the homing ability in limpets. Cook et al. (1969) postulated that the homing ability in members of the genus *Patella* may be due to absorbed proteins since washing of a trail on a rock did not seem to inhibit following. It was suggested that *Siphonaria normalis* may also be following some sort of chemical information (Cook, 1969).

Wells and Buckley (1972), in their well-known study, found that *Physa* traveled up the same arm of a Y-tube with a much higher frequency than would be predicted randomly. *Physa* followed its own trail as well as those laid down by other individuals. Another snail, *Biomphalaria glabrata*, will also follow its own trail and the trail of a conspecific with equal frequency (Townsend, 1974).

Following has been observed in the large terrestrial slugs *Limax grossui* Lupu. (Cook, 1977) and *L. pseudoflavus* (Cook, 1979). *Limax grossui*, in addition to following trails laid by members of its own species, also followed trails of *L. flavus*. It did not, however, follow the trails of *Deroceras reticulatum* or *Milax budapestiensis*, indicating trail discrimination between species exists.

This paper describes the results of an examination of trail following in the small slug *Deroceras* (=*Agrtolimax*) *laeve*. Individual following as well as following between conspecifics was studied.

*Institutes of Applied Sciences, Box 13078