

GUIDE TO COMMON PLANTS ON JAMESTOWN ISLAND



Colonial National Historical Park Virginia

Prepared by Helen Hamilton
Volunteer-In-Park
2002-3; 2009

INTRODUCTION

The following pages should assist the visitor in identifying many of the common plants growing in the historic area of Old and New Towne on Jamestown Island.

Most of the tree pages were prepared in winter, 2002, and some herbaceous species were done during the growing season 2003. Additions to the guide are being made during the growing season 2009.

Unlabeled drawings appear in The Illustrated Guide to Gleason and Cronquist's Vascular Plants, Holmgren et al, published by the New York Botanic Gardens, and used with permission.

Drawings of *Quercus alba* and *Ulmus americana* appear in Native Trees, Shrubs, and Vines for Urban and Rural America, by Gary L. Hightshoe, published by Van Nostrand Reinhold, New York.

Other drawings were taken from websites stating guidelines for using the materials for educational purposes, and credit is given for the drawings.

Helen Hamilton
Volunteer, 2002-3; 2009

Arundinaria gigantea Giant cane
POACEAE Grass Family

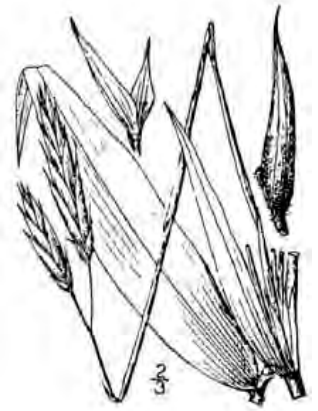
Description. A woody perennial, reaching as much as 30 feet in height, with slender, hollow stems and long, flat leaves forming fanlike clusters. This large grass grows in dense colonies, called canebrakes, spreading freely by rhizomes. Giant cane flowers sporadically and dies soon after fruiting. Small cane *Arundinaria tecta*, usually reaching heights of only six feet, sometimes to 12 feet where fire-suppressed, is endemic to the Southeastern Coastal Plain. Giant cane *A. gigantea* may have been introduced to Jamestown.

Habitat. Grows in damp woods, wet ground and swamps from Maryland and Virginia south to Florida and Texas and west to Ohio and Illinois. Requires part shade and wet soil. Photographed at the Glasshouse demonstration area, immediately adjacent to non-native Bamboo, *Phyllostachys aurea*.

Comments. The canes are used for fish poles, basketry, and in a variety of other ways. The young shoots and leaves are eaten by domestic animals. Both species of *Arundinaria* were much reduced by the foraging of free-range livestock in the 18th and early 19th centuries and by fire suppression in the late 19th century and throughout the 20th century. “Canebrakes,” large areas dominated by cane, were described in many historical accounts and apparently occupied large parts of the landscape of the Coastal Plain, also occurring in the Piedmont and low Mountains.



Arundinaria gigantea



Arundinaria tecta



USDA-NRCS PLANTS Database
/ Britton, N.L., and A. Brown.
1913. *An illustrated flora of
the northern United States,
Canada and the British
Possessions*. Vol. 3: 251.

Chasmanthium laxum Spikegrass
POACEAE Grass Family

SUMMER-FALL

Description. A perennial grass of medium height, growing up to 4 feet tall, but somewhat bent. Flowers are carried on a narrow terminal spike up to 18 inches long.

Habitat. Found in extensive drifts in moist pine woods, meadows and swamps. Ranges from Florida to Texas, north to Long Island, New Jersey, Kentucky and southern Missouri; in Virginia located only in eastern and central counties. Blooms March-May.

Comments. The species name *laxum* refers to the pendant aspect of the thin branches; they are seldom erect.



USDA-NRCS PLANTS Database /
Britton, N.L., and A. Brown. 1913. *An
illustrated flora of the northern
United States, Canada and the British
Possessions*. Vol. 3: 251.



Echinochloa crusgalli Barnyard Grass

EXOTIC

POACEAE Grass Family

Description. An annual grass 3-6 feet tall with several usually erect stems from the base, each bearing a flower-cluster at the top, somewhat nodding. Slender bristles are found along the spike, giving the entire cluster a bristly appearance.

Habitat. A native of Japan, Barnyard Grass is common in waste places, fields, roadsides, almost all over the world, and in every county in Virginia. On Jamestown Island, photographed from the footpath to Black Point. Blooms June-November.

Comments. Now generally considered a troublesome weed, Barnyard Grass was introduced into the country by enthusiastic promoters and somehow given the absurd name of Billion-Dollar Grass.



USDA-NRCS PLANTS Database / USDA
NRCS. *Wetland flora: Field office
illustrated guide to plant species*. USDA
Natural Resources Conservation Service.

Echinochloa walteri Water Grass; Walter Millet
POACEAE Grass Family

Description.. An erect annual grass up to 6 feet tall. Stems are round with long, tapering leaves up to 20 inches long and one inch wide. The dense flower cluster at the ends of stems bears numerous erect spikes with many spikelets covered by long bristles (awns), often over one inch long.

Habitat. Common in wet places – marshes, swamps, ponds, ditches in eastern U.S. and Canada. In Virginia, grows only in the coastal counties. On Jamestown Island, photographed under the footbridge. Blooms July-frost.

Comments. A similar species, Barnyard Grass, *E. crusgalli* is usually less than 3 feet tall, and its spikelets typically lack long bristles.



USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant species*. USDA Natural Resources Conservation Service.

Elymus virginicus Virginia wildrye
POACEAE Grass Family

Description. A perennial grass forming tufts with upright, stiff stems, growing to four feet tall. The single flower cluster has a harsh texture, with stiff, straight bristles, greenish at first, then turning yellow. Characteristics are highly variable.

Habitat. Grows in moist woods, meadows, thickets, shores of freshwater marshes, and depressions. Ranges from Newfoundland west to Alberta and south to Florida and Arizona. Scattered throughout Jamestown Island, especially along the trail to Black Point. Blooms June-August.

Comments. Name comes from the Greek *elyo*, "rolled up", referring to the coverings over the grain. A good forage grass. Native Americans have used species of *Elymus* for medicinal purposes, food, fiber and fodder.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 251.



Panicum virgatum Switchgrass
POACEAE Grass Family

SUMMER-FALL

Description. This perennial grass is easily recognized by the 6 feet tall erect to arching stems with open seedheads. Leaves are long and tapered; some species have reddish leaves or stems, or bluish leaves and seedheads. Switchgrass grows in clumps which expand over several years. A very important forage grass of the tallgrass prairies, the roots are deep and wide.

Habitat. In Virginia found mostly in the eastern counties, and widely distributed over most of U.S. and Canada. Grows along the edges of ponds and marshes, wet pinelands, swales, prairies, dunes, and shores. Blooms June to October. Photographed at the back of the Jamestown Island Visitor Center.

Comments. Garden centers offer a variety of cultivars of switchgrass, some with metallic blue foliage, red leaves, or pale blue seedheads. Grown for erosion control and furnishes food for small birds.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 251.



Paspalum dilatatum Dallis grass
POACEAE Grass Family

EXOTIC

Description. *P. dilatatum*, Dallis Grass, grows in tufts, often sprawling, up to 3 feet tall. The linear leaves are often folded, and taper to an inrolled point. Flat, hemispheric flowers are lined along one side of the stem; the flowers are fringed with long silky hairs.

Habitat. Dallis grass is very weedy and can be expected almost anywhere in the open, most frequently at roadsides, in lawns and fields, doing best in moist places. A native of South America, it has been cultivated and widely escaped in southern U.S., extending north to Kentucky, in the coastal states to New Jersey, and across southern U.S. to California. Found in eastern and central Virginia. Blooms May-October. Photographed along the footpath to Black Point on Jamestown Island.

Comments. The name probably comes from the Greek *paspale*, "meal". This was a valuable pasture plant for native Americans.

USDA-NRCS PLANTS Database / Hitchcock, A.S.
(rev. A. Chase). 1950. *Manual of the grasses of the
United States*. USDA Miscellaneous Publication No.
200. Washington, DC.



Phragmites australis Common Reed
POACEAE Grass Family

ALIEN INVASIVE

Description. Perennial with stout stems to 12 feet tall, forming extensive stands by rooting from underground stems (rhizomes). Leaf blades are broad (2 inches), long and flat with a bluish color. Tawny flowers are densely crowded on long spikes at the end of stems. Seed is seldom produced.

Habitat. Common in fresh marshes, swamps and wet shores of the Coastal Plain throughout northeastern United States; nearly cosmopolitan. It is tolerant of salt, and thrives in brackish soils. Populations on Jamestown Island are under control by National Park Service staff. Colonies can be seen along the Loop Trail, mixed with the native giant cordgrass (*Spartina cynosuroides*). Blooms August-October.

Comments. There is a native *Phragmites* which is almost identical to the exotic, more invasive species, but is not invasive. The exotic species, once it sets a foothold, can alter ecosystem functions and reduce biological diversity. Certain communities of Wax Myrtle are especially susceptible to invasion by Common Reed. The genus name is derived from the Greek *phragmites*, "growing in hedges", apparently from its hedge-like growth along ditches.



Seedhead opening



Stands of prior season's growth,
seen in early spring

Phyllostachys aurea Golden bamboo
POACEAE Grass Family

INVASIVE ALIEN

Description. A highly invasive, woody perennial reed-like plant that can reach 40 feet. Flowering is very rare, once every 7-12 years. Golden bamboo can form dense, monocultural thickets that displace native species. Once established, it is difficult to remove.

Habitat. The plant grows semi-shade in any soil, usually moist, but can tolerate drought. . Infestations are commonly found around old homesites and can rapidly expand in size.

Comments. Golden bamboo is native to China and was first introduced into the United States in 1882 for ornamental purposes. Rapidly spreading by rhizomes, and producing thick, tall canes, bamboo has been used for screening and fencing. But its aggressive growth habit dominates the landscape and chokes all other vegetation. The rhizomes will grow through asphalt and concrete. Effective control is difficult and long-term. Cutting all green growth will eventually starve the rhizomes; mature canes should be cut to the ground and immediately painted with an herbicide.



Saccharum giganteum Sugarcane Plumegrass

POACEAE Grass Family

Description. One of the tallest grasses, growing to 12 feet, often forming clumps or large colonies. Leaf blades to one inch wide, and two feet long. The flower head is a large, dense plume, becoming purple to bronze in the fall.

Habitat. Moist ground, marshes, ditches, low woods, , from New York south to Florida and Texas. Found in the Coastal Plain and Piedmont counties in Virginia. Photographed along the Jamestown Loop Road. Blooms August-October.

Comments. The name is derived from the Greek *erion*, "wool", and *anthos*, "flower", referring to the long silky hairs, 2-3 times longer than the body of the spikelet, in a tuft around the base of each flower/fruit. This grass is a member of the same genus as sugar cane.



USDA-NRCS PLANTS Database /
Hitchcock, A.S. (rev. A. Chase). 1950.
Manual of the grasses of the United States. USDA Miscellaneous Publication
No. 200. Washington, DC.



USDA-NRCS PLANTS Database / Britton, N.L., and A.
Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 549.

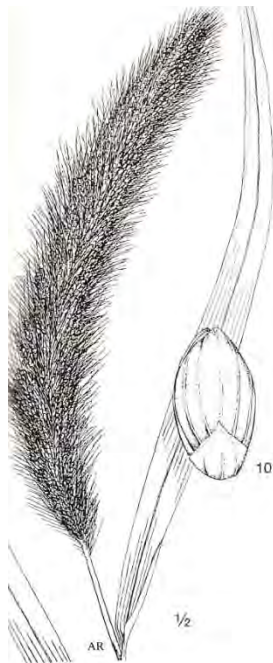


Setaria magna Giant Foxtail
POACEAE Grass Family

Description. This is the largest of the foxtail grasses, ascending to 12 feet tall, with inch-thick stems at the base. Leaves are up to nearly two feet long and 2 inches wide with rough surfaces and margins. The dense and bristly cylindrical flower head is up to 2 feet long and 1-2 inches wide.

Habitat. Coastal brackish marshes from New Jersey to Florida and Texas. In Virginia, found only in the coastal counties. Photographed from the first bridge on the Jamestown Loop Road, and seen along the Road near Black Point. Blooms July-October.

Comments. The genus name *Setaria* comes from the Latin *seta*, meaning “bristle.” Producing many seeds, these plants are a valuable food source for birds.



Holmgren, Noel. Illustrated companion to Gleason & Cronquist's Manual: illustrations of the vascular plants of northeastern United States and adjacent Canada, 1998. The New York Botanical Garden.

Spartina patens Saltmeadow Cordgrass
POACEAE Grass Family

Description. A fine, wiry, erect or spreading perennial grass, usually 1-3 feet tall. The base of the stem is weak and has a tendency to bend when stressed by winds or tides, producing the characteristic cowlicks or swirls occurring in large saltmarsh meadows. The leaves are very narrow, arranged in several planes around the stem, with the edges rolled inwardly so the blade appears round. Three to six green to purple, one-sided fruiting “spikes” are arranged alternately on the upper portion of the stem.

Habitat. Common in salt or brackish marshes and beaches, from Quebec to Florida and Texas and inland to eastern Michigan. In Virginia, found only in the coastal counties. Photographed at Black Point on Jamestown Island. Blooms June-October.

Comments. Saltmeadow cordgrass is an important component of the rich saltmarsh ecosystem. The detritus produced by this plant adds organic material to the marsh. It is not as dense as that of the larger saltmarsh cordgrass, and the young plants have no trouble growing up through it in the spring. It is the principal source of eastern salthay; in many marshes along the East Coast, it is grazed or harvested as a forage crop for cattle.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 223.

Tridens flavus Purple top, Greasy Grass

POACEAE Grass Family

Description. An erect, slender perennial, to 4 feet tall. The upper stem, branches and spikelets are covered with a waxy, greasy substance. The purple flower cluster is loose and open, and has a distinctive weeping form.

Habitat. Common in fields, roadsides, and edges of woods. Found from New Hampshire to Minnesota and Nebraska and south to Florida and Texas, and every county in Virginia. Photographed along the Jamestown Loop Road. Blooms August-October.

Comments. The species name comes from the Greek *triodous*, "three-toothed", referring to a flower part with a 3-toothed tip. Birds eat the seeds, and wildlife use the plant for cover. Purple Top is the larval host for 4 species of butterflies.



USDA-NRCS PLANTS Database / Hitchcock, A.S. (rev. A. Chase).
1950. *Manual of the grasses of the United States*. USDA
Miscellaneous Publication No. 200. Washington, DC.

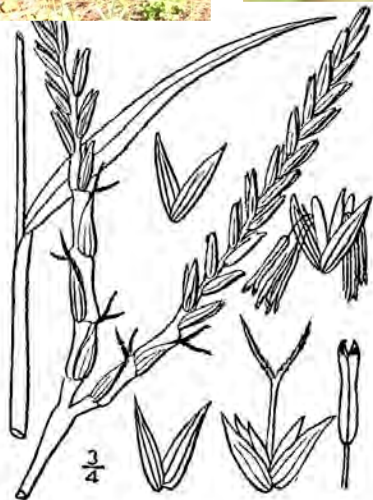
Tripsacum dactyloides Gama Grass

POACEAE Grass Family

Description. A tall perennial grass to 3-8 feet tall, growing in clusters or colonies. Leaves are wide, resembling those of domestic corn, and located largely at the base and on the lower half of the stem. At the end of the major stems, flower spikes bear male flowers above the female. The male portion of the spike resembles the tassel of corn plants and drops off after shedding pollen. The female flowers and grains develop into bony beadlike joints of the spike.

Habitat. Usually found in moist places – ditches, along the edges of marshes or woods, from Massachusetts to Michigan and Nebraska and southward to the tropics. In Virginia Gama Grass is found mostly in coastal and piedmont counties. On Jamestown Island, photographed from the Jamestown Loop Road, and at Black Point.

Comments. The name *dactyloides* is derived from a Greek word meaning “finger.” Although the grains resemble domestic corn, and botanists have attempted to link Gama Grass with the development of domestic corn *Zea mays*, they have very little genetic similarity.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 223.

Zizania aquatica Ricegrass
POACEAE Grass Family

Description. A native grass, mostly perennial, growing to 10 feet tall. Light green lance-shaped leaves are 2 inches wide and 3 feet long, with finely toothed margins. Distinctive for the arrangement of the flowering spike: the male flowers hang from the spreading lower branches, and the female ones are erect on the stiff, broomlike upper branches.

Habitat. Common in freshwater and brackish marshes in Virginia's coastal counties, ranging from Maryland to Texas. Blooms April-August. Photographed in Jamestown from the boardwalk to the monument.

Comments. Seeds are edible, and can be collected by boat. Native Americans bent the stalks in canoes and shook the ripe seeds into a cloth. After winnowing and washing, the seed can be prepared like brown rice or ground into flour.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 251.



Carex sp. Sedges
CYPERACEAE Sedge Family

Description. Easily confused with grasses, sedges can often be distinguished by 3-angled stems with leaves in 3 ranks. Seedheads are small and very diverse; the minute characteristics of the tiny fruits are used to identify species.

Habitat. Most sedges prefer wet or boggy soil, and are found in moist woods, swamps, marshes, and ditches where they form an intermediate step between mud and dry land by spreading their rhizomes and acting as a landfill, allowing other vegetation to grow. Found in many wet places on Jamestown Island.

Comments. Many sedges can be planted as ornamentals in ordinary garden soil where their interesting seedheads provide attractive contrast with other herbaceous plantings.



Juncus effusus Soft rush
JUNCACEAE Rush Family

Description. Not a grass, this erect, perennial herb grows 3 feet tall and forms dense clumps. The stems are stout, round and unbranched, with a bristle tip. There are no apparent leaves, and the flowers appear in an inconspicuous greenish brown cluster on the upper half of the stem. Each fruit capsule contains many minute seeds. Most of the stems remain greenish through winter.

Habitat. Found in sunny wet meadows, freshwater marshes, shrub swamps from Newfoundland to North Dakota, and south to Florida and Texas and in every county in Virginia. Blooms June through September.

Comments. Muskrats feed on the rootstalks, and birds find shelter among the stems. Jamestown colonists opened the stems to reveal a continuous white fiber which they used for candle wicks.



Juncus tenuis Path rush
JUNCACEAE Rush Family

Description. A short, clumped plant, about one foot tall with flat leaves around the base which ascend or curve gently away from the stems. A cluster of flowers which have been wind-pollinated appear at the ends of the stems.

Habitat. Path rush withstands trampling, and is often found in and along footpaths, in heavy clay-loam, clay or gravelly soil. While preferring sun or light shade, and wet soils, this rush tolerates a considerable dry period. Grows in every county in Virginia, and almost throughout North America. Photographed along Black Point on Jamestown Island.

Comments. This weedy species prefers disturbed habitats, growing well in compacted soil. Because the tiny seeds become sticky when wet, they cling readily to the feathers of birds, fur of mammals, shoes of humans, and tires of motor vehicles; by this means, they are distributed to new locations. This is one reason why the Path Rush is often observed along paths and roadways.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 251.



Scirpus cyperinus Woolgrass
CYPERACEAE Sedge Family

Description. This perennial sedge grows to 6 feet tall, usually in large clumps, and often in extensive colonies. The leaves are long and conspicuous, especially the basal ones. The flower-heads are large, the branches arching and drooping. In late summer-fall, the fruits are brown and very fuzzy.

Habitat. Woolgrass is common in wet places, roadside ditches, marshes, swamps and wet meadows. Native to most counties of Virginia, the plant ranges from eastern Texas to Newfoundland, British Columbia and south to Florida, east Texas and Oklahoma. Photographed along the Jamestown Loop Road. Blooms July-October.

Comments. This is one of several important species of wetland plants, many of them emergents, that provide food and cover for waterfowl and other wildlife. The seeds are eaten by waterfowl, and the roots by muskrats and geese. Woolgrass is good for erosion control in wet areas.



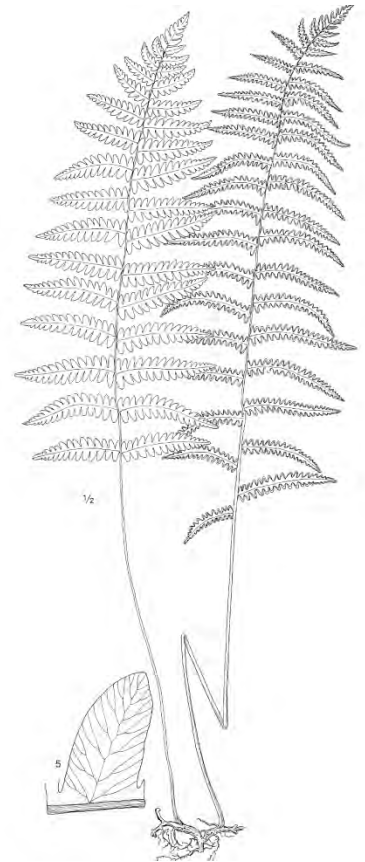
USDA-NRCS PLANTS Database / USDA
NRCS. *Wetland flora: Field office
illustrated guide to plant species.* USDA
Natural Resources Conservation Service.

Thelypteris palustris Marsh fern
ASPLENIACEAE Spleenwort Family

Description. The light green blades on Marsh fern are thin-textured and taper slightly downward. The spore-cases are crowded along the midline of each leaf-blade division, which are broad, with small ear-like projections near the stalk.

Habitat. Typically found along the margins of marshes and bogs and bottomland forests, preferring acid soil. Common over eastern and central U.S. and Canada and nearly every county in Virginia. Photographed near the start of the Jamestown Loop Trail.

Comments. Marsh fern spreads rapidly to form wide drifts. The species name *palustris* is derived from the Latin *palus*, meaning “marsh”.



Description. Mosses belong to a group of plants known as Bryophytes, distinguished by their lack of vascular tissue and of woody tissue as found in most land plants. They are always low to the ground, and retain their dependence upon their ancestral aquatic habitat in two ways (1) they act as sponges, taking up water through surface cells and (2) reproduction is accomplished by sperm swimming to an egg source nearby, usually accomplished in a film of rainwater or dew.

Habitat. These small plants grow in abundance in wet woods, streambanks and dark, shady places; in drought periods their metabolism is relatively inactive, reviving with a water supply.

Comments. Reproduction is accomplished by alternation of generations. The sexual phase occurs when sperm fertilize eggs, producing the familiar spore cases on long stalks. Later in the fall, these cases release microscopic spores which grow into the green leafy phase.



Arisaema triphyllum Jack-in-the-Pulpit
ARACEAE Arum Family

Description. The unusual “flower” is a flaplike column of green or purplish-brown, often striped, which curves gracefully over the club-shaped center – the “Jack” or preacher in his canopied pulpit. One or two leaves stand on single stalks, above the flower. Leaves are in 3 parts, with two of the leaflets at right angles. In early spring the plant is easily confused with trillium, but in the latter the leaves are all equidistant from each other. Fruit is a cluster of glossy green berries, becoming scarlet in late summer.

Habitat. Requires humus-rich moist soils, sun or shade, very easy to cultivate and needing very little care..Found in rich woods and bogs throughout eastern and central U.S. and Canada, and nearly every county in Virginia. Photographed along path to Glasshouse. Blooms March-April and fruits in July.

Comments. Also known as Indian turnip, American Indians gathered the fleshy taproot as a vegetable and used the dried root for many conditions. However, all parts of the plant, when fresh, contain calcium oxalate crystals which are intensely irritating



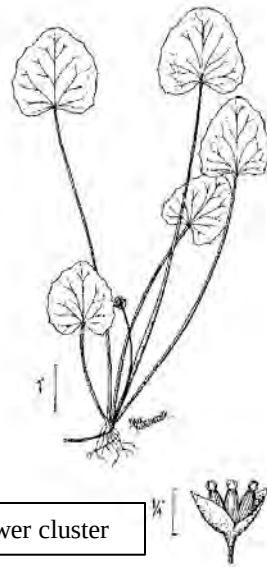
Centella erecta Coinleaf

APIACEAE Carrot Family

Description. Perennial; stems creeping, sending up at each joint (node) a cluster of leaves on stalks (petioles) up to one foot tall. Leaves are fleshy, oval, usually heart-shaped at base. Clusters of small white flowers also arise from the joints, on shorter stalks.

Habitat. Marshes and wet soils along the coast from southern New Jersey and Delaware to Florida and Texas; also tropical America. In Virginia, native only in southeastern coastal counties. Photographed under the footbridge on Jamestown Island. Blooms in summer.

Comments. The plant is well-named with an erect habit (“erecta”) and coin-shaped leaves from “centine.”



USDA-NRCS PLANTS Database / USDA NRCS.
Wetland flora: Field office illustrated guide to plant species. USDA Natural Resources Conservation Service.

Cirsium discolor Field Thistle
ASTERACEAE Aster Family

Description. A biennial (blooms the second year of its life, then dies), forming a rosette of prickly leaves that overwinter the first year. Growing 3-7 feet tall, the leaves are deeply cut, and their undersides are covered with a white felt. The upper leaves embrace the flower head which is usually purple.

Habitat. Roadsides, fields, thin woods, meadows, waste places. Ranges from Quebec west to Manitoba, south to North Carolina, Mississippi, Louisiana and Kansas. Found in nearly every county in Virginia. Photographed along the Jamestown Loop Road. Blooms August-November.

Comments. Goldfinches are found of this thistle seed. Field thistle is the larval host for the Painted Lady butterfly, very common in our area.



Silver-spotted skipper butterfly on
Field Thistle



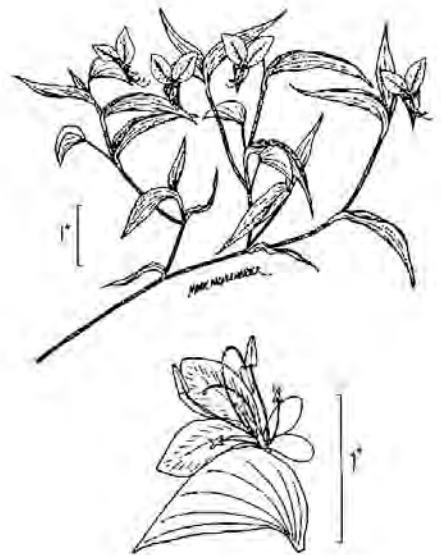
Commelina communis Asiatic dayflower
COMMELINACEAE Spiderwort Family

EXOTIC

Description. A sprawling annual, 1-3 feet, with oval leaves and clasping stem. Flowers have two prominent, earlike blue petals and a smaller whitish petal beneath. Each dayflower blooms for only one day, hence the common name. This imported weed differs from the Virginia dayflower by its small white (not blue) lower petal, with leaves more narrow. Blooms June-October.

Habitat. Grows in roadsides, waste places, edges across eastern and central U.S. and Canada, and nearly every county in Virginia. Photographed along the path to the Glasshouse.

Comments. In China, leaf tea was used for sore throats, urinary infections, dysentery. The young leaves and stems can be added fresh to salads or boiled and served with butter.



USDA-NRCS PLANTS Database / USDA NRCS.
Wetland flora: Field office illustrated guide to plant species. USDA Natural Resources Conservation Service.

Elephantopus tomentosus Elephant's Foot
ASTERACEAE Aster Family

Description. Branching perennial to two feet tall. Wide oval leaves cluster at the base in a rosette. The flowering stem has smaller leaves at the junction of the stem and flower stalk. Flower clusters are bluish-purple, surrounded by small, triangular leaf-like bracts.

Habitat. Grows in open, sandy woods on the Coastal Plain from southeast Virginia to Florida and Texas, and north to the interior of Kentucky. On Jamestown Island, occasional along roadsides. Blooms August-September.

Comments. Name composed of the Greek *elephas*, "elephant", and *pous*, "foot", a translation of an ancient name.



USDA-NRCS PLANTS Database /
Britton, N.L., and A. Brown. 1913.
*An illustrated flora of the northern
United States, Canada and the
British Possessions*. Vol. 3: 251.



Erechtites hieracifolia* var. *hieraciifolia Fireweed

ASTERACEAE Aster Family

Description. The small, pale tubular flowers barely peep from the swollen-based envelope of green bracts. In the fall, the flowers are replaced by cottony masses covering the seeds. The stems are grooved, and strong-smelling. Grows 1-9 feet tall, with alternate, toothed leaves 2-8 inches long, very variable.

Habitat. Various disturbed habitats including openings in dry woods and waste places. Ranges from Newfoundland to Florida and tropical America to, west to Saskatchewan and Texas; found in nearly every county in Virginia. Photographed along the Jamestown Loop Road. Blooms August-September.

Comments. The cottony seedheads are very visible in fields and meadows in the fall.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 549.

Perilla frutescens Beefsteak Plant/Wild Basil
LAMIACEAE Mint Family

ALIEN INVASIVE

Description. Beefsteak Plant is an annual, with oval leaves, wrinkled, with toothed edges and a peculiar fragrance. The leaves of the common variant are purple below but in some plants they are purple on both sides, i.e., the color of raw beefsteak. Flowers are whitish to pale violet in spikes at the ends of stems or where the leaf joins the stem.

Habitat. Native to Asia, this plant has become an invasive weed in the South in moist disturbed areas. Seen intermittently along the Jamestown Loop Road and under the footbridge. Found in most counties of Virginia, south to Florida and Texas and from Massachusetts to Iowa and Kansas.

Comments. Leaf tea has been used for a number of ailments, and is a favorite culinary herb of some Asian cultures. However, its use in human foods and medicine has been questioned.



USDA-NRCS PLANTS Database / USDA NRCS.
Wetland flora: Field office illustrated guide to plant
species. USDA Natural Resources Conservation Service.



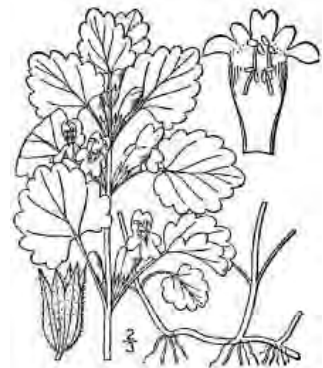
Glechoma hederacea Gill-over-the-Ground/Ground Ivy
LAMIACEAE Mint Family

EXOTIC

Description. A creeping, ivy-like perennial with scalloped roundish or kidney-shaped leaves, often purplish. The two-lipped violet flowers grow in whorls at the junction between the leaf and stem.

Habitat. A native of Eurasia, and now very common in moist woods and disturbed habitats across Virginia and throughout north and southeastern U.S. Photographed under the footbridge on Jamestown Island. Blooms April-June.

Comments. Traditionally, leaf tea was used for lung ailments and as a blood purifier, among other uses. Alcohol extracts are anti-inflammatory, but can cause throat irritation in humans.



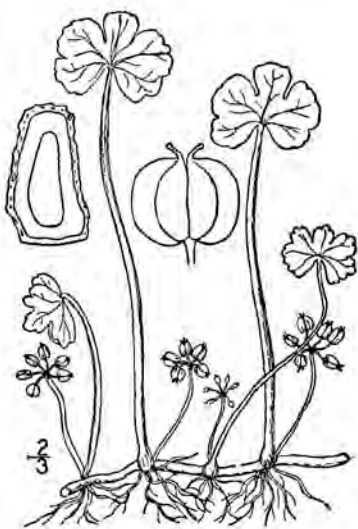
USDA-NRCS PLANTS Database /
Britton, N.L., and A. Brown. 1913. *An
illustrated flora of the northern United
States, Canada and the British
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***Hydrocotyle* spp.** Marsh pennywort
APIACEAE Carrot Family

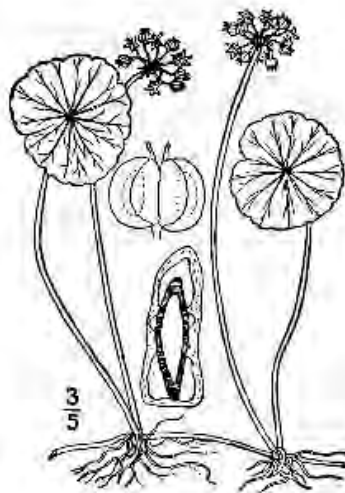
Description. A perennial herb, low-growing, usually to 6 inches tall. Unmistakable with thick, roundish, gently toothed leaves on long stalks attached to the center of the leaf (peltate). Inconspicuous whitish or greenish flowers are in a branched terminal cluster, and on separate stalks. The flowers of *H. verticillata* are in whorled clusters, carried on separate stalks, shorter than the leaf stalk. The flowers of *H. umbellata* are in umbrella-like clusters, longer than the leaf stalk. The most commonly seen Marsh pennywort is *H. ranunculoides*, where the leaves are lobed, and the stalk attaches to a clefts in a lobe.

Habitat. Common in swamps, marshes, ditches and wet soils from New England south to Florida and Texas and western U.S. and tropical America. Blooms June-October. On Jamestown Island marsh pennywort can be seen from the boardwalk leading to the Visitor Center.

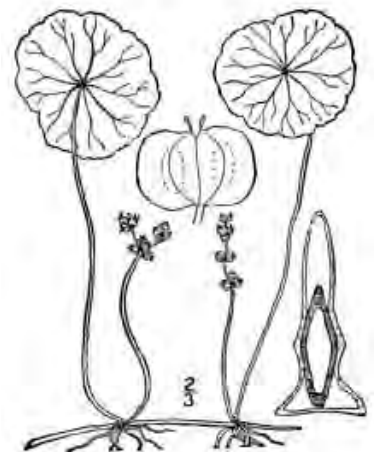
Comments. The genus name comes from the Greek *hydor*, “water” and *cotyle*, “a flat cup,” since the peltate leaves are somewhat cup-shaped. Native Americans used pennyworts for greens, and to alleviate coughing.



H. ranunculoides



H. umbellata



H. verticillata

Hypochaeris radicata Cat's Ear
ASTERACEAE Aster Family

EXOTIC

Description. Perennial with branching, leafless stems and milky juice. Toothed and lobed leaves all in a basal rosette are very hairy on both sides; a few scale-like leaves are along the stems. Golden-yellow flower heads are on long stalks; the ray flowers are cut at the tips, there are no disk flowers, but a deeper yellow center.

Habitat. Roadsides, fields, waste places. Native of Eurasia, now widely established in the United States and southern Canada. Frequent in Jamestown parking lot, roadsides, and along Jamestown Island Drive. Blooms April-June.

Comments. The genus name was used by Theophrastus for this or a related genus. The species name *radicata* means "having roots", probably from its firm hold in the ground via a taproot.



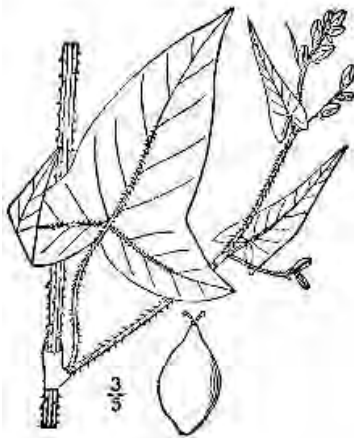
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British Possessions*. Vol. 3: 251.

***Persicaria arifolia* (*Polygonum arifolium*)** Halberd-leaved Tearthumb
POLYGONACEAE Smartweed Family

Description. Stems are very prickly, ending with small pink or whitish flower clusters. Leaves are shaped like an arrowhead but with the basal lobes pointing outward. Some upper leaves may be shaped differently. A viny perennial plant.

Habitat. Found in wet places and marshes over eastern U.S. and most counties in Virginia. Photographed under the footbridge on Jamestown Island. Blooms August-September.

Comments. The backward-pointing prickles will indeed tear a thumb which rubs along the stem.



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Pluchea foetida Marsh Fleabane; Stinking Fleabane

ASTERACEAE Aster Family

Description. A perennial plant growing to 1-2 feet tall with oblong, toothed leaves, growing close to the stem, without stalks. When bruised, the leaves emit a strong unpleasant odor. The creamy white, tubular, thread-like flowers are arranged in heads that are clustered at the ends of stems and the main branches.

Habitat. Wet soil, often in meadows or swampy woods from southern New Jersey to Florida and Texas, chiefly near the coast. In Virginia, found in the coastal counties only. Seen infrequently along the Jamestown Loop Road, growing in wet ditches. Blooms July-September.

Comments. The genus was dedicated to the Abbe Pluche, a French naturalist of the 18th century.



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Polygonum persicaria Spotted Ladysthumb
POLYGONACEAE Smartweed Family

EXOTIC

Description. A sprawling or erect perennial, with tight, spikelike clusters of tiny pink flowers. The reddish stems are jointed and immediately above each joint the stem is surrounded by a papery, fringed sheath. The narrow leaves usually have a dark triangular blotch in the center.

Habitat. A native of Europe, now a common weed of gardens and waste places throughout northeastern U.S., south to Florida and Texas, and west to Alaska and California. Found in ditches and moist places on Jamestown Island. Blooms June-October.

Comments. The Cherokee, Chippewa, and Iroquois prepared simple or compound decoctions of *Persicaria maculosa*, which they used as dermatological, urinary, gastrointestinal, and veterinary aids, for heart medicine, and as an analgesic



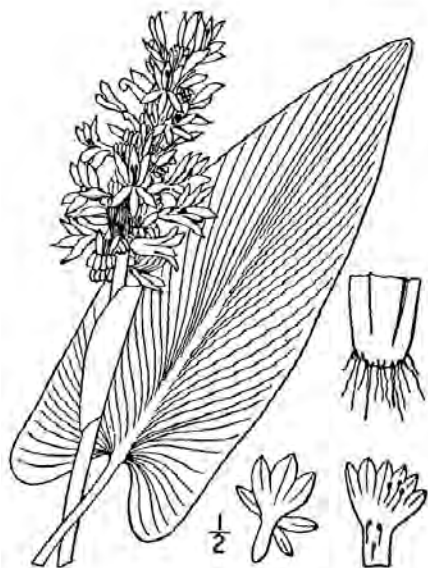
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 549.

Pontederia cordata* var. *cordata Pickerel Weed
PONTEDERIACEAE Water-hyacinth Family

Description. A soft-stemmed perennial to 3 feet tall. One leaf occurs not far below the flowers, the others extend on long petioles from the base of the stem. Leaves are flexible and oblong, usually heart-shaped at the base. Flowers are in a dense purplish-blue spike, with two yellow spots at the base of the upper lip of each flower. Mature fruits have six toothed ridges at the top.

Habitat. Marshes, shallow water and freshwater ditches, from Nova Scotia to Minnesota, south to Florida and Texas to Central America and South America. In Virginia, found in coastal and piedmont counties. Photographed from a bridge along the Jamestown Loop Road, and also seen in ditches. Blooms June-November.

Comments. The genus name honors Guilio Pontedera, 1688-1756, professor at Padua, Italy. Native Americans used this plant to prevent pregnancy. The roots produce a severe burning sensation on the tongue when eaten.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 549.

Ruellia caroliniensis Carolina wild petunia

ACANTHACEAE Acanthus Family

Description Resembling the annual garden petunias, wild petunia produces a single 5-petaled flower, 1-2 inches long and wide, emerging where each leaf joins the stem. The trumpet-shaped flowers vary in color from pale lavender to medium bluish-purple. On some plants the stems and the paired, egg-shaped leaves are hairy. Grows 1-2 feet tall, a little scraggly.

Habitat. Wild petunia can be seen along roadsides, moist or dry woods across most of Virginia. Although the species name refers to its habitat in the Carolinas, the plant is found in the U.S. from New Jersey to Iowa and south to South Carolina, Alabama and Texas. Blooming June through September, the blossoms last only a day or two, but new flowers form in succession. Photographed in back of the Glasshouse on Jamestown Island.

Comments. This plant was named for an early French herbalist Jean Ruella (1474-1537); *strepens* means “rustling”, from the explosive capsules.

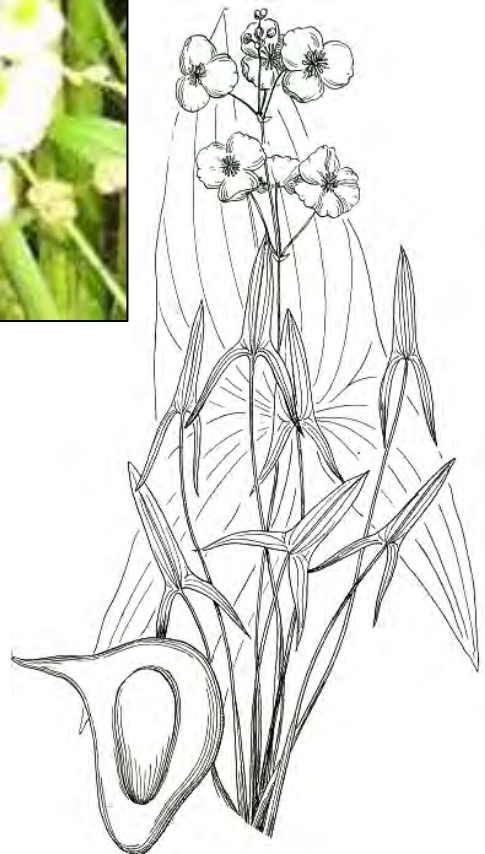


Sagittaria latifolia Arrowhead, Duck Potato
ALISMATACEAE Water Plantain Family

Description. Erect perennial marsh plants to over 3 feet tall. The large fleshy leaves are shaped like arrowheads, and are highly variable in size; while they range from very slender to very broad (up to 2 feet wide), the arrowhead shape remains constant. Flower stalks produce flowers with 3 white petals and yellow centers.

Habitat. Abundant in marshes, ponds and streams from Nova Scotia and Quebec to southern British Columbia and south to tropical America. Image taken from a bridge on the Jamestown Island Drive overlooking marsh.

Comments. Name is derived from the Latin *sagitta*, "an arrow", referring to a common form of the leaves. The common name "duck potato" refers to the fact that bulbs produced on the ends of underground stems (rhizomes) are dug up and eaten by waterfowl. Native Americans found some medicinal uses for this plant, chiefly in treating children. Many tribes roasted or boiled the tubers for food; several days were required to cook them properly -- the "potatoes", deer meat and maple sugar made a very tasty dish.



View from a bridge on the loop road

Symphyotrichum vimineum Calico Aster

ASTERACEAE Aster Family

Description. A small straggly aster, the flowers crowded on wide branches. Stems are smooth and purple, growing 1-4 feet tall, somewhat sprawling. Leaves are slender, the lower ones toothed, with smaller leaves in the axils. Several small flower heads of white or pale purple ray flowers surround yellow or purple disk flowers.

Habitat. Common in fields and woods borders throughout eastern and central U.S. and Canada. Found in eastern counties in Virginia. Photographed along the Jamestown Loop Road. Blooms August-October.

Comments. The common name refers to the fact that the heads are at first yellow and later turn purplish-red, so that flowers on one plant and even a single head may include both colors at the same time.



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office illustrated guide to plant species.*
USDA Natural Resources
Conservation Service.



Acer negundo Boxelder, Ash-leaved maple
ACERACEAE Maple Family

Description. Small to medium tree with a short trunk which divides near the ground into several strong limbs. All maples have opposite leaves; this is the only maple with compound leaflets, usually 3-5. The leaflets are on short stalks, rounded with pointed tips, and coarsely toothed. Flowers appear before the leaves in the spring. Fruits are paired “keys” which remain on the trees through the winter.

Habitat. Grows in wet soils throughout eastern U.S. There are 17 specimens on Jamestown Island; tree #339 was photographed. Flowers April-May; fruits Sept.-Oct.

Comments. The whitish wood is often used for boxes; “elder” indicates the resemblance of the foliage to that of the elders (*Sambucus*). Boxelder is hardy and fast-growing; it is planted for shade but is short-lived and easily broken in storms. Plains Indians made sugar from the sap. Squirrels and songbirds eat the seeds.



Ailanthus altissima Tree of Heaven
SIMAROUBACEAE Quassia Family

ALIEN INVASIVE

Description. A rapidly growing tree with few branches to 60 feet tall; stump sprouts (twigs) can grow 3 feet in length in one summer. Leaves are alternate, to 2 feet long, with 11-25 oblong leaflets. Small greenish-yellow flowers cluster at the ends of branches; male flowers produce a strong odor which has been described as “the smell of burnt peanut butter.” The leaves when crushed also produce this distinctive, offensive odor. Dry, winged fruits (samaras) are 2 inches long; they can be carried on the wind great distances from the parent plant.

Habitat. Tree of heaven, native to Asia, was first introduced into North America in 1748 by a Pennsylvania gardener. It was widely planted in cities because of its ability to grow in poor soil, and has now escaped into disturbed sites, such as roadsides, vacant lots, and natural forests degraded by storms. Tree of heaven resembles the sumacs and hickories, but is easily distinguished by the glandular, notched base on each leaflet and large leaf scars on the twigs. It is extremely tolerant of poor soil conditions and can even grow in cement cracks. One plant can produce 350,000 seeds per year, the seedlings establishing a taproot 3 months from germination. This tree is very difficult to remove after the taproot is established, and the tree vigorously resprouts from roots and shoots. Blooms in June. Found over most of continental U.S. Photographed on Jamestown Island near the Black Point footpath.

Comments. Tree of heaven produces a toxin in its bark and leaves; as these accumulate in the soil, the toxin inhibits the growth of other plants. This toxin is so effective it is currently being studied as a possible source for a natural herbicide.



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Carya illinoensis Pecan

JUGLANDACEAE Walnut Family

Description. A tall tree with a large, round canopy. The bark is closely ridged, but not peeling. The compound leaves are arranged alternately on the stem. There are 9-17 lance-shaped pointed leaflets which turn golden-brown in the fall. Flowers are tiny and greenish, appearing before the leaves in the spring. The familiar pecan nut is light brown and thin-shelled.

Habitat. Grows in wet forests in eastern and southeastern U.S. On Jamestown Island there are 79 specimens; tree #2 was photographed. May-October.

Comments. The word *pecan* is of Algonquian Indian origin. The Latin species name is from an old term “Illinois nuts”, and refers to the region where traders found wild trees and nuts. Pecan is one of the most valuable cultivated plants originating in North America. In the Southeast about 100 varieties are cultivated for their delicious nuts; pecans are also harvested locally from wild trees. The wood is used for furniture, flooring, and charcoal for smoking meats. Indians may have extended the range by planting.

This tree of the Mississippi valley was unknown to British colonists on the Atlantic coast. Thomas Jefferson planted seeds at Monticello and gave some to George Washington; now these pecans are the oldest trees in Mount Vernon.



Carya pallida Sand Hickory
JUGLANDACEAE Walnut Family

Description. The alternate, compound leaves usually carry 6 leaflets. Bark is tight, rough, and deeply furrowed. Endbuds are very small and the leafstalks are usually long-hairy. The nut is thin-shelled, pale buff, slightly 4-angled or smooth, usually splitting to the base. Kernels vary from bland to sweet to astringent and scarcely edible.

Habitat. Grows in moist or dry soil in southeastern U.S. from Florida to Virginia, in the eastern counties. Photographed in New Town, along the James River.

Comments. Hickories are somewhat similar to walnuts but the leaves usually have fewer leaflets and the final 3 leaflets are often larger than the rest, with the terminal leaflet largest of all. Fruits are smaller than those of walnuts and the husks split into 4 sections when mature, rather than remaining as a single unit.



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Celtis occidentalis Northern Hackberry
ULMACEAE Elm Family

Description. A small to large tree with rounded crown of spreading or slightly drooping branches. Bark is gray to light brown; smooth with corky warts or ridges, becoming scaly. The leaves are arranged alternately along the stem; they are long-pointed and coarse-toothed with mostly uneven bases. Flowers are 1/8 inch wide, yellowish-green in small clusters. The small, orange-red fruit forms on stalks at the leaf bases.

Habitat. Grows in moist soils, usually along streams. Ranges from Canada south to Virginia and west to Oklahoma and in most counties in Virginia. Ten specimens grow on Jamestown Island; trees #34 and 350 were photographed. Flowers April-May; fruits October-November.

Comments. The common name apparently was derived from "hagberry," meaning "marsh berry," a name used in Scotland for a cherry, referring to the fruit. The wood is similar to ash and of commercial value. Branches of this and other hackberries may become deformed bushy growths called witches'-brooms, produced by mites and fungi. The leaves often bear rounded galls caused by tiny jumping plant lice. Fruits ("sugarberries") are eaten by many birds, including bobwhite quail, pheasant, woodpeckers, and wild turkey.



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Morus alba White Mulberry
MORACEAE Mulberry Family

EXOTIC

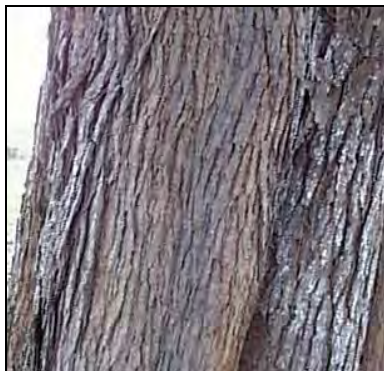
Description. A small tree with rounded crown of spreading branches. The bark is smooth and light red- brown, becoming furrowed into scaly ridges. Smooth leaves are alternate on the stem, oval but variable in shape, with 3 main veins from the base; they are coarsely toothed and often divided into 3 or 5 lobes. Flowers are tiny, greenish, and crowded in short clusters. Fruits are whitish, edible but rather tasteless.

Habitat. Grows in rich woods, often in floodplains. A native of China, it has escaped from cultivation throughout eastern U.S. There are 27 specimens on Jamestown Island; tree #10 was photographed. Flowers April-June; fruits June-July.

Comments. White Mulberry has been cultivated for centuries; the British introduced the tree to the south before the Revolution, in an unsuccessful attempt to establish a silkworm industry. It grows rapidly and produces abundant berries eaten by birds and people. The trees spread like weeds in cities, where the berries litter sidewalks.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 223.



Paulownia tomentosa Princess-tree
PAULOWNIACEAE Paulownia Family

ALIEN INVASIVE

Description. In early spring, before the leaves unfold, the large upright clusters of fragrant violet-colored flowers are very attractive. The flowers last only a few days, and are followed by broad, heart-shaped leaves. Conspicuous clusters of walnut-sized brown fruits appear in the fall and persist until spring.

Habitat. Growing throughout eastern U.S. and most counties of Virginia, along roadsides and in forest openings, Princess-tree has become invasive, each seedpod holding 2,000 seeds. One of the fastest-growing trees in eastern North American, it is out-competing desirable native species. Photographed along the Jamestown Loop Road in September. Blooms April, May.

Comments. A native of China, and named after a princess of the Netherlands, seeds were sent to the U.S. in 1830 and the tree was grown as an ornamental. Now thoroughly naturalized, it is considered a forest weed. See <http://www.nps.gov/plants/alien/fact/pato1.htm>.

The wood of this tree is extremely light and is used for air freight containers. The wood is sought by the Chinese for construction of small traditional chests. Large trees are sometimes pirated in the U.S. for sale abroad.



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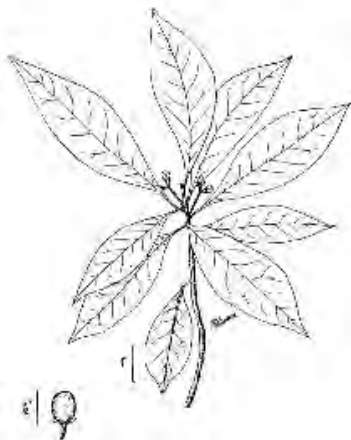
Persea palustris Red Bay; Swamp Bay

LAURACEAE Laurel Family

Description. A Coastal Plain tree, growing 50-70 feet tall, with thick, leathery, strongly aromatic leaves with wedge-shaped bases. The evergreen leaves are narrow, shiny on top, and pale beneath where upright rusty-colored hairs are found on the midveins. (On the leaves of a related species, *Persea borbonia*, the hairs on the midveins are closely appressed to the undersurface.) Twigs are angled, and hairy. Small flowers are borne in clusters on hairy stalks, producing small, dark blue to black roundish berries on red stems. Bark is dark reddish and deeply grooved.

Habitat. Swamps and wet woods in the southern coastal states. In Virginia, known to occur in only 12 Coastal Plain counties. (*P. borbonia* apparently does not occur north of Carteret County, North Carolina.) Photographed in a thicket near the start of the Jamestown Loop Road. Blooms August-September.

Comments. The spicy leaves can be used to flavor soups and meats. Fruit is eaten by several birds species. Red bay is a larval host and/or nectar source for the Palamedes swallowtail butterfly.



USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant species*. USDA Natural Resources Conservation Service.

Pinus taeda Loblolly Pine
PINACEAE Pine Family

Description. This tree grows rapidly, up to 115 feet tall. The bark is reddish brown to blackish gray, furrowed to form broad, elongate, flat-topped plates. The needles are long (up to 10 inches), often twisted and yellowish green in bundles of three needles per cluster. Young female cones are yellow and near the growing point of the twig; mature cones are slender and oblong when closed. Cones persist about a year after shedding seeds.

Habitat. Grows in swamp margins and well-drained slopes of rolling, hilly uplands. Forms pure stands, often on old fields. Loblolly pine is native in 15 southeastern states. There are 80 specimens on Jamestown Island; several were photographed. Reproductive in April-May.

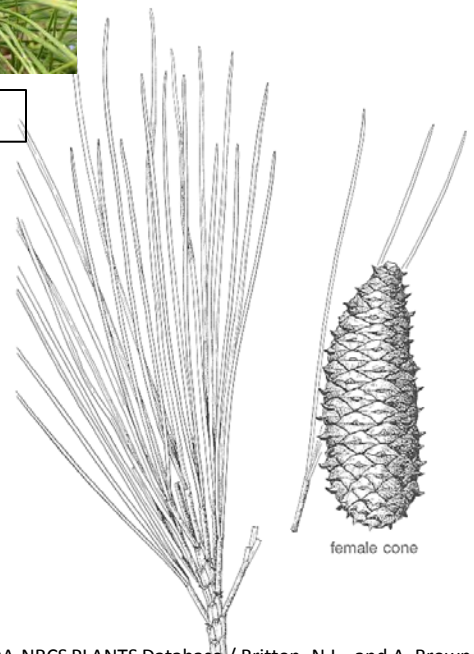
Comments. One of the meanings of the word *loblolly* is “mud puddle”, where these pines often grow. Among the fastest-growing southern pines, it is extensively cultivated in forest plantations for pulpwood and lumber. The wood is light brown and coarse-grained, widely used for home and general construction, especially for framing. Cherokee used the wood for lumber, canoes and carvings.



Female cones



Male cones



female cone

Quercus shumardii Shumard's oak

Fagaceae Beech Family

Description. A medium-sized tree with deeply lobed leaves, many of the tips touching each other. Twigs are hairless, end buds are straw-colored and hairless. The acorn cup is gray, fine-hairy, shallow and saucerlike. Very similar to scarlet oak (*Q. coccinea*) (no longer found at Jamestown) but the leaves are longer.

Habitat. Prefers moist, lowland soil. Found throughout eastern and central U.S. and Canada, but only a few counties in Virginia, including James City and York. Photographed leaving the Visitor Center Parking lot on the eastern roadside.

Comments. A handsome shade tree with good fall foliage. Native oaks are host plants for butterflies, furnishing larvae food. Acorns (seeds of nuts) and young leaves have low toxicity if eaten. Symptoms include stomach pain, constipation and later bloody diarrhea, excessive thirst and urination.



USDA-NRCS PLANTS Database / USDA NRCS.
Wetland flora: Field office illustrated guide to plant species. USDA Natural Resources Conservation Service.

Quercus virginiana Live Oak
FAGACEAE Beech Family

Description. A large, evergreen tree with widely spreading branches, often draped with “Spanish moss” (*Tillandsia sp.*). Bark is dark, furrowed, and cross-checked into small plates. The leaves are leathery, somewhat rolled at the edges, oblong, with a rounded tip sometimes ending in a tiny tooth; they are shiny, dark green above, pale gray and woolly beneath, turning yellow in the fall. This is the only oak with unlobed leaves.

Habitat. Grows in sandy soils including coastal dunes and ridges near marshes, on the coastal plain. Ranges from southeast Virginia to Florida, Texas, and northeast Mexico. One specimen is found on Jamestown Island, tagged #218, near the Timber Memorial Cross.

Comments. This is the state tree of Georgia, and may live to 300 years. Called “live oak” for its evergreen leaves, the timber was once important for building ships. Has been used extensively for street plantings in the South, most notably in the city of Savannah, Georgia.



Insect gall



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Aralia spinosa Devil's Walking Stick
ARALIACEAE Ginseng Family

Description. A large, mostly unbranched shrub with spines on the trunk and branches. Compound leaves are up to 3 feet long, egg-shaped and toothed with prickly stalks. Small white flowers are produced in branching clusters in summer, developing into red fruits (drupes) in the fall, much prized by many species of wild birds.

Habitat. Scattered throughout eastern U.S. and most counties in Virginia, Devil's Walking Stick grows in upland and low woods and woods edges. The plant prefers well-drained and fertile soils, but is often found on dry and stony slopes. Photographed along the path to the Glasshouse, and see throughout Jamestown Island.

Comments. Unmistakable with the very large compound leaves and very spiny branches. The common name "devil's walking stick" refers to the single stem, heavy with spines. In spite of the formidable array of prickles, the twigs are often browsed by white-tailed deer.



USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant species*. USDA Natural Resources Conservation Service.



Callicarpa americana Beauty-berry
VERBENACEAE Vervain Family

Description. A truly spectacular shrub of early fall. Also called French mulberry, beauty-berry is a multi-stemmed shrub six feet tall with unusual colored fruit. In late summer the fuzzy pink flowers attract pollinators. By September, glistening deep rose-pink berries encircle the nodes, where two leaves also emerge.

Habitat. Beautyberry prefers sun and soil a little moist, and flowers on new growth. It can be pruned to about a foot tall in late winter just before the leaves appear. This will make it much fuller, reduce the shrub height, and produce more berries. The long-lasting fruits provide food for birds and animals well into the winter months when other food sources are unavailable. Grows in southeastern U.S. and southeastern counties of Virginia. Scattered throughout Jamestown Island.

Comments. The roots, leaves and branches of the American beautyberry were used by Native American tribes for various medicinal purposes. Parts of the plant were prepared for treatment of rheumatism, stomachaches, dysentery, and colic, among other ailments.



Iva frutescens

Marsh Elder

ASTERACEAE Aster Family

FALL

Description. Bushy-branched shrub to 8 feet tall; the wood is soft and the branches are often killed back during severe winters. The deciduous leaves are opposite and thick with toothed margins, tapering towards both ends. The flowers are surrounded by tiny leaf-like appendages; they appear as green (later brown) spheres arranged on the ends of stems.

Habitat. Common in brackish or saltwater habitats such as marsh margins and mud flats. Often occurs with *Baccharis halimifolia*, Sea Myrtle. Distributed from Nova Scotia to eastern Texas. Grows only in the coastal counties of Virginia. On Jamestown Island, grows along the river's edge at Black Point. Blooms August-September.

Comments. *Iva* is an old name for some medicinal plant; *frutescens* means "shrubby".



Rhus copallinum Shining/Winged Sumac

ANACARDIACEAE Cashew Family

Description. A large deciduous shrub or small tree growing 4-10 feet tall. The compound leaves are large, and divided into 11-23 narrow, smooth-edged shiny leaflets, with the midrib bordered by thin “wings.” The leaves turn a brilliant scarlet in the fall. Twigs and leafstalks are velvety, round, and marked with obviously raised dots. Buds are hairy, surrounded by U-shaped leaf scars. Trunk is dark and smooth, with numerous raised cross streaks (lenticels). Yellowish-green flowers are succeeded by drooping, pyramidal fruit clusters which turn dull red and persist through winter. The shrub is fast growing, generally pest and disease-free, and drought-tolerant, often forming thickets.

Habitat. Common along woods borders, open, dry places. Ranges from southern Maine to Florida, west to Indiana, southern Illinois, southeast Nebraska and Texas. Found in most counties in Virginia. Photographed along the entrance road to the Jamestown Island causeway. Blooms June, July.

Comments. Shining sumac is a very ornamental sumac. Because of its large, spreading habit, is not suited to small areas. Native sumacs are important wildlife plants, providing winter food for many upland gamebirds, songbirds, and large and small mammals.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 549.

Rubus sp. Blackberry
ROSACEAE Rose Family

Description. Stems erect to arching, to six feet long with hooked prickles. Alternate, compound leaves of the flowering branches the first year have 5 leaflets, coarsely toothed on the edges. The second year, fertile canes have only 3 leaflets. White, 5-petaled flowers with numerous stamens clustered on the ends of branches. Red fruits ripen to black. Members of this genus hybridize readily, and hundreds of species have been named, making identification very difficult.

Habitat. Thin pinelands, fencerows, moist habitats, margins of woodlands and disturbed sands from Maryland to Florida and Texas, occasionally north to Massachusetts. Grows on roadsides along Jamestown Island Drive. Blooms May-June.

Comments. In this genus *Rubus*, roots are perennial and new stems grow from the base each spring which do not flower the first summer, becoming woody by autumn. These woody stems live through the winter and produce short, leafy, lateral, flowering branches. After the fruits have matured, the entire cane dies to the base, being succeeded by the new woody canes that are growing as the flowers and fruits are produced.

Various species of Blackberry are cultivated for jams and wine; deer browse the plants and fruits are eaten by birds and small mammals. Bees get nectar from the flowers.



Vitex agnus-castus Chaste tree
VERBENACEAE Vervain Family

EXOTIC

Description. An aromatic shrub or low tree growing to 15 feet, with densely short-hairy twigs. The leaves are divided into 5-9 narrow leaflets pointed in both ends, the central one longer than others. Striking lavender flowers grow in spikes at the ends of branches.

Habitat. Chaste tree grows in full sun or part shade, in dry or moist, well-drained soil. Native to West Asia and southwestern Europe, it was introduced throughout Europe at an early date, and known in English gardens by 1570. European immigrants brought chaste tree to America in the 19th century where it has now become naturalized over southern U.S. In Virginia it has escaped in 4 counties scattered across the state. Photographed near the monument, where the tree was planted as an ornamental. Blooms April-October.

Comments. Since the days of Hippocrates, chaste tree has been used for gynecological conditions. In medieval Europe, seeds were thought to allay sexual desire, hence the names “Chaste tree” and “Monk’s pepper.” Today it is widely prescribed by European gynecologists for treatment of menstrual problems.



Bignonia capreolata Crossvine
BIGNONIACEAE Crossvine Family

Description. With beautiful bell-shaped flowers, varying from orange to red outside and trimmed with yellow, crossvine is stunning in spring. The woody stems climb trees and the paired glossy green leaves are semi-evergreen, turning bronze or copper in the fall and remaining on the vine through the winter. Each leaf has two leaflets and tendrils. Brown seed pods appear in late fall.

Habitat. Crossvine likes swampy forests, rock outcrops and limy river banks, growing in sun or part shade, in acid to alkaline soils. Its native habitat is moist woods and can be seen from local roadways at the edge of woodlands. Walking the Jamestown Loop Road in May and June, the blossoms appear at your feet with no apparent source nearby because the vine has climbed to the top of the tallest trees to catch sunlight. Crossvine is found in southeastern counties in Virginia, and ranges from southern Maryland to southern Missouri, and south to Florida and Louisiana.

Comments. Bees, butterflies and hummingbirds love the flowers. The cut stem shows a cross pattern, which is the source for the common name. There are no serious disease or insect problems associated with crossvine. This plant is a native alternative to invasive nonnative English ivy, Japanese honeysuckle, and the Asian wisterias.



USDA-NRCS PLANTS Database /
USDA NRCS. *Wetland flora: Field
office illustrated guide to plant species.*
USDA Natural Resources Conservation
Service.



Lonicera japonica Japanese honeysuckle
CAPRIFOLIACEAE Honeysuckle Family

INVASIVE ALIEN

Description. A trailing or climbing evergreen vine, to over 80 feet. Young stems are hairy, leaves are oval and opposite, without stalks. Showy and highly fragrant tubular flowers, white and aging to yellow, develop in the axils of the leaves. Early spring foliage can have wavy margins. In the fall the fruits are shiny black berries.

Habitat. Grows in a variety of habitats – forest floors, roadsides, wetlands, disturbed areas, in all counties of Virginia and most states in the U.S. Blooms April-July. Photographed on Jamestown Island just off a boardwalk and over shrubbery along the Loop Trail.

Comments. A highly aggressive native of eastern Asia, Japanese honeysuckle can girdle small saplings, and can form dense mats in trees, shading everything below. Planted widely throughout the U.S. as an ornamental, for erosion control, and for wildlife habitat, this alien vine is outcompeting native species, and is on all lists as highly invasive. See www.invasive.org.



USDA-NRCS PLANTS Database /
Britton, N.L., and A. Brown. 1913.
*An illustrated flora of the northern
United States, Canada and the
British Possessions*. Vol. 3: 251.



COMMON PLANTS JAMESTOWN ISLAND October 30, 2009 (list revised Feb 9, 2010)					
WILDFLOWERS					
GENUS	SPECIES	COMMON NAME	FAMILY	FAMILY, COMMON	
Achillea	millefolium	yarrow	Asteraceae	Aster	
Antennaria	plantaginifolia	pussytoes	Asteraceae	Aster	
Arisaema	triphyllum	jack-in-the-pulpit	Araceae	Arum	
Asclepias	incarnata	butterfly weed	Asclepiadaceae	Swamp Milkweed	
Centella	erecta	coinleaf	Apiaceae	Carrot	
Centrosema/Clitoria	virginiana/mariana	butterfly pea	Fabaceae	Pea	
Chrysanthemum	leucanthemum	ox-eye daisy	Asteraceae	Aster	
Cirsium	discolor	field thistle	Asteraceae	Aster	
Cirsium	horridulum	yellow thistle	Asteraceae	Aster	
Commelina	communis	Asiatic dayflower	Commelinaceae	Spiderwort	
Cynoglossum	virginianum	wild comfrey	Boraginaceae	Borage	
Diodia	virginiana	buttonweed	Rubiaceae	Madder	
Duchesnea	indica	Indian strawberry	Rosaceae	Rose	
Elephantopus	tomentosus	elephant foot	Asteraceae	Aster	
Erechtites	hieracifolia	fireweed	Asteraceae	Aster	
Erigeron	strigosus	daisy fleabane	Asteraceae	Aster	
Eupatorium	capillifolium	dog fennel	Asteraceae	Aster	
Glechoma	hederacea	ground ivy	Lamiaceae	Mint	
Hibiscus	moscheutos	hibiscus	Malvaceae	Mallow	
Houstonia	caerulea	azure bluet	Rubiaceae	Madder	
Hydrocotyle	sp	pennywort	Apiaceae	Carrot	
Hypochoeris	radicata	cat's ear	Asteraceae	Aster	
Hypoxis	hirsuta	yellow stargrass	Liliaceae	Lily	
Iris	pseudoacorus	yellow iris	Iridaceae	Iris	
Linaria	canadensis	blue toadflax	Scrophulariaceae	Figwort	
Oxalis	dillenii	common yellow wood sorrel	Oxalidaceae	Wood sorrel	
Packera	tomentosus	woolly ragwort	Asteraceae	Aster	
Perilla	frutescens	beefsteak plant	Lamiaceae	Mint	ALIEN INVASIVE
Persicaria	arifolia	halberd-leaved tearthumb	Polygonaceae	Smartweed	
Phyla	lanceolata	fogfruit	Verbenaceae	Vervain	
Pluchea	foetida	marsh fleabane	Asteraceae	Aster	
Polygonum	persicaria	spotted ladythumb	Polygonaceae	Smartweed	
Polygonum	punctatum	knotweed	Polygonaceae	Smartweed	

Pontederia	cordata	pickerel-weed	Pontederiaceae	Water-hyacinth	
Ranunculus	bulbosus	bulbous buttercup	Ranunculaceae	Buttercup	ALIEN
Ruellia	caroliniensis	Carolina wild petunia	Acanthaceae	Acanthus	
Sagittaria	latifolia	arrowhead	Alismataceae	Water plantain	
Sisyrinchium	atlanticum	blue-eyed grass	Iridaceae	Iris	
Strophostyles	umbellata	wild bean	Fabaceae	Pea	
Symphyotrichum	vimineum	calico aster	Asteraceae	Aster	
Verbesina	occidentalis	yellow crownbeard	Asteraceae	Aster	
Zephyranthes	atamasca	Jamestown lily	Liliaceae	Lily	
		TREES			
Acer	negundo	boxelder	Aceraceae	Maple	
Acer	rubrum	red maple	Aceraceae	Maple	
Acer	saccharum	sugar maple	Aceraceae	Maple	
Aesculus	flava	yellow buckeye	Hippocastanaceae	Horse-chestnut	
Ailanthus	altissima	tree of heaven	Simaroubaceae	Quassia	ALIEN INVASIVE
Broussonetia	papyrifera	paper mulberry	Moraceae	Mulberry	
Carya	illinoensis	pecan	Juglandaceae	Walnut	
Carya	pallida	pale hickory	Juglandaceae	Walnut	
Catalpa	bignonioides	southern catalpa	Bignoniaceae	Trumpet-creeper	
Celtis	occidentalis	northern hackberry	Ulmaceae	Elm	
Cornus	florida	flowering dogwood	Cornaceae	Dogwood	
Diospyros	virginiana	persimmon	Ebenaceae	Ebony	
Fagus	grandifolia	American beech	Fagaceae	Beech	
Fraxinus	pennsylvanica	green ash	Oleaceae	Olive	
Ilex	opaca	American holly	Aquifoliaceae	Holly	
Juglans	nigra	black walnut	Juglandaceae	Walnut	
Juniperus	virginiana	red cedar	Cupressaceae	Cypress	
Lagerstroemia	indica	crepe myrtle	Lythraceae	Loosestrife	
Liquidambar	styraciflua	sweetgum	Hamamelidaceae	Witch-hazel	
Liriodendron	tulipifera	tuliptree, yellow poplar	Magnoliaceae	Magnolia	
Magnolia	grandiflora	southern magnolia	Magnoliaceae	Magnolia	
Morus	alba	white mulberry	Moraceae	Mulberry	
Paulownia	tomentosa	princess tree	Bignoniaceae	Trumpet-creeper	ALIEN INVASIVE
Persea	palustris	red bay, swamp bay	Lauraceae	Laurel	
Pinus	taeda	loblolly pine	Pinaceae	Pine	
Platanus	occidentalis	sycamore	Platanaceae	Plane-tree	

Populus	deltoides	eastern cottonwood	Salicaceae	Willow	
Prunus	serotina	wild black cherry	Rosaceae	Rose	
Pyrus	calleryana	bradford pear	Rosaceae	Rose	ALIEN INVASIVE
Quercus	alba	white oak	Fagaceae	Oak	
Quercus	falcata	southern red oak	Fagaceae	Oak	
Quercus	pagoda	cherrybark oak	Fagaceae	Oak	
Quercus	phellos	willow oak	Fagaceae	Oak	
Quercus	shumardii	Shumard's oak	Fagaceae	Oak	
Quercus	stellata	post oak	Fagaceae	Oak	
Quercus	virginiana	live oak	Fagaceae	Oak	
Robinia	pseudoacacia	black oak	Fabaceae	Pea	
Taxodium	distichum	bald cypress	Taxodiaceae	Bald cypress	
Thuja	orientalis	oriental arborvitae	Taxodiaceae	Bald cypress	
Ulmus	americana	American elm	Ulmaceae	Elm	
Ulmus	pumila	Siberian elm	Ulmaceae	Elm	
		SHRUBS			
Aralia	spinosa	hercules' club	Araliaceae	Ginseng	
Callicarpa	americana	beauty-berry	Verbenaceae	Vervain	
Iva	frutescens	marsh elder	Asteraceae	Aster	
Rhus	copallinum	shining/winged sumac	Anacardiaceae	Cashew	ALIEN
Rubus	sp.	blackberry/dewberry	Rosaceae	Rose	
Sambucus	canadensis	elderberry	Caprifoliaceae	Honeysuckle	
Vitex	agnus-castus	chaste tree	Verbenaceae	Vervain	
		VINES			
Bignonia	capreolata	crossvine	Bignoniaceae	Trumpet-creeper	
Campsis	radicans	trumpet creeper	Bignoniaceae	Trumpet-creeper	
Clematis	terniflora	yam-leaved clematis	Ranunculaceae	Buttercup	ALIEN
Lonicera	japonica	Japanese honeysuckle	Caprifoliaceae	Honeysuckle	ALIEN INVASIVE
Mikania	scandens	climbing hempweed	Asteraceae	Aster	
		GRASSES			
Arundinaria	gigantea	giant cane	Poaceae	Grass	
Chasmanthium	laxum	spikegrass	Poaceae	Grass	
Echinochloa	crusgalli	barnyard grass	Poaceae	Grass	

Echinochloa	walteri	water grass	Poaceae	Grass	
Elymus	virginicus	Virginia ryegrass	Poaceae	Grass	
Microstegium	vimineum	Asian stiltgrass	Poaceae	Grass	ALIEN INVASIVE
Panicum	virgatum	switchgrass	Poaceae	Grass	
Paspalum	dilatatum	dallis grass	Poaceae	Grass	ALIEN
Phragmites	australis	common reed	Poaceae	Grass	ALIEN INVASIVE
Phyllostachys	aurea	golden bamboo	Poaceae	Grass	ALIEN INVASIVE
Saccharum	giganteum	sugarcane plumegrass	Poaceae	Grass	
Setaria	magna	giant foxtail	Poaceae	Grass	
Spartina	cynosuroides	giant cordgrass	Poaceae	Grass	
Spartina	patens	salt-meadow cordgrass	Poaceae	Grass	
Tridens	flavus	purple top	Poaceae	Grass	
Tripsacum	dactyloides	gama grass	Poaceae	Grass	
Zizania	aquatica	ricegrass	Poaceae	Grass	
		RUSHES and SEDGES			
Carex	spp.	sedges	Cyperaceae	Sedge	
Juncus	effusus	soft rush	Juncaceae	Rush	
Juncus	tenuis	path rush	Juncaceae	Rush	
Scirpus	cyperinus	woolgrass	Cyperaceae	Sedge	
		FERNS			
Thelypteris	palustris	marsh fern	Aspleniaceae	Spleenwort	
		OTHER			
Moss		moss			
Typha	latifolia	cattail	Typhaceae	Cattail	

December 18, 2001

Ms. Carol Young
Director of Publications
New York Botanic Gardens
New York City, New York

Dear Carol:

Hi! It's me again ... Helen, from Assateague Island ...

I am preparing a visitor guide to the trees on Jamestown Island, a portion of Colonial National Historical Park. The notebook will contain no more than 40 sheets, each sheet carrying text, digital photographs, and a line drawing. An example follows. The drawings have been copied from The Illustrated Guide to Gleason and Cronquist's Vascular Plants.

The guide will be available for the staff at Jamestown Island to use as reference and to answer visitors' questions. It will not be published and will be used only for educational purposes. While the guide to common plants on Assateague Island contained over 200 sheets of wildflowers, trees, shrubs and other plants, this document will contain only the trees and is relatively small.

I hope we may obtain permission to use these excellent drawings for this purpose.

Thanks for your consideration.

Helen Hamilton
Volunteer-In-Park
Colonial National Historical Park
Yorktown, VA

Copy to: Dorothy Geyer, Landscape Architect

P.S.: Carol: Remembering the difficulty we had with snail mail--
the FAX number here in Yorktown is: 757/898-7856. Please send to
Attention: Dorothy Geyer, Landscape Architect - - Thanks again, HLH

HELEN L HAMILTON
952 WOOD DUCK COMMONS
WILLIAMSBURG, VA 23188-9402
757 564 4494 helen44@earthlink.net

August 3, 2009

Director of Publications
The New York Botanical Garden
200th Street and Kazimiroff Blvd.
Bronx, New York 10458-5126

Re: Holmgren, The Illustrated Guide to Gleason and Cronquist's Vascular Plants.

In February 2001, I obtained permission from Carol Young, Director of Publications, to use the line drawings from the above publication in a Visitor's Guide to Plants on Assateague Island.

I am now doing a similar plant book for Jamestown Island, a portion of Colonial National Historical Park. The notebook will contain about 100 sheets, only ¼ of which carry the drawings from your publication; other drawings were obtained from websites stating guidelines for using the materials for educational purposes, and credit is given for the drawings. The text was written by me, and all photographs were taken on site during the growing season.

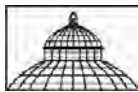
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Colonial National Historical Park
Yorktown, VA

Copy to: Dorothy Geyer, Landscape Architect,
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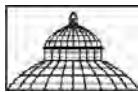
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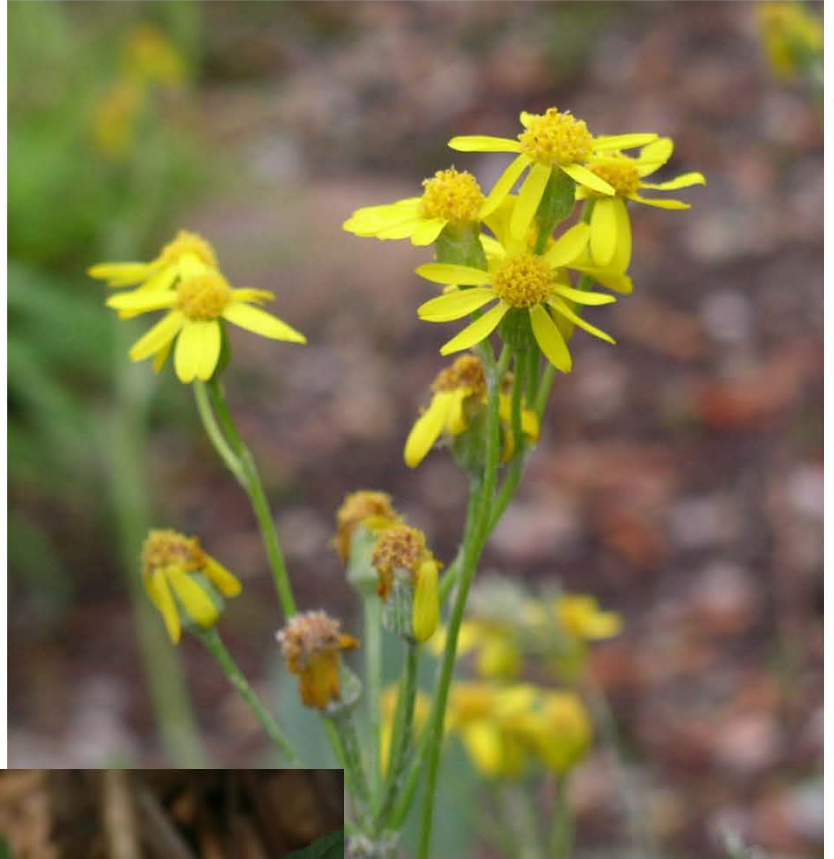
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TREES



WILDFLOWERS



SHRUBS



VINES



GRASSES



RUSHES, SEDGES, FERNS



OTHER



MOSS



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