SECTION FOUR

SPECIES IDENTIFICATION SHEETS

PLANTS

Barbara's Buttons Marshallia ramosa

FEDERAL LIST

STATE LIST

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA Unlisted Unlisted Rare Unlisted





SERPIN

GENERAL DESCRIPTION:

Perennial herb; stems are clumped and branched, 4-6 dm tall. Leaves are either linear, narrowly elliptic, or oblanceolate, 8-20 cm long, up to 1.5 cm wide, and three-nerved. Leaf stalks tend to be purplish; flowers are terminal, flat-topped clusters of 4-12 heads, each 1.5-2.0 cm wide and subtended by numerous, rounded to minutely pointed bracts. The disk flowers are pale rose to white, each subtended by a single, persistent, rounded to minutely pointed scale-like bract. The fruit is a 5-angled, 10-ribbed achene; about 2 mm long, with a hairy surface. Flowers mid-May to July and producing fruit from July to September.

GENERAL HABITAT: Found in open forests over ultramafic rock.

Bay Star-vine or Schisandra glabra Climbing Magnolia or Wild Sarsaparilla (Woody Vine)



FEDERAL LIST:

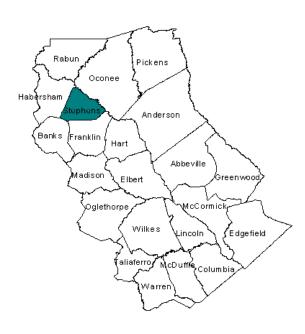
STATE LIST:

GEORGIA SOUTH CAROLINA Unlisted Concern

GEORGIA SOUTH C Threatened Unlisted

SOUTH CAROLINA





GENERAL DESCRIPTION: This twining **vine** can easily be confused with climbing hydrangea (*Decumaria barbara*), which is quite common. The difference between the two species is that *Decumaria barbara* has opposite leaves and climbs by means of aerial roots, and *Schisandra glabra* has **alternate leaves** and twines. The leaves of *S. glabra* are up to 6in (15cm) long and 2.5in (6cm) wide, have sparsely toothed margins, and are sweet smelling when crushed. Both **male and female flowers** occur on the same plant (monoecious), and droop on long, delicate flower stalks arising from the leaf axils of mature vines. The 9-12 petals are 0.3in (5-8mm) long, and crimson colored. The **fruit** is a cluster of red berries on an elongated spike; mature fruits are formed rarely in droughty summers. Flowering period is May through June with fruiting in July through August.

GENERAL HABITAT: Typically found twining over understory trees and shrubs in rich, alluvial woods, and on lower slopes near streams.

Bellflower, tall

Campanula americana

(Biennial herb)

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA

Unlisted Unlisted Unlisted Concern





GENERAL DESCRIPTION: Growing to a **height** of 6 ft (5.5 m) from a weak taproot, this plant has **flowers arranged on short lateral branches** from the main stem. **Leaves** are toothed and lance-shaped 2 ½-6 ½ in (6-17cm) long and ½-2 ½ in (1-6cm) wide. The green calyx has five linear lobes subtending the **light blue petals that are fused into a short tube with five spreading lobes**, giving each flower a "bell shape." Extending beyond the lobes is a slightly darker style that curves upward. Flowers appear from June to September followed by fruiting capsules that open by side pores.

GENERAL HABITAT: It is infrequent in Piedmont woods and prefers mature deciduous forest with basic to circumneutral soils. More common in mountainous areas.

Biltmore Sedge Carex biltmoreana

FEDERAL LIST STATE LIST

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA

Unlisted Concern Threatened Concern



SERPIN



GENERAL DESCRIPTION: This **annual** is from **6-12in** (**15-30cm**) **tall**. **Basal leaves** have 1-2 teeth per side, and are 0.5-0.75in (1-2cm) long and rounded. Flowers are produced at the base of the side branches and also terminal. The **flowers** have four **white petals** that are less than 0.1in (3mm) long and have a small notch at the apex. The **fruit** is a narrowly elliptic, two-parted pod (short silique or silicle), 0.15-0.2in (4-6mm) long and is covered with tiny star-shaped hairs. *Draba brachycarpa* strongly resembles this species but has hairless fruits and more elongated lower branches. *Draba aprica* flowers from March to April and the fruiting period is from April to May.

GENERAL HABITAT: Found in shallow soils on granite outcrops, especially beneath widely scattered, old-growth eastern red cedar (*Juniperus virginiana*).

Brittle Fern *Cystopteris protrusa*

(Perennial herb)



Tip of rhizome

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA

Unlisted Unlisted Unlisted Concern





GENERAL DESCRIPTION: The delicate light green compound leaves arise from an underground stem (rhizome) whose tip extends about an inch (2cm) beyond the youngest leaf. The rhizome has golden yellow scales. The leaves, up to 8 ½ in (22 cm) long and 4 ½ in (12cm) wide, have an overall deltoid to ovate-lanceolate shape with a pale yellow petiole that is shorter than the blade. The blade is once to twice divided with veins extending to teeth along the margins. When present, the sporangia are in small, round clusters enclosed by a thin, cup-shaped covering (indusium). Other diagnostic characters include a stem with two vascular bundles as seen in cross-section; the stems and branched parts of leaves also have glandular hairs (trichomes).

GENERAL HABITAT: Moist, very rich woods. Common at Steven's Creek Preserve but otherwise very rare in Piedmont.

Broomrape, one-flowered

Orobanche uniflora

(Perennial herb)

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA

Unlisted Unlisted Unlisted Concern





GENERAL DESCRIPTION: The bluish white flowers of this root parasite are borne singly at the tips of stems 3-6in (7-15cm) tall. The leaves are small, overlapping brownish scales at the base of the plant, which has glandular hairs. The flower parts are five-lobed and tubular with the bluish corolla about 1/2-3/4in (12-20mm) long that encloses the four stamens. Flowers appear in April-May and the fruit is a capsule.

GENERAL HABITAT: Rich woods, typically

Carolina Birdsfoot Trefoil (Annual herb)

Lotus helleri

FEDERAL LIST:

STATE LIST:

GEORGIA SOUTH CAROLINA Unlisted

GEORGIA Unlisted

Unlisted Endangered

SOUTH CAROLINA



GENERAL DESCRIPTION: Annual herb with erect, leaning, or trailing stems up to 30 inches (75 cm) tall; main stems reddish with strongly two-ranked side branches; stems and branches usually hairy. Most leaves with 3 narrow, pointed leaflets, \(\frac{1}{4} - \frac{3}{4} \) inch (0.5 - 1.8 cm) long and less than \(\frac{1}{4} \) inch (0.5 cm) wide, the uppermost leaves with only 1 leaflet. **Flower** less than _ inch (0.8 cm) long, pink, with an erect banner petal and 2 wing petals enclosing a yellowish keel petal; flower usually solitary on a stalk up to _ inch (2 cm) long that arises in the angle between leaf and stem. Fruit a narrow pod up to 1_ inches (2 - 3.5 cm) long.

Habitat: Openings in post oak and blackjack oak woodlands with clay soils, over bedrock high in iron and magnesium, such as ultramafic rock; clearings, roadsides, and rights-of-way through these habitats.

Survey Recommendations: Surveys are best conducted during flowering (late August– September) and fruiting (August–October).

Carolina Larkspur (Perennial herb)

Delphinium carolinianum

FEDERAL LIST:

STATE LIST:

GEORGIA Unlisted SOUTH CAROLINA Unlisted GEORGIA Unlisted SOUTH CAROLINA

Concern





Photograph courtesy of Carl G. Hunter and the Ozark Society Foundation

GENERAL DESCRIPTION: Tall plant, up to 80cm (30 in), with hairy stems. Alternate leaves are dissected and hairy, with linear segments about 2.5mm (1/8in) wide. The flower is light purple/blue with four spurred sepals and petals. Fruits are in threes and have one-opening, elongated, straight follicles containing winged seeds. These characters distinguish this species from the common larkspur, *D. tricorne*, which has divergent follicles and is usually less than 40cm (15in) tall.

GENERAL HABITAT: The species is generally found on outcrops and in rocky, oak dominated woods, flowering from March-May, followed by fruits, which may persist through early summer.

Coneflower, smooth purple (Perennial herb)

Echinacea laevigata

FEDERAL LIST:

STATE LIST:

GEORGIA SOUTH CAROLINA

GEORGIA SOUTH CAROLINA Endangered Endangered

Endangered Endangered Endangered Endangered





GENERAL DESCRIPTION: This plant is **1.5-3.5ft** (**50-100cm**) **tall** and arises from a thick fleshy **root**. The **basal leaves** are much longer than wide, coarsely toothed, smooth above and beneath, 3-5in (8-13cm) long, 1-3in (3-8cm) wide, and are attached by long slender petioles. The **stem leaves** are alternate, similar in shape to the basal leaves but smaller, and with shorter petioles. The single **flower head** is terminal and has two kinds of small flowers, ray and disk. The one petal of each **ray flower is deep to pale pink**, toothed at the tip, 2-3in (5-8cm) long, and drooping. The **disk flowers** are **purple** and about 0.3in (1cm) long. The **fruit** is an achene (nutlet). Flowering is from May through July with fruiting in late summer.

GENERAL HABITAT: Found in meadows and open woodlands on basic or circumneutral soils, often with eastern red cedar (*Juniperus virginiana*). House construction has reduced the coneflower population. Overutilization due to aesthetic and possible medicinal qualities also poses a threat.



SOUTH CAROLINA

PLANT:

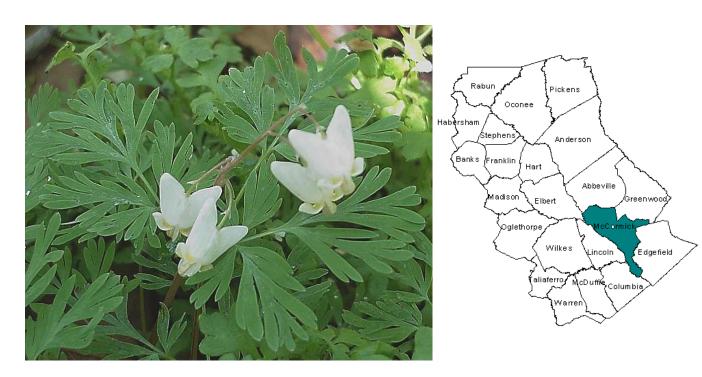
Dutchman's Breeches (Perennial herb)

Dicentra cucullaria

FEDERAL LIST:

GEORGIA SOUTH CAROLINA GEORGIA

Unlisted Unlisted Unlisted Concern



STATE LIST:

GENERAL DESCRIPTION: The plant consists of clusters of **blue-green**, **highly dissected basal leaves** with long, stem-like petioles, 7-22cm (2 ½ in-9in) long. The flowers are in elongated clusters. Each has four white petals: the outer two are sack-like, 7-9mm (2 ½- 3 ½ in) long, resembling a pair of breeches, hence the common name; the inner two petals are much shorter and spatula-shaped. Two clusters of three stamens each are opposite the outer petals. The **fruit** is a capsule with shiny black seeds.

GENERAL HABITAT: Plants are found in mature hardwood forests, frequently on north-facing slopes and near streams. Flowering occurs from March-June, followed by fruits which may persist into July/August.

False Poison Sumac or Michaux's Sumac or Dwarf Sumac (Deciduous shrub) Rhus michauxii

FEDERAL LIST:

STATE LIST:

GEORGIA

GEORGIA SOUTH CAROLINA Endangered Endangered

Endangered Endangered Endangered





SOUTH CAROLINA

GENERAL DESCRIPTION: This small, **low-growing shrub**, **1.0-3.75ft** (**0.3-1m**) tall, grows in clumps. The **stems** grow from an underground rhizome to a height of about 15 in (40cm). The **leaves** are pinnately compound with 9-13 **leaflets** which, except for the terminal leaflet, are stalkless, lance-shaped, and coarsely toothed. Leaflets are 2.0-3.5in (5-9cm) long and 0.75-2.0in (2-5cm) wide with a sharp point. The terminal leaflet sometimes has a winged stalk as in *Rhus copallina*. Leaves and twigs are heavily **covered with hairs**. Individual plants bear either male or female flowers (dioecious), and entire clumps are usually of one sex only. This sumac flowers in June, having flowers in dense, strongly conical-shaped, terminal clusters. Each small **flower** has **4-5 minute**, **greenish-yellow petals**. Female flowers produce red, fleshy **fruits**, which are covered by short hairs and contain a single large seed about 0.2in (5mm) in diameter. The species is believed to be extinct in South Carolina.

GENERAL HABITAT: Found in open, upland woods, along forest edges and maintained right-of-ways. Prefers the droughtier, full sun areas that have limited competition, especially from taller plants. It does not tolerate shade. Grows on sandy and rocky sites and along ridgelines. Requires periodic disturbance of surrounding vegetation. Found historically near Coastal Plain sandhills and across the Piedmont.

This sumac is currently found in only one Corps site in Elbert County, GA. A few other sites are known to occur in Georgia and North Carolina. The Elbert County site is on Corps of Engineers land which is leased by the Georgia Department of Natural Resources (GADNR) as part of the Broad River Wildlife Management Area.



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False rue-anemone (Perennial herb)

Enemion biternatum



FEDERAL LIST:

STATE LIST:

GEORGIA SOUTH CAROLINA Unlisted Unlisted

GEORGIA Unlisted SOUTH CAROLINA

Unlisted Concern





GENERAL DESCRIPTION: This is a delicate plant up to 20in (50cm) tall, arising from a thick, yellowish root. The leaves are compound, in arrangements of three, with lobed leaflets about 3/4 in (2cm) wide. The flowers are both axillary and terminal with 5 white sepals that look like petals. There are many stamens and 2-5 pistils that become pointed follicles (see fruiting photo on next page) that open along one line to release the seeds. The plant is often confused with wind flower, *Thalictrum thalictroides*, which also occurs in similar habitats. This latter plant however has leaflets whose lobes are more rounded and the flowers are

always in terminal umbels, never axillary. Also the fruits of the wind flower are achenes which do not break open.

GENERAL HABITAT: False rue anemone flowers and fruits from March to May in rich woods and alluvial soils. Currently it is known only from the Steven's Creek Preserve east of the Thurmond Dam area. The look-a-like wind flowers are found in similar habitats and are fairly common in the Thurmond Dam area.





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Florida or Miccosukee Gooseberry (Deciduous shrub)

Ribes echinellum



FEDERAL LIST:

STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA
Not listed Threatened Not listed Threatened





GENERAL DESCRIPTION: The Miccosukee Gooseberry is a **spiny- stemmed shrub** growing to **3.2ft** (**1m**) in height and forming clumps that often measure several meters in diameter. This plant has **three-lobed leaves** that measure approximately 1.0in (2.5cm) long. The **flowers** are **greenish-white** and small, 0.5in (15-20mm) long. The **fruits** are spiny and measure up to 0.5in (22mm) in diameter. The plant sheds most leaves in the summer and new leaves emerge in the autumn and over-winter. Flowering occurs in March and April and fruits mature in May to July. Reproduction is from seeds and also occurs asexually by the rooting of stem tips when they touch soil. Seed dispersal and pollinators have not been studied.

GENERAL HABITAT: Found in steeply sloping land containing stands of deciduous hardwood trees more typically found to the north. The present populations are possibly remnants of a vegetative distribution which developed during the Pleistocene period and remain stable. The species is found along Stevens Creek, 1.5 mi (2.4km) northeast of Clarks Hill, McCormick County, South Carolina. The population covers approximately 35 acres (14 hectares) and runs into the hundreds. This population seems to be stable.

Fraser Loosestrife (Perennial herb)

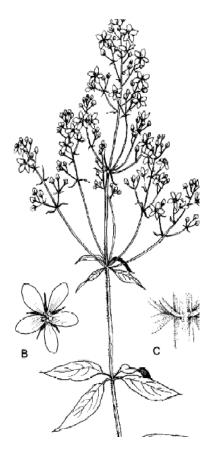
Lysimachia fraseri

FEDERAL LIST:

STATE LIST:

GEORGIA Unlisted SOUTH CAROLINA Unlisted GEORGIA Rare SOUTH CAROLINA

Rare Concern





GENERAL DESCRIPTION: Stems erect, stipitate-glandular, otherwise glabrous, stout, 1-1.5m tall, rhizomatous. Leaves stipitate-glandular, in whorls of 3-5, lanceolate to lance-elliptic, 6-15 cm long, 2-6 cm wide, acute, base cuneate to rounded; petioles 4-10 mm long. Inflorescence a leafy panicle 0.6-2.5 dm long, stipitate-glandular. Calyx densely stipitate-glandular, 4-5 mm long, lobes lanceolate, acute to acuminate, margins purple, seeds dark brown, finely alveolate. Flowers June and fruiting Sept-Oct.

GENERAL HABITAT: Moist, open, gravel bars and streambanks; also at edge of granite or sandstone outcrops.

Georgia Plume or Elliottia

(Deciduous tree)

Elliottia racemosa

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA Unlisted







GENERAL DESCRIPTION: This small tree grows to approximately 30ft (10m) tall. The bark is gray and furrowed. The **leaves**, arranged alternately on the stem, are elliptic, and 2-5in (5-12cm) long. The many flowered, plume-shaped **inflorescence** (flowering portion of plant) is quite showy and is a distinctive characteristic of this species. The **flowers** have four white petals that are up to 0.5in (14mm) long. The **fruit** is a round capsule, 0.3-0.5in (10-14mm) in diameter. Flowering period is from June to July with fruiting period from July to August. The species is believed to be extinct in South Carolina.

GENERAL HABITAT: Found in generally sunny to partially shady conditions on sand ridges, oak ridges, evergreen hammocks, and sandstone outcrops in a variety of sandy soil conditions ranging from moist to extremely dry.

Georgia Aster (Perennial herb)

Symphyotrichum (Aster)georgianum

FEDERAL LIST:

STATE LIST:

GEORGIA Candidate SOUTH CAROLINA Candidate

GEORGIA Threatened SOUTH CAROLINA Concern



GENERAL DESCRIPTION: Plant is 3-12 dm (12-48 inches) tall and canescent. **Alternate leaves** are lanceolate to oblanceolate, scabrous and clasp scabrous stem; 2.5-13 cm, 0.7-4 cm wide. Involucres turbinate, 7-8 mm long, 7-10 mm broad; bracts oblanceolate, glandular, often pubescent, and ciliate. Rays 18-22, blue-violet, 1.5-2 cm long; disc flowers yellow, purple, or red. Nutlets tan, oblanceolate to ellipsoid, 4 mm long, ribbed achene.

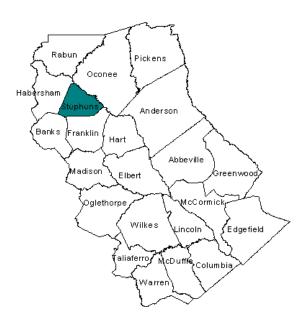
GENERAL HABITAT: The species is generally found in upland oak-hickory forests and openings, sometimes with *Echinacea laevigata*. Relict of post oak savannahs; found on roads, woodland borders, and dry rocky woods.

Golden Seal *Hydrastis canadensis* (Perennial herb)

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA Unlisted Unlisted Endangered Unlisted





Scott Kelley, USACE

GENERAL DESCRIPTION: This perennial **herbaceous plant** has distinct maple-like leaves from yellowish rhizome; 1.5-5 dm (6-20 inches) tall. Flower solitary, scape densely hirsute, 0.5-2 cm long. Flowers April with fruiting from May to June. The **fruit** is a round, fleshy capsule 0.4in (1cm) in diameter.

GENERAL HABITAT: Found in mature hardwood forests. Occurs in rich cove sites with moist, well-drained, deep soils. Located on Hartwell Project in Stephens County.

Ginseng, American (Perennial herb)

Panax quinquefolius

FEDERAL LIST:

STATE LIST:

GEORGIA Unlisted SOUTH CAROLINA Unlisted GEORGIA Unlisted **SOUTH CAROLINA**

Unlisted Concern





GENERAL DESCRIPTION: This plant grows from a branched fleshy root system and reaches heights of 8-24 in (20-60cm) with 3-4 compound leaves. Each leaf has five leaflets arranged in a palmate pattern with the two lower leaflets smaller than the upper three. Leaflets have pointed tips and toothed edges. The terminal cluster of small yellow-green flowers is borne on an elongated stalk above the leaves. The fruit is a cluster of bright red berries. May-Oct. Wild sarsaparilla is similar appearing but its compound leaves are pinnately arranged and the flowers and fruits are borne on leafless stems.

GENERAL HABITAT: Rich hardwoods, often with sugar maple.

Goldenrod, eared (Perennial herb)

Solidago auriculata

FEDERAL LIST:

STATE LIST:

GEORGIA Unlisted SOUTH CAROLINA Unlisted GEORGIA

SOUTH CAROLINA

Unlisted Concern





Jennifer Anderson – USDA NRCS PLANTS Database

GENERAL DESCRIPTION: Perennial herb, leaves alternate, cauline and larger toward the base or middle of stem.

GENERAL HABITAT: Early-successional fields

Gromwell, Tuberous (Perennial herb)

Lithospermum tuberosum

STATE LIST:

FEDERAL LIST:

GEORGIA SOUTH CAROLINA

Unlisted Unlisted

Photos: Darel Hess, www.2bnthewild.com

GEORGIA SOUTH CAROLINA Unlisted Concern



GENERAL DESCRIPTION: A tuber-like root gives rise to this slender, **hairy** plant that grows to 8-30in (20-70 cm) high from **a basal rosette of leaves** that are 2-4in (5-10cm) long. The **alternate stem leaves are much smaller**, elliptic shaped, and widely spaced. The **pale yellow flowers are tube-shaped with spreading tips** and arranged in loose terminal clusters. Flowering occurs from March to June.

GENERAL HABITAT: Found in mixed deciduous forests and on wooded bluffs.

Indian Olive or Conjurer's Nut (Deciduous shrub) Nestronia umbellula





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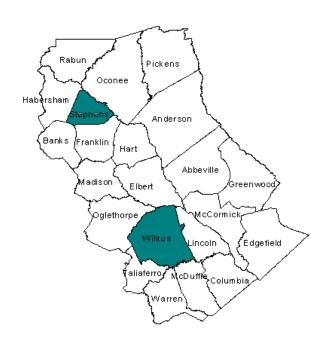
GEORGIA SOUTH CAROLINA
Unlisted Unlisted

STATE LIST:

GEORGIA SOUTH CAROLINA

Rare Concern





GENERAL DESCRIPTION: This small **shrub** is **colonial** and grows up to **3ft**, **(1m) tall**. The **leaves** are arranged oppositely on the stem, narrowly ovate to elliptic, and 1.25-2.3in (3-6cm) long. **Male and female flowers** are produced on different plants (dioecious). The female flowers are solitary and the male flowers are in umbellate clusters; both types arise from the axils of the leaves. The petals on the male and female flowers are absent; however, the **4-5 sepals are petal-like, greenish-yellow to maroon,** and less than 0.1in, (3mm) long. Flowering occurs April through May with fruiting in July. The **fruit** is a spherical drupe (fleshy, one-seeded.) This species may be parasitic on the roots of pines and oaks.

GENERAL HABITAT: Primarily found in dry, open, upland forest of mixed hardwood and pine.

Ladyslipper, Yellow (Perennial herb)

Cypripedium parviflorum

FEDERAL LIST:

STATE LIST:

GEORGIA

SOUTH CAROLINA

GEORGIA

SOUTH CAROLINA

Unlisted Rare



GENERAL DESCRIPTION: Perennial herb, 3 - 28 inches (7 - 70 cm) tall, with 3 - 5 leaves evenly spaced along an erect, hairy stem. Leaves up to 8 inches (20 cm) long and 4 inches wide, broadly oval with pointed tips and clasping leaf bases, hairy, strongly ribbed, alternate. Flowers 1 - 2 per plant, at the top of the stem, fragrant, with an erect, green **bract** behind each flower; a yellow, pouch-like lip petal ("slipper") up to 2 inches (5.4 cm) long and 1 inch wide (3.5 cm); 2 spirally twisted, drooping petals, 1 - 4 inches (2.4 - 9.7 cm) long; and 2 sepals, one curved over the top of the flower and another curved behind the slipper; sepals and petals are green with maroon spots or solid maroon. Fruit an oval capsule, up to 2 inches (5 cm) long.

GENERAL HABITAT: Rich, cove forests

Little Amphianthus Pool Sprite (Annual herb)

Amphianthus pusillus

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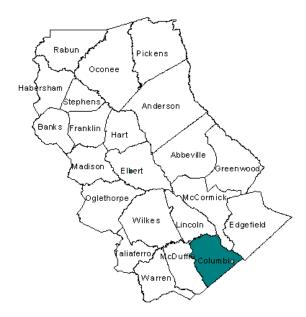
STATE LIST:

GEORGIA SOUTH CAROLINA Threatened

Threatened

GEORGIA SOUTH CAROLINA Threatened Threatened





GENERAL DESCRIPTION: Delicate annual herb with fibrous roots. This 2-4in (5-10cm) tall plant has submerged and floating greenish-purple leaves. Submerged leaves are thin and narrow, 0.4in (1.0cm) in length, and arranged in a basal rosette. Paired floating leaves, 0.32in (0.8cm) in length, are ovate, rounded, and surround a single white flower, all attached to a thin stem. Flowers are borne in the axils of both types of leaves. Only the floating flowers are opened. Amphianthus flowers from March through April. It has been speculated this plant produces seeds as exually which may threaten its ability to adapt. The plant's life cycle is usually only three or four weeks. The **fruit** is a capsule 0.12in (2-3mm) wide and 0.04in (1mm) containing many banana-shaped, dark brown seeds, 0.04in (1mm) long. Fruiting is from April to May.

GENERAL HABITAT: Granite outcrops occur as large isolated domes or gently rolling flatrocks in full sunlight. This plant typically occurs in shallow flat-bottomed pools located on the crest and/or flattened

slopes of these outcrops. The pools range in size from $0.3\text{-}10.0 \text{ yd}^2$ ($0.3\text{-}10.0 \text{ m}^2$), the vast majority ranging from $0.5\text{-}1.0 \text{ yd}^2$ ($0.5\text{-}1.0 \text{ m}^2$). These pools retain water for several weeks following a heavy rain and completely dry out with summer droughts. The seeds can lie dormant over several seasons until moisture becomes available.

Disturbance, particularly quarrying, is the major threat to granite outcrop plants.

Mock-orange, streambank (Deciduous shrub)

Philadelphus hirsutus

FEDERAL LIST:

STATE LIST:

GEORGIA SOUTH CAROLINA

GEORGIA Unlisted SOUTH CAROLINA

Unlisted Unlisted Concern





Philadelphus inodorus – Shirley Willard, USACE

GENERAL DESCRIPTION: The white flowers on this shrub appear for only a short time during April and May. Up to 6-7ft (2m) tall, this shrub has opposite, toothed, somewhat hairy leaves. These are oval shaped, 2-3in (4-8cm) long and ½-2in (1½-5 cm) wide with short petioles up to ¼ in (1cm). The four-petaled white flowers are about 1½ in (4cm) in diameter with numerous stamens. The ovary which is under the petals forms a ridged capsule in June-Aug. Common mock-orange is easily confused with this species; they are distinguished by differences in flower characteristics. Streamside mock-orange has a hairy calyx which spreads after the capsule forms, and the stigmas and styles are fused while those of the common mock-orange are separate.

GENERAL HABITAT: Moist, very rich woods, near streams.

Oak, Durand's White (Deciduous Tree)

Quercus sinuata

FEDERAL LIST:

STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA
Unlisted Unlisted Concern





GENERAL DESCRIPTION: Easily confused with white oak, Oglethorpe oak, and water oak, this tree also has gray, scaly bark as do white and Oglethorpe oaks. Water oak however lacks this distinctive bark. The obovate leaves are arranged alternately on the stem, are widest above the middle, and may have 3 shallow lobes toward the tip. Leaf size is generally 1 ½-4in (4-10cm) long and ¾-1 ½ in (1.5-3.5cm) wide with the underside being somewhat hairy. Male and female flowers are produced on the same tree (monoecious); male flowers appear as long drooping catkins. The fruit is a nut or "acorn", which has a shorter stalk than white oak. The cup covers less than 1/3 of the acorn. Flowering occurs in April with fruiting in the fall of the same year.

GENERAL HABITAT: Found on hillsides and stream banks; more common in coastal plain counties.

Oak, Oglethorpe Quercus oglethorpensis

(Deciduous Tree)

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA

Unlisted Unlisted Threatened Concern





GENERAL DESCRIPTION: This tree is **medium-sized** with **gray**, **scaly bark** that resembles white oak. The leathery **leaves** are arranged- alternately on the stem, mostly elliptic, smooth above, covered with **tawny star-shaped hairs beneath** and are **2-5.5in** (**5-13cm**) **long and 1.0-2.0in** (**1.5-5cm**) **wide**. Occasionally there are some irregular lobes toward the tip of the leaves, but generally lobes are lacking. **Male and female flowers** are produced on the same tree (monoecious); male flowers appear as long drooping catkins. The **fruit** is a nut or "acorn", which has a short turban-shaped cup, and is about 0.3in (1cm) long including the cup. Flowering occurs in April with fruiting in the fall of the same year. When suppressed by competitors and stressed by low water levels, it may be affected by chestnut blight.

GENERAL HABITAT: Found in poorly drained, seasonally wet Piedmont seepage swamps and on small stream terraces, often with cherrybark oak (*Quercus pagoda*).



Quercus bicolor





FEDERAL LIST:

Oak, Swamp White

(Deciduous Tree)

STATE LIST:

GEORGIA SOUTH CAROLINA Unlisted Unlisted

GEORGIA Unlisted

SOUTH CAROLINA

Concern





GENERAL DESCRIPTION: Easily confused with regular white oak, this tree also has gray, scaly bark. The **obovate leaves** are arranged alternately on the stem, are widest above the middle, and have 6-10 pairs of shallow, rounded lobes. Leaf size is generally 2 ½-8in (7-20cm) long and 1 ½-4.0in (4-10cm) wide. The underside of the leaf has white to tawny hairs. Male and female flowers are produced on the same tree (monoecious); male flowers appear as long drooping catkins. The **fruit** is a nut or "acorn", which has a longer stalk than white oak, 1in (2.5cm). The cup covers 1/3 to 1/2 of the acorn and sometimes has a fringed edge. Flowering occurs in April with fruiting in the fall of the same year.

GENERAL HABITAT: Found in poorly drained areas and swamps.

Oconee Bells Shortia galacifolia

FEDERAL LIST STATE LIST

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA

Unlisted Concern Endangered Concern





Appalachian State

GENERAL DESCRIPTION:

Rhizomatous, acaulescent, glabrous herbs with suborbicular to elliptic-orbicular leaves, 3-8 cm long, emarginate to truncate, coarsely crenate-serrate, base rounded to cordate. Flowers solitary, scapose, scapes to 18 cm long, 3-5 bracteate with 5 sepals. Corolla white to pinkish, campanulate, 2-2.5 cm long with petals united 1/24 or less their length; capsulte 5-6 mm long. Flowers March-April and produces fruit from July-August.

GENERAL HABITAT: Found in mesic forests in association with mountain laurel (*Kalmia latifolia*) and rhododendron.

Ocmulgee Skullcap (Perennial herb)

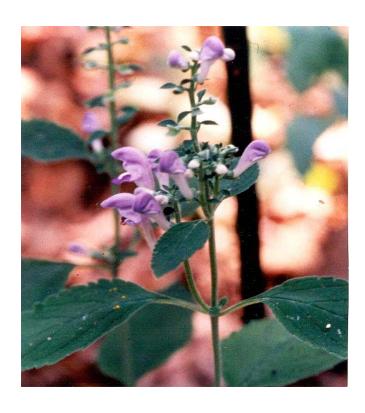
Scutellaria ocmulgee

FEDERAL LIST:

STATE LIST:

GEORGIA Concern SOUTH CAROLINA Unlisted GEORGIA Threatened SOUTH CAROLINA

Unlisted





GENERAL DESCRIPTION: This is an erect plant, 12-24in (30-60cm) tall. The **square stem** is slightly branched at the tip and hairy with some backward-pointing hairs. Stalked glands are present above the second internode. The **leaves are attached oppositely, petioles** are 0.75-1.0in (1.8-2.5 cm) long, and blades are more or less orbicular shaped below mid-stem and broadly ovate and smaller above, 1.0-1.2in (5-6cm) long, 1.3-2.0in (3.5-5.5cm) wide. Leaf apices are obtuse to round and margins are wavy. Both surfaces are hairy, the upper often with stalked glands. **Inflorescence is** a system of paired, lateral racemes with bracts changing from elliptic and crenate to oblanceolate with smooth margins. **Flowers** are irregular with the characteristic "capped" calyx which lacks stalked glands; flower stems are hairy, the **petals** are blue, fused, somewhat hairy, 0.9-1.0in (20-24cm) long, with a gradually dilating tube, the lower lip entire. Four stamens are present, extending beyond the petals; the stigma is two-parted. **Fruits** consist of 4 small nutlets. The flowering period is from late June to early August and fruits remain on the plant until mid-August at the latest. In this area the plants often fail to make flowers and fruits. Deer heavily browse both.

Overall the plants somewhat resemble catnip, another mint, in color, leaf shape, and in being softly hairy. *Scutellaria ovata* is very similar, but differs in the following:

- a. The calyx lobes have stalked **glandular hairs** in *S. ovata*, but they are absent in *S. ocmulgee*.
- b. The 2nd stem section (internode) before the base of the flowering portion lacks stalked **glandular hairs** in *S. ovat*a whereas they are present in *S. ocmulgee*.

GENERAL HABITAT: Typically found in rich soils under old-growth hardwoods on slopes above streams, often growing with geranium, heart-leaf, and lop-seed.

Orchid, Monkey-face or White fringeless orchid (Terrestrial monocot) Platanthera integrilabia

FEDERAL LIST:

GEORGIA SOUTH CAROLINA

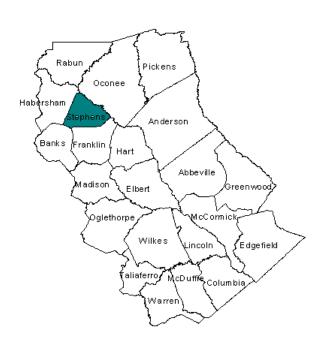
Candidate Candidate



STATE LIST:

GEORGIA SOUTH CAROLINA

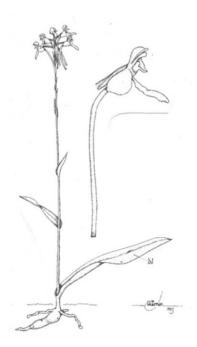
Threatened Concern



GENERAL DESCRIPTION: Perennial **herb** either with leafy flowering **stems** to 2 ft (6 dm) tall, or with a single, strap-shaped basal leaf, all attached to tuberous, fleshy **roots**. The 2-3 stem **leaves**, up to 8in (20cm) long and 1.3in (3cm) wide, are elliptic to lance-shaped with a single main vein. Leaves become bract-like near the top of the stem. The terminal **inflorescence** is a loosely flowered raceme with 6-15 pure **white flowers**, each helmet-shaped with a spur 1.7-2in (4-5cm) long. The lip petal is narrow, extended up to 0.5in (13mm) long and 0.25in (3-4mm) wide without a distinct fringe on the margin, but with irregular fine teeth. The **fruit** is an ellipsoid capsule, 0.5in (15mm) long, 0.15in (3mm) wide with numerous, dust-like seeds. Flowering period: mid-July to late August; fruiting period: September-October. The flower must be seen to distinguish it from other similar orchids.

GENERAL HABITAT: Typically found in red maple/black gum swamps and along sandy, damp stream margins; also on seepy, rocky, thinly vegetated slopes. Often associated with other orchids, white violets, cowbane, and grass-of-parnassas.

Photos and drawings courtesy of Larry Zettler, Illinois College



Pitcherplant, sweet (Red Pitcherplant) (Perennial Herb) Sarracenia rubra (No federal listing) Sarracenia rubra jonesii (Endangered)

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA Endangered Endangered Endangered





GENERAL DESCRIPTION: This **insectivorous** plant is 3-24in (8-68cm) tall. Its **hollow leaves** are green with some red or purplish veins above. It stands very erect and is strongly recurved at the base. The leaf hoods are sharply pointed with red-netted veins; they arch over the opening. The single, fragrant, **flowers** are borne on long stalks that usually exceed the leaves. The petals are maroon above, and sometimes gray or dull purple beneath, and 1.0-1.5in (2.5-4.0cm) long. Sepals are purplish above, greenish beneath, and 0.75-1.0in (1.8-2.5cm) long. The disc-shaped style is 1.0-1.5in (2.8-4cm) in diameter. The **fruit** is a capsule about 0.3in (1cm) in diameter. Flowering period- April through May; fruiting period June through July.

GENERAL HABITAT: Sometimes found in shaded areas along streams or moist areas in mesic woodlands. More frequently found in open or shaded depressions where acidic conditions have developed, such as sandhill seeps and open bogs. In some locations its long-term existence and vigor have apparently required periodic fires to control successional vegetation and insect pests.

Pogonia, small whorled (Perennial herb)

Isotria medeoloides

FEDERAL LIST:

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GEORGIA

SOUTH CAROLINA

GEORGIA SOUTH CAROLINA
Threatened Threatened

Threatened Threatened





GENERAL DESCRIPTION: This perennial, showy **orchid** is **6-10in** (**15-25cm**) **tall**. A single whorl of five to six **leaves**, pale, dusty green, drooping, 2.0-3.2in (5-8cm) long, 1.2-2in (3-5cm) wide, grow from the top of the stem. The leaf **stalk** and leaves may have a grayish coating over their surfaces. Single (rarely 2) **flowers** grow from the center of the leaves and are tubular, **yellow-green in** color, and asymmetrical (orchid-like). The middle petal is greenish-white, 3-lobed, 0.6in (15mm) long, 0.2in (5mm) wide, ridged or crested down the middle. This petal crest has small yellow warts. It flowers in May and fruits in June and July. The **fruit** is an elliptical capsule 1in (2.5cm) long and 0.4in (1cm) wide. Similar species: Large whorled pogonia (*Isotoria verticillata*) has purplish-green stems and spreading rather than drooping leaves. Indian cucumberroot (*Medeola virginiana*) has 6 or more slender leaves and a stem with cobwebby clusters of hairs.

GENERAL HABITAT: Habitat for the species consists of middle-aged, dry hardwood or mixed pine-hardwood forests with an open canopy, open understory and sparsely covered ground surface. Preferred

habitat is near long-term canopy gaps such as streams, vine gaps and old roads. Orchid collectors and small population size are major factors in the decline of this species. The species is typically found in the mountains of northeast Georgia.

Quillwort, Black-spored (Fern relative)

Isoetes melanospora

FEDERAL LIST

STATE LIST:

GEORGIA Endangered SOUTH CAROLINA Endangered GEORGIA Endangered SOUTH CAROLINA

Endangered Endangered





GENERAL DESCRIPTION: *Isoetes* species are **non-flowering** plants allied to ferns. They are frequently mistaken for small, aquatic grasses but lack the hollow stems, nodes, and flat leaves of typical grasses. Quillwort **leaves are hollow, quill-like**, and reveal cross-like partitions when cut in cross section. The leaves of black-spored quillwort are stiff to arching and usually **less than 8 cm (3in) tall**, but generally longer than those of mat-forming quillwort (5 cm; also described in this manual). Each leaf is narrow, 1-2 mm (less than 1/8in) wide, and broadens to a swollen base where it attaches in clusters to a **bulb-like**, **underground rhizome**, a characteristic of all quillwort species except mat-forming quillwort, *I. tegetiformans*. This swollen base also contains male and female sproangia protected by a thin, transparent covering (velum) which is used diagnostically to help identify quillwort species. Like mat-forming quillwort, black-spored quillwort also produces **dark-colored female spores**. Other Georgia quillworts have light-colored female spores.

The **roots** of black-spored and mat-forming quillworts are also useful in distinguishing between the two species. Roots arise from the underground rhisome in both species, but those of black-spored quillwort fork while those of mat-forming quillwort do not fork.

GENERAL HABITAT: Only six counties in Georgia are known for this aquatic plant, none in the Savannah Basin. It occurs in Pickens County, South Carolina. This plant grows in small, wet granite depressions and can regenerate with rain after a dry spell. Its habitat, granite outcrops, is like that of mat-forming quillwort with which it could be easily confused. The difference in habit- spreading for mat-forming quillwort, and condensed clusters for black-spored quillwort- is probably the most useful way of initially distinguishing between these two related species.

Quillwort, mat-forming (Fern relative)

Isoetes tegetiformans

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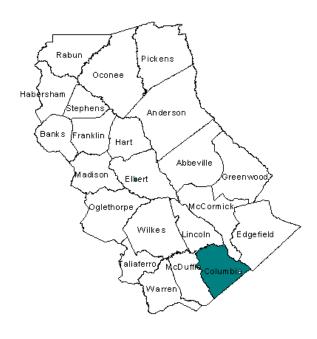
STATE LIST:

GEORGIA SOUTH CAROLINA

GEORGIA SOUTH CAROLINA

Endangered Not listed Endangered Unlisted





GENERAL DESCRIPTION: The species was originally described in 1978 from material collected at Heggie's Rock Preserve in Columbia County, Georgia from a single vernal (periodically wet and dry) pool. Only 10 additional populations, all in Georgia, have been located, and one has been destroyed. It is a **spore-producing** (no flowers) plant with narrow leaves that resemble short grass. The plant is separated from other quillwort species by technical characteristics that include complete velum coverage, dark tuberculate megaspores, and short, **0.8-1.8in** (**2-5cm**) **narrow, spiraled leaves** that are arranged along a spreading **rhizome** (**underground stem**) unlike other quillworts which have short bulb-like rhizomes. Immature plants may more closely resemble other quillworts. The small **roots** arise along the rhizome and do not branch. This plant forms **colonies**. Ideal moisture and light conditions are required for successful spore germination and growth. The dormancy period for the spores is unknown. It is speculated that this plant produces asexually, a genetic factor which may threaten its ability to adapt.

GENERAL HABITAT: This is an aquatic plant limited to granite outcrop pools and thus has very restrictive conditions for survival. It is found only in the Piedmont region. Seventy percent of the extant sites contain only one or two pools with this plant. In the remaining sites (30%), it has been observed in four to eight pools. Individual pools probably contain only a few genetically variable individuals.



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Rosinweed, prairie (Herbaceous perennial)

Silphium terebinthinaceum



FEDERAL LIST:

STATE LIST:

GEORGIA SOUTH CAROLINA Unlisted Unlisted

GEORGIA Unlisted **SOUTH CAROLINA**

nlisted Concern





Photos by K. J. Systma

GENERAL DESCRIPTION: When in flower, this **plant is very tall-** 3-10ft (1-2 ½ m) and has sunflower-like heads of flowers. The **large, toothed, heart-shaped leaves can be up to 2ft** (61cm) long and form a distinctive basal clump. The leaf upper surfaces feel rough (scabrous). Heads of flowers appear on nearly leafless, branched stalks from Aug-Sept. and are typically 2-3in (5-8cm) wide **with yellow disc and ray flowers**. Plant parts have **a turpentine-like odor**.

GENERAL HABITAT: Open areas, often associated with limestone.

Sedge, Nebraska (Perennial herb)

Carex jamesii

FEDERAL LIST:

GEORGIA SOUTH CAROLINA Unlisted Unlisted



D. Powell, USDA Forest Service

STATE LIST:

GEORGIA SOUTH CAROLINA
Unlisted Concern



GENERAL DESCRIPTION: Like many sedges, this plant is often mistaken for a grass; it can reach heights of 8-12in (20-30cm). The leaves which are less than ¼ in wide (1-3mm) are longer than the individual stems. The separate male and female flowers are borne at the top of an elongated solitary stem. Flower structures must be examined with magnification to identify parts. One characteristic feature of all *Carex* spp. is a sac-like structure, the perigynium, that surround the ovary in female flowers. Subtle differences occur between species. Any suspected plants will probably require identification by someone familiar with the genus which has over 120 species in the Savannah Basin counties. Flowering occurs in May-June followed by formation of a fruit which is 3-sided.

GENERAL HABITAT: Found only in mature, rich woods.

Shoals Spiderlily or Cahaba Lily (Perennial herb)

Hymenocallis coronaria



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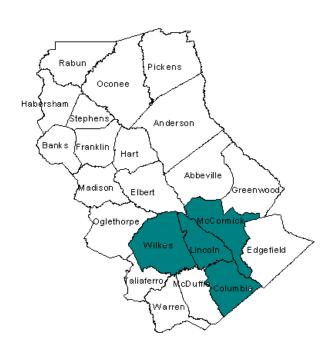
STATE LIST:

GEORGIA SOUTH CAROLINA Concern

Concern

GEORGIA SOUTH CAROLINA Threatened Concern





GENERAL DESCRIPTION: This is a conspicuous **monocot** growing to **3ft**, **(1m) tall** from a large **bulb**. The **leaves** are basal, strap-shaped, 1.3-1.75in (3-5cm) wide, and up to 31.5in (80cm) long. Typically six to nine fragrant white flowers are borne in a terminal cluster on a long stalk that equals or exceeds the basal leaves. Individual **flowers** which measure up to 6in (15cm) in diameter, open consecutively and last only one day. The **flowers** are quite showy with yellowish center, a narrow tube bearing six long petal-like parts, and a central **white cup** or crown (corona) to which the anther filaments are attached. The **fruit** is a fleshy capsule that prematurely splits open exposing the dark green, oblong seeds, each 0.75-1.5in (2-4cm) long, and resembling green olives. Flowering period is mid-May to late June with fruiting period late June through August. Federally-listed as a Species of Concern.

GENERAL HABITAT: Found in major streams and rivers among boulders in rocky shoals, usually with riverweed and water willow. An isolated population is located on Broad River just north of Anthony Shoals (Thurmond Lake) between Lincoln and Elbert counties in Georgia.

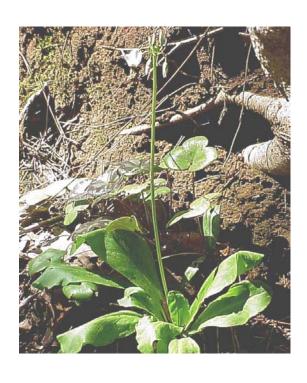
Shooting Star (Dodecatheon meadia)

(Perennial herb)

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA

Unlisted Unlisted Unlisted Concern





GENERAL DESCRIPTION: Basil leaves and a rocket-looking flower describe this spring blooming plant that grows up to 2ft (60cm) high. Leaves are entire, elliptic to lance-shaped, 4-11in (10-30cm) long and 1½ - 3in (3-8cm) wide. A cluster of flowers with white reflexed petals with five stamens protruding forward forms at the end of a tall stalk. Flowering occurs from March to May. The fruit is a capsule with dark reddish brown seeds.

GENERAL HABITAT: Along streams in moist hardwood forests.

Spiderwort, Virginia (Herbaceous perennial, monocot)

Tradescantia virginiana

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA Unlisted Unlisted Unlisted Concern





George F. Russell USDA NRCS 2001. The PLANTS Database Version 3.1

GENERAL DESCRIPTION: Unlike grasses whose leaves look similar, this monocot has showy 3-petaled flowers with variable colors- blue, red, white, and purple. It grows to 1-2ft (30-60cm), spreading to 3ft (90cm). Leaves can be up to 18in (45cm) long by 1in (2.5cm) wide. Flowers are about 1in (2.5cm) wide and have six, hairy yellow stamens. A hairy sheath which is not readily apparent and looks much like the vegetative leaves loosely surrounds them. Flowers last only a day, closing in the afternoon. The flowering period continues for several weeks, extending from April-June. The fruit is a capsule.

GENERAL HABITAT: Dry, semi-open woods.

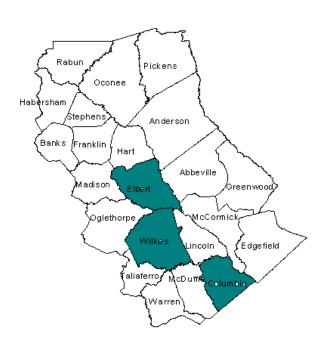
Stonecrop, Granite or Dwarf Stonecrop (Annual herb) Sedum pusillum

FEDERAL LIST

STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA Unlisted Unlisted Threatened Unlisted





GENERAL DESCRIPTION: This plant is small and succulent. Normally it grows to 0.75in (12cm) tall. The **succulent leaves** are up to 0.5in (12mm) and are cylindrical and overlapping. This plant is often confused with "red moss" or Elf Orpine (*Sedum smallii*) which is abundant on most granite outcrops and has uniform red leaves. The differences are only slight. *Sedum pusillum* is the larger of the two species and has bluish-green leaves, sometimes with tinges of red. *Sedum pusillum* has small white **flowers**, consisting of four petals that are 0.1in (2-3mm) long. The **fruit** is the most distinguishing feature.

Sedum smallii fruit opens by a small flap on the underside, whereas *S. pusillum* opens by a slit on the topside. The fruit is a follicle, 0.1-0.2in (3-5mm) long, and opens by a longitudinal suture facing upward. The flowering period is from March through April and the fruiting period is from April through May.

GENERAL HABITAT: Found growing among lichens in partial shade under large, open-grown eastern red cedar (*Juniperus virginiana*) trees on granite outcrops.

Strawberry, Piedmont Barren (Perennial herb)

Waldsteinia lobata



FEDERAL LIST

STATE LIST:

GEORGIA Unlisted

SOUTH CAROLINA Unlisted

GEORGIA SOUTH CAROLINA

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GENERAL DESCRIPTION: This is a low-growing plant that spreads by subsurface stems (rhizomes) and stoloniferous shoots. The leaves are heart-shaped, deeply 3-5 lobed, toothed on the margins, hairy, 1.5-2.75in (3.5-7cm) wide and 1.3-2.0in (3-5cm) long, and are attached to the stem by long hairy petioles. The flowers are borne on long stalks that equal or exceed the leaves. The five bright yellow petals are shorter than the sepals, and the numerous stamens (50 or more) make the flowers somewhat showy. The **fruit** is an achene. Flowering period is from April through June with fruiting in the summer.

GENERAL HABITAT: Found in rocky, acidic woods along streams with mountain laurel (Kalmia latifolia); also in drier, upland oak- hickory-pine woods.

Sunflower, White-leaved (Perennial herb)

Helianthus glaucophyllus

FEDERAL LIST:

STATE LIST:

GEORGIA Unlisted SOUTH CAROLINA

Unlisted

GEORGIA

SOUTH CAROLINA

Unlisted Concern





B. Eugene Wofford, Tennessee Vascular Plants Atlas

GENERAL DESCRIPTION: At flowering this plant can be 4-8ft (1-2.5m) tall. The **toothed, opposite leaves are rough above**, **and smooth beneath with a whitish tinge**. Leaf bases are rounded to tapering to a petiole that is usually more than 1/2in (10mm) long. **Leaf size** is about 4-10in (10-25cm) long and 1-3in (3-8cm) wide with a lance shape. Heads of flowers appear from July-Sept. and are usually 2-3in (5-8cm) wide **with yellow disc and ray flowers**. Rays are rounded at their tips and ½-1 ½ in (2-4cm) long. Unlike commercial sunflower "seeds," the fruits are smaller and a solid brown.

GENERAL HABITAT: Mixed deciduous woods.

Trillium, lance-leaf (*Trillium lancifolium*) (Perennial herb)

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA Unlisted Unlisted Concern





GENERAL DESCRIPTION: Like other trilliums, this one has parts in threes. It is distinguished from other **maroon flowered**, **sessile** trilliums such as *T. reliquum* by having fewer shades of green and **very narrow leaves and petals**. (See description in this manual of the latter species.) The three leaves are about 2-3in (5-8cm) long and ¾ -1in (2-2 ½ cm) wide. The petal color is usually brownish maroon, but some plants may have somewhat yellow-tinged petals. Flowering occurs from March-May; fruits are round berries with many seeds.

GENERAL HABITAT: Moist, very rich woods. Common at Steven's Creek Preserve but otherwise very rare in Piedmont.

Trillium, nodding or southern nodding (Perennial herb)

(Trillium rugelii)

FEDERAL LIST:

STATE LIST:

GEORGIA Unlisted SOUTH CAROLINA Unlisted GEORGIA Unlisted **SOUTH CAROLINA**

Unlisted Concern





GENERAL DESCRIPTION: This large white-petaled trillium is distinguished by very broad, **unmottled**, **light green leaves** and a **flower that bends downward**, **hence "nodding."** The leaves are 5-8in (13-20cm) long and 4-6in (10-15cm) wide. The **flower** may be up to 3in (7-8cm) wide. The stamens and pistil are a light purple color. Both the green calyx parts and the white flower petals- all in 3s- tend to bend backwards (reflexed) at maturity. Flowering occurs in Mar-April followed by fruits of rounded berries.

GENERAL HABITAT: Moist, very rich woods. Found at Steven's Creek Preserve but otherwise very rare in the Piedmont.

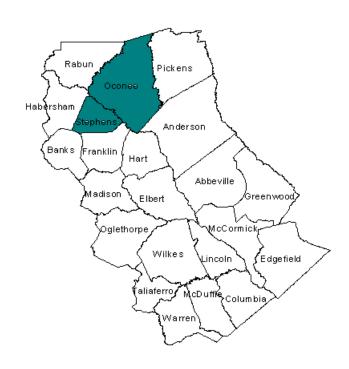
Trillium, persistent (Lily Family--Perennial herb)

Trillium persistens

FEDERAL LIST: STATE LIST:

GEORGIA SOUTH CAROLINA GEORGIA SOUTH CAROLINA Endangered Endangered Endangered Endangered





GENERAL DESCRIPTION: This is an early-blooming, perennial wildflower with a pale green to dark reddish-purple colored **stem**, 4-10in (10-25cm) long. The stem is topped with a single whorl of 3 spreading leaves, as is typical of all species of *Trillium*. **Leaves** are 1.2-3in (3-8cm) long, 0.4-1.2in (1-3cm) wide, slightly folded along the mid-vein and long-tapering to a sharp point with no petioles and a wedge shaped base. Leaves are dark green on the upper surface and paler or whitened below. The solitary showy **flowers** have 3 white petals, 0.8-1.4in (20-35mm) long and 0.2-0.4in (5-10mm) wide) that have edges slightly curled or twisted, growing from the middle of the leaf whorl. Flower anthers are straight and pale yellow. The flowers turn pink with age. The **fruit** is a fleshy capsule, greenish white, weakly six-lobed with 5-40 seeds. Fruiting occurs in late June to July. Similar species: Common rose trillium (*Trillium catesbaei*) has a larger white to pink flower with arching petals held on a reclining flower stalk. Its flower anthers are twisted and bright, egg-yolk yellow.

GENERAL HABITAT: Restricted to the Tallulah-Tugaloo River system in northeast Georgia where it is typically found on steep slopes growing under rhododendrons (*Rhododendron maximum* or *R. minus*) in mixed pine-hemlock-hardwood in moist, rocky, well-drained coves and ravines. Clearing, burning, thinning, grazing and soil/site disturbance are destroying its habitat.

Trillium, Relict (Perennial herb)

Trillium reliquum

FEDERAL LIST:

STATE LIST:

GEORGIA Endangered SOUTH CAROLINA Endangered GEORGIA Endangered SOUTH CAROLINA

Endangered





GENERAL DESCRIPTION: This perennial **herbaceous monocot** has three elliptical, pointed **leaves** 2-5in (5-13cm) long, each mottled in several shades of green and growing from a reclining stem that is 2-10in (5-25cm) long. Each leaf has a silver streak down its center. A single flower arises without a stalk from the top of the stem where leaves form a whorl. The **flower** has three slightly twisted, dark purple to greenish-yellow petals. The six anthers have prominent prolonged tips known as "beaks". Flowers from March to April with fruiting from May to June. The **fruit** is a round, fleshy capsule 0.4in (1cm) in diameter.

GENERAL HABITAT: Found in mature hardwood forests. Sites are sometimes mixed with mature pines. Occurs in rich cove sites with moist, well-drained, deep soils in mixtures of other wildflowers along streams, on stream terraces and in lime-sink depressions. Found in southwest, central and east-central Georgia, South Carolina, and Alabama mostly near the fall line.

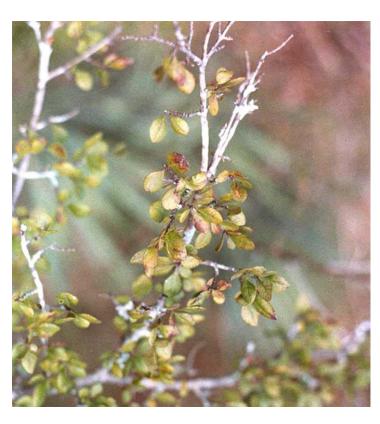
Upland privet Shrub

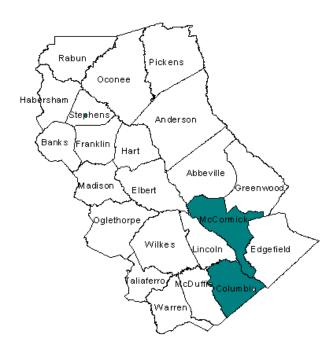
(Forestiera ligustrina)

FEDERAL LIST:

STATE LIST:

GEORGIA Unlisted SOUTH CAROLINA Unlisted GEORGIA Unlisted SOUTH CAROLINA Concern





GENERAL DESCRIPTION: This small shrub with light gray bark and rather scraggly-looking branches, is easily overlooked and sometimes confused with deciduous hollies. The small, **oval leaves are opposite** (hollies are alternate) with **faint teeth**. The average size is about 2-2.5 cm by 1-1.5 cm. **Hairs on the young twigs are in two lines, changing ninety degrees at each node.** The small, **unisexual flowers** are very hard to see, appearing about April-May. Petals are absent. The male flowers have 1-4 stamens. Female flowers have two-lobed stigmas and produce a **black, one-seeded fruit** about half a centimeter long in early fall.

HABITAT: Prefers rocky outcrops and is often found with eastern red cedar, sparkle-berry, and/or deciduous holly.

Whitlow-Grass or Sun loving Draba (Annual herb) Draba aprica

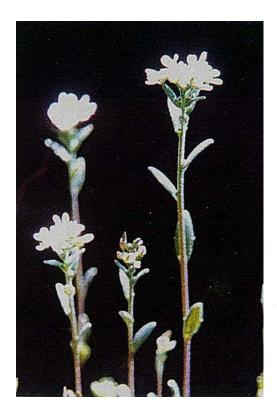


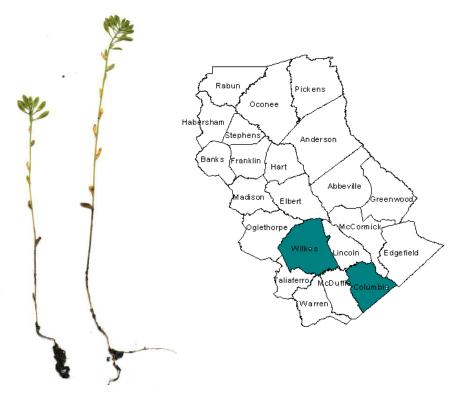
FEDERAL LIST

STATE LIST

GEORGIA Unlisted SOUTH CAROLINA Unlisted GEORGIA Endangered SOUTH CAROLINA

Concern





GENERAL DESCRIPTION: This **annual** is from **6-12in** (**15-30cm**) **tall**. **Basal leaves** have 1-2 teeth per side, and are 0.5-0.75in (1-2cm) long and rounded. Flowers are produced at the base of the side branches and also terminal. The **flowers** have four **white petals** that are less than 0.1in (3mm) long and have a small notch at the apex. The **fruit** is a narrowly elliptic, two-parted pod (short silique or silicle), 0.15-0.2in (4-6mm) long and is covered with tiny star-shaped hairs. *Draba brachycarpa* strongly resembles this species but has hairless fruits and more elongated lower branches. *Draba aprica* flowers from March to April and the fruiting period is from April to May.

GENERAL HABITAT: Found in shallow soils on granite outcrops, especially beneath widely scattered, old-growth eastern red cedar (*Juniperus virginiana*).

Ozark Bunchflower (Wood's False Hellebore) (Perennial herb)

Veratrum woodii

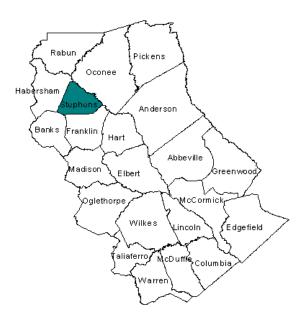
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GEORGIA Unlisted SOUTH CAROLINA Unlisted GEORGIA Para **SOUTH CAROLINA**

Rare Unlisted





Scott Kelley, USACE

GENERAL DESCRIPTION: This perennial **herbaceous plant** has distinct bright green basal leaves, elliptic to broadly oblanceolate, 35-60 cm (14-24 inches) long and 4-8 cm (2-3 inches) wide with conspicuous parallel veins. The numerous flowers are in a terminal panicle that rises well above the leaves. The three sepals and three petals are similar, purplish brown to maroon and each about 1 cm long. The fruit is a capsule about 1.5 cm long, 3-lobed with strongly winged seeds. Flowers sporadically from July to September with fruiting from August to October.

GENERAL HABITAT: Found in mature hardwood forests. Occurs in rich cove sites with moist, well-drained, deep soils, often in clumps on terraces along streams or on lower slopes. Located on Hartwell Project in Stephens County.