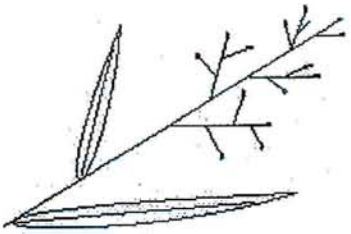
BOTANICAL SURVEY OF WALLACE TOWNSHIP

INCLUDING IDENTIFICIATION OF
EXCEPTIONAL NATURAL AREAS
AND
RARE PLANT SPECIES SITES

FIELDWORK 2006

REPORT, FEBRUARY, 2007



Survey Conducted by
Janet Ebert and Jack Holt
1611 Smith Bridge Road
Chadds Ford, PA 19317
610-459-0585
With the assistance of
The Brandywine Conservancy Environmental Management Center
And the
Wallace Township Environmental advisory Committee

PURPOSE

This survey was commissioned by the Wallace Township Board of Supervisors and was funded by a combination of a Chester County Vision Partnership Program grant and township monies. The purpose of the survey was to inventory the plant species and communities of Wallace Township, paying special attention to the location and quality of native plant communities, the distribution of alien invasives, and the presence of state listed species of special concern. The information gathered in the inventory is being used to set conservation priorities including locating, determining, and evaluating Exceptional Natural Areas (ENAs) in the township. It can also be useful in restoration efforts, attempts to control alien invasive species, and as a baseline for the botanical and broader ecological health of the township.

METHODS

For the purposes of the survey the township was divided into twenty sections of more or less equal size (see Map 1 – *Botanical Survey Sections*). The division was made using roads as much as possible, but also streams, utility lines, and property lines when necessary to keep sections roughly the same size. Dividing the township into separate survey sections provides a better picture of both the frequency and distribution of plant species. More importantly, it insured that the surveyors looked at the less interesting areas as well as the best habitats and develop a better feel for relative quality and distribution of habitats.

The majority of surveying was performed by repeatedly walking the roads of the township and recording all species encountered along them and in the adjacent habitats. Many landowners gave permission for a more thorough survey of their property, providing access to the interior of most sections. The Wallace Township Environmental Advisory Council, the Wallace Trust, members of the Planning Commission and Board of Supervisors and other citizens of the township provided essential assistance in landowner contact. Surveying began in January 2006 and concluded in January, 2007.

THE SETTING

Wallace Township, located in north-central Chester County, is approximately 7,761 acres, or 12.1 square miles, in area. It is irregularly squarish in shape and is bounded by East and West Brandywine, East and West Nantmeal, and Upper Uwchlan Townships respectively.

Pre-settlement vegetation consisted of deciduous forest punctuated by natural disturbances and clearing by Native Americans. European settlers cleared the trees for farmland, pasture, and timber, and agriculture became the mainstay of the local economy. Rocky or wet areas unsuitable for cultivation or grazing were harvested repeatedly for lumber and fuel, and the percentage of forest cover increased as marginal farmland was abandoned. Recently the conversion of farmland and woodland to residential land has accelerated, creating a patchwork of 'unused' natural habitats, farmland, and highly managed landscapes.

Wallace Township is not served by any major highways. Larger roads running through it include Creek Road (Route 282), which follows the East Branch Brandywine through the heart of the township, Little Conestoga Road through the north, Fairview Road from north to south, and Manor Road (Rt. 82), which cuts the far western corner. In addition the Pennsylvania Turnpike (I76), which is not connected to the township road system, cuts across the far northern edge of the township, with a service plaza (Peter J. Camiel) in the far northwest corner. Glenmoore and Cornog are the only communities of any size and contain what limited commercial or industrial development exists in the township. Devereaux Foundation and its school hold a large parcel of land in the center of the township, but the institutional facilities present on it are limited in size and number. A power line and numerous pipelines crisscross the township, their right-of-ways providing numerous stretches of managed open habitat. A long-abandoned railroad runs along the bank of the East Brandywine; it and the abandoned water-filled quarry southeast of Cornog provide the main conspicuous evidence of past commercial - industrial activity. Two major parks,

Springton Manor County Park in the south, and Marsh Creek State Park in the southeast, together with several smaller township parks provide preserves of open space and natural plant communities for the public. The Wallace Trust, The Nature Conservancy, and several other land trusts and Home Owner Associations also hold land or easements restricting land use. As a result, approximately 20% of land in the township is somewhat protected from future development.

GEOLOGY AND DRAINAGE

Wallace Township lies in the Piedmont geologic province, underlain by ancient rocks that were repeatedly metamorphized and deformed as continents and islands collided and split apart (see Map 2 – *Wallace Township Watersheds and Geology*). The oldest rock in the township is gneiss, a coarse-grained often streaky mixture of light and dark minerals that is over a billion years old. Approximately a billion years ago this gneiss was intruded by anorthosite, a rock formation composed mainly of calcium-rich feldspar. Later folding and faulting emplaced a wedge of slightly younger Chickies quartzite, a pale rock mostly composed of tightly-cemented quartz grains, at the south end of the township. Chester County was never covered by glaciers, but did have a considerably different climate when glaciers extended into northeastern PA., as recently as 10,000 years ago. The topography and drainage patterns were adjusted during the glacial period, and vegetation and recent land use are controlled by these underlying rocks and land forms.

The anorthosite intrusion forms a rough oval underlying the center-west of the township and parts of West Nantmeal and Honey Brook townships. In profile it forms a shallow bowl, sloping down to Indian Run and the East Brandywine. Large areas of the anorthosite have eroded into bouldery terrain better suited for woodlots than farming or grazing, giving Wallace Township its distinctive characteristics of large wooded tracts and pale stone walls. In the south the resistant Chickies quartzite forms a high ridge that offers sweeping views to the north and south, while deflecting the Brandywine eastward. A major inactive regional fault (the Brandywine Manor fault) separates the anorthosite and Chickies quartzite, also dividing the gneiss into two 'flavors' of rock based on the intensity of metamorphism. Like the anorthosite, large areas of gneiss-underlain terrain erode into boulder fields, with rich soil between the rounded rocks.

The township lies entirely within the East Branch of the Brandywine watershed. In the township three sub-drainages occur within this watershed; the East Brandywine, running through the center and draining about 50% of the township; the north and south branches of Indian Run in the southwest 30%, draining the anorthosite-underlain area; and Marsh Creek, which forms most of the north border of the township and drains the all-gneiss area north and east of Little Conestoga Road. Marsh Creek originates in the Great Marsh, one of the largest non-tidal wetland complexes in southeastern PA. (*Chester County Natural Areas Inventory*, 1994, updated 2000). All the streams in the township are designated as Special Protection Waters (High Quality) by the PA. Department of Environmental Protection. Indian Run, including the North Branch is also designated as a wild trout stream by the PA. Fish and Boat Commission.

THE FLORA

A total of 825 plant species have been recorded for Wallace Township during this survey. Of these, 578, or 70% are natives and 248, or just under 30%, are aliens. The largest families are *Asteraceae* (Aster family) with 97 species, *Poaceae* (Grass family) with 88 species, and *Cyperaceae* (Sedge family) with 63 species. In comparison with six other townships with similar surveys, Wallace Township has both the highest number of native species and the lowest percent of aliens. The rocky topography and distance from urban centers have slowed the loss of habitat and native plant communities suffered by many other townships in the area. However, *156 species or 26% of the native plants were seen in only one or two sections.* Some require soil, temperature, or water conditions that seldom occur in the township, and have never been very common, but others, such as mountain laurel and downy rattlesnake-plantain were once considered frequent or common in the county (see Hugh E.A. Stone's *Flora of Chester County*, 1945) but are now are in danger of disappearing. Certainly some species have already vanished from the township, and without protection, management, and restoration, the losses will increase. Appendix 1 contains a complete list of the plants of Wallace Township, and Appendix 2 lists of trees and shrubs.

PLANT COMMUNITIES

A plant community is defined by Fike (1999) as "an assemblage of plant populations sharing a common environment and interacting with each other, with animal populations, and with the physical environment" (*Terrestrial and Palustrine Plant Communities of Pennsylvania*). These interactions occur at a wide range of scales, from those involving regional factors such as climate and geology, to those involving chemical reactions and soil microbes. With so many (and often conflicting) influences, plant communities are not discrete, easily classified units, but more a continuum of possibilities. Also, the speed and magnitude of human alterations of the environment have reduced and degraded native plant communities faster than they can adjust, and many wide-spread communities are unstable and alien-dominated. Communities can be broadly delineated according to available moisture and dominant species.

Forests are woodlands with a closed canopy whose trees are generally older than 60-70 years of age. They range from dry chestnut oak-heath, to red oak-mix, more mesic beech-tulip-oak, to maple-pin oak swamp forest, to floodplain forest.

Dry Oak-Heath: The characteristic species of this community are chestnut oak (sometimes in pure stands, but usually mixed with other oaks), a red maple understory, and various mixtures of ericaceous (heath) shrubs (mountain laurel, blueberries, huckleberries) beneath. The ground is usually covered with duff, often loose and thick. The herb layer is usually sparse, with sedges the most prominent component, and is generally confined to the frequently mossy duff-free areas. This community is frequently well-developed on the quartzite ridges in Chester County. The only known example of this community in Wallace Township occurs toward the east end of the Chickies outcrop where a narrow band of dry oak-heath forest extends from the ridgetop partway down the north slope.

Red Oak-Mix or Dry Oak-Mix: This forest type is usually found on dry ridges and slopes. In general oaks are the dominant canopy trees, but usually grow mixed with often considerable amounts of hickory, black gum, tulip, and beech. Black birch is a frequent canopy and understory tree, often forming sizable stands. Other common understory trees and shrubs include red maple, dogwood, witch hazel, maple-leaved viburnum, spicebush, and occasionally azalea. White wood aster is a common herb, but many other herbs and ferns are usually present, including may-apple, New York fern, white wild lettuce, Solomon's-seal, false Solomon's-seal, wild licorice, blue-stemmed goldenrod, partridgeberry, wild sarsasparilla, wintergreen, and sedges. Frequent boulder-strewn slopes and less frequent rock outcrops usually have lichens, mosses, and at least one species of fern growing on them, the most common being marginal shield-fern and Christmas fern. These rocky slopes also are frequent hosts for the understory tree hop-hornbeam. This is the most generalized and most common forest type in the township. It occurs on all three of the major bedrock types, mostly on ridges and drier slopes. Large high-quality examples of this forest community occur on the slope south and east of the Barneston flood control dam; in the northeast corner near the turnpike; in Marsh Creek State Park along the Brandywine, and many other areas.

Mesic forest: This is a generalized and therefore common forest type, of a medium moisture level, and is often not easily separated from the drier red oak-mix or the moister floodplain forests. This forest type tends to grow on deeper soils and gentler lower slopes than the red oak-mix. Oaks, mostly red or white, are often still present, but tulip, maples and/or beech are usually more common, and may dominate large tracts. The shady beech-dominated communities tend to have poorly-developed but generally native understory, shrub and herb layers over duff. In contrast tulip-dominated forests often have a very rich and diverse herb flora, shaded by ironwood, dogwood, spicebush, black-haw and other viburnums. Common herbs include jack-in-the-pulpit, may-apple, violets, bloodroot, sanicles, Solomon's-seal, false Solomon's-seal, enchanter's-nightshade, spring-beauty, and various ferns and sedges. However, the rich soils are conducive to alien invasion, especially where the soil has been disturbed. Many tulip woodlands are dominated underneath by invasives including Norway maple, the bush-honeysuckles, multiflora rose, burning bush, barberry, garlic mustard, long-bristled smartweed, stilt-grass, garlic, chickweed, ivy-leaved speedwell, and long-bristled smartweed. Non-invaded examples include the level forest east of Lovell Lane, the forest fragment south of Little Conestoga Road east of the pipeline in the eastern part of the township, and the rich mid-slope tulip woodland along the eastern edge of Springton Manor Park.

Wet forests: These are forests growing on poorly drained or seepy ground that is at best rarely flooded by streams. They are often heavily laced with gravelly seeps and muddy rivulets. Many are on low ground near the larger streams; others are in nearly level headwater areas.

Red maple is most often the canopy dominant, but pin oak is usually present to a lesser or greater degree. Other oaks, especially swamp white, tulip, shagbark hickory, and ashes are also frequent canopy species. Red maple also tends to dominate the understory, occasionally joined by black ash. The shrubbery is often thick and tangled, with arrowwood, black haw, winterberry, and spicebush the most common species. Swamp dogwood, blackberries, highbush blueberry, multiflora rose, and privet are also often present, the last two especially in edges and disturbed areas. Where not heavily impacted by aliens the ground flora is often diverse, though not so much as the mesic forests. In non-oak low woodlands jack-in-the-pulpit, skunk cabbage, trout-lily, spring-beauty, honewort, jewelweed, wood reed-grass, white-grass, and numerous sedges are some of the common ground covers. Gravel seep specialists include skunk cabbage, early saxifrage, crested shield-fern, Pennsylvania bittercress, and in the anorthosite region the uncommon herb mountain watercress. Some common muddy rivulet herbaceous species are fowl bluegrass, fowl manna-grass, swamp buttercup, and jewelweed. Unfortunately stilt-grass has successfully invaded many of these woodlands.

Low acidic woods dominated by oaks (often with tulip and red maple mixed in) generally are less diverse, but are also usually less impacted by alien invasives. Many have large swathes of bristly dewberry, Canada mayflower, and tree clubmoss growing, with cinnamon and other ferns common in the seeps. A good example of low oak woods is in the ENA #4 north of Little Conestoga Road south of the pond.

Floodplain forests: Floodplains usually possess a variety of growing conditions, from muddy slough to sandy alluvium, often in close proximity. In frequently disturbed scour-and-fill areas near the larger watercourses trees such as sycamore and silver maple usually become established.

In often ribbon-like strips of higher well-drained ground along the stream, oaks (mainly red and white) and hickories (mostly bitternut and shagbark) are often common, shading spicebush, bladdernut, and a variety of rich or even red oak-mix woodland shrubs, herbs and numerous sedges. Beech and sugar maple are also a frequent canopy component in this habitat, often growing in near-pure stands, often on bouldery ground. In many areas the rich woods herbaceous species frequently grow alongside floodplain specialists, including Virginia waterleaf, Virginia bluebells, zigzag goldenrod, stonecrop, false mermaid-weed, meadow onion, sedges, and unfortunately often day-lily, dame's-rocket, and lesser celandine buttercup. Good examples of oak-hickory floodplain forests occur in ENA #16 south of Park Lane on the east bank of the East Brandywine, along Indian Run, and in Marsh Creek State Park along the East Brandywine. A good example of sugar maple floodplain woods grows on the north side of Marsh Creek north of the turnpike east of Fairview Road, and of low beech forest on the south side of Indian Run in Springton Manor Park.

In the lower swampier and frequently flooded ground away from the streams red maple, pin oak, green ash, and slippery elm are the most common trees, occasionally joined by swamp white oak in richer areas and black walnut in more disturbed ground. Viburnums, mainly black haw and arrowwood, are the common shrubs, frequently joined in disturbed areas by multiflora rose, brambles, and privet. The ground flora here is usually weedy, with poison ivy, Virginia creeper, fowl bluegrass, fowl manna-grass, jewelweed, jack-in-the-pulpit, skunk cabbage, wood reed-grass, and sedges commonly joined by stilt-grass, ground-ivy, Japanese honeysuckle, and other invasives. In the spring the ground is often green with ephemeral herbs including spring beauty, trout-lily, false mermaid weed, and increasingly the invasive lesser celandine buttercup.

Specialist forest communities: In addition to the above forest types there are several specialist communities. Several wet wooded sloughs occur along the Brandywine from just above the Cornog bridge. Wetland herbs and shrubs thrive in canopy breaks, including swamp dogwood, buttonbush, skunk cabbage, spatterdock, swamp buttercup, and some uncommon sedges. Finally, the frequent gravel bars along Indian Run and the East Brandywine are home not only to an assemblage of hardy annual weedy species but to sandbar sedge *(Carex torta)*, a native gravel bar specialist.

Wetlands: Natural wetlands in Wallace Township, of which there are many, mostly occur along stream corridors, as seepage springs or wetlands along or at the base of slopes, in old stream channels or overflow channels along streams, or poorly drained areas near and on stream drainage divides. Man-made wetlands occur below ponds, in storm detention basins, or where natural drainage has been impeded by a roadbed or a railroad bed. Most wooded wetlands are clearly marked in spring by the appearance of skunk cabbage, with cinnamon fern, sedges, jewelweed, violets, and tearthumbs appearing later in the season. Arrowwood, winterberry, and highbush blueberry are common shrubs, and red maple and pin oak typical canopy trees. Swamp white oak and green ash are often present, but usually only in larger wetlands. Skunk cabbage also occurs in open wetlands where it has to compete with other wetland plants, many of them woody, and is often quickly overtopped in the fight for light. Common marsh species include sensitive fern, jewelweed, tearthumbs, soft rush, willow herb, purple-stemmed aster, goldenrods, rice cut-grass, reed-canary grass, and various sedges. Cattails and arrowhead are generally found in the wettest areas where the ground is almost permanently inundated. Purple loosestrife and giant reed (with one major exception for the latter) are not serious problem aliens in the township, but the semi-native reed canary grass can often completely take over wet areas, especially where disturbance has occurred. Many variations of wetlands occur in the township, and Lambs Tavern has good examples of several intergrading wetland communities.

A special mention must be made of by far the largest wetland in the township, the Great Marsh, which continues well north into East Nantmeal Township. Along the water's-edge and at the upper end of the impoundment behind the dam on upper Marsh Creek grows a well-developed scrub shrub marsh dominated by marsh rose, swamp dogwood, sedges, and numerous vines and scramblers dotted with patches of emergent herbaceous marsh typified by cattails, sedges, sensitive fern, and skunk cabbage. In the impoundment itself spatterdock is the signature species, sharing space along edges with bur-reed, arrowhead, and hornwort. Considerable stretches of the marsh near the Pennsylvania Turnpike have been invaded by giant reed *(Phragmites australis)*, but for the most part natives are still dominant.

Aquatic habitats: Two major aquatic habitats exist in the township: Flowing water and impoundments. Few vascular plants can tolerate the combination of shade and swiftly flowing water. On boulders in sunnier rocky stretches of Indian Run and the East Brandywine grows one that can, the formerly state-listed riverweed (*Podostemum ceratophyllum*). Quieter sunny or muddy stretches harbor narrow-leaved waterweed or water star-wort. An exception is upper Marsh Creek below the dam, where along sunny stretches pondweeds, waterweed, and bur-reed often form extensive underwater mats of green.

The two major impoundments are on Marsh Creek in the far northwest corner of the township, described above, and Marsh Creek Lake, the northwest corner of which extends into Wallace Township. Most of the steep shoreline of Marsh Creek Lake is lined by only a narrow strip of emergent vegetation, but stretches of shallow water off-shore support a few pondweeds. Barneston Dam is a "dry dam," meaning it only backs up water when rains are heavy. Additionally, there are many ponds in the township.

Transitional habitats (edges, hedgerows, thickets, old fields): These habitats have high light levels and are generally dominated by woody species with mobile (wind, bird, or mammal-distributed) seeds.

Edges and hedgerows: Common edge and hedgerow trees include black cherry, ash, sassafras, red maple, and walnut over a mixture of native and alien shrubs including spicebush, black haw, multiflora rose, and brambles. They are usually knit together by vines, mainly poison ivy, grapes, bittersweet, and honeysuckle. The herbaceous flora beneath the woody vegetation is generally low in diversity and alien-dominated. White avens, garlic mustard, and stilt-grass are some of the common ground species.

Old fields, or early successional habitats such as abandoned cropfields and pastures, are infrequent in the township. Typically as time passes after abandonment the plants growing in these habitats progress from annual herbs or pasture grasses to perennials such as goldenrods and asters. In this area they are quickly invaded by aliens, mostly multiflora rose, autumn olive, bittersweet, and Japanese honeysuckle, with natives such as poison ivy, grapes, and tree saplings contributing heavily.

Thickets are old fields where the shrubbery, vines, and tree saplings (especially red maple, black cherry, ash, and tulip) have grown dense or tall enough to form a closed canopy. The boundary between old field and thicket (and young woodland) is not always clear, and the two habitats often interfinger until the patches of closed canopy merge. Both old fields and thickets once supported a diverse mix of native grasses, sedges, asters, goldenrods, tick-trefoils, clubmosses, and shrubs. Today the majority of both these habitats, especially in lowland areas, contain a limited number of hardy natives and aggressive aliens.

Young woodlands are less than 60 years of age, often have a closed or nearly closed canopy similar to those of forests, but tend to be dominated by one or two species of native early to mid-successional trees such as tulip, red maple, black cherry, or ash and rarely have a well-defined understory. They are often dominated in the shrub and herb layers by aliens and/or woody creepers. Typical shrubs include bush-honeysuckles, multiflora rose, brambles and spicebush, often frequently entwined or covered by Japanese honeysuckle, bittersweet, poison ivy, and Virginia creeper. Garlic mustard, garlic, stilt-grass, violets, and white avens are some common hardy herbs found in this habitat, with occasional remnant field and meadow herbaceous species mixed in. In general most younger woodlands, especially those adjacent to older ones, have some native shrubs and herbs present, but isolated young woodlands are often entirely devoid of them.

Open Lands (meadows, fields, heavily managed communities, and roadsides): Since any ground left along in the region is soon colonized by woody vegetation all non-wetland areas dominated by herbaceous plants are managed to a certain extent.

Meadows are areas defined as being open ground that is not a wetland where a majority of the flora is composed of native forbs, grasses, and sedges, with drainage, soil type and slope determining what species are present. Common wet meadow species include numerous sedges, rushes, joe pye-weed, goldenrods, ironweed, heal-all, agrimony, dogbane, and golden ragwort. Drier meadows are commonly dominated by goldenrods or grasses including broomsedge, purple top, sweet vernal grasses, sedges, and panic-grasses, with herbs such as milkweed, tick-trefoil, dwarf cinquefoil, asters, and dogbane frequent components. The drier and wetter portions of meadows tend to have the greatest diversity of species, and in general the older the meadow, the higher native plant diversity it possesses.

Unmown meadows are soon invaded by poison ivy, honeysuckle, multiflora rose, and tree and shrub seedlings. On the other hand, too-frequent mowing discourages native forbs and grasses and turns a meadow into a field, or an open area dominated by alien pasture or hay grasses and herbs such as orchard grass, fescue, bromes, bluegrass, timothy, and clovers. However, most fields, even the most heavily utilized, usually possess a few native species, especially along edges or on steep slopes, and the distinction between a meadow and a field is often unclear.

Heavily managed communities include pastures, active cropland, and lawns. In addition to cultivated species each of these continually disturbed habitats posses a typical assemblage of weedy, mostly alien and annual plant species including chickweed, lamb's-quarters, ragweed, thistles, and various grasses. These habitats, characterized by unstructured, low-diversity plant communities and compacted soils, allow rapid runoff of rain and nutrients (including fertilizer and manure) which degrade stream and groundwater quality.

Utility right-of-ways, of which Wallace Township has an abundance (one power line and at least five gas lines) are generally managed to suppress woody species, which sometimes allow for the development of unusual open-ground plant communities, especially in wetter or drier sections. However, too-frequent maintenance usually results in invasions of weedy non-natives which overwhelm the native flora.

Roadsides, especially those in sunny areas, are usually dominated by a few hardy and adaptable species such as knotweed, ragweed, brome-grass, and chicory which are able to deal with the harsh environment of temperature and moisture extremes, excessive mowing, pollution, or poisoning. However, a few feet back from the pavement roadbanks often have a greater diversity of both alien and native species. The richness of a roadbank, especially in native species is often a good indicator of the relative health of any nearby open or woodland plant community.

ALIENS

Aliens are defined as species that did not naturally occur in the area before European settlement, but have naturalized and have become part of the flora. Most are exotics, introduced from other continents, many unintentionally. A few are adventives, native elsewhere in North America, which opportunistically moved into the area in response to changes in land use or climate. Many are disturbance species that are abundant only in disturbed ground – farm fields, lawns, and roadsides. The most ecologically disruptive are those that aggressively invade natural plant communities or less-maintained areas. With no predators, they reproduce rapidly and soon out-compete the natives for sunlight and water, reducing the flora to a group of competing aliens. Deer speed up this process by preferentially browsing the natives. Many aliens, including most of the worst woody invaders, were originally introduced as ornamental or landscape plantings. It often takes years after initial introduction for a plant's population to reach a 'critical mass' and start expanding its range and numbers dramatically.

Aliens make up 30% of the township flora by number of species. Most of the worst invaders such as multiflora rose, bittersweet, autumn olive, Japanese stilt-grass, long-bristled smartweed, and garlic mustard occur in abundance throughout the township. Others such as lesser celandine buttercup, giant reed, Japanese hops, purple loosestrife, and mile-a-minute are well locally established but not ubiquitous. Some have habitat limitations that will restrict their spread somewhat, but others, especially lesser celandine and mile-a-minute, will continue to spread and grow more abundant. Other species just arriving but threatening include linden viburnum, Bradford pear, Japanese cork tree, Hingen cherry, *Photinia,* and *Aralia elata.* Other invasives not seen on this survey but are possibly present include Japanese knotweed, porcelain berry, jetbead, pachysandra, and several alien viburnums *(V. plicatum, setigerum, sieboldii).*

Many aliens present in the township are restricted to specific, already disturbed habitats (roadsides, ponds, actively cultivated ground, etc.) or are simply 'better behaved' (in comparison to invasives like garlic mustard) in that they do not take over and dominate the habitats they enter. These give interesting examples of both plant movement and community development. *Allium oleraceum,* a garlic, previously collected only from the lower Brandywine in Chester County, is now well-established in floodplain forests and moist roadsides in the township. Teasel *(Dipsacus sylvestris)* is relatively frequent on roadsides and disturbed low utility cuts, possibly due to the anorthosite. The carrot ally *Anthriscus caudatus (*possibly a new state record*),* the grass *Chloris verticillata (*more common in New Jersey), the mustard *Coincya monensis* (spreading along major highways*),* and seaside goldenrod (*Solidago sempervirens)* have all spread into the township via the Pennsylvania Turnpike.

RARE PLANT SPECIES

The Pennsylvania Natural Diversity Index (PNDI) keeps track of all species in the state that are determined to be of special concern. Endangered species (PE) are those which are in danger of becoming extinct in the state. Threatened species (PT) may become endangered if their habitat and populations are not maintained. Rare species (PR) are uncommon or restricted in range or numbers. Undetermined species (TU or PU) are believed to be in danger of population decline but not enough is known about their range or population dynamics to categorize them as endangered, threatened, or rare. Vulnerable species (PV) are in danger of population decline because of economic or other factors that would cause them to be collected.

Seven species of special concern in fifteen sites were recorded during the 2006 survey (see Map 3). None of these populations were previously known.

Scientific Name	Common Name	# Sites	Current Status	CC*
Andropogon glomeratus	Broom-sedge	1	PR	8
Crataegus pensylvania	Pennsylvania hawthorn	1	PT	6
Desmodium nuttallii	Nuttall's tick-trefoil	1	TU	4
Dicanthelium yadkinense	Yadkin river panic grass	1	TU	7
Hydrastis canadensis	Goldenseal	3	PV	6
Poa paludigena	Marsh bluegrass	1	PR	10

Trillium cernuum	Nodding trillium	6	TU	6

* Coefficient of conservatism – see page 9 for more details.

Following are brief descriptions of each species and their habitats:

Andropogon glomeratus - Broomsedge – PR A warm-season grass with a bushy inflorescence that grows in wet meadows. A small population was found growing in a low wet meadow on anorthosite.

Crataegus pensylvania - Pennsylvania hawthorn – PT A hawthorn with large pubescent leaves and fruits. Hawthorns are usually edge and hedgerow species. Two trees were observed growing in thickety open woods along and at the base of the north bank of the turnpike, and there may be others growing in the area.

Desmodium nuttallii - Nuttall's tick-trefoil – TU A large native bean of southern affinities. A sizable population was found growing in a dry meadowy pipeline cut in the northern part of the township.

Dicanthelium yadkinense - Yadkin river panic-grass – TU A warm-season grass of sandy fields, gravel bars, or alluvial sunny soil. Intolerant of competition. A single population was found growing along a woodland edge near a stream in the western part of the township.

Hydrastis canadensis – Goldenseal – PV A low-growing herb, formerly extensively collected for medicinal purposes. Generally found in rich woodlands in deep soil, often in large colonies. Three separate populations in two sections, two of them quite small, were found in the center of the township.

Poa paludigena - Marsh bluegrass – PT A small slender easily-overlooked grass found in extremely high-quality open swamp forests or wet scrub shrub marshes with constant water flow on mossy or sedgy tumps. Only a single small population was found during the survey. A larger population may well present, as the site was not thoroughly explored due to both the extremely difficult terrain and reluctance on the part of the botanists to damage the habitat unnecessarily. In addition it can only be positively identified during a brief period during the growing season.

Trillium cernuum – Nodding trillium – TU An herb of rich often rocky high-quality moist woodlands. In PA, it only occurs in the southeast, where it is heavily preyed upon by deer.

In addition four Watchlist (PW) species were found in the township during the survey. Watchlist species are those plants under consideration for official listing in the state.

Scientific Name	Common Name	# Sites	Habitat	CC
Carex striatula	A sedge	2	Dry woods	6
Carex styloflexa	A sedge	2	Wet woods	7
Dicanthelium polyanthus	A panic grass	1	Stream banks	8
Euonymus americanus	Running strawberry bush	1	Rich woods	5

Note - Rare plant species locations are called are called "RSS" (rare species sites) on the accompanying maps. See Map 3 for the general locations of rare plant species.

EXCEPTIONAL NATURAL AREAS

An Exceptional Natural Area (ENA) is defined as an area composed of relatively intact species-rich, native plant-dominated communities. ENAs are reservoirs of biodiversity. They may involve more than one type of plant community, including woodland, meadow, or wetland, and may vary widely in size. ENAs also may include managed landscapes such as occasionally mowed or grazed meadows or utility cuts which exhibit one or more of the characteristics noted below, and which will disappear without continued management or human intervention. The following biological community characteristics are used to locate and determine ENAs in Wallace Township:

- Communities containing species that are uncommon or declining in the township or the region.
- Communities that are an unusually rich and diverse examples of characteristic plant communities in the township.
- Communities that reflects unusual or regionally uncommon geologic features or structures.
- Communities with a number of species with limited ranges of ecological tolerance or high degrees of fidelity to narrow ranges of habitat condition, indicating a specialized or long-established community. (Coefficient of Conservatism of 7 or greater (see below for explanation)

Starting in the late 1970's, two professors in the Chicago area developed and expanded a method for evaluating natural areas for quality and environmental integrity. Several years ago, Bowman's Hill Wildflower Preserve adapted this method for use in Pennsylvania. The first and most important step in this method is to assign a Coefficient of Conservatism (CC) to every native plant found in the specified region. Bowman's Hill, in consultation with regional botanists, created lists of species with CCs for southeastern PA, available on their website www.bhwp.org.

The criteria for assigning coefficients are:

- 0 to 3 Plants with a high range of ecological tolerances / found in a variety of communities
- 4 to 6 Plants with an intermediate range of ecological tolerances / associated with a specific plant community
- 7 to 8 Plants with a poor range of ecological tolerances / associated with an advanced stage in plant community succession.
- 9 to 10 Plants with a high degree of fidelity to a narrow range of habitats

In Wallace Township, we are using species with a CC of 7 or greater as indicators of high quality habitat and potential Exceptional Natural Areas. See Appendix 3 for a list of Conservative Plant Species of Wallace Township.

Following is a list and brief description of twenty-four ENAs determined by this botanical survey. The ENAs are shown on Map 3. Seventeen of these are mostly in forest, often with wetlands and rich edges. Three are predominantly wetland, with some shrubs and younger trees, and one has a moist meadow and young woods seep. Only one (Cornog) is exceptional for its lack of water and trees. Due to time and accessibility constraints, not all parts of the township were thoroughly surveyed. It is probable that other ENAs would be discovered with more field work and that some of the delineated ENAs should be larger. In general, already protected lands, many of which contain ENAs, were not as well explored as unprotected areas.

As both a general rule and as a practical matter, high quality natural areas such as ENAs would be expected to occur more frequently on lands which have been protected from human disturbance for some length of time. These would normally include lands that are or were parts of large estates, lands that have been protected for some time, and, probably most often, lands that are constrained against farming or other kinds of development. This would include steep slopes, dry, rocky areas or other areas of 'poor' soils (from a farming standpoint), areas of unusual geology (such as serpentine outcroppings, which do not occur in Wallace Township, and wet areas, including wetlands and floodplains. One exception to this could be areas subject to heavy pressure from invasive plant species, as floodplains sometimes are.

To further explore some of these concepts, ENAs were analyzed here through a series of mapping exercises. For example, older woodlands can be estimated using older USGS Topographic (or Topo) maps. Woodlands that existed in 1956 are shown by the USGS topo maps (Wagontown and Downingtown 7.5

min. quads), and are more likely today to contain mature woods and therefore the forested ENAs (see Map 4 – *Woodlands 1956/ Woodlands 2003and ENAs and RSS.* It is worth noting here that many of today's forested interiors (the interior or deep woods, measured at 300' from any exterior edge) are found in the older woodland blocks. ENAs and RSS are then shown on the Wallace Township Woodland Classification on Map 5– *Woodland Classification, ENAs and Rare Plant Species Sites.* Finally, ENAs were mapped on top lands found within Wallace Township's Flood Hazard and Wet Soils District (see Map 6 - *ENAs and Rare Species Sites with the Wallace Township Flood Hazard and Wet Soils District*).

1. The Big Marsh (north of Turnpike) and upper Marsh Creek. An extremely large marsh extending north of the township border. Its heart is a large shallow impoundment with diverse aquatic flora, lined by broad dense swathes of marsh rose-dominated shrub wetland, with stretches of emergent herbaceous marsh to the wet and patches of oak woods along lower edges. Stretches along the Pennsylvania Turnpike have been impacted by *Phragmites.* As the property is protected it was not extensively surveyed. Section 1.

DRAINAGE: Marsh Creek GEOLOGY: Gneiss

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Aronia arbutifolia	Swamps	7		4
Bartonia virginica	Swamps	7		2
Calamagrostis canadensis	Swamps	7		4
Ceratophyllum demersum	Shallow water	6		1
Crataegus pensylvanica	Thickets	6	TU	1
Lyonia ligustrina	Swamps	7		2
Mikania scandens	Marshes	7		3
Nuphar luteum	Open Sloughs	7		2
Osmunda regalis	Wet Woods	7		6
Triadenum fraseri	Swamps	9		2
Toxicodendron vernix	Swamps	8		4

---

2. Lovell Lane Woods – A Rich oak-tulip-hickory upland woods south of the road, straddling and including a pair of pipeline cuts, with a dense growth of spicebush underneath, a high diversity of rich woodland herbs, and relatively few aliens. The pipeline cuts have patches of dry meadow species mixed with aliens. No notable species present, but was unusually species-rich. Edged by residential lots to the west and bordered in the east by a power line. Sections 1, 2.

DRAINAGE: Marsh Creek GEOLOGY: Gneiss

---

3. Lambs Tavern wetland complex. A young red maple swamp surrounded by and interfingered with a tussock sedge marsh / swamp and wet meadows, with a wet pipeline cut along the north side. The most exceptional area is a wet glady thicket not far from the road with a large concentration of high-quality species. Section 2

DRAINAGE: Marsh Creek GEOLOGY: Gneiss

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Bartonia virginica	Swamps	7		2
Calamagrostis canadensis	Swamps	7		4
Carex atlantica	Swamps	8		3
Gentiana andrewsii	Wet Meadows	8		4
Lysimachia terrestris	Swamps	8		2
Phlox maculata	Wet Meadows	7		3
Sanguisorba canadensis	Wet Meadows	7		1
Saxifraga pensylvanica	Wet Meadows	8		2
Sphenopholis pensylvanica	Swamps	8		1
Triadenum fraseri	Swamps	9		2

4. Woods to pond north of Little Conestoga Road – A good example of a dry oak-mix woods with a heath ground flora and a diverse dry roadbank community. Northward and downslope the woodland changes to a wet oak – maple woods, laced with large seeps as it approaches a large pond. Section 2

DRAINAGE: Marsh Creek GEOLOGY: Gneiss

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Solidago ulmifolia	Woods Edges	6		3

5. Emergent marsh on east side of Fairview Road between Marsh Creek and PA Turnpike. An open marsh and scrub-shrub wetland grading eastward into wet woods. Wet patches also occur on the west side of Fairview Road, but they are not as rich and have more aliens. Patches of swampy woods occur all along the Marsh Creek floodplain from the big marsh to below Fairview Road. Section 3

DRAINAGE: Marsh Creek GEOLOGY: Gneiss

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Carex lacustris	Marshes	8		3
Glyceria canadensis	Swamps	7		1
Iris versicolor	Marshes	7		2
Lysimachia terrestris	Swamps	8		2
Osmunda regalis	Wet Woods	7		6
Peltandra virginica	Marshes	6		2
Pilea fontana	Marshes	8		1
Spiraea alba	Marsh	6		2
Veronicastrum virginicum	Pipeline Cut	8		2

6. Marsh Creek wooded gorge. Approximately a half mile southeast of Fairview Road along the township line Marsh Creek enters a relatively narrow, rocky corridor with a steep gradient. A stretch of Marsh Creek closest to the turnpike has been channelized, Most of the bouldery and level north side of the stream east of a utility cut is a good-quality sugar maple-oak-hickory woods unaffected by the channelization, and extends up a steep slope into East Nantmeal Township. This anomalous stream corridor is probably involved with large changes in drainage of the Great Marsh in the periglacial period.

DRAINAGE: Marsh Creek GEOLOGY: Gneiss

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Elymus hystrix	Floodplain wds.	4		2

7. Rich rocky wooded slope east of Fairview Road, along and south of two pipelines. This ENA includes several broader sections of woodland between the pipelines. This often bouldery woodland, dominated by oak dotted with mixed stands of oak and tulip, has a high diversity of rich woodland herbs, shrubs, and understory trees with few alien invasives except along edges. It is imbedded within a larger area of younger woodland with some residential development along edges. Section 3

DRAINAGE: Marsh Creek GEOLOGY: Gneiss

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Conopholis americana	Rocky Woods	7		1
Euonymus americanus	Rich Woods	5	PW	1
Polypodium virginiaum	Rock Outcrops	8		4
Pyrola elliptica	Rich Woods	6		4
Vaccinium stamineum	Dry Woods	7		9

8. Marsh Creek Conservancy land, northwest corner of the township. This property contains three distinct notable habitats. Most of the forest north of the pipeline is a relatively level stretch of somewhat rocky high-quality oak-dominated forest, with some richer tulip near the pipeline and in the east. Close to the turnpike the forest grows increasingly dry, with blueberries and huckleberries. Above the turnpike is a steep dry rocky open series of ledges dominated by grasses and stunted shrubs that was created during construction of the turnpike and maintained by the extremely dry well-drained nature of the habitat. Much of the pipeline south of the woodland is overgrown with alien invasives, mostly stilt-grass, but still possesses a fair number of uncommon dry meadow species. Section 3.

DRAINAGE: Marsh Creek GEOLOGY: Gneiss

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.	
Aristolochia serpentaria	Dry Edges	6		5	
Ceanothus americana	Dry Meadows	7		1	
Conopholis americana	Rocky Woods	7		1	
Desmodium nuttallii	Dry Meadows	4	TU	1	
Paronychia canadensis	Dry Ledge	6		1	
Spiranthes cernua	Dry Ledge	6			5
Trichophorum planifolium	Dry Woods	6		2	

---

9. North slope forest and pipeline cut south and southeast of Barneston Dry Dam. A rich oak-tulip-birch rocky forest and older successional woodland, interrupted by scrub-shrub powerline cut. This is the best part of an extensive wooded slope and floodplain complex, some of which was recently logged and some which is younger and less diverse. Both the woods and the utility cut contain a high diversity of species. Section 4.

DRAINAGE: Brandywine GEOLOGY: Anorthosite

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Asclepias exaltata	Rich woods	7		3
Aristolochia serpentaria	Dry Edges	6		5
Chamaelirium luteum	Rich Rocky Wds	8		1
Galearis spectabilis	Rich Woods	6		7
Goodyera pubescens	Rich Woods	6		2
Lobelia cardinalis	Low wet woods	6		3
Obolaria virginica	Rich Woods	7		1
Pyrola elliptica	Rich Woods	6		4
Polypodium virginianum	Rock Outcrops	8		4
Trillium cernuum	Rich Woods	6	TU	6
Triosteum aurantiacum v. aur.	Utility ROW	6		3

---

10. Valley woodland and wetland complex between Little Conestoga Road and Rt. 282. The south end of this mostly forested area has a high-quality and diverse west-facing oak-dominated wooded slope in the south and a lower moist rich tulip-dominated forest northward. The south slope drains into an acidic red maple swamp forest dominated by skunk cabbage, cinnamon fern, and clearweed, the tulip woods into a red maple and pin oak swamp community. Across the stream is a large semi-wooded tussock sedge marsh being shaded out by red maple, which grades westward into a mown meadow community. The north end of the complex has mature tulip-beech-oak forest on the slopes above a large young red maple seepage wetland, with semi-open glady areas surrounding the swamp. Section 5

DRAINAGE: Brandywine GEOLOGY: Gneiss, anorthosite

NOTABLE SPECIES	Habit	CC	PA Rank	Twp. Freq.
Aronia arbutifolia	Swamps	7		4
Calamagrostis canadensis	Wet Woods	7		4
Carex leptalea	Wet Woods	7		2

Doellingeria umbellata	Marshes	7		1
Phlox maculata	Wet Meadows	7		3
Toxicodendron vernix	Swamps	8		4
Trichophorum planifolium	Dry Woods	6		2

---

11. Barneston Road powerline cut and woods. A rocky wet powerline cut meadow west of Barneston Road next to seepy to rocky high-diversity woodlands. The upper portion of the right-of-way was herbicided and brush-hogged in 2006, but the lower wetter portion on either side of the stream was not disturbed. Amidst bouldery terrain are pockets of both moist and dry meadow, sedge wetland, and scrub-shrub swamp, interrupted by stands of *Phragmites.* Farther west is a youngish low red maple-pin oak woods with gravelly seeps, some older trees, and an extensive drainage-divide seep near Rt. 82. The area immediately upstream was not surveyed. Section 8

DRAINAGE: Indian Run GEOLOGY: Anorthosite

NOTABLE SPECIES	Habit	CC	PA Rank	Twp. Freq.
Agalinis tenuifolia	Low Meadows	6		1
Caltha palustris	Wooded Seeps	7		3
Carex atlantica	Wet Meadows	8		3
Carex styloflexa	Low Woods	7	PW	2
Fraxinus nigra	Swamps	7		6
Gentiana andrewsii	Wet Meadows	8		4
Lilium canadense	Low Meadows	6		11
Mikania scandens	Marshes	7		3
Dicanthelium polyanthes	Low Meadows	8	PW	1
Pedicularis canadensis	Low Meadows	6		1
Toxicodendron vernix	Marshes	8		4

---

12. North branch of Indian Run east of Barneston Road. This low rich rocky woods, mostly north of the stream, has a considerable diversity of native herbs, grasses, and ferns, especially in the open meadowy woodland and its edge near Indian Run Road. This is the west end of a much larger unexplored wooded stream system that extends nearly 1.3 miles from Barneston Road to Springton Road. A considerable amount of deer browse was observed in the interior. Section 9.

DRAINAGE: Indian Run GEOLOGY: Anorthosite

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Orobanche uniflora	Rich Woods	6		2
Dicanthelium yadkinense	Low Woods	7	TU	1
Hypoxis hirsuta	Open Woods	5		6
Viola palmata v. triloba	Open Woods	6		3

---

13. Brandywine bend wetland complex. This ENA extends from lower slope of the Chickes Ridge on the uphill roadbank of Rt. 282 to the bank of the Brandywine. The roadbank along Route 282 below the house lots has growing some of the best patches of mountain laurel left in the township along with several unusual dry woodland herbs. North of Rt. 282, a low rich oak / oak-tulip woodland possesses a wide diversity of rich and acidic woodland species including two state-listed herbs. Northward the woods grades through a red maple-cinnamon fern swamp into a sizable and extremely high-quality tussock sedge/scrub-shrub swamp and marsh bounded on the north by the Brandywine floodplain 'levee' and on the west by an unusual swamp white oak-black ash woodland. Uncommon species abound in both the open and wooded portions of this wetland. This complex is the most botanically outstanding natural community in Wallace Township. Section 11.

DRAINAGE: Brandywine GEOLOGY:Anorthosite, Chickies quartzite erosional deposits

NOTABLE SPECIES	Habit	CC	PA Rank	Twp. Freq.

Aronia arbutifolia	Swamps	7		4
Asclepias exaltata	Rich Woods	7		3
Caltha palustris	Wooded Seeps	7		3
Cardamine rotundifolia	Wooded Seeps	8		7
Carex bromoides	Wet woods	7		2
Carex leptalea	Swamps	7		2
Carex lacustris	Marshes	8		3
Fraxinus nigra	Swamps	7		6
Hydrastis canadensis	Rich Woods	6	PV	2
Iris versicolor	Marshes	7		2
Kalmia angustifolia	Acidic Woods	8		2
Lyonia ligustrina	Swamps	7		2
Melampyrum lineare	Dry Woods	7		1
Poa paludigena	Marshes	10	PR	1
Pyrola americana	Rich woods	6		1
Saxifraga pensylvanica	Swamps, Marsh	8		2
Spiraea alba	Marsh	6		2
Toxicodendron vernix	Swamps, Marsh	8		4
Trillium cernuum	Rich Woods	6	TU	6
Viburnum lentago	Wet Woods	5		2

---

14. Eastern Chickies Ridge. The top and upper slope of this ridge has the only stretch of chestnut oak -heath forest found in the township. Mountain laurel is common, although much of it appears very sickly. An opening created in the ridge during housing construction is home to two clubmosses. Below the ridge is an alien-free tulip-oak-cherry birch slope. A bench in this slope, which probably follows the track of the Brandywine Manor fault, has several cinnamon fern/skunk cabbage/clubmoss seeps. The soil of the lower slope, while underlain by anorthosite, contains enough erosional sandy 'float' from upslope to support a dry oak woods with some heaths. Section 17.

DRAINAGE: Brandywine GEOLOGY: Chickies quartzite, Anorthosite

NOTABLE SPECIES	Habit	CC	PA Rank	Twp. Freq.
Kalmia angustifolia	Acidic Woods	8		2
Kalmia latifolia	Acidic woods	6		2
Lycopodium clavatum	Dry Meadow	7		2
Pyrola elliptica	Rich Upl. Wds	6		4

---

15. Slope and floodplain woods east side of Brandywine opposite Burgess township Park. A small but high-quality parcel of rocky sugar maple-hardwood floodplain woods with good diversity of trees, shrubs, and herbs. No notable species, but a good example of this forest type. Surrounded by less diverse woods. Section 11.

DRAINAGE: Brandywine GEOLOGY: Anorthosite

---

16. Slope and floodplain woods and seeps southeast of Park Lane along the Brandywine. A good example of rich diverse floodplain hardwoods, including several meadowy openings on the floodplain. Includes portions of rich wooded slope forest and gravelly seep. Section 11.

DRAINAGE: Brandywine GEOLOGY: Anorthosite

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Cardamine rotundifolia	Gravelly seeps	8		7
Ipomoea pandurata	Dry Woods	4		1
Muhlenbergia tenuiflora	Rich Woods	5		1

---

17. Rich floodplain woods and wetlands between Brandywine and old RR north of Marshall Road. A good example of sedge-rich floodplain 'levee' woods with a back swamp and old wet stream channels. The hydrology of this may have been altered and influenced by the now-abandoned railroad. Section 12.

DRAINAGE: Brandywine GEOLOGY: Gneiss, near Brandywine Manor fault

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Arisaema dracontium	Floodpl. Woods	7		2
Carex bromoides	Wet Woods	7		1
Nuphar luteum	Open Sloughs	7		2

---

18. Low meadow/woods/pipeline cut complex west of Edgemoor Lane. This small elongate meadow surrounded by young thickety woods contains the richest assemblage of uncommon meadow species in the township, including a state rarity. Several of these, along with additional local rarities, also grow in a nearby pipeline right-of-way. The meadow is probably mowed occasionally, and needs continued management. The surrounding young woodlands, and across the pipeline, are home to clubmosses, sedges, and an orchid. Section 13

DRAINAGE: Indian Run GEOLOGY: Anorthosite

NOTABLE SPECIES	Habit	CC	PA Rank	Twp. Freq.
Andropogon glomeratus	Wet Meadows	8	TU	1
Aristolochia serpentaria	Dry Edges	6		5
Aronia arbutifolia	Swamps	7		4
Calamgrostis canadensis	Wet Woods	7		4
Carex styloflexa	Low Woods	7	PW	2
Cirsium muticum	Wet ROW	6		3
Gentiana andrewsii	Wet Meadows	8		4
Lycopodium hickeyi	Dry Woods	7		2
Phlox maculata	Wet Meadows	7		3
Platanthera lacera	Low ground	4		2
Spiranthes cernua	Wet Meadows	6		5
Spiraea latifolia	Wet ROW	6		1

---

19. Moist meadow and rocky wet woods south of Indian Run Road. The east end of this ENA is a low moist diverse meadow. The west end is a rocky young low oak-red maple woodland surrounding a series of gravelly seeps. It is surrounded on the south by horse pastures and managed tallgrass meadows and by a low young woodland across the road to the north. Section 15.

DRAINAGE: Indian Run GEOLOGY: Anorthosite

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Caltha palustris	Wooded Seeps	7		3
Cardamine rotundifolia	Gravelly seeps	8		7
Spiranthes cernua	Wet meadow	6		5

---

20. Upper Indian Run meadow, diverse young maple woodland, and low forest. The most distinctive part of this ENA is a small tall-grass meadow complex that is closing in as woody vegetation, both native and alien, encroach upon it. This meadow, unique in the township, is dominated by Indian grass with considerable amounts of blueberries, huckleberries, and azaleas mixed in. Its edges and surrounding thickets have large patches of several species of clubmosses growing. Northward the thickets grade into increasingly older rich low woodlands, culminating in a rocky rich oak-dominated forest along the south branch of Indian Run. East of Indian Run is a mixed-canopy woodland, threaded with gravelly seeps, with a high diversity of forest shrubs and herbs. The area upslope from the meadow was recently cleared for development, creating a long edge near the meadow. The intact woodland upstream along Indian Run was not surveyed. Section 15.

DRAINAGE: Indian Run GEOLOGY: Anorthosite

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Asclepias viridiflora	Dry Meadow	7		1
Gentiana andrewsii	Meadow	8		4
Hieracium scabrum	Dry Meadow	3		3
Hieracium gronovii	Dry Meadow	5		2
Huperzia lucidula	Seepy Woods	6		5
Lycopodium clavatum	Dry Meadow	7		2
Mitella diphylla	Seepy Woods	8		2
Platanthera lacera	Meadow	4		2
Polygala sanguinea	Dry Meadow	5		2
Trillium cernuum v. cernuum	Rich woods	6	TU	6
Trichostema dichotomum	Dry Meadow	4		1
Veratrum viride	Seepy Woods	6		5
Viola sagittata	Dry Meadow	4		4
Viola palmata v. stoneana	Young Woods	6		3

---

21. Lower Brandywine corridor. This ENA is a large expanse of well-drained often rocky floodplain woods, with some back swamps, a roadside pocket marsh, gravel bars, and wooded slopes. It includes a rich wooded knoll with a rock outcrop on the west side of Route 282. Most of this site is Marsh Creek State Park, and portions of the woods on the slope are younger and weedy. Section 18, 19, 20

DRAINAGE: Brandywine GEOLOGY: Gneiss

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Arabis laevigata	Rocky Woods	7		1
Arisaema dracontium	Floodpl. Woods	7		2
Carex torta	Gravel Bars	7		7
Cephalanthus occidentalis	Marshes	7		4
Dicentra cucullaria	Rich Ravines	7		4
Fraxinus nigra	Swamps	7		6
Polypodium virginianum	Rock Outcrops	8		4
Saxifraga virginiana	Rocky Woods	6		2
Sedum ternatum	Floodpl. Woods	7		7
Symphyotrichum prenanthoides	Floodpl. Woods	6		4

---

22. Cornog dry meadow and thickets. North of Cornog Quarry is a unique example of formerly disturbed terrain grown up into a mostly natural grass and bean-dominated dry meadow, currently being encroached upon and threatened with extension by autumn olive and multiflora rose. The quarry exists because the complex geology near the Brandywine Manor fault and the end of the Chickies ridge. Section 19.

DRAINAGE: Brandywine GEOLOGY: Gneiss, near end of Chickies, fault

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Aristida dichotoma	Dry Meadows	0		1
Bulbostylis capillaries	Dry Meadows	4		1
Chamaecrista nictitans	Dry Meadows	4		2
Desmodium marilandicum	Dry Meadows	5		2
Dicanthelium sphaerocarpon	Dry Meadows	4		1
Dicanthelium depauperatum	Dry Meadows	5		1
Helianthus divaricatus	Open Woods	6		1
Juncus secundus	Meadows	6		2
Lespedeza hirta	Dry Meadows	6		1
Linum virginianum	Meadows	7		1

Paronychia fastigiata	Dry Meadows	7		1
Plantago virginica	Dry Meadows	2		1
Solidago ulmifolia	Woods Edges	6		3

23. Springton Manor East Woods. This is a small patch of rich upland mesic forest along the east side of the park. The canopy is tulip to tulip-oak, with a diversity of rich woodland herbs including two state-listed species. Upslope is more tulip woods with less diversity and more aliens, and to the northwest is a stand of planted pines. Sections 16, 17

DRAINAGE: Brandywine GEOLOGY: Anorthosite, near Brandywine Manor fault

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Galearis spectabilis	Rich Woods	6		7
Hydrastis canadensis	Rich Woods	6	PV	2
Pyrola elliptica	Rich Woods	6		4
Trillium cernuum	Forb	6	TU	6

24. Lower Indian Run corridor. This ENA includes over half a mile of good-quality level woods and lower slopes along and near along Indian Run including several types of forest communities, rocky seeps, and a low meadow. Indian Run itself between Rt. 282 and the Brandywine is wooded but disturbed and weedy. Upstream across Springton Road grow possibly good-quality low maple floodplain woods that were not surveyed. Section 16, 10

DRAINAGE: Indian Run GEOLOGY: Anorthosite

NOTABLE SPECIES	Habitat	CC	PA Rank	Twp. Freq.
Aralia racemosa	Rich Woods	6		1
Asclepias exaltata	Rich Woods	7		3
Cardamine rotundifolia	Gravelly seeps	8		7
Carex caroliniana	Meadow	5		1
Carex torta	Gravel Bars	7		7
Dryopteris goldiana	Wet rocky Wds	7		1
Heliopsis helianthoides	Meadow	4		1
Orobanche uniflora	Rich Woods	6		2
Thalictrum dioicum	Rich Rocky Wds	6		2
Sedum ternatum	Floodpl. Woods	7		7
Symphyotrichum prenanthoides	Floodpl. Woods	6		4

MANAGEMENT AND PROTECTION PRIORITIES

There are many other areas in the township in addition to the designated Exceptional Natural Areas that have significant native plant species or communities and are worthy of conservation attention. Some of these habitats are undervalued and easily lost by short-sighted management. Some may harbor undiscovered ENAs. They can be described in rough categories:

Forests Areas shaded green as wooded on current USGS topo maps are the oldest in the township, and should be disturbed as little as possible.

Small wetlands. Wetland species can be surprisingly resilient, and even ditches, stream edges, hayfields, and pastures can have a diverse native wetland flora present. No wetland should be considered too small for protection, and existing wetlands should be preserved rather than creating replacement wetlands, which are never as rich and are often invaded by and overwhelmed by invasive aliens.

Ponds. Ponds, especially shallow ones with fluctuating water levels, usually have a specialized group of wetland species growing on their banks and edges, plants which often also grow in stormwater detention basins and larger stream sand/gravel bars. In addition an unmown pond edge can provide habitat not only for plants but for insects and amphibians.

Floodplain forests and woodlands. Most of the stream corridors in the township are wooded for long distances. Keeping these forested corridors intact, even if they contain stretches of younger, alien-infested woodlands, should be a high priority.

Meadows. Open areas managed to sustain native grasses and herbs should be encouraged. There are many opportunities for native meadows, including private land, roadsides, park land and open space managed by homeowner associations.

Roadbanks and Utility Right-Of-Ways. Both of these infrequently maintained corridors can support complex native plant and animal communities. Some of the better-quality wetlands occur where powerlines cross streams. Both roadbanks and ROW's harbor pockets of dry meadow and woodland edge species. Better management could restore dry woodland edge communities which have been nearly eliminated in many places.

The biggest threats to all of these communities are outright destruction, invasive aliens, deer, and indifferent management. The battle with aliens in unending, but can be reduced by long-term management plans that emphasize deer control and strengthening native plant communities. Individual efforts to manage or restore native plant communities of any size could go a long way toward improving the biological health of the township.

THE BIG PICTURE

From our background information-gathering and experience with other 'southern' townships, prior to the actual fieldwork we developed some assumptions regarding the flora of Wallace Township:

- The species total might not reach 800 total species (the average of species per township near the Delaware state line was 836).
- Geology would significantly affect plant distribution in the township.
- There would be more 'northern' species in the township, and some 'southern' species would not be found.
- There might be fewer alien species than in the southern townships.

The assumption of a lower species count than those of southern townships proved to be pessimistic. The total count reached a respectable 825 species, and since not all areas of the township were thoroughly surveyed, further fieldwork would certainly uncover additional species. Wallace also had the highest number of native species and the lowest percentage of aliens of all the townships we have surveyed so far. Out of our aggregate township list of 1178 species, 38 species were observed only in Wallace Township, and only four of those were non-natives, three of which were restricted to the Pennsylvania Turnpike corridor.

Geology proved locally significant in plant distribution. The effect of the Chickies quartzite on the flora was pronounced. One forest community was confined to its upper slope, and a number of species found in the township were either restricted to or were rare away from the quartzite ridge. Among these were several heaths, notably mountain laurel, sheep laurel (*Kalmia angustifolia* and *K. latifolia*), and trailing arbutus (*Epigaea repens*). The effect of anorthosite on plant distribution was less distinct, at least compared to gneiss. Slight differences in soil chemistry were not as influential as similarities of topography and hydrology, especially the influence on land use by the rocky weathering of both anorthosite and gneiss

'Northern' species such as swamp buttercup (*Ranunculus caricetorum*), big-leaved aster (*Eurybia macrophylla*) and northern swamp milkweed (*Asclepias incarnata v. incarnata*) Canada mayflower (*Maianthemum canadense*), yellow wild licorice (*Galium lanceolatum*), northern arrowwood (*Viburnum recognitum*), gray dogwood (*Cornus racemosa*), marsh marigold (*Caltha palustris*), bottle gentian (*Gentiana andrewsii*), poke milkweed (*Asclepias exaltata*), mountain water-cress (*Cardamine rotundifolia*),and sandbar sedge (*Carex torta*) were frequent in Wallace Township, but extremely rare in the southern townships. On the other hand, species such as panic grass (*Panicum anceps*), Jacob's-ladder (Polemonium *reptans*), and cranefly orchid (Tipularia discolor) were rare or absent. Loss of habitat and climate change have also influenced the distribution of these species.

Alien species were not only distinctly less abundant in total number of species found (less than 30%) but in average number per survey section. Many invasives common near Delaware were absent or only found sparingly in the township. Farming, development, and major roads, all providing alien-friendly corridors and habitats, had a smaller aggregate footprint in Wallace then in many other townships. Nonetheless several highly invasive species, notably lesser celandine buttercup (*Ranunculus ficaria*) and mile-a-minute (*Polygonum perfoliatum*) are moving into the township.

FUTURE WORK

Wallace Township proved to have too much high-quality habitat to be thoroughly explored in a single field season, especially with access constraints. As a result some potentially significant areas including the old Girl Scout Camp and the Hankin properties were not well surveyed. New species were still being added to the database into January 2007, indicating some gaps in seasonal coverage. In addition extant plant species lists from previous surveys, including from the Great Marsh and an old inventory of Springton Manor were not reviewed for this survey. More thorough surveys of specific parcels would add more information and fill in gaps in this baseline survey

REFERENCES

Brandywine Conservancy, 2004. Upper East Branch Brandywine Creek Watershed Conservation Plan. Chadds Ford, PA.

Chester County Planning Commission. 1973. Chester County Geology. West Chester, PA

Chester County Planning Commission. 1994 with 2000 update. Chester County Natural Areas Inventory. West Chester, PA

Fike, J. 1999. Terrestrial and Palustrine Plant Communities of Pennsylvania. PA Dept. of Conservation and Natural Resources. Harrisburg, PA.

Flora of North America Committee. From 1993. Flora of North America, Vol. 2 -5, 19 – 23, 25, 26. Oxford University Press. New York, New York.

Gleason, H. and Cronquist, A. 1991. Manual of Vascular Plants of Northeastern United States and adjacent Canada, 2nd ed. The New York Botanical Garden. New York, New York.

Herman, K., et al. 1997. Floristic Quality Assessment: Development and Application in the State of Michigan. Natural Areas Journal, Vol. 17(3)

Rhoads, A. and Block, T. 2000. The Plants of Pennsylvania. University of Pennsylvania Press. Philadelphia, PA. (A second edition is in press)

Rhoads, A. and Klein, W. 1993. The Vascular Flora of Pennsylvania. American Philosophical Society. Philadelphia, PA.

Schultz, C., ed. 1999. The Geology of Pennsylvania. PA Geological Survey. Harrisburg, PA

Stone, H. 1945. A Flora of Chester County. The Academy of Natural Sciences. Philadelphia, PA.

Swink, F. A. and G. Wilhelm. 1994. Plants of the Chicago Region, 4th ed. Indiana Academy of Science. Indianapolis, Ind.

APPENDIX 1

THE PLANTS OF WALLACE TOWNSHIP

Based on 2006 Fieldwork

APPENDIX 1
THE PLANTS OF WALLACE TOWNSHIP

	Families	Species	Natives	Aliens
Ferns	11	32	32	0
Gymnosperms	3	5	3	2
Dicots	93	571	378	193
Monocots	18	217	165	52
TOTAL	**125**	**825**	**578**	**247**

29.9 % Alien Species

STATUS: A = Alien

PE = PA Endangered
PT = PA Threatened
PR = PA Rare
TU = PA Undetermined
PW = PA Watchlist
PV = PV Vulnerable

CC = Coefficient of Conservatism

OCCURRENCE CODE (BY SECTION):
First two Digits – Year first recorded (06, 07)
Third Digit - Month first recorded - A = January, B = February, through L = December
Note: 06 blank = 06G = July, 06
Q = Questionable, ID, or taxonomic problem

COUNT = Number of sections recorded from

Largest Families
97 - ASTERACEAE (aster family) - 63 native
88 - POACEAE (grass family) – 53 native
63 - CYPERACEAE (sedge family) – 61 native
40 - ROSACEAE (rose family) – 27 native
30 - FABACEAE (legume family) - 13 native
27 - LAMIACEAE (mint family) – 19 native
25 – LILIACEAE (lily family) – 15 native
25 – BRASSICACEAE (mustard family) – 8 native

Largest genera
49 – *Carex* (sedges) – 47 native
13 – *Viola* (violets) – 12 native
11 – *Galium* (bedstraws) – 8 native
11 – *Solidago* (goldenrods) – 10 native
10 – *Dicanthelium* (panic grasses) – 10 native

Nomenclature follows Rhoads and Block, 2000, *The Plants of Pennsylvania* or the more recent *Flora of North America* series.

WALLACE TOWNSHIP PLANT LIST - 2006

PTERIDOPHYTES - FERNS AND FERN ALLIES

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
ADIANTACEAE		**MAIDENHAIR FERN FAMILY**					**1 SPECIES**																	
Adiantum pedatum		Maidenhair fern	6			06J	06										06		06E					4
ASPLENIACEAE		**SPLEENWORT FERN FAMILY**					**1 SPECIES**																	
Asplenium platyneuron		Ebony spleenwort	3		06	06J	06K		07A						06	06E		06D		06	06	06	06C	11
DENNSTAEDTIACEAE		**HAY-SCENTED FERN FAMILY**					**2 SPECIES**																	
Dennstaedtia punctilobula		Hay-scented fern	2	06D	06D	06D	06E	06E	06E	06F	06E			06E	06		06E	06E	06H	06E		06		15
Pteridium aquilinum		Bracken	4	07A		06J								06E					06H					4
DRYOPTERIDACEAE		**WOOD FERN FAMILY**					**11 SPECIES**																	
Athyrium filix-femina v. angustum		Northern lady fern	3	06A	06D	06D	06D	06E	06D	06D	06	06E	06	06D	06E	06E	06E	06E	06	06E	06E	06E	06E	20
Cystopteris tenuis		Fragile fern	4																				06	1
Deparia acrostichoides		Silvery spleenwort	4				06E	06E	06E	06D	06E	06E	06E	06D			06	06E	06E	06E		06E		13
Dryopteris x cristata		Crested fern hybrids	6								07A			6H0										1
Dryopteris carthusiana		Spinulose woodfern	4	06A	07A	06L	06E	06E	06E	06F	06I		06H	06F		06E	06E	06F	06E	06E	06F		06	17
Dryopteris cristata		Crested fern	6	06A	06A	06A	06K	06E	06C	06F	06D		06H	06D	06E	06D	06	06E	06					15
Dryopteris goldiana		Giant wood fern	7																06					1
Dryopteris intermedia		Intermediate woodfern	4	06E	06D		06D	06E	07A	06D		06F		06D		06I					06E			10
Dryopteris marginalis		Marginal woodfern	5	06H		06A	06E	06L	06C	06C	06I	06F	06	06D			06E	06E	06D	06C	06E	06E	06C	17
Onoclea sensibilis		Sensitive fern	1	06A	06A	06A	06C	06D	06C	06C	06D	06D	06E	06D	06C	06D	06D	06D	06D	06E	06C	06C	06E	20
Polystichum acrostichoides		Christmas fern	3	06A	06	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06H	06D	06D	06D	06C	06E	06C	06C	20
EQUISETACEAE		**HORSE-TAIL FAMILY**					**2 SPECIES**																	
Equisetum arvense		Field horsetail	1	06E		06D			06E				06D	06E	06E	06F			06D	06E	06E	06E	06E	12
Equisetum sylvaticum		Woodland horsetail	6			06E																		1
LYCOPODIACEAE		**CLUBMOSS FAMILY**					**5 SPECIES**																	
Diphasiastrum digitatum		Ground pine	5					06L	06C									06F						3
Huperzia lucidula		Shining clubmoss	6				06	06L	06D									06E		06D				5
Lycopodium clavatum v. clavatum		Runing-pine clubmoss	7															06J		07A				2
Lycopodium hickeyi		Hickey's tree clubmoss	7													06D		06F						2
Lycopodium obscurum		Tree clubmoss	5	06A	06A		06E	06E	06C					06D					07A	06D				8
OPHIOGLOSSACEAE		**ADDER'S-TONGUE FAMILY**					**2 SPECIES**																	
Botrychium dissectum		Cut-leaved grapefern	3	07A	06I	06I	06K	06L	07A		07A		06D		06	06F		06E			06	06	06C	14

PTERIDOPHYTES - FERNS AND FERN ALLIES

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Botrychium virginianum		Rattlesnake fern	5	06F	06E	06E	06E	06E	06E	06D	06E		06E	06D	06	06H	06E	06E	06E	06E	06E	06E	06	19
OSMUNDACEAE		**ROYAL-FERN FAMILY**				**3 SPECIES**																		
Osmunda cinnamomea		Cinnamon fern	5	06D	06A	06A	06E	06E	06E	06F	06D		06H	06D	06	06D	06F	06E		06D			06	16
Osmunda claytoniana		Interrupted fern	5	06E		06J	06E		06E	06F			06E	06E	06E		06	06E	06	06E				12
Osmunda regalis		Royal fern	7	07A		06J		06E			06D			06F			06							6
POLYPODIACEAE		**POLYPODY FERN FAMILY**				**1 SPECIES**																		
Polypodium virginianum		Polypody	8			06J	06K							06L							06E			4
SELAGINELLACEAE		**SPIKE-MOSS FAMILY**				**1 SPECIES**																		
Selaginella apoda		Creeping spikemoss	4																		06			1
THELYPTERIDACEAE		**BEECH FERN FAMILY**				**3 SPECIES**																		
Phegopteris hexagonoptera		Broad beech fern	6				06K					06F			06		06	06E	06I	06E	06E	06	06	10
Thelypteris noveboracensis		New york fern	4	06D	07A	06D	06E	06E	06C	06F	06D	06E	06E	06D		06F	06E	06E	06	06E	06E		06	18
Thelypteris palustris		Marsh fern	5	06E	06A	06E		06E	06E		06E			06D	06	06F	06E	06E		06H	06F			13

WALLACE TOWNSHIP PLANT LIST - 2006

GYMNOSPERMS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
CUPRESSACEAE		**CYPRESS FAMILY**				1 SPECIES																		
Juniperus virginiana		Red cedar	2	06A	06D	06A	06C	06C	06C	06D	06D	06D	06D	06L	06C	06E	06D	06D	06D	06C	06	06C	06C	20
PINACEAE		**PINE FAMILY**				3 SPECIES																		
Pinus strobus	A	White pine	7											06D			06D	06F				06		4
Pinus virginiana		Scrub pine	6													06F								1
Tsuga canadensis		Eastern hemlock	6			06J									06C			06D		06D			06E	5
TAXACEAE		**YEW FAMILY**				1 SPECIES																		
Taxus cuspidata	A	Japanese yew				06A									06C									2

WALLACE TOWNSHIP PLANT LIST - 2006

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
ACERACEAE		**MAPLE FAMILY**																						**7 SPECIES**
Acer negundo		Box elder	2							06F		06E	06D	06D						06E				5
Acer palmatum	A	Japanese maple								06D				06H								06		3
Acer platanoides	A	Norway maple		06E	06D	06D	06E	06D	06	06C	06	06D	06D	06D	06C	06E	06D	06D	06D	06C	06C	06E	06C	20
Acer pseudoplatanus	A	Sycamore maple					06E		06				06											3
Acer rubrum		Red maple	1	06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Acer saccharinum		Silver maple	3				06E	06H		06F					06E					06H			06	6
Acer saccharum		Sugar maple	5			06I	06E			06C	06		06E	06D		06E	06	06E	06E	06E	06E	06E	06E	14
AIZOACEAE		**CARPETWEED FAMILY**																						**1 SPECIES**
Mollugo verticillata	A	Carpetweed														06H						06I		2
AMARANTHACEAE		**AMARANTH FAMILY**																						**4 SPECIES**
Amaranthus albus	A	Tumbleweed														06H								1
Amaranthus hybridus	A	Green amaranth														06H								1
Amaranthus retroflexus	A	Pigweed					06H							06H		06H			06H					4
Amaranthus spinosus	A	Thorny amaranth									06													1
ANACARDIACEAE		**CASHEW FAMILY**																						**5 SPECIES**
Rhus copallina		Shining sumac	4								06	06F						06F						3
Rhus glabra		Smooth sumac	3	06F	06D		06C	06	06C	06C	06D	06D	06J	06	06C	06H				06	06C	06	06	16
Rhus hirta (typhina)		Staghorn sumac	1					06D		06H	06D				06C									4
Toxicodendron radicans		Poison ivy	1	06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
Toxicodendron vernix		Poison sumac	8	06F				06E			06			06D										4
APIACEAE		**PARSLEY FAMILY**																						**14 SPECIES**
Aegopodium podagraria	A	Goutweed																			06C	06E		2
Anthriscus caucalis	A	Bur-chervil		06F																				1
Cicuta maculata		Water hemlock	5	06E		06E	06E	06E		06F	06			06F	06								06E	9
Conium maculatum	A	Poison hemlock			06A								06	06	06		06D		06D			06C		7
Cryptotaenia canadensis		Honewort	2	06H	06D	06A	06	06E	06E	06C	06E	06E	06D	06D	06E	06D	06D	06E	06D	06E	06F	06E	06E	20
Daucus carota	A	Wild carrot		06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Hydrocotyle americana		Water pennywort	7		06I						06													2
Osmorhiza claytonii		Sweet cicely	4						06E			06E	06E								06F			4
Osmorhiza longistylis		Anise-root	4	06	06A	06D	06E	06C	07A	06D			06D	06D	06E	06E	06D	06D	06D	06D	06E	06E	06C	18
Pastinaca sativa	A	Wild parsnip			06D	06D		06D			06					06D								5

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Pimpinella saxifraga	A	Burnet saxifrage																06J						1
Sanicula canadensis		Black snakeroot	3	06F	06E	06E	06	06E		06F		06D	06J	06	06	06E	06F	06F	06D	06	06	06E	06E	18
Sanicula odorata		Black snakeroot	5										06E				06F	06E	06			06E		5
Sanicula trifoliata		Rough-fruited sanicle	5				06																	1
APOCYNACEAE		**DOGBANE FAMILY**					**2 SPECIES**																	
Apocynum cannabinum		Indian hemp, dogbane	1	06A	06A	06A	06C	06D	06C	06C	06D	06D	06	06	06E	06D	06E	06D	06D	06C	06C	06C	06C	20
Vinca minor	A	Periwinkle		06H						06C				06D			06	06D		06D				6
AQUIFOLIACEAE		**HOLLY FAMILY**					**3 SPECIES**																	
Ilex crenata	A	Japanese holly																06J						1
Ilex opaca		American holly	5	07A	06D	06J		06L	06C				06D		06C			06D	06I	07A		06C	06C	12
Ilex verticillata		Winterberry	4	06A	06A	06J	06E	06E	06E		06D	06F	06H	06D	06C	06F	06E	06E	06	06D	06E	06E	06	19
ARALIACEAE		**GINSENG FAMILY**					**5 SPECIES**																	
Aralia elata	A	Asian hercules-club																06J						1
Aralia nudicaulis		Wild sarsasparilla	5	06H	06	06D	06E		06E			06F		06E	06				06E	06E			06	11
Aralia racemosa		Spikenard	6																06E					1
Hedera helix	A	English ivy													06C		06D					06		3
Panax trifolius		Dwarf ginseng	6								06E	06E	06D					06E	06D			06E		6
ARISTOLOCHIACEAE		**WILD-GINGER FAMILY**					**2 SPECIES**																	
Aristolochia serpentaria		Virginia snakeroot	6			06J								06		06F		06F				06		5
Asarum canadense		Wild ginger	4				06D			06D	06E	06E	06D	06D	06E		06F	06F	06E	06E	06E	06E	06	14
ASCLEPIADACEAE		**MILKWEED FAMILY**					**6 SPECIES**																	
Asclepias exaltata		Poke milkweed	7				06K						06E	06E										3
Asclepias incarnata v. incarnata		Swamp milkweed	4		06E	06E	06		06C		06D					06F								6
Asclepias purpurascens		Purple milkweed	6							06F			06J			06F								3
Asclepias syriaca		Common milkweed	1	06F	06A	06A	06E	06D	06	06F	06E	06D	06E	06	06	06D	06	06D	06E	06C	06C	06E	06E	20
Asclepias tuberosa		Butterfly weed	6		06								06J					06F		06		06		5
Asclepias viridiflora		Green milkweed	7															06F						1
ASTERACEAE		**ASTER FAMILY**					**97 SPECIES**																	
Achillea millefolium	A	Yarrow		06E	06D	06A	06C	06C	06C	06F	06D	06D	06D	06	06E	06D	06D	06D	06D	06C	06C	06C	06C	20
Ageratina altissima v. altissima		White snakeroot	2	06A		06		06E	06E			06D	06E			06H		06F	06E	06	06F	06	06	13
Ambrosia artemisiifolia		Common ragweed	0	06A	06A	06A	06E	06C	06E	06C	06E	06E	06E	06F	06E	06F	06F	06F	06E	06	06E	06E	06C	20
Ambrosia trifida		Great ragweed	1	06H	06A	06E	06D	06C	06	06C	06D	06D	06D	06F	06C	06D	06D	06D	06D	06D	06C	06C	06C	20

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Antennaria neglecta		Field pussytoes	2		06D								06J			06F		06F	06D					5
Antennaria neodioica ssp. neodioica		Small pussytoes	3	07A		06J																		2
Antennaria parlinii ssp. parlinii		Plantain-leaved pussytoes	3	07A								06D												2
Antennaria plantaginifolia		Plantain-leaved pussytoes	3		06D	06J							06D					06D		06D		06		6
Anthemis arvensis	A	Corn camomile								06E					Q6		06							2
Arctium lappa	A	Great burdock													06E								06C	2
Arctium minus	A	Common burdock		06H	06H	06D	06	06C		06D		06	06	06H	06E	06E	06	06F	06E		06C			15
Artemisia annua	A	Annual wormwood											06											1
Artemisia vulgaris	A	Mugwort		06A	06D	06A		06D	06C	06H	06I	06D		06D	06C	06E	06E	06E		06C	06E	06C		16
Bidens bipinnata		Spanish needles	2		06H																			1
Bidens cernua		Bur-marigold	4		06I																			1
Bidens connata		Beggar's-ticks	3		06I	06I																		2
Bidens frondosa		Beggar's-ticks	1	06A	06I	06	06		06	06F			06	06F	06E	06H	06	06I	06		06F		06	15
Bidens polylepis	A	Tickseed sunflower			06E	06E	06				06I	06F				06F						06		7
Carduus nutans	A	Nodding thistle							07A										06D		06C			3
Centaurea jacea	A	Brown knapweed					06H											06J						2
Centaurea maculosa	A	Spotted knapweed									06D				06E							06E		3
Centaurea nigrescens (dubia)	A	Knapweed																		06H		06		1
Chrysanthemum leucanthemum	A	Ox-eye daisy		06F	06A	06D	06E	06C	06C	06F	06D	06D	06D	06	06E	06F	06D		06E	06		06E	06C	18
Cichorium intybus	A	Chicory		06E	06D	06D	06C	06C	06	06D	06E	06D	06	06	06C	06E	06F	06D	06	06C	06C	06C	06	20
Cirsium arvense	A	Canada thistle		06A	06A	06D	06D	06D	06	06D	06	06D	06	06F	06C	06D	06D	06D	06D	06C	06C	06C	06E	20
Cirsium discolor		Field thistle	2		06A	06D	06D	06H	06E	06F	06E	06D	06E		06	06F						06	06E	13
Cirsium muticum		Swamp thistle	6	07A	06I											06D								3
Cirsium vulgare	A	Bull thistle		06A	06D	06A	06E	06C	07A	06D	06D	06F	06		06C	06E		06D		06C	06C	06C	06	17
Conyza canadensis		Horseweed	0	06A	06	06A	06	06	06		06	06F	06	06	06	06F	06	06D	06H	06	06		06E	18
Doellingeria umbellata		Flat-topped white aster	7					06E																1
Erechtites hieracifolia		Pilewort	0	06F	06H	06I	06C	06H	06	06F	06		06	06	06	06H	06	06I		06H	06	06	06	18
Erigeron annuus		Daisy fleabane	0	06F	06D	06A	06E	06D	06C	06D	06E	06E	06E	06F	06C	06E	06D	06D	06E	06C	06E	06E	06C	20
Erigeron philadelphicus		Common fleabane	1	06A	06A	06D	06C	06D	06C	06D	06D	06D	06E	06D	06C	06E	06D	06D	06D	06C	06C	06C	06E	20
Erigeron pulchellus		Robin's-plantain	3											06H										1
Erigeron strigosus		Fleabane	0	06E	06		06H	06H		06F	06E	06E			06	06H	06F		06	06H		06	06E	14
Eupatorium perfoliatum		Boneset	3	06H	06E	06E		06E	06C	06F	06	06E	06H	06F	06E	06F	06E	06E			06C	06E		16
Eurybia divaricatus		White wood aster	3	06E	06A	06A	06D	06D	06D	06D	06D	06D	06D	06D	06C	06D	06D	06E	06D	06C	06E	06E	06C	20
Eurybia macrophylla		Bigleaf aster	5	06E		06D	06E	06E	06D	06F	Q6I			Q0	Q0	06I			06E	06E	06E			11
Eurybia schreberi		Bigleaf aster	5										Q6				06							1
Euthamia graminifolia		Grass-leaved goldenrod	3	06D	06A	06A	06C	06E	06C	06C	06D	06D	06D	06	06C	06D	06E	06D	06D	06C	06C	06C	06C	20

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Eutrochium dubium		Marsh joe-pye weed	6	06E	06A	06E		06						06F									06	6
Eutrochium fistulosum		Hollow joe-pye weed	3	06A			06C	06E	06C	06F	06D	06E	06E	06E	06E	06F		06F	06D	06	06F	06E	06	17
Eutrochium purpureum		Woodland joe-pye weed	5				06		06E				06		06	06H	06			06E		06E		8
Galinsoga quadriradiata	A	Galinsoga		06H		06			06		06	06	06	06H	06	06H	06		06				06	12
Gnaphalium obtusifolium		Sweet everlasting	2		06D						06D													2
Helenium flexuosum	A	Purple-headed sneezeweed			06I			06																2
Helianthus annuus	A	Common sunflower																		06				1
Helianthus decapetalus		Thin-leaved sunflower	3			06J			06E					06	06C					06	06E	06E	06	7
Helianthus divaricatus		Woodland sunflower	6																			06		1
Heliopsis helianthoides		Ox-eye	4																06E					1
Hieracium caespitosum	A	King devil		07A	06D		06C	06D	06E	06D	06D	06E	06H	06H	06E	06E		06D	06E	06	06F	06E	06E	18
Hieracium flagellare	A	Hawkweed			06E				06			06	06											4
Hieracium gronovii		Hairy hawkweed	5			06J												06F						2
Hieracium paniculatum		Panicled hawkweed	5	06H		06J	06K	06E							06C					06C			06C	7
Hieracium piloselloides	A	Small-headed hawkweed				06J					06							06D				06E		4
Hieracium scabrum		Rough hawkweed	3												06	06F		06J		06				3
Hieracium venosum		Rattlesnake-weed	6														06E			06				2
Hypochaeris radicata	A	Cat's-ear			06D																			1
Krigia biflora		Two-flowered cynthia	5	06H	06E		06E	06E					06H			06F		06F						7
Lactuca biennis		Tall lettuce	1	06E	06A	06A		06D	06D	06D	06	06D	06	06D	06E	06E	06D			06C	06E	06C	06E	17
Lactuca canadensis		Yellow smooth wild lettuce	1		06H	06E			06E		06		06E	06H	06	06E	06E	06I		06		06E	06	13
Lactuca serriola	A	Prickly lettuce		06F	06I	06I	06H	06H	06	06F	06		06	06	06	06E	06E			06				14
Lapsana communis	A	Nipplewort														06H			06				06	3
Matricaria matricarioides	A	Pineapple-weed							06E													06E		2
Mikania scandens		Climbing boneset	7	07A							06	06E												3
Packera aurea		Golden ragwort	5		06D	06D	06E	06E			06E	06D	06D	06F	06E	06F		06E	06E		06E			13
Prenanthes alba		Rattlesnake-root	7	07A																				1
Prenanthes altissima		Tall white wild lettuce	4	06D	06A	06A	06E	06E	06D	06D	06E	06D	06E	06D	06	06F	06E	06E	06E	06E	06E	06E	06E	20
Rudbeckia fulgida v. speciosa	A	Coneflower																				06C		1
Rudbeckia hirta	A	Brown-eyed susan		06	06D	06D	06			06C	06D	06D	06D			06F	06F		06		06	06E	06E	14
Rudbeckia laciniata		Green-headed coneflower	5				06D			06D	06	06E		06D				06F				06E	06E	8
Senecio vulgaris	A	Common groundsel		06F	06D	06A		06C	06C	06C	07A				06E	06E	06E	06D		06C	06C	06C		14
Solidago bicolor		Silverrod	6	06H							06I	06F		06H		06I		06F		06		06I		8
Solidago caesia		Blue-stemmed goldenrod	5	06H	06A	06A	06	06E	06D	06F	06E	06E	06D	06D	06		06E	06D	06D	06C	06F	06E	06C	19
Solidago canadensis		Canada goldenrod	1	06A	06A	06A	06C	06C	06	06C	06D	06D	06D	06D	06C	06D	06D	06D	06	06E	06C	06C	06C	20
Solidago flexicaulis		Zig-zag goldenrod	6							06F			06D	06F			06	06E	06E			06E	06E	8

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Solidago gigantea		Late goldenrod	4	06E	06E	06E	06E	06	06E	06C	06E	06F	06H	06F	06E	06F			06	06H	06F	06E	06E	18
Solidago juncea		Early goldenrod	3	06	06E	06E	06	06	06E		06E	06E	06E		06	06F	06F	06F	06E	06H	06	06E	06E	18
Solidago nemoralis		Gray goldenrod	4	07A		06I					06D	06E	06H			06F		06I	06			06		9
Solidago patula		Rough-leaved goldenrod	6		06E	06I	06D		06C		06D			06D		06D	06E	06F			06F	06E		11
Solidago rugosa		Rough-stemmed goldenrod	3	06E	06A	06D	06D	06E	06C	06C	06E	06E	06	06F	06C	06F	06F	06D	06E	06E	06E	06E	06E	20
Solidago sempervirens	A	Seaside goldenrod		06F																				1
Solidago ulmifolia		Elm-leaved goldenrod	6		06H										06							06		3
Sonchus asper	A	Spiny-leaved sow thistle		06F	06H	06A			06	06H	06	06	06	06F	06	06H	06	06J	06	06E	06	06F		17
Sonchus oleraceus	A	Sow-thistle		06F		06			06			06	06			06H				06				7
Symphyotrichum cordifolium		Heart-leaved aster	4	06H	06A	06A	06K	06L	06E	06F			06D	06E	06C		06D	06E	06D	06D	06F	06E	06C	17
Symphyotrichum lanceolatum		Panicled aster	2		06A	06	06	06H	06		06		06H	06	06	06H		06F	06I	06H	06	06I	06	16
Symphyotrichum lateriflorum		Calico aster	2	06A	06A	06I	06C	06			06		06H	06	06	06H		06I	06	06	06	06		15
Symphyotrichum novae-angliae		New england aster	2						06E															1
Symphyotrichum pilosum v pilosum		Heath aster	2	06F	06D	06I	06	06C	06	06C	06D	06D	06D	06	06C	06F	06D	06D	06	06C	06C	06C	06C	20
Symphyotrichum prenanthoides		Zig-zag aster	6										06E	06F					06			06E		4
Symphyotrichum puniceum		Purple-stemmed aster	3	06D	06A	06D	06C	06E	06C	06F	06D	06D	06H	06D	06E	06D	06D	06D	06D	06	06E		06C	19
Taraxacum officinale	A	Dandelion		06A	06D	06A	06D	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Tussilago farfara	A	Colt's-foot													06									1
Verbesina alternifolia		Wingstem	5		06																			1
Vernonia noveboracensis		Ironweed	3	06A	06A	06A		06E	06C	06C	06D	06D	06H		06E	06D		06I	06E	06H	06C			15
Xanthium strumarium	A	Cocklebur					06	06								06I								3
BALSAMINACEAE		**JEWEL-WEED FAMILY**					**2 SPECIES**																	
Impatiens capensis		Orange jewelweed	2	06D	06A	06A	06D	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06D	06C	06E	06C	20
Impatiens pallida		Yellow jewelweed	3								06I		06	06H			06		06	06H	06		06	8
BERBERIDACEAE		**BARBERRY FAMILY**					**2 SPECIES**																	
Berberis thunbergii	A	Japanese barberry		06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06D	06C	06E	06C	20
Podophyllum peltatum		Mayapple	5	06D	06D	06D	06D	06D	06D	06D	06E	06E	06D	06D	06E	06E	06D	06E	06D	06E	06E	06E	06C	20
BETULACEAE		**BIRCH FAMILY**					**7 SPECIES**																	
Alnus glutinosa	A	Black alder													06C								06E	2
Alnus serrulata		Common alder	4	06A	06A	06	06C	06E	06C	06F	06D			06D									06E	10
Betula lenta		Cherry birch	4	06H	06D		06E	06L	06C		06D	06D	06D	06D	06		06E		06D	06C	06C	06E	06C	16
Betula populifolia		Gray birch	2	07A		06J																		2
Carpinus caroliniana v. virginiana		Ironwood	5	06A	06A	06A	06C	06E	06C	06C	06D	06D	06D	06D	06C	06D	06E	06D	06D	06C	06E	06E	06C	20
Corylus americana		American hazelnut	5	06F	06D	06D	06	06C	06C	06D	06D	06D	06E	06D		06H	06E		06D	06	06C	06	06C	18

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Ostrya virginiana		Hop hornbeam	6			06J	06		06E				06D	06D			06	06E	06D	06C	06E		06C	11
BIGNONIACEAE		**BIGNONIA FAMILY**					**3 SPECIES**																	
Campsis radicans		Trumpet-creeper	2										06J											1
Catalpa bignonioides	A	Catalpa		06F	06D										06								06E	4
Paulownia tomentosa	A	Princess-tree				06J				06F	06					06H						06	06	6
BORAGINACEAE		**BORAGE FAMILY**					**5 SPECIES**																	
Hackelia virginiana		Beggar's-lice	2	06A	06E	06D		06E	06	06D	06		06D	06D	06C	06H	06	06E	06	06E	06E	06E	06E	18
Mertensia virginica		Virginia bluebells	7										06D	06D	06E				06E			06E		5
Myosotis arvensis	A	Forget-me-not																		06				1
Myosotis laxa		Smaller forget-me-not	4			06	06E			06F					06E					06				5
Myosotis scorpioides	A	Forget-me-not		07A		06J				06F			06H		06E							06E	06	7
BRASSICACEAE		**CRESS FAMILY**					**25 SPECIES**																	
Alliaria petiolata	A	Garlic mustard		06A	06A	06A	06C	06D	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Arabidopsis thaliana	A	Mouse-ear cress								06D								06D		06D				3
Arabis glabra		Tower mustard	3																				06	1
Arabis laevigata v. laevigata		Smooth rock-cres	7																			06E		1
Barbarea vulgaris	A	Wintercress		06F	06D	06D	06C	06C	06C	06C	06D	06D	06D	06	06C	06D	06D	06D	06D	06D	06C	06C	06C	20
Brassica rapa	A	Mustard			06D			06D		06H							06E	06J	06	06H		06C		8
Capsella bursa-pastoris	A	Shepherd's purse					06	06D	06									06F						4
Cardamine bulbosa		Spring cress	6	06E				06E	06C		06D			06F	06C									6
Cardamine concatenata		Cut-leaved toothwort	5				06D		06D	06D			06D	06D	06E			06E	06D	06E	06E	06E	06E	12
Cardamine hirsuta	A	Hairy bittercress		06A	06A	06A	06C	06C	06C	06D	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Cardamine impatiens	A	Cut-leaved bittercress		06E	06A	06						06		06E										5
Cardamine pensylvanica		Pennsylvania bittercress	5	06D	06A	06D		06E	06C	06D	06E		06E	06D	06C	06F	06D	06E	06E		06E	06E	06E	17
Cardamine rotundifolia		Mountain water-cress	8				06E		06E	06F			06H	06D			06	06E						7
Coincya monensis	A	Yellow mustard		06E		06																		2
Draba verna	A	Whitlow-wort								06D														1
Hesperis matronalis	A	Dame's rocket					06C		06E	06C			06E	06D	06C		06D		06E	06C	06E	06C	06C	12
Lepidium campestre	A	Cow-cress		06F	06	06E	06E	06E		06F	06E	06E	06E		06	06F			06D	06H		06E		14
Lepidium densiflorum	A	Wild pepper-grass		06F			06								06E	06F					06	06E	06	7
Lepidium virginicum		Poor man's pepper	0	06F				06		06			06							06		06		6
Nasturtium officinale	A	Watercress						06H					06D		06E									3
Rorippa palustris		Yellow marsh cress	2					06E		06F	06				06E						06E			5
Rorippa sylvestris	A	Creeping yellow cress									06													1

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Sisymbrium officinale	A	Hedge mustard		06F								06	06	06										4
Thlaspi alliaceum	A	Stinking penny-cress		06E	06D					06D	06						06	06D	06D			06C	06	9
Thlaspi arvense	A	Field pennycress			06D	06E		06D		06D	06D	06E		06D		06E		06D	06D	06C	06C	06C		13
CAESALPINIACEAE		**POINCIANA FAMILY**				**4 SPECIES**																		
Cercis canadensis		Redbud	7										06			P06								1
Chamaecrista nictitans		Wild sensitive plant	4			06																06		2
Gleditsia triacanthos	A	Honey locust				06J				06H				06H	06E	06F	06					06		7
Senna hebecarpa		Wild senna	6			06L																		1
CALLITRICHACEAE		**WATER-STAR FAMILY**				**2 SPECIES**																		
Callitriche heterophylla		Water starwort	5												6L1									1
Callitriche stagnalis	A	Water-starwort		06E		06E				06F				06L	06E									5
CAMPANULACEAE		**BELLFLOWER FAMILY**				**5 SPECIES**																		
Campanula aparinoides		Marsh bellflower	6	06E	06E	06																		3
Lobelia cardinalis		Cardinal-flower	6			06J	06K				06													3
Lobelia inflata		Indian tobacco	0	06F	06A	06I	06C	06C	06	06C	06	06D	06D	06H		06D		06F	06H	06H	06E	06C	06C	18
Lobelia siphilitica		Great lobelia	5		06I	06E	06H						06H		06E					06H				6
Triodanis perfoliata		Venus' looking-glass	0			06E											06E						06	3
CANNABACEAE		**HOPS FAMILY**				**2 SPECIES**																		
Humulus japonicus	A	Japanese hops					06D			06F			06E	06F	06E			06E	06E		06C	06E		9
Humulus lupulus		Common hops	2											06E										1
CAPRIFOLIACEAE		**HONEYSUCKLE FAMILY**				**14 SPECIES**																		
Lonicera japonica	A	Japanese honeysuckle		06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Lonicera maackii	A	Amur bush-honeysuckle		06D	06A	06D	06E	06D	06E	06C	06E	06E	06D	06D	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
Lonicera morrowii	A	Morrow's bush-honeysuckle		06D	06D	06D	06E		06E		06D	06E	06		06	06E	06E		06E		06F	06	06E	15
Lonicera sempervirens		Trumpet honeysuckle	5			06D	06K												06	06E				4
Sambucus canadensis		Elderberry	3	06D	06D	06A	06D	06C	06E	06D	06D	06D	06D	06D	06E	06D	06D	06E	06	06D		06C	06C	19
Symphoricarpos orbiculatus	A	Coralberry																			06	06E		2
Triosteum aurantiacum v. aurantiacum		Wild coffee	6				06K		06E				06											3
Viburnum acerifolium		Maple-leaved viburnum	5	06E	06A	06A	06E	06D	06D	06F	06I	06E	06D	06D	06		06	06E	06D	06C	06E	06	06C	19
Viburnum dentatum		Southern arrowwood viburnum	3	06A	06A	06D	06D	06C	06D	06C	06D	06E	06E	06D	06E	06D	06E	06E	06D	06D	06E	06E	06C	20
Viburnum dilitatum	A	Linden viburnum											06D	06D				06J	06E	06E				5
Viburnum lentago		Nannyberry	5							06F				06F										2
Viburnum plicatum	A	Doublefile viburnum								06D														1

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Viburnum prunifolium		Black-haw	2	06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06E	06E	06C	20
Viburnum recognitum		Northern arrowwood viburnum	6	06	06E	06	06				06				06E	06F								7
CARYOPHYLLACEAE		**PINK FAMILY**					**16 SPECIES**																	
Arenaria serpyllifolia	A	Thyme-leaved sandwort							06	06D														2
Cerastium fontanum	A	Mouse-eared chickweed		06F	06D	06E	06E	06D	06C	06C	06D	06D	06D	06F	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
Cerastium glomeratum	A	Mouse-ear chickweed								06D		06E	06E	06F			06F				06E			6
Dianthus armeria	A	Deptford pink		06F	06D	06	06	06D	06		06D	06F	06D	06	06	06E	06D	06D	06D	06C		06C	06C	18
Myosoton aquaticum	A	Giant chickweed					06D			06F		06E	06E	06F	06C				06D	06D	06E	06E	06	11
Paronychia canadensis		Forked chickweed	6			06J																		1
Paronychia fastigiata (incl. v. paleacea)		Forked chickweed	7																			06		1
Sagina japonica	A	Pearlwort												06F				06F			06F	06E		4
Saponaria officinalis	A	Soapwort							06						06E					06H				3
Silene antirrhina		Sleepy catchfly	1												06			06I						2
Silene latifolia	A	White campion		06E	06D	06E	06E	06D	06E	06D		06	06E	06	06C	06H	06D	06D	06D			06	06C	17
Silene stellata		Starry campion	6																				06C	1
Stellaria alsine		Trailing stitchwort	6			06E	06			06F					06E			06E				06E		6
Stellaria graminea	A	Common stitchwort			06E		06E									06F								3
Stellaria longifolia		Long-leaved stitchwort	4	06E		06D	06E	06E	06E	06F		06F		06F							06F			9
Stellaria media	A	Common chickweed		06A	06A	06A	06K	06C	06C	06C	06D	06D	06D	06D	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
CELASTRACEAE		**BITTERSWEET FAMILY**					**4 SPECIES**																	
Celastrus orbiculatus	A	Oriental bittersweet		06A	06D	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
Euonymus alatus	A	Winged burning-bush		06A	06A	06A	06C	06D	06E	06H	06		06	06D	06C	06E	06D	06D	06D	06D	06F	06C	06C	19
Euonymus americanus	PW	Running strawberry bush	5			06J																		1
Euonymus fortunei	A	Wintercreeper								06C														1
CERATOPHYLLACEAE		**HORNWORT FAMILY**					**1 SPECIES**																	
Ceratophyllum demersum		Hornwort	6	07A																				1
CHENOPODIACEAE		**GOOSEFOOT FAMILY**					**1 SPECIES**																	
Chenopodium album	A	Lamb's-quarters		06A	06D	06	06C	06C	06	06D	06	06	06	06H	06	06F		06D	06	06D	06C	06C		18
CLUSIACEAE		**ST. JOHN'S-WORT FAMILY**					**4 SPECIES**																	
Hypericum mutilum		Dwarf st. john's-wort	2		06I	06E	06C	06	06E		07A		06H		06	06H	06	06J		06H				12
Hypericum perforatum	A	Common st. john's-wort		06A		06A		06			06		06H		06	06F	06		06H			06E	06E	11
Hypericum punctatum		Spotted st. john's-wort	2	06F	06D	06D	06C	06E	06C	06F	06D	06D	06D	06	06E	06F	06D	06E	06	06C		06C	06	19
Triadenum fraseri		Marsh st. john's-wort	9	07A	06E																			2

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
CONVOLVULACEAE		**MORNING-GLORY FAMILY**					**3 SPECIES**																	
Calystegia sepium		Hedge bindweed	0	06E	06	06E	06	06H	06E		06E	06E	06	06	06E	06F	06F	06E	06E	06	06	06E	06E	19
Convolvulus arvensis	A	Field bindweed													06									1
Ipomoea pandurata		Wild potato-vine	4											06H										1
CORNACEAE		**DOGWOOD FAMILY**					**4 SPECIES**																	
Cornus alternifolia		Pagoda dogwood	5	06E	06	06E	06	06E	06E	06F			06E	06H	06E	06E		06D	06E	06	06E	06E	06C	17
Cornus amomum		Swamp dogwood	3	06A	06A	06A	06C	06E	06C	06C	06D	06E	06H	06D	06C	06I	06D	06F	06D	06H	06C	06E	06C	20
Cornus florida		Flowering dogwood	5	06D	06A	06A	06C	06C	06E	06C	06D	06D	06D	06D	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
Cornus racemosa		Panicled dogwood	3		06A	06A	06E				06		06J	06F				06E						5
CRASSULACEAE		**STONECROP FAMILY**					**2 SPECIES**																	
Sedum telephium	A	Orpine																	06E					1
Sedum ternatum		Wild stonecrop	7						06C				06E	06	06E			06E	06H			06E		7
CUCURBITACEAE		**GOURD FAMILY**					**1 SPECIES**																	
Sicyos angulatus		Bur-cucumber	2			06E	06H	06H			06			06F	06E		06				06		06	9
CUSCUTACEAE		**DODDER FAMILY**					**1 SPECIES**																	
Cuscuta gronovii		Dodder	3	06A	06I	06		06H	06		06			06H			Q0	06D			06		06	9
DIPSACACEAE		**TEASEL FAMILY**					**1 SPECIES**																	
Dipsacus sylvestris	A	Teasel		06A	06E	06	06E		06C	06D			06		06C							06C		9
EBENACEAE		**EBONY FAMILY**					**1 SPECIES**																	
Diospyros virginiana		Persimmon	5										06H											1
ELAEAGNACEAE		**OLEASTER FAMILY**					**1 SPECIES**																	
Elaeagnus umbellata	A	Autumn olive		06A	06D	06A		06D	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	19
ERICACEAE		**HEATH FAMILY**					**9 SPECIES**																	
Epigaea repens		Trailing arbutus	7																	06D				1
Gaylussacia baccata		Black huckleberry	5	07A	06D	06J		06E			06I	06D				06F		06F	06I	07A			06	11
Kalmia angustifolia		Sheep laurel	8											06D						06				2
Kalmia latifolia		Mountain laurel	6											06D						06C				2
Lyonia ligustrina		Maleberry	7	07A										06D										2
Rhododendron periclymenioides		Pinxter flower	5	06F	06D	06D	06	06E	06E	06F	06D	06E	06E	06D		06F	06E	06D	06D	06C			06	17
Vaccinium corymbosum		Highbush blueberry	5	06A	06A	06D	06K	06E	06C		07A	06D		06D	06C	06D	06	06E	06I	06D				15

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Vaccinium pallidum		Lowbush blueberry	6	06D	06D	06D	06	06E	06C	06F	06D	06F	06E	06D		06F	06E	06D	06D	06C			06C	17
Vaccinium stamineum		Deerberry	7	06H	06	06J					06E			06F				06E	06I	06			06	9
EUPHORBIACEAE		SPURGE FAMILY					6 SPECIES																	
Acalypha gracilens		Slender 3-seeded mercury	3										06H					06J						2
Acalypha rhomboidea		Three-seeded mercury	0	06F	06	06E	06H	06	06	06F	06	06	06	06F	06	06H	06F		06H	06	06	06	06	19
Acalypha virginica		Three-seeded mercury	2										06J			06H		06J						3
Chamaesyce maculata		Milk purslane	0	06F	06			06H	06		06I		06	06	06	06H	06			06H	06	06		13
Chamaesyce nutans		Eyebane	1	06				06H								06H	06			06H				5
Euphorbia cyparissias	A	Cypress spurge																06D		06				2
FABACEAE		LEGUME FAMILY					30 SPECIES																	
Amphicarpa bracteata		Hog peanut	4	06F	06	06E	06E	06E	06E	06F	06E	06E	06E	06E	06E	06E	06E	06E	06E	06E	06F	06E	06	20
Apios americana		Groundnuts	6	06F		06		06E						06F									06E	5
Coronilla varia	A	Crown vetch		06A	06D	06D	06E	06D	06D	06D	06I		06D	06H	06C	06E	06E		06	06C		06C		16
Desmodium glutinosum		Pointed-leaved tick-trefoil	5			06E							06E	06H	06							06E	06	6
Desmodium marilandicum		Smooth small-leaved tick-trefoil	5			06J																06		2
Desmodium nudiflorum		Naked-flowered tick-trefoil	5	06H	06	06E	06E	06E					06E	06H	06			06J	06I	06			06	12
Desmodium nuttallii	TU	Nuttall's tick-trefoil	4			06J																		1
Desmodium paniculatum		Panicled tick-trefoil	3		06	06E			06E				06J	06H	06E	06F	06	06F			06	06E		11
Desmodium perplexum		Tick-trefoil	3	06	06E	06E	06	06	06E	06F	06E	06E	06	06H	06	06F	06F	06F		06	06F	06E	06E	19
Kummerowia striata	A	Japanese clover		06		06I		06H					06									06E		5
Lespedeza cuneata	A	Sericea			06A	06D									06C							06C		4
Lespedeza hirta		Bush-clover	6																			06		1
Lespedeza intermedia		Wand-like bush-clover	4			06J					06			06H	06	06I				06		06		7
Lespedeza repens		Trailing bush-clover	4																	06				1
Lespedeza virginica		Narrow-leaved bush-clover	5						06E													06		2
Lotus corniculatus	A	Birdsfoot trefoil				06A	06E		06E		06				06E	06H		06I	06E					8
Medicago lupulina	A	Black medick		06E	06E	06E	06		06E	06F	06	06E	06	06	06E	06H	06F		06	06	06	06E	06	18
Melilotus alba	A	White sweet clover		06		06			06			06	06		06					06		06	06	9
Melilotus officinalis	A	Yellow sweet clover		06F		06	06		06						06E						06F	06		7
Robinia pseudo-acacia	A	Black locust		06A	06D			06C	06E	06D	06	06D	06	06D	06E	06E	06D	06D	06D	06C	06C	06C	06C	18
Strophostyles helvola		Trailing wild bean	4	06		06																		2
Trifolium aureum	A	Hop clover		06	06		06H		06	06F	06	06F						06I	06			06I	06	11
Trifolium campestre	A	Low hop clover		06F									06							06			06E	4
Trifolium dubium	A	Least hop clover																			06			1
Trifolium hybridum	A	Alsike clover		06F	06		06E	06H		06F		06F				06F	06		06H	06H		06E	06E	12

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Trifolium pratense	A	Red clover		06A	06A	06A	06C	06C	06C	06D	06D	06D	06D	06F	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Trifolium repens	A	White clover		06F	06E	06A	06C	06C	06C	06D	06D	06D	06D	06F	06E	06D	06D	06D	06D	06C	06C	06C	06C	20
Vicia cracca	A	Cow vetch										06F												1
Vicia sativa (angustifolia)	A	Common vetch								06D		06F												2
Vicia tetrasperma	A	Four-seeded vetch		06	06		06E													06				4
FAGACEAE		**BEECH FAMILY**					**10 SPECIES**																	
Castanea dentata		American chestnut	5		06		06K							06F			06		06I	06			06	7
Fagus grandifolia		American beech	6	06A	06D	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06E	06D	06D	06C	06C	06E	06C	20
Quercus alba		White oak	4	06A	06A	06A	06	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06E	06C	06C	20
Quercus bicolor		Swamp white oak	7			06J	06K		06C		07A			06D	06C	06D	06	06F	06		06C			10
Quercus coccinea		Scarlet oak	4			06J								06L			06		06I	07A			06C	6
Quercus montana		Chestnut oak	6		06D	06D	06	06D	07A		06D	06F		06D	06C		06E	06D	06D	06C	06F			14
Quercus muhlenbergii		Yellow oak	8												06									1
Quercus palustris		Pin oak	3	06A	06A	06A	06C	06C	06C	06C	06D	06D	06H	06D	06C	06D	06E	06E				06E	06	17
Quercus rubra		Red oak	4	06E	06A	06A	06	06D	06C	06C	06D	06F	06D	06D	06		06E	06D	06	06E	06	06E	06C	19
Quercus velutina		Black oak	4	06E	06D	06D	06C	06C	07A	06D	06	06E	06E	06D	06C	06E	06	06F	06D	06C	06	06E	06C	20
FUMARIACEAE		**FUME-ROOT FAMILY**					**1 SPECIES**																	
Dicentra cucullaria		Dutchman's breeches	7				06D														06E	06E	06E	4
GENTIANACEAE		**GENTIAN FAMILY**					**3 SPECIES**																	
Bartonia virginica		Bartonia	7	06F	06I																			2
Gentiana andrewsii		Bottle gentian	8		06E						06I					06F		06F						4
Obolaria virginica		Pennywort	7				06K																	1
GERANIACEAE		**GERSANIUM FAMILY**					**2 SPECIES**																	
Geranium columbinum	A	Long-stalked cranesbill							06E															1
Geranium maculatum		Wild geranium	4	06E	06D	06D	06D	06D	06D	06D	06D	06D	06D	06D	06C	06D	06D	06E	06D	06E	06E	06E	06E	20
HALORAGACEAE		**WATER-MILFOIL FAMILY**					**1 SPECIES**																	
Myriophyllum spicatum	A	Eurasian water-milfoil																					06E	1
HAMAMELIDACEAE		**WITCH-HAZEL FAMILY**					**1 SPECIES**																	
Hamamelis virginiana		Witch-hazel	6	06H	06	06D	06E		06D	06D	06D	06D	06D	06D	06		06E	06E	06E	06C	06E	06E	06C	18
HYDROPHYLLACEAE		**WATERLEAF FAMILY**					**1 SPECIES**																	
Hydrophyllum virginianum		Virginia waterleaf	6				06D		06E	06D				06D	06E							06E	06	7

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
JUGLANDACEAE		**WALNUT FAMILY**		**7 SPECIES**																				
Carya alba		Mockernut hickory	5	06H	06		06K	06D					06J	06D	06		06	06D	06D	06D	06C	06	06C	14
Carya cordiformis		Bitternut hickory	3			06	06D	06E		06C	06		06D	06D	06C		06D	06E	06D	06D	06F	06E	06C	15
Carya glabra		Pignut hickory	4	06H	06			06		06H				06H				06E	06I	06E			06	9
Carya ovalis		Sweet pignut hickory	4							06C														1
Carya ovata		Shagbark hickory	5	06A	06D	06D	06C	06C	06C	06F	06D	06D	06D	06D	06C	06D	06D	06E	06D	06	06E	06C	06C	20
Juglans cinerea		Butternut	3											06D		06E								2
Juglans nigra		Black walnut	2	06A	06A	06A	06C	06C	06C	06C	06D	06E	06D	06D	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
LAMIACEAE		**MINT FAMILY**		**27 SPECIES**																				
Agastache nepetoides		Yellow giant hyssop	4						06E										06D				06E	3
Clinopodium vulgare	A	Wild basil			06D	06D	06E		06C		06	06F	06D		06	06H	06D				06H	06C	06	06C	14
Collinsonia canadensis		Horse-balm	5	06F	06E	06E	06E	06E	06E	06H	06E	06E	06E	06	06	06H	06E	06E	06E	06E	06E	06E	06E	19
Cunila origanoides		Dittany	6					06E																1
Glechoma hederacea	A	Ground ivy		06H	06H	06A	06C	06C	06C	06C	06D	06D	06	06D	06C	06E	06D	06D	06E	06C	06C	06C	06C	20
Hedeoma pulegioides		American pennyroyal	2										06D		06		06					06C		4
Lamium amplexicaule	A	Henbit																		06C				1
Lamium purpureum	A	Purple dead-nettle			06D	06A	06K	06C	06C	06C	06E	06D		06D	06E	06D	06D	06D	06D	06C	06C	06C	06C	18
Leonurus cardiaca	A	Motherwort									06		06	06						06			06C	5
Lycopus americanus		Cut-leaved water-horehound	4		06A	06E	06E			06F	06E		06H		06E	06I					06H		06E	10
Lycopus uniflorus		Bugleweed	5	06F	06E			06E			06E					06F							06E	6
Lycopus virginicus		Bugleweed	3	06E		06E	06E	06E	06E	06F		06E	06H	06F	06E	06F	06E	06F		06	06F		06E	16
Mentha canadensis (arvensis v. villosa)		Wild mint	3								06I													1
Mentha spicata	A	Spearmint						06E												06H				2
Monarda clinopodia		Wild bergamot	4							06F				06D	06C						06F	06		2
Nepeta cataria	A	Catnip						06D		06H	06		06H			06H			06H			06C		7
Perilla frutescens	A	Perilla				06D		06D												06H				3
Prunella vulgaris		Heal-all	2	06F	06A	06A	06C	06C	06C	06C	06D	06D	06	06	06C	06D	06D	06D	06D	06C	06E	06E	06C	20
Pycnanthemum tenuifolium		Narrow-leaved mountain-mint	4			06J							06H									06		3
Pycnanthemum virginianum		Virginia mountain-mint	4		06A	06A	06C	06	06C	06C	06D	06D	06H		06	06D		06F	06			06E		14
Salvia lyrata		Lyre-leaved sage	4												Q6					06C			06C	2
Scutellaria elliptica		Hairy skullcap	6				06K	06E												06E		06		4
Scutellaria integrifolia		Hyssop skullcap	5			06I	06H		06C				06H			06H								5
Scutellaria lateriflora		Mad-dog skullcap	4			06L				06F				06F	06E		06E							5
Stachys tenuifolia		Smooth hedge nettle	4																		06F			1
Teucrium canadense		Germander	3	06A		06E			06C	06F					06E							06E	06F	7

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Trichostema dichotomum		Bluecurls	4															06J						1
LAURACEAE		**LAUREL FAMILY**				**2 SPECIES**																		
Lindera benzoin		Spicebush	2	06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Sassafras albidum		Sassafras	1	06F	06D	06A	06E	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
LIMNANTHACEAE		**FALSE MERMAID FAMILY**					**1 SPECIES**																	
Floerkea proserpinacoides		False mermaid-weed	4			06D	06C	06E	06C	06D	06D	06E	06D	06D	06C				06D	06D	06E	06E	06C	15
LINACEAE		**FLAX FAMILY**					**3 SPECIES**																	
Linum medium v. texanum		Southern yellow flax	4								06							06E						2
Linum striatum		Ridged yellow flax	5								06I													1
Linum virginianum		Yellow flax	7													06F						06I		2
LYTHRACEAE		**LOOSESTRIFE FAMILY**					**2 SPECIES**																	
Cuphea viscosissima		Clammy cuphea	4		06I												06							2
Lythrum salicaria	A	Purple loosestrife				06	06E								06C							06C	06E	5
MAGNOLIACEAE		**MAGNOLIA FAMILY**					**1 SPECIES**																	
Liriodendron tulipifera		Tulip-tree	2	06A	06A	06A	06	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
MALVACEAE		**MALLOW FAMILY**					**4 SPECIES**																	
Abutilon theophrastii	A	Velvet-leaf						06			06		06H			06H			06					5
Hibiscus trionum	A	Flower-of-an-hour														06H	06							2
Malva neglecta	A	Common mallow								06D	06													2
Sida spinosa	A	Prickly mallow			06H			06C							06		06		06H	06H				6
MENISPERMACEAE		**MOONSEED FAMILY**					**1 SPECIES**																	
Menispermum canadense		Canada moonseed	4	06E		06J				06D					06	06H	06E	06E					06	8
MIMOSACEAE		**MIMOSA FAMILY**					**1 SPECIES**																	
Albizia julibrissin	A	Mimosa			06															06H				2
MONOTROPACEAE		**PINESAP FAMILY**					**1 SPECIES**																	
Monotropa uniflora		Indian pipe	4	06H	06	06J	06E						06D	06D		06I	06	06F	06	06D			06C	12
MORACEAE		**MULBERRY FAMILY**					**3 SPECIES**																	
Broussonetia papyrifera	A	Paper mulberry										06												1
Maclura pomifera	A	Osage orange													06E				06D			06C	06C	4
Morus alba	A	White mulberry		06A	06H	06J	06	06C	06	06C	06	06	06	06	06E		06E		06	06D			06E	16

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
NYCTAGINEACEAE		**FOUR O'CLOCK FAMILY**					**1 SPECIES**																	
Mirabilis nyctaginea	A	Four o'clock								06														1
NYMPHAEACEAE		**WATERLILY FAMILY**					**1 SPECIES**																	
Nuphar lutea		Spatterdock	7	07A											06E									2
NYSSACEAE		**SOUR-GUM FAMILY**					**1 SPECIES**																	
Nyssa sylvatica		Black gum	4	06E	06E	06J	06	06C	06E	06C	06E	06D	06	06D	06C	06E	06D	06D	06E	06E	06F	06	06C	20
OLEACEAE		**OLIVE FAMILY**					**4 SPECIES**																	
Fraxinus americana		White ash	1	06E	06	06D	06D	06E	06C	06C	06D	06D	06E	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Fraxinus nigra		Black ash	7								06I		06	06D			06		06			06E		6
Fraxinus pennsylvanica		Green ash	3	07A			06E				07A		06D	06F	06E			06E	06	06E	06E	06E		10
Ligustrum obtusifolium	A	Broad-leaved privet		06E	06D	06I	06D	06C	06C	06C	06E	06F	06H	06D	06C	06D	06D	06D	06D	06D	06F	06	06C	20
ONAGRACEAE		**EVENING-PRIMROSE FAMILY**					**6 SPECIES**																	
Circaea lutetiana		Enchanter's-nightshade	2	06E	06D	06D	06D	06E	06E	06D	06E	06D	06E	06D	06E	06E	06E	06E	06E	06E	06E	06E	06	20
Epilobium coloratum		Willow herb	2	06A	06A	06A	06C	06E	06C	06C	06E	06D	06E	06D	06C	06D	06D	06F	06	06H	06E	06E		19
Ludwigia alternifolia		Seedbox	4	06D	06A	06A	06D	06E	06C	06C	06D	06D	06H		06	06D		06D	06D	06C		06C	06E	17
Ludwigia palustris		Water purslane	3	06E	06I	06E	06	06H		06F	06			06F	06E	06I		06F		06H			06	13
Oenothera biennis		Evening primrose	1	06A	06D	06A	06E	06C	06C	06C	06D	06D	06D		06C	06D	06D	06D		06C	06C	06C	06	18
Oenothera fruticosa ssp. glauca		Sundrops	6				06C				06		06H			06F		06F						5
OROBANCHACEAE		**BROOM-RAPE FAMILY**					**3 SPECIES**																	
Conopholis americana		Squaw-root	7			06J																		1
Epifagus virginiana		Beechdrops	6			06J		06L			06D		06D	06D			06E	06E	06				06C	9
Orobanche uniflora		One-flowered cancer-root	6									06E							06E					2
OXALIDACEAE		**WOOD-SORREL FAMILY**					**2 SPECIES**																	
Oxalis dillenii		Yellow wood-sorrel	1	06E	06D	06D	06C	06E	06	06D	06E	06E	06E	06D	06E	06E	06E	06D	06E	06C	06E	06E	06	20
Oxalis violacea		Violet wood-sorrel	4				06E		06E				06E											3
PAPAVERACEAE		**POPPY FAMILY**					**2 SPECIES**																	
Chelidonium majus	A	Celandine		06H						06D			06	06D	06E			06E	06H	06C	06		06	10
Sanguinaria canadensis		Bloodroot	3	06E	06D	06D	06E	06D	06D	06D			06D	06D	06	06E	06D	06D	06D	06D	06E	06E	06	18
PHYTOLACCACEAE		**POKEWEED FAMILY**					**1 SPECIES**																	
Phytolacca americana		Pokeweed	0	06A	06D	06A	06C	06C	06	06C	06D	06D	06D	06D	06E	06D	06D	06D	06D	06C	06C	06C	06C	20

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
PLANTAGINACEAE		**PLANTAIN FAMILY**					**4 SPECIES**																	
Plantago lanceolata	A	English plantain		06A	06A	06A	06C	06C	06C	06D	06D	06D	06D	06	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Plantago major	A	Common plantain		06	06E	06E			06	06D	06I	06E	06E		06E	06E			06E			06E		12
Plantago rugelii		Pale plantain	0	06D	06D	06A	06	06D	06E	06C	06D	06D	06	06	06	06D	06D	06E	06D	06E	06E	06C	06	20
Plantago virginica		Hoary plantain	2																			06E		1
PLATANACEAE		**PLANE-TREE FAMILY**					**1 SPECIES**																	
Platanus occidentalis		Sycamore	3	06A	07A	06					06		06D	06D	06C		06D		06D	06C	06C	06C	06C	13
PODOSTEMACEAE		**RIVERWEED FAMILY**					**1 SPECIES**																	
Podostemum ceratophyllum		Riverweed	6							06F				06	06E							06E		4
POLEMONIACEAE		**PHLOX FAMILY**					**3 SPECIES**																	
Phlox divaricata v. divaricata		Wild blue phlox	8														06D							1
Phlox maculata		Wild sweet william	7		06E			06E								06F								3
Phlox paniculata	A	Garden phlox																	06H	06E		06E	06E	4
POLYGALACEAE		**MILKWORT FAMILY**					**2 SPECIES**																	
Polygala sanguinea		Field milkwort	5													06I		06J						2
Polygala verticillata		Whorled milkwort	4																06			06		2
POLYGONACEAE		**BUCKWHEAT FAMILY**					**16 SPECIES**																	
Fallopia convolvulus	A	Black bindweed			06H	06	06		06	06H		06	06		06	06H					06E			10
Fallopia scandens		Climbing false buckwheat	1	06E	06E	06D	06E	06C	06E	06D	06	06F	06	06E	06E	06D			06E	06E	06C	06E	06E	18
Persicaria arifolia		Halberd-leaved tearthumb	5	06A		06E	06C	06E	06C	06F	06D	06E	06E	06D	06C	06F	06E	06D	06E	06E		06E	06	18
Persicaria hydropiper	A	Common smartweed			06I	06I					06		06H	06H										5
Persicaria longiseta	A	Long-bristled smartweed		06F	06E	06E	06D	06E	06E	06D	06E	06E	06E	06D	06E	06E	06E	06E	06E	06E	06E	06E	06E	20
Persicaria maculosa	A	Lady's-thumb			06H	06I	06	06H	06	06H	06		06	06H	06	06H	06		06	06	06			15
Persicaria pensylvanica		Pennsylvana smartweed	1				06H							06H		06I		06J	06					5
Persicaria perfoliata	A	Mile-a-minute								06F	06		06H		06E		06	06J	06H					7
Persicaria punctata		Slender water smartweed	2		06I	06I	06H	06H	06		06		06H	06H		06I		06I		06H	06			12
Persicaria sagittata		Arrow-leaved tearthumb	4	06E	06A	06	06E	06E	06E	06F	06E	06E	06H	06F	06E	06F	06E	06F	06E	06H	06F	06E	06	20
Persicaria virginica		Virginia knotweed	2	06D	06	06D	06D	06E	06E	06D	06E		06D	06D	06E	06E	06E	06E	06E	06E	06E	06E	06E	19
Polygonum aviculare	A	Knotweed		06	06	06E	06	06H	06	06F	06	06	06	06F	06E	06H	06	06F	06	06E	06	06C	06	20
Polygonum erectum		Erect knotweed	4				06			06H														2
Rumex acetosella	A	Sheep sorrel		06	06D	06D	06C	06D	06C	06F	06D	06E	06J		06E	06F		06F	06D	06C	06C	06C	06C	18
Rumex crispus	A	Curly dock		06A	06D	06D	06E	06C	06	06D	06D	06E		06	06C	06D	06D	06E	06D	06D	06E	06C	06E	19

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Rumex obtusifolius	A	Broad dock		06D	06D	06D	06D	06C	06	06D	06D	06D	06	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
PORTULACACEAE		**PURSLANE FAMILY**					**2 SPECIES**																	
Claytonia virginica		Spring beauty	3	06A	06D	06D	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06D	06E	06E	06C	20
Portulaca oleracea	A	Purslane		06F			06		06	06H	06				06	06H			06		06			9
PRIMULACEAE		**PRIMROSE FAMILY**					**5 SPECIES**																	
Anagallis arvensis	A	Scarlet pimpernel		06		06			06			06F	06	06		06F								7
Lysimachia ciliata		Fringed loosestrife	3	06E	06H	06D	06D	06E	06E	06F	06	06E		06F	06E	06F	06E	06E	06E	06D	06F	06E	06E	19
Lysimachia nummularia	A	Moneywort				06L	06C	06C	06C	06D		06		06F	06C		06D				06E	06E	06	12
Lysimachia quadrifolia		Whorled loosestrife	5	06F					06E		06E					06F		06F	06H	06E		06		8
Lysimachia terrestris		Swamp candles	8		06E	06																		2
PYROLACEAE		**WINTERGREEN FAMILY**					**3 SPECIES**																	
Chimaphila maculata		Spotted wintergreen	4	06H	06D	06D	06K	06E	07A	06F	06I		06E	06D				06D	06H	06C	06F	06		15
Pyrola americana		Round-leaved pyrola	6																	06D				1
Pyrola elliptica		Shinleaf	6			06D	06		07A											06E				4
RANUNCULACEAE		**BUTTERCUP FAMILY**					**16 SPECIES**																	
Anemone quinquefolia		Wood anemone	5	06D	06D	06D	06E	06E	06D	06D		06E	06D	06F		06D	06E	06E	06E			06E	06E	16
Anemone virginiana		Thimbleweed	4		06	06	06E		06E			06E	06D			06E	06D	06D		06E	06	06		12
Caltha palustris v. palustris		Marsh marigold	7								06D			06D					06E					3
Cimicifuga racemosa		Black cohosh	5	06H	06D	06A	06	06E	06D	06D	06I		06	06D	06		06E	06E	06E	06E	06E	06	06	18
Clematis virginiana		Virgin's-bower	4	06E	06D	06	06E	06E	06E	06D		06F	06E	06F	06E	06F	06F	06E		06E	06F			16
Hepatica nobilis v obtusa		Round-lobed hepatica	5			06D	06	06D	07A				06D	06D			06		06E					8
Hydrastis canadensis	PV	Goldenseal	6											06E						06E				2
Ranunculus abortivus		Kidneyleaf buttercup	2	06E	06D	06A	06D	06C	07A	06C	06D	06D	06D	06D	06C	06E	06D	06D	06D	06C	06E	06E	06C	20
Ranunculus bulbosus	A	Bulbous buttercup		06A	06A	06E	06C	06C	07A	06C	06D	06D	06D	06F	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
Ranunculus caricetorum		Swamp buttercup	7			06	06C	06E	06C	06D	06I	06E		06D	06C		06E			06D		06E	06E	13
Ranunculus ficaria	A	Lesser celadine					06D	06E	06C	06D		06D	06D	06D	06C		06D	06E		06C		06C	06E	13
Ranunculus recurvatus		Hooked buttercup	3	06D	06D	06D	06E	06E	06E	06D	06D	06E	06D	06D	06E	06D	06D	06E	06E	06E	06E	06E	06E	20
Ranunculus sceleratus		Cursed buttercup	1	06F						06F											06F		06E	4
Thalictrum dioicum		Early meadow rue	6														06		06E					2
Thalictrum pubescens		Tall meadow rue	3	06A	06E	06D	06D	06E	06E	06D	06E	06E	06E	06F	06E	06F	06F	06E	06	06E	06E	06E	06E	20
Thalictrum thalictroides		Rue anemone	6			06D			06D				06D	06D	06		06	06E	06H					8
RHAMNACEAE		**BUCKTHORN FAMILY**					**1 SPECIES**																	
Ceanothus americanus		New jersey tea	7			06J																		1

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
ROSACEAE		ROSE FAMILY					40 SPECIES																	
Agrimonia parviflora		Small-flowered agrimony	2	06D	06A	06A	06C	06E	06C	06C	06				06E	06D		06D	06D			06I	06E	14
Agrimonia pubescens		Agrimony	4		06		06K		06E				06E	06H	06	06H	06E	06E	06H	06E			06	12
Agrimonia striata		Roadside agrimony	3										06J		Q6									1
Amelanchier arborea		Tree shadbush	5		06D	06I		06E			06			06D		06F		06E	06D	06D	06F			10
Aronia arbutifolia		Red chokeberry	7	06F				06E						06F		06F				06				5
Aronia melanocarpa		Black chokeberry	7								07A													1
Crataegus crus-galli		Cockspur hawthorn	4	06E				06E		06F				06F			06F						06	6
Crataegus flabellata		Hawthorn	4					06E	06E												06F			3
Crataegus pensylvanica	PT	Pennsylvania hawthorn	6	06F																				1
Crataegus phaenopyrum		Washington thorn	4	07A		06D		06E	06D															4
Crataegus species		Hawthorn		06H		06E	06C			06F			06H	06D		06F	06D	06F	06D				06C	11
Duchesnea indica	A	Indian strawberry		06	06H	06A	06C	06C	06C	06C	06	06F	06D	06D	06C	06E	06D	06D	06E	06C	06C	06C	06C	20
Fragaria virginiana		Wild strawberry	2	06A	06A	06A	06C	06E	06C	06F	06D	06E	06D		06E	06D	06D	06F	06	06E	06F	06E	06C	19
Geum canadense		White avens	1	06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Geum laciniatum		Rough avens	3				06				06													2
Geum vernum		Spring avens	4								06E	06F		06	06E	06E	06E		06E			06E	06E	9
Malus pumila	A	Apple		06E						06D										06H	06E	06E		5
Malus species	A	Crabapple		06E	06D	06A	06D	06D	06C	06F	06	06D	06D	06D	06C	06D		06E	06	06H				15
Photinia villosa (?)	A	Photinia											06											1
Potentilla canadensis		Dwarf cinquefoil	2	06A	06A	06A	06C	06	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Potentilla norvegica	A	Rough cinquefoil		06F	06D		06	06H					06			06D		06D				06E		8
Potentilla recta	A	Rough-fruited cinquefoil			06D	06E			06E	06F	06				06					06C	06	06E	06C	10
Potentilla reptans	A	Creeping cinquefoil											06H					06D	06H	06H	06E			5
Potentilla simplex		Common cinquefoil	2	06D	06D	06D	06C	06E		06F	06E	06E	06	06	06E	06F	06E	06E	06E		06F	06E	06E	18
Prunus avium	A	Sweet cherry		06A	06D	06D	06K	06C	06	06D	06	06	06D	06D	06E	06D	06F	06D	06D	06C	06F	06E	06C	20
Prunus serotina		Black cherry	1	06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Prunus subhirtella	A	Higan cherry											06H							06E				2
Pyrus calleryana	A	Callery pear			06H										06E									2
Pyrus communis	A	Pear		06A	06E				06E															3
Rosa carolina		Pasture rose	5	06D	06A	06J	06K	06E			06E	06E		06D		06D	06	06I	06H					12
Rosa multiflora	A	Multiflora rose		06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Rosa palustris		Swamp rose	7	06A	06A	06	06C	06E			06D		06H	06D	06E	06F		06F						11
Rubus allegheniensis		Blackberry	1	06A	06A	06A	06C	06C	06C	06C	06D	06D	06	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Rubus flagellaris		Dewberry	1	06D	06D	06A	06D	06C	06C	06C	06D	06F	06E	06	06	06E		06D	06E	06	06C	06E	06C	19
Rubus hispidus		Swamp dewberry	6	06A	06D	06D		06E						06D		06D								6

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Rubus occidentalis		Thimbleberry	1	06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06E	06D	06D	06D	06D	06C	06C	06C	20
Rubus phoenicolasius	A	Wineberry		06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06E	06D	06D	06D	06D	06C	06C	06C	06C	20
Sanguisorba canadensis		Canadian burnet	7		06E																			1
Spiraea alba		Narrow-leaved meadowsweet	6	06A		06								06D										3
Spiraea latifolia		Meadow-sweet	6													06D								1
RUBIACEAE		**MADDER FAMILY**		**13 SPECIES**																				
Cephalanthus occidentalis		Buttonbush	7	06E		06									06E								06	4
Galium aparine		Cleavers	1	06D	06D	06D	06D	06E	06C	06D	06E	06E	06D	06D	06E	06E	06D	06D	06D	06C	06E	06E	06E	20
Galium asprellum		Rough bedstraw	5	06E		06	06E							06F	06E									5
Galium circaezans		Wild white licorice	5	06E	06D	06D	06E	06D	06D	06F	06E	06E	06D	06D	06	06E	06D	06D	06E	06D	06F	06E	06E	20
Galium lanceolatum		Yellow wild licorice	6	06H		06D	06E	06E							06									5
Galium mollugo	A	Wild madder		06E	06A	06A	06C	06D	06	06C	06E	06F	06D	06	06C	06E	06E	06D	06D	06C	06C	06C	06C	20
Galium obtusum		Swamp bedstraw	5		06E				06E							06F			06		06F			5
Galium odoratum	A	Sweet woodruff												06L										1
Galium pilosum		Hairy bedstraw	5						06E				06J											2
Galium tinctorium		Swamp three-petalled bedstraw	4	06F		06	06	Q0	06		06	06F	06H	06F	06	06F		06F		06H			06E	13
Galium triflorum		Sweet bedstraw	3	06E	06D	06D	06E	06E	06D	06C	06	06E	06D	06D	06E	06E	06D	06E	06E	06D	06E	06E	06C	20
Galium verum	A	Yellow bedstraw											06J											1
Mitchella repens		Partridgeberry	5	06A	06A	06D	06E	06E	06C		06D	06D				06D	06E	06E	06D	06D		06C	06C	15
RUTACEAE		**RUE FAMILY**		**1 SPECIES**																				
Phellodendron japonicum	A	Japanese cork-tree																06E	06H					2
SALICACEAE		**WILLOW FAMILY**		**5 SPECIES**																				
Populus grandidentata		Bigtooth aspen	3	06A		06A		06C	06C	06C	06D		06D		06C	06F	06E	06D		06C	06F	06C		14
Salix babylonica	A	Weeping willow																		06H				1
Salix humilis v. humilis		Upland willow	7																06D					1
Salix nigra		Black willow	2	06A	07A	06J	06E			06D	06			06L	06C	06D		06F	06E	06H	06E	06C	06C	15
Salix species		Willow				06					06			06F		06F								4
SAXIFRAGACEAE		**SAXIFRAGE FAMILY**		**6 SPECIES**																				
Chrysosplenium americanum		Golden saxifrage	7		06A	06		06L	06E		06D	06E	06D	06D		06D	06D	06E						11
Heuchera americana		Alumroot	3			06J								06D						06D	06F	06E		5
Mitella diphylla		Bishop's-mitre	8					06E										06E						2
Penthorum sedoides		Ditch stonecrop	3			06E	06D							06L	06E				06					5
Saxifraga pensylvanica		Swamp saxifrage	8		06E									06F										2
Saxifraga virginiensis		Early saxifrage	6											06D								06		2

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
SCROPHULARIACEAE		**FIGWORT FAMILY**		**20 SPECIES**																				
Agalinis tenuifolia		Small-flowered false-foxglove	6								06D													1
Chelone glabra		Turtlehead	5	06D	06D	06D	06D	06E	06E	06D	06D	06E	06E	06D	06E	06F	06E	06E	06	06E	06C	06E	06	20
Gratiola neglecta		Clammy hedge-hyssop	3			06E			06E	06F		06F			06E		06E						06	7
Linaria vulgaris	A	Butter-and-eggs		06F	06D	06D	06D	06C	06E	06H	06D	06D	06	06	06E	06E	06E	06E	06D	06C	06E	06E	06E	20
Melampyrum lineare v. americanum		Cow-wheat	7																	06				1
Mimulus alatus		Wingstem monkey-flower	6							06F					06E			06F					06	4
Mimulus ringens		Square-stemmed monkeyflower	5	06E	06A	06E	06C	06	06C	06F	06E	06D		06L	06E			06E	06E		06F		06	15
Pedicularis canadensis		Wood-betony	5								06E													1
Penstemon digitalis	A	White beard-tongue		06F	06H	06E	06				06D	06D	06J		06C	06D	06D	06D	06D			06E	06C	14
Scrophularia marilandica		Carpenter's-square	1					06C	06E	06F		06E	06	06F	06C	06E	06		06	06D	06E	06E	06	14
Verbascum blattaria	A	Moth-mullein		06F		06E			06	06C	06D	06D	06E		06							06E		9
Verbascum thapsus	A	Common mullein		06A	06A	06A	06	06C	06C	06D	06D	06D	06D		06C	06D	06D	06D	06H	06C	06	06C	06E	19
Veronica americana		American brooklime	5	06E		06	06																	3
Veronica arvensis	A	Corn speedwell		06E	06D	06D	06E	06E	06E	06D	06E	06E	06	06F	06E	06F		06F	06D	06E	06E	06E	06E	19
Veronica hederaefolia	A	Ivy-leaved speedwell				06A				06D			06D	06D	06C	06E	06D	06D	06D	06C		06E	06C	12
Veronica officinalis		Common speedwell	1	07A	06A	06A	06C		06C		06D		06J	06H	06C		06F	06D	06D	06C	06F	06C	06C	16
Veronica peregrina		Purslane speedwell	0							06D					06E	06E						06E		4
Veronica persica	A	Bird's-eye speedwell			06D	06I	06	06C	06C	06D		06D	06			06D	06D	06D	06D	06C	06C	06C	06C	16
Veronica serpyllifolia	A	Thyme-leaved speedwell			06		06C	06E	06	06D		06E		06	06E	06D	06D		06		06E		06	13
Veronicastrum virginicum		Culver's-root	8			06																	06F	2
SIMAROUBACEAE		**QUASSIA FAMILY**		**1 SPECIES**																				
Ailanthus altissima	A	Tree-of-heaven		06F	06	06D	06	06C		06H		06D		06D			06D				06E		06E	11
SOLANACEAE		**NIGHTSHADE FAMILY**		**5 SPECIES**																				
Physalis heterophylla		Clammy ground-cherry	2	06									06H			06I	06	06J	06H	06E			06	8
Physalis subglabrata		Smooth ground-cherry	2	06F	06H		06				06	06E	06			06H	06		06H	06	06			11
Solanum carolinense	A	Horse-nettle			06		06C	06C	06	06C	06		06H	06	06	06F	06	06I	06	06C	06C		06C	16
Solanum dulcamara	A	Deadly nightshade			06E	06					06I		06	06F		06F		06F		06H		06E		9
Solanum nigrum	A	Black nightshade			06H	06			06	06H		06	06H		06	06H	06	06J		06				11
STAPHYLEACEAE		**BLADDER-POD FAMILY**		**1 SPECIES**																				
Staphylea trifolia		Bladdernut	5				06	06E		06D			06D	06F	06C		06F	06E	06E	06E	06E	06E	06E	13
TILIACEAE		**LINDEN FAMILY**		**1 SPECIES**																				
Tilia americana		Basswood	5				06	06E	06E	06F			06	06F			06	06E	06E	06E	06E	06E	06E	13

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
ULMACEAE		**ELM FAMILY**																						
																								3 SPECIES
Celtis occidentalis		Hackberry	2	07A	06E	06J				06H			06E		06	06E		06J	06E	06H		06C	06	12
Ulmus americana		American elm	4						06C										06					2
Ulmus rubra		Slippery elm	4	06E	06E	06D	06D	06E	06E	06D	06E	06E	06D	06D	06E	06D	06E	06E	06E	06E	06E	06E	06C	20
URTICACEAE		**NETTLE FAMILY**																						
																								5 SPECIES
Boehmeria cylindrica		False nettle	3	06F	07A	06E	06C	06E	06C	06D	06I	06E		06F	06E	06I	06E	06F	06		06F	06E	06E	18
Laportea canadensis		Wood nettle	4	06E		06	06D	06E	06D	06D	06E	06E	06E	06D	06E		06F	06E	06E		06E	06E	06	17
Pilea fontana		Lesser clearweed	8		06I																			1
Pilea pumila		Clearweed	1	06F	06E	06	06	06E		06F	06	06F	06E	06F	06E	06H	06	06E	06E	06H	06	06E	06	19
Urtica dioica	A	Stinging nettle							06E				06H						06					3
VALERIANACEAE		**VALERIAN FAMILY**																						
																								1 SPECIES
Valerianella locusta	A	Corn-salad													06E									1
VERBENACEAE		**VERVAIN FAMILY**																						
																								3 SPECIES
Phryma leptostachya		Lopseed	5	06F	06E	06E	06	06E	06E				06D		06	06H	06E	06F	06D		06F	06E	06E	15
Verbena hastata		Blue vervain	4	06E	06A	06A	06C		06C	06F	06D	06D	06H	06L	06C					06H			06E	13
Verbena urticifolia		White vervain	1	06E	06	06E	06H	06	06	06D	06	06E	06H	06F	06C	06H	06E	06E	06	06	06E	06C	06C	20
VIOLACEAE		**VIOLET FAMILY**																						
																								13 SPECIES
Viola bicolor (rafinesquii)		Field pansy	0						07A															1
Viola blanda		Sweet white violet	5		06E			06E																2
Viola conspersa (labradorica)		Dog violet	5			06D	06E	06E	06D		06	06E	06E	06D		06F	06F	06E	06	06E	06			14
Viola cucullata		Marsh blue violet	6					06E	06D			06E				06F	06E	06E						6
Viola eriocarpa(pub. V scabriuscula)		Smooth yellow violet	6	06H	06D	06D	06D	06D	06E	06D		06E	06D	06D	06E	06E	06D	06E	06E	06E	06F	06E	06E	19
Viola hirsutula		Southern wood violet	5				06E											06D						2
Viola palmata v. stoneana		Stone's violet	6								06E					06F		06F						3
Viola palmata v. triloba		Three-lobed violet	6									06E				06I								2
Viola primulifolia		Primrose-leaved violet	6								06E													1
Viola pubescens		Downy yellow violet	6		06E	06	06E					06F						06						5
Viola sagittata v. sagittata		Arrow-leaved violet	6										06H			06F		06F		06				4
Viola sororia		Common blue violet	1	06D	06D	06D	06C	06D	06C	06D	06D	06E	06D	06D	06E	06E	06D	06D	06D	06D	06E	06E	06C	20
Viola sororia cv. priceana	A	Confederate violet																		06D				1
VITACEAE		**GRAPE FAMILY**																						
																								4 SPECIES
Parthenocissus quinquefolia		Virginia creeper	1	06E	06A	06A	06C	06C	06C	06D	06D	06D	06D	06D	06C	06D	06E	06E	06D	06D	06C	06C	06C	20

DICOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Vitis aestivalis		Summer grape	4	06H	06E	06J		06E	06	06	06	06F	06	06	06	06E	06E	06F	06E	06E	06	06	06E	19
Vitis labrusca		Fox grape	4	06E	06E	06E	06E	06E	06E	06F	06E	06E	06H	06F	06E	06E	06E	06F	06	06E	06F	06E	06E	20
Vitis vulpina		Frost grape	1	06A	06E	06E	06E	06C	06C	06D	06	06E	06E	06F	06C	06E	06D	06F	06E	06D	06	06E	06E	20

WALLACE TOWNSHIP PLANT LIST - 2006

MONOCOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
ACORACEAE		**ARUM FAMILY**		**1 SPECIES**																				
Acorus calamus	A	Sweet flag					06E						06H								06H	06E		4
ALISMATACEAE		**WATER-PLANTAIN FAMILY**		**4 SPECIES**																				
Alisma subcordatum		Water plantain	4	06E		06D	06E			06F					06E			06F			06F			7
Sagittaria australis		Southern arrowhead	5	06F	06E	06E	06E					06F			06E		06E	06F						8
Sagittaria latifolia		Broad-leaved arrowhead	4		06I		06H	06																4
Sagittaria latifolia v. pubescens		Hairy arrowhead	5						06		06		06H										06	4
ARACEAE		**ARUM FAMILY**		**4 SPECIES**																	06F			
Arisaema dracontium		Green dragon	7												06E									2
Arisaema triphyllum		Jack-in-the-pulpit	3	06A	06D	06D	06D	06E	06E	06D	06E	06E	06E	06D	06E	06E	06E	06E	06E	06E	06E	06E	06E	20
Peltandra virginica		Arrow arum	6	06E		06																		2
Symplocarpus foetidus		Skunk cabbage	3	06A	06A	06A	06D	06E	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	07A	06C	06E	06C	20
COMMELINACEAE		**SPIDERWORT FAMILY**		**1 SPECIES**																				
Commelina communis	A	Asiatic dayflower		06F	06E	06E	06E	06E	06	06D	06	06F	06E	06	06E		06F	06E	06E	06E	06F	06E	06E	19
CYPERACEAE		**SEDGE FAMILY**		**63 SPECIES**																				
Bulbostylis capillaris		Sand rush	4																			06		1
Carex aggregata		A sedge	3			06E		06E		06F				06F	06E								06E	6
Carex albicans		A sedge	3			06D		06E	06E	06F		06E	06D	06D				06D		06D				9
Carex amphibola		A sedge	2	06E	06E	06E	06	06E	06E	06F	06E	06E	06E	06F	06E	06E	06E	06E	06E	06E	06F	06E	06E	20
Carex annectens		A sedge	4	06	06E	06E	06			06F		06F		06	06E	06F						06F		10
Carex atlantica ssp. atlantica		A sedge	8		06E				06E		06E													3
Carex blanda		A sedge	2	06E		06E	06E	06E	06E	06F	06E	06E		06F	06E	06E	06E	06E	06E		06E	06E	06E	17
Carex bromoides		A sedge	7											06F	06E									2
Carex bushii		A sedge	6		06E	06E				06F		06E							06					5
Carex caroliniana		Carolina sedge	5																06					1
Carex cephalophora		A sedge	3	06H		06E				06F		06E	06E	06		06F			06		06	06E	06E	11
Carex crinita		A sedge	5			06E				06F	06	06F		06F	06E	06F							06E	7
Carex debilis v. debilis		A sedge	6					06E	06E	06F	06E	06F				06F	06E	06E						8
Carex digitalis		A sedge	4	06H	06	06E	06	06E		06F		06E	06E		06		06E	06F	06E		06F		06	14
Carex festucacea		A sedge	4		06E	06E	06		06E		06E			06		06F								7
Carex glaucodea		Glaucous sedge	3		06A	06A	06C		06C	06F	06	06F	06H	06		06D		06F		06C				12
Carex gracilescens		A sedge	4				06E	06E	06E	06D			06E	06F	06E			06E	06		06F	06E	06E	12

MONOCOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Carex gracillima		A sedge	5				06E	06E	06E	06F	06E	06E	06E	06F	06E	06F	06	06E	06E		06F			14
Carex gynandra		A sedge	7							06F														1
Carex hirsutella		A sedge	4	06F	06					06F	06					06F		06F				06		7
Carex hirtifolia		A sedge	3				06		06E	06D			06D	06F	06C		06D	06E	06D		06E	06E	06E	12
Carex intumescens		Swollen sedge	6			06E		06E		06F	06E					06F	06E	06E						7
Carex lacustris		Lake sedge	8	07A		06								06F										3
Carex laevivaginata		A sedge	4					06E		06F	06E	06F			06E	06F	06E				06F		06E	9
Carex laxiculmis		A sedge	5	06H		06D	06E	06E	06D	06D	06E	06E	06E	06D	06		06E	06E	06E	06E	06	06	06E	18
Carex laxiflora		A sedge	4			06E		06E					06E					06F				06	06	6
Carex leptalea v. leptalea		A sedge	7					06E						06F										2
Carex lurida		Sallow sedge	1	06F	06E	06E	06	06	06E	06F	06E	06F	06H		06E	06F	06F	06I	06E	06H	06F		06	18
Carex mesochorea		Midland sedge	4									06F												1
Carex normalis		A sedge	3	06						06F		06F	06E	06		06F			06	06	06F	06E	06E	11
Carex pensylvanica		A sedge	5		06J	06	06E	06D	06F			06E	06D	06D		06F		06E	06E		06F		06E	13
Carex prasina		A sedge	7			06E		06E				06E	06E	06H				06E	06					7
Carex radiata		A sedge	2	06E		06E	06E	06E	06E	06F	06E	06E	06H	06E	06E	06F	06E	06F	06E	06E	06F	06E	06E	19
Carex rosea		A sedge	3					06E	06E	06F			06E		06			06F			06F	06		8
Carex scoparia		Crowded sedge	2	06F	06E		06			06F	06	06F	06H		06	06F		06I		06H	06F			12
Carex sparganioides		A sedge	3										06				06				06			3
Carex spicata	A	A sedge										06F								06	06			3
Carex squarrosa		Squarrose sedge	6				06E			06F	06E				06E	06F						06E		6
Carex stipata		A sedge	2	06F	06E	06E	06E		06E	06F	06E	06E	06H	06F	06E	06F			06E		06F			14
Carex striatula	PW	A sedge	6		06E												06E							2
Carex stricta		Tussock sedge	5	06A	06A	06	06C	06E	06C	06F	06E	06D	06H	06D	06E	06D	06						06E	15
Carex stricta v. strictior		Rhizomatous tussock sedge	5		06E			06E																2
Carex styloflexa	PW	A sedge	7								06					06F								2
Carex swanii		A sedge	3	06F	06E	06E	06	06E	06E	06F	06E	06E	06H	06F	06	06F	06E	06F	06	06	06F	06E	06	20
Carex texensis	A	A sedge								06E														1
Carex torta		Sandbar sedge	7										06D	06D	06E		06D		06E			06E	06E	7
Carex tribuloides		A sedge	2			06																	06	2
Carex umbellata		A sedge	5								06E							06D						2
Carex virescens		A sedge	4			06E																		1
Carex vulpinoidea		A sedge	2	06F	06	06E	06	06H		06F	06	06F		06F	06				06	06H	06F	06	06	15
Cyperus esculentus		Yellow nutsedge	0		06H			06H		06H	06						06	06J			06			7
Cyperus flavescens		Umbrella-sedge	1					06H			06I													2
Cyperus strigosus		A flatsedge	2		06I	06I	06H	06H			06		06H	06H	06	06H		06I	06H	06H			06	13

MONOCOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Eleocharis acicularis		Needle spike-rush	3															06J						1
Eleocharis obtusa		Blunt spike-rush	2			06I									06	06I			06		06F			5
Eleocharis tenuis		Slender spike-rush	2		06E	06E	06	06E	06	06F	06E	06E	06H	06		06F		06F	06	06H		06E		15
Rhynchospora capitellata		Small-headed beak-rush	8		06A				06C		06D		06H					06I						5
Schoenoplectus tabernaemontanae		Great bulrush	5			06E							06H						06				06C	4
Scirpus cyperinus		Woolgrass	4	06A	06A	06A	06C	06E	06C		06D	06D	06H	06L	06C	06D		06I	06D	07A		06C	06C	17
Scirpus expansus		Red-stem bulrush	6	06F									06H	06F	06E									4
Scirpus georgianus		Bulrush	3			06J	06			06F	06	06F	06H		06	06H				06H		06		10
Scirpus polyphyllus		Leafy bulrush	4				06				06						06				06F		06	5
Trichophorum planifolium		Woodland club-rush	6			06J		06E																2
DIOSCOREACEAE		**YAM FAMILY**					**1 SPECIES**																	
Dioscorea villosa		Wild yam	4	06F	06E	06D	06E	06E	06C	06F	06D	06F	06E	06D	06	06E	06	06E		06E	06	06E	06	19
HYDROCHARITACEAE		**WATERWEED FAMILY**					**1 SPECIES**																	
Elodea nuttallii		Narrow-leaved waterweed	5				06			06F				06L										3
IRIDACEAE		**IRIS FAMILY**					**2 SPECIES**																	
Iris versicolor		Northern blue flag	7			06								06F										2
Sisyrinchium angustifolium		Blue-eyed grass	3	06F	06E	06E	06D	06E	06E	06F	06E	06F	06	06F	06E	06D	06D	06F	06	06	06E	06E	06E	20
JUNCACEAE		**RUSH FAMILY**					**7 SPECIES**																	
Juncus acuminatus		A rush	4	06F	06E	06E	06E	06H		06F	06D	06F	06H	06	06	06F		06J		06H				14
Juncus effusus		Soft rush	2	06A	06A	06A	06C	06E	06C	06C	06D	06D	06H	06F	06C	06D	06E	06D	06D	06C	06C	06C	06E	20
Juncus marginatus		A rush	3								06													1
Juncus secundus		Secund rush	6														06					06		2
Juncus tenuis		Path rush	1	06A	06D	06A	06C	06C	06C	06C	06	06E	06D	06F	06E	06F	06D	06E	06D	06C	06E	06C	06C	20
Luzula echinata		Wood rush	3	06H	06E	06E	06E	06E	06E	06F	06E	06F	06E	06D		06F	06E	06E	06E	06C				16
Luzula multiflora		Wood rush	3						Q6		Q6		Q6					Q6		06			Q6	1
LEMNACEAE		**DUCKWEED FAMILY**					**3 SPECIES**																	
Lemna minor		Duckweed	2	06F			06E								06E								06E	4
Spirodela polyrhiza		Greater duckweed	3										06H						06E				06E	3
Wolffia brasiliensis		Pointed water-meal	3										06H						06E	06H			06	4
LILIACEAE		**LILY FAMILY**					**25 SPECIES**																	
Allium canadense		Meadow onion	4				06D		06E	06F			06D	06D	06C	06F		06E	06E		06F	06E		11
Allium oleraceum	A	Wild garlic			06						06		06	06F					06	06H	06		06	8

MONOCOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Allium vineale	A	Field garlic		06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Asparagus officinalis	A	Asparagus			06E	06E				06F		06F	06J			06H			06	06H				8
Chamaelirium luteum		Fairy-wand	8				06K																	1
Convallaria majalis	A	Lily-of-the-valley								06D					06									2
Erythronium americanum		Trout lily	4			06D	06D	06E	06D	06D	06D	06D	06D	06D	06C	06D	06D	06E	06D		06E	06E	06E	17
Galanthus nivalis	A	Snowdrops											06D	06D	06C							06C	06C	5
Hemerocallis fulva	A	Orange daylily		06H	06D		06C	06E	06	06D	06D	06D	06D	06D	06E		06D	06D	06D	06D	06E	06C	06C	18
Hosta ventricosa	A	Plantain-lily													06E			06E	06			06E		4
Hypoxis hirsuta		Yellow star-grass	5		06E						06E	06F	06E			06F	06E							6
Lilium canadense		Canada lily	6	06E	06D		06E	06E	06D		06	06F		06F		06F		06E			06F			11
Maianthemum canadense		Canada mayflower	6	06D	06D	06D		06E			06E	06F		06F	06	06F		06E		06E				11
Maianthemum racemosum		False solomon's-seal	5	06E	06D	06D	06E	06E	06D	06D	06E	06E	06E	06D	06E	06E	06E	06E	06E	06E	06E	06E	06E	20
Medeola virginiana		Indian cucumber-root	5			06E	06E	06E	06D			06F		06F			06			06E			06	9
Muscari botryoides	A	Grape-hyacinth											06D	06D		06E				06D	06E			3
Narcissus pseudonarcissus	A	Daffodil					06C	06C					06D	06D									06E	5
Ornithogalum umbellatum	A	Star-of-bethlehem				06D	06C	06C		06D		06D	06D	06D	06C	06E	06D	06E	06E	06C		06C	06C	15
Polygonatum biflorum		Solomon's-seal	5	06E		06J	06D	06E		06D	06	06E	06E	06E	06E	06E	06	06F	06I	06E		06E	06	17
Polygonatum canaliculatum		Great solomon's-seal	6											06F	06					06E	06	06E	06	6
Polygonatum pubescens		Hairy solomon's-seal	5	06F	06D	06D	06E	06E	06D	06D	06E	06E	06E	06D		06E	06E	06E	06E	06E	06E	06E	06E	19
Trillium cernuum v. cernuum	TU	Nodding trillium	6				06E	06E	06E					06F				06E		06E				6
Uvularia perfoliata		Perfoliate bellwort	6		06	06E	06E		06D					06D			06E	06J	06I	06E	06F		06	11
Uvularia sessilifolia		Sessile bellwort	6	06E	06D	06L		06E	06E	06D	06E	06E		06F			06E	06E	06H	06E				13
Veratrum viride		False hellebore	6				06D		06D		06D			06D				06E						5
NAJADACEAE		**WATER-NYMPH FAMILY**					**1 SPECIES**																	
Najas minor	A	Water-nymph																	06				06	2
ORCHIDACEAE		**ORCHID FAMILY**					**5 SPECIES**																	
Epipactis helleborine	A	Hellborine orchid																		06				1
Galearis spectabilis		Showy orchis	6				06	06E							06			06E	06F	06E	06E			7
Goodyera pubescens		Downy rattlesnake-plantain	6	07A			06K																	2
Platanthera lacera		Ragged fringed orchis	4													06F		06F						2
Spiranthes cernua		Nodding ladies'-tresses	6		06I	06J					06I					06I		06I						5
POACEAE		**GRASS FAMILY**					**88 SPECIES**																	
Agrostis gigantea	A	Redtop		06F	06	06	06	06			06	06	06	06	06	06H		06I	06	06	06	06		16
Agrostis perennans		Upland bent-grass	2	06H		06I	06C			06F	06I	06F	06H	06		06F	06	06J	06I	07A		06I	06	15

MONOCOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Agrostis stolonifera	A	Creeping bentgrass									06	06				06H					06			4
Andropogon gerardii		Big bluestem	7										06H						P06					1
Andropogon glomeratus	PR	Broom-sedge	8													06I								1
Andropogon virginicus		Broomsedge	2	06	06A	06A	06C	06C	06C	06C	06D	06D	06J		06C	06D		06D	06E	06C	06C	06C	06C	18
Anthoxanthum odoratum	A	Sweet vernal grass		06E	06D	06E	06E	06E	06D	06F	06D	06E	06	06	06E	06D	06E	06D	06D	06E	06E	06E	06E	20
Aristida dichotoma		Poverty grass	0																			06I		1
Arrhenatherum elatius v. elatius	A	Tall oatgrass						06								06H			06	06	06		06E	6
Arthraxon hispidus	A	A grass			06A			06H	06		06D				06	06H				06C				7
Brachyelytrum erectum		Brachyelytrum grass	5				06K		06D			06F		06D				06F		06E				6
Bromus commutatus	A	Hairy chess				06E	06		06E	06F	06E	06F			06E	06F			06	06H				10
Bromus inermis	A	Awnless brome-grass		06E	06D	06A	06C	06C	06	06F	06	06F	06	06	06	06E			06D	06C	06C	06C	06C	18
Bromus pubescens		Canada brome	5		06E																	06		2
Bromus sterilis	A	Barren brome		06F		06E	06E		06E	06D			06			06E	06E	06F		06H				10
Calamagrostis canadensis		Canada bluejoint grass	7	06F	06E			06H								06F								2
Chloris verticillata	A	Windmill grass		06F																				1
Cinna arundinacea		Wood reed-grass	3	06A	06A	06A	06C	06E	06C	06C	06D	06D	06D	06D	06C	06D	06E	06E	06	06E	06C		06C	19
Dactylis glomerata	A	Orchard grass		06E	06D	06A	06	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Danthonia compressa		Northern oat-grass	7	06H										06H	06									3
Danthonia spicata		Wild oat-grass	2	06F	06A	06A	06H	06D	06C	06F	06D		06D		06	06D	06E	06D	06	06		06E	06	17
Dicanthelium acuminatum		A panic-grass	3	06F	06E	06E	06H	06H	06E	06F	06	06F	06H		06	06F		06F	06			06	06C	16
Dicanthelium boscii		A panic-grass	5			06J	06K																	2
Dicanthelium clandestinum		Deer-tongue grass	2	06A	06A	06A	06C	06E	06C	06D	06D	06D	06D	06D	06E	06D	06E	06E	06E	06E	06C	06E	06C	20
Dicanthelium commutatum		A panic-grass	4																	06				1
Dicanthelium depauperatum		Poverty panic-grass	5																			06		1
Dicanthelium dichotomum		A panic-grass	2	06H	06A	06A	06D	06H	06E	06F	06D	06F	06H	06		06D	06E	06F		06I			06E	16
Dicanthelium latifolium		Broad-leaved panic-grass	5							06F														1
Dicanthelium polyanthes	PW	A panic-grass	8								06													1
Dicanthelium sphaerocarpon		A panic-grass	4								06											06		2
Dicanthelium yadkinense	TU	Yadkin river panic-grass	7									06F												1
Digitaria ischaemum	A	Crabgrass				06I	06H	06H					06J			06H		06J	06H	06H		06I		9
Digitaria sanguinalis	A	Crabgrass		06H	06H	06I	06H	06H	06	06H	06	06	06H	06	06	06H			06H	06H	06		06	17
Echinochloa crus-galli	A	Barnyard grass			06I	06I	06H	06	06	06H	06		06H	06H		06H		06J	06H	06H	06			14
Echinochloa muricata		Barnyard grass	3		06I																			1
Eleusine indica	A	Goose-grass		06A	06H	06I	06H	06H	06	06H	06		06H	06H	06	06H			06H	06H	06			15
Elymus hystrix		Bottlebrush grass	4			06L																06		2
Elymus riparius		Riverbank wild-rye	3	06A					06C	06H				06D										4

MONOCOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Elymus villosus		Hairy wild-rye	4											06	06C							06	06	3
Elymus virginicus		Virginia wild-rye	3																				06	1
Elytrigia repens	A	Witch grass		06F	06	06	06	06H	06	06F	06	06F	06	06F	06		06			06			06	15
Eragrostis frankii		Frank's lovegrass	0										06H											1
Eragrostis minor	A	Smaller stink-grass											06H			06H			06H		06			4
Eragrostis pectinacea		Carolina lovegrass	0					06H							06	06H				06H		06I		5
Eragrostis spectabilis		Tumble grass	1	07A	06D	06I	06K				06D		06D		06	06I		06I	06D		06C	06C		12
Festuca elatior	A	Meadow fescue		06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06E	06D	06D	06D	06C	06C	06C	06C	20
Festuca obtusa		Woodland fescue	3			06E	06E	06E	06E	06F		06E	06E	06F	06E	06E	06E	06E	06E	06E	06	06E	06E	17
Festuca rubra	A	Red fescue										06F	06											2
Festuca trachyphylla	A	Hard fescue											06E			06F	06F							3
Glyceria canadensis		Northern manna-grass	7			06																		1
Glyceria striata		Fowl manna-grass	3	06F	06E	06E	06	06H	06E	06F	06		06H	06F	06E	06F	06E	06E	06	06	06		06	18
Holcus lanatus	A	Velvet grass		06F			06E			06F					06E	06F								5
Leersia oryzoides		Rice cut-grass	2	06F	06I	06	06H	06	06		06		06H	06H	06			06I	06	06H	06F		06	15
Leersia virginica		White grass	2	06E		06	06H	06	06E	06D	06E	06F	06H	06	06E	06F	06E	06E	06E	06H	06F	06	06E	19
Lolium perenne	A	Perennial rye-grass		06F	06E				06	06F			06	06	06	06F			06					9
Microstegium vimineum	A	Japanese stilt-grass		06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06C	06C	20
Miscanthus sinensis	A	Japanese plumegrass			06D																			1
Muhlenbergia frondosa		Leafy muhly	1	06							06		06J	06	06		06		06H	06I				8
Muhlenbergia mexicana		Satin grass muhly	5			06J					06I		06J					06J						4
Muhlenbergia schreberi		Nimblewill	0	06A	06A	06A	06C	06C	06C	06C	06D	06	06D	06D	06C	06H	06D	06D	06D	06C	06C	06C	06C	20
Muhlenbergia tenuiflora		Woodland muhly	5											06H										1
Panicum anceps		A panic-grass	4		06I			06E					06H			06F		06D		06H				6
Panicum dichotomiflorum		A panic-grass	0	06A		06I	06H	06C		06C	06I					06I		06J	06H			06I		10
Panicum philadelphicum		A panic-grass	1			06I					06I						06							3
Panicum rigidulum		A panic-grass	6		06I		06H	06H																3
Panicum virgatum	A	Switch-grass																				06I		1
Paspalum laeve		Bead-grass	3		06I		06H													06H				3
Paspalum setaceum		Bead-grass	3		06I			06H					06H			06I		06I			06			6
Phalaris arundinacea	A	Reed-canary grass		06F	06I	06D	06C	06D	06	06F	06D	06D	06D	06D	06E	06D	06D	06D	06D	06D	06C	06C	06C	20
Phleum pratense	A	Timothy		06F	06		06	06	06	06H	06		06	06	06	06F	06	06J	06	06	06		06	17
Phragmites australis	A	Giant reed		06A	06	06A	06E		06C	06C	06D					06F			06D			06E		10
Poa annua	A	Annual bluegrass		07A	06A	06J	06E	06D	06C	06D	06	06D	06D	06D	06E	06E	06D	06D	06D	06D	06C	06E	06C	20
Poa compressa	A	Canada bluegrass		06E	06D	06E	06	06D	06	06F	06E	06E	06E	06F	06	06E	06E	06F	06	06E	06F	06E	06	20
Poa paludigena	PR	Marsh bluegrass	10											06F										1

MONOCOTS

SCIENTIFIC NAME	STATUS	COMMON NAME	CC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	COUNT
Poa pratensis	A	Kentucky bluegrass		06E	06E	06E	06E	06D	06E	06D	06E	06D	06E	06F	06C	06E	06F	06D	06E	06C	06C	06C	06E	20
Poa sylvestris		Woodland bluegrass	4											Q6							06F	06E	06E	2
Poa trivialis	A	Rough-stemmed bluegrass		06E	06I	06	06E	06E		06D	06E	06F	06D	06D	06E	06F	06E	06E	06E	06E	06E			17
Schizachyrium scoparius		Little bluestem grass	4								06D		06D					06F				06	06C	5
Setaria faberi	A	Giant foxtail grass		06A	06A	06A	06C	06C	06	06C	06	06F	06	06H	06C	06D	06	06D	06H	06H	06	06C	06C	20
Setaria geniculata		Slender foxtail grass	3				06H						06H					06J		06				4
Setaria pumila	A	Yellow foxtail		06A	06D	06A	06H	06H	06	06C	06D		06H	06H	06C	06H		06J	06H	06C	06C			16
Setaria viridis	A	Green foxtail											06											1
Sorghastrum nutans		Indian grass	5		06J		06H					06E				06D		06F	06E			06		7
Sorghum halepense	A	Johnson grass																	06H					1
Sphenopholis obtusata v. major		Wedgegrass	4			06E				06F		06E		06F				06F		06	06F	06		8
Sphenopholis pensylvanica		Swamp oats	8		06E																			1
Sporobolus vaginiflorus		Poverty-grass	1	06A			06K															06I		3
Tridens flavus		Purpletop	1	06A	06A	06A	06C	06C	06C	06C	06D	06D	06D	06L	06C	06E		06D	06D	06C	06C	06C	06C	19
POTAMOGETONACEAE		**PONDWEED FAMILY**					**3 SPECIES**																	
Potamogeton crispus	A	Crimped pondweed		06E						06F													06E	3
Potamogeton nodosus		Longleaf pondweed	5																				06E	1
Potamogeton pusillus		Slender pondweed																	06					1
SMILACACEAE		**GREENBRIER FAMILY**					**5 SPECIES**																	
Smilax glauca		Glaucous greenbrier	3	06H	06D	06E	06C	06E	06C	06C	06		06D	06D	06C	06D	06D	06D	06D	06C	06C	06	06C	19
Smilax herbacea		Carrion-flower	5	06E	06E	06J	06E	06E	06E	06F	06E	06E	06E	06F	06	06E	06E	06E	06	06E	06F	06	06E	20
Smilax pulverulenta		Hairy carrion-flower	5			06E	06				06E		06E	06F	06	06H	06	06E	06E	06E	06F		06	13
Smilax rotundifolia		Round-leaved greenbrier	3	06A	06A	06	06C	06C	06C	06C	06D	06D	06D	06D	06C	06D	06D	06D	06D	06C	06C	06E	06E	20
Smilax tamnoides		Bristly greenbrier	6				06K			06D	06E		06E						06E					5
SPARGANIACEAE		**BUR-REED FAMILY**					**1 SPECIES**																	
Sparganium americanum		Common bur-reed	7	06E	06E	06D					06												06	5
TYPHACEAE		**CAT-TAIL FAMILY**					**2 SPECIES**																	
Typha angustifolia		Narrow-leaved cattail	1	06F									06H											2
Typha latifolia		Cattail	1	06E	06E	06	06C		06C	06C	06D		06H	06D				06I	06D	06C	06C	06C	06E	15

APPENDIX 2

TREES AND SHRUBS OF WALLACE TOWNSHIP

Based on 2006 Fieldwork

APPENDIX 2 - A

WALLACE TOWNSHIP TREES - 2006

		STATUS		COUNT
MAPLE FAMILY	**ACERACEAE**			
Acer negundo	Box elder	2	Woods, floodplain, thickets	5
Acer palmatum	Japanese maple	A	Woods, thickets	3
Acer platanoides	Norway maple	A*	Woods	20
Acer pseudoplatanus	Sycamore maple	A	Thickets, woods	3
Acer rubrum	Red maple	1	Woods	20
Acer saccharinum	Silver maple	3	Woods, floodplain	6
Acer saccharum	Sugar maple	5	Woods, rich	14
CASHEW FAMILY	**ANACARDIACEAE**			
Rhus copallina	Shining sumac	4	Fields, dry, thickets	3
Rhus glabra	Smooth sumac	3	Thickets, old fields	16
Rhus hirta	Staghorn sumac	1	Fields, old, thickets	4
HOLLY FAMILY	**AQUIFOLIACEAE**			
Ilex opaca	American holly	5	Woods	12
GINSENG FAMILY	**ARALIACEAE**			
Aralia elata	Asian hercules-club	A*	Woods, disturbed	1
BIRCH FAMILY	**BETULACEAE**			
Alnus glutinosa	Black alder	A*	Streamsides, thickets	2
Betula lenta	Cherry birch	4	Woods, dry	16
Betula populifolia	Gray birch	2	Fields, dry, thickets	2
Carpinus caroliniana ssp. virgini	Ironwood	5	Woods	20
Ostrya virginiana	Hop hornbeam	6	Woods, rocky	11
BIGNONIA FAMILY	**BIGNONIACEAE**			
Catalpa bignonioides	Catalpa	A	Roadsides, waste places	4
Paulownia tomentosa	Princess-tree	A*	Woods, thickets	6
POINCIANA FAMILY	**CAESALPINIACEAE**			
Gleditsia triacanthos	Honey locust	A	Woods, thickets	7
DOGWOOD FAMILY	**CORNACEAE**			
Cornus alternifolia	Pagoda dogwood	5	Woods, rich	17
Cornus florida	Flowering dogwood	5	Woods, rich	20
CYPRESS FAMILY	**CUPRESSACEAE**			
Juniperus virginiana	Red cedar	2	Fields, old	20
EBONY FAMILY	**EBENACEAE**			
Diospyros virginiana	Persimmon	5	Thickets, old fields	1
LEGUME FAMILY	**FABACEAE**			
Robinia pseudo-acacia	Black locust	A*	Woods, thickets	18
BEECH FAMILY	**FAGACEAE**			
Castanea dentata	American chestnut	5	Woods	7
Fagus grandifolia	American beech	6	Woods	20
Quercus alba	White oak	4	Woods	20
Quercus bicolor	Swamp white oak	7	Woods, low moist	10
Quercus coccinea	Scarlet oak	4	Woods	6
Quercus montana	Chestnut oak	6	Woods, dry	14

		STATUS		COUNT
LAUREL FAMILY	**LAURACEAE**			
Lindera benzoin	Spicebush	2	Woods	20
OLIVE FAMILY	**OLEACEAE**			
Ligustrum obtusifolium	Broad-leaved privet	A*	Thickets, waste places	20
BUCKTHORN FAMILY	**RHAMNACEAE**			
Ceanothus americanus	New Jersey tea	7	Thickets, dry fields, barren	1
ROSE FAMILY	**ROSACEAE**			
Aronia arbutifolia	Red chokeberry	7	Swamps, thickets	5
Aronia melanocarpa	Black chokeberry	7	Bogs, low woods, edges	1
Photinia villosa	Photinia	A*	Woods	1
Rosa carolina	Pasture rose	5	Fields, dry, thickets	12
Rosa multiflora	Multiflora rose	A*	Fields, thickets, woods	20
Rosa palustris	Swamp rose	7	Marshes, swamps	11
Rubus allegheniensis	Blackberry	1	Fields, thickets	20
Rubus flagellaris	Dewberry	1	Fields, thickets	19
Rubus hispidus	Swamp dewberry	6	Swamps, low woods	6
Rubus occidentalis	Thimbleberry	1	Fields, thickets	20
Rubus phoenicolasius	Wineberry	A*	Fields, thickets	20
Spiraea alba	Narrow-leaved meadows	6	Marshes, wet fields	3
Spiraea latifolia	Meadow-sweet	6	Meadows, streamsides	1
MADDER FAMILY	**RUBIACEAE**			
Cephalanthus occidentalis	Buttonbush	7	Marshes, swamps	4
WILLOW FAMILY	**SALICACEAE**			
Salix humilis v. humilis	Upland willow	7	Fields, dry, barrens	1
BLADDER-POD FAMILY	**STAPHYLEACEAE**			
Staphylea trifolia	Bladdernut	5	Woods, floodplain	13
YEW FAMILY	**TAXACEAE**			
Taxus cuspidata	Japanese yew	A	Woods	2

STATUS: A= Alien, A* = Invasive alien
Number=Coefficient of Conservatism

COUNT= Number of sections seen in out of 20 sections

APPENDIX 2 - B

WALLACE TOWNSHIP SHRUBS - 2006

		STATUS		COUNT
CASHEW FAMILY	**ANACARDIACEAE**			
Toxicodendron vernix	Poison sumac	8	Swamps, marshy bogs	4
HOLLY FAMILY	**AQUIFOLIACEAE**			
Ilex crenata	Japanese holly	A	Woods	1
Ilex verticillata	Winterberry	4	Woods, low, swamps	19
BARBERRY FAMILY	**BERBERIDACEAE**			
Berberis thunbergii	Japanese barberry	A*	Woods	20
BIRCH FAMILY	**BETULACEAE**			
Alnus serrulata	Common alder	4	Marshes, streamsides	10
Corylus americana	American hazelnut	5	Woods, thickets	18
POINCIANA FAMILY	**CAESALPINIACEAE**			
Cercis canadensis	Redbud	7	Woods, rich, streamsides	1
HONEYSUCKLE FAMILY	**CAPRIFOLIACEAE**			
Lonicera maackii	Amur bush-honeysuckle	A*	Fields, thickets	20
Lonicera morrowii	Morrow's bush-honeysuck	A*	Fields, thickets	15
Sambucus canadensis	Elderberry	3	Thickets, low woods	19
Symphoricarpos orbiculatus	Coralberry	A	Thickets, waste places	2
Viburnum acerifolium	Maple-leaved viburnum	5	Woods	19
Viburnum dentatum	Southern arrowwood vibur	3	Woods, swamps	20
Viburnum dilitatum	Linden viburnum	A*	Woods, disturbed	5
Viburnum lentago	Nannyberry	5	Thickets, wet woods	2
Viburnum plicatum	Doublefile viburnum	A*	Thickets, waste places	1
Viburnum prunifolium	Black-haw	2	Thickets, old fields, woods	20
Viburnum recognitum	Northern arrowwood vibur	6	Swamps, low woods	7
BITTERSWEET FAMILY	**CELASTRACEAE**			
Euonymus alatus	Winged burning-bush	A*	Woods	19
Euonymus americanus	Running strawberry bush	5	Woods, low, thickets	1
Euonymus fortunei	Wintercreeper	A*	Woods, thickets, housesite	1
DOGWOOD FAMILY	**CORNACEAE**			
Cornus amomum	Swamp dogwood	3	Marshes, thickets, low are	20
Cornus racemosa	Panicled dogwood	3	Fields, moist, thickets	5
OLEASTER FAMILY	**ELAEAGNACEAE**			
Elaeagnus umbellata	Autumn olive	A*	Fields, old thickets	19
HEATH FAMILY	**ERICACEAE**			
Gaylussacia baccata	Black huckleberry	5	Woods, dry	11
Kalmia angustifolia	Sheep laurel	8	Swamps, dry woods, acidi	2
Kalmia latifolia	Mountain laurel	6	Woods, dry	2
Lyonia ligustrina	Maleberry	7	Marshes, wet woods & thic	2
Rhododendron periclymenioides	Pinxter flower	5	Woods, acidic	17
Vaccinium corymbosum	Highbush blueberry	5	Woods, low, swamps	15
Vaccinium pallidum	Lowbush blueberry	6	Woods, dry	17
Vaccinium stamineum	Deerberry	7	Thickets, woods, dry	9
WITCH-HAZEL FAMILY	**HAMAMELIDACEAE**			
Hamamelis virginiana	Witch-hazel	6	Woods	18

		STATUS		COUNT
BEECH FAMILY	**FAGACEAE**			
Quercus muhlenbergii	Yellow oak	8	Woods, rich calcareous	1
Quercus palustris	Pin oak	3	Woods, low	17
Quercus rubra	Red oak	4	Woods	19
Quercus velutina	Black oak	4	Woods	20
WALNUT FAMILY	**JUGLANDACEAE**			
Carya alba	Mockernut hickory	5	Woods	14
Carya cordiformis	Bitternut hickory	3	Woods	15
Carya glabra	Pignut hickory	4	Woods	9
Carya ovalis	Sweet pignut hickory	4	Woods	1
Carya ovata	Shagbark hickory	5	Woods	20
Juglans cinerea	Butternut	3	Woods, floodplain	2
Juglans nigra	Black walnut	2	Woods, floodplain	20
LAUREL FAMILY	**LAURACEAE**			
Sassafras albidum	Sassafras	1	Thickets, young woods	20
MAGNOLIA FAMILY	**MAGNOLIACEAE**			
Liriodendron tulipifera	Tulip-tree	2	Woods	20
MIMOSA FAMILY	**MIMOSACEAE**			
Albizia julibrissin	Mimosa	A	Roadsides, waste places	2
MULBERRY FAMILY	**MORACEAE**			
Broussonetia papyrifera	Paper mulberry	A	Roadsides, waste places	1
Maclura pomifera	Osage orange	A	Thickets, hedgerows	4
Morus alba	White mulberry	A	Thickets, hedgerows	16
SOUR-GUM FAMILY	**NYSSACEAE**			
Nyssa sylvatica	Black gum	4	Woods	20
OLIVE FAMILY	**OLEACEAE**			
Fraxinus americana	White ash	1	Woods	20
Fraxinus nigra	Black ash	7	Swamps, wet woods	6
Fraxinus pennsylvanica	Green ash	3	Woods, low	10
PINE FAMILY	**PINACEAE**			
Pinus strobus	White pine	A 7	Woods, rich	4
Pinus virginiana	Scrub pine	6	Woods, dry, serpentine	1
Tsuga canadensis	Eastern hemlock	6	Woods, rich	5
PLANE-TREE FAMILY	**PLATANACEAE**			
Platanus occidentalis	Sycamore	3	Woods, floodplain	13
ROSE FAMILY	**ROSACEAE**			
Amelanchier arborea	Tree shadbush	5	Woods	10
Crataegus crus-galli	Cockspur hawthorn	4	Thickets, woods edges	6
Crataegus flabellata	Hawthorn	4	Low woods, dges	3
Crataegus pensylvanica	Pennsylvania hawthorn	6	Edges, hedherows, thicket	1
Crataegus phaenopyrum	Washington thorn	4	Thickets, edges	4
Crataegus species	Hawthorn		Woods, thickets	11
Malus pumila	Apple	A	Thickets, old fields	5
Malus species	Crabapple	A*	Thickets, woods, edges	15
Prunus avium	Sweet cherry	A	Woods, thickets	20
Prunus serotina	Black cherry	1	Woods	20
Prunus subhirtella	Higan cherry	A*	Hedgerows, edges	2

		STATUS		COUNT
ROSE FAMILY	**ROSACEAE**			
Pyrus calleryana	Callery pear	A*	Edges, old fields	2
Pyrus communis	Pear	A	Thickets, old fields	3
RUE FAMILY	**RUTACEAE**			
Phellodendron japonicum	Japanese cork-tree	A*	Woods, disturbed, thickets	2
WILLOW FAMILY	**SALICACEAE**			
Populus grandidentata	Bigtooth aspen	3	Thickets, old, young wood	14
Salix babylonica	Weeping willow	A	Meadows, streamsides	1
Salix nigra	Black willow	2	Marshes, streamsides	15
Salix species	Willow		Marshes, streamsides	4
QUASSIA FAMILY	**SIMAROUBACEAE**			
Ailanthus altissima	Tree-of-heaven	A*	Thickets, old fields	11
LINDEN FAMILY	**TILIACEAE**			
Tilia americana	Basswood	5	Woods, rich	13
ELM FAMILY	**ULMACEAE**			
Celtis occidentalis	Hackberry	2	Woods, thickets	12
Ulmus americana	American elm	4	Woods, floodplain	2
Ulmus rubra	Slippery elm	4	Woods, low	20

STATUS: A= Alien, A* = Invasive alien
Number=Coefficient of Conservatism

COUNT= Number of sections seen in out of 20 sections

APPENDIX 3

"CONSERVATIVE" PLANT SPECIES OF WALLACE TOWNSHIP

Based on 2006 Fieldwork

Plant Species with

A Coefficiency of Conservatism

Of 7 – 10

(see text for explanation)

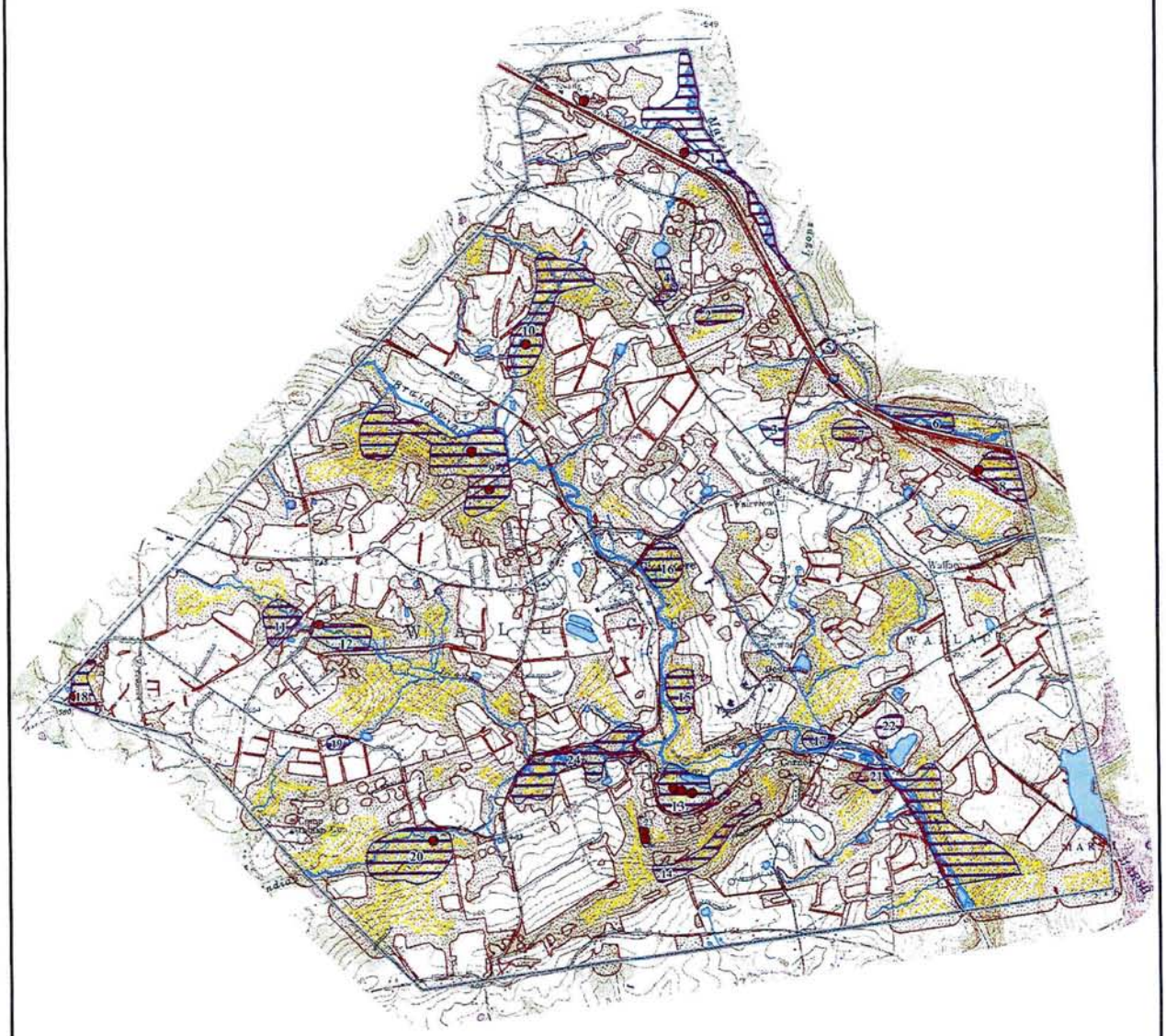
WALLACE TOWNSHIP
SPECIES WITH CC OF 7 TO 10

CC			STATUS		SITES
7	Andropogon gerardii	Big bluestem		Fields, dry, meadows	1
7	Arabis laevigata v. laevigata	Smooth rock-cres		Bluffs, rocky slopes	1
7	Arisaema dracontium	Green dragon		Woods, floodplain	2
7	Aronia arbutifolia	Red chokeberry		Swamps, thickets	5
7	Aronia melanocarpa	Black chokeberry		Bogs, low woods, edges	1
7	Asclepias exaltata	Poke milkweed		Woods, rich open	3
7	Asclepias viridiflora	Green milkweed		Fields, dry	1
7	Bartonia virginica	Bartonia		Woods, low, meadows	2
7	Calamagrostis canadensis	Canada bluejoint grass		Bogs, marshes, serpentine	2
7	Caltha palustris v. palustris	Marsh marigold		Seeps, swamps	3
7	Carex bromoides	A sedge		Swamps, bogs, wet woods	2
7	Carex gynandra	A sedge		Swamps, wet edges	1
7	Carex leptalea v. leptalea	A sedge		Swamps, wet woods	2
7	Carex prasina	A sedge		Seeps, woodland	7
7	Carex styloflexa	A sedge	PW	Woods, moist to wet	2
7	Carex torta	Sandbar sedge		Streambanks, gravel bars	7
7	Ceanothus americanus	New jersey tea		Thickets, dry fields, barrens	1
7	Cephalanthus occidentalis	Buttonbush		Marshes, swamps	4
7	Cercis canadensis	Redbud		Woods, rich, streamsides	1
7	Chrysosplenium americanum	Golden saxifrage		Seeps, swamps	11
7	Conopholis americana	Squaw-root		Woods, dry oak	1
7	Danthonia compressa	Northern oat-grass		Woods, dry open	3
7	Dicanthelium yadkinense	Yadkin river panic-grass	TU	Woods, dry open	1
7	Dicentra cucullaria	Dutchman's breeches		Woods, rich	4
7	Doellingeria umbellata	Flat-topped white aster		Fields, low, wet woods	1
7	Dryopteris goldiana	Giant wood fern		Woods, rich	1
7	Epigaea repens	Trailing arbutus		Woods, dry	1
7	Fraxinus nigra	Black ash		Swamps, wet woods	6
7	Glyceria canadensis	Northern manna-grass		Woods, wet, swamps	1
7	Hydrocotyle americana	Water pennywort		Swamps, seeps	2
7	Iris versicolor	Northern blue flag		Marshes, swamps	2
7	Linum virginianum	Yellow flax		Fields, low	2
7	Lycopodium clavatum	Runing-pine clubmoss		Thickets, dry, old fields	2
7	Lycopodium hickeyi	Hickey's tree clubmoss		Woods, dry, thickets	2
7	Lyonia ligustrina	Maleberry		Wet woods & thickets	2
7	Melampyrum lineare	Cow-wheat		Woods, dry upland	1
7	Mertensia virginica	Virginia bluebells		Woods, floodplain	5
7	Mikania scandens	Climbing boneset		Marshes, bogs, swamps	3
7	Nuphar lutea	Spatterdock		Aquatic	2
7	Obolaria virginica	Pennywort		Woods, rich	1
7	Osmunda regalis	Royal fern		Swamps	6
7	Paronychia fastigiata	Forked chickweed		Woods, dry, railroad banks	1
7	Phlox maculata	Wild sweet william		Marshes, swamps	3
7	Prenanthes alba	Rattlesnake-root		Woods, open rocky	1
7	Quercus bicolor	Swamp white oak		Woods, low moist	10
7	Ranunculus caricetorum	Swamp buttercup		Swamps, seeps	13
7	Rosa palustris	Swamp rose		Marshes, swamps	11
7	Salix humilis v. humilis	Upland willow		Dry edges	1

WALLACE TOWNSHIP
SPECIES WITH CC OF 7 TO 10

7	Sanguisorba canadensis	Canadian burnet		Marshes, boggy woods	1
7	Sedum ternatum	Wild stonecrop		Woods, floodplain	7
7	Sparganium americanum	Common bur-reed		Marshes	5
7	Vaccinium stamineum	Deerberry		Thickets, woods, dry	9
8	Andropogon glomeratus	Broom-sedge	PR	Wet meadows	1
8	Cardamine rotundifolia	Mountain water-cress		Springheads, seeps	7
8	Carex atlantica ssp. atlantica	A sedge		Swamps, marshes	3
8	Carex lacustris	Lake sedge		Marshes, swamps	3
8	Chamaelirium luteum	Fairy-wand		Woods, rich open	1
8	Dicanthelium polyanthes	A panic-grass	PW	Woods, open, thickets	1
8	Gentiana andrewsii	Bottle gentian		Meadows, rich	4
8	Kalmia angustifolia	Sheep laurel		Swamps, dry woods, acidic	2
8	Lysimachia terrestris	Swamp candles		Marshes, swamp edges	2
8	Mitella diphylla	Bishop's-mitre		Seeps, springheads	2
8	Phlox divaricata v. divaricata	Wild blue phlox		Woods, rich ravine	1
8	Pilea fontana	Lesser clearweed		Swamps, seeps	1
8	Polypodium virginianum	Polypody		Bluffs, rocks	4
8	Quercus muhlenbergii	Yellow oak		Woods, rich calcareous	1
8	Rhynchospora capitellata	Small-headed beak-rush		Wet meadows, bogs	5
8	Saxifraga pensylvanica	Swamp saxifrage		Marshes, wet woods	2
8	Sphenopholis pensylvanica	Swamp oats		Woods, wet, seeps, springs	1
8	Toxicodendron vernix	Poison sumac		Swamps, marshy bogs	4
8	Veronicastrum virginicum	Culver's-root		Fields, meadows, thickets	2
9	Triadenum fraseri	Marsh St. John's-wort		Marshes	2
10	Poa paludigena	Marsh bluegrass	PR	Open cool swamps	1

Map 4
Wallace Township
Woodlands 1956 / Woodlands 2003
Exceptional Natural Areas
& Rare Species Sites



0 2700 5400 8100

Scale in Feet

Legend

- Rare plant species
- Roads
- Streams
- Water bodies
- Exceptional natural areas
- USGS woodlands, 1956
- Woodlands, 2003
- Forest interiors, 2003
- Township boundary

Brandywine Conservancy

Environmental Management Center

Data Source: Base data from Chester County GIS data distribution, 2005. Woodlands from Brandywine Conservancy, 2003. USGS topological map, 1956. Exceptonal natural areas and rare plant species from field survey by Janet Ebert, 1/2007.

Map created: June 14, 2007