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Checklist of the Vascular Plants of Plummers Island, Maryland

(Contribution XXVIII to the Natural History of Plummers Island, Maryland)

by

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Abstract

Shetler, Stanwyn G., Sylvia S. Orli, Elizabeth F. Wells, and Marcie Beyersdorfer. 2005. Checklist of the Vascular Plants of Plummers Island, Maryland. This Checklist combines and updates the original checklist (1935) and supplementary list (1953) of the vascular flora published by Ellsworth P. Killip and Sydney F. Blake. Plummers Island, a small (4.8 ha) island in the Potomac River near the Maryland shore in Montgomery County about 14.5 km upriver (northwest) from the center of the District of Columbia, has been intensively studied by biologists for over 100 years, mostly members of the Washington Biologists' Field Club. Floristic studies have always included 14.2 ha of the adjacent Maryland shore (so-called "mainland"), part of the original holdings that belonged to the Club for many years.. A total of 885 vascular plant species has been recorded over the years, including 77 known only from the mainland. Of these, 704 (80%) are native, 181 (20%) introduced, and 92 are being reported here for the first time. Based on the 300 species seen again in 2003-2005, it is estimated that the present flora totals about 350 species. The history of floristic work here, changes in the vegetation cover and flora, including a section by Wells on the present plant communities, and known deliberate introductions are discussed.

Key Words: flora, floristics, vascular plants, Maryland, Montgomery County, Plummers Island, Potomac River, C&O Canal, C&O Canal National Historical Park.

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Checklist of the Vascular Plants of Plummers Island, Maryland

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Introduction

Plummers Island and Mainland

Plummers Island (38°E 58' 10" N. lat., 77°E 10' 36" W. long.) is a small wooded island in the Potomac River near Cabin John, Montgomery County, Maryland (Figs. 1, 2). It is about 14.5 km (9 mi) upriver (northwest) from the White House, Washington, DC, and is just downriver from the American Legion (Cabin John) Bridge of the Capital Beltway (I-495), which connects Maryland and Virginia. The island is separated from the Maryland shore by only a narrow channel, which can be crossed at the east end on stepping stones except at high water. It lies between Locks 10 and 12 of the Chesapeake and Ohio (C&O) Canal. (In the past the island's name was often written with an apostrophe, Plummer's.)

The island itself consists of only 4.8 ha (12 acres), but it has been well known to local biologists for over a hundred years, thanks to studies there fostered by the Washington Biologists' Field Club (WBFC), ever since it first leased the island from the owner in 1901 (WBFC Web site, 2005). The Club purchased it in 1908, along with ca. 14.2 hectares (35 acres) of the "mainland," as the land between the island and the canal was dubbed by the early members. To this was added the Barton tract of ca. 1.4 hectares (3.5 acres) in 1924, for a total of 15.6 hectares (38.5 acres) of mainland. (The Leland Barton tract extended the Club's mainland holding between the C&O Canal and the Potomac River eastward from Rock Run to Lock 10.)

Access to the island at times of high water requires a small boat, and for many years the

Club has had its own boat for ferrying its members the short distance across the channel to and from the island for its annual fall and spring outings on the island. From time to time a dock has been constructed on one or both sides, referred to as the “ferry” dock, but sooner or later flooding has always destroyed it.

Ownership of the island and mainland property passed to the National Park Service through a series of steps in 1958-1961, and the property later became part of the new C&O Canal National Historical Park (NPS), opening the island to public access. In return, the Club received a settlement sum from the U. S. Government, which it invested, and an agreement with the NPS that the Club could continue to do research on the island and adjacent mainland and to maintain and use the cabin it had built on the island in 1901 as the “Clubhouse” for Club functions. (It was dubbed Winnemana Lodge, Winnemana meaning “beautiful island” in a local Indian language.) Each year some of the income from the investments has been used to support research on the island or elsewhere in the DC area within the Potomac drainage.

The island is elongate and tadpole-shaped, its long axis oriented more or less east-west with the west or upstream end being the broad, blunt end. It is high-centered and rocky with large boulders outcropping at various places and a narrow primary floodplain and/or mud flats around parts of it. There is an abrupt, high outcrop (“Rock of Gibraltar”) at the west end, and there are two high knolls in the center that are thinly covered with soil and drop down to floodplain with varying degrees of steepness. The elevation at the top of the higher knoll, where the cabin is built, is over 36 m (120 ft) above sea level and about 20 m (some 60 ft) above the river level. Parts of the north and south sides are rock cliffs. The top of the other knoll is about 3 m (10 ft) lower. The outcropping rock is granitic gneiss, which also outcrops on the mainland (Erwin 1981).

The mainland parcel, lying between the Tow Path of the C&O Canal on the north and the Potomac River on the south and somewhat surpassing the island at both ends, was acquired to protect the island from encroachment and preserve access, and it was actively used in a number of ways in the early years (see below). Killip and Blake (1935, 1953), following Club tradition, included the mainland in their study of the Plummerville Island flora, but starred (*) the species found only on the mainland. At almost 16 ha, it is more than three times larger in area than the island itself. The highest point is a knoll as high as the highest point on the island. (Fig. 3, early students of flora; Figs. 4-12, contemporary scenes of island and vicinity.)

History of Floristic Study

From the outset, the Club has encouraged and sponsored research on the flora and fauna of the island and adjacent mainland, and many scientific papers have resulted to date, including a series of 27 papers under the general heading "Natural History of Plummerville Island, Maryland." Twenty-four of the 27 have been published in the *Proceedings of the Biological Society of Washington*. Many other papers dealing at least in part with the island have been published elsewhere. (See WBFC Web site, 2005.)

The first specimens known to come from Plummerville Island were collected by a number of persons in the late 1890s before the WBFC was involved with the island. McAtee (McAtee file, WBFC archives) alludes to collections as early as the 1870s in his notes, but none has been seen to confirm this. Once the Club established its headquarters on the island in 1901, collections began to accumulate, and the herbarium of vascular plants was kept conveniently on the island in the cabin. A running list of species identified on the island and presumably also the mainland was

maintained in a card file. By August 10, 1912, this totaled 538 species, according to a list copied from the card file at that time, apparently by McAtee, entitled "Spermatophyta of Plummer's Island, Maryland" (McAtee file, WBFC archives). The herbarium and no doubt the card file as well were still housed in the cabin as late as 1935 (Maxon 1935), but at some time after that they were moved to safety at the Smithsonian Institution, presumably because of the growing threat of theft and vandalism. Here is where the herbarium has remained, but the card file has disappeared.

Up to the present, at least 67 persons have contributed one or more specimens to the Plummer's Island Herbarium. Of these, 13 collected 100 or more specimens, six collected 300 or more, and only three collected 500 or more—Ellsworth P. Killip (847), Albert S. Hitchcock (597), and Emery C. Leonard (578). Neil Hotchkiss, with 477, was not far behind (Fig. 3). Nearly half, 31, of the 67 collectors have been members of the WBFC, and 25 of the 31 have been botanists. Since some 65 botanists (exact number depending on definition of "botanist") have belonged to the WBFC during the course of its long history, this means that less than half of them have contributed specimens to the Plummer's Island collections over the years.

Three of the most important collectors and students of the Plummer's Island vascular flora were Killip (1890-1968), Leonard (1892-1968), and Hotchkiss (1901-1994), whose collecting activities on the island spanned 41 (1915-1955), 45 (1921-1965), and 49 (1917-1965) years, respectively. Sydney F. Blake (1892-1959; Fig. 3) also stands out, not for his collecting but for his collaboration with Killip to publish the "Flowering Plants and Ferns" in 1935. This paper, the second contribution (No. II) to the WBFC's series on the Natural History of Plummer's Island initiated that year, followed a short introductory paper (No. I) and was really the first research contribution to the new series. It was also the first and, until now, has been the only catalog of the

vascular flora of the island and adjacent mainland to be published in the Club's 100-year history. In 1953, Killip and Blake also published what proved to be the only supplement to their checklist-- "Flowering Plants and Ferns-- Supplement 1" (No. X in Natural History series).

Collecting has gone in cycles through the years. Extensive collecting was done in the early years of Club ownership and especially in the 1930s before and after the Killip and Blake checklist appeared. In the more than 50 years since their supplement was published there have been four major cycles. Hotchkiss and Leonard made many collections in 1960-1961, and in 1982-1986 Beyersdorfer systematically collected the non-graminoid flora on behalf of Shetler in anticipation of this present study. In 1997-1998, Wells and her students, Rebecca L. Brown and Venkat S. Murthy, did extensive documentary collecting in their study of changes in the floodplain vegetation of the island. In a new (2003-2005) cycle of collecting and sight-recording, Shetler, Orli, Wells, W. John Kress, and others have attempted to establish the present flora. Kress and coworkers have also been documenting their feasibility study ("An Electronic Field Guide: Plant Exploration and Discovery in the 21st Century"), begun in 2004 and focused on the island. This project also includes a pilot study of the feasibility of DNA barcoding in flowering plants (Kress et al. 2005). All of these collections have been deposited in the Plummers Island Herbarium.

There is a problem with the date of collection given, 9 May 1961, on the labels of 149 of the specimens of Hotchkiss and Leonard. Many of these plants clearly could not have been collected so early in the growing season; they were far too advanced in their development. There is no apparent reason, however, to suspect other data on these labels.

Since being moved to the Smithsonian Institution, the Plummers Island Herbarium, a collection now numbering over 3500 specimens, has always been kept separate from the general

collection of the U. S. National Herbarium (US) in the National Museum of Natural History. It is maintained as a separate part of the Herbarium of the Washington-Baltimore Area ("District of Columbia" or "DC" Herbarium). The Plummers Island Herbarium, as also the entire DC Herbarium, can be searched and consulted on-line through the Web site of the Flora of the Washington-Baltimore Area (see References Cited) by using "Plummers Island" as the "Locality."

The nonvascular plants, as traditionally circumscribed, have been the subject of a number of papers. In the "Natural History of Plummers Island" series are lists of "Mosses" by Leonard (1935), "Fungi" by Stevenson and Ermold (1936), "Hepaticae" by Leonard and Pierce (1939), "Lichens" by Leonard and Killip (1939), and "Blue-green Algae (Myxophyceae)" by Drouet (1954). These lists are now very dated and have not been followed up by further surveys.

More recently, however, Hale (1970, 1972, 1979) and Lawrey and Hale (1977, 1981) published on lichen growth and stress from automobile pollution on Plummers Island. They studied the lichens on Cactus Rock and showed that after the American Legion Bridge was built for the Capital Beltway (I-495) automobile emissions stressed the lichens and reduced their growth. Comparable studies have not been done to examine the effect, if any, of air pollution on the vascular plants of the island.

As an interesting botanical sidelight of the WBFC's early years on the island, McAtee recorded in miscellaneous notes (McAtee file, WBFC archives) that in June 1918 the Club granted Mary Vaux Walcott use of the island for six months for her sketching of wild flowers. Presumably, "use" meant right of access, but this is not clear. Mary Walcott was the wife of Charles D. Walcott, fourth Secretary (1907-1925) of the Smithsonian Institution. She gained fame for her 400 watercolors of North American wild flowers, sumptuously published by the

Smithsonian in five volumes (Walcott 1925).

Changing Vegetation Cover and Flora

The topographic relief, with mud flats, floodplain, and various slopes and rocky outcrops, has afforded a variety of habitats on the island despite its small size. Over the years, repeated high water and flooding on the lower parts have brought repeated cycles of scouring and deposition and in the process periodic renewal of the mud-flat and floodplain flora. The floodplain is quite sandy in places, especially toward the east (downstream) end. At one time it included a small pond at the west end and a small marsh below Cabin Knoll (Erwin 1981). A small marshy area still exists on the northwest corner of the island.

The constant changes of the floodplain habitats no doubt account in significant measure for the relatively large cumulative flora recorded for the island and for many of the apparently transitory accidentals. According to Maxon (1935), for instance, in the summer of 1930 the water was unusually low, and Killip recorded "numerous aquatic and shore plants." In their 1953 supplement to the their earlier checklist, Killip and Blake noted that nearly two-thirds of the 128 species being added to the flora were collected in 1936 and 1937, "following the disastrous floods of those years." Their commentary continues:

In the low-lying parts at the upper end of the Island and along the channel many of the trees and shrubs and much of the top-soil were swept away. Seeds brought in with deposits of silt and sand had an abundance of sunlight and air in which to germinate, and constant collecting by members of the Club led to the discovery of a surprisingly large number of novelties.

Of the accidental floristic element that likely was brought in by the river over the years, the most notable member is *Iresine rhizomatosa* Standl. (bloodleaf) of the amaranth family (Amaranthaceae). A southeastern plant of low wet woodlands, it was described as a species separate from *I. celosioides* L. (= *I. diffusa* Humb. & Bonpl. ex Willd.) by P. C. Standley (1915) on the basis of specimens collected by him on the island that year. It had been collected there several times before, but his was the last collection ever to be made on the island. At that time, he reported, there were “numerous” plants in “several colonies,” although only two or three were in flower. Just when it disappeared is not documented, but the species has long been gone from the island.

The *Iresine* is one of at least three species that were new to the flora of the whole District of Columbia area when first discovered here, the other two being *Crepis pulchra*, small-flowered hawkbill, and *Verbascum phlomoides*, clasping-leaved mullein.

The vegetation cover of the island has changed dramatically over the years, changing the character of the habitat from highly exposed to quite closed. Today, the island is covered with a relatively dense tree canopy, but early photographs show an island that must have been cut-over in the 1800s, because, particularly on the uplands, there was little or no tree cover when the Club acquired the island (Erwin 1981). *Juniperus virginiana* (eastern red-cedar), a successional pioneer of old fields and open dry land, was about the only tree on the highest parts, where it was scattered. Most of the red-cedar trees are gone now and have been replaced by various deciduous species, notably maples, hickories, and oaks.

The gradual closing of the canopy layer obviously has changed the habitats and, accordingly, been accompanied by changes in the understory and the ground flora as well. This

succession has given rise to a relatively diverse *cumulative* flora over the last century. As for the flora extant at any one time, however, the trend clearly has been toward a reduction in diversity on the island, given the ever denser canopy. The same can be said for the trend on the mainland, as the open, cultivated parts, with all their possibilities for accidental introductions, have returned to closed forest (see below).

The loss of open habitat and consequent reduction in diversity are apparent when the present Checklist is compared with the earliest known list of the vascular plants, McAtee's unpublished "Spermatophyta of Plummer's Island, Maryland," dated August 10, 1912, which was mentioned earlier (McAtee file, WBFC archives). It enumerates 538 native (mostly) and naturalized species, as compared to the 300 or so species that are extant today. A surprising number of the plants on that early list are among the 300 still there, over a hundred years later. Of the species on the early list that no longer are present, many are typical of open country. In some cases, alien species have out-competed their native counterparts over the years. For example, the early list includes the native *Celastrus scandens*, American bittersweet, and the native *Humulus lupulus*, common hop, but today they appear to have been replaced entirely by the aliens *Celastrus orbiculatus*, oriental bittersweet, and *Humulus japonicus*, Japanese hop, neither of which is mentioned in McAtee's list.

His list includes about 40 species (exact number depends on nomenclatural interpretations) that lack voucher specimens and were never verified and included by Killip and Blake (1935, 1953), hence are not included in our Checklist. The card file, surely known and available to them, was probably a compilation of field-identified species, and some of the species in the list are questionable in light of what is known today about the region's flora. Many of the 40 or so species

are weedy in nature and typical of fields, meadows, openings and edges, or disturbed areas. They may have been so transient that they were long gone without verifiable documentation by the time Killip and Blake put together their list (1935). Also, it is not always clear whether McAtee was including some species from across the river in Virginia or other nearby locales.

The *Opuntia humifusa* (eastern prickly-pear) is one of perhaps many species that have disappeared from the island in the last hundred years in all likelihood because of the closing canopy, although other factors such as human disturbance and predation and even air pollution may have contributed to their disappearance. Specimens and photographs preserved in the Plummers Island Herbarium show that a large colony of this cactus flourished in the early 1900s on the large boulder that became known as Cactus Rock, which is just downslope from the crest of the high knoll. Curiously, the cactus is not in McAtee's list of the spring flora on the island in 1912, perhaps because it was not yet in flower when the list was made (McAtee file, WBFC archives).

The last collection was made in 1915, and there are no records to show how long after that the cactus persisted. Several persons recall seeing a few residual plants as recently as the early 1980s, but there are no specimens or other records to support such a recent survival. It likely disappeared many years ago. Such a conspicuous species would hardly have been overlooked by collectors in the 1960s and later. Cactus Rock, when it was much more exposed, was a prominent, accessible high vantage point to which hikers were easily attracted. Thus, in addition to increasing shade, trampling likely took a toll and maybe collecting for gardens, as well. Certainly, foot traffic increased as the island became more accessible to the public through the years, especially after becoming part of the C&O Canal National Historical Park.

When the land was purchased, the mainland parcel, with its three or four small woodland pools, swampy area, and cleared plots, added significantly to the habitat and species diversity of the island. Today, the open areas are gone, and the property in general is heavily wooded. The pools, now in the middle of relatively mature forest, may be little more than wet areas in summer.

The mainland property had long been subjected to disturbance before purchase, which was continued for a time by the Club. Over a third of the property, more or less surrounding the Lock House enclosure at Lock 11, was open land that had been in agricultural use, perhaps in connection with the Lock House. Club members did a little gardening there during war years, and by times the Club leased it to residents of the Lock House for agricultural purposes (WBFC Web site 2005, Biological Studies). Eventually, the cultivated areas of the mainland were left to revert to forest, and the vegetation cover has gradually become more homogeneous. Although the Lock House has not been occupied for many years, the NPS still keeps open the small grassy clearing around it.

The elimination of cultivation in time largely eliminated the open and edge habitats and with them the potential for accidental introductions through agriculture. Just how many, if any, of the species in the Checklist were introduced incidental to cultivation and have since disappeared is unknown.

Finally, in recent years heavy and ever increasing browsing by white-tailed deer on both the island and the mainland are having a growing impact on the vegetation, such that more and more herbaceous species (e.g., *Impatiens capensis*, orange jewelweed) are unable to mature and produce seeds and may eventually die out. In fact, it is likely that some species have already been extirpated by the deer, but this is difficult to determine.

Present Plant Communities

This section is a general account of the plant communities of Plummers Island by Wells, based on detailed plot studies principally of the floodplain vegetation made by her on the island during the growing season of 1997 with the assistance of Brown and Murthy.

Plummers Island's varied topography supports three main types of plant communities: riparian, terrace, and upland forest. The riparian communities have relatively low topographic relief, occur at the lower elevations along the river, and are flooded frequently, from several times a year to once every 2-3 years. They are dominated by a rich flora of species typically associated with floodplains, such as *Platanus occidentalis* (sycamore), *Acer saccharinum* (silver maple), *A. rubrum* (red maple), *A. negundo* (boxelder), *Fraxinus pennsylvanica* (green ash), *Ulmus rubra* (slippery elm), *Juglans nigra* (black walnut), *Lindera benzoin* (spicebush), and many other species tolerant of flooding. Sycamore, green ash, boxelder, and slippery elm form a closed canopy throughout the island's floodplain, and *Asimina triloba* (pawpaw) is conspicuous in the riparian sub-canopy over much of the island. *Parthenocissus quinquefolia* (Virginia-creeper), *Vitis aestivalis* (summer grape), *V. vulpina* (winter grape), and *Toxicodendron radicans* (poison-ivy) are common vines throughout the island. A few non-native invasive species such as *Alliaria petiolata* (garlic-mustard) and *Lonicera japonica* (Japanese honeysuckle) are common throughout most of the floodplain; *Conium maculatum* (poison-hemlock) and *Celastrus orbiculatus* (oriental bittersweet) are conspicuous in some areas.

The herbaceous vegetation of the riparian communities varies with habitat, soil depth, and flooding frequency. The floodplains on the lower end and at the head of the island are relatively

broad and gently rolling. The deep sandy soil is redeposited by rapidly flowing water during floods, leaving bare sand which is quickly revegetated by opportunistic herbaceous plants following floods. The lush herbaceous layer here is composed of *Allium tricoccum* (native ramp), *Phlox divaricata* (wild blue phlox), *Verbesina alternifolia* (wingstem), and *V. occidentalis* (southern flatseed-sunflower), and the non-natives *Artemisia annua* (annual wormwood), *Polygonum cespitosum* (Asiatic water-pepper), *Glechoma hederacea* (ground-ivy), and *Urtica dioica* (stinging nettle).

A rocky channel in the floodplain, known as Upper Gap, on the northwest side of the smaller knoll has shallow silty soil overlying tilted plates of bedrock and supports a highly diverse flora. Trees include *Celtis occidentalis* (hackberry), slippery elm, *Salix nigra* (black willow), *Populus deltoides* (cottonwood), *Betula nigra* (river birch), boxelder, pawpaw, and other floodplain species. Herbs include many native species such as *Aster* spp. and *Solidago* spp. (goldenrods), *Scrophularia marilandica* (Maryland figwort), and *Teucrium canadense* (American germander), and the non-natives *Lonicera maackii* (Maack's honeysuckle) and *Lysimachia nummularia* (moneywort), as well as many of the species common in the deep sandy floodplain on the island. *Saururus cernuus* (Lizard's-tail) thrives in a shallow pool between rock outcrops. A small pond has developed nearby in a low area on the north side of the island.

The river and lagoon banks of the island in most areas are steep and sandy. The bank on the south side receives full sun during the afternoon and bears an extremely dense assemblage of tall herbs such as *Rudbeckia laciniata* (tall coneflower), *Ambrosia trifida* (giant ragweed), wingstem, *Hesperis matronalis* (dame's-rocket), and many others. The banks on the north side are deeply shaded and sparsely vegetated as compared to the south-facing bank, bearing species

typical of the sandy floodplain. The species on the north bank include annual wormwood, Asiatic water-pepper, stinging nettle, wingstem, and southern flatseed-sunflower.

Sandy and silty bars in a few locations around the shore of the island remain submerged until the river level falls in late summer and exposes them, at least during dry years. These bars support a rich but short-lived assemblage of herbaceous and woody species. The herbaceous species are extremely diverse and include *Ammannia coccinea* (tooth-cup), *A. latifolia* (Koehne's ammannia), *Amaranthus spinosus* (spiny amaranth), *Sicyos angulatus* (bur-cucumber), *Penthorum sedoides* (ditch stonecrop), *Mollugo verticillata* (carpetweed), *Lindernia dubia* (false pimpinell), *Mimulus alatus* (winged monkey-flower), *Paspalum repens* (water paspalum), and others, in addition to many found on the floodplain of the island.

The woody species on these bars are all first-year seedlings of trees such as river birch, *Catalpa bignonioides* (southern catalpa), cottonwood, green ash, *Paulownia tomentosa* (empress-tree), sycamore, silver maple, and boxelder that die when the bar is flooded during the following winter. A small marsh persists near the south shore of the island in one location, where *Asclepias incarnata* (swamp milkweed), *Lobelia cardinalis* (cardinal-flower), *Orontium aquaticum* (golden-club), and *Sagittaria latifolia* (common arrowhead) are found in some years. Rock outcrops that jut into the river at the west end provide habitat for *Hibiscus moscheutos* (rose-mallow) and *Cephalanthus occidentalis* (buttonbush) as well as sycamore and willow.

Terrace communities occur at the higher elevations along the river and are flooded less frequently, having a flood return interval greater than every 3 years, in most cases as great as 25-30 years. Their soils are deep, sandy, mature with a developed soil profile, and rarely redeposited by flooding, in contrast with immature riparian soils which typically have little time for soil profile

development between fast-moving floods. Their topographic relief varies from almost level to gently rolling. They are dominated by species typically associated with moist upland sites, such as *Acer saccharum* (sugar maple) in the canopy, *Staphylea trifolia* (bladdernut) in the tall shrub layer, and *Asarum canadense* (wild ginger), *Matteuccia struthiopteris* (ostrich fern), and *Polystichum acrostichoides* (Christmas fern) in the herb layer.

The vegetation of terraces also contains many species common to floodplains, such as red maple, *Liriodendron tulipifera* (tulip-tree), hackberry, pawpaw, and a few upland species, such as *Chionanthus virginicus* (fringe-tree), and *Quercus rubra* (northern red oak). One sloping terrace supports *Dirca palustris* (leatherwood), *Tilia americana* (basswood), *Cystopteris protrusa* (lowland brittle fern), *Caulophyllum thalictroides* (blue cohosh), *Cimicifuga racemosa* (black cohosh), and *Hydrophyllum virginianum* (Virginia waterleaf). On the island, terraces offer the best display of showy spring ephemerals, such as *Mertensia virginica* (Virginia bluebells), *Dicentra cucullaria* (Dutchman's-breeches), *D. canadensis* (squirrel-corn), *Trillium sessile* (sessile trillium), and *Viola striata* (creamy violet).

Upland forest communities occur on the two high knolls and among the large boulders and rock outcrops of the island well above the river, and they never flood. Their soils are relatively thin, clay-rich, with a developed soil profile, and are derived from the weathered granitic gneiss bedrock. Their topography ranges from rolling vegetated slopes to very steep, barren, craggy cliffs and rock outcrops. The cliffs on the north side of the higher knoll, known as Cabin Hill, are almost vertical, and their crevices and north-facing ledges provide habitat for basswood, sugar maple, *Dryopteris marginalis* (marginal shield fern), Christmas fern, and *Polypodium virginianum* (rock polypody).

Trees such as *Quercus montana* (chestnut oak), northern red oak, *Q. alba* (white oak), *Carya glabra* (pignut hickory), *Juniperus virginiana* (eastern red-cedar), *Ostrya virginiana* (hop hornbeam), slippery elm, *U. americana* (American elm), and red maple form a somewhat open canopy over both knolls. Shrubs include *Vaccinium stamineum* (deerberry), *V. pallidum* (lowbush blueberry), and others. The herb layer provides dense cover under the open canopy, with species such as *Aster divaricatus* (white wood aster), *Hieracium venosum* (rattlesnake-weed), *Solidago caesia* (blue-stem goldenrod), *Carex nigromarginata* (black-edged sedge), *Dichanthelium commutatum* (variable panic grass), and others, including many grasses and sedges. Vines such as Virginia-creeper, summer grape, winter grape, and poison-ivy completely cover some of the cliffs and large boulders, especially where they receive full afternoon sun on the south side and on the high, massive rock ("Rock of Gibraltar") at the upper end of the island. *Ailanthus altissima* (tree-of-heaven) is established on the smaller knoll, and several trees have reached the canopy.

Planted Species

Two types of alien species make up the "introduced" flora of Plummers Island: (1) naturalized species, i.e., species that are not native to the region and have been introduced over the years by one means or another and become established in the region, including at Plummers Island (see Shetler & Orli 2000, 2002); (2) native species not present at Plummers Island that were deliberately brought in and planted on the island, mainland, or both during the early years of the Club. Some but not all of these transplants have always been treated as part of the flora of Plummers Island, and, for reasons explained later, a few more of them are being added to our Checklist. Though native in the region, they are regarded here as part of the introduced or,

loosely speaking, naturalized flora of Plummers Island.

From the outset, the island was regarded as a preserve that would be allowed to return to nature more or less without interference. There were some exceptions to this, however. In an early project, spearheaded by Albert K. Fisher, the Club initiated a regional arboretum ("*Arboretum Columbianum*") on the mainland and began to bring in some of the rarer native plants of the region, particularly woody plants. This arboretum is referred to on a number of specimen labels as the "Fisher Garden" or "Fisher Farm." McAtee (1930, p. 53) listed 35 species (below) that were planted on the mainland.

A few of the 35 were also planted on the island, as a small "wildflower garden" (now gone without a trace. The garden may have been more of a concept than a single place. The full list of species transplanted to this garden or elsewhere on the island is unknown, but apparently it included at least the six species in McAtee's list marked here with the symbol "§" plus *Polypodium polypodioides* (L.) Watt (resurrection fern) and *Pinus strobus* L. (white pine), which presumably were all planted on the rocky high knoll near the cabin, where the habitat was suitable, probably as an extension of the arboretum (McAtee 1930, p. 53; Killip & Blake 1935; WBFC archives; WBFC Web site, 2005, see Biological Studies).

In their checklist of the flora Killip and Blake included without explanation 9 of McAtee's list of 35 planted species (marked with an asterisk "*").

**Aralia spinosa* L.- Hercules'-club

Aronia melanocarpa (Michx.) Elliott - black chokeberry

**Aruncus dioicus* (Walter) Fernald (as *A. sylvester* Kostel.) - goat's-beard

Betula lenta L. - black birch

- Caltha palustris* L.- marsh-marigold
- **Carya ovata* (Mill.) K. Koch - shagbark hickory
- **Catalpa bignonioides* Walter - common catalpa
- **Ceanothus americanus* L. (formerly native here) - New Jersey-tea
- Clethra alnifolia* L. - sweet-pepperbush
- Comptonia peregrina* (L.) J.M. Coult. - sweet-fern
- **Cornus alternifolia* L.f. - alternate-leaved dogwood
- Cypripedium acaule* Aiton - pink lady's-slipper
- Dodecatheon meadia* L. - shooting-star
- §*Epigaea repens* L. - trailing-arbutus
- §*Gaultheria procumbens* L. - wintergreen
- *§*Ilex opaca* Aiton - American holly
- Iris cristata* Aiton - dwarf crested iris
- Iris verna* L. - dwarf iris
- Liquidambar styraciflua* L. - sweetgum
- Lonicera sempervirens* L. - trumpet honeysuckle
- Lygodium palmatum* (Bernh.) Sw. - American climbing fern
- **Magnolia virginiana* L. - swamp magnolia
- Mentha spicata* L. - spearmint
- Pellaea atropurpurea* (L.) Link - purple cliffbrake
- §*Pinus pungens* Lamb. - table-mountain pine
- Pinus taeda* L. - Loblolly pine

Prunus virginiana L. - chokecherry

Quercus macrocarpa Michx. - bur oak

§*Rhododendron maximum* L. - rhododendron

Taxodium distichum (L.) Rich. - bald-cypress

§*Tsuga canadensis* (L.) Carrière - eastern hemlock

Veratrum viride Aiton - false hellebore

Viburnum nudum L. - possum-haw

Viola pedata L. - bird's-foot violet

**Vitis labrusca* L. - fox grape

Killip and Blake, in their own list of transplants, included two species, *Hydrastis canadensis* L. (goldenseal) and *Spigelia marilandica* L. (Indian-pink), that McAtee did not mention, but they did not specify in their list which species were planted on the island and which on the mainland.

Thus, altogether, the published records show that 39 species were transplanted to the island and/or mainland during the early years of Club ownership (McAtee's long list + *Hydrastis*, *Pinus strobus*, *Polypodium*, *Spigelia*). At least 10 additional species are mentioned in fragmentary notes of McAtee (McAtee file, WBFC archives), but they were never documented in print by him or others. Of the 10, none was included in the flora by Killip and Blake, and none has survived to recent times.

Of the 36 planted species named in print by McAtee (list of 35 + *Polypodium*), Killip and Blake's (1935) own list of planted species included only 18. They did not include any of these 18 in their formal catalog of the flora, but they did include 9 (see above) of McAtee's other 18

species. Our Checklist also includes these 9 and another 4 from McAtee's list (see Flora Statistics).

From the wildflower garden, only the holly has survived to the present, although no longer on the high knoll, where it persisted until at least the early 1960s, as did also the hemlock (see species entries in Checklist). One small but relatively old, staminate, holly tree (DBH 12-15 cm) is growing in the depression between the knolls. It is unclear from the record whether American holly also occurred naturally on the island at the time of the planting. Of the wildflower-garden species planted on the mainland as well as the island (McAtee 1930, p. 54), only the holly remains on the mainland today, represented by several shrubs and small trees that presumably are descendants of the original planting.

At some point long after these early introductions *Buxus sempervirens* L. was planted on the Barton Property (mainland), but Killip and Blake, despite Killip's specimen (*E. P. Killip* 36989. 17 July 1949), did not include it in their 1953 list of additions to the flora. It also is not included here. Undoubtedly, *Hedera helix* L. (English ivy), a longtime member of the flora, also was planted, although there is no record of the planting. It is well established at the Lock House for Lock 11 and other places on the mainland but only now is being included in the Checklist. There are several other suspected deliberate introductions particularly among the naturalized species in the list of post-1953 additions (see Flora Statistics).

Excluded Species

As will be apparent from the synonymy, a number of the species recognized by Killip and Blake (1935, 1953) are not recognized in our *Checklist* because they are now included in other

species. In addition, the following species recognized by Killip and Blake are omitted from the *Checklist* for the reasons given below:

Apocynum medium Greene - Specimens subsequently redetermined as *A. pubescens* R. Br., which has since been reduced to a variety of *A. cannabinum* L.

Carex complanata Torr. & Hook. - Based on misidentified specimens of *C. hirsutella* Mack.

C. cristatella Britton - Based on misidentified collection (*E. P. Killip* 32608. 19 June 1938. 3 sheets) of *C. tribuloides* Wahlenb.

Carya alba (L.) K. Koch (= *C. tomentosa* (Poiret) Nutt.) - Based on two misidentified specimens, one *C. cordiformis* (Wangenh.) K. Koch (*P. C. Standley* 11481. 9 May 1915), the other *C. glabra* (Mill.) Sweet (*E. P. Killip* 13207. 24 Jun 1928).

Celtis mississippiensis Bosc (= *C. laevigata* Willd.) - Based on misidentified specimen (*A. S. Hitchcock* 12782. 13 Jun 1915) of *C. tenuifolia* Nutt.

Ceratophyllum demersum L. - Based on misidentified specimens of *C. echinatum* A. Gray.

Cornus stolonifera Michx. (= *sericea* L.) - Based on misidentified specimen (*A. S. Hitchcock* 12915. 24 Jun 1917) of *C. amomum* Mill. from the Island.

Cyperus dipsaciformis Fernald (= *C. retrofractus* (L.) Torr.) - Based on misidentified specimen (*S. F. Blake s.n.* 5 Aug 1933) of *C. lancastriensis* Porter ex A. Gray.

C. filiculmis Vahl - Based on misidentified specimen (*E. P. Killip* 32633. 17 Aug 1938) of *C. lupulinus* (Spreng.) Marcks.

Cystopteris fragilis (L.) Bernh. - In the strict sense, no longer regarded as occurring in the Washington-Baltimore Area, where it is replaced by segregates *C. prothrusa* (Weath.) Blasdell and *C. tenuis* (Michx.) Desv., both of which have been found on Plummers

Island.

Desmodium pauciflorum (Nutt.) DC - Based on misidentified specimen (*E. P. Killip 31069*. 06 Aug 1933) of *D. nudiflorum* (L.) DC. (cf. Killip & Blake 1935, 1953).

Eragrostis hirsuta (Michx.) Nees - Based on misidentified specimen (*E. P. Killip & J. R. Swallen 31889*. 12 Jul 1936) of *Eragrostis capillaris* (L.) Nees.

Juncus dudleyi Wiegand - Based on two misidentified specimens (*A. S. Hitchcock 13003*. 15 July 1917; *A. S. Hitchcock 15618*. 29 Jul 1917) of *J. dichotomus* Elliott.

Petunia violacea Lindl. - Misapplied to *P. axillaris* (Lam.) Britton, Sterns & Poggenb. or based on misidentified specimen (*E. P. Killip 31928*. 16 Aug 1936) of *P. axillaris*.

Quercus coccinea Münchh. - Based on misidentified specimen of *Q. rubra* L. (*C. L. Pollard & P. Dowell 18*. 16 Aug 1903), which was first identified as *Q. palustris* Münchh. and then as *Q. coccinea*.

Q. heterophylla (= *Hheterophylla*) F. Michaux. - *Q. phellos* L. H *rubra* L., included in *phellos*.

Q. saulii (= *Hsaulei*) C. K. Schneid. - *Q. alba* L. H *montana* Willd. (*G. B. Sudworth s.n.* 8 Jul 1906), included in *alba*.

Q. velutina Lam. - Based on misidentified specimen (*A. S. Hitchcock 12436*. 25 Apr 1915) of *Q. rubra* L.

Rosa virginiana Mill. - Based on several misidentified specimens of *Rosa carolina* L.

Sanicula marilandica L. Included in 1935 checklist of Killip and Blake (as *Sanicula marylandica*) obviously on the basis of *A. S. Hitchcock 12552*, collected May 9, 1915, and identified as this species. *P. C. Standley 11493*, collected on the same date and identified only to genus, appears to be a duplicate. Although Hitchcock's specimen was later (1933) annotated by

Mildred E. Mathias as *S. canadensis* L., and Standley's specimen was annotated by Ren Hwa Shan and Lincoln Constance in "1948-1949" as *S. marilandica* L., both specimens, which are in an early flowering stage, appear to be closer to *S. gregaria* Bickn. It is clear from the disagreements of the experts that the sanicles of Plummers Island are in need of careful study through the seasons.

Scirpus validus Vahl (= *Schoenoplectus validus* (Vahl) A. Löve & D. Löve) - Mistakenly based on an unidentifiable fragment of *Juncus* (E. P. Killip 31986. 11 Oct 1936).

Flora Statistics and Analysis

Total Species.....	885
Native Species.....	704 (80%)
Introduced Species.....	181 (20%)
Island Only or Island & Mainland.....	808 (91%)
Mainland Only.....	77 (9%)
Ferns & Fern Allies.....	20 (2%)
Gymnosperms.....	6 (<1%)
Dicots.....	621 (70%)
Monocots.....	238 (27%)

The Checklist, like the combined lists of Killip and Blake (1935, 1953), includes all the native and naturalized ferns, fern allies, gymnosperms, and flowering plants that have ever been

reported growing in the wild on Plummers Island and/or the adjacent “mainland,” the land between the island and the C&O Canal. In addition, as already indicated, the Checklist includes a few species that were planted and became naturalized or persisted for a long time, hence were noticeable elements of the flora for years (see Planted Species). The status of each is made clear in its Checklist entry. Among fragmentary notes of McAtee in the WBFC archives are some spring field trip lists for several years around 1910. They include some species that are not vouchered with specimens and were not included by Killip and Blake (1935, 1953), presumably for good reason. Accordingly, they are not included here.

All but four were already included by Killip and Blake. The four transplanted species that have been added here are *Pinus taeda* (loblolly pine), *Taxodium distichum* (bald-cypress), *Tsuga canadensis* (eastern hemlock), and *Viburnum nudum* (swamp-haw). None of the four is still living, nor is the year each died known, but all clearly persisted for years. Killip or other early collectors preserved specimens of them, indicating that the four were being treated as species in the flora. Of the four, only the *Taxodium* was outside (slightly north of) its native range here. At least two trees were still standing as snags in 2004.

Among fragmentary notes of McAtee in the WBFC archives are some spring field trip lists for several years around 1910. They include some species that are not vouchered with specimens and were not included by Killip and Blake (1935, 1953), presumably for lack of confirming documentation. Accordingly, they are not included here. There is also McAtee's 1910 list of 534 spermatophytes, discussed earlier, which includes 40 or so species that apparently were not included and, therefore, presumably rejected by Killip and Blake (1935, 1953) and thus also have not been included in our Checklist. Nevertheless, the fact remains that among the 75 or so species

not included in our Checklist because Killip and Blake had passed over them there are quite a few credible records, which suggests that the cumulative flora of Plummers Island, including the mainland, since the WBFC began studies there actually should total well over 900 species.

The outer and inner boundaries of the mainland with respect to the canal and towpath on the outside and the island and river channel on the inside were never clearly defined for floristic purposes. Although Club property ended at the towpath on the outer edge, a number of species that grew in the adjacent portions of the canal were included by Killip and Blake in their lists. For this reason, the canal between Locks 10 and 12 is considered part of the mainland in our Checklist. As for the inner boundary, it is impossible to determine whether the early collectors consistently regarded plants on the rocky islets and among the crossing rocks in the channel as belonging to the island flora or the mainland flora.

For our purposes, the middle of the channel is regarded as the dividing line. In fact, where this boundary is placed ultimately affects few if any species in terms of the island/mainland distinction. For example, the most recent collection of *Paspalum repens* P. J. Bergius, cited in the Checklist, was made by Shetler and Orli (2004-24) on an islet in the channel. Because the islet site is nearer the shore of the island than of the mainland, the collection is treated in the Checklist as from the island. In the past, however, it had already been collected on both the island and the mainland.

The combined lists of Killip and Blake totaled 846 species (see Killip & Blake 1953), compared to our 885. Owing, however, to corrected identifications and other taxonomic changes (e.g., combined spp., as *Viola papilionacea* in *V. sororia*), their lists would total only about 800 in today's taxonomy. In fact, of our 885 species, 92, distributed in 44 families, are new to the

cumulative known flora of Plummers Island, including the mainland. These are flagged in the Checklist with a plus sign (+)

Only 42 of the 92 species were discovered in or after 1953. The other 50 were collected in earlier years and for whatever reason (misidentified, buried in unprocessed specimens, etc.) went unrecognized and were not included by Killip and Blake in either of their lists. Thus, although they were never reported before, they are not species newly found since the last summary was published in 1953. Of the 42 species dating to 1953 or later, 23, about 50%, are introduced. This clearly reflects the explosive spread in recent years of alien species in the local flora.

The 42 new species dating to 1953 or later are the following, listed alphabetically within category. This represents almost one new species a year, no doubt counter-balanced by an equal or greater loss per year. Codes indicate if the species were collected or sighted in 1997 by Wells and her students or have been seen more recently by Wells or other botanists. Adding up the species coded I or M, it can be seen that 26 of the 42 species (62%) were present as recently as 2000 (*Carex albolutescens*) or 2003-2004. By contrast, only 5 species (*Aster lateriflorus*, *Solidago rupestris*, *Carex planispicata*, *Celtis tenuifolia*, *Cystopteris protrusa*, as *C. fragilis*) of the 50 pre-1953 additions (10%) to the Checklist were still present this recently. We have no ready explanation other than chance for why 90% of these have disappeared in contrast to about 65% for the flora as a whole (see below).

Key

All caps - Naturalized species

I - Seen on island only or island and mainland in 2003 or 2004

M - Seen on mainland only in 2003 or 2004 except as otherwise indicated

W - Collected or seen on island by E. F. Wells and students in 1997

Dicots

ALBIZIA JULIBRISSIN - I

Ammannia coccinea - W

Amorpha fruticosa

AMPELOPSIS BREVIPEDUNCULATA - M

ARTEMISIA VULGARIS - I

Asclepias quadrifolia

BERBERIS THUNBERGII - M

CELASTRUS ORBICULATUS - I

CONIUM MACULATUM - I

Conopholis americana

EUONYMUS ALATUS - M

E. FORTUNEI - M

Eupatorium serotinum - I

HEDERA HELIX - I

HIBISCUS TRIONUM - M

LAPSANA COMMUNIS

LIGUSTRUM OBTUSIFOLIUM - I

LONICERA MAACKII - I

LUDWIGIA PEPLOIDES - W

Myosotis verna

MYRIOPHYLLUM SPICATUM

POLYGONUM CUSPIDATUM - I

P. hydropiperoides - I

P. PERFOLIATUM - M

ROSA MULTIFLORA - I

Rubus hispidus

SOLANUM PHYSALIFOLIUM - M

SONCHUS ASPER - I

STYLOPHORUM DIPHYLLUM - I

Valerianella radiata - W

Viburnum rafinesqueanum

Monocots

ARTHRAOXON HISPIDUS - W

Carex aggregata - I

C. albolutescens - M (2000)

C. gracilescens - I

Echinochloa muricata

Elymus macgregorii - I

E. riparius - I

Lemna minor

L. obscura

MICROSTEGIUM VIMINEUM* - IOrontium aquaticum* - W

31 dicots, 11 monocots; 19 native species, 23 (55%) naturalized species

Clearly, many of the species in the Checklist are no longer present in the Plummers Island flora. The flora is in constant flux from season to season and year to year, especially because of frequent flooding. Many of the species found over the years on the active floodplain have been very transient, lasting a season or two and then disappearing. In past, especially dry years when wide mudflats have been exposed during much of the summer, new species have shown up for at least that season. Thus, at any given time the total catalog of extant species is impossible to determine precisely.

Some species apparently have come and gone more than once. *Astragalus canadensis* (Canada milk-vetch), for instance, was collected (as *A. carolinianus*) in 1903 by T. H. Kearney, but by 1935 Killip and Blake, who had not seen this or any other specimen but included the species on the basis of a reliable report, speculated that the species was “extinct” on the island. In 1940, however, Killip (32928) collected it again. In their 1953 supplement Killip and Blake said it had persisted ever since, but in the years since 1953 the species has disappeared from the flora again.

The likelihood of a given species in the Checklist still being present in the flora can be judged to some extent by how recently it was collected or otherwise documented. For this reason, the latest collection or observation is cited for each species in the Checklist.

Although the most recent collections are still being processed, insofar as possible they

have been cited in the Checklist where appropriate. (For the most up-to-date listings of specimens on deposit, search the DC Herbarium database (locality: Plummers Island) on the Web site of the Flora of the Washington-Baltimore Area.) The Kress collections and the recent collections and observations of others form the basis for flagging each species in the Checklist that has been seen on the island and/or mainland in 2003-2005 (see Key).

Total species seen in 2003-2005 (I + M).....	300
Native species.....	239 (80%)
Introduced species.....	61 (20%)
Island + island & mainland (I).....	250 (83%)
Mainland only (M).....	50 (17%)

Of the 885 species recorded historically for either the island, the mainland, or both, the current 300 represents about 34%. If the “mainland only “species are excluded, then the total is 808, of which the current 250 represents about 31%. Thus, the present flora of Plummers Island would appear to be about a third of the cumulative flora, whether or not the mainland-only species are included.

Among the species that Wells and her students collected or noted on the island in 1997, 80 were not found here again in 2003-2005, although 9 of them were found on the mainland, leaving 71 unaccounted for in the present flora. In the Checklist, her collections are cited, if not superseded, and her observation-only records are denoted at the end of the entries by a “W,” meaning last seen on the island in 1997, by Wells. (The 9 that did show up in 2003-2005 but only on the mainland are denoted by “M, W.”) If one were to assume that all of the species found as recently as 1997 are still on the island, mainland, or both and will turn up sooner or later, then,

adding to the 300 the 71 species not actually seen again in 2003-2005, one could project an extant flora of the island and mainland as high as 371 species. This would represent 42% of the historical total of 885 for the island and mainland together or 46% of the historical total of 808 for the island alone.

Thus, the extant flora of Plummers Island could number upwards of half of the historical total, but this seems highly unlikely. It is much more likely that the present flora is closer to a third than a half of the cumulative total. It seems unlikely, given the ecological succession that has continued to take place over the many years and the steadily increasing browsing of white-tailed deer in recent years, that any more than another 50 species at best can be found at present, for a total of around 350 extant species. This is surely a very liberal estimate.

The total number of 885 is almost a third (32%) of the 2794 species of vascular plants recently reported for the entire Washington-Baltimore Area (Shetler & Orli 2000, 2002). Nearly 36% of the flora of the Washington-Baltimore Area is composed of introduced species, almost twice the 20% of the Plummers Island flora. The comparison may be misleading, however, because the figures are based on cumulative species lists, not on present floras. For Plummers Island, for which current figures are available, the percentages are still the same, based on the 300 species counted in 2003-2005. Of them, 61 or 20% are introduced. As shown above, however, of the 42 species added to the flora since 1953, 55% are introduced. A contemporary comparison with the whole Washington-Baltimore Area cannot be made, however, because the size of its extant flora at this point in time is unknown.

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Rebecca L. Brown and Venkat S. Murthy assisted Wells in 1997 in making collections on Plummers Island itself to document their study of the vegetation, particularly on the floodplain. The first set (137 specimens) of these important collections is deposited in the Plummers Island Herbarium of the U. S. National Herbarium.

We could not have done this project without the continuing support of the Department of Botany, chaired by W. John Kress. Kress, with the assistance of Michael Butts and Norman A. Bourg, made an important new collection of about 150 specimens during 2004, which were made available to us for study and citation, thanks especially to Ida Lopez. He also provided some of the photographs for this paper, as did Bourg. We are indebted also to Matthew C. Perry and Edward Lohnes for photographs. Dan Nicolson, as always, was patient and generous with his time and expertise whenever asked for help with nomenclatural problems. His review, as well as that of an anonymous reviewer, provided many helpful suggestions for improving the manuscript. Katherine Rankin and George (“Rusty”) F. Russell facilitated any number of specimen processing transactions, so that it has been possible to incorporate newly collected specimens into the Plummers Island Herbarium quickly.

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References Cited

Literature

- Chuang, T. I. and L. Constance. 1977. Cytogeography of *Phacelia ranunculacea* (Hydrophyllaceae). *Rhodora* 79: 115-122.
- Drouet, F. 1954. Blue-green algae (Myxophyceae). Natural History of Plummers Island, Maryland XI. *Proc. Biol. Soc. Wash.* 67:239-241.
- Erwin, T. L. 1981. The ground beetles of a temperate forest site (Coleoptera: Carabidae): An analysis of fauna in relation to size, habitat selection, vagility, seasonality, and extinction. Natural History of Plummers Island, Maryland XXVI. *Bull. Biol. Soc. Wash.* 5: 104-224.
- Gleason, H. A. and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada. New York Botanical Garden, NY. 910 p.
- Hale, M. E., Jr. 1970. Single-lobe growth-patterns in the lichen *Parmelia caperata*. *The Bryologist* 73: 72-81.
- _____. 1972. Infestation of the lichen *Parmelia baltimorensis* Gyel. & For. by *Hypogastrura packardi* Folsom (Collembola). Natural History of Plummers Island, Maryland XXI. *Proc. Biol. Soc. Wash.* 85: 287-295.

- _____. 1979. Lichen growth responses to stress induced by automobile exhaust pollution. *Science* 204: 423-424.
- Hermann, F. J. 1946. A Checklist of Plants in the Washington-Baltimore Area. Ed. 2. Conference on District Flora, Smithsonian Institution, Washington, DC. Duplicated. 114 p.
- Hitchcock, A.S. and P. C. Standley. 1919. Flora of the District of Columbia and vicinity. *Contr. U.S. Natl. Herb.* 21: 1-329.
- Killip, E. P. and S. F. Blake. 1935. Flowering plants and ferns. Natural History of Plummers Island, Maryland II. *Proc. Biol. Soc. Wash.* 48: 118-134.
- _____. 1953. Flowering plants and ferns—Supplement. Natural History of Plummers Island, Maryland X. *Proc. Biol. Soc. Wash.* 66: 31-38.
- Kress, W. J., K. J. Wurdack, E. A. Zimmer, L. A. Weigt, and D. H. Janzen. 2005. Use of DNA barcodes to identify flowering plants. *Proc. Nat. Acad. Sci.* 102: 8369-8374.
- Lawrey, J. D. and M. E. Hale, Jr. 1977. Studies on lichen growth rate at Plummers Island, Maryland. Natural History of Plummers Island, Maryland XXIII. *Proc. Biol. Soc. Wash.* 90:698-725.
- _____. 1981. Retrospective study of lichen lead accumulation in the northeastern United States. *The Bryologist* 84: 449-456.
- Leonard, E. C. 1935. Mosses. Natural History of Plummers Island III. *Proc. Biol. Soc. Wash.* 48: 135-137.
- _____ and E. P. Killip. 1939. Lichens. Natural History of Plummers Island, Maryland VIII. *Proc. Biol. Soc. Wash.* 52: 23-26.
- _____ and M. E. Pierce. 1939. Hepaticae. Natural History of Plummers Island, Maryland.

Proc. Biol. Soc. Wash. 52: 21-22.

Maxon, W. R. 1935. Introduction. Natural History of Plummers Island, Maryland I. *Proc. Biol. Soc. Wash.* 48: 115-117.

McAtee, W. L. 1930. Seventh supplement to the Flora of the District of Columbia and Vicinity. *Proc. Biol. Soc. Wash.* 43: 21-54.

Shetler, S. G. and S. S. Orli. 2000. Annotated Checklist of the Vascular Plants of the Washington- Baltimore Area. Part I. Ferns, Fern Allies, Gymnosperms, and Dicotyledons. Smithsonian Institution, Washington, DC. xv +188 p. (Duplicated)

_____. 2002. Annotated Checklist of the Vascular Plants of the Washington-Baltimore Area. Part II. Monocotyledons. Smithsonian Institution, Washington, DC. xiv + 95 p. (Duplicated)

Standley, P. C. 1915. A new species of *Iresine* from the United States. *Proc. Biol. Soc. Wash.* 28: 171-174.

Stevenson, J. A. and E. M. Ermold. 1936. Fungi. Natural History of Plummers Island, Maryland V. *Proc. Biol. Soc. Wash.* 49: 123-131.

Walcott, M. V. 1925. North American Wild Flowers. Smithsonian Institution, Washington, DC. 5 vols. (400 color pls.).

Ward, L. F. 1881. Guide to the flora of Washington and vicinity. *Bull. U.S. Natl. Mus.* 22: 1-264.

Washington Biologists' Field Club Archives. Currently (2005) housed in Department of Botany and maintained by chairman of Archives Committee of WBFC , Laurence E. Skog, curator of botany emeritus, National Museum of Natural History, Smithsonian Institution, Washington, DC.

Web Sites

Flora of the Washington-Baltimore Area, 2005: <http://www.nmnh.si.edu/botany/projects/dcflora>

WBFC (Washington Biologists' Field Club), 2005:

<http://www.pwrc.usgs.gov/resshow/perry/bios/WBFCHome.htm>

Checklist

The Checklist is a cumulative list of all the native or naturalized vascular plant species ever documented for the Island and adjacent Mainland. A few transplanted species, clearly indicated, are also included.. The Checklist is based primarily on the voucher specimens preserved in the Plummers Island Herbarium, which can be accessed online through the Web site of the Flora of the Washington-Baltimore Area (see References Cited), and every specimen cited is in this herbarium or soon will be. The classification, circumscription, and nomenclature of the species follow Shetler and Orli (2000, 2002), as well as the current arrangement in the DC Herbarium, with two exceptions: *Dentaria* is placed in *Cardamine* here and *Hepatica* in *Anemone*. This, increasingly, is current practice. Otherwise, the classification is largely conservative and conventional for the practical reasons discussed in Shetler and Orli (2000) and for the most part does not reflect the explosive, continuing redefinition of families and genera resulting from molecular studies. No attempt has been made to treat infraspecific taxa in the flora.

The accepted genera and species in the list are not in *italics*, as is conventional for scientific names, but in **boldface** Roman type to set them apart as the entries, not to be confused with the *italicized* synonyms and collector citations.

For genera and/or species known or believed to be *naturalized aliens* in the Washington-Baltimore Area, as indicated by font in Shetler and Orli (2000, 2002), the scientific names likewise are given in a different font in large and small capital letters here. If the genus includes native and naturalized species, then only the epithets of the alien species are in all caps, and the generic name is not in all caps. A dagger (†) before the specific name denotes a species found only

on the Mainland, and a plus (+) denotes a species that is new to the flora, not included in either of the earlier lists of Killip and Blake.

For each species entry, following in sequence after the scientific name are (1) one or more common names, (2) pertinent scientific name synonyms, if any, (3) the number of specimens, if any, in the Plummers Island Herbarium, given in parenthesis, (4) citation of the most recent specimen on deposit at the Smithsonian, or, lacking a voucher specimen, citation of the source of information, and (5) "Comments." The Comments are all by Shetler but may include the quotation or citation of others. Also, anything in a species entry that is in brackets represents an insertion by Shetler.

The synonymy is tailored particularly to past usage for Plummers Island, either in the Plummers Island Herbarium or in the lists of Killip and Blake or other local sources. The type of synonymy is not always indicated, and, on the face of it, not all of the synonyms are legitimate synonyms. Some are legitimate names for other species under which the Plummers Island plants have been treated in the past, either by mistake or owing to a broader species concept at the time. The purpose of the synonyms is not to give nomenclatural history but to help the user of our Checklist to trace an accepted name to earlier local usage, which may have been in error. Thus, for two fern examples, *Polypodium virginianum* was included by Killip and Blake in a broad *P. vulgare*, and *Cystopteris fragilis* included the segregates *C. protrusa* and *C. tenuis*. Consequently, *P. vulgare* and *C. fragilis* are listed as synonyms of the respective species, which, strictly speaking, they are not. In the case of hybrids, as in *Quercus*, the hybrid name has been listed as a synonym only under the parent species to which the putative hybrid specimen has been referred.

The specimen citations include, to the extent given on the collection label, the collector(s),

collection no., date of collection, and pertinent locality data. The locality data are not necessarily verbatim, unless in quotation marks, and may be condensed. Here and henceforth in the Checklist entries “Mainland” and “Island” are treated as place names and capitalized. (Otherwise, in the general narrative of the Introduction they have not been capitalized.)

Unless otherwise indicated, the latest specimen represents the most recent documented sighting of the species. The lack of a recent specimen or other sighting documentation, however, does not necessarily indicate that the species no longer occurs on the Island or the Mainland, but in most cases this probably is true.

At the end of an entry, the letter “I” means that the species has been observed on the Island and, in some cases also the Mainland, in 2003-2005; an “M” means that the species has been observed only on the Mainland in 2003-2005; and a “W” means that the species was seen but not collected on the Island in 1997 by Wells, Brown, and Murthy during their vegetation study (Mainland not included) but has not been seen more recently. In the case of cited specimens of Wells et al., the year 1997 is already in the species entry, which, therefore, is not also marked with a “W.”

Collecting Sites

Over the years, the different collectors have developed their own names for various sites on the Island and Mainland, which were not always the same for the same places. There is no existing gazetteer or recorded documentation, such as a labeled map, for these site names. Some are obvious or traditional, and the others have to speak for themselves from the context of their associated label data. In any event, the whole area is so small in geographic terms that local site

names are likely to be of limited value to most potential users of this Checklist. Nevertheless, some of the most frequently used site names are listed below with brief explanations of their locations or apparent locations. Major sites are labeled on the map of the Island and Mainland (Fig. 1). Others are keyed to the map by number, and the number is given in parentheses at the end of the entry. A few, as indicated at the ends of the entries, are labeled on the aerial photograph of the area (Fig. 2). Except in the obvious cases, the map locations should be viewed as approximations.

Barrens (or "Barrens") - flood-swept, exposed area of Island along river channel that separates Island from Mainland; long since grown up in secondary forest. (16)

Barton Property - 1.4-hectare parcel between Rock Run and Lock 10 added to Mainland portion of WBFC property in 1924. (6)

Beltway - Capital Beltway, Interstate 495, which crosses Potomac River just west (upriver) of Island and connects Maryland with Virginia via American Legion (Cabin John) Bridge. (Fig. 2)

Boat Landing - landing area on river side of Cabin Hill directly downhill (south) from cabin; not used for many years. (18)

C&O Canal - Chesapeake and Ohio Canal, now part of C&O Canal National Historical Park.

Cabin - WBFC clubhouse built in 1901 mid-Island on highest point and still kept in repair and used; officially called Winnemana ("beautiful island") Lodge in early years.

Cabin Hill (Knoll) - high knoll mid-Island on which WBFC cabin stands. (15)

Cabin John Bridge (properly called American Legion Bridge; see Beltway). (Fig. 2)

Cactus Rock - flat-topped rock promontory just southwest and downslope from cabin; overlooks

Potomac River and harbored a small population of *Opuntia humifusa*, eastern prickly-pear cactus, for years. (14)

Channel (Lagoon) - narrow channel of Potomac River that separates Island from Mainland.

Crossing Rocks (also Rock Crossing) - rocky narrows of channel near east end of Island where channel can be bridged on foot over rocks at times of low water.

Dead Run - a small tributary feeding into Channel near west end of original Mainland property.

Not the well known Dead Run in Virginia across river opposite Island. ((2)

East Sandbar - sandbar at east (downriver) end of Island. (20)

East End - lower or downriver end of Island. (22)

Fern Valley - area with large colony of ostrich fern, *Matteuccia struthiopteris*, on alluvial terrace downslope on Cabin Hill, southeast of cabin. (17)

Ferry - tethered boat used from time to time to transport WBFC members across channel to and from Island; area is near mid-point of Island (north of cabin), but exact location not fixed and has moved back and forth along Channel over the years, as flooding has changed shores.

Ferry Dock - a dock of sorts for ferry was built and rebuilt after floods a number of times on one or both sides of Channel, not always at same spot. Effort to have permanent dock eventually abandoned for temporary measures as needed. (Location of dock moved back and forth with ferry.)

Fisher Garden (or Farm) - western third of Mainland area where A. K. Fisher started an arboretum for trees and shrubs native to region, especially the rarer ones (see Planted Species).

Floodplain - low areas of Island subject to regular, occasional, or rare flooding, depending on elevation; consists of active muddy zone along river and Channel banks and one or more higher, wooded terraces; rocky high points of Island not known to flood.

Frog Pond (s) - chain of three or four small woodland ponds in western third of Mainland, now reduced to one or two, depending on rainfall. (3)

Gap - Saddle depression between Cabin and West knolls. (13)

High Knoll - Cabin Hill, Cabin Knoll. (15)

I-495 bridge - See Beltway. (Fig. 2)

Lagoon - See Channel.

Locks 10-13 - locks of old C&O Canal in vicinity of Plummers Island. Lock 10 marks eastern boundary of Mainland of WBFC's original property and has small canal parking area.

Lock 11, just west of Rock Run, is in northeast corner of original Stewart Farm parcel of Mainland. Lock 12 marks western boundary of Mainland, and Lock 13 is west of property.

Lock House - lock keeper's residence during years of canal operation. Houses still present at Locks 10 and 11, but in use only at Lock 10. (5)

Lower end - east or downriver end of Island. (22)

Mainland - original WBFC property between C&O Canal, Locks 10-12, and Island (15.6 hectares [38.5 acres]).

Northwest Swamp - swampy woods in northwest corner of Mainland property. (1)

Outlook Rock - probably same as Rock of Gibraltar. (10)

Party spot - sheltered area among rocks near west end but just northeast of Rock of Gibraltar. (8)

Poachers Landing - boat landing somewhere around the east end, apparently on river side of Island. (21)

Prospect Rock - west end; probably same as Rock of Gibraltar. (10)

Rock Crossing (see Crossing Rocks).

Rock of Gibraltar - major rock outcrop and promontory at west end. (10)

Rock Run - small Potomac River tributary just east of Lock 11, forming original but not ultimate eastern boundary of Mainland property of WBFC.

Stewart Farm - large, once cultivated, eastern part of Mainland, bounded on the east by Rock Run. (4)

Sycamore Cove - little cove near east end on river side. (19)

Upper End - upriver (west) end of Island. (9)

Upper Gap - depression/opening near northwest end (northwest of lower knoll); once much more exposed. (7)

West End - upper or upriver end of Island. (9)

West Knoll - second highest point on Island. (12)

West Sandbar - river sandbar at west end. (11)

Quick Key:

All caps: (1) Genus and species naturalized (e.g., **ANTHEMIS ARVENSIS**); (2) species only (e.g., **BIDENS ARISTOSA**).

† - Species known only from Mainland.

+ - Species new to Checklist.

I - Species collected or seen in 2003-2005 on Island only or Island and Mainland.

M - Species collected or seen in 2003-2005 on Mainland only.

W - Species seen but not collected in 1997 by Wells et al.; her 1997 observations are so indicated only if they have not been superseded by more recent collections or observations.

FERNS AND FERN ALLIES

EQUISETACEAE (Horsetail Family)

Equisetum arvense L. - common horsetail, field horsetail. (4) *M. Beyersdorfer 99*, 8 May 1983. Mainland, sandy valley of Rock Run.

hyemale L. - common scouring-rush. (*E. prealtum* Raf.) (2) *M. Beyersdorfer s.n.*, -- --- 1982 or 1983. Mainland, Dead Run area.

SELAGINELLACEAE (Spikemoss Family)

Selaginella †apoda (L.) Spring - meadow spikemoss. (1) *E.P. Killip 31148*, 22 Apr 1934. Mainland, near old spring.

ADIANTACEAE (Maidenhair Fern Family)

Adiantum pedatum L. - northern maidenhair fern. (1) *E.P. Killip 31283*, 19 Aug 1934. West Knoll.

ASPLENIACEAE (Spleenwort Family)

Asplenium ×ebenoides R.R. Scott (*A. platyneuron* × *rhizophyllum*) - Scott's spleenwort. (1) *W. Palmer s.n.*, 23 Apr 1899. In a rock crevice.

platyneuron (L.) Britton, Sterns & Poggenb. - ebony spleenwort. (7) *W.J. Kress & M. Butts 04-7488*, 20 May 2004. Ridge above central plain, mid-island. I.

rhizophyllum L. - walking fern. (*Camptosorus rhizophyllus* (L.) Link). (5) *E.C.*

Leonard & N. Hotchkiss 3207, 23 Jul 1960. Just off trail to east about midway between base of rocky Cabin Hill and summit. Comments: Ferry-Cabin trail, vertical rock surface.

trichomanes L. - maidenhair spleenwort. (1) *J.E. Benedict Jr.* 2926, 19 Aug 1934.

Twelve paces south of cabin, on rocks.

AZOLLACEAE (Mosquito Fern Family)

Azolla caroliniana Willd. - eastern mosquito fern. (1) *E.C. Leonard & N. Hotchkiss* 3591, 9

May 1961. Channel above ferry, on mud and surface of water.

DENNSTAEDTIACEAE (Bracken Fern Family)

Dennstaedtia punctiloba (Michx.) T. Moore - hay-scented fern. (1) *E.P. Killip & J.E. Benedict*

31287, 19 Aug 1934. South slope of Cabin Hill. M.

DRYOPTERIDACEAE (Wood Fern Family)

Dryopteris marginalis (L.) A. Gray - marginal shield fern, marginal wood fern. (*Aspidium*

marginalis (L.) Sw.) (11) *W.J. Kress & M. Butts* 04-7481, 20 May 2004. Ridge above central plain (SW of cabin). I.

Polystichum acrostichoides (Michx.) Schott - Christmas fern. (*Aspidium acrostichoides*

(Michx.) Sw.) (3) *W.J. Kress & M. Butts* 04-7516, 11 Jun 2004. Floodplain; mid-island near north shore. I.

OPHIOGLOSSACEAE (Adder's-tongue Fern Family)

Botrychium †dissectum Spreng. - cut-leaved grapefern, lace-frond grapefern, dissected grapefern. (*B. obliquum* Muhl.) (4) *E.P. Killip 32653*, 11 Jun 1939. Mainland, just inside fence about 100 feet east of upper gate.

virginianum (L.) Sw. - rattlesnake fern, common grapefern. (3, including photograph) *M. Beyersdorfer s.n.*, 2 Sep 1984 [photograph]. Mainland, edge of C&O towpath midway between Locks 11 and 12.

POLYPODIACEAE (Polypody Fern Family)

Polypodium virginianum L. - rock polypody, common polypody. (*Polypodium vulgare* L.) (5) *M. Beyersdorfer 1*, 4 Apr 1982. Cabin Hill, outcropping behind cabin. I.

WOODSIACEAE (Cliff Fern Family)

Cystopteris +protrusa (Weath.) Blasdell - lowland brittle fern, southern bladder fern. (*C. fragilis* (L.) Bernh.) (5) *W.J. Kress & M. Butts 04-7484*, 20 May 2004. Central plain (SW). Comments: The dominant segregate of *C. fragilis* s.l. on the Island. I.

+tenuis (Michx.) Desv. - Mackay's brittle fern, upland brittle fern. (*C. fragilis* (L.) Bernh.) (2) *W.R. Maxon 6495*, 1 Aug 1920. Rich alluvial sandy loam [2 sheets].
Comments: Segregate of *C. fragilis* s.l.

Matteuccia struthiopteris (L.) Tod. - ostrich fern. (*Pteretis nodulosa* (Michx.) Nieuwl., *P. pennsylvanica* (Willd.) Fernald). (4) *M. Beyersdorfer 223*, 5 Sep 1982. Fern Valley, south of Cabin Hill. I.

Onoclea sensibilis L. - sensitive fern. (5) *M. Beyersdorfer 68*, 21 May 1983. Mainland, C&O Canal. I.

Woodsia obtusa (Spreng.) Torr. - blunt-lobed cliff fern. (4) *E.C. Leonard & N. Hotchkiss 3323*, 27 Sep 1960. Upper Gap, west end, rock crevice. Comments: Observed in 2004 by Shetler and Orli in crevices of sandstone blocks in walls of Lock 12, just north of Mainland boundary. I.

GYMNOSPERMS

CUPRESSACEAE (Cypress Family)

Juniperus virginiana L. - eastern red-cedar, Virginia juniper. (4) *W.J. Kress & M. Butts 04-7480*, 20 May 2004. Just north of Cactus Rock. I.

Taxodium +†distichum (L.) Rich. - bald-cypress. (1) *E.P. Killip 36575*, 17 May 1942. Mainland, eastern end of east Frog Pond. Comments: Planted by A.K. Fisher. Still persisting in 1982, according to M. Beyersdorfer, but dead by Dec. 2002 (George E. Watson) or well before (probably).

PINACEAE (Pine Family)

Pinus †echinata Mill. - shortleaf pine, yellow pine. (Killip & Blake 1935).

+**taeda** L. - loblolly pine. (1) *E.P. Killip 36646*, 24 Jan 1943. Mainland, four trees east of upper trail, not far from Canal. Comments: Planted by A.K. Fisher. Long gone.

virginiana Mill. - scrub pine, Virginia pine, Jersey pine. (*P. inops* Sol. ex Aiton (Ward)).

(3) *M. Beyersdorfer* 438, 31 Oct 1982. Cabin Hill. Comments: Gone by 2003.

Tsuga +canadensis (L.) Carrière - eastern hemlock. (3) *M. Beyersdorfer* 262, 12 Sep 1982.

Comments: Planted by A.K. Fisher on Island and Mainland (McAtee 1930, pp. 53-54). Tree about 4 m high still persisting on island in 1982 (M. Beyersdorfer), but gone by 2003.

DICOTYLEDONS

ACANTHACEAE (Water-Willow Family)

Justicia americana (L.) Vahl - water-willow, American water-willow, dense-flowered water-willow. (*Dianthera americana* L.) (5) *M. Beyersdorfer* 117, 26 May 1983. East end of Island, in water. I.

Ruellia +caroliniensis (J.F. Gmel.) Steud. - hairy ruellia, slender ruellia. (*R. parviflora* (Nees) Britton) (4) *E.C. Leonard & N. Hotchkiss* 3197, 23 Jul 1960. Between Cabin Hill and west end, along trail. Comments: Three of the four specimens were collected before 1935. One was identified as *R. strepens*, but the two identified as *R. parviflora* apparently were overlooked by Killip & Blake in 1935 and 1953.

strepens L. - smooth ruellia. (2) *S.F. Blake s.n.*, 19 Oct 1933. On hill west of Cabin [West Knoll].

ACERACEAE (Maple Family)

Acer negundo L. - boxelder, ash-leaved maple. (*Rulac negundo* (L.) Hitchc.) (7) *W.J. Kress & M. Butts* 04-7504, 8 Jun 2004. Mid-island, north shore, along river [channel]. I.

rubrum L. - red maple. (1) *Collector Unknown s.n.*, 15 May 1926. West end of Island. I.

saccharinum L. - silver maple. (6) *W.J. Kress & M. Butts 04-7503*, 20 May 2004. Mid-island, north shore, along river [channel]. I.

saccharum Marshall s.l. - sugar maple. (*A. barbatum* Michx., *A. leucoderme* Small., *A. nigrum* F. Michx.) (14) *W.J. Kress & M. Butts 04-7531*, 23 Jun 2004. Below Cactus Rock (W side). I. Comments: Specimens of sugar maple have been misidentified as *A. barbatum* and *A. leucoderme*. *Acer nigrum* is included in *A. saccharum*.

AMARANTHACEAE (Amaranth Family)

Amaranthus albus L. - tumbleweed. (*Amaranthus graecizans* L.) (1) *E.P. Killip 13474*, 8 Sep 1930. Sandbar, east end.

hybridus L. - common pigweed, smooth pigweed. (*A. retroflexus* L., misapplied (Ward 1881)). (7) *E.C. Leonard & N. Hotchkiss 3532*, 9 May 1961. West end, low weedy bank.

SPINOSUS L. - spiny amaranth, thorny amaranth. (8) *W.J. Kress & M. Butts 04-7541*, 23 Jun 2004. SW shore: beach. I.

Iresine rhizomatosa Standl. - bloodleaf, Juda's-bush. (5) *P.C. Standley 12500*, 3 Oct 1915 [2 sheets: holotype & isotype]. Comments: This species described from Island (Standley 1915). Extirpated for many years.

ANACARDIACEAE (Sumac Family)

Rhus copallinum L. - shining sumac. (3) *M. Beyersdorfer 405*, 31 Oct 1982. Cactus Rock.

†**glabra** L. - smooth sumac. (1) *E.P. Killip 13227*, 14 Jul 1928. [Mainland], edge of Fisher Garden.

typhina L. - staghorn sumac. (2) *M. Beyersdorfer 432*, 31 Oct 1982. Sycamore Cove on the banks toward east end.

Toxicodendron radicans (L.) Kuntze - poison-ivy. (*Rhus radicans* L., *R. toxicodendron* L.) (6) *W.J. Kress & M. Butts 04-7470*, 13 May 2004. On rock at W side of Cactus Rock. I.

†**vernix** (L.) Kuntze - poison-sumac. (*Rhus vernix* L.) Comments: Reported by Killip & Blake (1935) from Mainland but specimen now missing; they added: "Extinct."

ANNONACEAE (Custard-apple Family)

Asimina triloba Dunal - pawpaw. (13) *W.J. Kress & M. Butts 04-7433*, 6 May 2004. Along path to cabin. I.

APIACEAE (UMBELLIFERAE) (Parsley Family)

Angelica †**venenosa** (Greenway) Fernald - hairy angelica. (*A. villosa* (Walter) Britton, Sterns & Poggenb.) (1) *E.P. Killip 13318*, 9 Sep 1928. Mainland, Stewart Farm.

Chaerophyllum procumbens (L.) Crantz - spreading chervil. (4) *E.C. Leonard & N. Hotchkiss 3489*, 9 May 1961. West end ridge. M.

+†**tainturieri** Hook. - southern chervil. (1) *P.C. Standley 11418*, 9 May 1915. Mainland. Comments: Originally identified as *C. procumbens*, but probably *C. tainturieri*, though intermediate.

Cicuta maculata L. - common water-hemlock, spotted cowbane. (1) *E.P. Killip 32599*, 19

Jun 1938. East end.

CONIUM +MACULATUM L. - poison-hemlock. (4) *W.J. Kress & M. Butts 04-7474*, 13 May

2004. Directly below Cactus Rock (SW). I.

Cryptotaenia canadensis (L.) DC. - honewort, wild chervil. (*Deringa canadensis* (L.) Kuntze).

(8) *E.F. Wells, R.L. Brown & V.S. Murthy 4387*, 30 Jul 1997. Floodplain. I.

DAUCUS CAROTA L. - Queen Anne's-lace, wild carrot. (5) *W.J. Kress & M. Butts 04-7569*, 22

Jul 2004. Along beach at E end. I.

Erigenia bulbosa (Michx.) Nutt. - harbinger-of-spring. (8) *M. Beyersdorfer 12*, 25 Mar 1983.

Gap woods toward channel side.

Osmorhiza claytonii (Michx.) C.B. Clarke - hairy sweet-cicely, bland sweet-cicely, sweet-jarvil.

(2) *A.S. Hitchcock 12764*, 6 Jun 1915.

longistylis (Torr.) DC. - anise-root, smooth sweet-cicely, long-styled sweet-cicely. (11)

W.J. Kress & M. Butts 04-7444, 6 May 2004. Along path directly below (ENE)

terrace. I.

PASTINACA SATIVA L. - wild parsnip, parsnip. (Killip & Blake 1935).

Sanicula canadensis L. - black snakeroot, Canada sanicle. (5) *T.H. Kearney & W.R. Maxon 1*,

24 Jul 1910. Edge of rocky woods. W.

odorata (Raf.) K.M. Pryor & L.R. Philippe - clustered snakeroot, fragrant snakeroot, fragrant sanicle. (*S. gregaria* E.P. Bicknell). (9) *E.F. Wells, R.L. Brown & V.S. Murthy 4341*, 1 Jul 1997. Floodplain. I.

Thaspium †barbinode (Michx.) Nutt. - hairy-jointed meadow-parsnip, bearded meadow-parsnip. (1) *E.P. Killip 13228*, 14 Jul 1928. [Mainland], woods near Fisher Garden.

Zizia +aurea (L.) W.D.J. Koch - common golden-Alexanders. (*Thaspium aureum* (L.) Nutt.) (5) *M. Beyersdorfer 14*, 11 Apr 1982. East tip. Comments: *A.S. Hitchcock 12479*, 1915, and *P.C. Standley 11286*, 1915, apparently overlooked by Killip and Blake (1935, 1953). In a W.L. McAtee spring list, 30 Mar 1913 (WBFC Archives). W.

APOCYNACEAE (Dogbane Family)

Apocynum cannabinum L. - Indian-hemp, hemp dogbane. (*A. pubescens* R. Br., *A. sibiricum* Jacq.) (9) *W.J. Kress & N.A. Bourg 04-7575*, 31 Jul 2004. On rock outcrop at E end. Comments: Very variable species. See also *A. medium* in "Excluded Species" in Introduction. I.

AQUIFOLIACEAE (Holly Family)

Ilex opaca Aiton - American holly. (2) *W.J. Kress & M. Butts 04-7485*, 20 May 2004. Central plain (west of cabin). Comments: Included by Killip & Blake (1935) with comment, "Formerly one plant grew on Island." Known to be introduced to both Island and Mainland (McAtee 1930, pp. 53-54) and, thus, probably not native there. I.

†**verticillata** (L.) A. Gray - black-alder, winterberry. (2) *E.P. Killip & 31262*, 22 Jul 1934. Mainland, Northwest Swamp. M.

ARALIACEAE (Ginseng Family)

Aralia †**spinosa** L. - Hercules'-club, devil's-walking-stick, angelica-tree. (1) *E.P. Killip 31268*, 29 Jul 1934. Mainland, northwest corner of Fisher Garden. Comments: Introduced (McAtee 1930, p. 54).

HEDERA +†**HELIX** L. - English ivy. Comments: Mainland, well established at Lock House of Lock 11, C&O Canal, and elsewhere. Present for years without being recorded. M.

ARISTOLOCHIACEAE (Birthwort Family)

Aristolochia serpentaria L. - Virginia-snakeroot. (1) *A.S. Hitchcock 15822*, 16 Sep 1917.

Asarum canadense L. - wild ginger. (*A. reflexum* E.P. Bicknell). (11) *W.J. Kress & M. Butts 04-7441*, 6 May 2004. Along path directly below (ENE) terrace. I.

ASCLEPIADACEAE (Milkweed Family)

Asclepias incarnata L. - swamp milkweed. (*A. incarnata* var. *pulchra* (Ehrh. ex Willd.) Pers., *A. pulchra* Ehrh. ex Willd.) (11) *W.J. Kress & M. Butts 04-7565*, 22 Jul 2004. Above channel near W point, across from I-495 bridge. I.

+**quadrifolia** Jacq. - four-leaved milkweed. (1) *E.S. Steele s.n.*, 31 May 1897.

Comments: Steele's specimen overlooked by Killip & Blake (1935, 1953).

†**syriaca** L. - common milkweed. (Killip & Blake 1935).

†**tuberosa** L. - butterfly-weed, pleurisy-root. (1) *E.P. Killip 13226*, 14 Jul 1928.

Mainland, near Fisher Garden.

Cynanchum laeve (Michx.) Pers. - honeyvine, sandvine. (*Ampelamus albidum* (Nutt.) Britton, *Gonolobus laevis* Michx.) (16) *W.J. Kress & N.A. Bourg 04-7620*, 5 Sep 2004. On rock outcrop at E end. I.

Matelea obliqua (Jacq.) Woodson - (*Gonolobus obliquus* (Jacq.) R. Br. ex J. Schult., *Vincetoxicum obliquum* (Jacq.) Britton). (4) *E.P. Killip 32116*, 13 Jun 1937. Just west of Gap between Cabin and West knolls, close to trail.

ASTERACEAE (COMPOSITAE) (Aster Family)

Achillea millefolium L. - common yarrow, milfoil. (3) *P.C. Standley 11856*, 24 Jul 1915.

Ageratina altissima (L.) R.M. King & H. Rob. - white snakeroot. (*Eupatorium altissimum* L., *E. rugosum* Houtt., *E. urticifolium* Reichard). (9) *W.J. Kress & N.A. Bourg 04-7589*, 29 Aug 2004. Among rocks, W side below Cabin. I.

Ambrosia artemisiifolia L. - common ragweed. (*A. elatior* L.) (2) *E.F. Wells, R.L. Brown & V.S. Murthy 4495*, 20 Sep 1997. Floodplain.

trifida L. - giant ragweed. (7) *E.F. Wells, R.L. Brown & V.S. Murthy 4873*, 31 Aug 1997. Floodplain.

Antennaria plantaginifolia (L.) Richardson - plantain-leaved everlasting, plantain-leaved pussytoes. (*A. arnoglossa* Greene, *A. fallax* Greene, *A. parlinii* Fernald). (8) *M. Beyersdorfer 65*, 2 May 1983. Cabin Hill summit, west side.

ANTHEMIS ARVENSIS L. - corn chamomile, field chamomile. (3) *S.F. Blake s.n.*, 20 Oct 1936.

Waste weedy ground formed by 1936 flood.

ARCTIUM MINUS Bernh. - common burdock. (1) *S.F. Blake s.n.*, 19 Oct 1933. North of West Knoll.

Arnoglossum atriplicifolium (L.) H. Rob. - pale Indian-plantain. (*Cacalia atriplicifolia* L., *Mesadenia atriplicifolia* (L.) Raf.) (4) *E.C. Leonard & N. Hotchkiss 3336*, 27 Sep 1960. River trail near base of Cabin Hill.

ARTEMISIA ANNUA L. - annual wormwood. (12) *W.J. Kress & N.A. Bourg 04-7622*, 5 Sep 2004. On rock outcrop at E end. I.

+**VULGARIS** L. - common mugwort. (1) *E.F. Wells, R.L. Brown & V.S. Murthy 4377*, 30 Jul 1997. Floodplain. M.

Aster cordifolius Michx. - common blue wood aster, common blue heart-leaved aster. (*A. sagittifolius* Wedem. ex Willd., *Symphyotrichum cordifolium* (L.) G.L. Nesom, *S. sagittifolium* (Wedem. ex Willd.) G.L. Nesom). (9) *E.F. Wells, R.L. Brown & V.S. Murthy 5185*, 21 Sep 1997. Floodplain. I.

divaricatus L. - white wood aster, common white heart-leaved aster. (*Eurybia divaricata* (L.) G.L. Nesom). (13) *W.J. Kress & N.A. Bourg 04-7585*, 29 Aug 2004. On rocks on W side, below cabin. I.

†**infirmus** Michx. - cornel-leaved aster, Appalachian flat-topped white aster. (*Doellingeria infirma* (Michx.) Greene). (1) *E.P. Killip 13319*, 9 Sep 1928. [Mainland], edge of Stewart Farm.

lanceolatus Willd. - panicled aster, tall white aster. (*A. paniculatus* Lam., *A. simplex*

Willd., *Symphyotrichum lanceolatum* (Willd.) G.L. Nesom). (12) S.G. Shetler & E.R.

Shetler 2004.33, 11 Oct 2004. West end, floodplain. I.

+**lateriflorus** (L.) Britton - calico aster, starved aster, goblet aster. (*A. vimineus* Lam.,

Symphyotrichum lateriflorum (L.) A. Love & D. Love). (4) E.C. Leonard & N.

Hotchkiss 3216, 27 Sep 1960. High Knoll, south slope. Comments: T.H. Kearney's

nos. 206 and 220, both collected Oct. 1, 1905, and clearly duplicates, apparently were

not seen by Killip and Blake (1935, 1953). I.

novae-angliae L. - New England aster. (*Lasallea novae-angliae* (L.) Semple &

Brouillet, *Symphyotrichum novae-angliae* (L.) G.L. Nesom, *Virgulus novae-angliae*

(L.) Reveal & Keener). (2) E.P. Killip 32641, 24 Sep 1938. "Barrens" near new

ferry posts.

patens Aiton - late purple aster, clasping aster. (*Lasallea patens* (Aiton) Semple &

Brouillet, *Symphyotrichum patens* (Aiton) G.L. Nesom, *Virgulus patens* (Aiton)

Reveal & Keener). (2) A.S. Hitchcock 15865, 7 Oct 1917.

pilosus Willd. - white heath aster, awl aster. (*A. ericoides* L., misapplied,

Symphyotrichum pilosum (Willd.) G.L. Nesom). (13) N. Hotchkiss & E.C. Leonard

3559, 9 May 1961. Upper Gap [3 sheets]. W.

preanthoides Muhl. ex Willd. - crooked-stem aster, zigzag aster. (*Symphyotrichum*

preanthoides (Muhl. ex Willd.) G.L. Nesom). (2) E.P. Killip 13333, 22 Sep 1928.

Mainland, lower trail. W.

†**puniceus** L. - purple-stemmed aster, bristly aster. (*A. salicifolius* Lam.,
Symphotrichum puniceum (L.) A. Löve & D. Löve). (1) *E.P. Killip 31341*, 29 Sep
 1934. Mainland, Stewart Farm.

Bidens ARISTOSA (Michx.) Britton - midwestern tickseed-sunflower. (6) *E.P. Killip 36659*, 16
 Sep 1943. "Barrens" along channel.

bipinnata L. - Spanish-needles. (5) *E.C. Leonard & N. Hotchkiss 3248*, 27 Sep 1960.
 Prospect Rock [2 sheets].

cernua L. - nodding bur-marigold, stick-tight. (*B. chrysanthemoides* Michx., in part, *B.*
leptomeria Greene (type from DC area)). (10) *M. Beyersdorfer 311*, 25 Sep 1982.
 East end, near river's edge.

frondosa L. - devil's beggar-ticks, stick-tight. (5) *E.C. Leonard & N. Hotchkiss 3233*, 27
 Sep 1960. West tip. W.

polylepis S.F. Blake - Ozark tickseed-sunflower. (5) *E.F. Wells, R.L. Brown & V.S.*
Murthy 5164, 12 Jun 1997. Floodplain.

TRIPARTITA L. - beggar-ticks, tickseed. (*B. comosa* (A. Gray) Wiegand, *B. connata*
 Muhl. ex Willd.) (10) *E.C. Leonard & N. Hotchkiss 3526*, 9 May 1961. West end,
 low weedy bank.

vulgata Greene - tall beggar-ticks, tall stick-tight, common beggar-ticks. (5) *A.S.*
Hitchcock 15717, 9 Sep 1917.

Centaurea CYANUS L. - bachelor's-button, cornflower, bluebottle. (1) *E.P. Killip 31866*, 5 Jul

1936. "Barrens" along channel.

MACULOSA Lam. - spotted knapweed. (*C. biebersteinii* DC.) (1) *E.P. Killip 32159*, 1

Aug 1937. "Barrens" near new ferry posts.

Chrysogonum virginianum L. - golden-star, golden-knees, green-and-gold. (4) *M.*

Beyersdorfer 113, 26 May 1983. Mainland, east of path, midway between Canal - dock.

Chrysopsis †mariana (L.) Elliott - Maryland golden-aster, shaggy golden-aster. (Killip & Blake

1935).

CICHORIUM INTYBUS L. - chicory. (1) *E.P. Killip 31884*, 12 Jul 1936. Near unused ferry

posts.

Cirsium altissimum (L.) Hill - tall thistle. (6) *E.P. Killip 31334*, 24 Sep 1934. In front of

cabin.

discolor (Muhl. ex Willd.) Spreng. - field thistle. (2) *E.P. Killip 32228*, 19 Sep 1937.

Between Gap and upper part of channel, about halfway down.

VULGARE (Savi) Ten. - bull thistle, common thistle. (*C. lanceolatum* (L.) Hill.,

misapplied). (1) *E.P. Killip 32160*, 1 Aug 1937. "Barrens" - along channel toward

east end, near "tomato site." W.

Conyza canadensis (L.) Cronquist - horseweed, colt's-tail. (*Erigeron canadensis* L., *Leptilon canadense* (L.) Britton). (2) *E.C. Leonard & N. Hotchkiss 3261*, 27 Sep 1960.

Prospect Rock. W.

Coreopsis tinctoria Nutt. - golden coreopsis, plains tickseed. (1) *S.F. Blake 12091*, 20 Oct 1936. Waste weedy ground formed by 1936 flood.

†**verticillata** L. - whorled coreopsis, whorled tickseed, thread-leaved tickseed. (1) *E.P. Killip 31045*, 25 Jun 1933. Mainland, along main trail.

CREPIS PULCHRA L. - small-flowered hawk's-beard. (1) *E.P. Killip 31846*, 5 Jul 1936.

"Barrens" along channel just below ferry. Comments: "new record for D.C. area" (Killip & Blake 1953).

Eclipta prostrata (L.) L. - eclipta, yerba-de-tago. (*E. alba* (L.) Hassk.) (5) *E.F. Wells, R.L. Brown & V.S. Murthy 4546*, 21 Sep 1997. Floodplain. M.

Elephantopus carolinianus Raeusch. - elephant's-foot, leafy elephant's-foot. (4) *M. Beyersdorfer 325*, 26 Sep 1982. East end.

Erechtites hieraciifolia (L.) Raf. - fireweed, pilewort, sneezeweed. (3) *E.C. Leonard 3469*, 29 Oct 1960. High Knoll. W.

Erigeron annuus (L.) Pers. - daisy fleabane, annual fleabane, white-top. (7) *W.J. Kress & N.A. Bourg 04-7579*, 7 Aug 2004. W end, on south-facing shoreline, 150 m from I-495. I.

philadelphicus L. - Philadelphia fleabane, common fleabane, Philadelphia daisy. (5) *M. Beyersdorfer 80*, 10 May 1983. East end near flats on river side.

pulchellus Michx. - robin's-plantain. (*E. bellidifolius* Muhl. ex Willd.) (1) *A.S. Hitchcock* 12563, 9 May 1915.

strigosus Muhl. ex Willd. - lesser daisy fleabane, rough fleabane, white-top. (*E. ramosus* (Walter) Britton, Sterns & Poggenb.) (2) *E.P. Killip* 32659, 9 Jul 1939. Gap near upper end.

Eupatorium altissimum L. - tall thoroughwort, tall boneset. (8) *E.C. Leonard & N. Hotchkiss* 3556, 9 May 1961. Upper Gap, between rocks.

coelestinum L. - mistflower, blue-boneset, wild-ageratum, hardy-ageratum.

(*Conoclinium coelestinum* (L.) DC.) (6) *W.J. Kress & M. Butts* 04-7564, 22 Jul 2004. North shore, mid-island along channel. I.

hyssopifolium L. - hyssop-leaved boneset, hyssop-leaved thoroughwort. (*Eupatorium torreyanum* Short & Peter). (3) *E.C. Leonard & N. Hotchkiss* 3262, 27 Sep 1960. Prospect Rock. W.

perfoliatum L. - boneset, thoroughwort. (2) *E.C. Leonard* 3589, 9 May 1961. Bank of channel above ferry.

purpureum L. - purple-node joe-pye-weed, sweet joe-pye-weed, green-stemmed joe-pye-weed. (*Eupatoriadelphus purpureus* (L.) R.M. King & H. Rob.) (4) *S.G. Shetler & E.F. Wells* 2004.13, 21 Jul 2004. Mainland, near Crossing Rocks. I.

rotundifolium L. - round-leaved thoroughwort, round-leaved boneset. (*Eupatorium pubescens* Muhl. ex Willd.) (6) *M. Beyersdorfer* 138, 11 Jul 1982. East end just off the trail.

+**serotinum** Michx. - late-flowering thoroughwort, late-flowering boneset. (3) *S.G. Shetler & E.R. Shetler* 2004.31, 11 Oct 2004. West end, sandy depression on floodplain. I.

sessilifolium L. - upland boneset. (2) *E.P. Killip* 32663, 6 Aug 1939. Upper Gap, west side at edge of woods.

Euthamia graminifolia (L.) Nutt. - grass-leaved goldenrod, lance-leaved goldenrod, common flat-topped goldenrod. (*Solidago graminifolia* (L.) Salisb.) (3) *E.P. Killip* 32947, 6 Oct 1940. River side of Upper Gap.

GALINSOGA PARVIFLORA Cav. - smooth galinsoga, lesser quickweed. (5) *W.J. Kress & M. Butts* 04-7572, 11 Jun 2004. Mid-island near north shore. I.

QUADRIRADIATA Ruiz & Pav. - raceweed, common quickweed. (*G. caracasana* (DC.) Sch. Bip., *G. ciliata* (Raf.) Blake). (10) *E.C. Leonard & N. Hotchkiss* 3581, 9 May 1961. Bank of channel above ferry [May collection date questionable]. M.

Gnaphalium obtusifolium L. - fragrant cudweed, sweet everlasting. (1) *E.P. Killip* 31135, 1 Oct 1933. Near cabin.

purpureum L. - purple cudweed. (1) *E.P. Killip* 31894, 12 Jul 1936. "Barrens" near new ferry posts.

Helenium autumnale L. - yellow sneezeweed, common sneezeweed. (4) *E.F. Wells, R.L. Brown & V.S. Murthy 5169*, 12 Jun 1997. Floodplain.

flexuosum Raf. - purple sneezeweed, southern sneezeweed. (*H. nudiflorum* Nutt.) (1) *E.P. Killip 32631*, 31 Aug 1938. River side of Gap.

Helianthus †**ANNUUS** L. - common sunflower. (2) *E.P. Killip 32180*, 15 Aug 1937.
[Mainland], Stewart Farm.

decapetalus L. - thin-leaved sunflower, forest sunflower. (11) *E.F. Wells, R.L. Brown & V.S. Murthy 4492*, 20 Sep 1997. Floodplain.

divaricatus L. - woodland sunflower, divaricate sunflower. (1) *E.P. Killip 32666*, 13 Aug 1939. Gap at upper end, near channel side.

occidentalis Riddell - naked-stemmed sunflower, western sunflower, McDowell's sunflower. (*H. dowellianus* M.A. Curtis). (2) *E.P. Killip 32938*, 25 Aug 1940.
"Barrens," near upper ferry post.

tuberosus L. - Jerusalem-artichoke. (2) *E.P. Killip 31955*, 7 Sep 1936. "Barrens," near tree bridge [2 sheets].

Heliopsis helianthoides (L.) Sweet - ox-eye, false sunflower, sunflower-everlasting. (4) *W.J. Kress & M. Butts 04-7567*, 22 Jul 2004. Along trail near E point. I.

Hieracium venosum L. - rattlesnake-weed, veiny hawkweed. (3) *M. Beyersdorfer 16-84*, 31 May 1984. West end. rocky ledge.

- Krigia virginica** (L.) Willd. - dwarf-dandelion, Virginia dwarf-dandelion. (6) *R.S. Cowan 1693*,
4 Jun 1961. West slope of Cabin Hill. I.
- Lactuca biennis** (Moench) Fernald - tall blue lettuce. (*L. spicata* (Lam.) Hitchc., misapplied.)
(3) *E.P. Killip 31126*, 24 Sep 1933. Mainland, west of middle gate.
- canadensis** L. - wild lettuce, tall lettuce. (*L. sagittifolia* Elliott, *L. steelei* Britton). (2)
E.P. Killip 32165, 2 Aug 1937. Mainland, lower trail toward east end. W.
- floridana** (L.) Gaertn. - Florida blue lettuce, Florida lettuce, woodland lettuce. (*L. villosa* Jacq.) (5) *E.P. Killip 31114*, 4 Sep 1933. Mainland, along main trail. M.
- SERRIOLA** L. - prickly lettuce, compass-plant. (*L. scariola* L., *L. virosa* L.). (1) *E.P. Killip 31925*, 9 Aug 1936. "Barrens" along channel below ferry landing.
- LAPSANA + COMMUNIS** L. - nipplewort. (1) *S. Wiser & W. Burket 31*, 14 Aug 1986. East end,
bank of channel near Crossing Rocks. Open floodplain area.
- LEUCANTHEMUM †VULGARE** Lam. - ox-eye daisy. (*Chrysanthemum leucanthemum* L.) (1)
E.P. Killip 13327, 9 Sep 1928. [Mainland], Stewart Farm.
- Polymnia canadensis** L. - white-flowered leafcup, pale-flowered leafcup, small-flowered
leafcup. (5) *M. Beyersdorfer 441*, 31 Oct 1982.
- uvedalia** L. - yellow-flowered leafcup, large-flowered leafcup, bear's-foot. (5) *E.C. Leonard & N. Hotchkiss 3209*, 27 Sep 1960. High Knoll, east slope [2 sheets]. W.
- Prenanthes serpentaria** Pursh - lion's-foot, gall-of-the-earth, rattlesnake-root. (1) *T.H. Kearney 203*, 1 Oct 1905.

Rudbeckia †fulgida Aiton - orange coneflower, brilliant coneflower, eastern coneflower. (1)

E.P. Killip 13735, 13 Sep 1931. [Mainland], Stewart Farm.

hirta L. - black-eyed-Susan. (*R. serotina* Nutt.) (2) *E.P. Killip & 32654*, 24 Jun 1939.

"Barrens" near trail to ferry.

laciniata L. - tall coneflower, green-headed coneflower, cut-leaved coneflower. (10) *W.J.*

Kress & N.A. Bourg 04-7576, 31 Jul 2004. E end, on river bank at water's edge. I.

triloba L. - three-lobed coneflower. (8) *E.P. Killip 32935*, 24 Aug 1940. Flood-swept

land.

Senecio aureus L. - golden ragwort, heart-leaved groundsel. (8) *M. Beyersdorfer 41*, 28 Apr

1983. Northwest of Cabin Hill in the Gap - channel side. I.

†obovatus Muhl. - round-leaved ragwort, running groundsel, squaw-weed. (1) *S.F.*

Blake 11883, 5 May 1935. Mainland, near pond off upper path.

Solidago bicolor L. - silverrod. (5) *E.C. Leonard & N. Hotchkiss 3224*, 27 Sep 1960. Summit

of High Knoll.

caesia L. - blue-stem goldenrod, wreath goldenrod, axillary goldenrod. (9) *M.*

Beyersdorfer 307, 25 Sep 1982. Trail from east end up Cabin Hill, before Fern

Valley. I.

canadensis L. - tall goldenrod, Canada goldenrod, common goldenrod. (*S. altissima* L.)

(12) *E.C. Leonard 3462*, 29 Oct 1960. Upper Gap.

- flexicaulis** L. - zigzag goldenrod, broad-leaved goldenrod. (7) *E.F. Wells, R.L. Brown & V.S. Murthy 4488*, 20 Sep 1997. Floodplain. I.
- gigantea** Aiton - late goldenrod, smooth goldenrod. (*S. serotina* Aiton). (11) *E.F. Wells, R.L. Brown & V.S. Murthy 5172*, 12 Sep 1997. Floodplain.
- junceae** Aiton - early goldenrod. (6) *M. Beyersdorfer 217*, 28 Aug 1982. Cabin Hill, west slope.
- +**nemorialis** Aiton - gray goldenrod, old-field goldenrod, dwarf goldenrod. (5) *E.C. Leonard & N. Hotchkiss 3315*, 27 Sep 1960. Upper Gap. Comments: *T.H. Kearney 140* (1903) and *214* (1905) apparently not seen by Killip & Blake (1935, 1953).
- +**rupestris** Raf. - riverbank goldenrod. (2) *T.H. Kearney 186*, 30 Aug 1903. Comments: *T.H. Kearney 123* (1903) and *186* (1903) apparently not seen by Killip & Blake (1935, 1953).
- simplex** Kunth - riverbank goldenrod. (*S. racemosa* Greene). (10) *S.G. Shetler & E.F. Wells & R.J. Soreng 2004.38*, 30 Oct 2004. West end, on boulders at river's edge. I.
- ulmifolia** Muhl. ex Willd. - elm-leaved goldenrod. (10) *W.J. Kress & N.A. Bourg 04-7582*, 7 Aug 2004. In grassy area next to cabin on W side. I.
- SONCHUS** +**ASPER** (L.) Hill - spiny-leaved sow-thistle. (1) *S.G. Shetler & E.F. Wells 2004.16*, 21 Jul 2004. Sandy riverbank at edge of woods. I.
- Synosma suaveolens** (L.) Raf. ex Britton - sweet-scented Indian-plantain, hastate Indian-plantain. (*Cacalia suaveolens* L.) (4) *E.P. Killip 36631*, 17 Jul 1942. East end.

TARAXACUM LAEVIGATUM (Willd.) DC. - red-seeded dandelion. (*Leontodon erythrospermum* (Andrz. ex Besser) Britton, *T. erythrospermum* Andrz. ex Besser). (1) *A.S. Hitchcock* 12476, 2 May 1915.

OFFICINALE F.H. Wigg. - common dandelion. (*Leontodon taraxacum* L.) (3) *M. Beyersdorfer* 55, 28 Apr 1983. Mainland, path from Lock 11 to Crossing Rocks. W.

Verbesina alternifolia (L.) Britton ex Kearney - wingstem. (*Actinomeris alternifolia* (L.) DC., *Ridan alternifolia* (L.) Britton). (12) *W.J. Kress & N.A. Bourg* 04-7587, 29 Aug 2004. In bottomland below rocks on W side below cabin. I.

occidentalis (L.) Walter - yellow crownbeard, southern flatseed-sunflower. (4) *E.P. Killip* 32945, 28 Sep 1940. Upper Gap. W.

Vernonia +glauca (L.) Willd. - broad-leaved ironweed, Appalachian ironweed. (4) *E.C. Leonard & N. Hotchkiss* 3314, 27 Sep 1960. Upper Gap. Comments: Earlier specimens of T.H. Kearney (1903), J.C. Crawford (1914) and P.C. Standley (1915) apparently not seen by Killip & Blake (1935, 1953). W.

noveboracensis (L.) Michx. - New York ironweed. (7) *W.J. Kress & N.A. Bourg* 04-7623, 5 Sep 2004. At edge of Island next to trail before reaching rock outcrops. I.

Xanthium strumarium L. - common cocklebur. (*X. americanum* Walter, *X. chinense* Mill., *X. commune* Britton, *X. italicum* Moretti, *X. pennsylvanicum* Wallr., *X. pungens* Wallr., *X. saccharatum* Wallr.) (14) *E.F. Wells, R.L. Brown & V.S. Murthy* 4550, 21 Sep 1997. Floodplain. M.

BALSAMINACEAE (Touch-me-not Family)

Impatiens capensis Meerb. - spotted touch-me-not, orange touch-me-not, orange jewelweed.

(*I. biflora* Walter). (6) *W.J. Kress & M. Butts 04-7518*, 17 Jun 2004. Floodplain, mid-island, north shore. I.

pallida Nutt. - pale touch-me-not, yellow touch-me-not, yellow jewelweed. (4) *E.C.*

Leonard & N. Hotchkiss 3561, 9 May 1961. Bank of channel above ferry.

BERBERIDACEAE (Barberry Family)

BERBERIS +THUNBERGII DC. - Japanese barberry. (2) *M. Beyersdorfer 18*, 11 Apr 1982.

Cabin Hill base, northwest side (Gap). M.

Caulophyllum thalictroides (L.) Michx. - blue cohosh. (1) *A.S. Hitchcock 12449*, 25 Apr

1915. I.

Jeffersonia diphylla (L.) Pers. - twinleaf. (13) *W.J. Kress 04-7486*, 20 May 2004. Central plain

(west of cabin). I.

Podophyllum peltatum L. - mayapple, mandrake. (7) *M. Beyersdorfer 94*, 10 May 1983. Gap,

lowlands. M,W.

BETULACEAE (Birch Family)

Alnus serrulata (Aiton) Willd. - common alder, smooth alder, hazel alder. (*A. rugosa* (Du Roi)

Spreng., misapplied). (1) *E.P. Killip 31185*, 30 May 1934. Mainland, Northwest

Swamp. Comments: "Formerly on Island (no specimen preserved); still on mainland"

(Killip & Blake 1935).

Betula nigra L. - river birch, red birch. (4) *E.F. Wells, R.L. Brown & V.S. Murthy 4444*, 31 Aug 1997. Floodplain.

Carpinus caroliniana Walter - American hornbeam, ironwood, blue-beech, musclewood. (5) *M. Beyersdorfer 96*, 10 May 1983. Path to Cabin Hill through Fern Valley. I.

Ostrya virginiana (Mill.) K. Koch - hop hornbeam, ironwood. (11) *W.J. Kress & M. Butts 04-7543*, 23 Jun 2004. Cactus Rock (E side). I.

BIGNONIACEAE (Trumpet-creeper Family)

Campsis radicans (L.) Seem. ex Bureau - trumpet-creeper. (*Bignonia radicans* L.) (8) *W.J.*

Kress & N.A. Bourg 04-7578, 7 Aug 2004. W side, on rock outcrop next to river, 75 m from I-495. I.

CATALPA BIGNONIOIDES Walter - common catalpa, southern catalpa, Indian-bean. (2) *W.J.*

Kress & M. Butts 04-7560, 15 Jul 2004. W point, rocks near I-495 bridge.

Comments: Introduced to Mainland (McAtee 1930, p. 54). I.

BORAGINACEAE (Borage Family)

ECHIUUM VULGARE L. - viper's bugloss, blueweed, blue-devil, blue-thistle. (1) *E.P. Killip 32625*, 10 Jul 1938. "Barrens" south of upper new ferry post.

Hackelia virginiana (L.) I.M. Johnst. - beggar's-lice, stickseed. (*Lappula virginiana* (L.)

Greene). (2) *P.C. Standley 11839*, 24 Jul 1915.

Lithospermum ARVENSE L. - corn gromwell. (*Buglossoides arvensis* (L.) I.M. Johnst.) (1) *J.E.*

Benedict & E.P. Killip 32441, 8 May 1938. Upper Gap near channel.

Mertensia virginica (L.) Pers. ex Link - Virginia bluebells, bluebells, Virginia-cowslip. (10) *W.J.*

Kress & M. Butts 04-7438, 6 May 2004. Terrace. I.

Myosotis laxa Lehm. - smaller forget-me-not. (3) *E.F. Wells, R.L. Brown & V.S. Murthy 5145*,

12 Jun 1997. Floodplain.

+**verna** Nutt. - spring forget-me-not, early scorpion-grass, spring scorpion-grass. (*M.*

virginica (L.) Britton, Sterns & Poggenb., misapplied). (1) *N. Hotchkiss & H.K.*

Svenson s.n., 5 May 1962. Rock valley.

BRASSICACEAE (CRUCIFERAE) (Mustard Family)

ALLIARIA PETIOLATA (M. Bieb.) Cavara & Grande - garlic-mustard. (*A. officinalis* Andr. ex

M. Bieb.) (9) *W.J. Kress & M. Butts 04-7435*, 6 May 2004. Along path to cabin.

Directly north of terrace. I.

ARABIDOPSIS THALIANA (L.) Heynh. - mouse-ear cress. (2) *P.C. Standley 11422*, 9 May

1915.

Arabis canadensis L. - sickle-pod. (2) *A.S. Hitchcock 12771*, 6 Jun 1915.

laevigata (Muhl ex Willd.) Poir. - smooth rockcress. (6) *M. Beyersdorfer 29*, 14 Apr

1983. West end, path on river side to Rock of Gibraltar. I.

lyrata L. - lyre-leaved rockcress. (6) *E.P. Killip 36829*, 1 Jun 1947. East end.

shortii (Fernald) Gleason - Short's rockcress. (*A. dentata* (Torr.) Torr. & A. Gray.) (4)

P.C. Standley 13111, 30 Apr 1916. Alluvial flats.

BARBAREA VERNA (Mill.) Asch. - early winter-cress. (*Campe verna* (Michx.) Heller). (3) *E.P.*

Killip 13356, 30 May 1930. River side of Island. W.

VULGARIS W.T. Aiton - common winter-cress, yellow-rocket. (*Campe barbarea* (L.)

W. Wight ex Piper, *C. stricta* (Andrz.) W. Wight ex Piper). (6) *W.J. Kress & M. Butts*

04-7451, 6 May 2004. E point, at river's edge. I.

BRASSICA JUNCEA (L.) Czern. - Indian mustard, Chinese mustard, brown mustard. (2) *A.S.*

Hitchcock 15647, 29 Jul 1917.

NIGRA (L.) W.D.J. Koch - black mustard. (3) *S.G. Shetler & S.S. Orli 2004.10*, 30 Jun

2004. Sandy riverbank at edge of woods. I.

RAPA L. - turnip, bird's rape, field mustard. (*B. campestris* L.) (3) *E.P. Killip & N.*

Hotchkiss & J.R. Swallen 31996, 11 Oct 1936. "Barrens" near ferry landing.

CAPSELLA BURSA-PASTORIS (L.) Medik. - shepherd's-purse. (*Bursa bursa-pastoris* (L.)

Britton). (2) *A.S. Hitchcock 12536*, 9 May 1915.

Cardamine angustata O.E. Schulz - slender toothwort, Appalachian toothwort. (*Dentaria*

heterophylla O.E. Schulz.) (4) *M. Beyersdorfer 21*, 11 Apr 1983. Cabin Hill, in sloping valley in front of cabin.

bulbosa (Schreb. ex Muhl.) Britton, Sterns & Poggenb. - spring cress, bulbous cress. (3)

A.S. Hitchcock 12403, 18 Apr 1915.

concatenata (Michx.) Sw. - cut-leaved toothwort, cut-leaved pepperroot, five-parted

toothwort. (*Dentaria laciniata* Muhl. ex Willd.) (7) *M. Beyersdorfer 48*, 28 Apr 1983. Cabin Hill, west side. I.

+**HIRSUTA** L. - hairy bittercress. (1) *Leonard and Hotchkiss 3500*, 1961 [misidentified as *C. parviflora*]. M.

parviflora L. - small-flowered bitter-cress. (7) *E.P. Killip 40207*, 26 Jan 1950.

Mainland, along lower trail.

pensylvanica Muhl. ex Willd. - Pennsylvania bittercress. (6) *S.G. Shetler 2004.5*, 15

May 2004. Mainland, Northwest Swamp. M.

Draba VERNA L. - whitlow-grass. (3) *E.P. Killip 36817*, 20 Apr 1947. Near largest pool in Gap.

ERYSIMUM CHEIRANTHOIDES L. - wormseed mustard. (*Cheirinia cheiranthoides* (L.) Link(7)

W.J. Kress & M. Butts 04-7542, 23 Jun 2004. SW shore: beach. I.

HESPERIS MATRONALIS L. - dame's-rocket, dame's-violet. : (2) *W.J. Kress & M. Butts 04-*

7450, 6 May 2004. Near E point, close to river. I.

Lepidium CAMPESTRE (L.) W.T. Aiton - field-cress, cow-cress. (2) *E.P. Killip 31854*, 5 Jul

1936. "Barrens," lower end toward river.

virginicum L. - wild peppergrass, poor-man's-pepper. (4) *E.P. Killip 31862*, 5 Jul 1936.

"Barrens" along channel. W.

NASTURTIUM OFFICINALE W.T. Aiton - watercress. (*Radicula nasturtium-aquaticum* Britten

& Rendle, *Rorippa nasturtium-aquaticum* (L.) Hayek., *Sisymbrium nasturtium-*

aquaticum L.) (2) *E.C. Leonard & N. Hotchkiss 3420*, 27 Sep 1960. Channel at

ferry landing.

Rorippa palustris (L.) Besser - common yellow-cress, marsh yellow-cress. (*Radicula palustris* (L.) Moench, *Rorippa hispida* (Desv.) Britton, *R. islandica* (Oeder) Borbás, misapplied, *R. obtusa* (Nutt.) Britton, misapplied). (6) *E.F. Wells, R.L. Brown & V.S. Murthy 4551*, 21 Sep 1997. Floodplain. I.

sessiliflora (Nutt.) Hitchc. - southern yellow-cress. (*Radicula sessiliflora* (Nutt.) Greene). (1) *A.S. Hitchcock s.n.*, 16 Sep 1917.

SYLVESTRIS (L.) Besser - creeping yellow-cress. (*Radicula sylvestris* (L.) Druce). (6) *S.G. Shetler & E.F. Wells 2004.14*, 21 Jul 2004. Rocky islet at east end. I.

SISYMBRIUM OFFICINALE (L.) Scop. - hedge mustard. (*Erysimum officinale* L.) (1) *E.P. Killip 31852*, 5 Jul 1936. "Barrens" along channel.

THLASPI PERFOLIATUM L. - perfoliate pennycress. (3) *E.P. Killip 36816*, 20 Apr 1947.

BUDDLEJACEAE (Butterfly-bush Family)

BUDDLEJA DAVIDII Franch. - orange-eye butterfly-bush. (2) *E.P. Killip 32933*, 21 Aug 1940. Flood-swept land. Comments: "This persisted for a few years but is now extinct" (Killip & Blake 1953).

CACTACEAE (Cactus Family)

Opuntia humifusa (Raf.) Raf. - eastern prickly-pear. (*O. compressa* (Salisb.) J.F. Macbr., *O. opuntia* (L.) H. Karst., *O. vulgaris* Mill., misapplied). (5) *A.S. Hitchcock 12763*, 6 Jun 1915. Comments: Photographs (in herbarium) by H.S. Barber from spring of 1907 show Cactus Rock densely covered by robust plants of this species. When it disappeared is not on record, but it has been gone for many years (see Changing Vegetation Cover and Flora).

CALLITRICHACEAE (Water-starwort Family)

Callitriche †**STAGNALIS** Scop. - European water-starwort. (4) *E.P. Killip 36833*, 7 Jun 1947. Mainland [2 sheets].

terrestris Raf. - Austin's water-starwort. (*C. austinii* Engelm.) (1) *A.S. Hitchcock 15699*, 9 Sep 1917. North shore.

CAMPANULACEAE (Bellflower Family)

Campanula americana L. - tall bellflower. (5) *A.S. Hitchcock 13005*, 15 Jul 1917.

Triodanis perfoliata (L.) Nieuw. - Venus's-looking-glass, round-leaved triodanis. (*Specularia biflora* (Ruiz & Pavón) Fisch. & C.A. Mey., *S. perfoliata* (L.) DC., *T. biflora* (Ruiz & Pavón) Greene). (2) *A.S. Hitchcock 12777*, 6 Jun 1915.

CANNABACEAE (Hemp Family)

CANNABIS SATIVA L. - hemp, marijuana, pot, grass. (1) *S.F. Blake s.n.*, 24 May 1931. Near

cabin.

Humulus JAPONICUS Siebold & Zucc. - Japanese hop. (*H. scandens* (Lour.) Merr., misapplied). (9) *W.J. Kress & N.A. Bourg 04-7615*, 29 Aug 2004. W side, bottomland below rocks and cabin. I.

lupulus L. - common hop, hops. (1) *T.H. Kearney 31*, 19 Aug 1903. W.

CAPRIFOLIACEAE (Honeysuckle Family)

Lonicera JAPONICA Thunb. - Japanese honeysuckle. (8) *W.J. Kress & M. Butts 04-7466*, 13 May 2004. E side of Cactus Rock. I.

+**MAACKII** (Rupr.) Maxim. - Maack's honeysuckle. (3) *S.G. Shetler & E.R. Shetler 2004.36*, 11 Oct 2004. West end, shrubby area on sandy floodplain. I.

Sambucus canadensis L. - common elder, black elderberry, elder, elderberry. (2) *W.J. Kress & M. Butts 04-7568*, 22 Jul 2004. East end, near point. I.

Symphoricarpos orbiculatus Moench - coralberry, Indian-currant, blackbrush. (5) *E.C. Leonard & N. Hotchkiss 3298*, 27 Sep 1960. Upper Gap. I.

Triosteum +†**perfoliatum** L. - perfoliate horse-gentian, tinker's-weed, wild-coffee. (8) *E.P. Killip 42246*, 25 Sep 1952. Mainland, woods west of northwest corner of Stewart Farm. Comments: Based on collections then in hand, it was listed by Killip & Blake (1935) as *T. aurantiacum* E.P. Bicknell, a misidentification.

Viburnum acerifolium L. - maple-leaved viburnum, dockmackie, maple-leaved arrow-wood. (4) *M. Beyersdorfer 114*, 26 May 1983. Mainland, high rise just to east on path from

C&O Lock 11 to ferry dock. M.

†**dentatum** L. - arrow-wood, southern arrow-wood, roughish arrow-wood. (*V. pubescens* (Aiton) Pursh, *V. scabrellum* Torr. & A. Gray ex Chapm.) (3) M. *Beyersdorfer 96*, 10 Jun 1982. Mainland, near fence by C&O Canal.

+†**nudum** L. - possum-haw, swamp-haw, smooth withe-rod, naked withe-rod. (1) *E.P. Killip 31471*, 4 May 1935. Mainland, pool near old spring. Comments: Presumably persisting from earlier planting (see McAtee 1930, p. 54).

prunifolium L. - black-haw. (10) *W.J. Kress & M. Butts 04-7506*, 8 Jun 2004. Floodplain near NW point. I.

+**rafinesqueanum** Schult. - downy arrow-wood. (*V. affine* Bush ex C.K. Schneid.) (5) *E.C. Leonard & N. Hotchkiss 3291*, 27 Sep 1960. Between rock outcrops of Upper Gap [2 sheets].

CARYOPHYLLACEAE (Pink Family)

Arenaria SERPYLLIFOLIA L. - sandwort, thyme-leaved sandwort. (2) *E.P. Killip 32921*, 26 May 1940. East end.

Cerastium arvense L. - field chickweed. (*C. velutinum* Raf.) (8) *M. Beyersdorfer 95*, 10 Jun 1982. East end.

GLOMERATUM Thuill. - clammy chickweed. (*C. viscosum* L., misapplied). (4) *S.G. Shetler 2004.1*, 1 May 2004. East end. I.

nutans Raf. - nodding chickweed. (*C. longipedunculatum* Muhl. ex Britton). (2) *A.S.*

Hitchcock 12537, 9 May 1915.

DIANTHUS ARMERIA L. - deptford pink. (2) *E.P. Killip 32119*, 13 Jun 1937. South of West Knoll.

Paronychia canadensis (L.) Wood - forked-chickweed, smooth forked-chickweed. (*Anychia canadensis* (L.) Britton, Sterns & Poggenb.) (4) *S. Wiser 1*, 11 Jul 1986. Vicinity of Cactus Rock.

fastigiata (Raf.) Fernald - forked-chickweed, hairy forked-chickweed. (*Anychia polygonoides* Raf.) (1) *E.P. Killip 13703*, 23 Aug 1931. Near Cactus Rock.

SAPONARIA OFFICINALIS L. - bouncing-bet, soapwort. (9) *W.J. Kress & M. Butts 04-7550*, 1 Jul 2004. SW Point (rocks). I.

Silene antirrhina L. - sleepy catchfly. (5) *E.P. Killip 32118*, 13 Jun 1937. Where trail crosses Gap between Cabin Hill and West Knoll.

†**caroliniana** Walter - wild pink. (*S. pensylvanica* Michx.) (1) *E.P. Killip 30890*, 7 May 1933. Mainland, west of main trail.

LATIFOLIA Poir. - white campion, white-cockle, evening lychnis. (*Lychnis alba* Mill., *S. pratensis* (Rafn.) Godr. & Gren.) (5) *W.J. Kress & M. Butts 04-7546*, 23 Jun 2004. SW Point (rocks). I.

nivea (Nutt.) Muhl. ex Otth - snowy campion. (*S. alba* Muhl.) (3) *A.S. Hitchcock 12964*, 1 Jul 1917.

stellata (L.) Aiton - starry campion, widow's-frill. (7) *W.J. Kress & M. Butts 04-7558*, 15

Jul 2004. W point, rocks near I-495 bridge. I.

Stellaria †longifolia Muhl. ex Willd. - long-leaved stitchwort. (*Alsine longifolia* (Muhl. ex Willd.) Britton). (1) *E.P. Killip 31178*, 27 May 1934. Mainland, Barton property.

MEDIA (L.) Vill. - common chickweed. (*Alsine media* L., *S. neglecta* Weihe). (7) *E.F. Wells, R.L. Brown & V.S. Murthy 4356*, 1 Jul 1997. Floodplain. I.

pubera Michx. - star chickweed. (*Alsine pubera* (Michx.) Britton). (8) *E.F. Wells, R.L. Brown & V.S. Murthy 4882*, 27 Apr 1998. Floodplain. I.

CELASTRACEAE (Staff-tree Family)

Celastrus +ORBICULATUS Thunb. - Oriental bittersweet. (2) *W.J. Kress & M. Butts 04-7448*, 6 May 2004. SE end, river's edge. I.

scandens L. - American bittersweet. (3) *E.C. Leonard & N. Hotchkiss 3321*, 27 Sep 1960. Upper Gap [2 sheets].

Euonymus +†ALATUS (Thunb.) Siebold - winged burning-bush, winged euonymus. (1) *M. Beyersdorfer 71*, 10 May 1983. C&O Canal Towpath just east of Rocky [sic] Run. M.

americanus L. - strawberry-bush. (9) *M. Beyersdorfer 17-84*, 31 May 1984. West end. I.

atropurpureus Jacq. - wahoo, burning-bush. (2) *A.S. Hitchcock 12929*, 24 Jun 1917.

+FORTUNEI (Turcz.) Hand.-Mazz. - climbing euonymus. (2) *S.G. Shetler 2004.8*, 15 May 2004. Mainland, along west bank of Rock Run. M.

CERATOPHYLLACEAE (Hornwort Family)

Ceratophyllum +†**echinatum** A. Gray - hornwort, coontail. (*C. muricatum* Cham., misapplied). (4) *E.P. Killip 36576*, 7 Jun 1942, as *C. demersum* L. Comments: In 1953, Killip and Blake added *C. demersum* to the species list on the basis of *P.C. Standley 11771*, 27 Jun 1915, which, however, was later re-identified by N.C. Fassett as *C. echinatum*. In 1982, M. Beyersdorfer (350A) collected *C. echinatum* in the C&O Canal adjacent to the Mainland property.

CHENOPODIACEAE (Goosefoot Family)

Chenopodium **ALBUM** L. - lamb's-quarters, pigweed. (6) *S. Wiser & C. Van Metre 65*, 3 Oct 1986. East end on bank of channel. M, W.

AMBROSIODES L. - Mexican-tea, wormseed. (6) *S.G. Shetler, E.F. Wells & R.J. Soreng 2004.40*, 30 Oct 2004. Sandy muddy shores of river. I.

+**berlandieri** Moq. - pitseed goosefoot, village goosefoot. (*C. paganum* Rchb., misapplied). (1) *P.C. Standley 11444*, 9 May 1915., as *C. paganum*. Comments: Standley's specimen apparently overlooked by Killip & Blake (1935, 1953).

CISTACEAE (Rockrose Family)

Lechea racemulosa Michx. - pinweed. (3) *S.F. Blake s.n.*, 19 Oct 1933. On hill west of cabin.

CONVOLVULACEAE (Bindweed Family)

Calystegia sepium (L.) R. Br. - hedge bindweed, wild morning-glory. (*Convolvulus sepium* L.)

(2) *E.P. Killip 31913*, 1 Aug 1936. "Barrens" toward lower end.

Ipomoea HEDERACEA Jacq. - ivy-leaved morning-glory. (8) *M. Beyersdorfer 348*, 10 Oct 1982. East end by river.

lacunosa L. - small-flowered morning-glory, white morning-glory. (18) *W.J. Kress & N.A. Bourg 04-7619*, 5 Sep 2004. E end, on mudflats near river shore and rock outcrop. I.

pandurata (L.) G. Mey. - wild potato-vine, wild sweet-potato. (5) *E.P. Killip 32151*, 1 Aug 1937. Path of flood [sic] toward upper end.

PURPUREA (L.) Roth - common morning-glory. (2) *E.C. Leonard & N. Hotchkiss 3376*, 27 Sep 1960. Poachers Landing, east end.

CORNACEAE (Dogwood Family)

Cornus alternifolia L. f. - alternate-leaved dogwood, pagoda dogwood, green osier. (Killip & Blake 1935). Listed by Killip & Blake as reliably recorded for Island but "extinct." Also introduced to Mainland (McAtee 1930, p. 54), but not persisting.

amomum Mill. - silky dogwood, silky cornel, red-willow, knob-styled dogwood. (*C. obliqua* Raf., *C. purpusii* Koehne, *C. sericea* L., misapplied, *C. stolonifera* Michx., misapplied). (17) *E.P. Killip 41382*, 9 Sep 1951.

florida L. - flowering dogwood. (5) *M. Beyersdorfer 49*, 28 Apr 1983. Mainland, near Frog Ponds, adjacent to the large *Ilex*. I.

CRASSULACEAE (Stonecrop Family)

Penthorum sedoides L. - ditch stonecrop, Virginia stonecrop. (4) *W.J. Kress & N.A. Bourg 04-7618*, 3 Sep 2004. E end, on mudflats near river shore and rock outcrop. I.

Sedum ternatum Michx. - three-leaved stonecrop, wild stonecrop. (7) *W.J. Kress & M. Butts 04-7562*, 15 Jul 2004. Ridge above floodplain, on rock. I.

CUCURBITACEAE (Gourd Family)

Echinocystis lobata (Michx.) Torr. & A. Gray - wild cucumber, prickly-cucumber, wild balsam-apple. (*Micrampelis lobata* (Michx.) Greene). (1) *A.S. Hitchcock 15702*, 9 Sep 1917.

Sicyos angulatus L. - bur-cucumber, one-seeded bur-cucumber, star-cucumber. (7) *E.F. Wells, R.L. Brown & V.S. Murthy 4518*, 21 Sep 1997. Floodplain. I.

CUSCUTACEAE (Dodder Family)

Cuscuta gronovii Willd. ex Schult. - common dodder, Gronovius dodder. (16) *S.G. Shetler & E.F. Wells 2004.22*, 21 Jul 2004. Northeast of Cabin Hill, along channel. I.

pentagona Engelm. - five-angled dodder, field dodder. (*C. arvensis* Beyr. ex Engelm., *C. campestris* Yunck.) (3) *E.C. Leonard & N. Hotchkiss 3389*, 27 Sep 1960.
Poachers Landing, alluvial riverbank.

polygonorum Engelm. - smartweed dodder. (11) *E.C. Leonard & N. Hotchkiss 3550*, 9 May 1961. Prospect Rock. Comments: Six of the 11 sheets were collected by

Leonard and Hotchkiss and dated 9 May 1961, but May is almost certainly in error.

DIPSACACEAE (Teasel Family)

DIPSACUS SYLVESTRIS Huds. - common teasel, wild teasel, teasel. (*D. fullonum* ssp. *sylvestris* (Huds.) A.R. Clapham). (1) *E.P. Killip 32920*, 29 Apr 1940. Along channel at north end of Upper Gap.

EBENACEAE (Ebony Family)

Diospyros virginiana L. - persimmon. (1) *E.P. Killip 31286*, 19 Aug 1934. Cabin Hill, west slope. Comments: Observed by Shetler in 2004 on Mainland side of Crossing Rocks at Island's east end. M.

ERICACEAE (Heath Family)

Kalmia latifolia L. - mountain-laurel, ivy-laurel, calico-bush. (3) *M. Beyersdorfer 109*, 26 May 1983. Mainland, on rise just to east of path to ferry dock. One clump on Island at northwest end.

Lyonia †ligustrina (L.) DC. - maleberry. (*Xolisma ligustrina* (L.) Britton). (Killip & Blake 1935).

Rhododendron †periclymenoides (Michx.) Shinnars - pinxter-flower, pink azalea, pink-honeysuckle. (*Azalea nudiflora* Pursh, *R. nudiflorum* (L.) Torr.) (3) *M. Beyersdorfer 91*, 10 May 1983. Mainland, path to ferry dock.

Vaccinium †corymbosum L. - highbush blueberry, swamp blueberry. (*V. atrococcum* (A. Gray) A. Heller). (2) *E.P. Killip 31200*, 3 Jun 1934. Mainland, near Northwest Swamp.

pallidum Aiton - lowbush blueberry, late lowbush blueberry, hillside blueberry, upland blueberry. (*V. vacillans* Kalm ex Torr.) (4) *E.C. Leonard & N. Hotchkiss* 3569, 9 May 1961. High Knoll. I.

stamineum L. - deerberry, squaw-huckleberry. (*Polycodium stamineum* Small). (10) *W.J. Kress & M. Butts* 04-7563, 15 Jul 2004. Ridge above floodplain, on rock. I.

EUPHORBIACEAE (Spurge Family)

Acalypha gracilens A. Gray - slender three-seeded-mercury, short-stalk copperleaf. (5) *E.C. Leonard & N. Hotchkiss* 3245, 27 Sep 1960. Rock of Gibraltar.

+**rhomboidea** Raf. - common three-seeded-mercury, rhombic copperleaf. (6) *E.F. Wells, R.L. Brown & V.S. Murthy* 4389, 30 Jul 1997. Floodplain. Comments: Early specimen of P.C. Standley (12524, 1915) was misidentified as *A. virginica*. M.

virginica L. - Virginia three-seeded-mercury, Virginia copperleaf. (*A. digyneia* Raf.) (7) *E.C. Leonard & N. Hotchkiss* 3383, 27 Sep 1960. Poachers Landing, sandy alluvial riverbank.

Euphorbia commutata Engelm. - wood spurge, tinted spurge. (*Tithymalus commutatus* (Engelm.) Klotzsch & Garcke.) (8) *M. Beyersdorfer* 13-84, 21 May 1984. West end river side, just east of Rock of Gibraltar. "Party spot."

corollata L. - flowering spurge. (*Tithymalopsis paniculata* (Ell.) Small). (9) *A.S. Hitchcock* 15632, 29 Jul 1917.

maculata L. - spotted spurge, milk-purslane. (*Chamaesyce maculata* (L.) Small, *C. supina* (Raf.) Moldenke, *E. nutans* Lag., misapplied., *E. supina* Raf.) (6) *S.G. Shetler, E.F. Wells & R.J. Soreng 2004.41*, 30 Oct 2004. West end, sandy muddy shores of river. I.

nutans Lag. - eyebane. (*Chamaesyce hypericifolia* (L.) Millsp., misapplied, *C. maculata* L., misapplied, *C. nutans* (Lag.) Small, *C. preslii* (Guss.) Arthur, *E. hypericifolia* L., misapplied, *E. maculata* L., misapplied, *E. preslii* Guss.) (8) *W.J. Kress & N.A. Bourg 04-7621*, 5 Sep 2004. E end, on rock outcrop. Comments: Originally identified as *E. maculata*. I.

Phyllanthus caroliniensis Walter - Carolina leaf-flower. (5) *S.G. Shetler & S.S. Orli 2004.27*, 3 Aug 2004. Mainland, sandy bank of channel near Crossing Rocks. I.

FABACEAE (Legume Family)

ALBIZIA +jubilibrissin Durazz. - mimosa, silk-tree. Comments: Small seedling observed by Shetler and Wells in woods along channel NE of Cabin Hill on 21 July 2004. I.

Amorpha +fruticosa L. - false indigo. (1) *E.C. Leonard & N. Hotchkiss 3295*, 25 Sep 1960. Upper Gap, rock outcrops.

Amphicarpaea bracteata (L.) Fernald - hog-peanut. (*A. pitcheri* T. & G., *Falcata comosa* (L.) Kuntze, *F. pitcheri* (T. & G.) Kuntze). (6) *M. Beyersdorfer 244*, 12 Sep 1982. Near Fern Valley. I.

Apios americana Medik. - common groundnut, wild bean. (*Glycine apios* L.) (Killip & Blake 1935, "probably extinct.")

Astragalus canadensis L. - Canada milk-vetch, rattle-vetch. (*Astragalus carolinianus* L.) (2)
E.P. Killip 32928, 23 Jun 1940. South of West Knoll, just below where trail bends toward river.

Baptisia australis (L.) R. Br. - blue false indigo. (Killip & Blake 1935, "sporadic").

†**tinctoria** (L.) R. Br. ex W. T. Aiton - wild indigo, yellow wild indigo, rattleweed. (1)
E.P. Killip 31048, 25 Jun 1933. Mainland, between main trail and Stewart Farm.

Cercis canadensis L. - redbud, Judas-tree. (9) *W.J. Kress & M. Butts 04-7509*, 8 Jun 2004.
 Floodplain near NW point. I.

Chamaecrista fasciculata (Michx.) Greene - partridge-pea. (*Cassia fasciculata* Michx.) (5)
E.C. Leonard & N. Hotchkiss 3308, 27 Sep 1960. Upper Gap, between outcropping rocks.

nictitans (L.) Moench - sensitive-pea, small-flowered partridge-pea. (*Cassia nictitans* L.) (3) *E.P. Killip 31840*, 5 Jul 1936. "Barrens" along channel.

Clitoria mariana L. - butterfly-pea. (4) *E.P. Killip 13684*, 26 Jul 1931. Near Cactus Rock.

Crotalaria sagittalis L. - rattlebox. (1) *E.P. Killip 32155*, 1 Aug 1937. "Barrens" near new ferry posts.

Desmodium canescens (L.) DC. - hoary tick-trefoil. (*Meibomia canescens* (L.) Kuntze). (3)

E.P. Killip 32225, 19 Sep 1937. Path of flood near upper end; edge of woods toward north end.

cuspidatum (Muhl. ex Willd.) DC. ex Loudon - big tick-trefoil. (*D. bracteosum*

(Michx.) DC., *Meibomia bracteosa* (Michx.) Kuntze). (3) *N. Hotchkiss & E.C.*

Leonard 3211, 27 Sep 1960 [2 sheets].

glabellum (Michx.) DC. -. (*D. dillenii* Darl., in large part, *D. perplexum* B.G. Schub.,

Meibomia dillenii (Darl.) Kuntze, in large part, *M. glabella* (Michx.) Kuntze). (11)

W.J. Kress & N.A. Burg 04-7624, 5 Sep 2004. E end, sandy river shore next to trail before reaching rock outcrops. I.

nudiflorum (L.) DC. - naked-flowered tick-trefoil. (*Meibomia nudiflora* (L.) Kuntze).

(3) *E.P. Killip 31069*, 6 Aug 1933. Mainland, west of main trail.

paniculatum (L.) DC. - paniced tick-trefoil. (*Meibomia paniculata* (L.) Kuntze). (3)

E.P. Killip 40171, 18 Sep 1949. Gap at upper end.

Galactia volubilis (L.) Britton - hairy milk-pea. (4) *E.C. Leonard & N. Hotchkiss 3554*, 9 May

1961. Upper Gap, rock crevice. Comments: *T.H. Kearney 1* (19 Aug 1903) and *C.F.*

Wheeler s.n. (21 Sep 1903) apparently not seen by Killip & Blake (1935).

GLEDITSIA TRIACANTHOS L. - honey-locust. (4) *W.J. Kress & M. Butts 04-7552*, 1 Jul 2004.

Along beach near SW point. I.

Lespedeza capitata Michx. - bush-clover, round-headed bush-clover. (2) *E.P. Killip 36641*, 13

Sep 1942. East end.

intermedia (S. Watson) Britton -. (*L. frutescens* (L.) Elliott, misapplied). (2) *E.P. Killip*

31121, 17 Sep 1933. Near cabin.

procumbens Michx. - trailing bush-clover. (3) *E.C. Leonard & N. Hotchkiss 3223*, 27

Sep 1960. High Knoll.

repens (L.) Barton - creeping bush-clover. (7) *N. Hotchkiss & E.C. Leonard 3558*, 9

May 1961. Upper Gap [2 sheets].

STIPULACEA Maxim. - Korean clover, Korean lespedeza. (*Kummerowia stipulacea*

(Maxim.) Makino). (6) *E.C. Leonard & N. Hotchkiss 3564*, 9 May 1961. River trail w[est] [3 sheets].

+**STRIATA** (Thunb.) Hook. & Arn. - Japanese clover, Japanese bush-clover, Japanese

lespedeza. (*Kummerowia striata* (Thunb.) Schindl.) (2) *E.F. Wells, R.L. Brown & V.S. Murthy 4441*, 31 Aug 1997. Comments: *A.S. Hitchcock 15836* (16 Sep 1917) apparently overlooked by Killip & Blake in 1935 and 1953.

violacea (L.) Pers. - violet bush-clover. (11) *E.C. Leonard & N. Hotchkiss 3316*, 27 Sep

1960. Upper Gap, between outcropping rocks [2 sheets].

virginica (L.) Britton - Virginia bush-clover, slender bush-clover. (4) *S.G. Shetler & E.R.*

Shetler 2004.34, 11 Oct 2004. Mainland, sandy bank at Rock Crossing. Comments: Specimen overlooked in 1935 (Killip & Blake 1953).

MEDICAGO LUPULINA L. - black medick. (2) *E.P. Killip 31843*, 5 Jul 1936. "Barrens" along channel.

SATIVA L. - alfalfa. (1) *E.P. Killip 32622*, 3 Jul 1938. "Barrens" near lower of new ferry posts.

MELILOTUS ALBUS Medik. - white sweet-clover. (6) *W.J. Kress & M. Butts 04-7544*, 23 Jun 2004. SW Point (rocks). I.

OFFICINALIS (L.) Lam. - yellow sweet-clover. (1) *E.P. Killip 32114*, 31 May 1937. "Barrens" near upper of new ferry posts.

Robinia pseudoacacia L. - black locust. (5) *M. Beyersdorfer 11-84*, 21 May 1984. Rock of Gibraltar table. I.

Senna hebecarpa (Fernald) H.S. Irwin & Barneby - northern wild senna. (*Cassia hebecarpa* Fernald, *C. marilandica* L., misapplied, *C. nictitans* var. *hebecarpa* Fernald). (6) *M. Beyersdorfer 187*, 15 Aug 1982. Mainland side of Crossing Rocks at Island's east end.

Strophostyles umbellata (Muhl. ex Willd.) Britton - perennial wooly-bean. (1) *E.P. Killip 32630*, 14 Aug 1938. Along trail just west of sand bank above Cactus Rock [2 sheets].

Tephrosia †virginiana (L.) Pers. - goat's-rue, catgut. (*Cracca virginiana* L.) (2) *E.P. Killip*

31335, 29 Sep 1934. Mainland, west of main trail, toward Northwest Swamp.

Comments: Not among species starred (*) by Killip & Blake (1935) as restricted to

Mainland, even though both specimens came from Mainland.

Trifolium ARVENSE L. - rabbit-foot clover. (2) *E.P. Killip 31848*, 5 Jul 1936. "Barrens" along channel.

CAMPESTRE Schreb. - low hop clover, pinnate hop clover. (*T. procumbens* L.

misapplied). (1) *E.P. Killip & C.V. Morton 36629*, 12 Jul 1942. Cabin Hill, west

slope near top.

HYBRIDUM L. - alsike clover. (2) *E.C. Leonard & N. Hotchkiss 3588*, 9 May 1961.

River trail.

PRATENSE L. - red clover. (2) *E.P. Killip 31885*, 12 Jul 1936. "Barrens" along channel.

W.

REPENS L. - white clover. (3) *M. Beyersdorfer 103*, 18 May 1983. Crossing Rocks. W.

Vicia carolinianum Walter - pale vetch, wild vetch, wood vetch. (1) *A.S. Hitchcock 12477*, 2

May 1915.

SATIVA L. - common vetch, spring vetch. (Including *V. angustifolia* L.) (1) *E.P. Killip*

31180, 30 May 1934. Mainland, Fisher Garden.

FAGACEAE (Beech Family)

Castanea dentata (Marshall) Borkh. - chestnut, American chestnut. (1) *A.K. Fisher s.n.*, 14 Oct 1934. Mainland. Comments: "Extinct on both Island and mainland; preserved specimen from mainland only" (Killip & Blake 1935).

pumila Mill. - chinquapin. Comments: Killip & Blake included it in their 1935 list based on observations but added, "Extinct, at least on Island."

Fagus grandifolia Ehrh. - beech, American beech. (2) *M. Beyersdorfer 54*, 28 Apr 1983. Mainland, path to ferry dock, just below Lock 12. M.

Quercus alba L. - white oak. (*Q. ×saulei* C.K. Schneid.) (4) *M. Beyersdorfer 104*, 23 Jun 1982. I.

†**bicolor** Willd. - swamp white oak. (1) *E.P. Killip 31342*, 3 Nov 1934. [Mainland], near upper gate. Only tree of this species on property.

†**falcata** Michx. - Spanish oak, southern red oak. (*Q. rubra* L., misapplied). (1) *E.P. Killip 31206*, 3 Jun 1934. Mainland, woods east of Fisher Garden. Comments: Only known from Mainland, but not so indicated by Killip & Blake (1935). M.

†**marilandica** (L.) Münchh. - blackjack oak. (1) *E.P. Killip 31207*, 3 Jun 1934. Mainland, woods east of Fisher Garden.

montana Willd. - chestnut oak, mountain chestnut oak, rock chestnut oak. (*Q. prinus* L., in part). (10) *W.J. Kress & M. Butts 04-7489*, 20 May 2004. Ridge above central plain, mid-island. I.

muhlenbergii Engelm. - yellow oak, chestnut oak, chinquapin oak. (3) *E.P. Killip* 32660, 9 Jul 1939, as *Q. prinus*. Upper Gap, edge of woods, just north of laurel patch. Comments: Killip specimen re-determined as this species by A.T. Whittemore (Apr 2003). M.

palustris Münchh. - pin oak. (1) *T.H. Kearney* 57, 19 Aug 1903.

phellos L. - willow oak. (*Q. ×heterophylla* F. Michx.) "One tree formerly grew on Island" (Killip & Blake 1935). Comments: Under *Q. heterophylla*, they also reported one tree on the Mainland, presumably still growing at the time.

rubra L. - northern red oak. (*Q. borealis* F. Michx., *Q. maxima* (Marshall) Ashe). (16) *W.J. Kress & M. Butts* 04-7524, 17 Jun 2004. Cabin Hill, south side of cabin. I.

stellata Wangenh. - post oak. (3) *A.S. Hitchcock* 12952, 1 Jul 1917. M.

FUMARIACEAE (Fumitory Family)

Corydalis flavula (Raf.) DC - yellow fumewort, pale corydalis, yellow corydalis. (*Capnoides flavulum* (Raf.) Kuntze). (6) *M. Beyersdorfer* 24, 14 Apr 1983. Cactus Rock. I.

Dicentra canadensis (Goldie) Walp. - squirrel-corn. (*Bicuculla (Bikukulla) canadensis* (Goldie) Millsp.) (13) *E.F. Wells, R.L. Brown & V.S. Murthy* 4884, 27 Apr 1998. Floodplain. I.

cucullaria (L.) Bernh. - Dutchman's-breeches. (*Bicuculla (Bikukulla) cucullaria* (L.) Millsp.) (5) *M. Beyersdorfer* 4, 4 Apr 1982. "Gap" area of Island.

GENTIANACEAE (Gentian Family)

Gentiana villosa L. - striped gentian, Sampson's-snakeroot. (1) *T.H. Kearney 179*, 30 Aug 1903.

Obolaria virginica L. - pennywort. (Killip & Blake 1935).

Sabatia angularis (L.) Pursh - common marsh-pink, rose-pink. (3) *E.P. Killip 32628*, 31 Jul 1938. Gap at upper end, toward northwest corner.

GERANIACEAE (Geranium Family)

Geranium carolinianum L. - Carolina cranesbill. (2) *A.S. Hitchcock 12703*, 31 May 1915.

maculatum L. - wild geranium, wild cranesbill. (7) *M. Beyersdorfer 32*, 25 Apr 1982.

Gap, toward channel. W.

HALORAGACEAE (Water-milfoil Family)

+**Myriophyllum SPICATUM** L. – European water-milfoil. (*M. exalbescens* Fernald, misapplied).

(1) *M. Beyersdorfer 350B*, 10 Oct 1982. Mainland, C & O Canal. Comments: Mixed with a collection of *Ceratophyllum echinatum* A. Gray (as *C. demersum* L.)

(*Beyersdorfer 350A*).

HAMAMELIDACEAE (Witch-hazel Family)

Hamamelis virginiana L. - witch-hazel. (3) *M. Beyersdorfer 70*, -- May 1982. Top of Cabin

Hill, dry cliff side. I.

HYDROPHYLLACEAE (Waterleaf Family)

Ellisia nyctelea L. - water-pod, ellisia. (*Nyctelea ambigua* (Nutt.) Standl.) (5) *E.C. Leonard &*

N. Hotchkiss 3504, 9 May 1961. East end near channel.

Hydrophyllum canadense L. - broad-leaved waterleaf, maple-leaved waterleaf. (13) *W.J. Kress*

& M. Butts 04-7502, 27 May 2004. Mid-island near north shore. I.

virginianum L. - Virginia waterleaf, eastern waterleaf. (5) *M. Beyersdorfer 69*, 10 May

1983. Base of Cabin Hill, along path to east end. M, W.

Phacelia dubia (L.) Trel. - small-flowered phacelia, Appalachian phacelia. (12) *W.J. Kress & M.*

Butts 04-7458, 11 May 2004. Cactus Rock. I.

purshii Buckley - Miami-mist, Pursh's phacelia. (13) *M. Beyersdorfer 66*, 2 May 1983.

Cactus Rock.

ranunculacea (Nutt.) Constance - Coville's phacelia, buttercup phacelia. (*P. covillei* S.

Watson (Isotype: *F.V. Coville s.n.*, 1889, Larkspur Island [Montgomery Co., MD], US42482)). (16) *S.G. Shetler & 2004.3*, 1 May 2004. Slope in front of cabin.

Comments: See T.I. Chuang & L. Constance, concerning status of *P. covillei* as a separate species. I.

HYPERICACEAE (St. John's-wort Family)

Hypericum gentianoides (L.) Britton, Sterns & Poggenb. - orange-grass, pineweed. (*Sarothra*

gentianoides L.) (3) *E.P. Killip 31917*, 2 Aug 1936. "Barrens" near entrance to

channel.

hypericoides (L.) Crantz - St. Andrew's-cross. (*Ascyrum hypericoides* L.) (2) A.S.

Hitchcock 15767, 9 Sep 1917. I.

mutilum L. - small-flowered St. John's-wort, dwarf St. John's-wort. (*H. majus* (Gray)

Britt.) (5) *E.F. Wells, R.L. Brown & V.S. Murthy 4372*, 30 Jul 1997. Floodplain. I.

†**PERFORATUM** L. - common St. John's-wort. (1) *E.P. Killip 31064*, 2 Jul 1933.

[Mainland], Stewart Farm.

prolificum L. - shrubby St. John's-wort. (7) *W.J. Kress & M. Butts 04-7547*, 23 Jun

2004. SW Point (rocks). I.

punctatum Lam. - dotted St. John's-wort, spotted St. John's-wort. (*H. denticulatum*

Walter, misapplied). (8) *W.J. Kress & M. Butts 04-7519*, 17 Jun 2004. Cabin Hill near picnic tables. I.

JUGLANDACEAE (Walnut Family)

Carya cordiformis (Wangenh.) K. Koch - bitternut, bitternut hickory. (*Hicoria cordiformis*

(Wangenh.) Britton). (16) *W.J. Kress & M. Butts 04-7548*, 1 Jul 2004. Cactus Rock.

I.

glabra (Mill.) Sweet - pignut, pignut hickory, sweet pignut, false shagbark. (*C. ovalis*

(Wangenh.) Sarg., *Hicoria glabra* (Mill.) Britton, *H. microcarpa* (Nutt.) Britton).

(16) *W.J. Kress & M. Butts 04-7520*, 17 Jun 2004. Cabin Hill near picnic tables. I.

ovata (Mill.) K. Koch - shagbark hickory. (*Hicoria ovata* (Mill.) Britton). (Killip & Blake 1935). Comments: Record possibly based on transplanting to Mainland reported by McAtee (1930, p. 54). The one large, extant tree in 2004 appeared to have been a graft. M.

Juglans cinerea L. - butternut, white walnut. (Killip & Blake 1935).

nigra L. - black walnut. (5) *E.F. Wells, R.L. Brown & V.S. Murthy 4392*, 30 Jul 1997. Floodplain. I.

LAMIACEAE (Mint Family)

Agastache nepetoides (L.) Kuntze - yellow giant-hyssop, catnip giant-hyssop. (3) *S.F. Blake s.n.*, 19 Oct 1933. Front of cabin.

Collinsonia canadensis L. - richweed, horse-balm, citronella. (4) *W.J. Kress & M. Butts 04-7571*, 22 Jul 2004. E end, near shore of river. I.

Cunila origanoides (L.) Britton - dittany. (4) *M. Beyersdorfer 259*, 12 Sep 1982. Cabin Hill. I.

GLECHOMA HEDERACEA L. - gill-over-the-ground, ground-ivy. (9) *W.J. Kress & M. Butts 04-7447*, 6 May 2004. Along path halfway between terrace and river. I.

Hedeoma pulegioides (L.) Pers. - American pennyroyal. (3) *E.P. Killip 32634*, 21 Aug 1938. Gap at upper end.

LAMIUM +AMPLEXICAULE L. - henbit. (1) *P.C. Standley 11284*, 18 Apr 1915. Comments: Standley's specimen overlooked by Killip & Blake (1935, 1953).

PURPUREUM L. - purple dead-nettle, red dead-nettle. (*L. hybridum* Vill., misapplied).

(7) *W.J. Kress & M. Butts 04-7476*, 13 May 2004. Beach, SW end. I.

LEONURUS CARDIACA L. - motherwort. (1) *E.P. Killip 31276*, 4 Aug 1934. Cabin Hill near fireplace.

Lycopus americanus Muhl. - American water-horehound, cut-leaved water-horehound. (5) *S. Wisner & C. Van Metre 49*, 11 Sep 1986. West end, to the west of Cactus Rock, rocky "islands" directly offshore. W.

rubellus Moench - stalked water-horehound. (1) *E.P. Killip 32156*, 1 Aug 1937.

"Barrens" near new ferry posts.

+×**sherardii** E.S. Steele (= *Lycopus virginicus* × *L. uniflorus*) - Sherard's water-horehound. (2) *T.H. Kearney 119*, 23 Aug 1903.

virginicus L. - bugleweed, Virginia bugleweed, Virginia water-horehound. (8) *S.G.*

Shetler & S.S. Orli 2004.29, 3 Aug 2004. Mainland, Northwest Swamp [2 sheets].

M.

Mentha arvensis L. - field mint, wild mint. (*M. canadensis* L.) (3) *E.P. Killip 31931*, 22 Aug 1936. "Barrens" along channel toward lower end.

×**GRACILIS** Sole (= *M. arvensis* × *M. spicata*) - small-leaved mint, red mint, Scotch mint.

(*M. cardiaca* J. Gerard ex Baker, *M.* × *gentilis* L., misapplied). (1) *E.P. Killip 32170*, 3 Aug 1937. On rocks toward north end of upper flood path.

Monarda clinopodia L. - basil-balm, basil bee-balm. (4) *M. Beyersdorfer 130*, 4 Jul 1982.

Channel side of Gap.

NEPETA CATARIA L. - catnip. (3) *E.F. Wells, R.L. Brown & V.S. Murthy 4371*, 30 Jul 1997.

Floodplain.

PERILLA FRUTESCENS (L.) Britton - perilla, beefsteak-plant, perilla-mint. (5) *E.F. Wells, R.L.*

Brown & V.S. Murthy 4479, 20 Sep 1997. Floodplain. I.

Physostegia virginiana (L.) Benth. - obedient-plant, obedience. (*Dracocephalum virginianum*

L., *P. speciosa* (Sweet) Sweet) (1) *E.P. Killip 32142*, 4 Jul 1937. Lower end, toward river.

Prunella vulgaris L. - heal-all, selfheal. (2) *E.P. Killip 31070*, 13 Aug 1933. Near boat landing.

M.

Pycnanthemum †incanum (L.) Michx. - hoary mountain-mint. (*Koellia incana* (L.) Kuntze).

(1) *E.P. Killip 13234*, 14 Jul 1928. [Mainland], west side of Stewart Farm.

tenuifolium Schrad. - narrow-leaved mountain-mint. (*Koellia flexuosa* (Walter)

MacMill., misapplied, *P. flexuosum* (Walter) Britton, Sterns & Poggenb., misapplied).

(3) *E.P. Killip 32621*, 26 Jun 1938. At base of Sycamore at river end of Gap.

+verticillatum (Michx.) Pers. - verticillate mountain-mint. (*Koellia verticillata* (Michx.)

Kuntze). (2 sheets of 1 collection) *E.P. Killip 41367*, 17 Aug 1951. Comments:

Originally identified as *P. virginianum* (L.) T. Durand & B.D. Jacks. ex B.L. Rob. & Fernald and included as such in Killip & Blake (1953).

Salvia lyrata L. - lyre-leaved sage. (6) *M. Beyersdorfer s.n.*, 19 Oct 1984. Between Rock of Gibraltar and Cactus Rock, just east of rock outcrop in river. W.

Satureja CALAMINTHA (L.) Scheele - basil-thyme. (*Clinopodium nepeta* (L.) Kuntze, *S. nepeta* (L.) Scheele). (1) *S.F. Blake s.n.*, 20 Oct 1936. Waste weedy ground formed by 1936 flood.

vulgaris (L.) Fritsch. - basil, wild basil. (*Clinopodium vulgare* L.) (3) *A.S. Hitchcock 15628*, 29 Jul 1917.

Scutellaria elliptica Muhl. ex Spreng. - hairy skullcap. (*S. ovalifolia* Pers.) (6) *W.J. Kress & M. Butts 04-7510*, 8 Jun 2004. Slope below cabin (west side). I.

+integrifolia L. - large-flowered skullcap, hyssop skullcap. (2) *E.P. Killip 32610*, 26 Jun 1938. "Barrens" just north of sand bank toward east end. Comments: Apparently both *P.C. Standley 11768* (1915) and *Killip 32610* (1938) were overlooked by Killip & Blake in compiling their checklists (1935, 1953).

lateriflora L. - mad-dog skullcap. (*S. epilobiifolia* A. Ham., misapplied by Killip & Blake in 1935). (3) *E.C. Leonard & N. Hotchkiss 3543*, 9 May 1961. Near base of Outlook Rock.

Stachys +tenuifolia Willd. - common hedge-nettle, smooth hedge-nettle. (1) *E.P. Killip 32171*,
3 Aug 1937. Flood path near upper end. Comments: Treated as *S. aspera* Michx. by
Killip & Blake in 1953.

Teucrium canadense L. - American germander, American wood-sage. (7) *W.J. Kress & M.*
Butts 04-7527, 23 Jun 2004. Near E point. I.

Trichostema dichotomum L. - blue-curls. (2) *A.S. Hitchcock 15814*, 16 Sep 1917.

LAURACEAE (Laurel Family)

Lindera benzoin (L.) Blume - spicebush. (*Benzoin aestivale* (L.) Nees). (7) *W.J. Kress & M.*
Butts 04-7443, 6 May 2004. Along path directly below (ENE) terrace. I.

Sassafras albidum (Nutt.) Nees - sassafras, white sassafras. (*S. variifolium* (Salisb.) Kuntze.)
(2) *M. Beyersdorfer 202*, 22 Aug 1982.

LIMNANTHACEAE (Meadow-foam Family)

Floerkea proserpinacoides Willd. - false mermaid. (5) *P.C. Standley 13115*, 7 May 1916. I.

LINACEAE (Flax Family)

Linum medium (Planch.) Britton - common yellow flax, stiff yellow flax. (1) *S.F. Blake s.n.*, 26
Jul 1924. Cabin Hill, west slope.

LOBELIACEAE (Lobelia Family)

Lobelia cardinalis L. - cardinal-flower. (3) *M. Beyersdorfer 208*, 26 Aug 1982. Channel bank
at west end by stream that enters from under bridge. M, W.

inflata L. - Indian-tobacco. (4) *E.F. Wells, R.L. Brown & V.S. Murthy 4539*, 21 Sep 1997. Floodplain.

siphilitica L. - great lobelia, great blue lobelia, blue cardinal-flower. (5) *E.F. Wells, R.L. Brown & V.S. Murthy 4523*, 21 Sep 1997. Floodplain.

LYTHRACEAE (Loosestrife Family)

Ammannia +coccinea Rottb. - tooth-cup. (7) *E.F. Wells, R.L. Brown & V.S. Murthy 4435*, 31 Aug 1997. Floodplain.

Cuphea viscosissima Jacq. - blue waxweed, clammy cuphea, tarweed. (*C. petiolata* (L.) Koehne, *Parsonsia petiolata* (L.) Rusby). (3) *E.P. Killip 13478*, 21 Sep 1930. West end, sandbar.

Lythrum alatum Pursh - winged loosestrife, wing-angled loosestrife. (2) *E.P. Killip 32144*, 6 Jul 1937. Lower end, close to river.

Rotala ramosior (L.) Koehne - tooth-cup. (2) *E.P. Killip 31923*, 9 Aug 1936. Halfway between ferry landing and upper end, marshy soil at edge of pool.

MAGNOLIACEAE (Magnolia Family)

Liriodendron tulipifera L. - tulip-tree, yellow-poplar, tulip-poplar. (3) *W.J. Kress & M. Butts 04-7459*, 13 May 2004. Terrace. I.

Magnolia †virginiana L. - swamp magnolia, sweet-bay, swamp-bay. (1) *M. Beyersdorfer 112*, 20 Jun 1982. [Mainland], border of Frog Pond - opposite *Taxodium*. Comments: Perhaps the planted one (McAtee 1930, p. 54).

MALVACEAE (Mallow Family)

ABUTILON THEOPHRASTI Medik. - velvet-leaf, Indian-mallow. (4) *E.F. Wells, R.L. Brown &*

V.S. Murthy 5165, 12 Jun 1997. Floodplain. I.

Hibiscus laevis All. - halberd-leaved rose-mallow, smooth rose-mallow. (*H. militaris* Cav.) (8)

W.J. Kress & M. Butts 04-7559, 15 Jul 2004. W point, rocks near I-495 bridge. I.

moscheutos L. - rose-mallow, swamp rose-mallow. (*H. palustris* L.) (1) *A.H. Hitchcock*

15729, 9 Sep 1917. M, W.

+**TRIONUM** L. - flower-of-an-hour. (2) *E.P. Killip 43333*, 12 Aug 1953 [2 sheets]. East

sandbar.

MALVA NEGLECTA Wallr. - common mallow, cheeses. (*M. rotundifolia* L., misapplied). (1)

E.P. Killip & J.R. Swallen 31906, 19 Jul 1936. "Barrens" east of new ferry posts.

Sida hermaphrodita (L.) Rusby - Virginia-mallow, Virginia sida. (5) *E.P. Killip 32626*, 24 Jul

1938. Along side of river just above water gauge.

spinosa L. - false mallow, prickly-mallow, prickly sida. (*S. angustifolia* Lam.,

misapplied). (6) *W.J. Kress & N.A. Bourg 04-7618*, 05 Sep 2004. E end, on mudflats

near river shore, channel side. I.

MENISPERMACEAE (Moonseed Family)

Menispermum canadense L. - moonseed. (7) *E.F. Wells, R.L. Brown & V.S. Murthy 5162*, 12

Jun 1997. Floodplain. I.

MOLLUGINACEAE (Carpetweed Family)

Mollugo verticillata L. - carpetweed. (5) *W.J. Kress & M. Butts 04-7445*, 6 May 2004. Along path directly below (ENE) terrace. I.

MONOTROPACEAE (Indian-pipe Family)

Monotropa uniflora L. - Indian-pipe. (2) *E.P. Killip & M.K. Brady 32655*, 3 Jul 1939. Just beneath one of lower stone steps toward Landing Rock.

MORACEAE (Mulberry Family)

MACLURA POMIFERA (Raf.) C.K. Schneid. - osage-orange. (*Toxylon pomiferum* Raf. ex Sarg.) (Killip & Blake 1935). I.

Morus ALBA L. - white mulberry, silkworm mulberry. (2) *N. Hotchkiss & E.C. Leonard 3357*, 27 Sep 1960. Between boat landing and Poachers Landing [2 sheets]. I.

rubra L. - red mulberry. (3) *A.S. Hitchcock 12663*, 22 May 1915.

NYSSACEAE (Black-gum Family)

Nyssa sylvatica Marshall - black-gum, sour-gum, pepperidge, black tupelo. (2) *E.P. Killip 31261*, 22 Jul 1934. Mainland, Northwest Swamp. W.

OLEACEAE (Olive Family)

Chionanthus virginicus L. - fringe-tree, old-man's-beard. (10) *W.J. Kress & M. Butts 04-7462*, 13 May 2004. Near Cactus Rock. I.

Fraxinus americana L. - white ash. (*F. biltmoreana* Beadle). (16) *E.C. Leonard & N. Hotchkiss 3572*, 9 May 1961. Cabin Hill [3 sheets]. I.

pennsylvanica Marshall - red ash, green ash. (*F. lanceolata* Borkh.) (13) *E.F. Wells,*

E.F. & R.L. Brown & V.S. Murthy 4411, 25 Jul 1997. Floodplain. I.

LIGUSTRUM +†**OBTUSIFOLIUM** Siebold & Zucc. - border privet. (2) *S.G. Shetler & S.S. Orli*
2004.26, 3 Aug 2004. Mainland, in woods near ponds. Comments: A sterile specimen
of Ligustrum has been collected on the Island (W.J. Kress & M. Butts 04-7507, 8 Jun
2004), which might be this species. I.

ONAGRACEAE (Evening-primrose Family)

Circaea lutetiana L. - common enchanter's-nightshade. (*C. latifolia* Hill, *C. quadrisulcata*

(Maxim.) Franch. & Savigny). (2) *A.S. Hitchcock 12969, 1 Jul 1917.*

Epilobium coloratum Biehler - eastern willow-herb, purple-leaved willow-herb. (1) *A.S.*

Hitchcock 15704, 9 Sep 1917.

Gaura biennis L. - gaura, biennial gaura. (3) *E.P. Killip 13320, 9 Sep 1928. [Mainland],*

Stewart Farm.

Ludwigia alternifolia L. - seedbox, square-pod water-primrose. (5) *E.F. Wells, R.L. Brown &*

V.S. Murthy 4406, 30 Jul 1997. Floodplain. M.

palustris (L.) Elliott - common water-purslane, marsh-purslane. (*Isnardia palustris* L.)

(7) *M. Beyersdorfer 294, 25 Sep 1982. East end, Crossing Rocks, rocky crevices.*

M, W.

+**PEPLOIDES** (Kunth) P.H. Raven - creeping primrose-willow, creeping water-primrose.

(1) *E.F. Wells, R.L. Brown & V.S. Murthy 4866, 31 Aug 1997. Floodplain.*

Oenothera biennis L. - common evening-primrose. (*O. gauroides* Hornem.) (10) *E.F. Wells*,

R.L. Brown & V.S. Murthy 5182, 12 Jun 1997. Floodplain. M.

†**fruticosa** L. - sundrops. (*Kneiffia fruticosa* (L.) Raim., *K. tetragona* (Roth) Pennell, *O.*

tetragona Roth). (1) *E.P. Killip 31053*, 25 Jun 1933. [Mainland], Stewart Farm.

laciniata Hill - cut-leaved evening-primrose. (*Raimannia laciniata* (Hill) Rose). (2) *E.P.*

Killip 31891, 12 Jul 1936. "Barrens" near ferry landing.

OROBANCHACEAE (Broom-rape Family)

Conopholis +americana (L.f.) Wallr. - cancer-root, squaw-root. (1) *M. Beyersdorfer 73*, 10

May 1983. Cabin Hill slope that leads into valley in front of cabin.

Orobanche uniflora L. - one-flowered cancer-root, cancer-root, one-flowered broom-rape.

(*Thalesia uniflora* (L.) Britton). (5) *M. Beyersdorfer 105*, 18 May 1983. Path to west end just past Gap, river side - "party spot." I.

OXALIDACEAE (Wood-sorrel Family)

Oxalis +corniculata L. - creeping wood-sorrel. (*Xanthoxalis corniculata* (L.) Small). (2)

A.S. Hitchcock 12571, 9 May 1915. Comments: This specimen and one collected by P.C. Standley (11485) on the same day and probably at the same time and place were misidentified.

dillenii Jacq. - southern wood-sorrel, slender wood-sorrel. (*O. filipes* Small, *O. florida* Salisb., *O. stricta* L., misapplied, *Xanthoxalis filipes* Small, *X. stricta* L., misapplied).

(9) *W.J. Kress & M. Butts 04-7455*, 11 May 2004. Cabin Hill, under picnic tables. I.

grandis Small - great wood-sorrel, big wood-sorrel. (*Xanthoxalis grandis* (Small)

Small). (8) *P.C. Standley 11641*, 6 Jun 1915. Damp woods.

stricta L. - common wood-sorrel, upright wood-sorrel. (*O. cymosa* Small, *O. europaea*

Jord., *Xanthoxalis cymosa* (Small) Small, *X. stricta* (L.) Small). (17) *S.G. Shetler &*

E.F. Wells 2004.17, 21 Jul 2004. Mainland, edge of woods along trail near Crossing Rocks. I.

violacea L. - violet wood-sorrel. (*Ionoxalis violacea* (L.) Small). (5) *W.J. Kress & M.*

Butts 04-7463, 13 May 2004. Near Cactus Rock. I.

PAPAVERACEAE (Poppy Family)

CHELIDONIUM MAJUS L. - celandine, greater celandine. (4) *M. Beyersdorfer 1-84*, 11 May 1984. Below Rock of Gibraltar, sandy alluvial soil.

Papaver DUBIUM L. - orange poppy, smooth-fruited poppy, long-headed poppy. (2) *E.P. Killip 31027*, 4 Jun 1933. South of West Knoll, open grassland.

Sanguinaria canadensis L. - bloodroot. (6) *M. Beyersdorfer 11*, 25 Mar 1983. Gap, channel side. M.

STYLOPHORUM +DIPHYLLUM (Michx.) Nutt. - celandine-poppy, wood-poppy. Comments:

One plant, in flower, base of Cabin Hill, NE side (D.H. Nicolson, 3 May 2003). I.

PASSIFLORACEAE (Passion-flower Family)

Passiflora lutea L. - yellow passion-flower. (3) *E.F. Wells, R.L. Brown & V.S. Murthy 4417*, 25

Jul 1997. Floodplain.

PHYTOLACCACEAE (Pokeweed Family)

Phytolacca americana L. - pokeweed, pokeberry, poke. (6) *W.J. Kress & M. Butts 04-7511*, 11

Jun 2004. Below Cactus Rock (west side). I.

PLANTAGINACEAE (Plantain Family)

Plantago ARISTATA Michx. - bracted plantain, buckhorn, bottle-brush plantain. (1) *E.P. Killip*

31890, 12 Jul 1936. "Barrens" just below ferry landing.

LANCEOLATA L. - English plantain, narrow-leaved plantain, ribgrass, buckhorn. (3) *E.P.*

Killip 31867, 5 Jul 1936. "Barrens" along channel.

rugelii Decne. - common plantain, broad-leaved plantain, American plantain. (5) *E.F.*

Wells, R.L. Brown & V.S. Murthy 4529, 21 Sep 1997. Floodplain.

virginica L. - dwarf plantain, hoary plantain. (1) *S.F. Blake s.n.*, 26 Jul 1924.

PLATANACEAE (Plane-tree Family)

Platanus occidentalis L. - sycamore, American plane-tree. (7) *W.J. Kress & M. Butts 04-7475*,

13 May 2004. Beach, SW end. I.

POLEMONIACEAE (Phlox Family)

Phlox divaricata L. - wild blue phlox, forest phlox. (11) *W.J. Kress & M. Butts 04-7436*, 6 May 2004. Terrace. I.

paniculata L. - summer phlox, garden phlox, fall phlox, perennial phlox. (3) *S. Wiser 12*, 8 Aug 1986. West end, floodplain, towards channel.

†**subulata** L. - moss-pink, moss phlox. (Killip & Blake 1935, "extinct").

POLYGALACEAE (Milkwort Family)

Polygala polygama Walter - racemed milkwort. (3) *E.P. Killip 40536*, 3 Jul 1950. West Knoll, northwest corner.

verticillata L. - whorled milkwort. (1) *E.P. Killip & F. Drouet 36517*, 24 Jul 1941. Upper Gap, toward west side.

POLYGONACEAE (Smartweed Family)

Polygonum amphibium L. - water smartweed. (*Persicaria amphibia* (L.) S.F. Gray, *P.*

muhlenbergii (Meisn. in DC.) Small, *Polygonum coccineum* Muhl. ex Willd., *P.*

muhlenbergii (Meisn. in DC.) S. Watson). (5) *M. Beyersdorfer 212*, 26 Aug 1982.

Bank of channel by ferry dock.

AVICULARE L. - knotweed. (*P. buxiforme* Small). (3) *E.P. Killip 32595*, 19 Jun 1938.

Near bar toward east end [2 sheets]. W.

CESPITOSUM Blume - Asiatic water-pepper. (*P. longisetum* Bruijn). (11) *W.J. Kress & M. Butts 04-7513*, 11 Jun 2004. Mid-island, near north shore. I.

+**CUSPIDATUM** Siebold & Zucc. - Japanese knotweed. (1) *S.G. Shetler, E.F. Wells & R.J.*

Soreng 2004.39, 30 Oct 2004. NW side, terrace above active floodplain. I.

erectum L. - erect knotweed. (1) *E.P. Killip & S.F. Blake 36552*, 2 Nov 1941. Mudbar

below sandpile.

HYDROPIPER L. - common smartweed, water-pepper. (*Persicaria hydropiper* (L.)

Opiz.) (5) *E.F. Wells, R.L. Brown & V.S. Murthy 4869*, 31 Aug 1997. Floodplain.

+**hydropiperoides** Michx. - mild water-pepper, false water-pepper. (*Persicaria*

hydropiperoides (Michx.) Small). (4) *S.G. Shetler & E.F. Wells 2004.18*, 21 Jul

2004. Mainland, edge of woods near Crossing Rocks. I.

lapathifolium L. - dock-leaved smartweed. (*Persicaria lapathifolia* (L.) S.F. Gray).

(12) *E.F. Wells, R.L. Brown & V.S. Murthy 5166*, 12 Jun 1997. Floodplain. M.

ORIENTALE L. - prince's-feather. (*Persicaria orientalis* (L.) Spach). (1) *E.P. Killip &*

J.E. Benedict 31259, 22 Jul 1934. East sandbar.

pensylvanicum L. - pinkweed, Pennsylvania smartweed. (*Persicaria pensylvanica* (L.)

M. Gómez). (12) *W.J. Kress & M. Butts 04-7526*, 23 Jun 2004. River's edge of E

point. I.

+**PERFOLIATUM** L. - mile-a-minute, perfoliate tearthumb. (1) *E.F. Wells, R.L. Brown &*

V.S. Murthy 4336, 1 Jul 1997. Floodplain. M.

PERSICARIA L. - lady's-thumb. (*Persicaria mitis* Gilib., *P. persicaria* (L.) Small). (6)

A.S. Hitchcock 15646, 29 Jul 1917. W.

punctatum Elliott - water smartweed, dotted smartweed. (*Persicaria punctata* (Elliott)

Small). (10) *E.F. Wells, R.L. Brown & V.S. Murthy 4536*, 21 Sep 1997. Floodplain.

I.

sagittatum L. - arrow-leaved tearthumb. (*Tracaulon sagittatum* (L.) Small). (2) *E.F.*

Wells, R.L. Brown & V.S. Murthy 4548, 21 Sep 1997. Floodplain.

scandens L. - false buckwheat. (*Bilderdykia scandens* (L.) Greene). (8) *E.F. Wells, R.L.*

Brown & V.S. Murthy 4484, 20 Sep 1997. Floodplain.

tenuis Michx. - slender knotweed. (1) *T.H. Kearney 33*, 19 Aug 1903.

virginianum L. - jumpseed. (*Tovara virginiana* (L.) Raf.) (7) *W.J. Kress & N.A. Bourg*

04-7581, 7 Aug 2004. W side upland forest at base of hill, facing I-495. I.

Rumex ACETOSELLA L. - sheep sorrel. (2) *A.S. Hitchcock 12765*, 6 Jun 1915.

altissimus A. Wood - pale dock, water dock. (10) *W.J. Kress & M. Butts 04-7492*, 25

May 2004. Floodplain near west point. I.

CRISPUS L. - curly dock. (1) *A.S. Hitchcock 12689*, 31 May 1915. I.

OBTUSIFOLIUS L. - bitter dock, broad-leaved dock. (3) *E.P. Killip 31902*, 18 Jul 1936.

"Barrens" along channel. W.

verticillatus L. - swamp dock, water dock. (2) *E.P. Killip 32598*, 19 Jun 1938.

"Barrens" toward east end, river side.

PORTULACACEAE (Purslane Family)

Claytonia virginica L. - spring-beauty. (7) *W.J. Kress & M. Butts 04-7440*, 6 May 2004. Along path directly below (ENE) terrace. I.

PORTULACA OLERACEA L. - common purslane. (2) *E.C. Leonard & N. Hotchkiss 3395*, 27 Sep 1960. East end, riverbank. I.

PRIMULACEAE (Primrose Family)

ANAGALLIS ARVENSIS L. - scarlet pimpernel, common pimpernel. (1) *S.F. Blake s.n.*, 26 Jul 1924.

Lysimachia ciliata L. - fringed loosestrife. (*Steironema ciliatum* (L.) Raf.) (6) *E.F. Wells, R.L. Brown & V.S. Murthy 4337*, 1 Jul 1997. Floodplain. I.

NUMMULARIA L. - moneywort. (5) *W.J. Kress & M. Butts 04-7491*, 25 May 2004. Floodplain near west point. I.

+†**terrestris** (L.) Britton, Sterns & Poggenb. - swamp loosestrife, swamp-candles. (1) *D.L. Topping s.n.*, 21 Jun 1897. Near Plummers Island [?Mainland]. Comments: Overlooked or omitted by Killip & Blake (1935, 1953).

Samolus parviflorus Raf. - water-pimpernel, brookweed. (*S. floribundus* Kunth). (3) *E.P. Killip 36546*, 2 Nov 1941. Mid-mudbar.

PYROLACEAE (Shinleaf Family)

Chimaphila †maculata (L.) Pursh - spotted wintergreen. (2) *M. Beyersdorfer 80*, 2 Jun 1982. Mainland, off main trail to ferry.

RANUNCULACEAE (Buttercup Family)

Anemone americana H. Hara - hepatica, round-lobed hepatica. (*Hepatica americana* (DC.) Ker Gawl.) (4) *M. Beyersdorfer* 7, 18 Apr 1982. Mainland, south of the Northwest Swamp.

quinquefolia L. - wood anemone, windflower. (3) *A.S. Hitchcock* 12806, 7 May 1916.

virginiana L. - thimblewood, tall anemone. (8) *S. Wiser* 2, 11 Jul 1986. West end, sandy soil.

Anemonella thalictroides (L.) Spach - rue-anemone, windflower. (*Syndesmon thalictroides* (L.) Hoffmanns. ex Britton, *Thalictrum thalictroides* (L.) Eames & B. Boivin). (1) *E.P. Killip* 30862, 29 Apr 1933. Mainland, near main trail. Comments: "Reported from Island also" (Killip & Blake 1935).

Aquilegia canadensis L. - wild columbine, Canadian columbine. (4) *E.C. Leonard* 3122, 30 Apr 1960. Near west end, rock outcrop of old channel. I.

Cimicifuga racemosa (L.) Nutt. - black snakeroot, black cohosh, bugbane. (3) *M. Beyersdorfer* 129, 10 Jun 1983. East end, lowlands. M, W.

Clematis viorna L. - leather-flower, vase-vine. (*Viorna urnigera* Spach). (10) *M. Beyersdorfer* 210, 26 Aug 1982. Northwest side of Island.

†**virginiana** L. - virgin's-bower. (1) *E.P. Killip* 13323, 9 Sep 1928. [Mainland], edge of Stewart Farm.

Consolida AJACIS (L.) Schur. - rocket larkspur. (*Delphinium ajacis* L., *D. ambiguum* L., misapplied). (1) *E.P. Killip 32596*, 19 Jun 1938. "Barrens" toward east end, river side.

Delphinium tricorne Michaux - dwarf larkspur. (Killip & Blake 1935).

Ranunculus abortivus L. - kidney-leaved crowfoot, kidney-leaved buttercup, small-flowered crowfoot, aborted buttercup. (8) *E.F. Wells, R.L. Brown & V.S. Murthy 4331*, 15 May 1997. Floodplain. I.

BULBOSUS L. - bulbous buttercup, bulbous crowfoot. (1) *E.P. Killip 40520*, 7 May 1950. East end near junction of trails to Crossing Rocks and East Sandbar. M.

hispidus Michaux - hispid buttercup, swamp buttercup. (*R. septentrionalis* Poir.) (7) *S.F. Blake s.n.*, 7 May 1933. Ferry landing side of Island.

micranthus Nutt. - small-flowered crowfoot. (7) *E.P. Killip 31146*, 22 Apr 1934. Near Outlook Rock.

recurvatus Poir. - hooked crowfoot. (3) *W.J. Kress & M. Butts 04-7442*, 6 May 2004. Along path, directly below (ENE) terrace. I.

sceleratus L. - cursed crowfoot. (2) *E.C. Leonard 21124*, 30 Apr 1960. [Mainland], bed of drained [C & O] Canal opposite Island.

Thalictrum coriaceum (Britton) Small - thick-leaved meadow-rue, leatherleaf meadow-rue. (*T. caulophylloides* Small). (12) *W.J. Kress & M. Butts 04-7482*, 20 May 2004. Central plain (SW). I.

pubescens Pursh - tall meadow-rue, late meadow-rue. (*T. polygamum* Muhl. ex Spreng.)

(2) *M. Beyersdorfer 118*, 10 May 1983. Flats, east end by Sycamore Cove, path from east end [2 sheets].

revolutum DC. - skunk meadow-rue, wax-leaved meadow-rue, purple meadow-rue. (4)

A.S. Hitchcock 12932, 24 Jun 1917.

RHAMNACEAE (Buckthorn Family)

Ceanothus †americanus L. - New Jersey-tea. (2) *E.P. Killip 32135*, 20 Jun 1937. [Mainland],

woods near Northwest Swamp. Comments: Once native here, but these specimens could be from plantings (McAtee 1930, p. 54).

ROSACEAE (Rose Family)

Agrimonia †parviflora Aiton - small-fruited agrimony. (1) *E.P. Killip 31085*, 19 Aug 1933.

Between Stewart Farm and north fence, near middle gate.

pubescens Wallr. - downy agrimony, hairy agrimony. (11) *M. Beyersdorfer 131*, 18 Aug

1983. West end, opposite inlet of stream that goes under Beltway. W.

rostellata Wallr. - woodland agrimony. (*A. eupatoria* L., misapplied). (2) *E.P. Killip*

31109, 4 Sep 1933. West Knoll.

Amelanchier arborea (F. Michx.) Fernald - common serviceberry, downy serviceberry,

shadbush. (*A. canadensis* (L.) Medik., misapplied). (1) *E.P. Killip 31147*, 21 Apr

1934. Mainland, near old spring. Comments: "...formerly reported from Island also"

(Killip & Blake 1953). I.

- Aruncus †dioicus** (Walter) Fernald - goat's-beard. (*A. vulgaris* (Maxim.) Raf. ex Hara). (1) *E.P. Killip 31047*, 25 Jun 1933. Mainland, woods between main trail and Stewart Farm. Comments: Apparently introduced (McAtee 1930).
- Crataegus uniflora** Muenchh. - one-flowered hawthorn, dwarf hawthorn. (1) *E.P. Killip 31179*, 30 May 1934. Mainland, main trail near Fisher Garden. Comments: "...two plants formerly on Island also" (Killip & Blake 1935). I.
- DUCHESNEA INDICA** (Andrews) Focke - false strawberry, Indian-strawberry. (2) *W.J. Kress & M. Butts 04-7478*, 15 May 2004. Mid-island. Comments: Reported without voucher specimen by Killip & Blake (1935). I.
- Fragaria virginiana** Duchesne - wild strawberry. (3) *E.F. Wells, R.L. Brown & V.S. Murthy 4517*, 21 Sep 1997. Floodplain.
- Geum †aleppicum** Jacq. - yellow avens. (*G. strictum* Aiton). (1) *E.P. Killip 31074*, 13 Aug 1933. Mainland, along lower trail.
- canadense** Jacq. - white avens. (*G. meyerianum* Rydb.) (12) *W.J. Kress & M. Butts 04-7517*, 11 Jun 2004. Floodplain, mid-island. I.
- Malus †SYLVESTRIS** Mill. - apple. (*M. pumila* Mill., misapplied., *Pyrus malus* L.) (1) *E.P. Killip 31474*, 5 May 1935. Mainland, Stewart Farm. Comments: Undoubtedly persisting from cultivation.
- Physocarpus opulifolius** (L.) Maxim. - ninebark. (*Opulaster opulifolius* (L.) Kuntze). (5) *E.C. Leonard & N. Hotchkiss 3493*, 9 May 1961. West end, rock crevice.

Porteranthus †trifoliatus (L.) Britton - bowman's-root, false ipecac, Indian-physic. (*Gillenia trifoliata* (L.) Moench). (1) *E.P. Killip 31183*, 30 May 1934. Mainland, west of main trail about 30 ft south of fence.

Potentilla arguta Pursh - tall cinquefoil (five-finger). (1) *E.P. Killip 31995*, 11 Oct 1936. Bar midway between Cactus Rock and Outlook Rock.

canadensis L. - common cinquefoil (five-finger), running cinquefoil. (*P. pumila* Poir.) (3) *P.C. Standley 11456*, 9 May 1915. I.

norvegica L. - rough cinquefoil (five-finger), strawberry-weed. (*P. monspeliensis* L.) (3) *E.P. Killip 31252*, 21 Jul 1934. West sandbar.

simplex Michx. - old-field cinquefoil (five finger), common cinquefoil. (*P. canadensis* L., misapplied). (2) *A.S. Hitchcock 12562*, 9 May 1915. W.

Prunus americana Marshall - wild plum. (6) *E.P. Killip 36654*, 18 Jul 1943. [Mainland], along C&O Canal between Locks 10 and 11.

+angustifolia Marshall - chickasaw plum. (1) *P.C. Standley 13107*, 30 Apr 1916. On rocks at upper end. Comments: Identity subject to question. Specimen overlooked or discounted by Killip & Blake (1935, 1953). In a spring-flowering list of W.L. McAtee for Apr 23, 1911 (WBFC Archives).

AVIUM L. - sweet cherry. (3) *M. Beyersdorfer 37*, 28 Apr 1983. Mainland, near Canal fence by Northwest Swamp.

†PERSICA (L.) Batsch - peach. (Killip & Blake 1935).

serotina Ehrh. - wild black cherry, wild cherry. (5) *W.J. Kress & M. Butts 04-7553*, 1 Jul 2004. Cliff above W point. I.

PYRUS †COMMUNIS L. - pear. (1) *E.P. Killip 31177*, 27 May 1934. Mainland, Barton Property. Comments: Undoubtedly persisting from cultivation.

Rosa carolina L. - pasture rose. (8) *N. Hotchkiss & E.C. Leonard 3307*, 27 Sep 1960. Upper Gap [3 sheets].

+MULTIFLORA Thunb. - multiflora rose. (1) *M. Beyersdorfer 112*, 26 May 1983. Mainland, old picnic grove by Lock 12-13, just next to Beltway. I.

palustris Marshall - swamp rose. (1) *E.P. Killip 31260*, 22 Jul 1934. Mainland, Northwest Swamp.

Rubus +alleganiensis Porter - common blackberry. (10) *N. Hotchkiss & E.C. Leonard 3188*, 23 Jul 1960. Cactus Rock, ledge on cliff facing river [5 sheets].

argutus Link - tall blackberry, southern blackberry. (6) *E.P. Killip 31202*, 3 Jun 1934. Mainland, near pools west of old spring. W.

flagellaris Willd. - northern dewberry, dewberry. (*R. baileyanus* Britton, *R. camurus* L.H. Bailey, *R. enslenii* Tratt., *R. procumbens* Muhl., misapplied, *R. prosper* L.H. Bailey). (12) *W.J. Kress & M. Butts 04-7465*, 13 May 2004. E side of Cactus Rock. I.

+hispidus L. - swamp dewberry, dewberry. (2) *M. Beyersdorfer 76*, 10 May 1983. West end, rocky table, behind Rock of Gibraltar.

occidentalis L. - black raspberry. (2) *P.C. Standley 11428*, 9 May 1915.

pensilvanicus Poir. - blackberry, Pennsylvania blackberry. (*R. ostryifolius* Rydb., *R. par* L.H. Bailey). (3) *E.P. Killip 31103*, 3 Sep 1933. Near Cactus Rock.

PHOENICOLASIUS Maxim. - wineberry. (3) *W.J. Kress & M. Butts 04-7483*, 20 May 2004. Central plain (SW). I.

SPIRAEA †**THUNBERGII** Siebold ex Blume - Thunberg's meadowsweet. (1) *E.P. Killip 30877*, 6 May 1933. [Mainland], Barton Property (introduced). Comments: "Escape" (Killip & Blake 1935).

RUBIACEAE (Madder Family)

Cephalanthusoccidentalis L. - buttonbush. (8) *W.J. Kress & M. Butts 04-7556*, 1 Jul 2004. W point of Island, rocks near I-495 bridge. I.

Diodia teres Walter - buttonweed, rough buttonweed. (2) *E.P. Killip 32183*, 15 Aug 1937. "Barrens" north of gap between hills.

Galium aparine L. - cleavers. (5) *E.F. Wells, R.L. Brown & V.S. Murthy 4345*, 1 Jul 1997. Floodplain. I.

circaezans Michx. - wild licorice, forest bedstraw. (6) *E.C. Leonard & N. Hotchkiss 3225*, 27 Sep 1960. West slope of High Knoll.

concinnum Torr. & A. Gray - shining bedstraw. (5) *M. Beyersdorfer 132*, 4 Jul 1982. Gap floor. M.

pilosum Aiton - hairy bedstraw. (3) *A.S. Hitchcock 13013*, 15 Jul 1917.

†**tinctorium** (L.) Scop. - southern three-lobed bedstraw, wild madder. (2) *E.P. Killip*

13209, 24 Jun 1928. Mainland, west of trail, near Canal [2 sheets].

triflorum Michx. - sweet-scented bedstraw. (3) *E.P. Killip 36845*, 3 Aug 1947.

Houstonia caerulea L. - bluets, Quaker-ladies. (*Hedyotis caerulea* (L.) Hook.) (4) *M.*

Beyersdorfer 34, 28 Apr 1983. Mainland, high knoll just to the left of main path to ferry dock. *M.*

longifolia Gaertn. - long-leaved bluets, long-leaved summer bluets. (*Hedyotis longifolia*

(Gaertn.) Hook.) (1) *C.L. Pollard & P. Dowell 28*, 16 Aug 1903.

purpurea L. - large summer bluets. (6) *W.J. Kress & M. Butts 04-7499*, 27 May 2004.

West side of cabin. *I.*

Mitchella repens L. - partridge-berry. (4) *M. Beyersdorfer 88*, 2 Jun 1982. West end, rocks.

RUTACEAE (Rue Family)

Ptelea trifoliata L. - hop-tree, wafer-ash. (3) *W.J. Kress & M. Butts 04-7477*, 13 May 2004.

Near beach at SW end. Comments: Earlier collection of D.L. Topping (*s.n.*, 1897) apparently not seen by Killip & Blake in 1935. Killip's *32600* was actually collected by W.T. Swingle (Killip & Blake 1953). *I.*

SALICACEAE (Willow Family)

Populus deltoides Bartram ex Marshall - cottonwood. (*P. virginiana* Foug.) (9) *M.*

Beyersdorfer 289, 19 Sep 1982. West end, river rocks. *I.*

Salix †**BABYLONICA** L. - weeping willow. (Killip & Blake 1935).

caroliniana Michx. - Carolina willow, Ward's willow. (*S. wardii* (Bebb) Bebb). (6) *M.*

Beyersdorfer 368, 17 Oct 1982. West end path around Rock of Gibraltar.

+†**humilis** Marshall - prairie willow, upland willow, small pussy willow. (1) *C.L. Pollard*

s.n., 4 Apr 1897. [Mainland], bank of Canal, opposite Island. Comments: Pollard's specimen overlooked by Killip & Blake (1935, 1953). Also in one of W.L. McAtee's spring-flowering lists, 1912 (WBFC Archives).

nigra Marshall - black willow. (6) *M. Beyersdorfer* 120, 26 Sep 1982. East end. M, W.

SAURURACEAE (Lizard's-tail Family)

Saururus cernuus L. - lizard's-tail. (3) *E.C. Leonard & N. Hotchkiss* 3269, 27 Sep 1960.

Upper Gap, alluvial soil between rock outcrops. Comments: Gone from the Island in 1935 (Killip & Blake: "Extinct?") but present again by 1946 (Killip & Blake 1953). I.

SAXIFRAGACEAE (Saxifrage Family)

Heuchera americana L. - common alumroot, rock-geranium. (8) *M. Beyersdorfer* 12-84, 21

May 1984. West Knoll, rocky outcrop.

Hydrangea arborescens L. - wild hydrangea, American hydrangea. (5) *E.C. Leonard & N.*

Hotchkiss 3158, 23 Jul 1960. West end of West Knoll.

Saxifraga virginensis Michx. - early saxifrage. (6) *M. Beyersdorfer* 53, 28 Apr 1982. West

face of Cabin Hill, rocky outcroppings. I.

SCROPHULARIACEAE (Figwort Family)

Agalinis auriculata (Michx.) Blake - auricled agalinis, auricled gerardia. (*Gerardia auriculata* Michx., *Otophylla auriculata* (Michx.) Small, *Tomanthera auriculata* (Michx.) Raf.)

(2) *E.P. Killip 31940*, 30 Aug 1936. Along river close to channel [2 sheets].

Chelone glabra L. - white turtlehead. (Killip & Blake 1935).

Gratiola neglecta Torr. - clammy hedge-hyssop. (*G. virginiana* L., misapplied). (5) *S. Wiser 7*, 11 Jul 1986. West end, near bank of channel.

Linaria vulgaris Mill. - butter-and-eggs, toadflax. (2) *P.C. Standley 11778*, 27 Jun 1915. South shore.

Lindernia dubia (L.) Pennell - false pimpernel. (*Ilysanthes attenuata* (Spreng.) Small, *I. dubia* L. Barnhart). (10) *E.F. Wells, R.L. Brown & V.S. Murthy 4531*, 21 Sep 1997. Floodplain. I.

Mecardonia acuminata (Walter) Small - purple hedge-hyssop, water-hyssop. (*Bacopa acuminata* (Walter) B.L. Rob.) (4) *E.P. Killip 32678*, 3 Sep 1939. Gap, west side.

Mimulus alatus Aiton - winged monkey-flower. (7) *M. Beyersdorfer 132*, 18 Aug 1983. West end of Island by stream inlet under Beltway. M, W.

ringens L. - common monkey-flower, square-stemmed monkey-flower. (2) *E.P. Killip 31945*, 5 Sep 1936. Pool about halfway between ferry landing and upper end.

PAULOWNIA TOMENTOSA (Thunb.) Siebold & Zucc. ex Steud. - empress-tree, princess-tree,

imperial-tree. (1) *E.F. Wells, R.L. Brown & V.S. Murthy 4515*, 21 Sep 1997.

Floodplain. I.

Penstemon hirsutus (L.) Willd. - hairy beard-tongue, northeastern beard-tongue. (4) *A.K.*

Fisher s.n., 18 May 1941. Along trail to east end, east of new ferry post.

laevigatus Aiton - smooth beard-tongue, eastern beard-tongue. (2) *E.P. Killip 32117*, 13

Jun 1937. Near upper end, in path of flood. Comments: Specimen of D.L. Topping (*s.n.*, 1897), misidentified as *P. digitalis* (Sweet) Nutt., apparently overlooked by Killip & Blake (1935,1953).

Scrophularia marilandica L. - Maryland figwort, eastern figwort. (3) *W.J. Kress & M. Butts*

04-7566, 22 Jul 2004. Along trail near E point. I.

VERBASCUM BLATTARIA L. - moth mullein. (3) *E.P. Killip 31972*, 20 Sep 1936. Path of main current of flood near upper end.

PHLOMOIDES L. - clasping-leaved mullein. (3) *E.P. Killip 36557*, 11 Oct 1941. Mudbar at east end. Comments: New to DC area at the time (Killip & Blake 1953).

THAPSUS L. - common mullein, great mullein. (4) *M. Beyersdorfer 266*, 12 Sep 1982.

Behind Rock of Gibraltar, rock crevice on rock table. I.

Veronica +americana Schwein. ex Benth. - American brooklime, American speedwell. (2) *S.*

Wiser & C. Van Metre 71, 3 Oct 1986. Along channel west of cabin, in rock crevices. Comments: Specimen of P.C. Standley (11773, 1915) apparently overlooked by Killip & Blake (1935, 1953).

anagallis-aquatica L. - water speedwell, brook-pimpernel. (*V. glandifera* Pennell). (4)

S.G. Shetler 2004.9, 15 May 2004. Mainland, among rocks at Rock Crossing. M.

ARVENSIS L. - corn speedwell. (2) *A.S. Hitchcock 12581*, 9 May 1915.

HEDERIFOLIA L. - ivy-leaved speedwell. (7) *W.J. Kress & M. Butts 04-7446*, 6 May

2004. Along path directly below (ENE) terrace. I.

peregrina L. - purslane speedwell. (3) *F. Pennell 2861A*, 4 Jun 1941. East end of Island.

Veronicastrum virginicum (L.) Farw. - culver's-root. (*Leptandra virginica* (L.) Nutt.) (7) *E.C.*

Leonard & N. Hotchkiss 3320, 27 Sep 1960. Rock outcrop of Upper Gap.

SIMAROUBACEAE (Quassia Family)

AILANTHUS ALTISSIMA (Mill.) Swingle - tree-of-heaven. (5) *W.J. Kress & M. Butts 04-7555*, 1

Jul 2004. Slope above beach near SW point. I.

SOLANACEAE (Nightshade Family)

Datura stramonium L. - jimson-weed. (10) *W.J. Kress & M. Butts 04-7540*, 23 Jun 2004. SW

shore, beach. I.

LYCOPERSICON ESCULENTUM Mill. - tomato. (4) *M. Beyersdorfer 395*, 24 Oct 1982.

Entrance to channel.

NICANDRA PHYSALODES (L.) Gaertn. - apple-of-Peru. (*Physalodes peruvianum* (Mill.)

Kuntze). (1) *E.P. Killip 31947*, 7 Sep 1936. "Barrens" toward lower end.

PETUNIA AXILLARIS (Lam.) Britton, Sterns & Poggenb. - common garden petunia. (*P.*

violacea Lindl., ?misapplied). (1) *E.P. Killip & J.R. Swallen 31928*, 16 Aug 1936.

Physalis heterophylla Nees - clammy ground-cherry, common ground-cherry. (4) *E.P. Killip*

31055, 25 Jun 1933. [Mainland], Stewart Farm.

longifolia Nutt. - smooth ground-cherry, longleaf ground-cherry. (*P. philadelphica*

Lam., misapplied, *P. subglabrata* Mack. & Bush). (12) *W.J. Kress & N.A. Bourg 04-*

7573, 31 Jul 2004. On rock outcrop at E end. I.

pubescens L. - hairy ground-cherry, downy ground-cherry. (3) *E.F. Wells, R.L. Brown &*

V.S. Murthy 4533, 21 Sep 1997. Floodplain.

Solanum carolinense L. - horse-nettle. (5) *W.J. Kress & M. Butts 04-7539*, 23 Jun 2004. SW

shore, at water's edge. I.

nigrum L. s.l. - black nightshade. (*S. americanum* Mill., perhaps misapplied, *S.*

nodiflorum Jacq., *S. ptychanthum* Dunal). (9) *W.J. Kress & M. Butts 04-7514*, 11 Jun

2004. Mid-island, near north shore. I.

+† **PHYSALIFOLIUM** Rusby - hairy nightshade. (*S. sarrachoides* Sendt., misapplied). (1)

S.G. Shetler & E.F. Wells 2004.19, 21 Jul 2004. Mainland, near Crossing Rocks. M.

STAPHYLEACEAE (Bladdernut Family)

Staphylea trifolia L. - bladdernut. (11) *W.J. Kress & M. Butts 04-7434*, 6 May 2004. Along path to cabin. I.

THYMELAEACEAE (Mezereum Family)

Dirca palustris L. - leatherwood. (4) *E.C. Leonard 3113*, 30 Apr 1960. Outcrop near west end, among rocks. I.

TILIACEAE (Linden Family)

Tilia americana L. - basswood, American linden. (*T. heterophylla* Vent., *T. neglecta* Spach). (8) *W.J. Kress & M. Butts 04-7554*, 1 Jul 2004. Cliff above SW point. I.

ULMACEAE (Elm Family)

Celtis occidentalis L. - hackberry, northern hackberry. (*C. crassifolia* Lam.) (21) *W.J. Kress & N.A. Bourg 04-7584*, 29 Aug 2004. On rocks on W side below cabin. I.

+**tenuifolia** Nutt. - dwarf hackberry. (*C. pumila* Pursh, misapplied). (1) *A.S. Hitchcock 12782*, 13 Jun 1915. Comments: Annotated as "*C. mississippiensis* Bosc" (= *C. laevigata* Willd.) and treated as that species in Hitchcock & Standley (1919) and Killip & Blake (1935). I.

Ulmus americana L. - American elm. (6) *M. Beyersdorfer 121*, 27 Jun 1982. West end. I.

rubra Muhl. - slippery elm, red elm. (*U. fulva* Michx.) (14) *W.J. Kress & M. Butts 04-7557*, 1 Jul 2004. W point, rocks near I-495 bridge. I.

URTICACEAE (Nettle Family)

Boehmeria cylindrica (L.) Sw. - false nettle. (11) *E.F. Wells, R.L. Brown & V.S. Murthy 4877*,

31 Aug 1997. Floodplain. I.

Laportea canadensis (L.) Wedd. - wood-nettle. (*Urticastrum divaricatum* (L.) Kuntze). (6)

E.F. Wells, R.L. Brown & V.S. Murthy 4502, 20 Sep 1997. Floodplain. I.

Parietaria pennsylvanica Muhl. ex Willd. - pellitory. (1) *A.S. Hitchcock 12916*, 24 Jun 1917.

W.

Pilea pumila (L.) A. Gray - richweed, clearweed. (6) *E.F. Wells, R.L. Brown & V.S. Murthy*

4552, 21 Sep 1997. Floodplain.

Urtica dioica L. - stinging nettle, nettle. (*U. gracilis* Aiton, *U. procera* Muhl. ex Willd.) (12)

W.J. Kress & M. Butts 04-7501, 27 May 2004. Mid-island near north shore. I.

VALERIANACEAE (Valerian Family)

Valeriana pauciflora Michx. - valerian(9) *W.J. Kress & M. Butts 04-7479*, 13 May 2004. Mid-

island near north shore. I.

Valerianella LOCUSTA (L.) Latourr. - European corn-salad, blue corn-salad. (*V. olitoria* (L.)

Pollich). (7) *E.P. Killip 36692*, 25 May 1945. Trail on "Barrens" about 20 ft. east of
ferry trail.

+**radiata** (L.) Dufur. - beaked corn-salad. (1) *E.F. Wells, R.L. Brown & V.S. Murthy 4332*, 15

May 1997. Floodplain.

VERBENACEAE (Vervain Family)

Phyla lanceolata (Michx.) Greene - fogfruit. (*Lippia lanceolata* Michx.) (4) *S.G. Shetler & S.S.*

Orli 2004.28, 3 Aug 2004. Bank of channel, near crossing rocks. M.

Verbena hastata L. - blue vervain, common vervain. (4) *S.G. Shetler & S.S. Orli 2004.25*, 3

Aug 2004. Small rock island in middle of channel. I.

simplex Lehm. - narrow-leaved vervain. (*V. angustifolia* Michx.) (1) *A.S. Hitchcock*

12690, 31 May 1915.

urticifolia L. - white vervain. (6) *W.J. Kress & M. Butts 04-7525*, 23 Jun 2004. Rivers

edge at E point. I.

VIOLACEAE (Violet Family)

Hybanthus concolor (T.F. Forst.) Spreng. - green violet. (*Cubelium concolor* (T.F. Forst.)

Raf.) (11) *E.C. Leonard 3106*, 30 Apr 1960. South slope of West Knoll.

Viola +affinis Leconte - Leconte's violet. (1) *G.P. Van Eseltine 266*, 15 Apr 1915. Comments:

This specimen, collected as "*Viola familiaris*" in 1915 and annotated *V. affinis* by Ezra Brainerd in 1917, apparently was overlooked or ignored by Killip & Blake (1935, 1953). Some (e.g., Gleason & Cronquist 1991) include *V. affinis* in *V. sororia*.

M.

bicolor Pursh - field pansy, wild pansy. (*V. kitaibeliana* Roem. & Schult. var.

rafinesquei (Greene) Fernald, *V. rafinesquei* Greene). (4) *A.S. Hitchcock 12583*, 9

May 1915.

cucullata Aiton - blue marsh violet. (1) *E.P. Killip 30874*, 6 May 1933. Flats north of

Cabin Hill.

palmata L. - wood violet, palmate-leaved violet. (*Viola stoneana* House, *V. triloba*

Schwein., misapplied). (6) *E.C. Leonard & N. Hotchkiss* 3483, 9 May 1961. West slope of High Knoll.

pubescens Aiton - downy yellow violet, smooth yellow violet. (*V. eriocarpa* (Nutt.)

Schwein., *V. pensylvanica* Michx.) (8) *E.F. Wells, R.L. Brown & V.S. Murthy* 4886, 27 Apr 1998. Floodplain. I.

sororia Willd. - common blue violet. (*V. papilionacea* Pursh). (23) *M. Beyersdorfer* 47,

28 Apr 1983. Path from east end to Cabin Hill by Sycamore Cove. W.

striata Aiton - creamy violet, striped violet. (13) *W.J. Kress & M. Butts* 04-7438, 6 May

2004. Terrace. I.

triloba Schwein. - three-lobed violet. (2) *E.C. Leonard & N. Hotchkiss* 3505, 9 May

1961. Trail (upper) to ferry, rock outcrop.

VITACEAE (Grape Family)

AMPELOPSIS +†**BREVIPEDUNCULATA** (Maxim.) Trautv. - porcelain-berry. (*A. heterophylla*

(Thunb.) Siebold & Zucc.) (1) *S.G. Shetler & E.R. Shetler* 2004.37, 11 Oct 2004.

Mainland, towpath where trail to Island cuts off - just below Lock 11. M.

Parthenocissus quinquefolia (L.) Planch. - Virginia-creeper. (6) *W.J. Kress & M. Butts* 04-

7469, 13 May 2004. Cactus Rock. I.

Vitis aestivalis Michx. - summer grape, pigeon grape. (*V. argentifolia* Munson). (6) *E.C.*

Leonard & N. Hotchkiss 3179, 23 Jul 1960. Cactus Rock, climbing on trees and shrubs. W.

†**labrusca** L. - fox grape. (2) *E.P. Killip 31184*, 30 May 1934. Mainland, near Northwest Swamp. Comments: Probably introduced (McAtee 1930, p. 54).

riparia Michx. - riverbank grape, frost grape. (*V. cordifolia* Michx., misapplied, *V. vulpina* L., misapplied). (7) *W.J. Kress & M. Butts 04-7454*, 11 May 2004. E point, at river's edge. I.

rupestris Scheele - sand grape, sugar grape. (2) *A.K. Fisher s.n.*, -- Jun 1906 [2 sheets].

vulpina L. - frost grape, winter grape, chicken grape. (*V. cordifolia* Michx., *V. riparia* Michx., misapplied). (11) *E.C. Leonard & N. Hotchkiss 3250*, 27 Sep 1960. Rock of Gibraltar. I.

MONOCOTYLEDONS

ALISMATACEAE (Water-plantain or Arrowhead Family)

Alisma subcordatum Raf. - common water-plantain. (*A. plantago-aquatica* L. var. *parviflorum* (Pursh) Torr.) (2) *E.C. Leonard & N. Hotchkiss* 3587, 9 May 1961. Damp alluvial bank of channel above ferry.

Sagittaria latifolia Willd. - common arrowhead, broad-leaved arrowhead, duck-potato, wapato. (*S. pubescens* Muhl. ex Nutt.) (7) *E.C. Leonard* 3592, 9 May 1961. Damp grassy bank below ferry [2 sheets]. W.

montevidensis Cham. & Schldl. - giant arrowhead, Mississippi arrowhead, tidal sagittaria. (*Lophotocarpus calycinus* (Engelm.) J.G. Sm.) (1) *E.P. Killip* 13484, 28 Sep 1930. In deep pool just off sandbar at west end.

rigida Pursh - sessile-fruited arrowhead. (1) *E.P. Killip* 13496, 5 Oct 1930. Pool at east end.

ARACEAE (Arum Family)

Arisaema dracontium (L.) Schott - green-dragon. (4) *E.F. Wells, R.L. Brown & V.S. Murthy* 5151, 12 Jun 1997. Floodplain.

triphyllum (L.) Schott - jack-in-the-pulpit, Indian-turnip. (5) *M. Beyersdorfer* 28, 25 Apr 1982. At base of Cabin Hill by ferry path. I.

Orontium +aquaticum L. - golden-club. Low swale at inner edge of mudflat along river below Cabin (observed in vegetative condition by E.F. Wells, 31 Aug 1997). W.

Peltandra virginica (L.) Schott - arrow-arum, tuckahoe, green arrow-arum. (4) M.

Beyersdorfer 149, 14 Jul 1982. Mainland swamp on northwest corner of property by Lock 12 and 13. M.

COMMELINACEAE (Dayflower Family)

Commelina communis L. - Asiatic dayflower. (7) *W.J. Kress & N.A. Bourg 04-7577*, 31 Jul 2004. W side, on rock outcrop terrace, 50m below cabin, facing I-495. Comments: Earliest collection, *T.H. Kearney 167*, 30 Aug 1903, apparently never seen by Killip & Blake (1935, 1953). I.

erecta L. - slender dayflower, white-mouth dayflower. (*C. virginica* L., misapplied). (10) *E.C. Leonard & N. Hotchkiss 3149*, 23 Jul 1960. Trail bordering river between Cabin Hill and west end.

virginica L. - Virginia dayflower. (*C. erecta* L., misapplied, *C. hirtella* Vahl). (9) *S. Wisner & W. Burket 34*, 14 Aug 1986. East end, near crossing rocks; open area midway between channel and river.

Tradescantia virginiana L. - Virginia spiderwort, widow's-tears. (11) *W.J. Kress & M. Butts 04-7457*, 11 May 2004. Cactus Rock. I.

CYPERACEAE (Sedge Family)

Carex +aggregata Mack. – glomerate sedge. (2) *M.T. Strong 3350, 3351*, 1 May 2004

[unmounted as of Dec 2004].

albicans Willd. ex Spreng. - white-tinged sedge, Emmon's sedge. (*C. artitecta* Mack., *C. emmonsii* Dewey, *C. varia* Host, misapplied). (11) *Collector Unknown 4161*, 1 May 1971. I.

+†**albolutescens** Schwein. - green-white sedge. (*C. straminea* Willd. ex Schkuhr, misapplied). (1) *C. Lea 1485*, 11 May 2000. [Mainland], between C&O Canal and Potomac River, edge of vernal pool, south of Lock 12.

albursina E. Sheld. - white bear sedge. (6) *E.P. Killip 31029*, 4 Jun 1933. I.

†**amphibola** Steud. - eastern narrow-leaf sedge. (5) *C. Lea 1482*, 11 May 2000. Mainland, between C&O Canal and Potomac River, south of Lock 12. I.

annectens (E.P. Bicknell) E.P. Bicknell - yellow-fruit sedge. (4) *E.P. Killip 36826*, 30 May 1947. Gap at upper end [2 sheets].

†**atlantica** L.H. Bailey - bog sedge, prickly bog sedge, Howe's sedge. (*C. cephalantha* (L.H. Bailey) E.P. Bicknell, misapplied, *C. incomperta* E.P. Bicknell). (2 sheets of 1 collection) *P.C. Standley 11663*, 6 Jun 1915. Mainland.

blanda Dewey - charming sedge, eastern woodland sedge. (10) *E.P. Killip 32444*, 8 May 1938. "Barrens" near sand bank, east end. I.

cephalophora Muhl. ex Willd. - oval-leaf sedge. (10) *W.J. Kress & M. Butts 04-7460*, 13

May 2004. South corner of cabin. I.

+**communis** L.H. Bailey - fibrous-root sedge. (*C. pedicellata* (Dewey) Britton). (3) *E.C.*

Leonard & N. Hotchkiss 3485A, 9 May 1961. Upper Gap, west end [2 sheets].

Comments: *Kearney & Maxon s.n.*, 1902, apparently overlooked by Killip & Blake (1935, 1953).

†**comosa** Boott - bearded sedge. (1) *P.C. Standley 11633B*, 6 Jun 1915. Mainland, edge

of pool in woods. Comments: Indicated by Killip & Blake (1935) to be on Island as well as Mainland, but there are no voucher specimens preserved from Island.

+**conjuncta** Boott - soft fox sedge. (1) *E.P. Killip 31188*, 30 May 1934. West end.

Comments: This specimen and, thus, this species overlooked by Killip & Blake (1935, 1953). I.

†**crinita** Lam. - fringed sedge. (4) *E.P. Killip 31035*, 10 Jun 1933. Mainland, swamp

near old spring. Comments: Indicated by Killip & Blake (1935) to be on Island as well as Mainland, but there are no voucher specimens preserved from Island.

frankii Kunth - Frank's sedge. (*C. stenolepis* Torr.) (6) *E.C. Leonard & N. Hotchkiss*

3578, 9 May 1961. Riverbank. W.

+**gracilescens** Steud. – slender loose-flowered sedge. (1) *M. T. Strong 3342*, 1 May 2004

[unmounted as of Dec 2004].

†**gracillima** Schwein. - graceful sedge. (1) *P.C. Standley 11663*, 6 Jun 1915. Mainland, edge of pool in deep woods.

granularis Muhl. ex Willd. - limestone-meadow sedge. (2) *E.P. Killip 32934*, -- May 1940 [2 sheets]. Comments: Mainland or Island? - exact collection site not known, according to label of sheet no. 03150290. The label of this sheet also indicates that Killip himself was not the collector, as further confirmed in Killip & Blake (1953, "collector uncertain").

grayi J. Carey - Gray's sedge. (*C. asa-grayi* L.H. Bailey). (7) *W.J. Kress & M. Butts 04-7496*, 25 May 2004. Floodplain near NW point. Comments: Apparently overlooked by Killip & Blake (1935, 1953) despite E.P. Killip's 1933 collection (*31015*, 2 sheets).
I.

grisea Wahlenb. - inflated narrow-leaf sedge. (*C. amphibola* Steud., in part). (3) *E.P. Killip 31014*, 29 May 1933. Near west end. W.

hirsutella Mack. - hirsute sedge, fuzzy-wuzzy sedge. (*C. complanata* Torr. & Hook., in part, *C. triceps* of authors, not Michx.) (4) *E.P. Killip 31009*, 28 May 1933. West trail, south of West Knoll.

hirtifolia Mack. - pubescent sedge. (2) *E.P. Killip & S.F. Blake 31193*, 2 Jun 1934. Just east of Cabin.

hitchcockiana Dewey - Hitchcock's sedge. (1) *E.P. Killip 30865*, 6 May 1933. West foot of Cabin Hill.

- jamesii** Schwein. - James' sedge. (*C. steudelii* Kunth). (5) *E.P. Killip 13677*, 31 May 1921. Foot of west side of Cabin Hill. I.
- †**laevivaginata** (Kük.) Mack. - smooth-sheathed sedge. (3) *C. Lea 960*, 21 May 1995. [Mainland], near Island, wooded swamp.
- laxiflora** Lam. - loose-flowered sedge. (*C. anceps* Muhl.) (2) *E.C. Leonard & N. Hotchkiss 3476A*, 9 May 1961. Upper Gap, west end, rock outcrop.
- LEAVENWORTHII** Dewey - Leavenworth's sedge. (1) *P.C. Standley 11433*, 9 May 1915.
- lupulina** Muhl. ex Willd. - hop sedge. (4) *E.P. Killip 36626*, 12 Jul 1942. Mainland, large Frog Pond.
- lurida** Wahlenb. - sallow sedge. (3) *E.P. Killip 32614*, 26 Jun 1938. Near entrance to channel, marshy streamlet.
- muhlenbergii** Schkuhr ex Willd. - Muhlenberg's sedge. (*C. plana* Mack.) (1) *E.P. Killip 13358*, 30 May 1930. Outlook Rock, near west end.
- nigromarginata** Schwein. - black-edged sedge, black-margined sedge. (2) *E.P. Killip 30888*, 7 May 1933. Mainland, northwest corner near fence. W.
- normalis** Mack. - greater straw sedge. (*C. straminea* Willd. ex Schkuhr, misapplied). (3) *P.C. Standley 11651*, 6 Jun 1915. Upper end, among rocks.
- oligocarpa** Schkuhr ex Willd. - rich-woods sedge, few-fruited sedge. (7) *C. Lea 1481*, 11 May 2000. Mainland, between C&O Canal and Potomac River, south of Lock 12.

pensylvanica Lam. - Pennsylvania sedge. (4) *E.P. Killip 13656*, 10 May 1931.

[Mainland], near old spring. I.

+**planispicata** Naczi - flat-spiked sedge. (*C. amphibola* Steud., in part). (1) *P.C.*

Standley 11399, 9 May 1915. I.

†**prasina** Wahlenb. - drooping sedge. (*C. miliacea* Muhl. ex Schkuhr). (2) *C. Lea 957*,

21 May 1995. [Mainland], near Island. M.

radiata (Wahlenb.) Small - eastern star sedge. (*C. convoluta* Mack., misapplied, *C.*

rosea Schkuhr ex Willd., misapplied). (10) *C. Lea 483*, 21 May 1995. [Mainland],

near Island, grassy edge of towpath. I.

retroflexa Muhl. ex Schkuhr - reflexed sedge. (3) *E.P. Killip 31173*, 27 May 1934.

Mainland, near main trail.

rosea Schkuhr ex Willd. - rosy sedge. (*C. convoluta* Mack.) (2) *E.C. Leonard & N.*

Hotchkiss 3195, 23 Jul 1960. Near summit of Cabin Hill, along trail from ferry to cabin.

scoparia Schkuhr ex Willd. - pointed broom sedge. (*C. cristellata* Britton, misapplied).

(4) *E.P. Killip 32651*, 4 Jun 1939 [2 sheets].

†**shortiana** Dewey - Short's sedge. (3) *E.P. Killip 13203*, 24 Jun 1928. Mainland, along

lower trail [2 sheets].

sparganioides Muhl. ex Willd. - bur-reed sedge. (7) *E.P. Killip 31016*, 30 May 1933.

Near cabin.

+squarrosa L. - squarrose sedge. (2) *W.J. Kress & M. Butts 04-7497*, 25 May 2004.

Floodplain near NW point. Comments: *P.C. Standley 11644*, 1915, overlooked by Killip & Blake (1935, 1953). I.

stipata Muhl. ex Willd. - stalkgrain sedge. (2) *E.P. Killip 32613*, 26 Jun 1938. Near entrance to channel, marshy streamlet. I.

tribuloides Wahlenb. - blunt broom sedge. (*C. cristellata* Britton). (9) *W.J. Kress & M. Butts 04-7498*, 25 May 2004. Floodplain near NW point. I.

virescens Muhl. ex Willd. - ribbed sedge. (7) *W.J. Kress & M. Butts 04-7472*, 13 May 2004. Below Cactus Rock on W side. I.

vulpinoidea Michx. - foxtail sedge. (2) *E.P. Killip 32607*, 19 Jun 1938. Marshy streamlet, near entrance to channel [2 sheets].

willdenowii Schkuhr ex Willd. - Willdenow's sedge. (3) *E.P. Killip 31197*, 3 Jun 1934. Mainland, Northwest Swamp. I.

Cyperus bipartitus Torr. - shining cyperus, shining flatrush. (*C. diandrus* Torr., misapplied, *C. rivularis* Kunth). (3) *E.P. Killip 31965*, 13 Sep 1936 [2 sheets].

echinatus (L.) A.W. Wood - globose cyperus, globe flatsedge. (*C. ovularis* (Michx.) Torr.) (2) *E.C. Leonard & N. Hotchkiss 3311*, 27 Sep 1960. Upper Gap, small pocket in outcropping rocks.

erythrorhizos Muhl. - red-rooted galingle, red-root flatsedge. (9) *E.F. Wells, R.L. Brown & V.S. Murthy 4458*, 31 Aug 1997. Floodplain.

- esculentus** L. - yellow nutsedge, chufa, edible nutgrass, yellow nutgrass. (7) *W.J. Kress & M. Butts 04-7549*, 1 Jul 2004. SW point (rocks). I.
- flavescens** L. - yellow galingale, yellow flatsedge. (3) *M. Beyersdorfer 337*, 26 Sep 1982. Midway between Cactus Rock and Rock of Gibraltar, cracked mud on river flats at large rock outcrop protruding into river.
- lancastriensis** Porter ex A. Gray - Lancaster's cyperus, many-flowered flatsedge. (6) *E.F. Wells, R.L. Brown & V.S. Murthy 4409*, 30 Jul 1997. Floodplain.
- +**lupulinus** (Spreng.) Marcks - slender cyperus, Great Plains flatsedge. (*C. filiculmis* Vahl, misapplied). (1) *E.P. Killip 32633*, 17 Aug 1938. South of West Knoll, woods between trail and rocks [misidentified as *C. filiculmis* Vahl].
- +**odoratus** L. - fragrant galingale, rusty flatsedge. (*C. speciosus* Vahl). (5) *E.F. Wells, R.L. Brown & V.S. Murthy 4521*, 21 Sep 1997. Floodplain. Comments: *E.C. Leonard & E.P. Killip 2116* (8 Nov 1931) apparently overlooked by Killip & Blake (1935, 1953).
- pseudovegetus** Steud. - green galingale, marsh flatsedge. (2) *E.P. Killip 41356*, 28 Jul 1951. Upper Gap, pool [2 sheets].
- refractus** Engelm. ex Boeck. - reflexed cyperus, reflexed flatsedge. (*C. engelmannii* Steud., misapplied). (9) *E.C. Leonard & N. Hotchkiss 3249*, 27 Sep 1960. West slope of High Knoll, rock outcrop.

squarrosus L. - awned cyperus, awned flatsedge. (*C. aristatus* Rottb.) (6) *E.F. Wells*,

R.L. Brown & V.S. Murthy 4453, 31 Aug 1997. Floodplain.

strigosus L. - straw-colored cyperus, false nutsedge, galingale, straw-colored flatsedge.

(9) *S.G. Shetler & S.S. Orli 2004.12*, 30 Jun 2004. Rocky islet off east end of Island.

I.

Dulichium arundinaceum (L.) Britton - three-way sedge, three-square sedge. Comments:

Reported by Killip & Blake (1935), who added the query, "Extinct?".

Eleocharis acicularis (L.) Roem. & Schult. - least spikerush, needle spikerush. (3) *E.P. Killip &*

S.F. Blake 36555, 2 Nov 1941. Mudbar, between Rock of Gibraltar and channel [2 sheets].

engelmannii Steud. - Engelmann's spikerush. (1) *E.P. Killip 31871*, 5 Jul 1936. Near pools halfway between ferry and upper end.

obtusa (Willd.) Schult. - blunt spikerush. (6) *E.C. Leonard & N. Hotchkiss 3566*, 9 May 1961. West end, south side, riverbank.

tenuis (Willd.) Schult. - slender spikerush, kill-cow, doghair. (*E. capitata* (L.) R. Br., misapplied). (2) *E.P. Killip 41376*, 24 Aug 1951. Among rocks.

Fimbristylis autumnalis (L.) Roem. & Schult. - slender fimbry. (*F. mucronulata* (Michx.) S.F. Blake). (1) *A.S. Hitchcock 15863*, 7 Oct 1917.

Scirpus atrovirens Willd. - black bulrush, dark green bulrush. (4) *A.S. Hitchcock 12960*, 1 Jul 1917.

cyperinus (L.) Kunth - wool-grass, cottongrass bulrush. (*S. eriophorum* Michx., *S. rubricosus* Fernald). (5) *E.C. Leonard & N. Hotchkiss* 3292, 27 Sep 1960. Upper Gap, soil pockets on rock outcrops [2 sheets]. W.

+**georgianus** R.M. Harper - Georgia bulrush. (*S. atrovirens* var. *georgianus* (R.M. Harper) Fernald). (1) *E.P. Killip* 32606, 9 Jun 1938. Near entrance to channel, marsh streamlet [as *S. atrovirens*].

DIOSCOREACEAE (Yam Family)

Dioscorea villosa L. - wild yam, yam-root, colicroot. (*D. glauca* Muhl. ex Bartlett, *D. quaternata* J.F. Gmel.) (11) *M. Beyersdorfer* 81, 10 May 1983. On path through gap to west end [2 sheets]. M.

HYDROCHARITACEAE (Frog-bit Family)

Elodea +canadensis F. Michx. - common waterweed, Canada waterweed. (*Anacharis canadensis* (Michx.) Planch.) (2) *E.P. Killip* 40542, 7 Aug 1950. Mainland, long pool near rocks to dam. Comments: Both specimens misidentified as *Najas guadalupensis* (Spreng.) Morong.

nuttallii (Planch.) H. St. John - western waterweed, free-flowered waterweed. (*Anacharis canadensis* (Michx.) Planch., misapplied, *A. occidentalis* (Pursh.) Vict., *E. canadensis* Michx., misapplied, *E. occidentalis* (Pursh) H. St. John). (2) *E.P. Killip* 32656, 9 Jul 1939. Large pool north of gap between Cabin Hill and West Knoll.

Vallisneria americana Michx. - eel-grass, wild-celery, water-celery. (*V. spiralis* L.) (1) *E.P.*

Killip 13457, 24 Aug 1930. In pool at west end.

IRIDACEAE (Iris Family)

BELAMCANDA CHINENSIS (L.) DC. - blackberry-lily, leopard-flower. (*Gemmingia chinensis*

(L.) Kuntze). (*Killip & Blake 1935*).

Iris versicolor L. - blue flag, northern blue flag. (2) *M. Beyersdorfer 42*, 13 May 1982.

[Mainland], banks of C&O Canal. Comments: "Also observed on Island" (*Killip & Blake, 1935*).

Sisyrinchium angustifolium Mill. - narrow-leaved blue-eyed-grass, stout blue-eyed-grass. (*S.*

gramineum Lam.) (4) *W.J. Kress & M. Butts 04-7500*, 27 May 2004. Central plain (west of cabin). I.

JUNCACEAE (Rush Family)

Juncus acuminatus Michx. - sharp-fruited rush, knotty-leaved rush. (3) *E.P. Killip 31845*, 5 Jul

1936. "Barrens" above ferry landing.

bufonius L. - toad rush. (1) *E.P. Killip 32605*, 19 Jun 1938. Upper Gap, near large pool.

dichotomus Elliott - forked rush. (*J. platyphyllus* (Wiegand) Fernald, *J. tenuis* var.

platyphyllus (Wiegand) F.J. Herm.) (5) *E.P. Killip 31862*, 13 Sep 1936. Between ferry and upper end. Comments: These specimens treated as *J. dudleyi* Wiegand or *J. tenuis* by *Killip & Blake (1935, 1953)*.

- effusus** L. - soft rush, common rush, lamp rush. (4) *E.C. Leonard & N. Hotchkiss 3313*, 27 Sep 1960. Upper Gap, small rock pool. W.
- marginatus** Rostk. - grass-leaved rush. (1) *E.P. Killip 31858*, 5 Jul 1936. Near pools halfway between ferry and upper end.
- secundus** P. Beauv. ex Poir. - lopsided rush. (*J. tenuis* var. *secundus* (P. Beauv. ex Poir.) Engelm.) (2) *E.P. Killip & S.F. Blake 36547*, 2 Nov 1941. Mid-mudbar.
- tenuis** Willd. - path rush. (*J. macer* Gray). (3) *E.F. Wells, R.L. Brown & V.S. Murthy 4407*, 30 Jul 1997. Floodplain. I.

LEMNACEAE (Duckweed Family)

- Lemna +minor** L. - common duckweed. (1) *E.C. Leonard & N. Hotchkiss 3590*, 9 May 1961. Channel above ferry, on mud and surface of water.
- +**obscura** (Austin) Daubs - little water duckweed. (1) *M. Beyersdorfer 234*, 5 Sep 1982. Comments: Collection mixed with *Spirodela polyrrhiza* on US sheet 3062125.
- perpusilla** Torr. - minute duckweed. (4) *E.P. Killip 36743*, 17 Aug 1946. Mainland, Frog Ponds.
- Spirodela polyrrhiza** (L.) Schleid. - greater duckweed, water-flaxseed, common duck-meal. (*Lemna polyrrhiza* L.) (5) *M. Beyersdorfer 234*, 5 Sep 1982. Crossing Rocks. Comments: *Lemna obscura* also on this sheet [US3062125].

Wolffia columbiana H. Karst. - water-meal. (2) *P.C. Standley 11664*, 6 Jun 1915. Mainland, pool in deep woods. Comments: This US sheet (895246) also includes *Spirodela polyrrhiza* and is filed under that name.

LILIACEAE (Lily Family)

Allium canadense L. - meadow garlic, wild onion, wild garlic. (2) *W.J. Kress & M. Butts 04-7468*, 13 May 2004. Cactus Rock. I.

cernuum Roth - nodding onion, wild onion. (8) *E.C. Leonard & N. Hotchkiss 3206*, 23 Jul 1960. West end, crevices of rock outcrop [2 sheets]. I.

tricoccum Aiton - ramp, wild leek. (7) *W.J. Kress & M. Butts 04-7528*, 23 Jun 2004. Directly below terrace (SE side). I.

VINEALE L. - wild garlic, field garlic, crow garlic. (3) *E.F. Wells, R.L. Brown & V.S. Murthy 5163*, 12 Jun 1997. Floodplain. I.

ASPARAGUS OFFICINALIS L. - asparagus. (Killip & Blake 1935).

Erythronium albidum Nutt. - white trout-lily, white fawn-lily, white dog's-tooth-violet, white adder's-tongue. (7) *M. Beyersdorfer 27*, 14 Apr 1983. Path from east end, next to path by bend at Sycamore Cove.

americanum Ker Gawl. - yellow trout-lily, yellow fawn-lily, yellow dog's-tooth-violet, yellow adder's-tongue. (5) *M. Beyersdorfer 4-84*, 11 May 1984. Cabin Hill. I.

HEMEROCALLIS FULVA L. - orange daylily, common daylily. (2) *M. Beyersdorfer 76*, 2 Jun 1982. Mainland, bank by Crossing Rocks. W.

MUSCARI BOTRYOIDES (L.) Mill. - common grape-hyacinth. (3) *E.P. Killip & J.E. Benedict Jr.*

31749, 19 Apr 1936. Just east of Landing Rock.

NEGLECTUM Guss. ex Ten. - blue-bottle, grape-hyacinth. (*M. racemosum* (L.) Lam. &

DC., misapplied, *M. racemosum* (L.) Mill., misapplied). (2) *A.S. Hitchcock 12409*, 18

Apr 1915.

NARCISSUS × MEDIOLUTEUS Mill. (*N. poeticus* L. × *tazetta* L.) - poetaz narcissus, primrose

narcissus. (*N. × biflorus* W. Curtis, *N. poetaz* Hort. ex L.H. Bailey). (1) *A.S.*

Hitchcock 12446, 25 Apr 1915.

+**POETICUS** L. - poet's narcissus, pheasant's-eye. (1) *P.C. Standley 11302*, 25 Apr 1915.

Flats at lower end. Comments: This specimen apparently overlooked or discounted by Killip & Blake in 1935.

†**PSEUDONARCISSUS** L. - common daffodil. (2) *E.P. Killip 36978*, 10 Apr 1949.

Mainland, lower trail, near trail to Crossing Rocks [2 sheets]. Comments: "A single plant, which has not reappeared" (Killip & Blake 1953).

ORNITHOGALUM †NUTANS L. - nodding star-of-Bethlehem. (2) *M. Beyersdorfer 26*, 25 Apr

1982. Mainland, off to left of path from Lock 11 to river.

UMBELLATUM L. - star-of-Bethlehem, sleepydick. (4) *M. Beyersdorfer ? - 84*, 11 May

1984. East end, sandy alluvium - flood deposit.

Polygonatum biflorum (Walter) Elliott - smooth Solomon's-seal. (*P. canaliculatum* (Muhl. ex Willd.) Pursh, misapplied, *P. commutatum* (Schult. & Schult. f.) A. Dietr., *P. giganteum* A. Dietr.) (6) *M. Beyersdorfer* 25, 11 Apr 1982. West Knoll - 2nd highest point of Island. I.

Smilacina racemosa (L.) Desf. - false Solomon's-seal, false spikenard, plumelily. (*Maianthemum racemosum* (L.) Link, *Vagnera racemosa* (L.) Morong). (9) *E.F. Wells, R.L. Brown & V.S. Murthy* 4374, 30 Jul 1997. Floodplain. I.

Trillium sessile L. - toadshade, sessile trillium. (25) *W.J. Kress & M. Butts* 04-7487, 20 May 2004. Central plain (west of cabin). I.

Uvularia perfoliata L. - perfoliate bellwort, mealy bellwort. (1) *A.S. Hitchcock* 12577, 9 May 1915.

NAJADACEAE (Naiad or Water-nymph Family)

Najas flexilis (Willd.) Rostk. & W.L.E. Schmidt - wavy naiad, wavy water-nymph, northern water-nymph. (2) *E.P. Killip & N. Hotchkiss* 31984, 11 Oct 1936. Pool about halfway between ferry landing and upper end.

guadalupensis (Spreng.) Magnus - Guadalupe naiad, Guadalupe water-nymph. (*N. flexilis*, misapplied). (1) *E.P. Killip* 13462, 7 Sep 1930. Shallow water near sandbar at east end.

ORCHIDACEAE (Orchid Family)

Aplectrum hyemale (Muhl. ex Willd.) Torr. - puttyroot, Adam-and-Eve. (4) *A.S. Hitchcock*

12921, 24 Jun 1917.

Corallorhiza +odontorhiza (Willd.) Nutt. - autumn coral-root, small coral-root. (1) *H.S. Barber*

s.n., 12 Oct 1907. Comments: Barber's specimen apparently overlooked by Killip & Blake (1935, 1953).

+wisteriana Conrad - Wister's coral-root, spring coral-root. (1) *T.H. Kearney s.n.*, 9

May 1915. Near west end, toward Maryland shore. Comments: Kearney's specimen apparently overlooked by Killip & Blake (1935, 1953).

Galearis spectabilis (L.) Raf. - showy orchid. (*Orchis spectabilis* L.) (Killip & Blake 1935).

Goodyera pubescens (Willd.) R. Br. ex W.T. Aiton - downy rattlesnake-plantain. (*Peramium*

pubescens (Willd.) MacMill.) (3) *E.C. Leonard & N. Hotchkiss 3285*, 27 Sep 1960.

Upper Gap, between rock outcrops.

Liparis liliifolia (L.) Rich. ex Lindl. - lily-leaved twayblade, large twayblade. (2) *T.H. Kearney*

21, 19 Aug 1903.

loeselii (L.) Rich. - Loesel's twayblade, yellow twayblade. (1) *A.S. Hitchcock 15827*, 16

Sep 1917.

Spiranthes †lacera (Raf.) Raf. - slender ladies'-tresses. (*Ibidium beckii* (Lindl.) House, *I.*

gracile (Bigelow) House, *S. beckii* Lindl., *S. gracilis* (Bigelow) Beck). (1) *E.P. Killip*

31083, 13 Aug 1933. [Mainland], west of Stewart Farm and north of Fisher Farm.

tuberosa Raf. - little ladies'-tresses. (*Ibidium beckii*, sense of House, *S. beckii* Lindl., misapplied). (1) *S.F. Blake 8903*, 5 Oct 1924. Slope west of cabin.

Tipularia discolor (Pursh) Nutt. - crane-fly orchid. (*T. unifolia* (Muhl.) Britton, Sterns & Poggenb.) (3) *M. Beyersdorfer 129*, 18 Aug 1983. Mainland, next to the Frog Ponds. M.

Triphora trianthophora (Sw.) Rydb. - nodding-pogonia, three-birds orchid. (3) *H.K. Svenson & E.P. Killip 45705*, 18 Aug 1956. Mainland.

POACEAE (Grass Family)

Agrostis GIGANTEA Roth - redtop. (*A. alba* L., misapplied, *A. palustris* Huds., in part, *A. stolonifera* L., in part). (5) *F.J. Hermann 9543*, 2 Jul 1938. North end, bank of river.

†**hyemalis** (Walter) Britton, Sterns & Poggenb. - tickle grass, hair grass. (1) *J.E. Benedict Jr. 3261*, 7 Jun 1936. [Mainland], near Lock 11, open field.

perennans (Walter) Tuck. - upland bent grass, autumn bent grass. (9) *E.C. Leonard 3309A*, 27 Sep 1960. Upper Gap, west end, rock outcrop crevices.

Andropogon gerardii Vitman - big bluestem. (*A. furcatus* Muhl. ex Willd.) (4) *E.C. Leonard & N. Hotchkiss 3508*, 9 May 1961. West end, on rocks.

virginicus L. - broom-sedge. (3) *E.C. Leonard & N. Hotchkiss 3255*, 27 Sep 1960. Outlook Rock, west end.

ANTHOXANTHUM ODORATUM L. - sweet vernal grass. (Killip & Blake 1935).

Aristida dichotoma Michx. - poverty grass. (2) *E.C. Leonard & N. Hotchkiss 3252*, 27 Sep

1960. Outlook Rock, west end.

purpurascens Poir. - arrow-feather three-awn. (1) *E.P. Killip & J.R. Swallen 32222*, 19

Sep 1937. Outlook Rock.

ARTHRAOXON +HISPIDUS (Thunb.) Makino - arthraxon, small carp grass. (*A. ciliaris* P. Beauv.

var. *cryptatherus* Hack.) (3) *E.F. Wells, R.L. Brown & V.S. Murthy 5171*, 12 Jun

1997. Floodplain.

Brachyelytrum erectum (P. Beauv. ex Schreb.) P. Beauv. (3) *E.C. Leonard & N. Hotchkiss*

3251, 27 Sep 1960. Lookout Rock, west end.

Bromus COMMUTATUS Schrad. - hairy chess, upright chess, meadow brome. (1) *E.P. Killip*

36689, 29 May 1945. Trail on "Barrens" north of east end of Cabin Hill. W.

JAPONICUS Thunb. - Japanese chess, Japanese brome. (1) *E.P. Killip & J.R. Swallen*

31876, 12 Jul 1936. "Barrens" near east end. W.

LATIGLUMIS (Scribn. ex Shear) Hitchc. - early-leaf brome. (*B. incanus* (Shear) Hitchc.,

B. purgans L., misapplied). (8) *J.R. Swallen 9965*, 14 Sep 1947.

+nottawayanus Fernald - Nottoway Valley brome. (4) *J.R. Swallen 9660-9662*, -- Jun

1947. Comments: *A.S. Hitchcock s.n.*, 1906, and Swallen specimens overlooked by

Killip & Blake (1935, 1953).

pubescens Muhl. ex Willd. - hairy woodland brome, Canada brome. (*B. purgans* L., misapplied). (7) *E.C. Leonard & N. Hotchkiss 3146*, 23 Jul 1960. Trail on river side of Island between Cabin Hill and west end. W.

Cenchrus longispinus (Hack.) Fernald - field sandbur, common sandbur. (*C. pauciflorus* Benth., misapplied (Hitchcock & Standley 1919, Hermann 1946)). (1) *E.P. Killip & J.R. Swallen 31904*, 19 Jul 1936. "Barrens" at east end.

Chasmanthium latifolium (Michx.) H.O. Yates - wild oats, Indian wood-oats. (*Uniola latifolia* Michx.) (12) *W.J. Kress & N.A. Bourg 04-7588*, 29 Aug 2004. Bottomland below rocks on W side below cabin. I.

Cinna arundinacea L. - common woodreed, Indian-reed. (6) *S.G. Shetler & S.S. Orli 2004.23*, 3 Aug 2004. Northwest Swamp. M.

CYNODON DACTYLON (L.) Pers. - Bermuda grass, scutch grass. (*Capriola dactylon* (L.) Kuntze). (Killip & Blake 1935).

DACTYLIS GLOMERATA L. - orchard grass. (1) *E.P. Killip 32146*, 12 Jul 1937. "Barrens" at foot of trail uphill from ferry.

Danthonia spicata (L.) P. Beauv. ex Roem. & Schult. - poverty grass, poverty oat grass. (3) *E.P. Killip 32134*, 20 Jun 1937. [Mainland], woods near Northwest Swamp. J.R. Swallen, coll.

Dichanthelium aciculare (Desv. ex Poir.) Gould & C.A. Clarke - needle-leaf panic grass, needle-leaf rosette grass. (*Panicum bicknellii* Nash, misapplied). (3) *A.S. Hitchcock* 12948, 1 Jul 1917.

acuminatum (Sw.) Gould & C.A. Clark - hairy panic grass, tapered rosette grass. (*D. lanuginosum* (Elliott) Gould, *D. lindheimeri* (Nash) Gould, *Panicum acuminatum* Sw., *P. huachuchae* Ashe, *P. lindheimeri* Nash, *P. tennesseense* Ashe). (15) *M. Beyersdorfer* 183, 15 Aug 1982. West Knoll.

boscii (Poir.) Gould & C.A. Clarke - Bosc's panic grass, Bosc's rosette grass. (*Panicum boscii* Poir.) (11) *S.G. Shetler & S.S. Orli* 2004.30, 3 Aug 2004. Woods near Northwest Swamp. I.

clandestinum (L.) Gould - deer-tongue grass, deer-tongue rosette grass. (*Panicum clandestinum* L.) (3) *E.C. Leonard & N. Hotchkiss* 3175, 23 Jul 1960. Cactus Rock.

commutatum (Schult.) Gould - variable panic grass, variable rosette grass. (*Panicum ashei* G. Pearson ex Ashe, *P. commutatum* Schult.) (8) *W.J. Kress & M. Butts* 04-7505, 8 Jun 2004. Floodplain near north shore. I.

depauperatum (Muhl.) Gould - starved panic grass, starved rosette grass. (*Panicum depauperatum* Muhl.) (1) *A.S. Hitchcock* 12708, 31 May 1915.

dichotomum (L.) Gould - bushy panic grass, cypress rosette grass. (*D. microcarpon* (Muhl. ex Elliott) Mohlenbr., *D. yadkinense* (Ashe) Mohlenbr., *Panicum barbulatum* Michx., *P. dichotomum* L., *P. microcarpon* Muhl. ex Elliott, *P. yadkinense* Ashe).

(17) *R.S. Cowan 1682*, 4 Jun 1961. West slope of Cabin Hill.

+latifolium (L.) Harvill - broad-leaved panic grass. (*Panicum latifolium* L.) (1) *T.H.*

Kearney & W.R. Maxon 59, 24 Jul 1910. Rich woods. Comments: This specimen apparently overlooked by Killip & Blake (1935, 1953).

laxiflorum (Lam.) Gould - lax-flowered panic grass, open-flowered rosette grass.

(*Panicum laxiflorum* Lam., *P. xalapense* Kunth). (5) *E.C. Leonard & N. Hotchkiss 3226*, 27 Sep 1960. West slope of West Knoll.

linearifolium (Scribn.) Gould - low panic grass, slim-leaved rosette grass. (*Panicum*

linearifolium Scribn., *P. wernerii* Scribn.) (5) *E.C. Leonard & N. Hotchkiss 3185*, 23 Jul 1960. Cliff face of Cactus Rock facing river. W.

sphaerocarpon (Elliott) Gould - round-fruited panic grass, round-seed rosette grass. (*D.*

polyanthes (Schult.) Mohlenbr., *Panicum polyanthes* Schult., *P. sphaerocarpon* Elliott). (6) *E.C. Leonard & N. Hotchkiss 3287*, 27 Sep 1960. Upper Gap, west end, rock crevices.

villosissimum (Nash) Freckmann - white-haired panic grass, white-haired rosette grass.

(*Panicum pseudopubescens* Nash, *P. villosissimum* Nash). (1) *J.R. Swallen s.n.*, 5 Jul 1936. About halfway along trail to upper end.

Digitaria ISCHAEMUM (Schreb.) Schreb. ex Muhl. - smooth crab grass, small crab grass.

(*Syntherisma ischaemum* (Schreb.) Nash). (3) *E.F. Wells, R.L. Brown & V.S. Murthy 4508*, 21 Sep 1997. Floodplain.

SANGUINALIS (L.) Scop. - crab grass, northern crab grass, hairy crab grass.

(*Syntherisma sanguinalis* (L.) Dulac). (5) *E.C. Leonard & N. Hotchkiss* 3296, 27

Sep 1960. Upper Gap, west end.

ECHINOCHLOA CRUSGALLI (L.) P. Beauv. - large barnyard grass. (7) *E.F. Wells, R.L. Brown &*

V.S. Murthy 4396, 30 Jul 1997. Floodplain.

+**muricata** (P. Beauv.) Fernald - rough barnyard grass. (*E. crusgalli* var. *mitis* (Pursh)

Peterm., *E. pungens* (Poir.) Rydb.) (1) *S. Wiser & C. Van Metre* 48, 11 Sep 1986.

West end, west of Cactus Rock; rocky "islands" directly offshore in river.

ELEUSINE INDICA (L.) Gaertn. - yard grass, wire grass, Indian goose grass. (2) *E.F. Wells, R.L.*

Brown & V.S. Murthy 4524, 21 Sep 1997. Floodplain. I.

Elymus hystrix L. - bottle-brush grass. (*Hystrix patula* Moench). (6) *W.J. Kress & M. Butts* 04-

7508, 8 Jun 2004. Floodplain near NW point. I.

+**macgregorii** R.E. Brooks & J.J.N. Campb. – Macgregor's wild rye. (1) *W.J. Kress & M.*

Butts 04-7493b, 25 May 2004. Floodplain near NW point. I.

+**riparius** Wiegand – riverbank wild rye. (1) *W.J. Kress & M. Butts* 04-7493a, 25 May

2004. Floodplain near NW point. I.

villosus Muhl. ex Willd. - downy wild rye, slender wild rye. (*E. striatus* Willd.,

misapplied). (7) *E.P. Killip* 42238, 9 Aug 1952. Upper Gap, west of rock near cattail

pool. I.

virginicus L. - Virginia wild rye grass, Terrell grass. (*E. australis* Scribn. & C.R. Ball, *E. glabriflorus* (Vasey) Scribn. & C.R. Ball, *E. striatus* Willd.) (21) *E.F. Wells, R.L. Brown & V.S. Murthy 4360*, 1 Jul 1997. Floodplain.

Eragrostis capillaris (L.) Nees - lace grass. (4) *E.P. Killip & J.R. Swallen 31889*, 12 Jul 1936. "Barrens" near ferry landing.

CILIANENSIS (All.) Vignolo ex Janch. - stink grass. (2) *E.P. Killip & J.R. Swallen 31905*, 19 Jul 1936. "Barrens" at east end near river.

frankii C.A. Mey. ex Steud. - sandbar love grass, Frank's love grass. (6) *S. Wiser & C. Van Metre 47*, 11 Sep 1986. West end, to west of Cactus Rock; floodplain by river. W.

hypnoides (Lam.) Britton, Sterns & Poggenb. - teal love grass. (*E. reptans* (Michx.) Nees, in part). (13) *E.F. Wells, R.L. Brown & V.S. Murthy 4509*, 21 Sep 1997. Floodplain.

MINOR Host - little love grass. (*E. poaeoides* P. Beauv. ex Roem. & Schult.) (1) *E.P. Killip & J.R. Swallen 32162*, 1 Aug 1937. Lower end east of sandpile.

pectinacea (Michx.) Nees - pink grass, purple love grass, Carolina love grass. (*E. caroliniana* (Biehler) Scribn., misapplied). (5) *M. Beyersdorfer s.n.*, 2 Sep 1984. Sandy flats just west of Cactus Rock.

PILOSA (L.) P. Beauv. - India love grass. (*E. multicaulis* Steud., *E. peregrina* Wiegand).

(1) *E.P. Killip & J.R. Swallen 32163*, 1 Aug 1937. Lower end, east of sandpile.

spectabilis (Pursh) Steud. - purple love grass, tumble grass, trouble-grass. (*E.*

pectinacea (Michx.) Nees, misapplied). (1) *A.S. Hitchcock 15829*, 16 Sep 1917.

Festuca subverticillata (Pers.) E.B. Alexeev - nodding fescue. (*F. obtusa* Biehler). (5) *E.F.*

Wells, R.L. Brown & V.S. Murthy 4410, 30 Jul 1997. Floodplain.

Glyceria †septentrionalis Hitchc. - floating manna grass, eastern manna grass. (*Panicularia*

septentrionalis (Hitchc.) E.P. Bicknell). (1) *E.P. Killip 36572*, 17 May 1942.

Mainland, in middle of Frog Pond nearest old spring.

striata (Lam.) Hitchc. - fowl manna grass, nerved manna grass. (*G. nervata* (Willd.)

Trin., *Panicularia nervata* (Willd.) Kuntze). (2) *A.S. Hitchcock 12696*, 31 May

1915.

Leersia oryzoides (L.) Sw. - rice cut grass. (*Homalocenchrus oryzoides* (L.) Pollich). (4) *E.C.*

Leonard & N. Hotchkiss 3408, 27 Sep 1960. East end, sub-island at upper rock crossing of channel.

virginica Willd. - white grass. (*Homalocenchrus virginicus* (Willd.) Britton). (5) *E.F.*

Wells, R.L. Brown & V.S. Murthy 4519, 21 Sep 1997. Floodplain.

LOLIUM MULTIFLORUM Lam. - annual rye grass, Italian rye grass. (*L. perenne* ssp. *multiflorum*

(Lam.) Husn.) (1) *E.P. Killip & N. Hotchkiss 32619*, 26 Jun 1938. "Barrens" north of gap between Cabin Hill and West Knoll.

Melica mutica Walter - two-flowered melic. (4) *W.J. Kress & M. Butts 04-7461*, 13 May 2004.

Near Cactus Rock. I.

MICROSTEGIUM +VIMINEUM (Trin.) A. Camus - Japanese stilt grass, coverall grass, Nepalese browntop. (*Eulalia viminea* (Trin.) Kuntze). (1) *E.F. Wells, R.L. Brown & V.S. Murthy 4474*, 12 Sep 1997. Floodplain. I.

Muhlenbergia frondosa (Poir.) Fernald - wire-stem muhly. (*M. mexicana* (L.) Trin., misapplied). (7) *E.C. Leonard & N. Hotchkiss 3348*, 27 Sep 1960. Boat landing, sandy riverbank.

schreberi J.F. Gmel. - nimblewill. (2) *E.C. Leonard & N. Hotchkiss 3397*, 27 Sep 1960. East end, riverbank.

sobolifera (Muhl. ex Willd.) Trin. - branched muhly, rock muhly. (2) *J.R. Swallen & J.E. Benedict s.n.*, 17 Oct 1937. Front of cabin along trail to Cactus Rock.

Panicum anceps Michx. - flat-stemmed panic grass, beaked panic grass. (1) *A.S. Hitchcock 15774*, 9 Sep 1917.

capillare L. - witch grass, old-witch grass, common panic grass. (3) *M. Beyersdorfer 358*, 10 Oct 1982. West Knoll, path on channel side by rock-tree ring.

dichotomiflorum Michx. - spreading witch grass, fall panic grass. (7) *E.C. Leonard & N. Hotchkiss 3358*, 27 Sep 1960. East end, Poachers Landing.

gatteringi Nash - Gattinger's panic grass. (8) *E.C. Leonard & N. Hotchkiss 3530*, 9 May 1961. West end, low bank. Comments: May date unlikely.

philadelphicum Bernh. ex Trin. - wood witch grass, Philadelphia panic grass. (6) *E.F.*

Wells, R.L. Brown & V.S. Murthy 4534, 21 Sep 1997. Floodplain.

rigidulum Bosc. ex Nees - red-top panic grass. (*P. stipitatum* Nash). (2) *E.P. Killip* 36993, 6 Aug 1949. Largest pool, near laurel patch.

virgatum L. - switch grass, wand panic grass. (3) *E.C. Leonard & N. Hotchkiss 3290,* 27 Sep 1960. Upper Gap, west end.

Paspalum laeve Michx. - smooth paspalum, field crown grass. (*P. circulare* Nash). (1) *E.P. Killip 36638, 7 Sep 1942. Upper Gap, marsh.*

repens P.J. Bergius - water paspalum, horsetail crown grass. (*P. fluitans* (Elliott) Kunth, *P. repens* var. *fluitans* (Elliott) Wipff & S.D. Jones). (8) *S.G. Shetler & S.S. Orli 2004.24, 3 Aug 2004. Small rock island in middle of channel. I.*

setaceum Michx. - slender paspalum, slender crown grass. (*P. pubescens* Muhl. ex Willd.) (2) *E.P. Killip & J.R. Swallen 32138, 4 Jul 1937. Flood-swept gap at west end, near river.*

Phalaris arundinacea L. - reed canary grass. (6) *W.J. Kress & M. Butts 04-7488, 20 May 2004. Ridge above central plain, mid-island. I.*

PHLEUM PRATENSE L. - timothy, herd's grass. (1) *E.P. Killip & J.R. Swallen 31877, 12 Jul 1936. "Barrens" toward lower end.*

Piptochaetium avenaceum (L.) Parodi - black-seed needle grass, black oat grass. (*Stipa avenacea* L.) (3) *R.S. Cowan 1680, 4 Jun 1961. West slope of Cabin Hill [2 sheets].*

Poa COMPRESSA L. - Canada blue grass, flat-stemmed blue grass. (1) *A.S. Hitchcock 12683, 31*

May 1915.

cuspidata Nutt. - short-leaved blue grass, early blue grass. (1) *A.S. Hitchcock 12420*, 18

Apr 1915.

pratensis L. - Kentucky blue grass. (2) *A.S. Hitchcock 12666*, 22 May 1915.

sylvestris A. Gray - forest blue grass, sylvan blue grass, woodland blue grass. (4) *W.J.*

Kress & M. Butts 04-7453, 6 May 2004. NE corner of cabin. I.

TRIVIALIS L. - rough-stemmed blue grass, rough blue grass. (2) *A.S. Hitchcock 12687*,

31 May 1915.

SCHEDONORUS +ARUNDINACEUS (Schreb.) Dumort. - tall fescue, alta fescue, tall rye grass.

(*Festuca arundinacea* Schreb., *F. elatior* L.) (2) *E.C. Leonard & N. Hotchkiss 3191*,

23 Jul 1960. East end of Island [2 sheets].

PRATENSIS (Huds.) P. Beauv. - meadow fescue, meadow rye grass. (*Festuca elatior* L.,

misapplied). (1) *E.P. Killip & J.R. Swallen 32125*, 20 Jun 1937. West Knoll, north side.

Schizachyrium scoparium (Michx.) Nash - little bluestem, little false bluestem. (*Andropogon scoparius* Michx.) (Killip & Blake 1935).

Setaria +FABERI R.A.W. Herrm. - giant foxtail grass, nodding foxtail grass. (4) *W.J. Kress &*

N.A. Bourg 04-7572, 31 Jul 2004. On rock outcrop at E end. I.

PUMILA (Poir.) Roem. & Schult. - yellow foxtail grass. (*Chaetochloa lutescens*

(Weigel) Stuntz, misapplied, *Setaria glauca* (L.) P. Beauv., in part, *S. lutescens*

(Poir.) Roem. & Schult., misapplied). (1) *A.S. Hitchcock 15766*, 9 Sep 1917.

VIRIDIS (L.) P. Beauv. - green foxtail grass, green bristle grass. (*Chaetochloa viridis* (L.) Scribn.) (7) *E.C. Leonard & N. Hotchkiss 3355*, 27 Sep 1960. Boat landing, riverbank.

Sorghastrum nutans (L.) Nash - Indian grass, yellow Indian grass. (4) *E.C. Leonard & N. Hotchkiss 3596*, 9 May 1961. Riverbank near Poachers Landing. Comments: May date unlikely.

Sphenopholis †intermedia (Rydb.) Rydb. - slender wedge grass, slender wedgescale. (*S. pallens* (Spreng.) Scribn., of Hitchcock & Standley 1919). (1) *E.P. Killip 31059*, 20 Jun 1933. [Mainland], Stewart Farm.

nitida (Biehler) Scribn. - shiny wedge grass, shiny wedgescale. (1) *A.S. Hitchcock 12585*, 16 May 1915.

Sporobolus vaginiflorus (Torr. ex A. Gray) A.W. Wood - poverty dropseed, poverty grass. (2) *E.P. Killip & J.R. Swallen 31937*, 30 Aug 1936. "Barrens" along channel, toward east end.

Tridens flavus (L.) Hitchc. - purpletop, tall redtop. (*Triodia flava* (L.) Smyth). (4) *S. Wiser & C. Van Metre 57*, 11 Sep 1986. West end, to west of Cactus Rock, in rock crevices about 20-25' from shore.

Tripsacum dactyloides (L.) L. - eastern gama grass. (5) *E.C. Leonard & N. Hotchkiss 3310*, 27 Sep 1960. West end, Upper Gap, soil pocket between outcrop rocks.

ZE A MAYS L. - corn, maize. (1) *E.P. Killip 31924*, 09, 15 Aug 1936 [with small ear]. "Barrens" near tree bridge. Comments: Temporarily present after floods of 1936, 1937 (Killip & Blake 1953).

PONTEDERIACEAE (Pickerel-weed Family)

Heterantha dubia (Jacq.) MacMill. - water-stargrass, grass-leaved mud-plantain. (*Schollera graminea* Raf. ex A. Gray, *Zosterella dubia* (Jacq.) Small). (6) *S. Wiser & C. Van Metre 75*, 3 Oct 1986. West end, near Cabin John Bridge on Potomac River side, on muddy shore.

reniformis Ruiz & Pav. - kidney-leaved mud-plantain. "Extinct" (Killip & Blake 1935).

POTAMOGETONACEAE (Pondweed Family)

Potamogeton +CRISPUS L. - curly pondweed. (4) *E.P. Killip 40545*, 27 Aug 1950. Entrance to channel, submerged [misidentified as *P. foliosus* Raf.].

diversifolius Raf. - common snail-seed pondweed, variable pondweed, waterthread pondweed. (*P. capillaceus* Poir., misapplied, *P. hybridus* Michx., misapplied). (4) *E.P. Killip & N. Hotchkiss 31981*, 11 Oct 1936. Halfway between ferry landing and upper end, pool.

nodosus Poir. - long-leaf pondweed. (*P. americanus* Cham. & Schltld.) (4) *M. Beyersdorfer 351*, 10 Oct 1982. Mainland, C&O Canal, across from Plummers Island.

+pusillus Morong - small pondweed, slender pondweed. (1) *E.P. Killip 13459*, 24 Aug 1930. West end, in pool [misidentified as *P. foliosus* Raf.].

Stuckenia +pectinata (L.) Börner - sago-pondweed. (*Coleogeton pectinatus* (L.) Les & R.R. Haynes, *Potamogeton pectinatus* L.) (3) *E.P. Killip & N. Hotchkiss 32620*, 26 Jun 1938. Pool north of gap between Cabin Hill and West Knoll. Comments: All three specimens (1908, 1937, 1938) apparently overlooked by Killip & Blake in 1935 and 1953.

SMILACACEAE (Greenbrier Family)

Smilax glauca L. - sawbrier, glaucous greenbrier. (4) *W.J. Kress & M. Butts 04-7464*, 13 May 2004. E side of Cactus Rock. I.

herbacea L. - smooth carrion-flower. (1) *S.F. Blake s.n.*, 4 Aug 1934. West End.

hispida Raf. - China-root, bristly greenbrier, hellfetter. (*S. tamnoides* L., confused name). (4) *A.S. Hitchcock 15821*, 16 Sep 1917.

pulverulenta Michx. - downy carrion-flower. (3) *E.P. Killip 31204*, 3 Jun 1934. Woods near old spring.

rotundifolia L. - common greenbrier, common catbrier, bullbrier, horsebrier. (10) *S.G. Shetler 2004.2*, 1 May 2004 [2 sheets]. I.

TYPHACEAE (Cattail Family)

Typha +angustifolia L. - narrow-leaved cattail. (1) *E.P. Killip 31873*, 5 Jul 1936. In pool halfway between ferry landing and upper end. Comments: Specimen apparently overlooked by Killip & Blake in 1953.

latifolia L. - broad-leaved cattail. (1) *E.P. Killip 41359*, 29 Jul 1951. Largest pool in Upper Gap, near laurel patch. Comments: Reported as "Extinct" by Killip & Blake in 1935, but reinstated in 1953.

