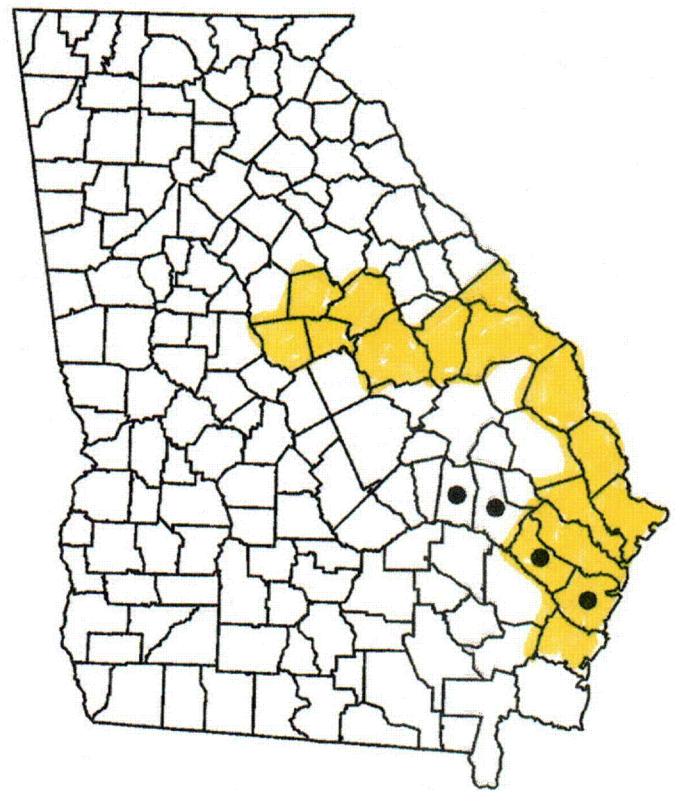


# *Matelea pubiflora* (Decaisne) Woodson

1

Trailing Milkvine, Trailing Spiny-pod

Milkweed Family, ASCLEPIADACEAE



#### LEGAL STATUS:

State: RARE  
Federal: None

#### SYNONYMY:

*Edisonia pubiflora* (Decaisne) Small  
*Gonolobus pubiflorus* (Decaisne) Gray

**RANGE:** Coastal Plain of southeastern Georgia and peninsular Florida. Recorded from four counties in Georgia (see map).

**ILLUSTRATION:** (A) portions of trailing vines, with opposite leaves and axillary flower clusters, 1x; (B) flower bud, lateral view, with rounded shape, 2x; (C) flower, 2x; (D) detail of flower center, 10x; (E) fruit, 0.8x. Source: (A) original drawing by Vicky Holifield; (B, C, D, E) Drapalik (1970), drawn by Marion Seiller and used with permission.

**DESCRIPTION:** This is an herbaceous vine, trailing on the ground, usually 0.2-0.6 m long, rarely to 1.1 m, with milky sap. The leaves are opposite, ovate with a broad, cordate base, generally 2-5 cm long, and slightly less broad. The leaves are smaller than other species of *Matelea* found in Georgia. The inflorescence consists of one or more axillary clusters of 2-5 flowers, which are 5-parted. The fruit is a pod about 6-11 cm long, 10-25 mm wide, covered with small, pointy projections. Except for the tiny leaves and trailing habit, the above description can

apply to several species in this genus; identification to species in this group relies heavily on characteristics of fresh flowers, which are highly modified for insect pollination. In this species, the petals are olive to red-brown, and up to 4 mm long. In the center of the flower is a rounded-pentagonal structure, 1.5-2.0 mm wide, called the gynostegium. It is mounted on top of a low, cushion-like, olive to red-brown disk, about 2-3 mm in diameter, called the corona. In most species, the corona ("crown") has a number of pointy appendages. In this species these project above the gynostegium, bending inward and with black tips. **Flowering period:** April to early June; **fruiting period:** August to October. **Best search time:** during growing season, since the trailing habit, as well as leaf size are diagnostic.

**HABITAT:** Found on open, deep white sands of sand ridges in association with turkey oak and longleaf pine.

**SPECIAL IDENTIFICATION FEATURES:** The trailing milkvine has the smallest leaves (2-5 cm long), tightest flower clusters, smallest flowers (petals about 4 mm long), most trailing habit, and prefers the driest habitat of any of Georgia's seven or eight native species of *Matelea*.

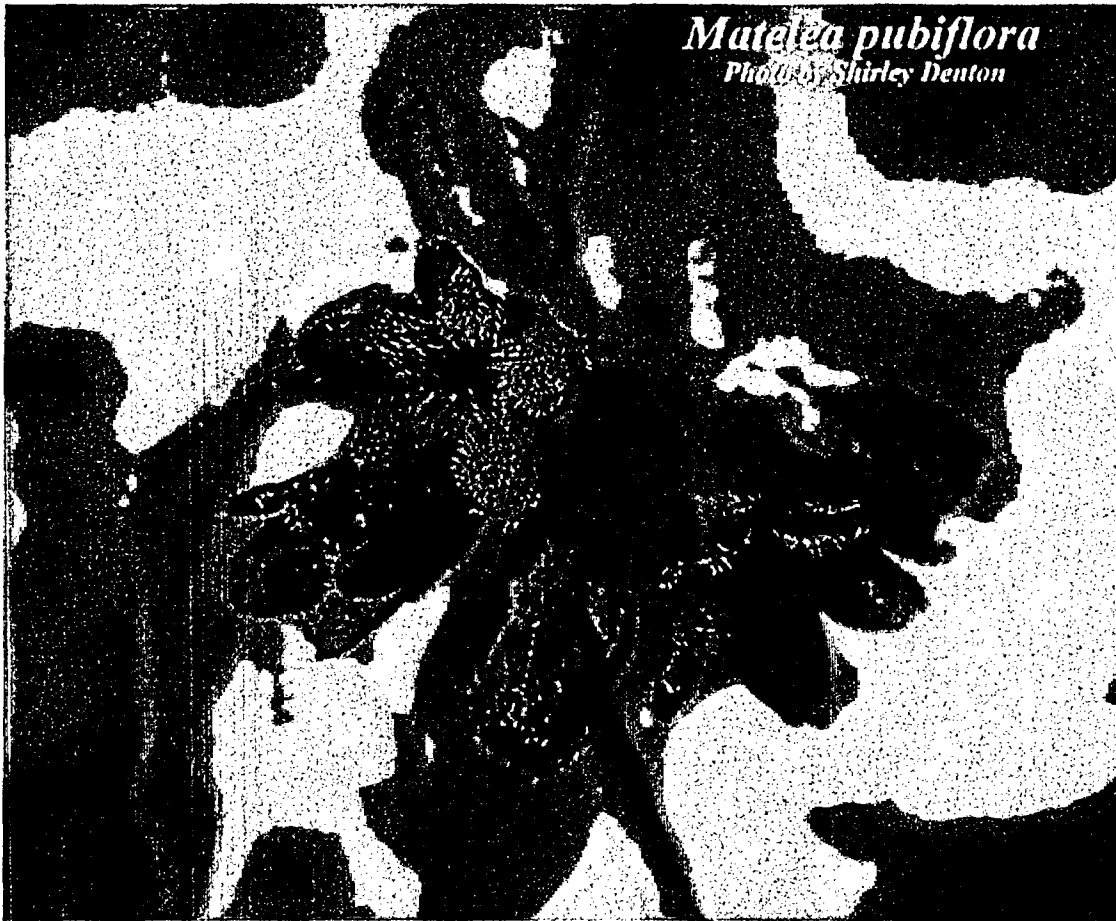
**MANAGEMENT RECOMMENDATIONS:** Prevent encroachment of woody vegetation through controlled burning. Timber removal, if desired, may be beneficial to this light-loving plant.

**REMARKS:** The genus *Matelea* can be a frustrating one to study, because flowers are required to identify most of the species. All too often, however, plants are found only in sterile condition. Fortunately, *M. pubiflora* is one of the few species of the genus that can readily be identified even when flowers are absent. It was first collected in the early 1800s, on a sand ridge near the Altamaha River in McIntosh County, and can still be found in that vicinity today. It is now known from about a half dozen locations in Georgia. Though somewhat more abundant in Florida, *M. pubiflora* is rare throughout its range and in Georgia is a rare disjunct. It has sustained significant habitat loss due to fire suppression or conversion of sand ridge habitat (e.g., to Bermuda grass pasture or pine plantation).

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- Duncan, W. H. and L. E. Foote. 1975. Wildflowers of the Southeastern United States. University of Georgia Press, Athens. 296 pp.
- Rickett, H. W. 1966. Wild Flowers of the United States. Volume 2. The Southeastern States. McGraw-Hill, New York. 688 pp.
- Rosatti, T. J. 1989. The genera of suborder Apocynineae (Apocynaceae and Asclepiadaceae) in the southeastern United States. *Journal of the Arnold Arboretum* 70:443-514.

620 Longleaf Pine  
512 Sandhill  
434 Mixed Pine-Oakwood  
413 Xeric Hardwood

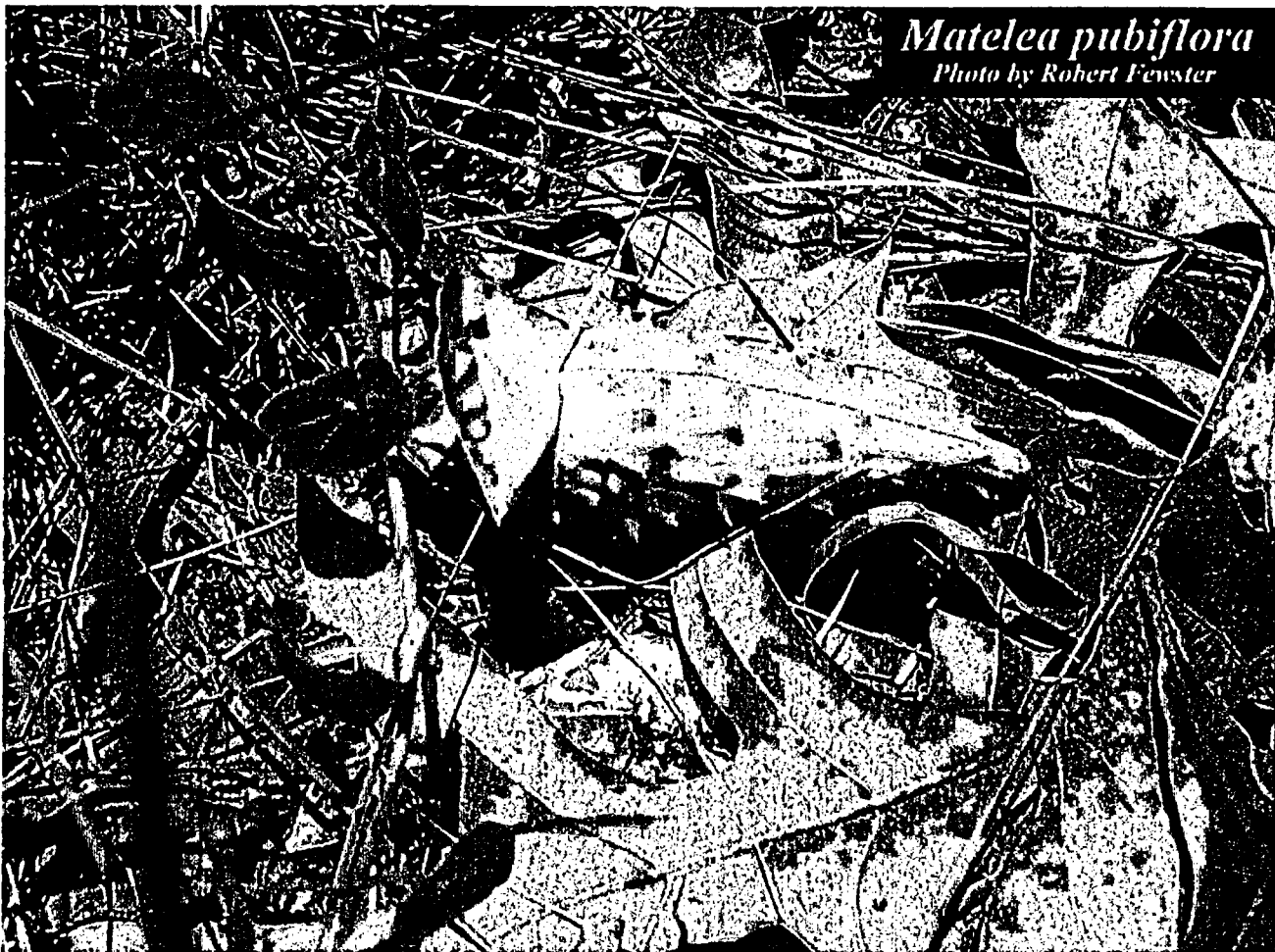


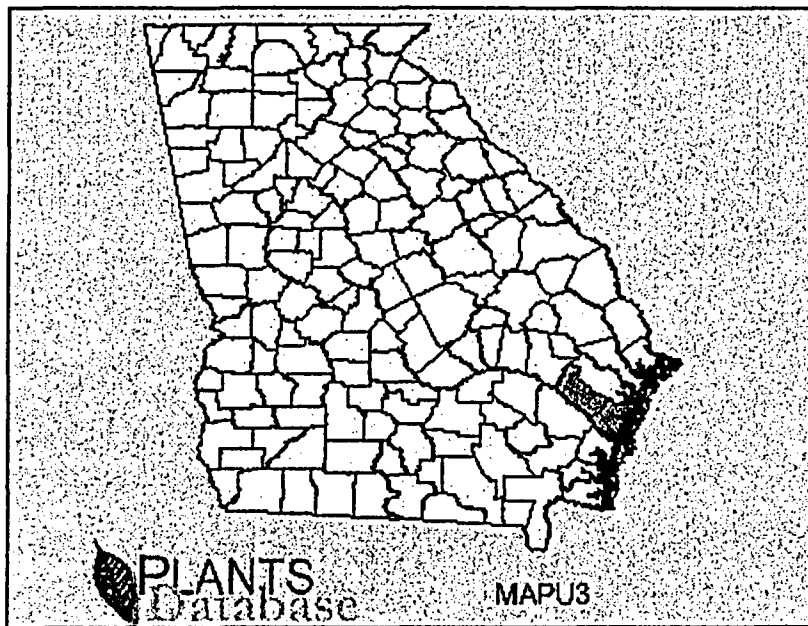


*Matelea pubiflora*  
Photo by Shirley Denton

*Matelea pubiflora*

*Photo by Robert Fewster*






**County Distribution of  
MAPU3 In Georgia**

*Matelea pubiflora* (Dcne.)  
Woods.  
trailing milkvine

**Return to the  
MAPU3 Plant Profile Page**

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Time Generated: Fri 1:03 PM - 02/11/2005

# *Nestronia umbellula* Rafinesque

Indian Olive, Conjuror's Nut, Nestronia

Santalwood Family, SANTALACEAE

**LEGAL STATUS:**

State: THREATENED

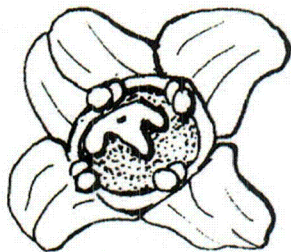
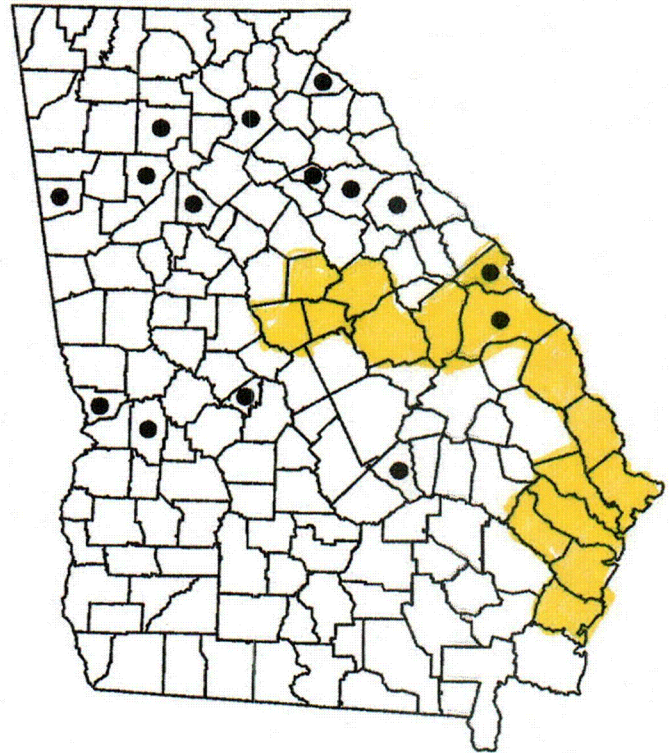
Federal: None

**SYNONYMY:** None in current usage.

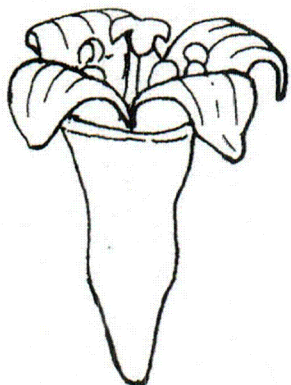
**RANGE:** Piedmont and Inner Coastal Plain from Alabama to southern Virginia; disjunct on the Highland Rim of central Tennessee. Recorded from 15 counties in Georgia (see map).

**ILLUSTRATION:** (A) branch, with opposite leaves, and single, axillary, female flowers, 0.3x; note pairs of opposite buds where leaves have fallen; (B) leaf, 1x; (C) female flower, two views, 8x. Source: Knox and Sharitz (1990), drawn by Jean B. Coleman and used with permission.

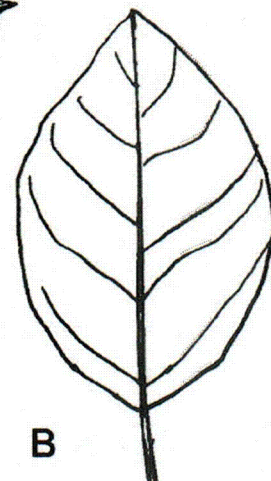
**DESCRIPTION:** Deciduous shrub. *Nestronia* is a small, colonial shrub, 0.6-1.3 m tall. The young branches are smooth, shiny, and dark purplish-green to chestnut brown. The leaves are opposite, and when a twig is viewed end-on the leaves appear in a single plane in two distinct, opposite rows (2-ranked). The leaves are narrowly ovate to elliptic, 3-6 cm long, about half as wide, pale green,



C



A



B

smooth, and pointed. Male and female flowers are produced on different plants (dioecious). The female flowers are solitary and the male flowers are in tight clusters (umbels) of 3-11 flowers, both types arising 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 3 mm long. The fruit is an olive-shaped drupe, 13-15 mm in diameter, and greenish-yellow, the sepal lobes persistent at the apex. **Flowering period:** April to May; **fruiting period:** July. **Best search time:** during growing season, since twigs and leaves are diagnostic.

**HABITAT:** Found in dry, open, upland forests of mixed hardwood and pine.

**SPECIAL IDENTIFICATION FEATURES:** *Nestronia* grows in dense clumps resembling, but slightly taller than, the common lowbush blueberry (*Vaccinium pallidum*, including plants sometimes known as *V. vacillans*). The 2-ranked, opposite leaves with a pale green color on shiny, purplish-green to chestnut brown twigs are diagnostic. The leaves fall early and plants become hidden in fallen litter. The buds are 1-3 mm long, about 1 mm wide, pointed, and dark blackish-brown, covered with 3-4 pairs of bud scales. The buds point outward, sometimes nearly at right angles to the twig. Each pair of dark buds is conspicuous on the naked winter twig. When a leaf is shed, it leaves a circular leaf scar at the base of the bud for next year's leaf. In contrast, lowbush blueberry has alternate, deep green leaves on green to greenish-brown twigs; its buds are greenish or reddish, and the subtending leaf scars on the winter twigs are crescent-shaped.

**MANAGEMENT RECOMMENDATIONS:** Hand thinning of shading trees in its vicinity, if done carefully, may be beneficial to this species.

**REMARKS:** William Bartram made the first recorded observation of this species in 1773, in Georgia. It was described in 1836. It is now known from about 16 locations in Georgia. The genus *Nestronia* consists of only this species. Like many of its relatives in the Santalaceae (e.g., buffalo nut), *Nestronia* is a hemiparasite. Such plants contain chlorophyll and make their own food, but are capable of parasitizing the roots of certain other plants when the opportunity presents itself. *Nestronia umbellula* is rare throughout its range and has sustained significant habitat loss due to clearing of forest land. Many of the remaining populations are of only a single sex, and thus are mostly able to reproduce by asexual root-sprouting. Dioecious species such as this one are especially vulnerable to fragmentation of their habitat. As a result of habitat loss, the distance between individuals—in the genetic sense—increases, lessening the likelihood that a pollinator will travel from an individual to one of the

opposite sex.

#### SELECTED REFERENCES

- Dean, B. E. 1988. *Trees and Shrubs of the Southeast*. Third Edition, Revised and Expanded. Birmingham Audubon Society Press, Alabama. 264 pp.
- Horn, D. D. and R. Kral. 1984. *Nestronia umbellula* Rafinesque (Santalaceae), a new state record for Tennessee. *Castanea* 49:69-73.
- Knox, J. N. and R. R. Sharitz. 1990. Endangered, threatened, and rare vascular flora of the Savannah River site. Publication SRO-NERP-20. Savannah River Site National Environmental Research Park Program, Savannah River Ecology Laboratory, Aiken, South Carolina. 147 pp.
- Kral, R. 1983. A report on some rare, threatened, or endangered forest-related vascular plants of the South. Technical Publication R8-TP2. United States Forest Service, Atlanta, Georgia. 1305 pp.
- Musselman, L. J. 1991. *Nestronia*. In: Terwilliger, K. (coordinator), Virginia's Endangered Species. McDonald and Woodward Publishing Company, Blacksburg, Virginia. 672 pp.
- Radford, A. E., H. E. Ahles, and C. R. Bell. 1968. *Manual of the Vascular Flora of the Carolinas*. University of North Carolina Press, Chapel Hill. 1183 pp.

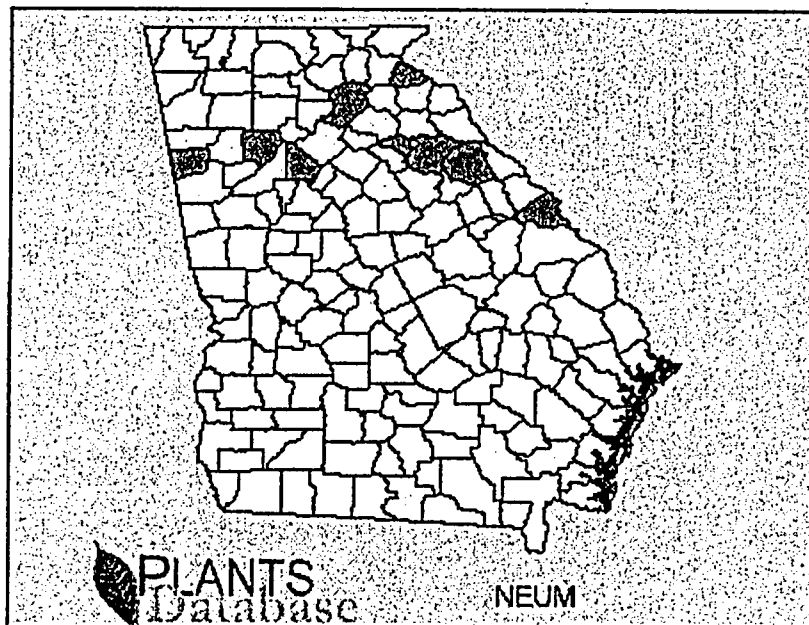
434 mixed Pine - Hardwood  
413 Xeric Hardwood





Photo by Dennis D. Horn



**County Distribution of  
NEUM In Georgia**

*Neutronia umbellula* Raf.  
leechbrush

[Return to the  
NEUM Plant Profile Page](#)

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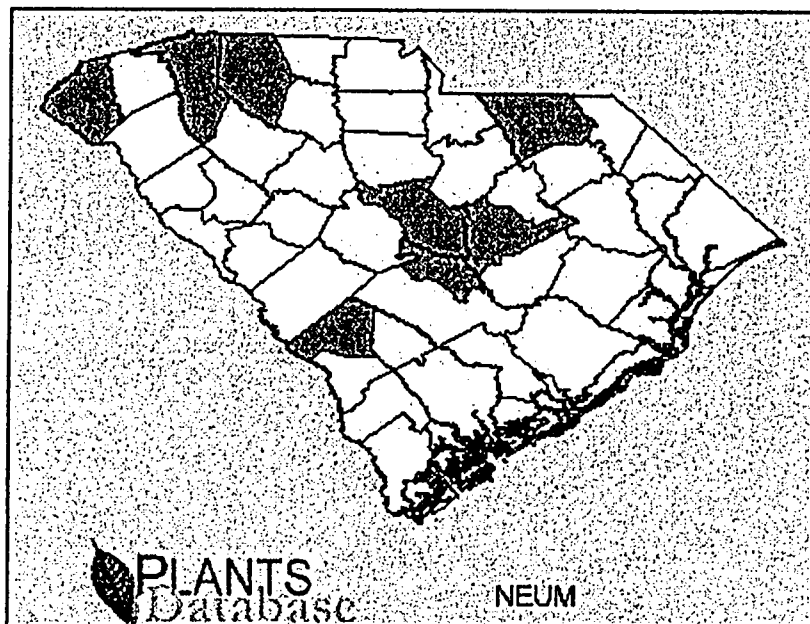
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Time Generated: Fri 1:34 PM - 02/11/2005

**County Distribution of  
NEUM In South Carolina***Neutronia umbellula* Raf.  
leechbrush**Return to the  
NEUM Plant Profile Page**

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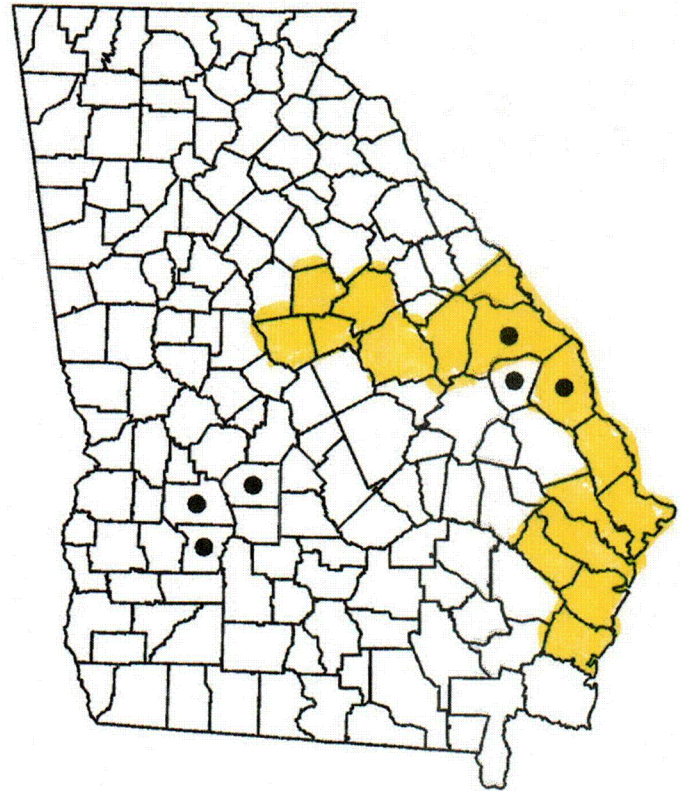
Time Generated: Fri 1:34 PM - 02/11/2005

# *Oxypolis canbyi* (Coulter & Rose) Fernald

1

Canby Dropwort

Carrot Family, APIACEAE



## LEGAL STATUS:

State: ENDANGERED

Federal: ENDANGERED

**SYNONYMY:** None in current usage.

**RANGE:** Coastal Plain from southwestern Georgia to southeastern North Carolina, disjunct in Maryland, and possibly extirpated in Delaware. Recorded from six counties in Georgia (see map).

**ILLUSTRATION:** (A) plant habit, with proliferation of cord-like rhizomes at base, 0.2x; (B) quill-like leaf attached to portion of a hollow stem, 1x; note partitions in leaf; (C) flower, three views, from below, above, and side (lowermost), 5x; note upwardly curled petals; (D) fruit of *Oxypolis filiformis*, three views, 5x; note thin wings on the flattened fruit; (E) fruit of *O. canbyi*, three views, 5x; note much thicker wings on the flattened fruit. Source: (A, C, D, E) Kral (1981), drawn by Robert Kral and used with permission; (B) original drawing by Vicky Holifield.

**DESCRIPTION:** Perennial herb. This is a hollow-stemmed, aromatic (odor of dill) plant up to 1.5 m tall, which spreads by elongate, cord-like, deep-set rhizomes. The lower stem is suffused with purple. The quill-like leaves are actually modified leafstalks, which are round in cross section, divided by partitions, and up to 20 cm long. The tiny flowers are arranged in flat-topped

clusters composed of 5-11 individual umbels, themselves arranged in umbellate fashion, forming a compound umbel (see illustration showing three compound umbels). The compound umbels are either terminal or axillary, and are subtended by a whorl of several (5-11) linear bracts that are 1.0-2.5 cm long. The five sepals may be tinged red. The five petals are white, 1.2-1.3 mm long, and curve upward toward the center of the flower (see illustration). The fruit is flattened in cross section and splits into two halves, each about 5 mm long, strongly ribbed out to the corky-textured, thickened, winged edge (see illustration). **Flowering period:** late June to mid-August, sporadically later during wet summers to early October; **fruiting period:** August to October. **Best search time:** during flowering, since the wispy plants blend in with other vegetation, especially when not in flower.

**HABITAT:** Found in peaty muck of shallow cypress ponds, wet pine savannas, and adjacent sloughs and drainage ditches.

**SPECIAL IDENTIFICATION FEATURES:** There are two tall (about 1 m or more) aquatic plants in the Coastal Plain with quill-like leaves and flat-topped clusters of tiny, white flowers. Both are *Oxypolis* species, but not yet observed from the same site. Common dropwort (*O. filiformis*) lacks cord-like rhizomes, has compound umbels composed of more (usually 10-20) individual umbels, and produces fruits with thinly winged margins (see illustration). In contrast, Canby dropwort (*O. canbyi*) has cord-like rhizomes from a pinkish-purple lower stem, has compound umbels composed of fewer (5-11) individual umbels, and produces fruits with thick, corky wings (see illustration).

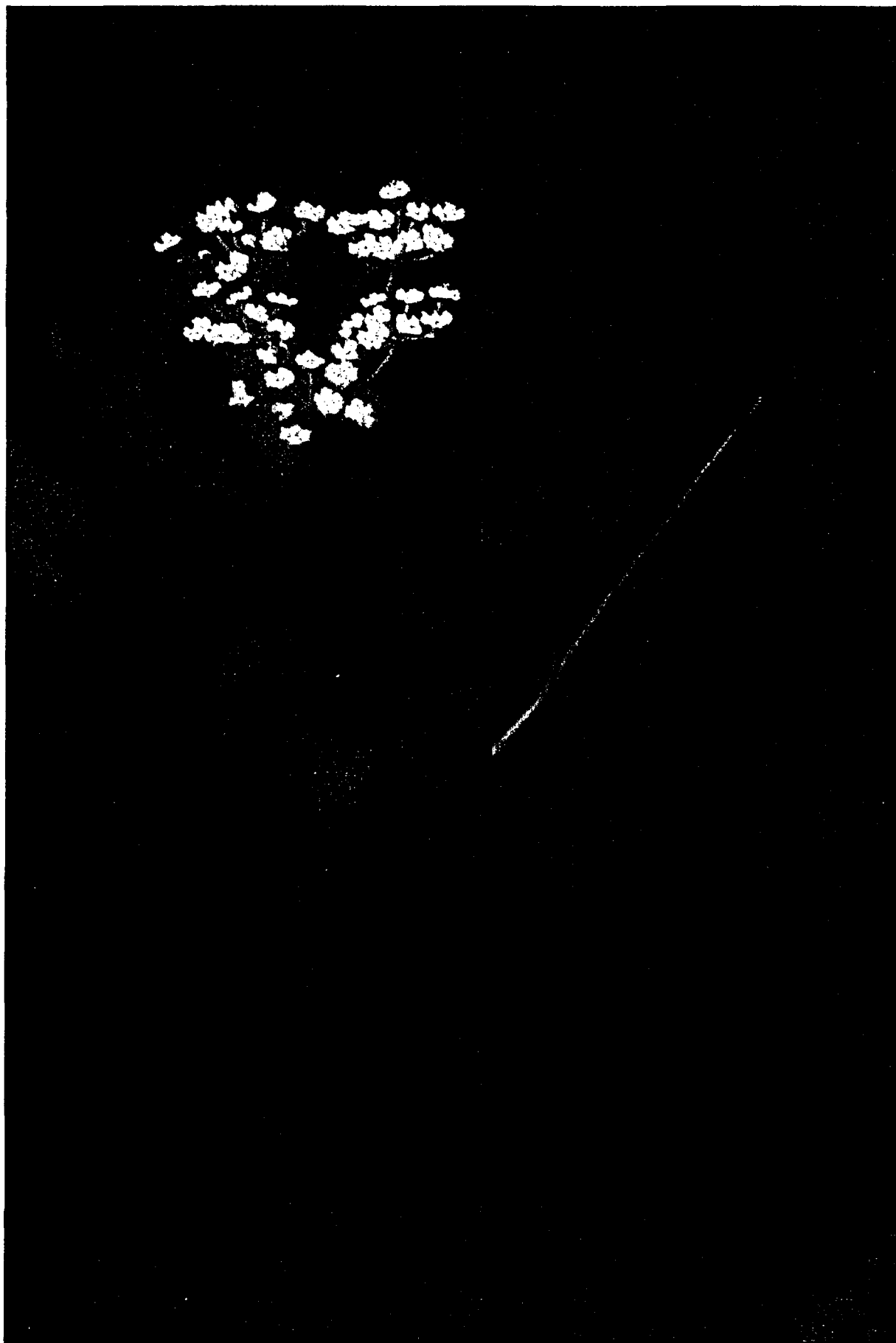
**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site. Control encroachment of competing vegetation through prescribed burning during drought years. Hand thinning of shading trees in its vicinity, if done carefully, may be beneficial to this species.

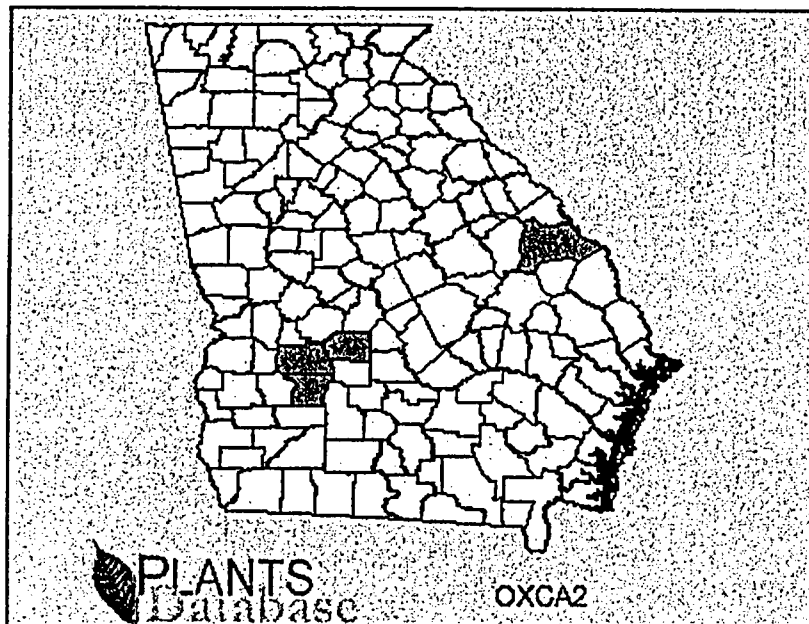
**REMARKS:** William Canby (1831-1904), a businessman and avid plant collector, made the first collection of this species in 1867, in Delaware. It was not recognized as distinct from the common dropwort (*Oxypolis filiformis*) until 1900. Roland Harper made the first Georgia collection in 1901, in Lee County. There are 18 populations known to persist in the state; another four are believed extirpated. Recently, helicopter surveys have revealed a few previously unknown populations; such surveys are practical because the preferred habitat of this species is relatively open and flowering individuals are sufficiently conspicuous and distinctive. *Oxypolis canbyi* is rare throughout its range and has sustained significant habitat loss due chiefly to draining of its habitat for agricultural land.

#### SELECTED REFERENCES

- Fernald, M. L. 1970. Gray's Manual of Botany. Eighth (Centennial) Edition-Illustrated. D. Van Nostrand Company, New York. 1632 pp.
- Kral, R. 1981. Notes on some "quill"-leaved umbellifers. *Sida* 9:124-134.
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- Rickett, H. W. 1966. Wild Flowers of the United States. Volume 2. The Southeastern States. McGraw-Hill, New York. 688 pp.
- Tucker, A. O., N. H. Dill, T. D. Pizzolato, and R. Kral. 1983. Nomenclature, distribution, chromosome numbers, and fruit morphology of *Oxypolis canbyi* and *O. filiformis* (Apiaceae). *Systematic Botany* 8:299-304.

890 Cypress - Pine Swamp  
 900 Bottomland Hardwood  
 990 Evergreen Forested Wetland  
 980 Shrub Wetland




**County Distribution of  
OXCA2 In Georgia**

*Oxypolis canbyi* (Coult. &  
Rose) Fern.  
Canby's cowbane

**Return to the  
OXCA2 Plant Profile Page**

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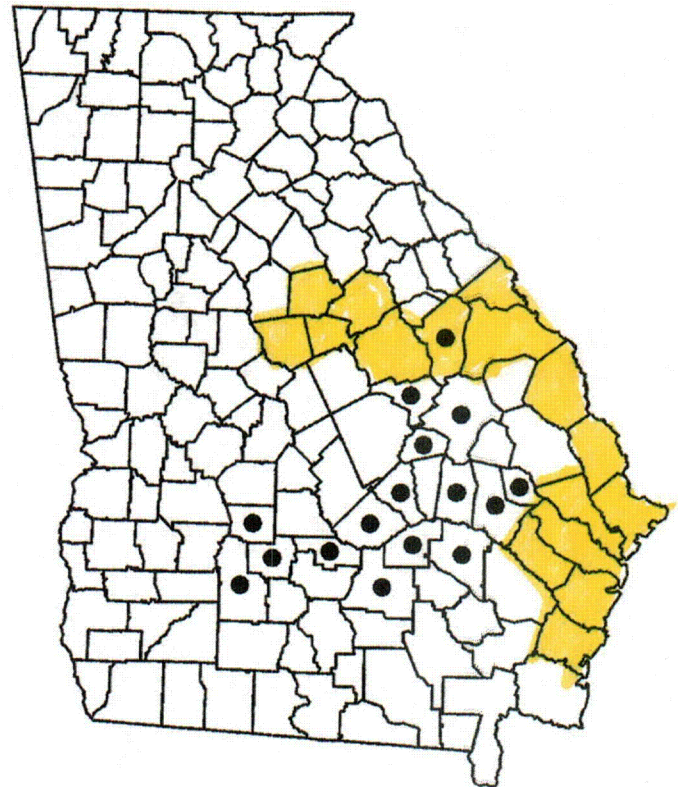


# *Penstemon dissectus* Elliott

1

Cutleaf Beardtongue

Figwort Family, SCROPHULARIACEAE



### LEGAL STATUS:

State: RARE

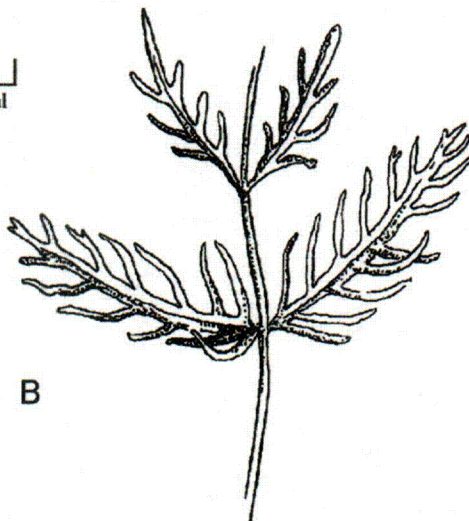
Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Coastal Plain of Georgia. Recorded from 16 counties in Georgia (see map).

**ILLUSTRATION:** (A) flowering stem, upper portion, 1x; (B) leaves, two pair, on lower stem, 1x. Source: original drawing by Vicky Holifield.

2cm on original  
drawing



**DESCRIPTION:** Perennial herb. The stems are 1-several, often clumped, and 3-4 dm tall. Stem leaves are opposite, 1.5-5.0 cm long, 1-2 cm wide, deeply divided (dissected) into linear segments (see illustration). Basal leaves, with their margins entire to few-toothed, form a rosette that withers as the flowering shoot matures. The flowers are in branched, terminal clusters (panicles), and resemble those of snapdragons and foxgloves in shape. The five sepals are 3-4 mm long, ovate, and pointed at the apex. The corolla has an upper lip of two fused petals, and a longer lower lip of three fused petals. The corolla, including tube and lips, is 20-25 mm long and variously shaded and striped with violet-purple. There are four fertile, non-protruding (included) stamens, and a fifth, protruding (exserted), sterile stamen (staminode), which is bearded with a tuft of yellow hairs. The fruit is an ovoid capsule with a tapered

apex, and contains numerous, small, angled seeds. **Flowering period:** late April to May; **fruiting period:** late May to August. **Best search time:** during growing season, since the dissected stem leaves are diagnostic.

**HABITAT:** Found in dry, open, mixed oak-longleaf pine forests or on thin soils near rock outcrops of the Altamaha Formation (Altamaha Grit), a coarse, gritty, resilient, sandstone-like, indurated (hardened) clay.

**SPECIAL IDENTIFICATION FEATURES:** The beardtongues or penstemons (*Penstemon* spp.) are distinguished by a 2-lipped (bilabiate) corolla with the lower three lobes folded on the outside of the upper two lobes. The inner surface of the upper lobes bears a peculiar stamen, known as the "beardtongue" or staminode. The staminode is a sterile stamen, producing only a terminal beard of yellow hairs rather than pollen. Other genera in the figwort family have *beardless* sterile stamens. The cutleaf beardtongue is easily distinguished from other beardtongues by its deeply dissected stem leaves.

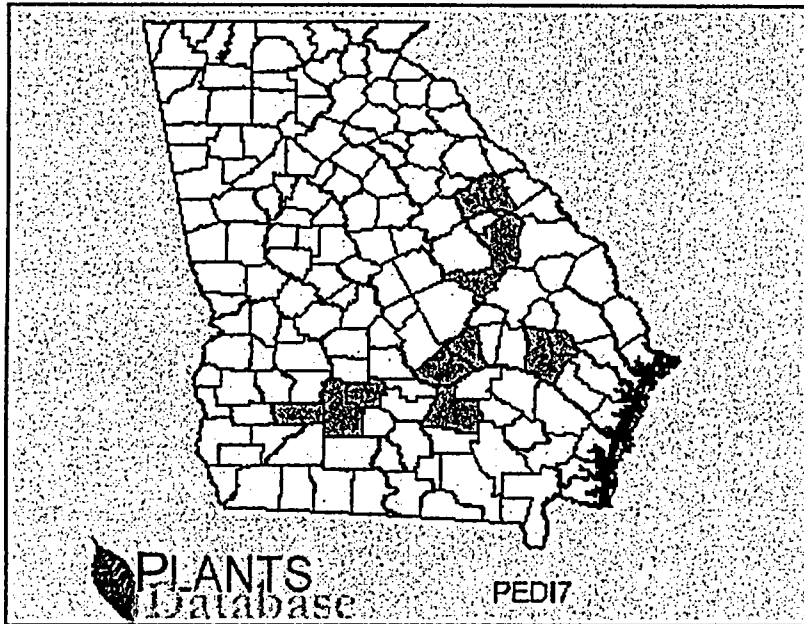
422 Open hollyhock - Short leaf Pine  
413 Xeric Hardwood

**MANAGEMENT RECOMMENDATIONS:** Control encroachment of woody vegetation through prescribed burning. Timber removal, if desired, may be beneficial to this light-loving plant.

**REMARKS:** This species was described in 1822, based on a specimen sent to Stephen Elliott from Louisville, Georgia, then the state capital. The specimen came from James Jackson, son of Governor James Jackson. This species has been found at a total of about 21 locations, all in the Altamaha Grit region of the Inner Coastal Plain of Georgia. It is unique within the genus in possessing finely dissected leaves. *Penstemon dissectus* is a Georgia endemic species that is rare throughout its geographically restricted range.

#### SELECTED REFERENCES

- Duncan, W. H. and L. E. Foote. 1975. Wildflowers of the Southeastern United States. University of Georgia Press, Athens. 296 pp.
- Harper, R. L. 1906. A phytogeographical sketch of the Altamaha Grit Region of the Coastal Plain of Georgia. *Annals of the New York Academy of Sciences* 17:1-414, Part 1.
- Pennell, F. W. 1935. The Scrophulariaceae of eastern temperate North America. Monograph Number 1. Academy of Natural Sciences of Philadelphia. 650 pp.
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- Small, J. K. 1933. Manual of the Southeastern Flora. 1972 Reprint Edition. Hafner Publishing Company, New York. 1554 pp.





**County Distribution of  
PED17 in Georgia**

*Penstemon dissectus* Ell.  
dissected beardtongue

**Return to the  
PED17 Plant Profile Page**

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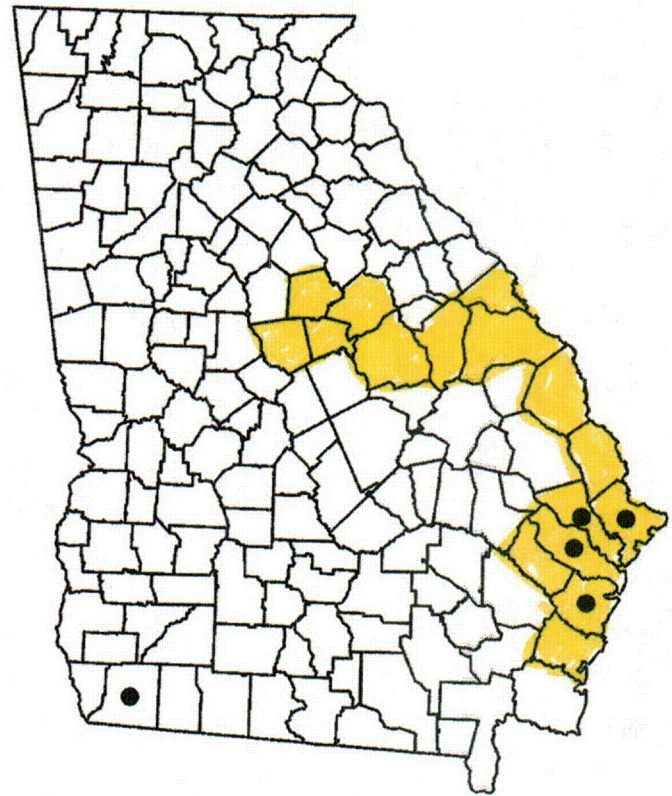
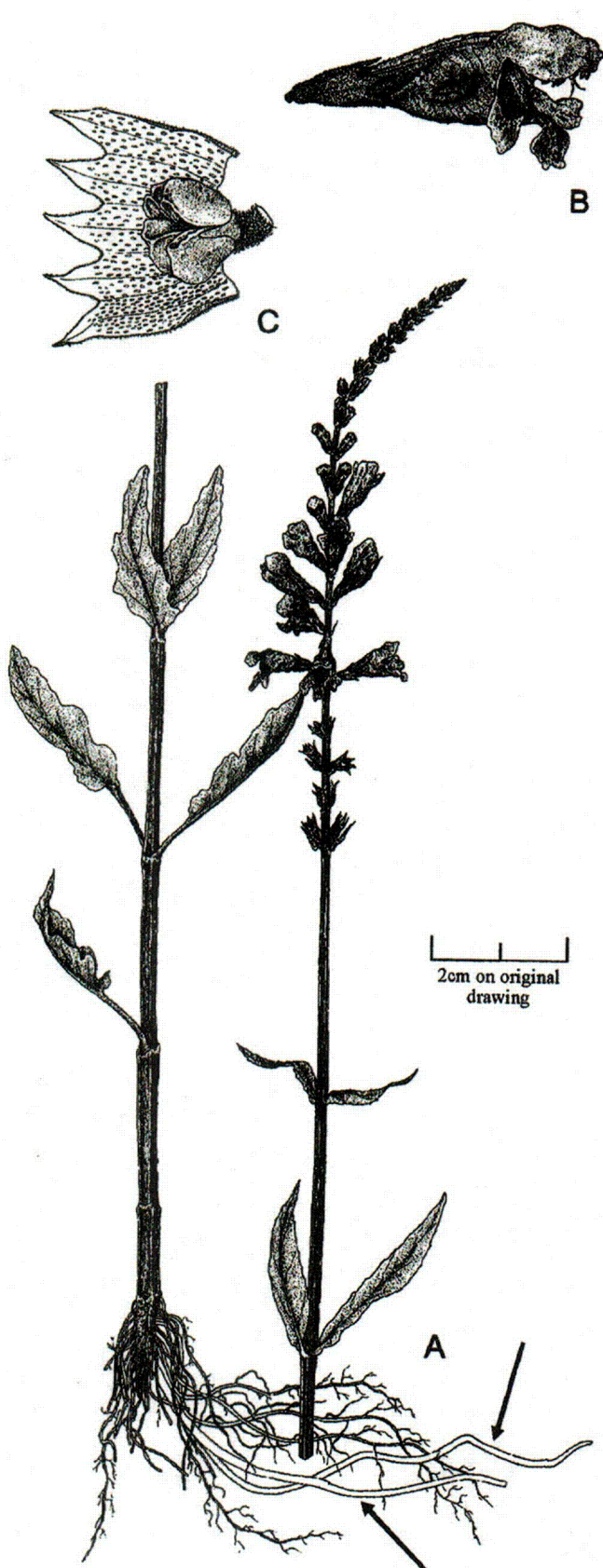
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# *Physostegia leptophylla* Small

1

Narrowleaf Obedient Plant, False Dragonhead

Mint Family, LAMIACEAE



### LEGAL STATUS:

State: THREATENED  
Federal: None

### SYNONYMY:

*Dracocephalum leptophyllum* (Small) Small  
*Dracocephalum veroniciforme* (Small) Small  
*Physostegia veroniciformis* Small

**RANGE:** Coastal Plain of Florida and Georgia, north to southeastern Virginia. Recorded from five counties in Georgia (see map).

**ILLUSTRATION:** (A) plant habit, showing lowermost leaves stalked and the uppermost leaves clasping the stem, 0.5x; note the elongate, horizontal rhizomes; (B) flower, profile, 2x; (C) fruiting calyx, opened to show the 3-angled nutlets, 4x. Source: Godfrey and Wooten (1981), drawn by Melanie Darst and used with permission.

**DESCRIPTION:** Perennial herb. This showy herb has quadrangular stems up to 14 dm tall. The primary underground stem (rhizome) branches, producing numerous horizontal secondary rhizomes capable of producing plants asexually. The leaves are opposite in 7-15 pairs, with the margins wavy (undulate) or having low, rounded teeth. The lower pairs of leaves have longer leafstalks (to 6 cm long) and the expanded portion of the leaf (blade) is elliptic-lanceolate, 3-11 cm long and 1-3 cm

wide. The upper pairs of leaves clasp the stem and are narrowly lanceolate, 2-13 cm long, and 0.5-3.3 cm wide. The uppermost leaves are much longer than the flower bracts, which are 2-8 mm long and 1.2 mm wide. The numerous flowers are produced in showy terminal racemes that are finely hairy or downy, the hairs only 0.1 mm long. The corolla is deep lavender to reddish-violet with purplish splotches within, 14-30 mm long, and 2-lipped, the lower lip with three lobes. The calyx is densely fine-hairy, with a tube 3.5-6.0 mm long, and five lobes that are sharply pointed and 1-3 mm long. Each flower produces up to four fruits, which are nutlets, each 3-angled, brown, and 2.2-3.2 mm long. **Flowering period:** late April to early August; **fruiting period:** July to October. **Best search time:** during flowering, when plants are most conspicuous.

**HABITAT:** Found in wet muck or peat in shallow water of river swamp openings, and in the margins of both freshwater and brackish (tidal) marshes.

**SPECIAL IDENTIFICATION FEATURES:** Three obedient plants are found on Georgia's Coastal Plain, but only *Physostegia leptophylla* regularly inhabits river swamps and both freshwater and brackish marshes. Virginia obedient plant (*P. virginiana*) has leaves abruptly tapered to a point (acuminate) and occupies rocky or sandy streambanks, seasonally damp meadows, and moist, rocky openings in woods. Both narrowleaf obedient plant (*P. leptophylla*) and purple obedient plant (*P. purpurea*) have bluntly toothed to entire, sharply pointed to rounded (acute to obtuse) leaves. In *P. purpurea* the distance between the two uppermost pairs of leaves is more than twice their length, and the plant inhabits sloughs, ditches, and open pinelands. In contrast, in narrowleaf obedient plant (*P. leptophylla*) the distance between the two uppermost pairs of leaves is about as long or shorter than their length.

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site.

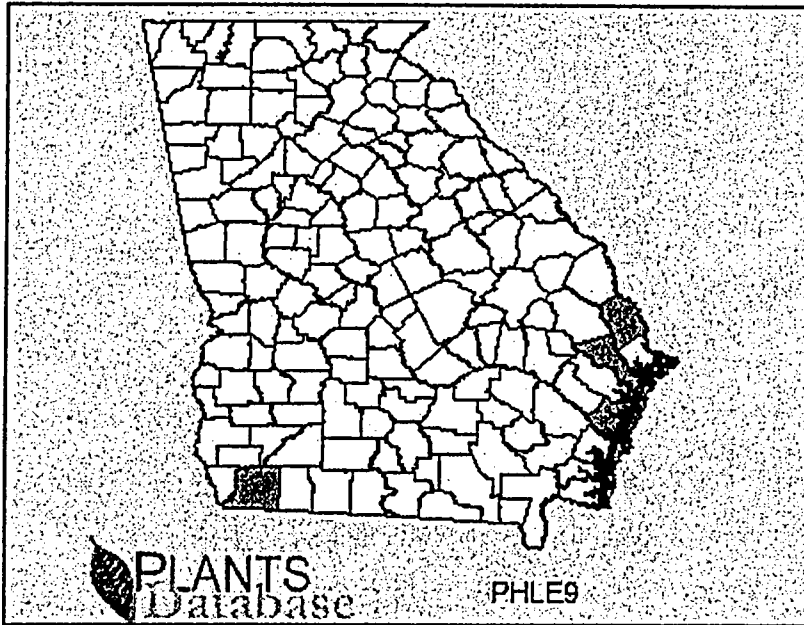
**REMARKS:** John K. Small (1869-1938) described *Physostegia leptophylla* in 1899, based on plants collected along the Manatee River, in Florida. Four years later he described *P. veroniciformis*, based on an old collection from the vicinity of Sunbury, Georgia (Bryan County). *Physostegia veroniciformis* allegedly differed from *P. leptophylla* principally in having short corollas (<2 cm long) but long calyx tubes (8-9 mm long). The most recent monographer of the genus, Cantino (1982), placed *P. veroniciformis* in synonymy with *P. leptophylla* (i.e., he did not treat the former as distinct from the latter). He also apparently considered the plants treated as *P. veroniciformis* by Kral (1983) to represent *P. purpurea* instead. *Physostegia leptophylla* is rare throughout its range and has sustained significant habitat loss due to draining of its habitat for conversion to agricultural land.

#### SELECTED REFERENCES

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- Rickett, H. W. 1966. Wild Flowers of the United States. Volume 2. The Southeastern States. McGraw-Hill, New York. 688 pp.
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890 Cypress Gum Slough  
 900 Bottomland Hardwood  
 930 Fresh Water Marsh




**County Distribution of  
PHLE9 in Georgia**

*Physostegia leptophylla*  
Small  
slenderleaf false  
dragonhead

**Return to the  
PHLE9 Plant Profile Page**

Our county data are based primarily on the literature, herbarium specimens, and confirmed observations. Not all populations have been documented, however, and significant gaps in the distribution shown above may not be real. Please use the Distribution Update module to improve the data by adding your new distribution information to PLANTS. Remember that only native and naturalized populations are mapped!

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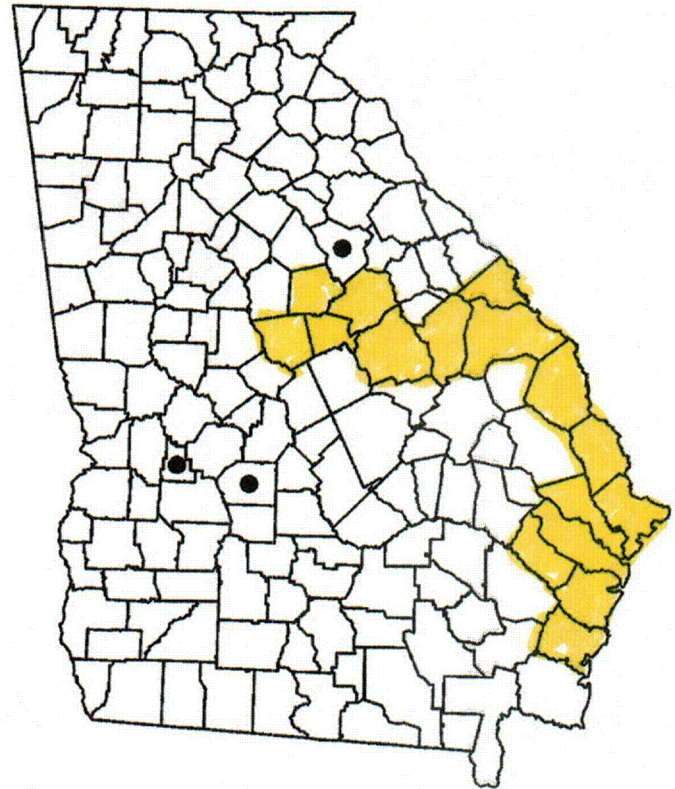
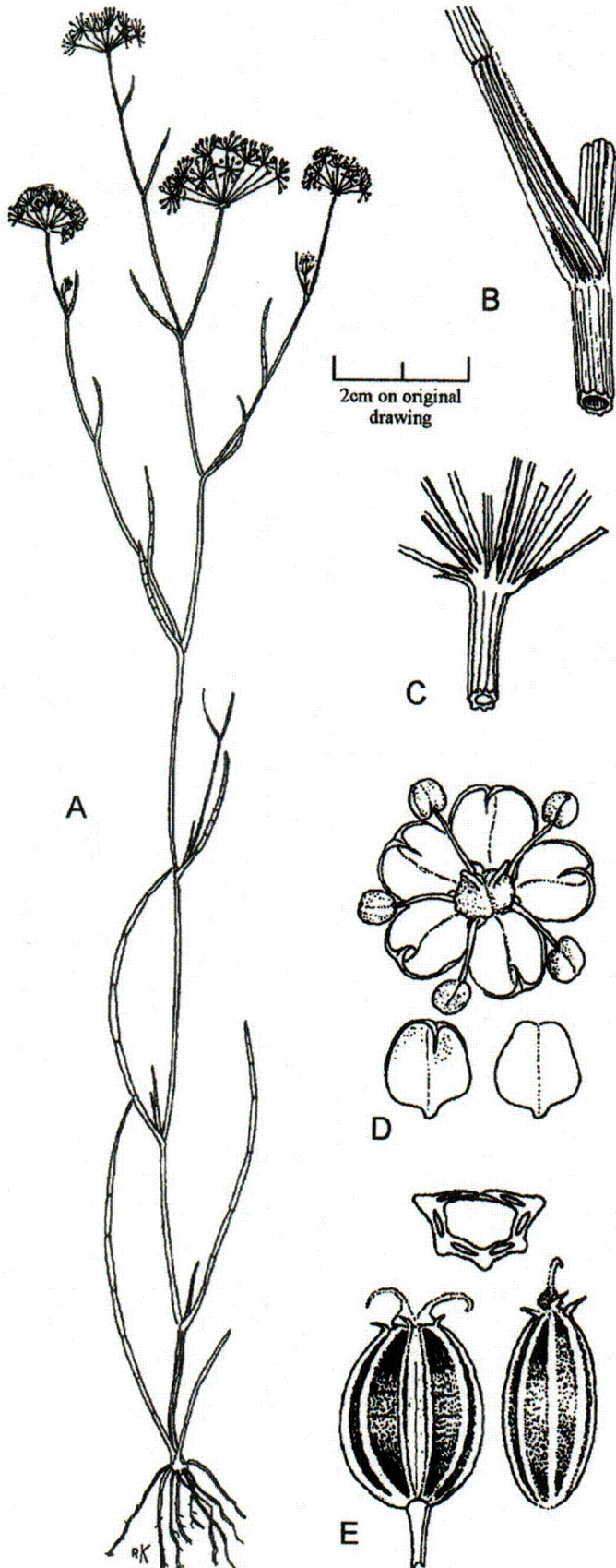
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# *Ptilimnium nodosum* (Rose) Mathias

1

Harperella

Carrot Family, APIACEAE



## LEGAL STATUS:

State: ENDANGERED

Federal: ENDANGERED

## SYNONYMY:

*Harperella fluviatilis* Rose

*Harperella nodosa* Rose

*Harperella vivipara* Rose

*Ptilimnium fluviatile* (Rose) Mathias

*Ptilimnium viviparum* (Rose) Mathias

**RANGE:** Scattered in various physiographic provinces from the Cumberland Plateau of northeastern Alabama, Coastal Plain of westcentral Georgia, Piedmont Plateau of central Georgia, thence into the Carolinas, West Virginia, and Maryland; reported also from Arkansas. Recorded from three counties in Georgia (see map).

**ILLUSTRATION:** (A) plant habit, 0.5x; (B) portion of stem, showing the hollow stem and a leaf base, 3x; (C) base of inflorescence (umbel), 2x; note minute bracts subtending the rays or branches; (D) flower, from above, and a single petal from above (left) and below (right), 10x; (E) fruit, with strong, longitudinal ribs, 15x. Source: Kral (1981), drawn by Robert Kral and used with permission.

**DESCRIPTION:** Annual herb, sometimes overwintering by vegetative buds produced in the axils of lower stem leaves. Plants are 1-4 dm tall, rarely more robust,



sometimes reclining and rooting from the lower stem when submerged. Plants vary greatly in size and fluctuate year-to-year in abundance; full development is dependent upon adequate moisture during summer. The leaves are quill-like, 3-30 cm long, and hollow, with internal partitions. Vegetative buds on lower stems may form rosettes of quill-like leaves in late summer or fall. The flowers are in umbels, themselves clustered in an umbellate manner to form compound umbels. The compound umbels are terminal or axillary, composed of 5-15 simple umbels and subtended by a ring of short (0.5 mm long) bracts. The five sepals are green or reddish-tinged, 0.5 mm long, and persist in fruit. The five petals are white, round, 1-2 mm long, and incurved at the apex. The fruit is nearly globose, thus rounded in cross section, and splits into two halves, each 2 mm long with 3-5, greenish-tan, longitudinal ribs. **Flowering period:** late May to early July; **fruiting period:** July to August, the seeds dropping quickly. **Best search time:** during flowering and early fruiting, since plants rapidly disintegrate soon after flowering.

**HABITAT:** Found on the Coastal Plain in wet savannas and on peaty fringes of pineland pools and cypress ponds; also on the Piedmont Plateau in seeps on a granitic outcrop.

**SPECIAL IDENTIFICATION FEATURES:** Species of *Ptilimnium* have white flowers, longitudinally ribbed fruits that are nearly globose, and leaves either with delicate segments or reduced to a single, quill-like, septate projection. There are two *Ptilimnium* species in Georgia that have delicate habits, their stems under 3 mm in diameter at the base and under 50 cm tall. *Ptilimnium capillaceum* has leaves and bracts divided into extremely narrow segments. In contrast, *P. nodosum* has quill-like, hollow, septate leaves and unbranched bracts. Both species can occur and flower together, closely intermixed at times.

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site and any other activity that might affect the moisture regime or water quality.

**REMARKS:** Roland Harper made the first collection of this species in 1902, near Ellaville (Schley County). He sent material to the leading authority on the family, Joseph Rose, who named the plant *Harperia nodosa* in 1905, in honor of its discoverer. Soon after publication, Rose was informed that the name *Harperia* had been published for a totally unrelated Australian plant the previous year. Therefore, his genus name was not valid for the present species. Harper found more plants in DeKalb County, Alabama in 1905 that differed somewhat from the Georgia material. In 1906 Rose renamed the Georgia material *Harperella nodosa* and described the Alabama plants as *H. fluviatilis*. Rose collected plants in Maryland in 1910, and

described them the next year as *H. vivipara*. In 1936 Mildred Mathias declared *Harperella* to be insufficiently distinct from the genus *Ptilimnium* and transferred Rose's three species to that genus. In time the distinctions among these species were questioned, as perhaps due more to habitat differences than to genetic differences. Currently the taxa *P. nodosum*, *P. fluviatile* and *P. viviparum* are considered one variable species. The Dooly County population was still extant in 1956 (Easterly, 1957), but after that date the plant was not seen again in Georgia until 1980, when James Allison discovered the Greene County population. The latter small population is the only one known to persist in the state. *Ptilimnium nodosum* is rare throughout its range. It has sustained significant habitat loss due to changed hydrology, such as draining of its habitat for conversion to agricultural land, or drowning of it by stream impoundments.

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890 Cypress-Cum Swamp  
620 longleaf Pine



# Arkansas Natural Heritage Commission

Rare Plant Fact Sheet  
PDAP11Y040

## Harperella - *Ptilimnium nodosum*

**Family:** Apiaceae

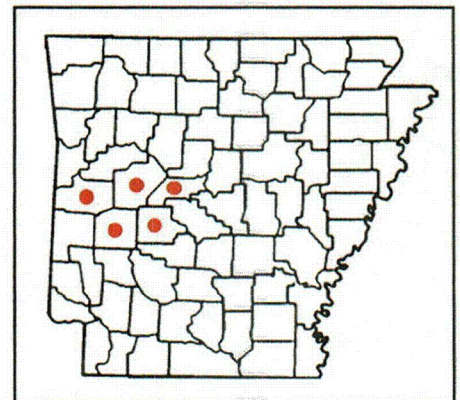
**Identification:** Harperella can be distinguished from other members of the Apiaceae by its hollow, quill-like leaves. Leaves are 1 - 5 inches in length, and are very narrow and delicate. Plants can attain a height of 1 - 2 feet and may occur singly or in large clumps along rocky shoals of clear, swift-flowing streams. During periods of high stream flow, plants may be stripped of their leaves, flowers, fruits, and even stems. New flushes of leaves and stems may appear throughout the summer and into the fall. The white flowers are arranged in umbels, similar to those of Queen Anne's Lace, but are fewer in number and more delicate. Harperella flowers from July to August with seeds produced in late summer or fall. Dispersal of seeds is aided through the action of flood waters.

**Status:**

Federally Listed **Endangered**  
G2 - Imperiled globally due to rarity  
S2 - Imperiled in Arkansas due to rarity

**Current Distribution:** Half of this species known populations have been destroyed. The remaining populations are scattered across Alabama, Arkansas, Georgia, Maryland, North Carolina, South Carolina, and West Virginia. First discovered in Arkansas in 1990, harperella is known from five counties (Garland, Montgomery, Perry, Scott, and Yell) in the Ouachita Mountains. Arkansas populations represent the western most extension of this species known range.

**Cause of Decline:** Harperella grows along rocky shoals of clear, swift-flowing streams. In such places, harparella requires a narrow range of hydrologic conditions, neither too deep nor too dry. Dependence upon specific water depths, and good water quality, have made populations of this species extremely vulnerable to upstream development, changes in water usage and flow, and water quality degradation.



**Distribution of Known  
Arkansas Occurrences**

## Rare Plant Fact Sheet PDAPIIY040

**Habitat:** In Arkansas, harperella occurs along seasonally flooded rocky streams of the Ouachita Mountains. Plants are generally found in microsites (rocky shoals) sheltered from the erosive effects of rapidly moving water. Since flooding along streams can alter the distribution of these microsites, harperella populations seldom persist in one specific location for a number of consecutive years. Instead, populations of this plant tend to shift in accordance with the distribution of suitable habitat.

**Threats and Conservation:** Primary threats to harperella center around changes in water flow and water quality. Dams, reservoirs, and other water impoundments and diversions can alter the narrow range of water levels this species is dependent upon. Likewise, degradation of water quality through siltation can damage existing populations. Protection of habitat where this species is known to occur is essential. However, such protection should take a broad view (entire stream) in light of this species tendency to “move” along a stream in response to the availability of appropriate microsites.

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### For More Information Contact:

**Arkansas Natural Heritage Commission**

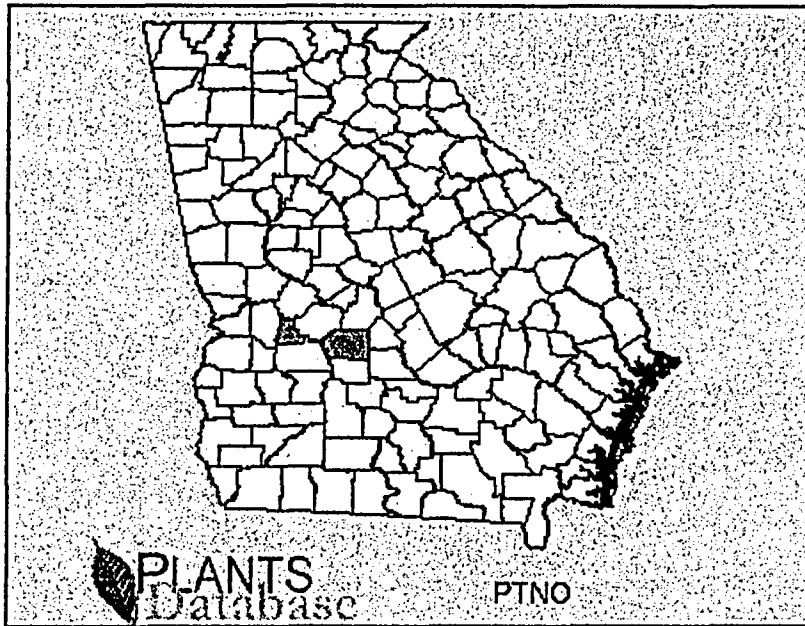
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Little Rock, AR 72201      E-mail: [info@arkansasheritage.org](mailto:info@arkansasheritage.org)

[www.naturalheritage.com](http://www.naturalheritage.com)

2/4/02

Prepared by: Michael D. Warriner and Theo Witsell

Additional text excerpted from a report to the ANHC by Vernon Bates


**County Distribution of  
PTNO in Georgia**

*Ptilimnium nodosum* (Rose)  
Mathias  
piedmont mock bishopweed

**Return to the  
PTNO Plant Profile Page**

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# *Quercus oglethorpensis* Duncan

Oglethorpe Oak

Beech Family, FAGACEAE

**LEGAL STATUS:**

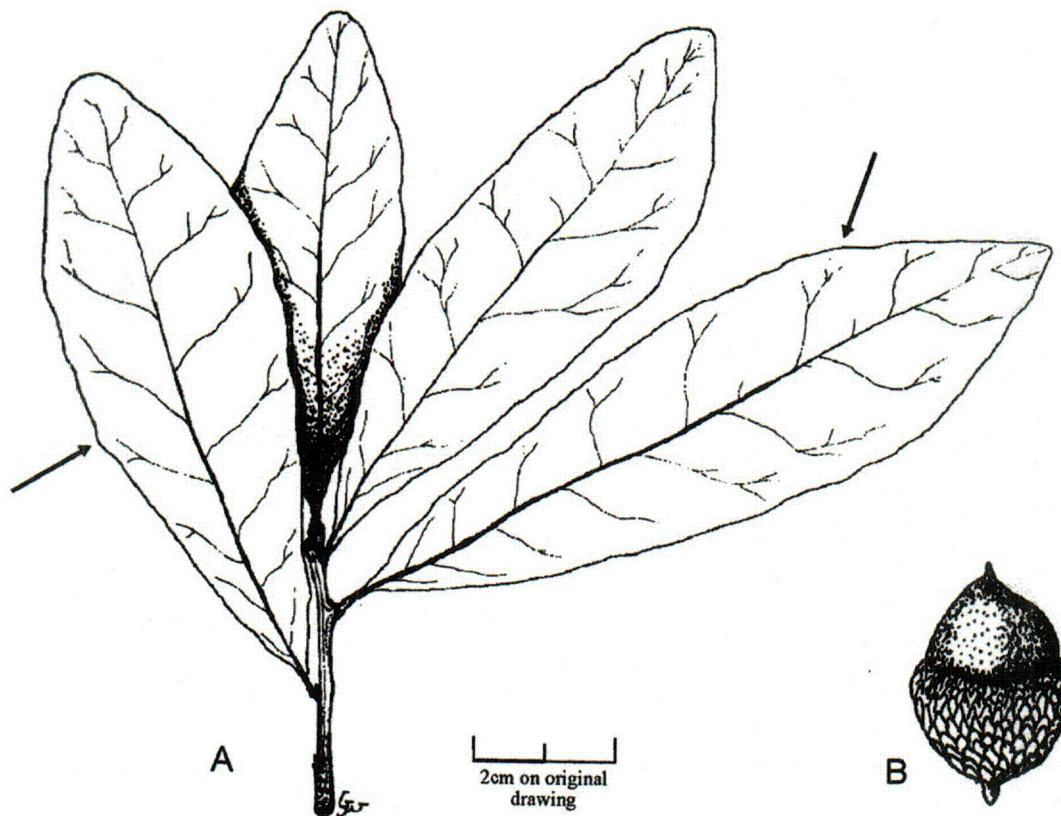
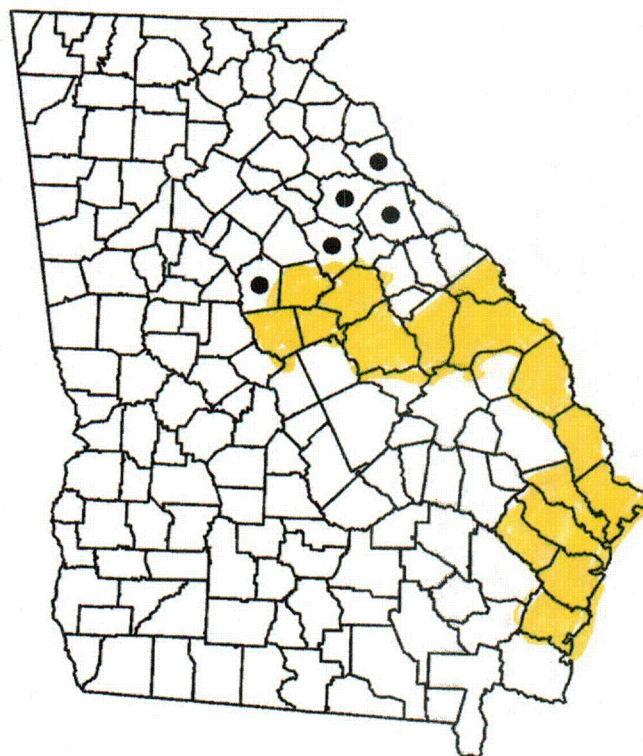
State: THREATENED  
Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Piedmont of Georgia and South Carolina; disjunct on Coastal Plain of Louisiana and Mississippi. Recorded from five counties in Georgia (see map).

**ILLUSTRATION:** (A) twig, with leaves, 1x; note somewhat wavy margins; (B) acorn, with nut nearly half-covered by the cup, 2x. Source: (A) Haehnle and Jones (1985), drawn by Guy Woodward; (B) Miller (1986), drawn by Mozelle Funderburk; and used with permission.

**DESCRIPTION:** Deciduous tree. This is a medium-sized tree with gray, scaly bark that resembles that of white oak or post oak. The leathery leaves are alternate, 5-13 cm long, 1.5-5.0 cm wide, elliptic to obovate, smooth above, felty below with persistent, tawny hairs (the hairs stalked and branched under 10x magnification). Often, the leaves have some shallow lobes or wavy margins, but never any teeth or bristly tips (see illustration). Male and female



flowers are produced on the same tree (monoecious); male flowers are in drooping, linear racemes (catkins) of tiny flowers lacking petals. The fruit, 1.0-1.5 cm long, is an "acorn" composed of a nut and a cup of fused scales, the cup covering one-third to one-half of the nut. **Flowering period:** April; **fruiting period:** September to October. **Best search time:** during growing season when leaves are mature, since the persistent felt-like hairs on the leaf undersides and the peculiar waviness of the leaf margins are all useful in identification.

**HABITAT:** Found mostly in poorly drained, heavy clay soils of seasonally wet Piedmont seepage swamps, often with cherrybark oak (*Quercus pagoda*); sometimes found in surrounding uplands and on stream terraces, especially with chalk maple (*Acer leucoderme*).

**SPECIAL IDENTIFICATION FEATURES:** Oglethorpe oak is distinguished by elliptic to obovate leaves often with wavy margins without teeth or bristles, the leaf undersides covered with persistent hairs, and the bark resembling that of white oak (*Quercus alba*) or post oak (*Quercus stellata*).

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site.

**REMARKS:** This species was named for Oglethorpe County, where Wilbur H. Duncan, G. N. Bishop, and A. D. McKellar collected it in 1939. In examining herbarium specimens, Duncan found one that T. G. Harbison collected in 1919, from Wilkes County. Duncan (1950) hypothesized that the species is a relict, i.e., that the narrow range represented a remnant of a formerly broad distribution. This was confirmed by a series of range extensions over the years, most notably in Jasper County, Georgia (1952); Caldwell Parish, Louisiana (1973); and Scott County, Mississippi (1985). A good place to observe this species is at the Oglethorpe County courthouse in Lexington, where it has been planted. *Quercus oglethorpensis* is rare throughout its range, and has sustained significant habitat loss due to clearing of forest land for agriculture and conversion of hardwood forest to pine plantation. It is also somewhat susceptible to the same blight that devastated the American chestnut.

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890 Cypress Gum Swamp

980 Shrub Wetland

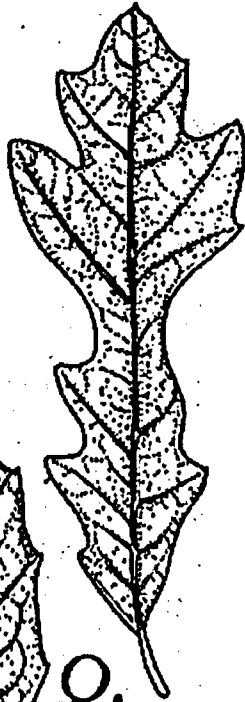
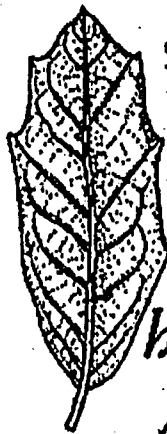
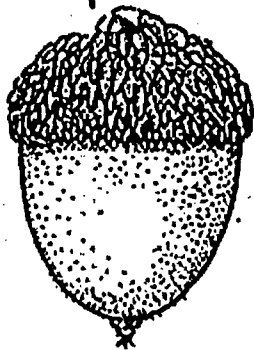
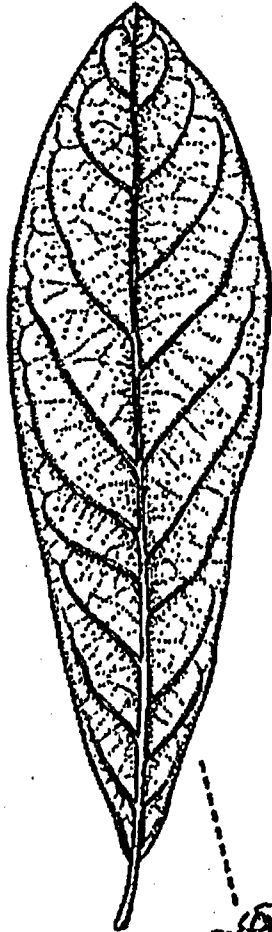
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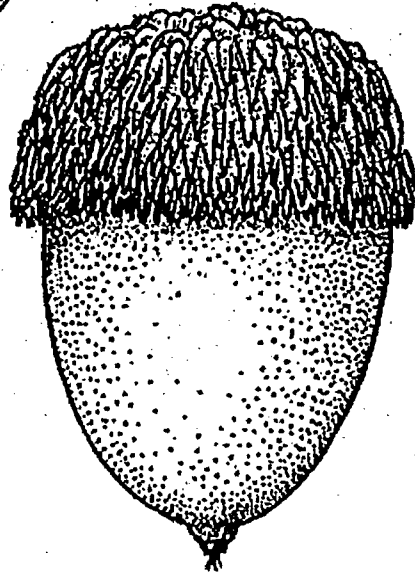




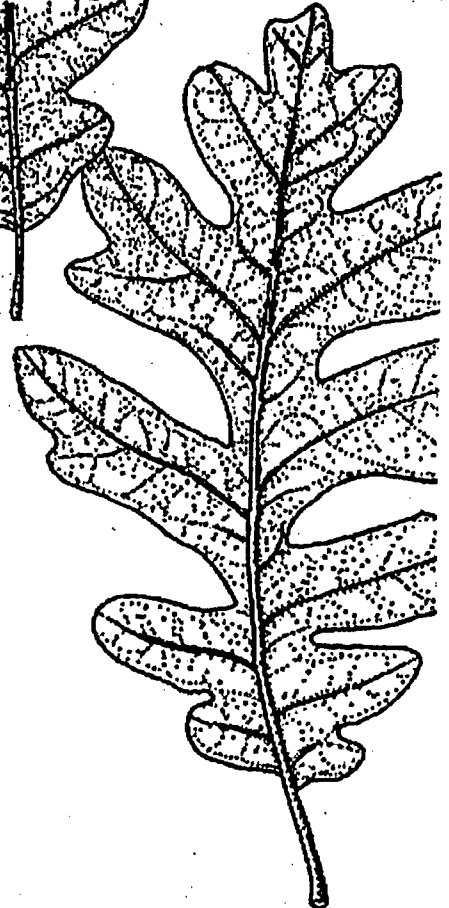
*Q. oglethorpensis*



*Q. havardii*



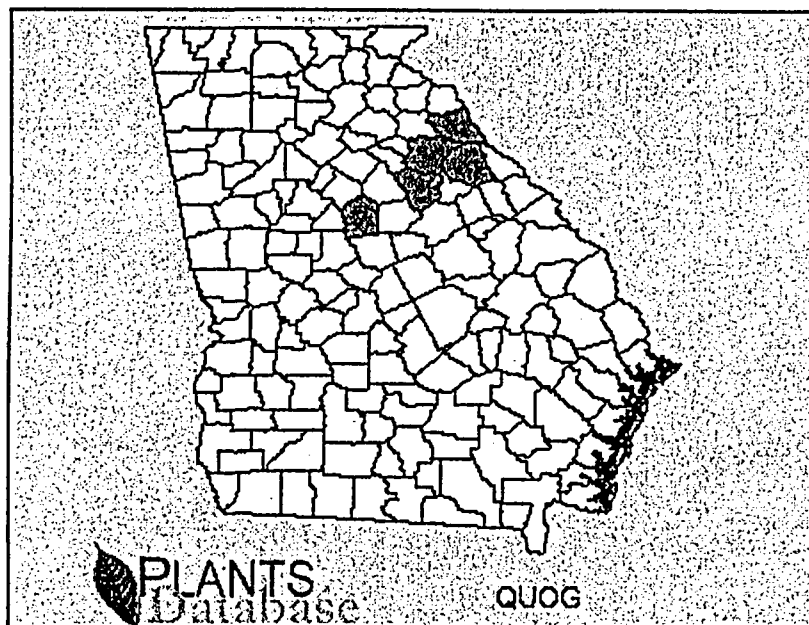
*Q. gambelii*



1 cm all fruits



QUERCUS

**County Distribution of  
QUOG In Georgia**

*Quercus oglethorpensis*  
Duncan  
Oglethorpe oak

**Return to the  
QUOG Plant Profile Page**

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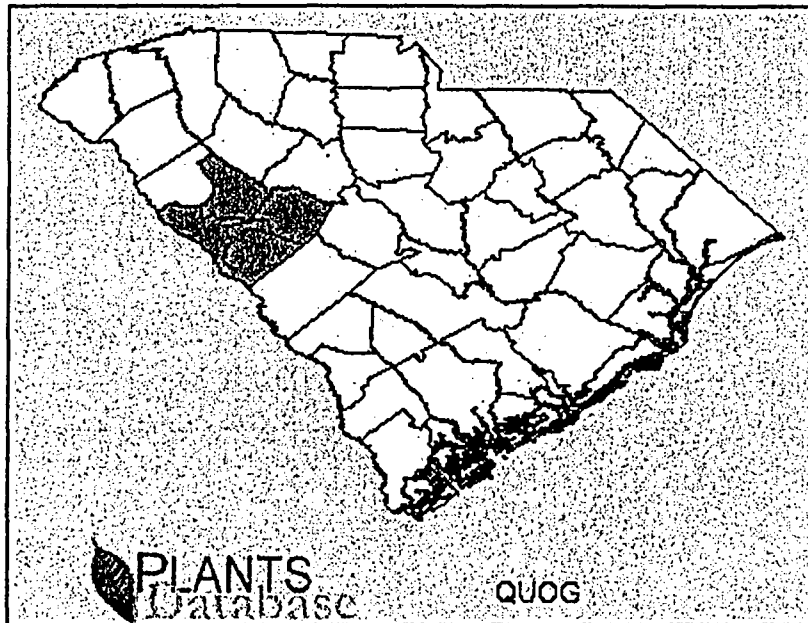
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**County Distribution of  
QUOG In South Carolina**

*Quercus oglethorpensis*  
Duncan  
Oglethorpe oak

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QUOG Plant Profile Page**

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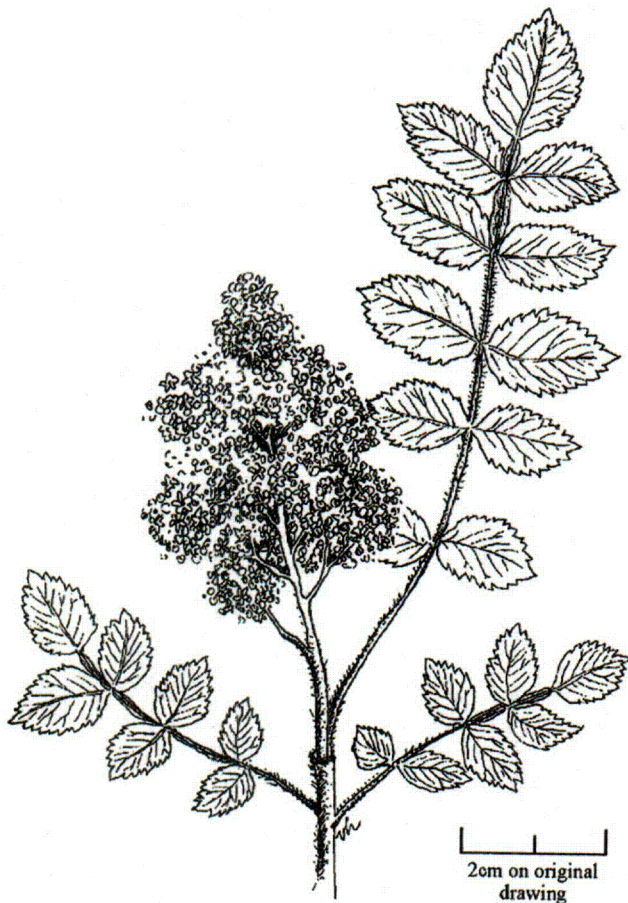
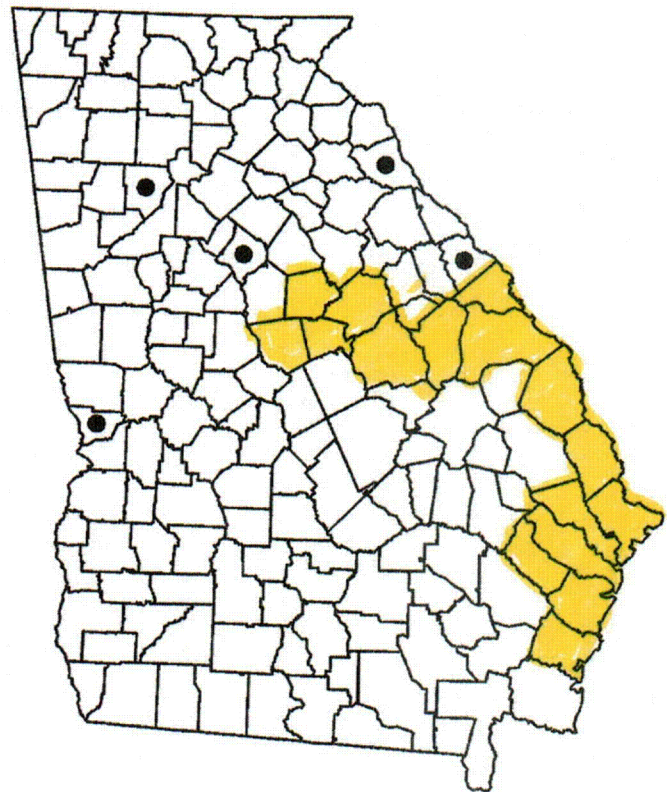
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# *Rhus michauxii* Sargent

1

Dwarf Sumac, False Poison Sumac, Michaux Sumac

Cashew Family, ANACARDIACEAE



## LEGAL STATUS:

State: ENDANGERED

Federal: ENDANGERED

**SYNONYMY:** None in current usage.

**RANGE:** Inner Coastal Plain and Piedmont of Georgia, South Carolina (where possibly extirpated), North Carolina and adjacent Virginia (where first observed in 1993). Recorded from five counties in Georgia (see map).

**ILLUSTRATION:** Flowering branch, showing hairy leaves with uniform, coarse teeth, 0.6x. Source: original drawing by Vicky Holifield.

**DESCRIPTION:** Shrub with a low stature, mostly 0.3-0.6 m tall, forming dense clumps when in healthy populations. Both the young twigs and the leaves are densely hairy. The leaves are divided into 7-13 leaflets on a hairy axis (rachis). Sometimes the axis may be narrowly winged toward the apex (see illustration). The leaflets are 4-9 cm long, 2-5 cm wide, oblong to oblong-lanceolate, without stalks (sessile), coarsely toothed, sharply pointed at the apex, and rounded at the base. Individuals are either male or female (dioecious); the flowers are in dense, terminal panicles and have 4-5, tiny, greenish-yellow petals. The fruit is a drupe, deep red, densely hairy, and 5-6 mm in diameter. **Flowering period:** June to August; **fruiting period:** August to October. **Best search time:** during the

growing season, since leaves are essential for identification.

**HABITAT:** Found on the Piedmont Plateau in rocky, open woods, especially in soils high in magnesium; perhaps also on sandhills of the Inner Coastal Plain.

**SPECIAL IDENTIFICATION FEATURES:** *Rhus michauxii* is readily distinguished by the combination of densely hairy twigs and leaves, coarsely and evenly toothed margins of the leaflets, and dwarf stature (under 1 m tall).

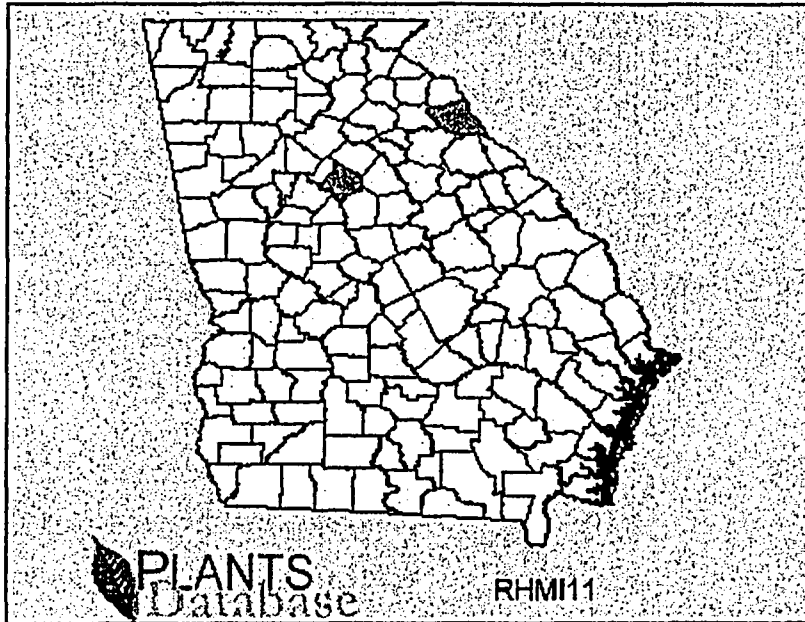
**MANAGEMENT RECOMMENDATIONS:** Prevent encroachment of trees and competing shrubs by controlled burning. Hand thinning of shading trees in its vicinity, if done carefully, may be beneficial to this species.

**REMARKS:** This species was first collected around 1789 by André Michaux (1746-1802), French botanist and explorer, and described in his *Flora Boreali-Americana*, published posthumously in 1802. Unfortunately the name he used had already been published for another species. In 1895 Sargent published the present name, commemorating the discoverer. Samuel Boykin made the first collection from Georgia in 1845, near Columbus. It has since been found at three or four other Georgia locations, but only a single locality in the state is known to harbor it today, and that site may support only a single clone. *Rhus michauxii* is rare throughout its range and has sustained significant habitat loss, at least in part due to fire suppression. Most of the remaining populations of this species are of only a single sex and at a considerable distance from other populations, and thus are able to reproduce only clonally. Like many other dioecious species (e.g., *Nestronia umbellula*) it has been seriously impacted by habitat fragmentation. *Rhus michauxii* sometimes hybridizes with smooth sumac (*R. glabra*) when both grow in the same general vicinity, forming *R. x ashei*.

512 Sandhill  
422 Open hollyhock Shrubleaf Pine  
415 Xeric Hardwood

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- Sherman-Broyles, S. L., J. P. Gibson, J. L. Hamrick, M. A. Bucher, and M. J. Gibson. 1992. Comparisons of allozyme diversity among rare and widespread *Rhus* species. Systematic Botany 17:551-559.

**County Distribution of  
RHMI11 In Georgia**

*Rhus michauxii* Sarg.  
false poison sumac

[Return to the  
RHMI11 Plant Profile Page](#)

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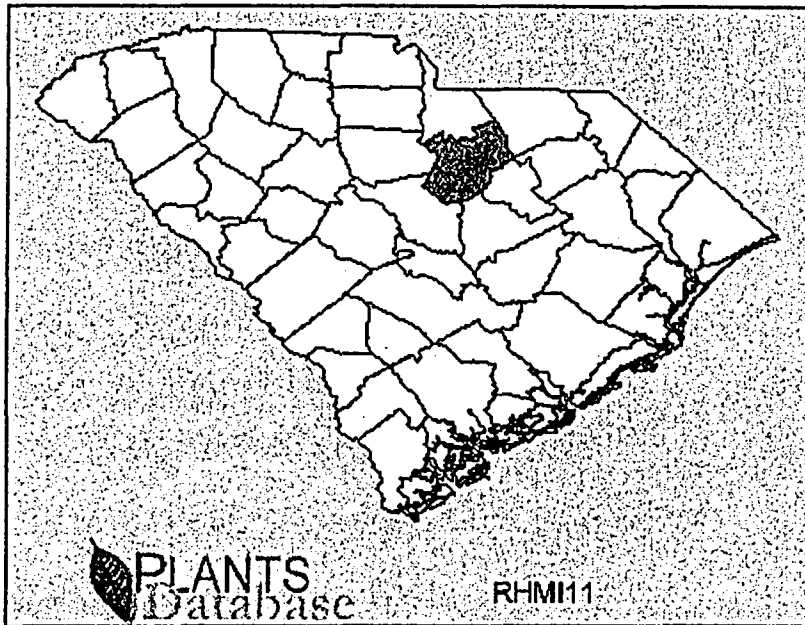
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**County Distribution of  
RHMI11 in South Carolina**

*Rhus michauxii* Sarg.  
false poison sumac

**Return to the  
RHMI11 Plant Profile Page**

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# *Sageretia minutiflora* (Michaux) Mohr

1

Climbing Buckthorn

Buckthorn Family, RHAMNACEAE

## LEGAL STATUS:

State: THREATENED

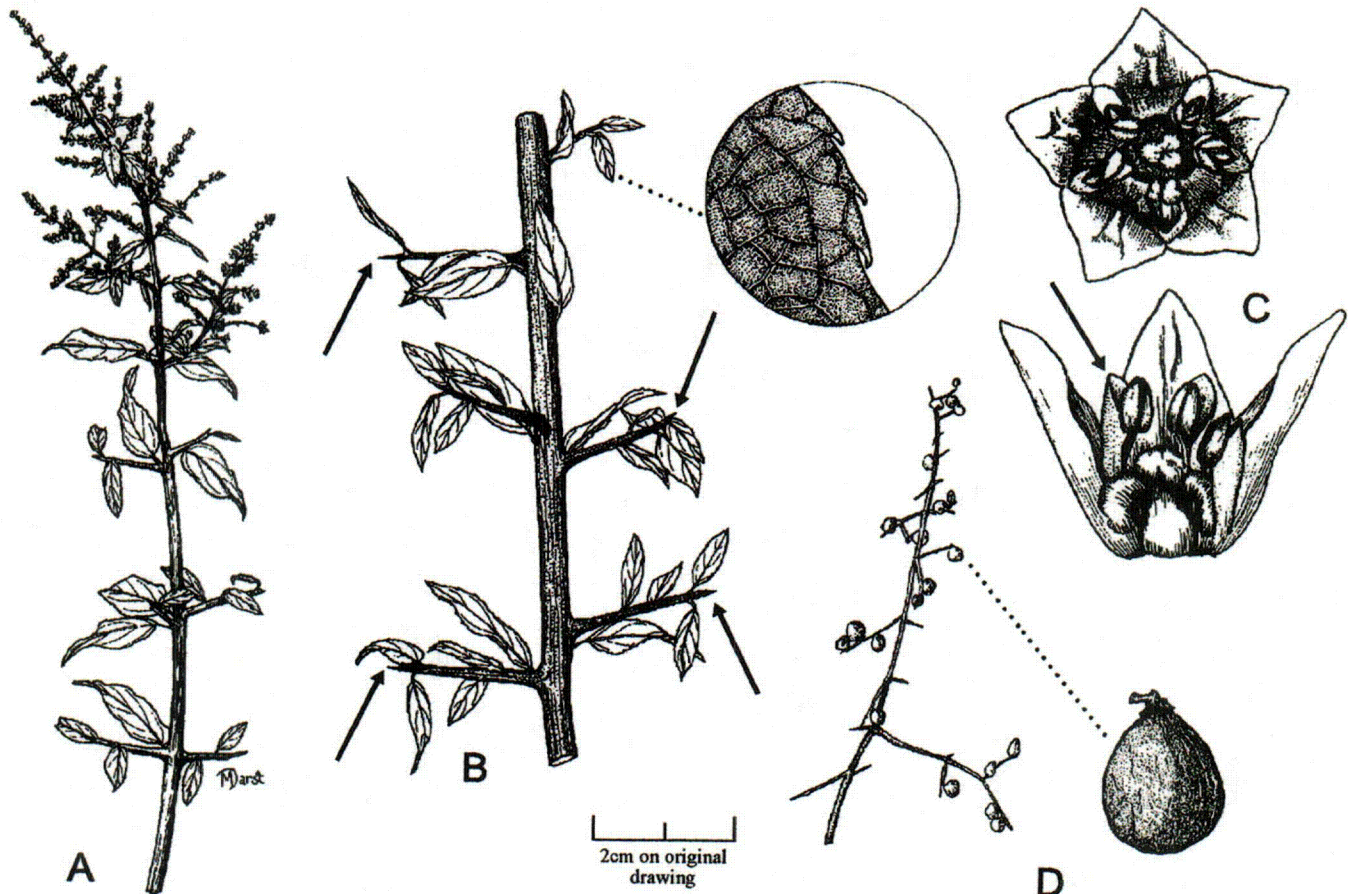
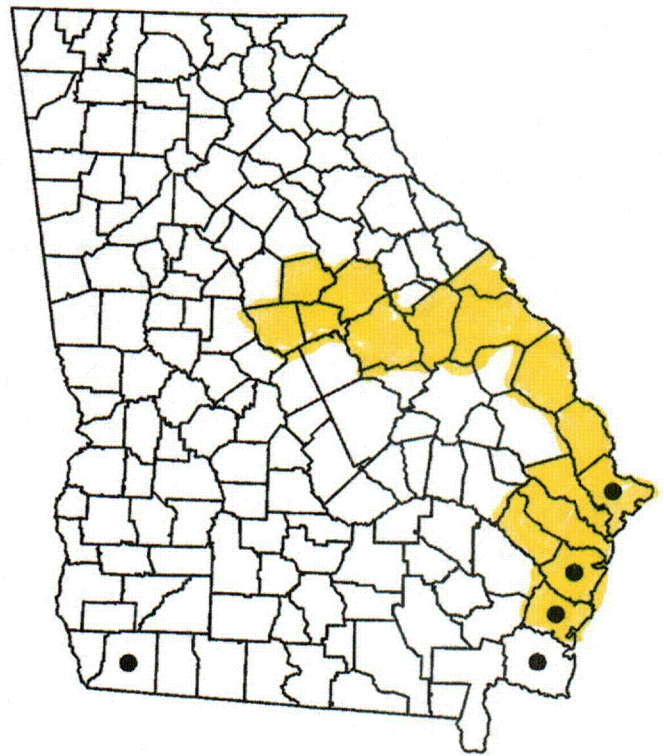
Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Southeastern Coastal Plain from Mississippi to North Carolina, mostly on or near the coast, but with a few inland stations. Recorded from five counties in Georgia (see map).

**ILLUSTRATION:** (A) flowering branch, 0.5x; (B) stem, older portion, with thorn-tipped leafy branchlets, 0.5x; note detail of leaf margin showing minute teeth, 10x; (C) flower, top view, and cutaway side view, 10x; note stamen cupped by a petal; (D) fruiting branch, 0.5x; note detail of mature fruit, 2x. Source: Godfrey (1988), drawn by Melanie Darst and used with permission.

**DESCRIPTION:** Sprawling, vine-like, deciduous shrub. The stems are up to 3 cm in diameter and produce thorn-tipped branchlets. Tendrils are lacking but leader shoots can be vigorous and tend to twine among the tree branches. The leaves are opposite to subopposite, tardily deciduous, 0.5-6.0 cm long, 1-2 cm wide, ovate to round,





the margins having shallow teeth with firm tips (callus-toothed; see illustration). The flowers are in axillary or terminal, leafy-bracted, branched or unbranched spikes with leafy bracts. The flowers are tiny, and fragrant; the five petals are each about 1 mm long, half as long as the sepals, and peculiarly cupped around each stamen. The sepals, petals, and stamens arise from a saucer-shaped floral tube, persisting around the base of the fruit. The fruit is purplish, 5-8 mm in diameter, and at first resembles a drupe or few-seeded berry, but after overwintering, the fruit separates into as many as three, leathery nutlets. **Flowering period:** August; **fruiting period:** September to October or later. **Best search time:** during growing season, since observations of the climbing habit, leaves, and thorny branchlets are all useful for identification.

**HABITAT:** Found on calcareous rocky bluffs, forested shell middens on barrier islands, and evergreen hammocks along banks of streams and coastal marshes.

**SPECIAL IDENTIFICATION FEATURES:** The peculiar habit of climbing into vegetation by aggressive leader shoots with lateral, thorn-tipped branchlets is diagnostic. The leaves differ from those of other members of the buckthorn family, including Carolina buckthorn (*Rhamnus caroliniana*) and supple-jack or rattan-vine (*Berchemia scandens*). In climbing buckthorn, the leaves are opposite to subopposite, their margins with firm-tipped teeth and their veins prominently raised in an intricate network. In contrast, the other buckthorn family members have alternate leaves, their margins entire or with ordinary teeth, their veins strongly parallel in a fishbone pattern.

**MANAGEMENT RECOMMENDATIONS:** Avoid disturbance. This species is tolerant of increased light levels, and thus may benefit from hand thinning of shading trees in its vicinity.

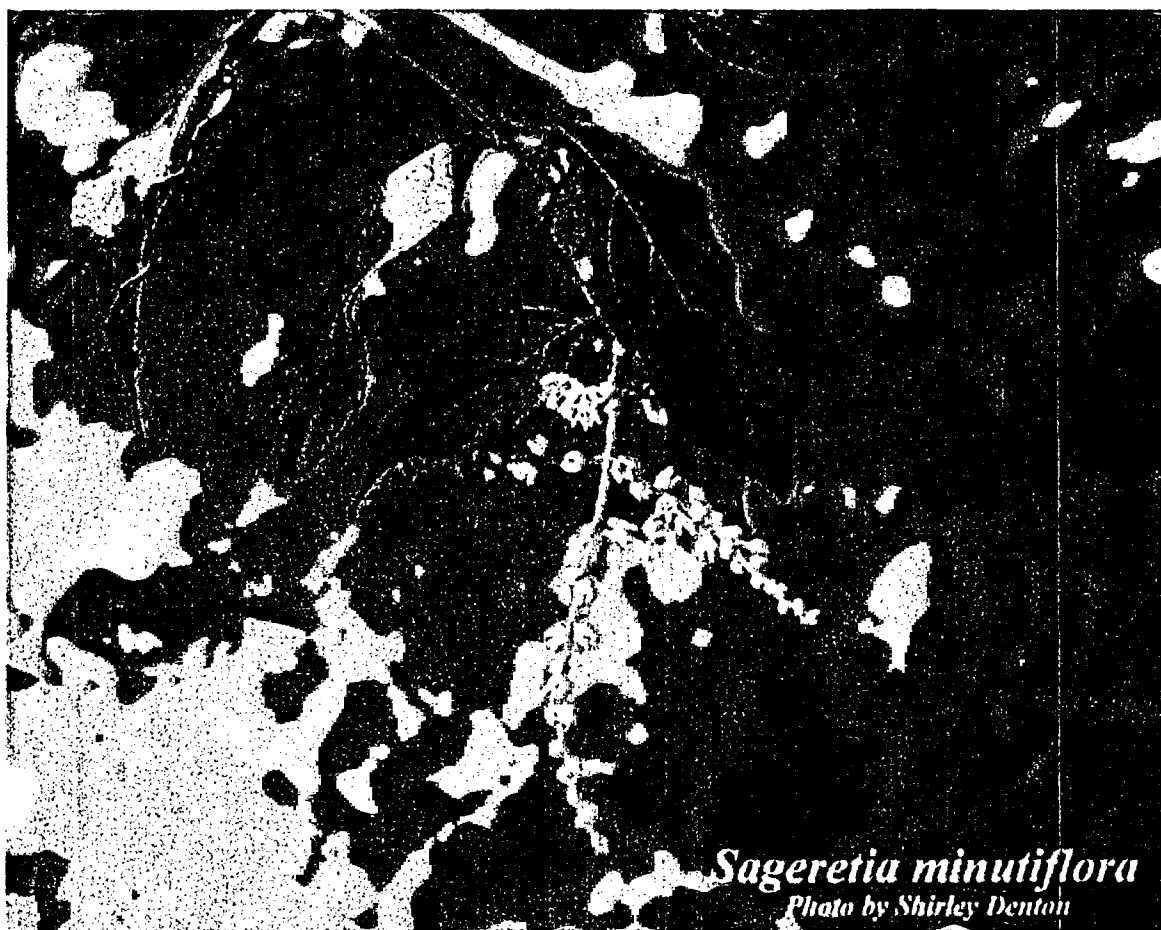
**REMARKS:** *Sageretia* is a genus of some 35 species, found mostly in the warmer regions of the globe, particularly in Asia. In Southeast Asia leaves of *S. thea* are brewed to make a tea. André Michaux described the present species as *Rhamnus minutiflorus*. Later, Adolphe Brongniart segregated it and its close relatives from *Rhamnus* by founding a new genus, *Sageretia*. Because the epithet *minutiflora* ("tiny flowered") was not truly descriptive in the new genus, the members of which tended to have smaller flowers than those of *Rhamnus*, Brongniart renamed it *S. michauxii* in honor of its discoverer. Later the International Code of Botanical Nomenclature, the "law" governing the scientific names given to plants, required the acceptance of the earliest validly published species epithet, regardless of whether it might seem inappropriate. Thus the accepted name is *Sageretia minutiflora*. Wilbur Duncan made the first collection of this species from Georgia in 1956, on Sapelo Island

(McIntosh County). *Sageretia minutiflora* is rare throughout its range. It has sustained significant habitat loss from conversion of its habitat, such as to agricultural land or residential development.

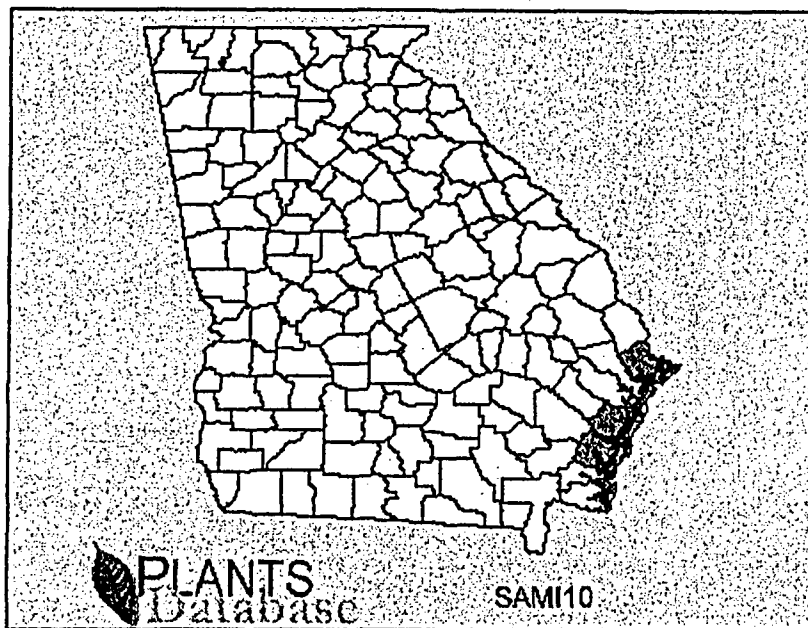
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 Dean, B. E. 1988. *Trees and Shrubs of the Southeast*. Third Edition, Revised and Expanded. Birmingham Audubon Society Press, Alabama. 264 pp.  
 Godfrey, R. K. 1988. *Trees, Shrubs, and Woody Vines of Northern Florida and Adjacent Georgia and Alabama*. University of Georgia Press, Athens. 734 pp.  
 Kral, R. 1983. A report on some rare, threatened, or endangered forest-related vascular plants of the South. Technical Publication R8-TP2. United States Forest Service, Atlanta, Georgia. 1305 pp.

990 Evergreen Forest Wetland  
 930 Fresh Water Marsh  
 890 Cypress-Gum Swamp



*Sageretia minutiflora*  
Photo by Shirley Denton

**County Distribution of  
SAMI10 in Georgia**

*Sageretia minutiflora*  
(Michx.) C. Mohr  
smallflower mock buckthorn

**Return to the  
SAMI10 Plant Profile Page**

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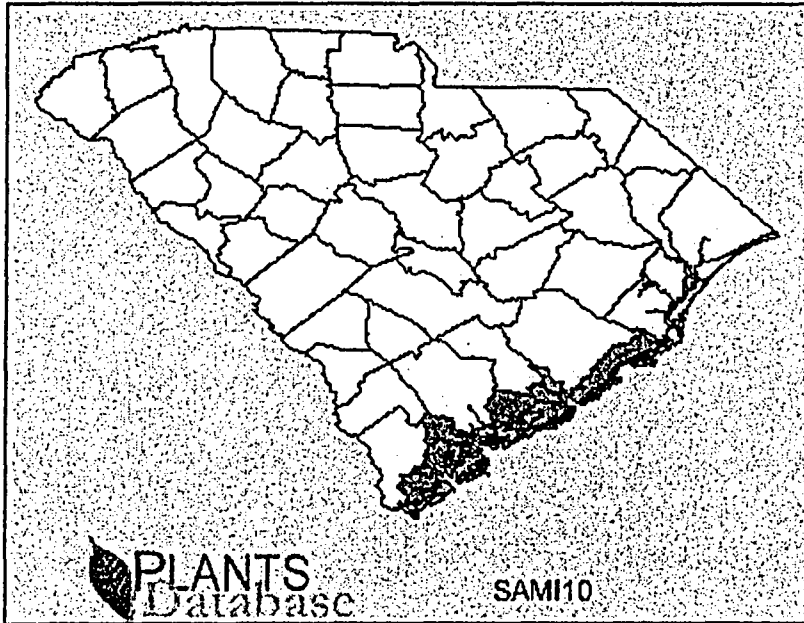
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**County Distribution of  
SAMI10 In South Carolina**


*Sageretia minutiflora*  
(Michx.) C. Mohr  
smallflower mock buckthorn

**Return to the  
SAMI10 Plant Profile Page**

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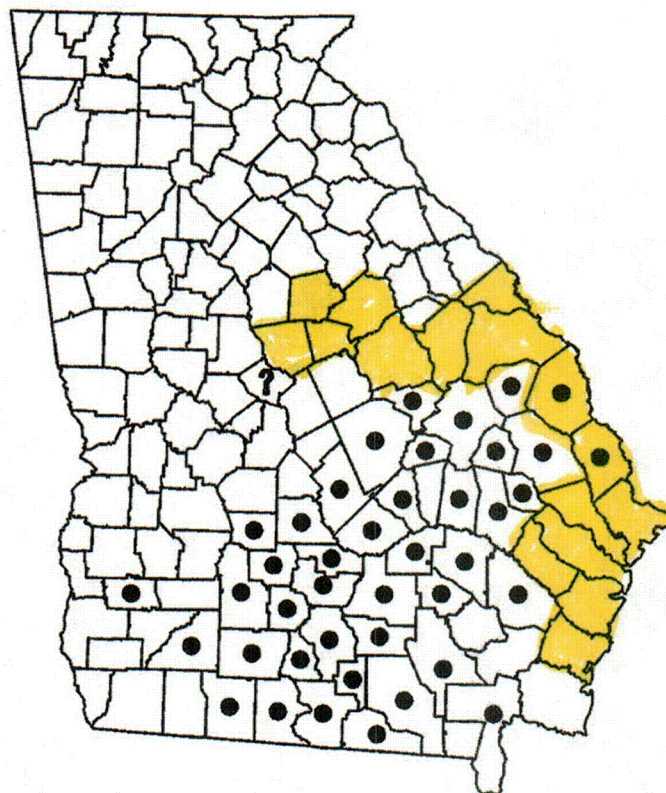
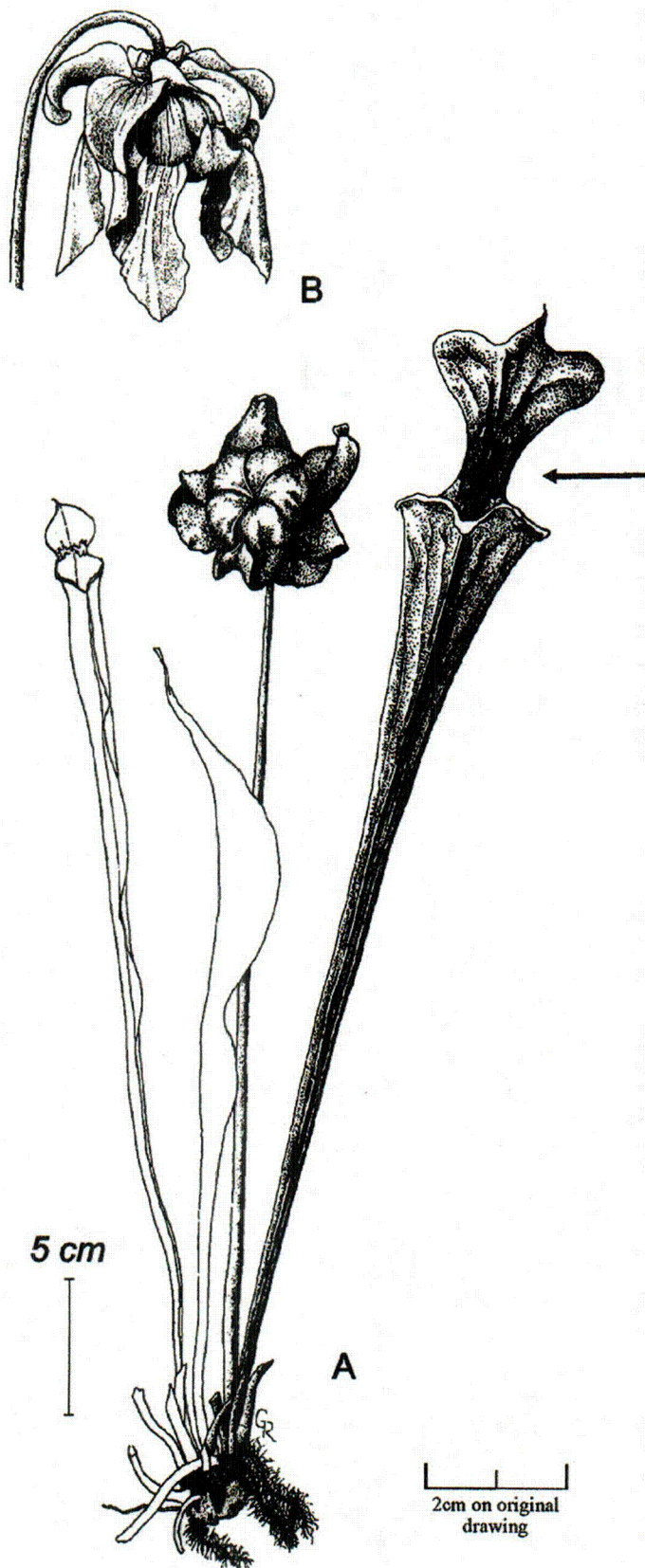
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# *Sarracenia flava* Linnaeus

1

Fly-catchers, Golden Trumpets, Yellow Flytrap

Pitcherplant Family, SARRACENIACEAE



#### LEGAL STATUS:

State: UNUSUAL

Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Coastal Plain from southeastern Mississippi to southeastern Virginia; also on the Piedmont Plateau of North Carolina and southeastern Virginia. Recorded from 42 counties in Georgia, including one possible record from Bibb County based on a sterile specimen (see map).

**ILLUSTRATION:** (A) plant habit, 0.4x; note pigmented band at base of hood; (B) flower, with descending petals, 0.6x. Source: McDaniel (1971), drawn by Grady W. Reinert and used with permission.

**DESCRIPTION:** Perennial herb. *Sarracenia flava* is one of the largest members of this genus, growing to 95 cm tall. The hollow, trumpet-shaped leaves (pitchers) are greenish-yellow, 25-95 cm tall, 1-5 cm wide at the orifice, gradually narrowed to the base, and have suberect hoods with a reddish-purple splotch at the base. Flattened, sword-shaped leaves (phyllodes) are produced after flowering; they are 12-30 cm long, and may overwinter. The flowers appear before the leaves, and are nodding and solitary on long, leafless stalks. The five sepals are green, 2.5-3.0 cm long, and persist at the base of the fruit. The five petals are bright yellow, ovate, 5.0-8.5 cm long, and

quickly fall off. A distinctive characteristic of the pitcherplant flower is the umbrella-shaped style (style-disk), which is 6-8 cm in diameter in this species. The fruit is a globose capsule, 1.5-2.0 cm in diameter, with numerous seeds. **Flowering period:** mid-March to April; **fruiting period:** May to July, possibly later. **Best search time:** during entire growing season, especially during flowering.

**HABITAT:** Found in acidic soils of seepy meadows, bogs, wet savannas, and pine flatwoods; sometimes along sloughs and ditches.

**SPECIAL IDENTIFICATION FEATURES:** The mature leaves or pitchers are erect, broadest at the mouth, and lack the translucent "windows" found in some species. The hoods are ascending with reddish-purple banding near the base. The petal color is bright yellow.

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site. Limit encroachment of woody vegetation by controlled burning. Timber removal, if desired, may be beneficial to this light-loving plant. Of horticultural interest: protect from removal by irresponsible persons.

**REMARKS:** The family *Sarraceniaceae* is native only to the New World. It consists of three genera: *Heliamphora*, with five species restricted to Venezuela; *Darlingtonia*, a monotypic genus of California and Oregon; and *Sarracenia*, with eight species, all but *S. purpurea* restricted to the southeastern United States. *Sarracenia flava*, especially when in bloom, is one of the showiest of the genus, a group of plants ingeniously evolved for the capture and digestion of insect prey. The inside of the vase-shaped "pitcher" has nectar-producing glands that attract insects, a slippery surface offering no foothold, and downward-pointing hairs. A portion of the inner surface also bears tiny glands that exude digestive enzymes. The naturalist Mark Catesby, who was among the earliest persons to write about the natural history of Georgia, described this species in 1731. The name given to it by Linnaeus 22 years later is the accepted name, for the scientific names given to plants prior to the publication of Linnaeus's *Species Plantarum* (1753) are, by international agreement, disregarded. *Sarracenia flava* has sustained significant habitat loss due to fire suppression or draining of its habitat. It is vulnerable to excessive digging by nurserymen and gardeners.

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- 890 Cypress - Pine Swamp  
 990 Emergent Tule Wetland  
 900 Ballonant Hardwood  
 980 Shrub Wetland  
 620 Longleaf Pine  
 440 Tule - Shortleaf Pine  
 422 Open Tule - Shortleaf Pine



*Sarracenia flava*  
Photo by Walter Hodge  
USF Herbarium Slide Collection

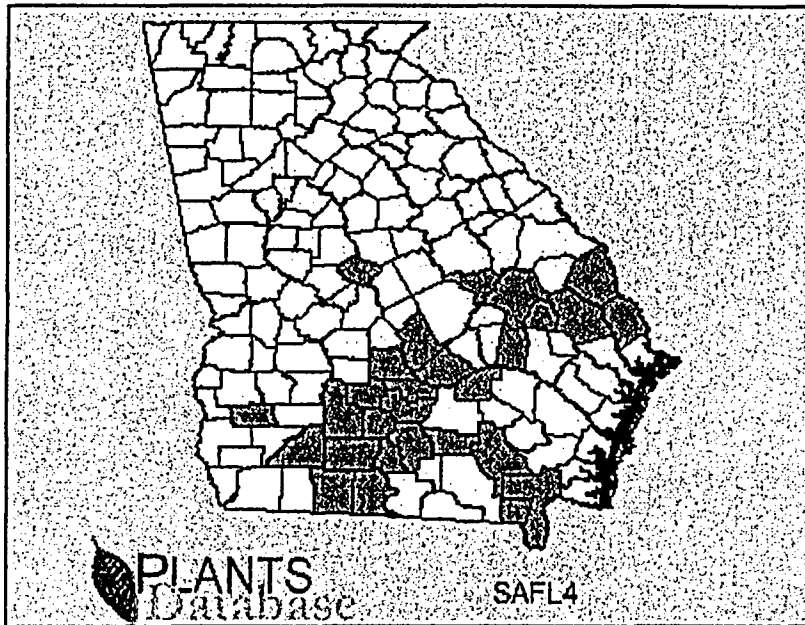
*Sarracenia flava*

Photo by Kim Davis & Mike Stungeland










**County Distribution of  
SAFL4 in Georgia**

*Sarracenia flava* L.  
yellow pitcherplant

**Return to the  
SAFL4 Plant Profile Page**

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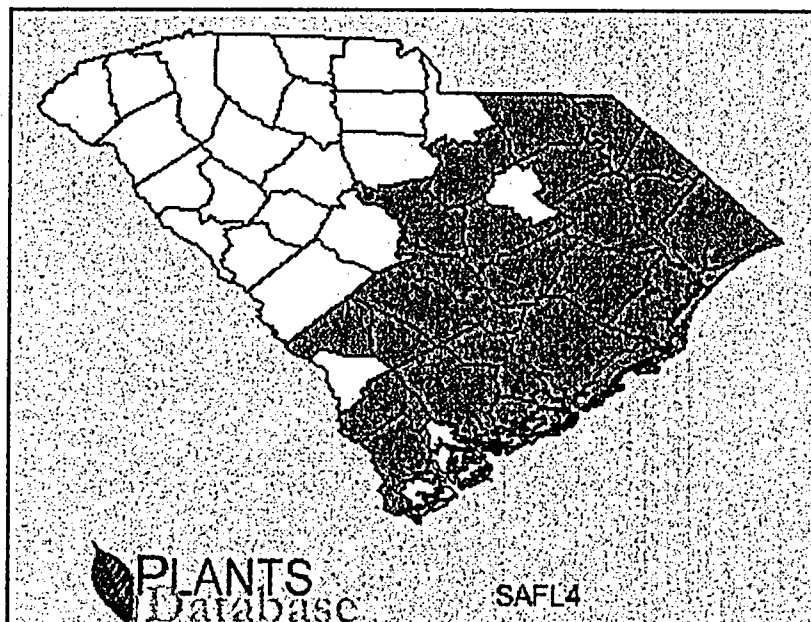
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**County Distribution of  
SAFL4 In South Carolina**

*Sarracenia flava* L.  
yellow pitcherplant

**Return to the  
SAFL4 Plant Profile Page**

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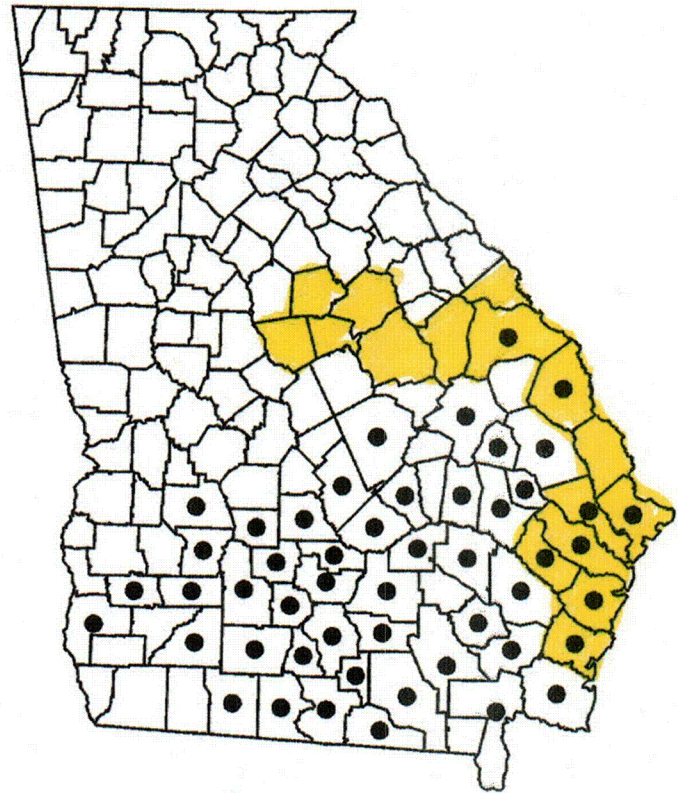
Time Generated: Fri 2:14 PM - 02/11/2005

# *Sarracenia minor* Walter

1

Hooded Pitcherplant

Pitcherplant Family, SARRACENIACEAE



**LEGAL STATUS:**

State: UNUSUAL  
Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Coastal Plain of central Florida into Georgia, north to southeastern North Carolina. Recorded from 50 counties in Georgia (see map).

**ILLUSTRATION:** Plant habit, 0.5x; note "windows" on back of hood. Source: McDaniel (1971), drawn by Barbara Culbertson and used with permission.

**DESCRIPTION:** Perennial herb. The hooded pitcherplant is 15-60 cm tall. The hollow, trumpet-shaped leaves (pitchers) are green at the base, sometimes red above with conspicuous translucent "windows" toward the apex, 15-60 cm tall, 1-4 cm wide at the orifice, gradually narrowed to the base, and have hoods that are bent downward over the orifice. The flowers are nodding and solitary on long, leafless stalks that equal or exceed the leaves. The five sepals are greenish-yellow, 1.5-3.5 cm long, and persist at the base of the fruit. The five yellow petals are ovate, 2.5-4.0 cm long, and quickly fall off. A distinctive characteristic of the pitcherplant flower is the umbrella-shaped style (style-disk), which is 2-3 cm in diameter in this species. The fruit is a globose capsule, 0.8-1.8 cm in diameter, with numerous seeds. **Flowering**

**period:** March to May; **fruiting period:** June to July, or later. **Best search time:** during entire growing season, especially during flowering.

**HABITAT:** Found in acidic soils of open bogs, wet savannas, pond margins, low areas in pine flatwoods, sphagnum seeps of red maple-blackgum swamps, and along sloughs and ditches.

**SPECIAL IDENTIFICATION FEATURES:** The mature leaves or pitchers are erect, broadest at the mouth, and have translucent "windows" near the apex, especially on the backs of the hoods, which are bent so that they nearly close the orifice. The petal color is yellow.

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site. Control encroachment of woody vegetation through prescribed burning. Timber removal, if desired, may be beneficial to this light-loving plant. Of horticultural interest: protect from removal by irresponsible persons.

**REMARKS:** This species was illustrated as early as 1576. Thomas Walter gave it its present name in 1788. Because the opening to the pitcher is nearly closed by the hood of this species, much of the light entering the pitchers comes through the clear patches or areolae ("windows"). These "windows" may enhance the efficiency of the pitchers in trapping flying insects that have entered them. In attempting to exit, the insects fly towards the translucent "windows," then either strike the wall of the pitcher and fall in, or crawl around the windowed region until they slip and fall. *Sarracenia minor* has sustained significant habitat loss due to fire suppression or draining of its habitat. Although not truly rare, it, like all other pitcherplants, is vulnerable to excessive digging by nurserymen and gardeners. It is listed as Unusual primarily to allow regulation of commercial activity and to protect populations on public lands.

#### SELECTED REFERENCES

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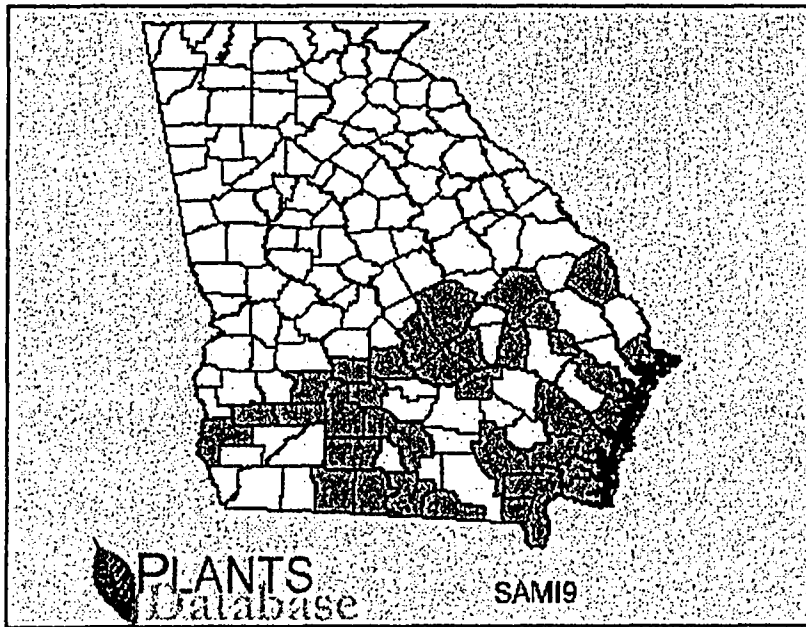
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*Sarracenia minor*

Photo by Kim Davis & Mike Stungeland







**County Distribution of SAMI9 in Georgia**

*Sarracenia minor* Walt.  
hooded pitcherplant

**Return to the SAMI9 Plant Profile Page**

Our county data are based primarily on the literature, herbarium specimens, and confirmed observations. Not all populations have been documented, however, and significant gaps in the distribution shown above may not be real. Please use the Distribution Update module to improve the data by adding your new distribution information to PLANTS. Remember that only native and naturalized populations are mapped!

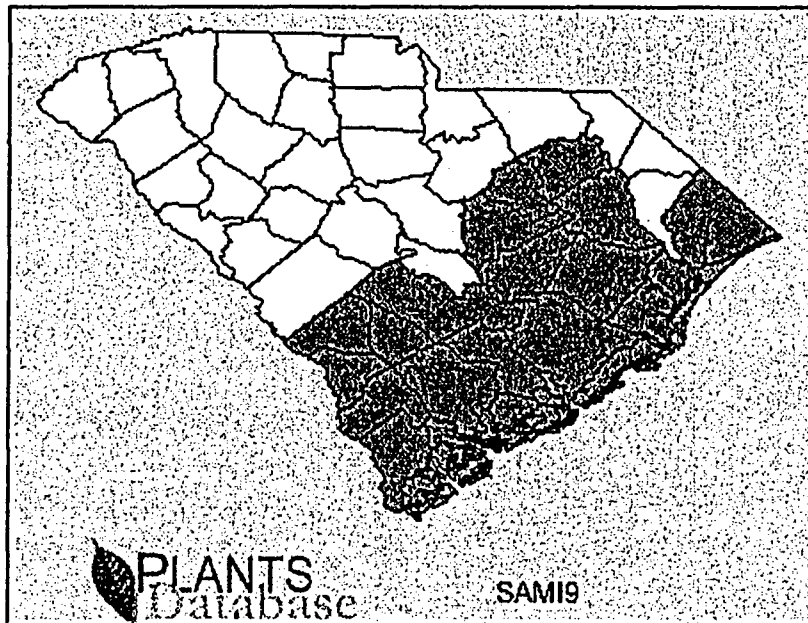
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-  [Disclaimers](#)

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**County Distribution of SAMI9 in South Carolina**

*Sarracenia minor* Walt.  
hooded pitcherplant

**Return to the SAMI9 Plant Profile Page**

Our county data are based primarily on the literature, herbarium specimens, and confirmed observations. Not all populations have been documented, however, and significant gaps in the distribution shown above may not be real. Please use the Distribution Update module to improve the data by adding your new distribution information to PLANTS. Remember that only native and naturalized populations are mapped!

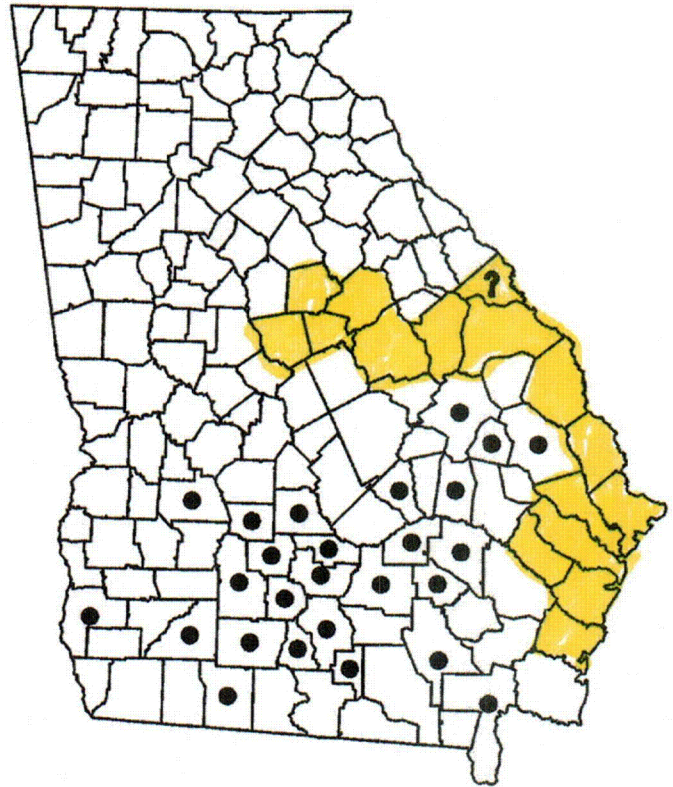
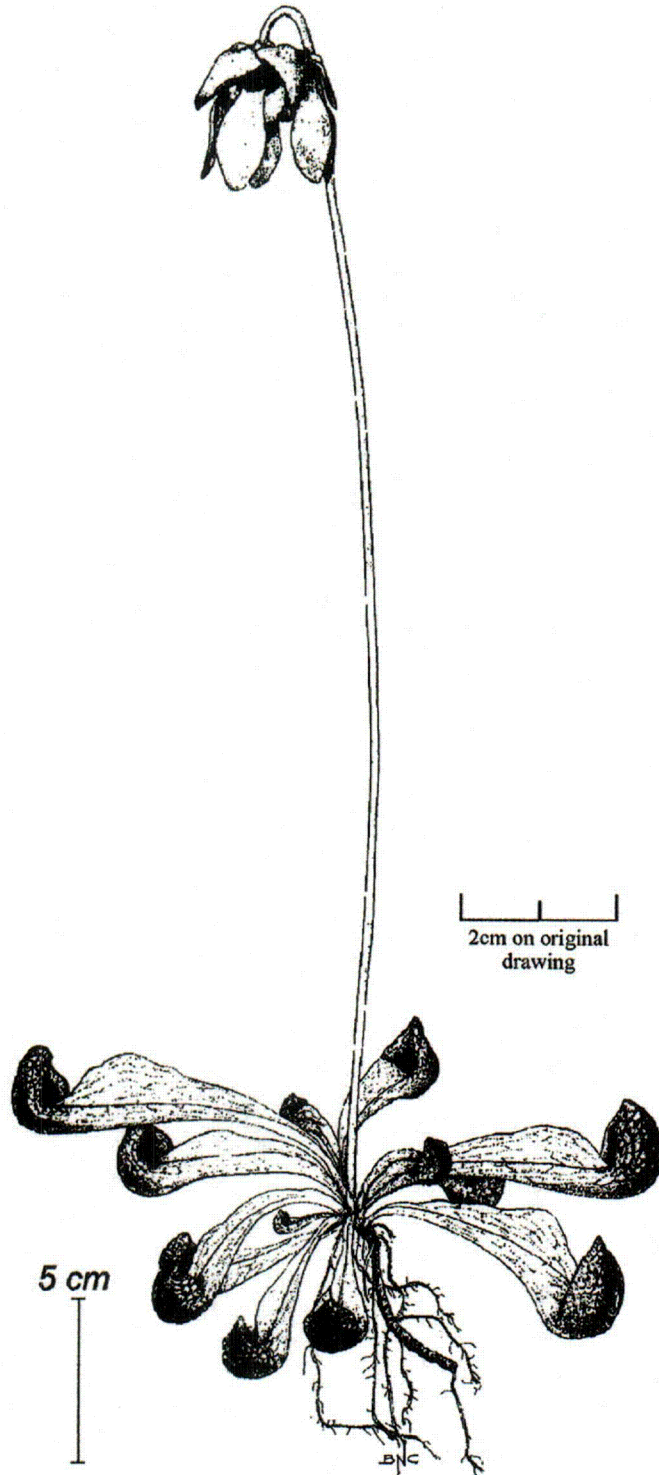
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**LEGAL STATUS:**

State: THREATENED

Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Coastal Plain of northeastern Florida and southern Georgia, west to southeastern Louisiana. Recorded from 27 counties in Georgia, including an ambiguous report from the Augusta area (see Remarks), perhaps from Richmond County (see map).

**ILLUSTRATION:** Plant habit, with reclining leaves, 0.4x. Source: McDaniel (1971), drawn by Barbara Culbertson and used with permission.

**DESCRIPTION:** Perennial herb. This plant is one of the smaller members of this genus, often overlooked. The hollow leaves (pitchers) recline on the ground, in a basal rosette. They are 9-28 cm long, 1.0-1.3 cm wide at the orifice, green at the base, red-veined toward the top, broadest and prominently winged in the upper half. The hood is rounded into a hollow chamber; both it and the adjoining leaf area have translucent "windows." The flowers appear with the leaves, and are nodding and solitary on long (to about 35 cm), leafless stalks that rise well above the leaves. The five sepals are green and maroon, 1.5-2.5 cm long, and persist at base of fruit. The five petals are maroon, 2.0-4.5 cm in diameter, broadest

near the apex, and quickly fall off. A distinctive feature of the pitcherplant flower is the umbrella-shaped style (style-disk), which is 1.8-2.6 cm in diameter in this species. The fruit is a globose capsule about 1 cm in diameter, with numerous seeds. **Flowering period:** March to May; **fruiting period:** June to July, or later. **Best search time:** during flowering, since leaves are usually hidden in vegetation.

**HABITAT:** Found in acidic soils of open bogs, wet savannas, and low areas in pine flatwoods.

**SPECIAL IDENTIFICATION FEATURES:** The mature leaves or pitchers are reclined, prominently winged, with translucent "windows" near the apex, and with hoods rounded. The petal color is maroon.

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site. Control encroachment of woody vegetation through prescribed burning. Hand thinning in the vicinity of the plants, if done carefully, may be beneficial to this light-loving plant. Of horticultural interest: protect from removal by irresponsible persons.

**REMARKS:** André Michaux described this species in 1803. Typical of the collections of that era, his specimen label has a general statement of the known range, "from the city of Augusta, Georgia, to Florida," rather than the precise collection site. Both the scientific and common names of this species refer to a fancied resemblance of the pitcher, when viewed in profile, to a parrot's head. Unlike those of the hooded pitcherplant (*Sarracenia minor*), the pitchers of this species are decorated with "windows" over the whole of the (head-like) hood. In view of the supposed function of the windows in the capture of prey, as described for *S. minor*, this may be an adaptation related to the near-horizontal position that the pitchers assume in this species. Unlike most of its kin, *S. psittacina* is often found in areas that are subject to periodic flooding, and its pitchers are specially modified for capture of aquatic(!) prey. *Sarracenia psittacina* has sustained significant habitat loss due to fire suppression or draining of its habitat. Like the other pitcherplants, it is vulnerable to excessive digging by nurserymen and gardeners.

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- Barker, N. G. and G. B. Williamson. 1988. Effects of a winter fire on *Sarracenia alata* and *S. psittacina*. *American Journal of Botany* 75:138-143.
- Duncan, W. H. and L. E. Foote. 1975. *Wildflowers of the Southeastern United States*. University of Georgia Press, Athens. 296 pp.
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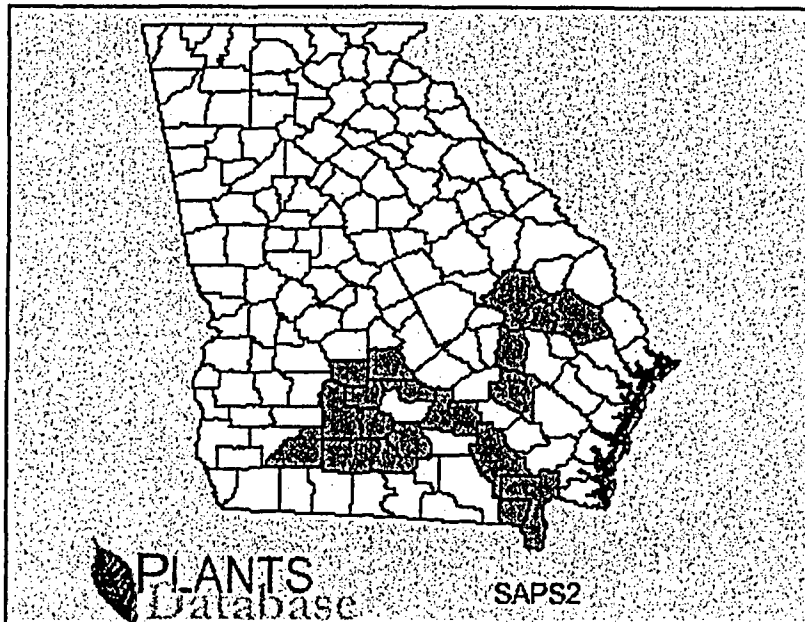


*Sarracenia psittacina*

*Photo by Walter K. Taylor,  
from his book: Florida Wildflowers  
In Their Natural Communities*



*Sarracenia psittacina*  
Photo by Shirley Denton




**County Distribution of  
SAPS2 In Georgia**

*Sarracenia psittacina* Michx.

parrot pitcherplant

**Return to the  
SAPS2 Plant Profile Page**

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# *Sarracenia purpurea* Linnaeus

Purple Pitcherplant, Indian Pitcher, Flytrap

Pitcherplant Family, SARRACENIACEAE

**LEGAL STATUS:**

State: ENDANGERED

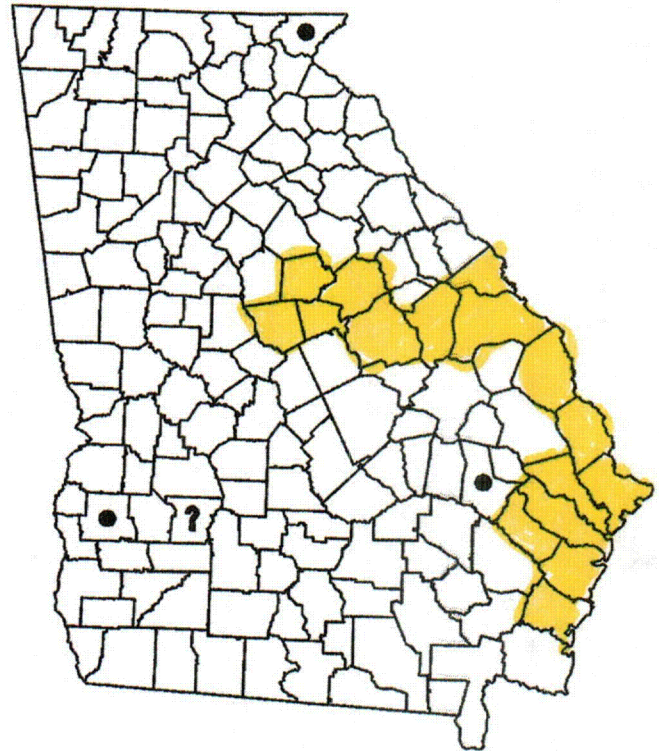
Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Coastal Plain of Mississippi to the Florida Panhandle and southern Georgia, north to Virginia; somewhat disjunct on the Piedmont Plateau of North Carolina and in the Blue Ridge Mountains from northeastern Georgia and western North Carolina; thence becoming rather widespread and sporadic northward to Labrador, and west to British Columbia. Recorded from four counties in Georgia, including an ambiguous report for Lee County (see map).

**ILLUSTRATION:** Plant habit, with tendency for reclining leaves, 0.4x. Source: McDaniel (1971), drawn by Barbara Culbertson and used with permission.

**DESCRIPTION:** Perennial herb. This is one of the smaller pitcherplants. The hollow leaves (pitchers) are 5-45 cm long, green (if shaded) to purple-tinged, evergreen, broadest and prominently winged near the urn-shaped center, and arranged in a basal rosette that



reclines on the ground. The hood is erect, 2-5 cm long. The flowers are nodding and solitary on long, leafless stalks that rise well above the leaves. The sepals are purplish-red, 2-4 cm long, and persist at base of fruit. The petals are fiddle-shaped, reddish-purple to rose, and 3-6 cm long. A distinctive feature of the pitcherplant flower is the umbrella-shaped style-disk, which is 4-5 cm in diameter in this species. The fruit is a capsule, 1-2 cm in diameter. **Flowering period:** April to May; **fruiting period:** June to July, or later. **Best search time:** all year, since leaves are evergreen.

**HABITAT:** Found on the Coastal Plain in seepy meadows and bogs dominated by peat moss (*Sphagnum* spp.), usually with other pitcherplants (especially *Sarracenia minor* and *S. flava*); also in the Blue Ridge Mountains on seepy, sphagnum mats near streams in thickets of laurel (*Kalmia latifolia*) and rhododendron (*Rhododendron maximum*).

**SPECIAL IDENTIFICATION FEATURES:** The mature leaves are reclined, bulging near the middle, often suffused with purple, and with large (to 5 cm broad) ruffled-margined, erect hoods (see illustration). The petal color is more roseate than maroon, in contrast to other species, but *Sarracenia purpurea* rarely flowers unless it receives ample sunlight.

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site. Control encroachment of woody vegetation through prescribed burning, for this species requires well-lit conditions to flower well. Hand thinning of shading trees and shrubs, if done carefully, may also be beneficial to this plant. Of horticultural interest: protect from removal by irresponsible persons.

**REMARKS:** This is the most widespread species of *Sarracenia*, and the only one to reach the Northeast and into Canada. *Sarracenia purpurea* was illustrated as early as 1601. It was in cultivation in Europe by 1640, and has become a wild plant in parts of Ireland and Switzerland and probably elsewhere. The relatively open pitchers of this species would appear to reduce their effectiveness as traps, but *S. purpurea* relies more upon drowning its prey than its relatives do. Indeed, the pitchers produce a wetting agent that reduces the surface tension of the pool of rainwater contained within, decreasing the prospects of escape. The classification and nomenclature of infraspecific (within-species) variants of purple pitcherplant is a confusing and controversial subject. Some authors recognize a northern and a southern subspecies of *S. purpurea*, whose ranges overlap from Maryland to New Jersey. These writers have, at least until recently, referred to our plants as *S. purpurea* var. (or subsp.) *venosa*, and to the northern plants as *S. purpurea* var. (subsp.) *purpurea*. It has recently been argued that the southern plants are in

fact the "true" *purpurea* of Linnaeus (*S. purpurea* var. *purpurea*), and that the northern plants are to be called *S. purpurea* var. *terrae-novae*. In addition, plants from Georgia's mountain bogs appear to differ in subtle morphological features from plants found on Georgia's Coastal Plain. *Sarracenia purpurea* is extremely rare at the periphery of its range in Georgia. It has sustained significant habitat loss due to fire suppression or draining of its habitat. It is vulnerable to digging by irresponsible nurserymen and gardeners.

#### SELECTED REFERENCES

- Duncan, W. H. and L. E. Foote. 1975. Wildflowers of the Southeastern United States. University of Georgia Press, Athens. 296 pp.
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- Harper, R. M. 1904. Explorations in the Coastal Plain of Georgia during the season of 1902. Bulletin of the Torrey Botanical Club 31:9-27.
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- Pietro Paolo, J. and P. Pietro Paolo. 1986. Carnivorous Plants of the World. Timber Press, Portland, Oregon. 206 pp.
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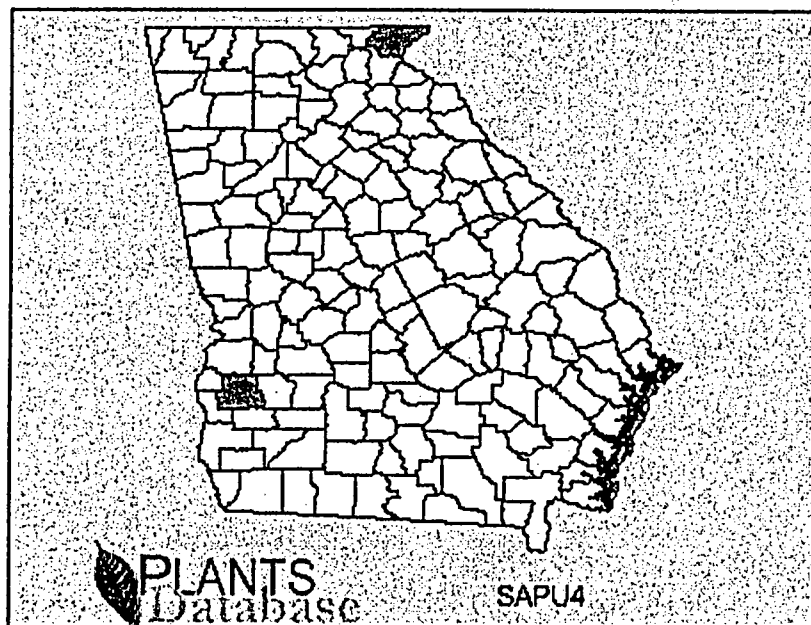


*Sarracenia rosea*

Photo by Fred Nation



*Sarracenia rosea*  
Photo by Guy Anglin



### County Distribution of SAPU4 in Georgia

*Sarracenia purpurea* L.  
purple pitcherplant

**Return to the  
SAPU4 Plant Profile Page**

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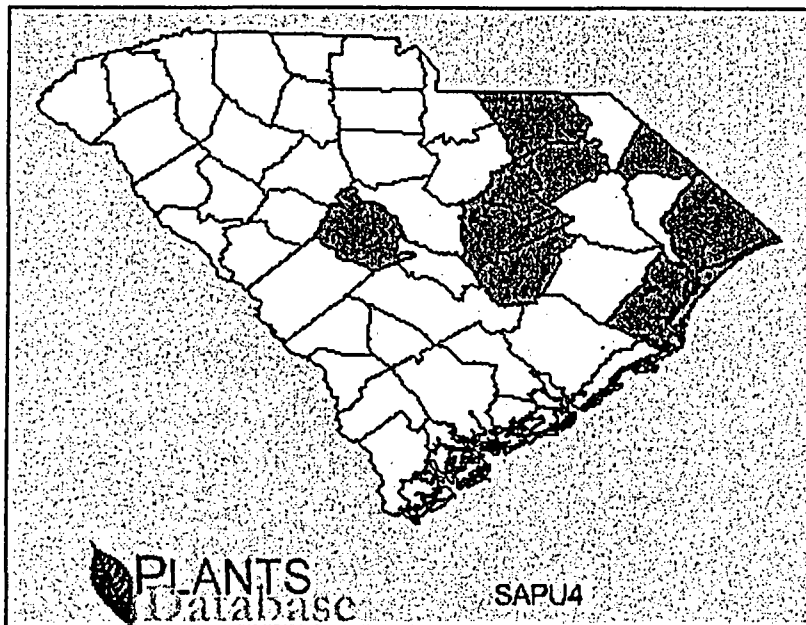
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**County Distribution of  
SAPU4 In South Carolina**

*Sarracenia purpurea* L.  
purple pitcherplant

**Return to the  
SAPU4 Plant Profile Page**

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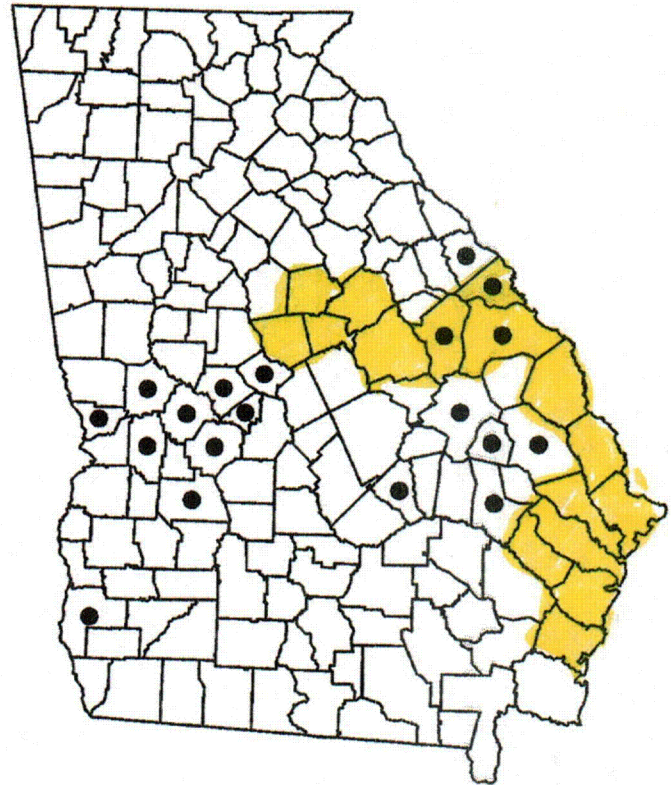
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# *Sarracenia rubra* Walter

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Sweet Pitcherplant, Red Pitcherplant

Pitcherplant Family, SARRACENIACEAE



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been granted  
for use of the  
*Sarracenia rubra*  
illustration on  
our Web page.

Contact  
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for a paper copy of  
this page, if needed.

**LEGAL STATUS:**

State: ENDANGERED

Federal: None

**SYNONYMY:**

*Sarracenia rubra* Walter subsp. *rubra*

**RANGE:** Coastal Plain of Mississippi to the Florida Panhandle, thence sporadically and mostly on the Inner Coastal Plain in the Fall Line Sandhills of Georgia, north to North Carolina. Recorded from 19 counties in Georgia (see map).

**ILLUSTRATION:** Plant habit, 0.6x. Source: Ward (1978), drawn by Lisa C. Megahee and used with permission.

**DESCRIPTION:** Perennial herb. The sweet pitcherplant may be up to 75 cm tall. The hollow leaves (pitchers) are green with some red or purplish veins above, 8-68 cm long, and erect; the hoods curve over the orifice, have a network of reddish veins, and are sharply pointed at the tip. The flowers are nodding, fragrant and solitary on long (up to 75 cm), leafless stalks that usually exceed the leaves. The sepals are purplish above, greenish beneath, 1.8-2.7 cm long, and persist at the base of the fruit. The petals are maroon above, sometimes gray or dull purple beneath, and 2.5-4.0 cm long. Another distinctive feature of the flower is the umbrella-shaped style (style-disk),

which is 2.8-4.0 cm in diameter. The fruit is a globose capsule, 0.6-1.2 cm in diameter with numerous seeds. **Flowering period:** April to May; **fruiting period:** June to July. **Best search time:** during entire growing season, especially during flowering.

**HABITAT:** Found in acidic soils of open bogs, sandhill seeps, Atlantic white-cedar swamps, wet savannas, low areas in pine flatwoods, and along sloughs and ditches.

**SPECIAL IDENTIFICATION FEATURES:** The mature leaves or pitchers are erect, broadest at the mouth, and gradually tapered below. The hoods are sharply pointed with entire margins. The petal color is maroon.

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site. Control encroachment of woody vegetation through prescribed burning. Timber removal, if desired, may be beneficial to this light-loving plant. Of horticultural interest: protect from removal by irresponsible persons.

**REMARKS:** Thomas Walter described this species in 1788, based upon material collected in South Carolina. *Sarracenia rubra* is the species of pitcherplant that has stimulated the most taxonomic controversy. Some authors regard it as a single species with some regional differentiation, while others perceive as many as five distinct species. A reasonable approach is to recognize geographic races, or subspecies. However, there is no consensus on how many of these should be formally recognized. Two of these subspecies are protected by the federal Endangered Species Act: *S. rubra* subsp. *alabamensis*, of central Alabama, and subsp. *jonesii*, of the Blue Ridge in the Carolinas. In Georgia, detailed studies are needed to determine whether there is any significance to the apparent discontinuous distribution into a western and an eastern concentration (see map). At this time, all material from Georgia is regarded as the typical subspecies, the "true" *rubra* of Walter, and may be designated *S. rubra* subsp. *rubra*. *Sarracenia rubra* has sustained significant habitat loss due to fire suppression or draining of its habitat. It is vulnerable to digging by unscrupulous nurserymen and gardeners.

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- Duncan, W. H. and L. E. Foote. 1975. Wildflowers of the Southeastern United States. University of Georgia Press, Athens. 296 pp.
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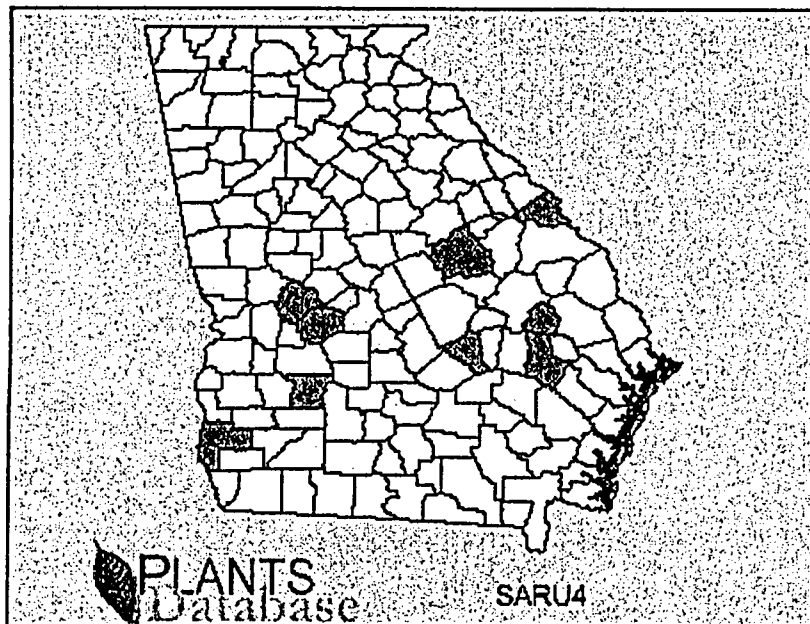






*Sarracenia rubra subsp. gulfensis*

Photo by Kim Davis & Mike Stungelund



**County Distribution of SARU4 In Georgia**

*Sarracenia rubra* Walt.  
sweet pitcherplant

**Return to the SARU4 Plant Profile Page**

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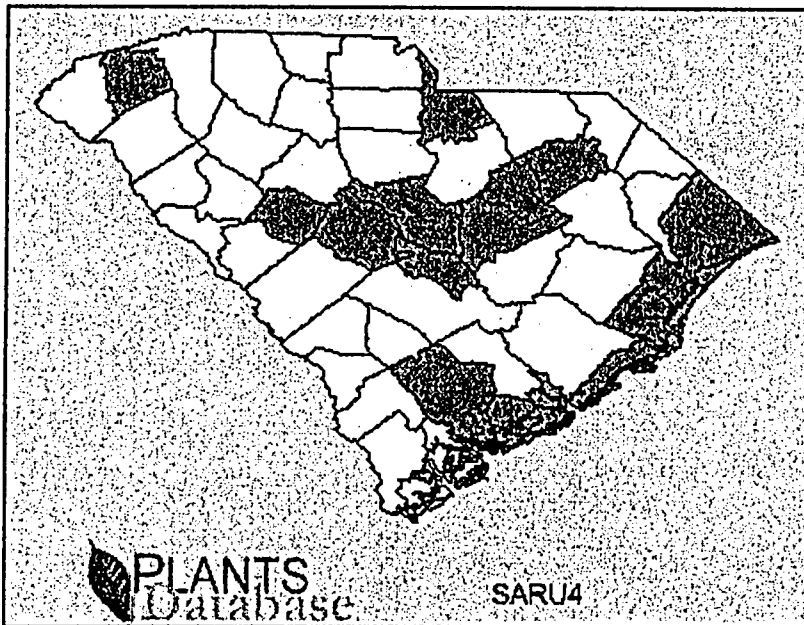
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**County Distribution of  
SARU4 in South Carolina**

*Sarracenia rubra* Walt.  
sweet pitcherplant

**Return to the  
SARU4 Plant Profile Page**

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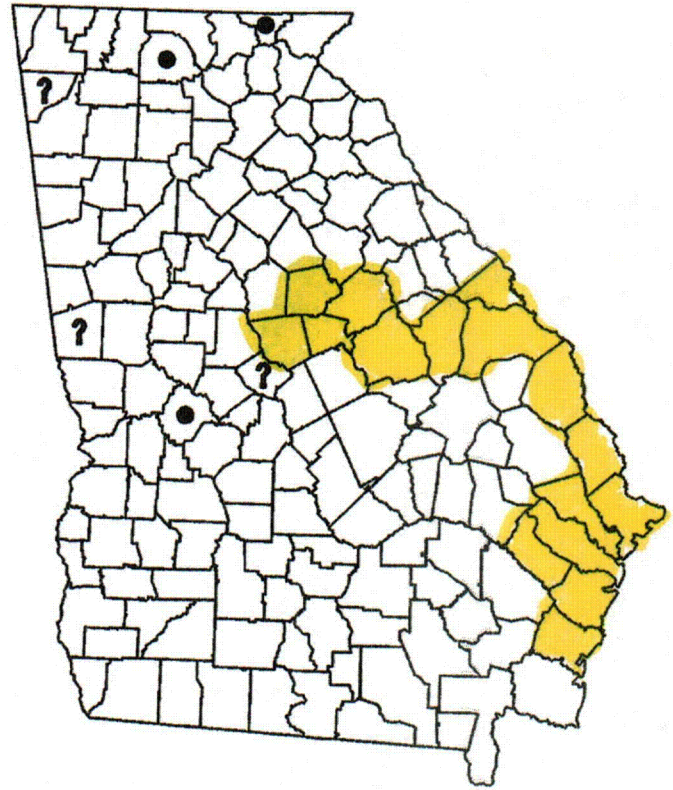
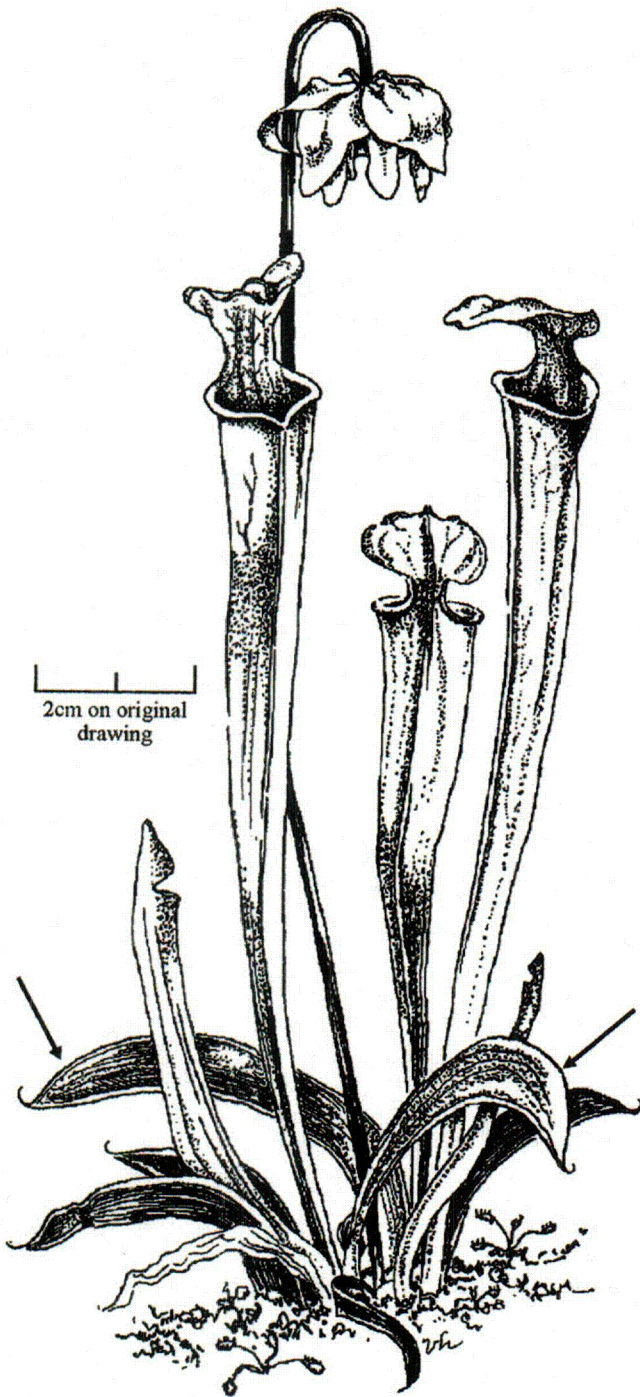
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# *Sarracenia oreophila* (Kearney) Wherry

1

Green Pitcherplant, Flytrap

Pitcherplant Family, SARRACENIACEAE



## LEGAL STATUS:

State: ENDANGERED

Federal: ENDANGERED

## SYNONYMY:

*Sarracenia flava* Linnaeus var. *oreophila* Kearney

**RANGE:** Cumberland Plateau and Ridge and Valley of northeastern Alabama and adjacent Georgia, also on the Coastal Plain near the Fall Line; disjunct in the Blue Ridge Mountains of Georgia and adjacent North Carolina. Recorded from six counties in Georgia, including three unauthenticated reports either not documented by specimens (Chattooga, Troup Counties) or represented by an old, inadequate (sterile) specimen from Bibb County (see map).

**ILLUSTRATION:** Plant habit, 0.5x; note sickle-shaped leaves (phyllodes) at base of plant. Source: original drawing by Vicky Holifield.

**DESCRIPTION:** Perennial herb. The green pitcherplant is from 20-75 cm tall. The hollow, trumpet-shaped leaves (pitchers) are 20-75 cm long, green to yellow-green, and have nearly erect hoods, 2-8 cm long, with veins often purplish. Flattened, sickle-shaped leaves (phyllodes) are produced after flowering, are 5-18 cm long, strongly curved, and persist over winter. The phyllodes may become more numerous than the leaves in shaded or

stressed plants. The flowers are nodding and solitary on long, leafless stalks that equal or exceed the leaves. The five sepals are greenish-yellow, 3-5 cm long, and persist at the base of the fruit. The five petals are bright yellow, obovate-elliptic, 4.0-5.5 cm long, and quickly fall off. A distinctive characteristic of the pitcherplant flower is the umbrella-shaped style (style-disk), which is 5.0-8.5 cm in diameter in this species. The fruit is a globose capsule, 15-18 cm in diameter with numerous seeds. **Flowering period:** May to early June; **fruiting period:** July to August, or later. **Best search time:** during flowering and early fruiting, since plants become hidden in competing vegetation later in the growing season. Although the basal, sickle-like phyllodes are sometimes evergreen and a unique feature of this species, they are inconspicuous and the tubular pitcher leaves wither late in the season or during periods of drought.

**HABITAT:** Found in seepy meadows, poorly drained oak-pine flatwoods, red maple-blackgum swamps, or along sandy banks of streams flushed periodically by floodwaters.

**SPECIAL IDENTIFICATION FEATURES:** *Sarracenia oreophila* resembles golden trumpets (*S. flava*), but the pitchers are greenish throughout, lacking the reddish throats of *S. flava*. *Sarracenia flava* occasionally produces flattened leaves (phyllodes) that are upright and sword-shaped. In contrast, *S. oreophila* has abundant, flattened leaves (phyllodes) that curve away from the base of the plant, with a profile like the blade of a sickle (see illustration).

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site. Control encroachment of woody vegetation through prescribed burning. Timber removal, if desired, may be beneficial to this light-loving plant. Of horticultural interest: protect from removal by irresponsible persons.

**REMARKS:** Hugh M. Neisler made the first collection of this species around 1875, in Taylor County. It was usually confused with other pitcherplants until 1900, when T. J. Kearney named it *Sarracenia flava* var. *oreophila*. In 1933 Edgar T. Wherry, who had the opportunity to study greenhouse material, elevated it to species rank. This species was feared eradicated in Georgia until W. Michael Dennis rediscovered it in Towns County late in the 1970s (Dennis, 1980). *Sarracenia oreophila* is rare throughout its range. It has sustained significant habitat loss due to draining of its habitat, digging by unscrupulous nurserymen and gardeners, and in at least one case, conversion to a fish pond. The digging of green pitcherplants from the wild is an indefensible practice, as all of the species can be propagated from seeds without employing any elaborate techniques.

#### SELECTED REFERENCES

- Dennis, W. M. 1980. *Sarracenia oreophila* (Kearney) Wherry in the Blue Ridge Province of northeastern Georgia. *Castanea* 45:101-103.
- Folkerts, G. W. 1992. Identification and measurement of damage caused by flower and seed predators associated with *Sarracenia oreophila*. United States Fish and Wildlife Service, Field Office, Jackson, Mississippi. 41 pp., 10 figs.
- Godfrey, R. K. and J. W. Wooten. 1981. Aquatic and Wetland Plants of Southeastern United States. Volume 2. Dicotyledons. University of Georgia Press, Athens. 933 pp.
- Govus, T. E. 1987. The occurrence of *Sarracenia oreophila* (Kearney) Wherry in the Blue Ridge Province of southwestern North Carolina. *Castanea* 52:310-311.
- McDaniel, S. 1971. The genus *Sarracenia* (Sarraceniaceae). Bulletin Number 9. Tall Timbers Research Station, Tallahassee, Florida. 36 pp.
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- Rickett, H. W. 1966. Wild Flowers of the United States. Volume 2. The Southeastern States. McGraw-Hill, New York. 688 pp.
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- Wherry, E. T. 1933. The Appalachian relative of *Sarracenia flava*. *Bartonia* 15:7-8, 1 pl.

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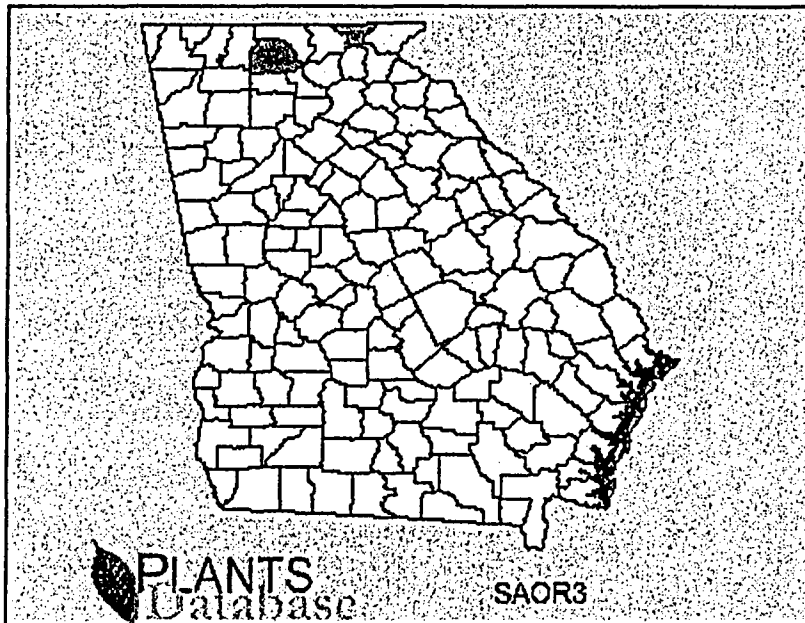
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890

980

990




**County Distribution of  
SAOR3 In Georgia**

*Sarracenia oreophila*  
(Kearney) Wherry  
green pitcherplant

**Return to the  
SAOR3 Plant Profile Page**

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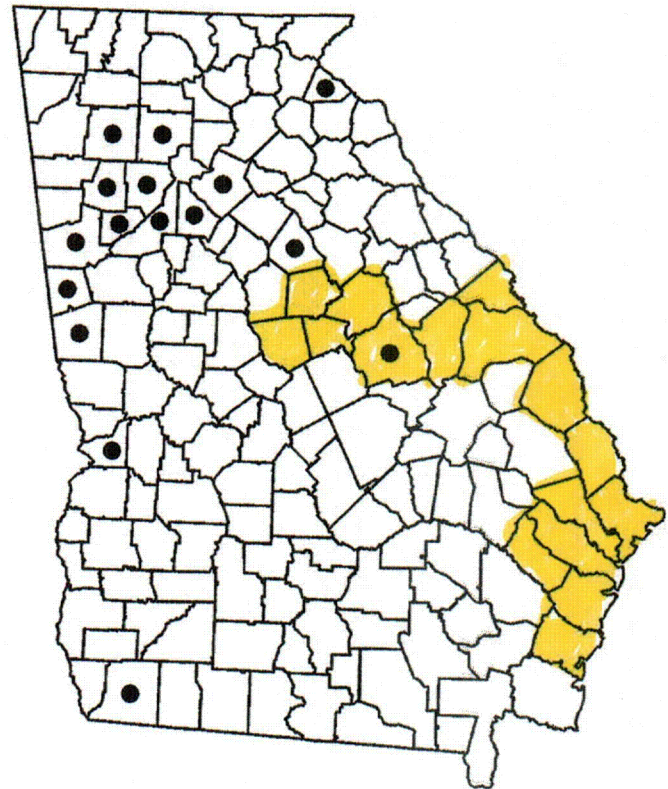
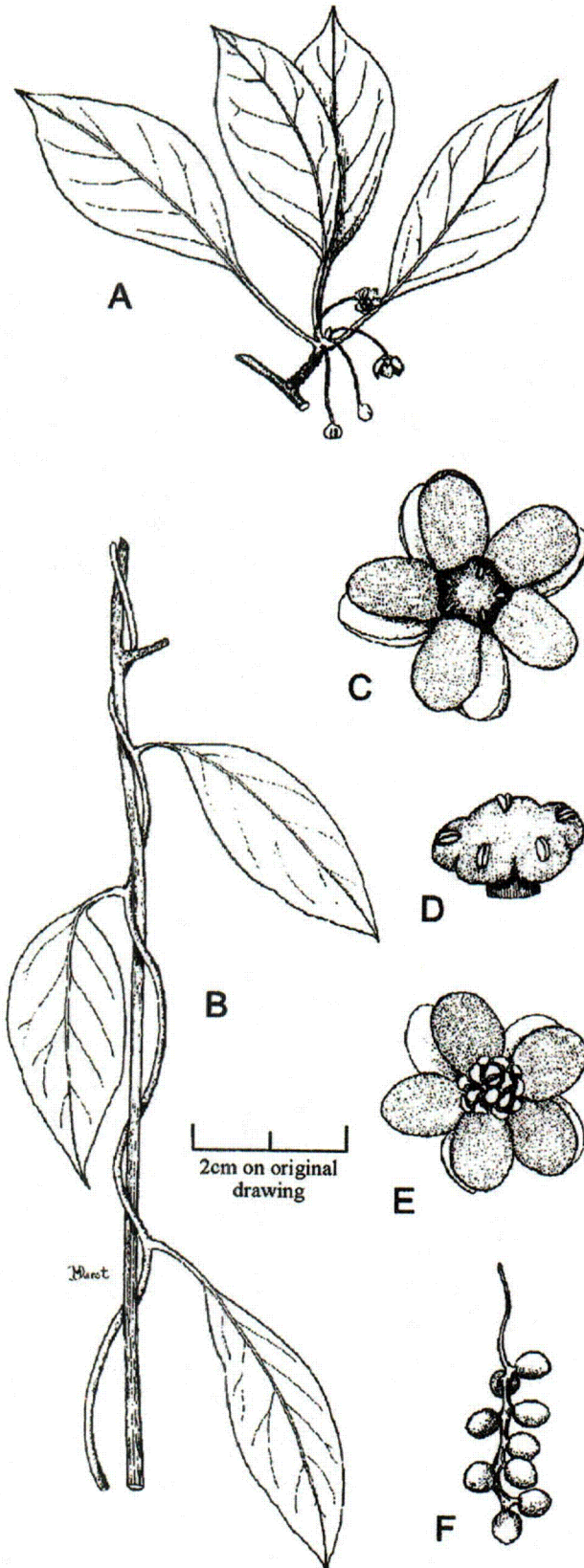
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# *Schisandra glabra* (Brickell) Rehder

Bay Star-vine, Climbing Magnolia, Wild Sarsaparilla

Star-vine Family, SCHISANDRACEAE



**LEGAL STATUS:**

State: THREATENED

Federal: None

**SYNONYMY:**

*Schisandra coccinea* Michaux

**RANGE:** Scattered in the Southeast: on the Coastal Plain from the Mississippi Embayment in Arkansas and Tennessee, south to Louisiana and east to northeastern North Carolina; on the Piedmont Plateau of Georgia; and disjunct on the Cumberland Plateau of southcentral Kentucky. Recorded from 16 counties in Georgia (see map).

**ILLUSTRATION:** (A) flowering shoot, 0.5x; (B) portion of vine, 0.5x; note twining stem without tendrils; (C) male flower, 4x; (D) stamens, fused into a pentagonal shield, 8x; (E) female flower, 4x; (F) cluster of fruits, as formed from a single flower, 0.8x. Source: Godfrey (1988), drawn by Melanie Darst and used with permission.

**DESCRIPTION:** Deciduous, woody vine. *Schisandra glabra* has stems to 3 cm thick, twining up to the crowns of trees or trailing along the ground. Sometimes large clumps of leaves form a ground cover, resembling a sprawling Virginia creeper or woodbine (*Parthenocissus quinquefolia*). The leaves are up to 15 cm long and 6 cm wide, ovate to elliptic, with sparsely toothed margins, and

are sweet-smelling when crushed. The leaves are alternate, but are close together on the slower growing secondary branchlets ("spur shoots"). 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 (see illustration). The 9-12 petals are 5-8 mm long, greenish outside and crimson-colored within. The fruit is an aggregate of red berries on an axis that elongates during ripening (see illustration). **Flowering period:** May to June; **fruiting period:** July to August. **Best search time:** from late spring to middle summer, since leaves tend to fall early.

**HABITAT:** Found twining over understory trees and shrubs in rich, forested bottomlands and adjacent lower slopes; sometimes older vines occur on trunks of overstory trees, or sprawl along the ground forming patches rooted in the litter, especially near mountain laurel (*Kalmia latifolia*) thickets.

**SPECIAL IDENTIFICATION FEATURES:** Bay star-vine can easily be confused with climbing hydrangea (*Decumaria barbara*), a quite common vine. The difference between the two is that *D. barbara* has opposite leaves and climbs by means of aerial roots, while *S. glabra* has alternate leaves and climbs only by twining. Both vines occupy similar habitats. The flowers of climbing hydrangea are showy, white, and in flat-topped clusters. In contrast, the flowers of bay star-vine are inconspicuous, maroon, and either solitary or in loose clusters.

**MANAGEMENT RECOMMENDATIONS:** Avoid disturbance. At most this species will tolerate only hand thinning of trees in its immediate vicinity, and only if done carefully. Control exotic weeds, especially Japanese honeysuckle.

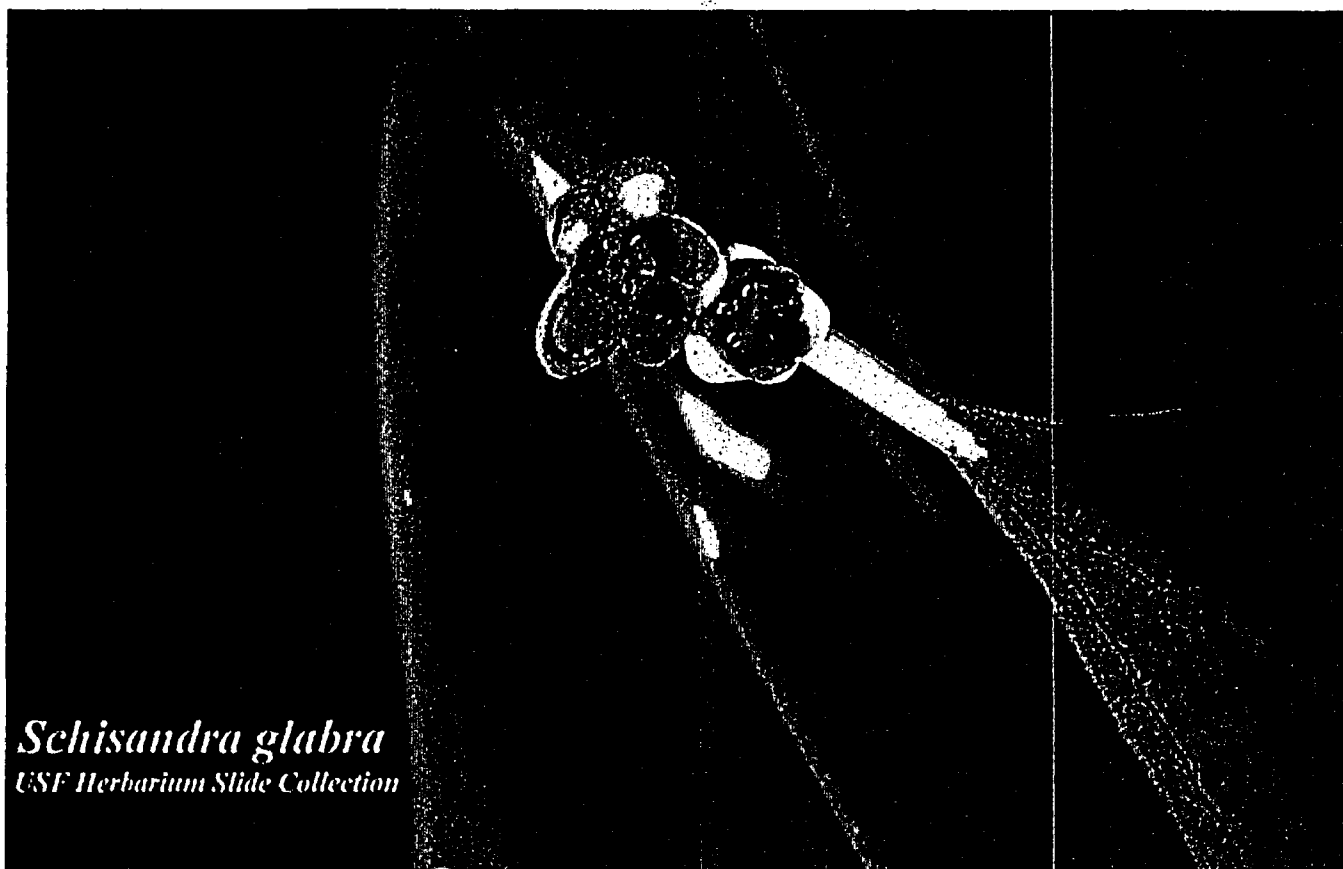
**REMARKS:** John Brickell, a physician and amateur botanist, described this species in 1803, based upon collections from near Savannah, where he lived, and from Beaufort, South Carolina. Like croomia (*Croomia pauciflora*), twinleaf (*Jeffersonia diphylla*), and Oconee bells (*Shortia galacifolia*), the closest living relatives of this species are found in Asia. *Schisandra* and, for example, *Illicium*, *Isoetes*, and *Torreya* are described by many as "primitive" because they share some significant characteristics with fossil forms that are many millions of years old. Others dislike such terms as "primitive" (or "lower plants" for ferns, mosses, etc.), feeling that these labels have some negative connotations. After all, plants such as these have demonstrated a perfection of adaptation that has enabled them to survive through eons when many evolutionary innovations have been tried and found wanting! *Schisandra glabra* is rare throughout its range and has sustained significant habitat loss due to clearing of hardwood forest for conversion to agricultural land or pine

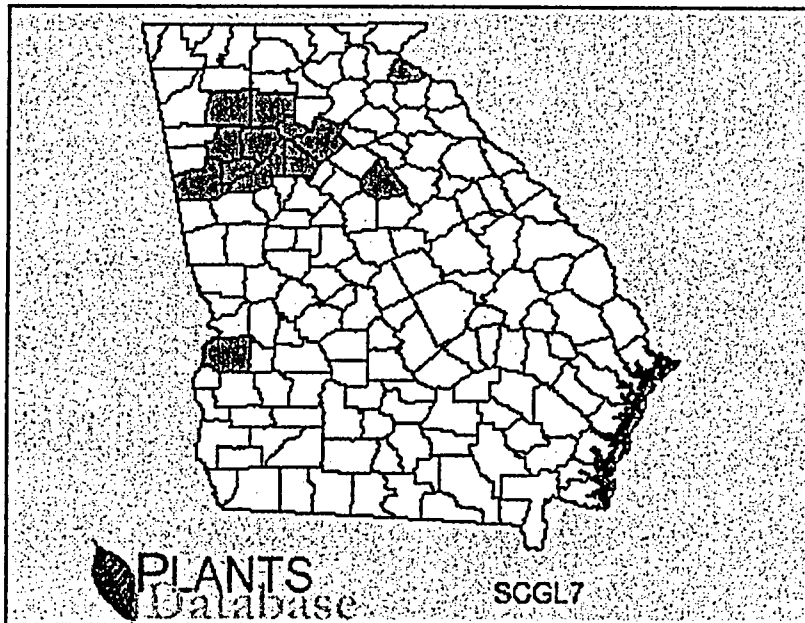
plantation.

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900 Bottomland Hardwood






**County Distribution of  
SCGL7 In Georgia**

*Schisandra glabra* (Bickn.)  
Rehd.  
bay starvine

**Return to the  
SCGL7 Plant Profile Page**

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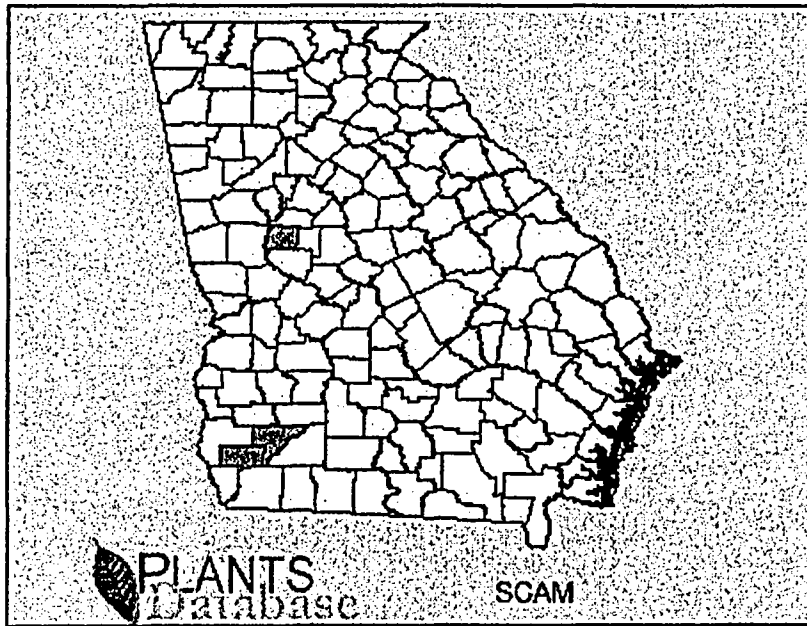
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**County Distribution of SCAM In Georgia**

*Schwalbea americana* L.  
chaffseed

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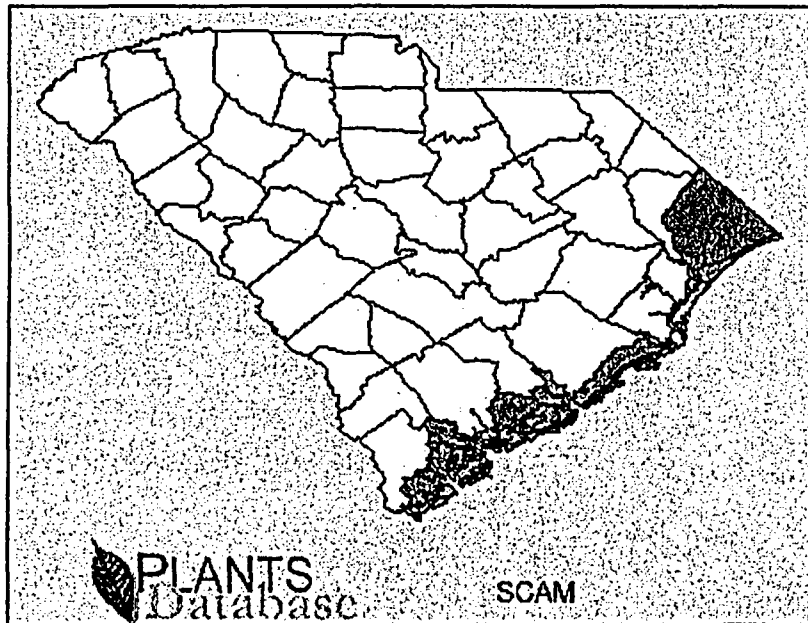
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Time Generated: Fri 2:29 PM - 02/11/2005




**County Distribution of  
SCAM In South Carolina**

*Schwalbea americana* L.  
chaffseed

**Return to the  
SCAM Plant Profile Page**

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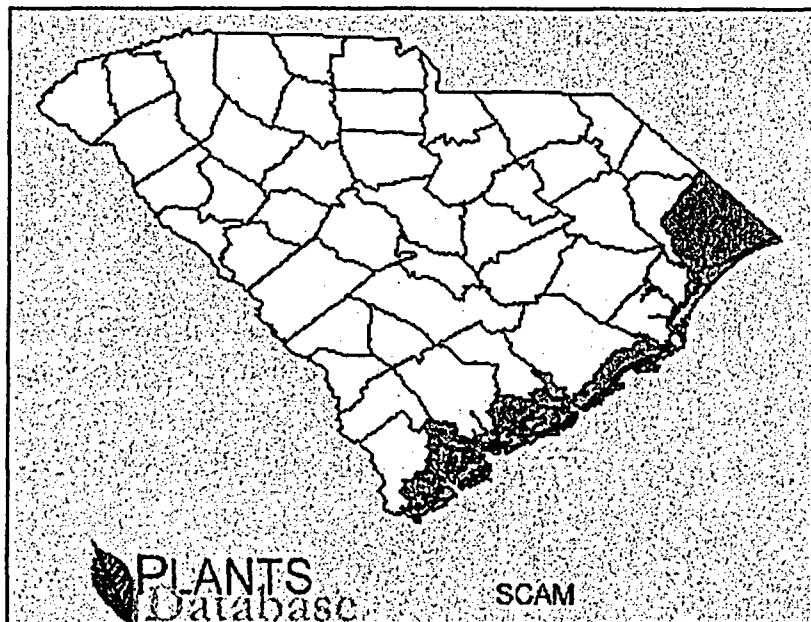
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**County Distribution of SCAM in South Carolina**

*Schwalbea americana* L. chaffseed

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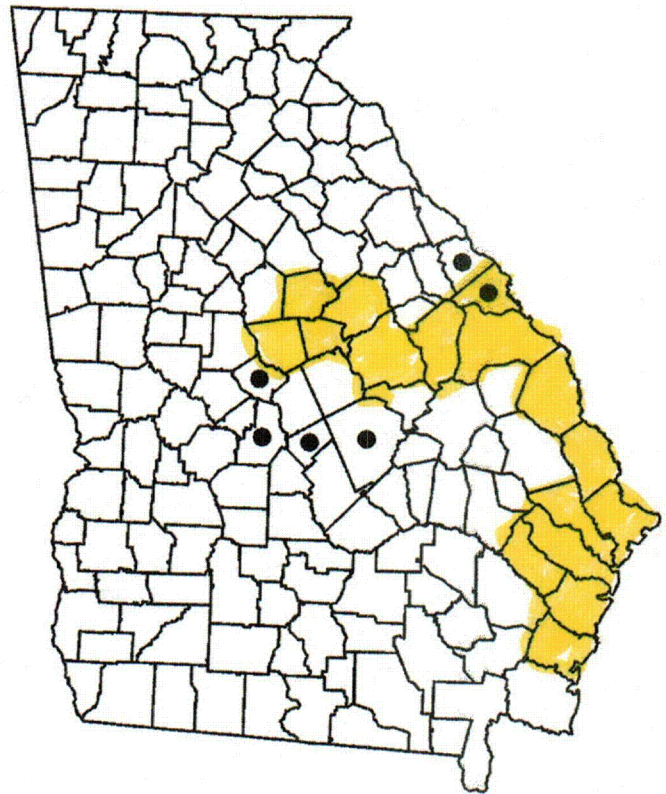
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# *Scutellaria ocmulgee* Small

Ocmulgee Skullcap

Mint Family, LAMIACEAE



**LEGAL STATUS:**

State: THREATENED

Federal: CANDIDATE

**SYNONYMY:** None in current usage.

**RANGE:** Near the Fall Line in Georgia and adjacent South Carolina. In Georgia, it is found along a few tributaries and bluffs of the Ocmulgee, Oconee and Savannah Rivers. Recorded from six counties in Georgia (see map).

**ILLUSTRATION:** (A) flowering stem, upper portion, 0.8x; (B) flower, side view, 1.8x; (C) persistent calyx in fruit, 2x; (D) mid-stem leaf, 0.5x; note straight-edged base; (E) lower stem leaf, 0.4x; note cordate base. Source: (A, C, D, E) original drawings by Vicky Holifield; (B) Collins (1976), drawn by Leo Collins and used with permission.

**DESCRIPTION:** Perennial herb from branched, cord-like (3-6 mm in diameter), knotty rhizomes with 4-8 major roots. The stems are 4-sided, 40-80 (rarely to 120) cm tall, sometimes branched from upper axils when robust. The upper stem has two types of hairs: (1) straight, spreading, knob-tipped hairs, and (2) shorter, upwardly curved, slender-tipped hairs. The leaves are opposite, highly variable in shape (see illustration), covered beneath with velvety hairs, and have margins with rounded, shallow teeth. The lower stem leaves are smaller, rounded with



heart-shaped (cordate) bases; the mid-stem leaves are longer, 5-8 cm long, oblong-ovate with their bases squared as if cut off (truncate); and the upper stem leaves are the smallest, gradually becoming bract-like in the inflorescence, elliptic to narrowly ovate with broadly wedge-shaped (cuneate) bases. Middle and lower leaves have long leafstalks that are 1/3 to 1/2 as long as the expanded portion of the leaf (blade). The flowers are in racemes or panicles that are 15-20 cm long, terminal and axillary from the upper leaf axils. The floral axis has two types of hairs, like the upper stem. The calyx is 2-lipped (bilabiate) and covered with short, curled hairs. The corollas are dull blue to violet-blue with white splotches; the tube and lip together are 18-23 mm long. The fruit consists of four nutlets enclosed within the firm, persistent calyx, which has a noticeable protuberance (the "skullcap") on the upper lip. The calyx enlarges greatly during fruit maturation, and the upper lip springs off when ripe, expelling the nutlets. **Flowering period:** late June to early October; **fruiting period:** August to November. **Best search time:** during flowering, since characters of the flower (especially flower size and types of hairs on the calyx) are essential for proper identification.

**HABITAT:** Found on forested terraces, hardwood slopes, and riverbanks.

**SPECIAL IDENTIFICATION FEATURES:** The skullcaps (*Scutellaria*) are readily distinguished by the persistent calyx, the upper lip of which has a prominent bump or protuberance. Species are difficult to tell apart, and flower size, leaf shape, and types of hairs on leaves, upper stems, and flowers are needed for accurate identification. *Scutellaria ocmulgee* has late-blooming, medium-sized flowers (the corollas 18-23 mm long); variable, softly hairy leaves, the middle and lower ones with long stalks; a combination of knob-tipped hairs and upwardly curved, slender-tipped hairs on the upper stem; and a calyx with only upwardly curved, slender-tipped hairs. At least four other ovate-leaved skullcaps overlap in range and habitat with the Ocmulgee skullcap. *Scutellaria elliptica* has smaller, sandpapery leaves, the mid-stem and upper with wedge-shaped bases; and has smaller flowers (the corollas 14-21 mm long), with knob-tipped hairs on the calyx. *Scutellaria mellichampii* lacks knob-tipped hairs but has soft, short, straight, grayish hairs on the upper stems. *Scutellaria ovata* has similar broad, soft leaves, without glandular hairs, but with long downwardly curled hairs (retorse) on the upper stem. *Scutellaria elliptica* blooms in May and June; the other skullcaps noted above are summer bloomers.

**MANAGEMENT RECOMMENDATIONS:** Hand thinning of shading trees in its vicinity, if done carefully, may be beneficial to this species. Control exotic weeds, especially Japanese honeysuckle.

**REMARKS:** John Kunkel Small (1869-1938) made the first collection of this little-known species in 1895, from the banks of the Ocmulgee River, Bibb County, above Macon. He described it in 1898. After the original collection it was lost to science until Steve Bowling rediscovered it at or near the original locality around 1983. It has since been found at about ten other locations. The unusual distribution of this species in widely separated localities along or near major rivers suggests that it is a relictual species. Presumably it was once much more common but has disappeared from most of its former localities and now consists only as scattered pockets of survivors. *Scutellaria ocmulgee* is rare throughout its range. It has sustained significant habitat loss due to clearing of forest land, especially for home sites on river bluffs and other residential development.

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421 Handwood forest  
 434 moist Pine Handwood  
 900 Bottomland Handwood



# Conservation

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## Ocmulgee Skullcap (*Scutellaria ocmulgee*)



Mint Family (LAMIACEAE)

Listing status (as of 7/96)  
Federal: Species of Concern  
State: Threatened

### DISTRIBUTION

**The Ocmulgee skullcap occurs sporadically along major rivers near the Fall Line in Georgia and adjacent South Carolina. It has been recorded from six counties in Georgia. The population at Robins AFB is the only account of this plant in Houston County.**

## **HABITAT**

**The Ocmulgee skullcap typically occurs on forested terraces, hardwood slopes, and riverbanks. On Robins AFB, it is scattered extensively throughout the Upland Hardwood Bluff Forest along Fort Valley Street and Crescent Drive. It also occurs on an Upland Hardwood Bluff Forest east of the golf course, on the west side of Hannah Road.**

## **IDENTIFICATION**

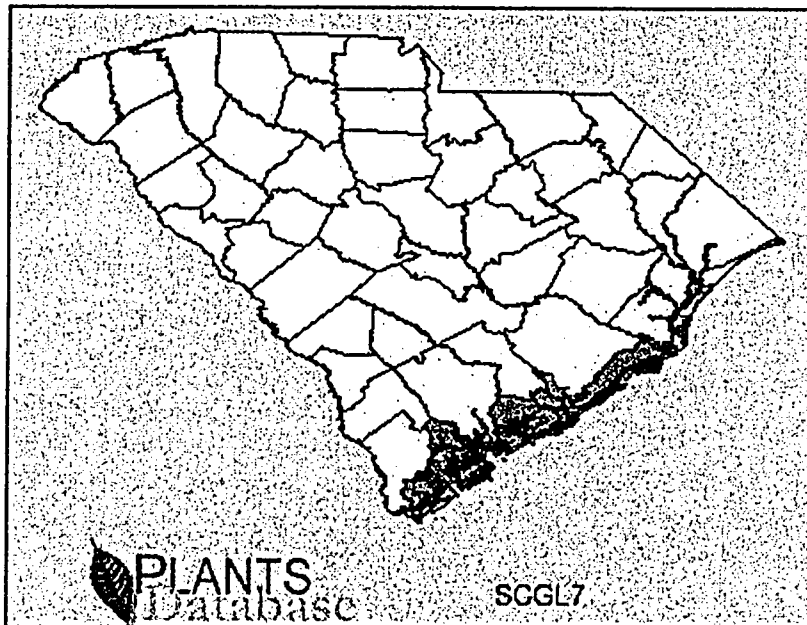
**The skullcaps (*Scutellaria*) are easily recognized in flower or fruit by the presence of a persistent calyx (the structure surrounding the petals) which has a prominent bump on the upper lip. Species within this genus, however, are difficult to differentiate. Flower size, leaf shape, and characteristics of the hairs found on leaves, upper stems, and flowers are used in species identification. The following features will differentiate the Ocmulgee skullcap from similar species found in the area.**

**The Ocmulgee skullcap blooms from late June to early October; later than most skullcaps. It has medium-sized (0.7 to 0.9 inches [18-23 mm] long) flowers; variable, softly hairy leaves (the middle and lower with long stalks); a combination of knob-tipped hairs and upwardly curved, slender-tipped hairs on the upper stem; and only upwardly curved, slender-tipped hairs on the calyx.**

### **NOTES:**

**The Ocmulgee skullcap was first collected in 1895 from the banks of the Ocmulgee River north of Macon, in Bibb County. The plant was not seen again until it was rediscovered near the original collection site in 1983. The distribution of this species in widely scattered localities along major rivers suggests that it is a relict species, which means that it was likely more common in the past, but has disappeared from most of its former locations. Today, the Ocmulgee skullcap is rare throughout its range, and it has sustained significant habitat loss due to clearing of forest land, especially for home sites on river bluffs.**

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**County Distribution of  
SCGL7 in South Carolina**

*Schisandra glabra* (Bickn.)  
Rehd.  
bay starvine

**Return to the  
SCGL7 Plant Profile Page**

Our county data are based primarily on the literature, herbarium specimens, and confirmed observations. Not all populations have been documented, however, and significant gaps in the distribution shown above may not be real. Please use the Distribution Update module to improve the data by adding your new distribution information to PLANTS. Remember that only native and naturalized populations are mapped!

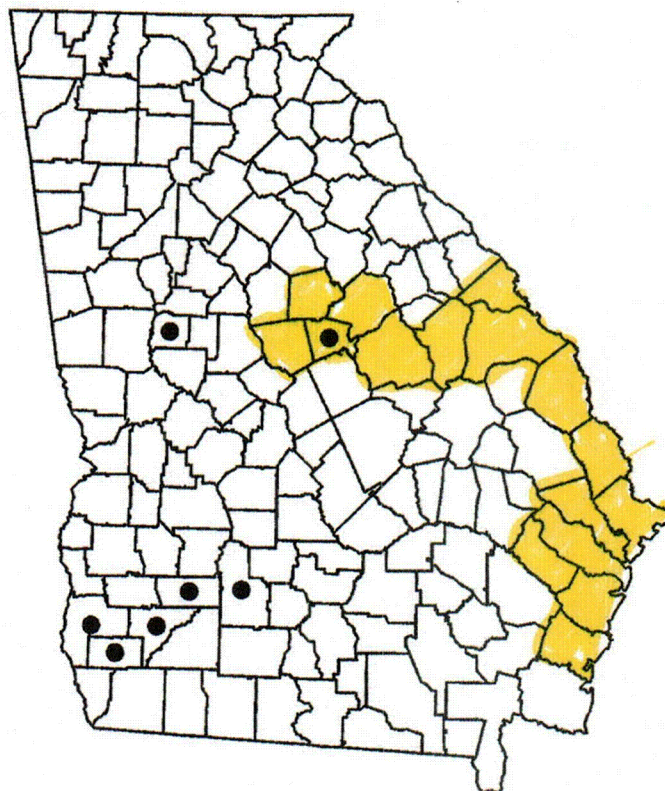
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Time Generated: Fri 2:28 PM - 02/11/2005



**LEGAL STATUS:**

State: ENDANGERED  
Federal: ENDANGERED

**SYNONYMY:**

*Schwalbea australis* Pennell

**RANGE:** Known mostly historically: on the Coastal Plain from eastern Texas to Massachusetts; disjunct and possibly extirpated inland on the Piedmont Plateau of Georgia, Cumberland Plateau of eastern Tennessee, and in the Cumberland Mountains of Kentucky. Recorded from seven counties in Georgia (see map).

**ILLUSTRATION:** Flowering stem, upper portion, 1x. Source: original drawing by Vicky Holifield.

**DESCRIPTION:** Perennial herb 0.6-0.7 m tall; a root-parasite of gallberry (*Ilex glabra*) and huckleberry (*Gaylussacia dumosa*), among others. Plants are narrow (about 8 cm wide), unbranched, leafy, stiffly erect, and covered with fine hairs. The leaves are simple, alternate, 3-5 cm long, about 1 cm wide, lacking stalks, mostly ascending and reduced upwards, the surfaces velvety, and the margins entire. The flowers are in a terminal raceme, each flower with two bracts at the base of the calyx and an additional one at the base of the flower stalk. The corollas resemble closed, narrow turtle heads about 3 cm long, and are suffused with subtle colors ranging from creamy

yellow to purple- or rose-tinted green, blending in with the purplish-tinted bracts and leaves. The calyx is strongly striped with ten distinct lines and persists around the developing fruit. The fruit is a capsule splitting into four parts, shedding numerous seeds. The seeds are "chaffy" (strongly winged, thus resembling hulls of grain), 2.5-3.0 mm long, nearly linear, and greenish-brown. **Flowering period:** May; **fruiting period:** June to July. **Best search time:** during flowering, since plants blacken and deteriorate rapidly during fruiting.

**HABITAT:** Found on the Coastal Plain in fire-maintained wet savannas with grass pinks (*Calopogon* spp.), colic root (*Aletris obovata*), and invading gallberry (*I. glabra*) and huckleberry (*Gaylussacia dumosa*); also on the Piedmont in grassy openings and swales of relict longleaf pine woods.

**SPECIAL IDENTIFICATION FEATURES:** Chaffseed is readily identified by a few characters. The entire plant is clothed in fine hairs, has a purplish-tinge, and is extremely leafy.

**MANAGEMENT RECOMMENDATIONS:** Avoid drainage of site. Control encroachment of woody vegetation, such as gallberry, through prescribed burning. Timber removal, if desired, may be beneficial to this light-loving plant.

**REMARKS:** Linnaeus described the single species of *Schwalbea* in 1753, in his *Species Plantarum*, in honor of Christian Georg Schwalbe, a botanical writer of the day. Samuel Boykin made the first collection from Georgia in the first half of the last century. It has since been found at about a dozen other locations, but only a few of these populations are known to persist in the state. Because *Schwalbea* roots produce haustoria (organs that connect to the roots of other species in order to parasitize them), it has been considered parasitic. Since it also contains chlorophyll (and unlike mistletoe, is rooted in the ground rather than growing on a host), it had been regarded as hemiparasitic, meaning that it is not obliged to parasitize other plants but does so when the opportunity presents itself. Recent study indicates, however, that although *Schwalbea* will remain in the seedling stage for up to a year without a host, it will not develop further without one. *Schwalbea americana* is rare throughout its range and has sustained significant habitat loss due to fire suppression or conversion of its habitat to agricultural land. It has seemingly been extirpated from more than half of the states in which it once occurred.

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900 Bottomland

620 Longleaf Pine

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# *Sedum pusillum* Michaux

1

Puck's Orpine, Granite Stonecrop, Dwarf Stonecrop

Stonecrop Family, CRASSULACEAE

## LEGAL STATUS:

State: THREATENED

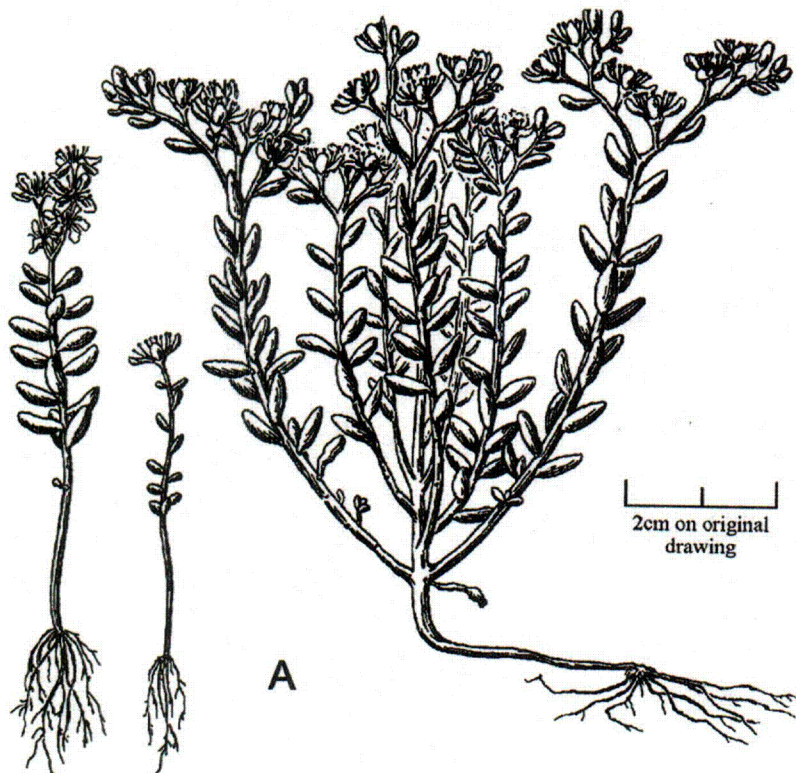
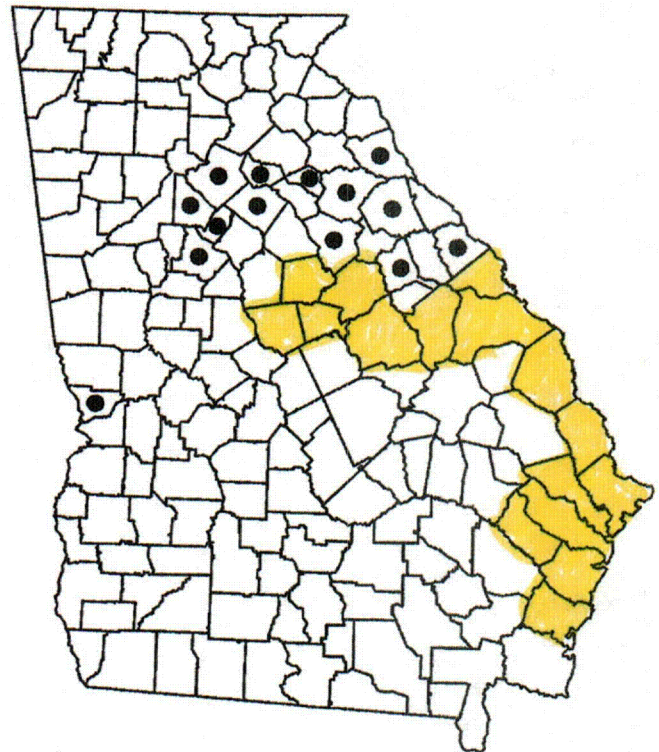
Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Piedmont Plateau of Georgia, South Carolina and southcentral North Carolina. Recorded from 14 counties in Georgia (see map).

**ILLUSTRATION:** (A) plant habit, variable sizes, 1x; (B) flower, *Sedum pusillum*, top and side views, 2.5x; (C) flower, *Diamorpha smallii*, top and side views; note cupped or hooded petal tips, 2.5x; (D) fruit, *S. pusillum*, opening by slits on top side, 4x; (E) fruit, *Diamorpha*, opening by flaps on underside, 4x. Source: (A) original drawing by Vicky Holifield; (B, C, D-top, E-top) Clausen (1975), drawn by Elfriede Abbe; (D-below, E-below) Spongberg (1978), drawn by Karen S. Velmurer and Rachel A. Wheeler, and used with permission.

**DESCRIPTION:** Annual herb. *Sedum pusillum* is a small, succulent plant usually 4-8 cm tall, unbranched to few-branched. The succulent leaves are spirally arranged, nearly cylindrical, 4-12 mm long, and 1.5-2.0 mm thick.



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The small, white flowers are arranged in a cyme, and have four petals, each 3-4 mm long. The eight stamens have reddish-brown pollen sacs. The fruit is cross-shaped, each pod-like arm is 3-5 mm long, splitting longitudinally along the top. **Flowering period:** March to April; **fruiting period:** April to May. **Best search time:** during fruiting, since how the fruit opens is diagnostic.

**HABITAT:** Found growing on granitic outcrops among mosses in partial shade, usually in leaf litter and mats of mosses (especially *Hedwigia ciliata*, sometimes *Grimmia laevigata*), under old, gnarled eastern redcedar trees (*Juniperus virginiana*).

**SPECIAL IDENTIFICATION FEATURES:** The infrequent *Sedum pusillum* strongly resembles "red-moss" or elf orpine (*Diamorpha smallii*) which is abundant on virtually all granitic outcrops. *Sedum pusillum* begins to bloom earlier, prefers shade, and has bluish-green leaves, whereas *Diamorpha* begins blooming two weeks later, prefers sun and usually has red leaves. The best distinguishing feature is the fruit. In *Diamorpha* the fruit opens by a small flap on the underside. In contrast, in *Sedum* the fruit opens by a longitudinal slit on the top side.

33 Quarries, Stryp mines

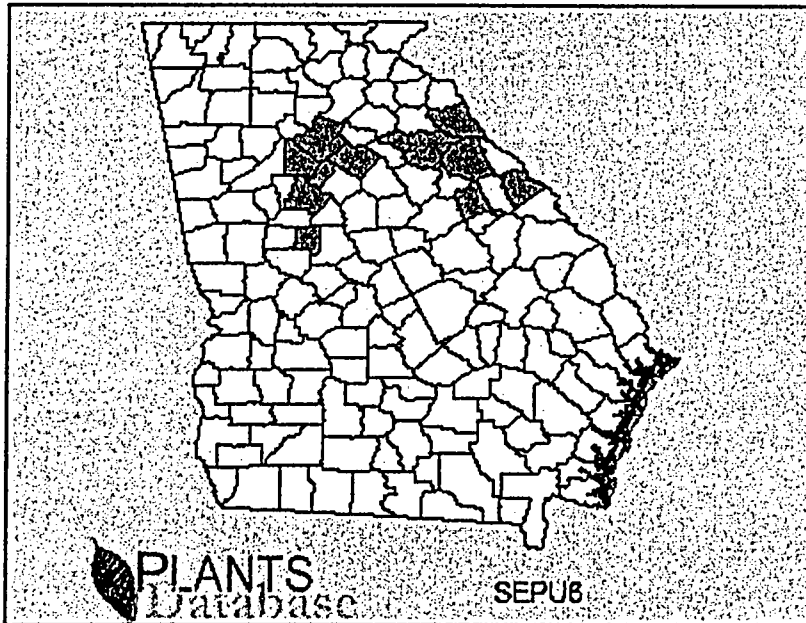
**MANAGEMENT RECOMMENDATIONS:** Control exotic weeds, especially Japanese honeysuckle and privet.

**REMARKS:** André Michaux was the first to collect this species, in April 1795, in Kershaw County, South Carolina. He described it in 1803 in his posthumously published *Flora Boreali-Americana (Flora of North America)*. *Sedum pusillum* is considered an ancient species with few, if any, close relatives within the genus. So far as known it has the lowest chromosome number in the family ( $n=4$ ). It is distinctive enough that Joseph Rose made it a genus all to itself (monotypic genus), *Tetrorum*. Due to its similarity to elf orpine (*Diamorpha smallii*), and because the original collections of both plants came from the same locality, the two were long considered the same species. It was not until 1875, when Asa Gray visited Stone Mountain and saw both species growing near each other, that their distinctiveness was firmly established. *Sedum pusillum* is rare throughout its range, and has sustained significant habitat loss due to extensive quarrying of granite outcrops, including the site where Michaux discovered it.

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**County Distribution of  
SEPU6 In Georgia**

*Sedum pusillum* Michx.  
granite stonecrop

**Return to the  
SEPU6 Plant Profile Page**

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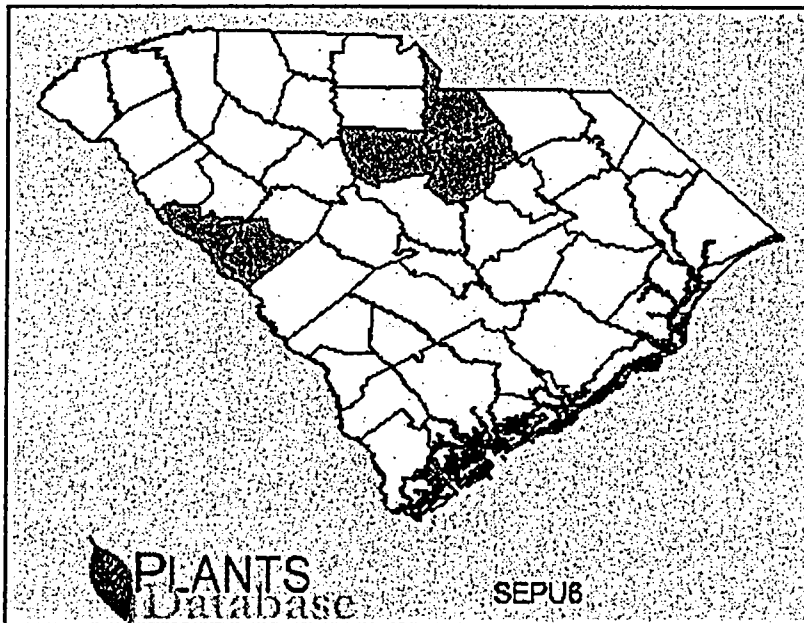
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**County Distribution of  
SEPU6 In South Carolina**

*Sedum pusillum* Michx.  
granite stonecrop

**Return to the  
SEPU6 Plant Profile Page**

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# *Silene polypetala* Walter) Fernald & Schubert

Fringed Campion

Pink Family, CARYOPHYLLACEAE

**LEGAL STATUS:**

State: ENDANGERED  
Federal: ENDANGERED

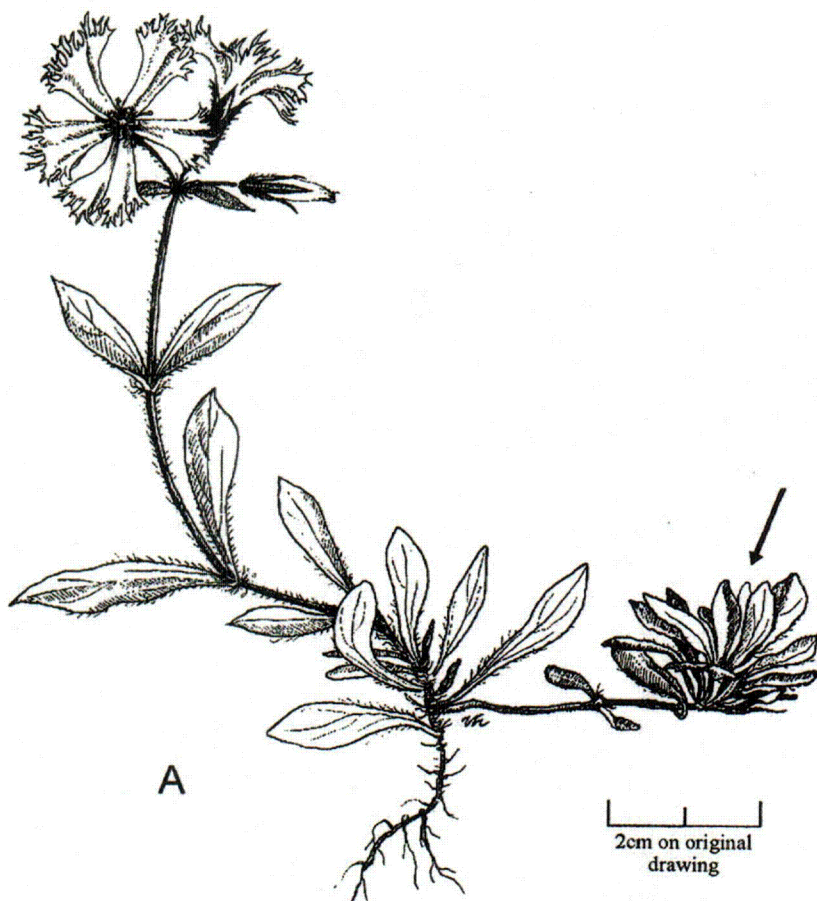
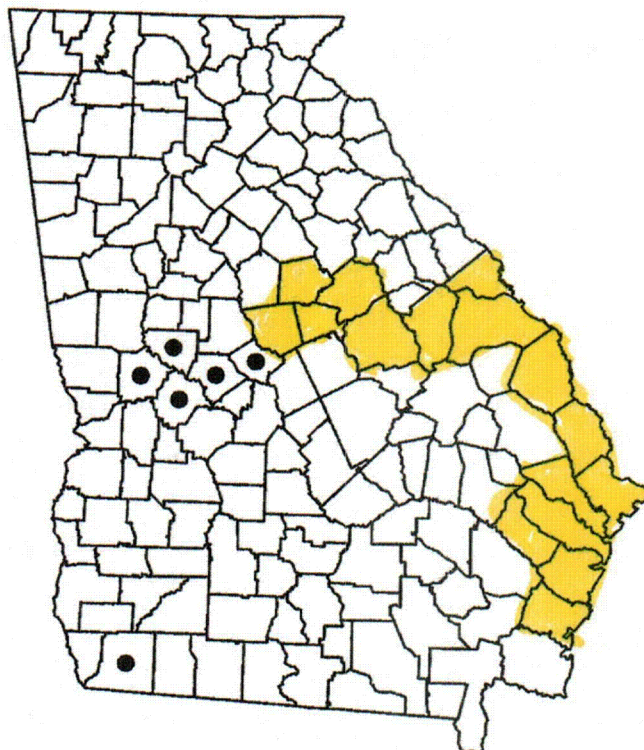
**SYNONYMY:**

*Silene baldwinii* Nuttall

**RANGE:** Lower Piedmont Plateau of westcentral Georgia in both the Flint and Ocmulgee River drainages; also Coastal Plain of extreme southwestern Georgia and the adjacent Florida Panhandle along Lake Seminole and the uppermost stretches of the Apalachicola River. Recorded from six counties in Georgia (see map).

**ILLUSTRATION:** (A) plant habit, 0.7x; note runner (stolon) with rosette of leaves; (B) partially opened flower, side view, showing fringed petals, and calyx with long soft hairs, 2.8x; (C) single petal and stamen, pressed flat, showing inner surface, 2.8x; note floral axis. Source: (A) original drawing by Vicky Holifield; (B,C) Hitchcock and Maguire (1947), drawn by an unknown artist and used with permission of the publisher.

**DESCRIPTION:** Perennial herb. This is a showy, delicate, mat-forming plant up to 25 cm tall. The stems



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creep by runners or stolons, rooting shallowly in the surface litter, with only their flowering tips erect. The flowering stems arise from rosettes produced at the ends of runners or stolons (see illustration). The flowering stem leaves are opposite, spatula-shaped to narrowly elliptic, 2-6 cm long, 1.0-1.5 cm wide, with soft, white hairs on the margins of the narrowed leaf bases. The elegant flowers are the most distinctive characteristic of this species. The five sepals are fused into a narrow cylinder, 2.2-2.5 cm long, weakly 10-veined, and covered with soft, sticky hairs. The five petals are bright pink when fresh, sometimes fading to a lighter shade, up to 3 cm long, about 1.5 cm wide, and deeply fringed at the apex. The fruit is an ovoid capsule, 1.0-1.2 cm long. **Flowering period:** March to mid-May; **fruiting period:** April to June. **Best search time:** during flowering, since many plants in a given population tend to go dormant rapidly.

**HABITAT:** Found in mature hardwood or hardwood-pine forests on river bluffs, small stream terraces, moist slopes and well-shaded ridge crests.

**SPECIAL IDENTIFICATION FEATURES:** Fringed campion is recognized vegetatively by the soft fringe of white hairs on the leafstalks (petioles), and the creeping habit of the shoots. The flower is exquisite; large (to 4 cm broad), often bright pink, and delicately fringed.

**MANAGEMENT RECOMMENDATIONS:** Hand thinning of shading trees in its vicinity, if done carefully, may be beneficial to this species. Control exotic weeds, especially Japanese honeysuckle. Avoid use of fire, raking, or any management tool that would destroy the protective litter layer of decaying hardwood leaves.

**REMARKS:** This species was first collected in the late 18th century from somewhere in Georgia, and described by Thomas Walter in 1788 as *Cucubalus polypetalus*. In 1818 Thomas Nuttall described *Silene baldwinii* (sometimes spelled *S. baldwynii*), based on a collection from the "banks of Flint River, Florida [sic]," sent to him by William Baldwin, a Delaware physician and avid plant collector. This was certainly from the Flint River in Georgia, probably in present day Crawford, Taylor or Upson Counties. Nuttall's name was universally employed for this species for the next 130 years, as the original description by Walter of *Cucubalus polypetalus* was scanty, at best, and that plant's true identity remained obscure. In 1948 M. L. Fernald and B. G. Schubert discovered that Walter's plant was the same as Nuttall's *S. baldwinii*. Because the earliest validly published species epithet for the plant was *polypetalus*, they published the new combination, *Silene polypetal*. This species has been found at about 20 locations in Georgia and a few localities just over the Florida state line, near the Apalachicola River. *Silene polypetal* is rare throughout its range. It has

sustained significant habitat loss due to clearing of forest land for agriculture and conversion of hardwood forest to pine plantation.

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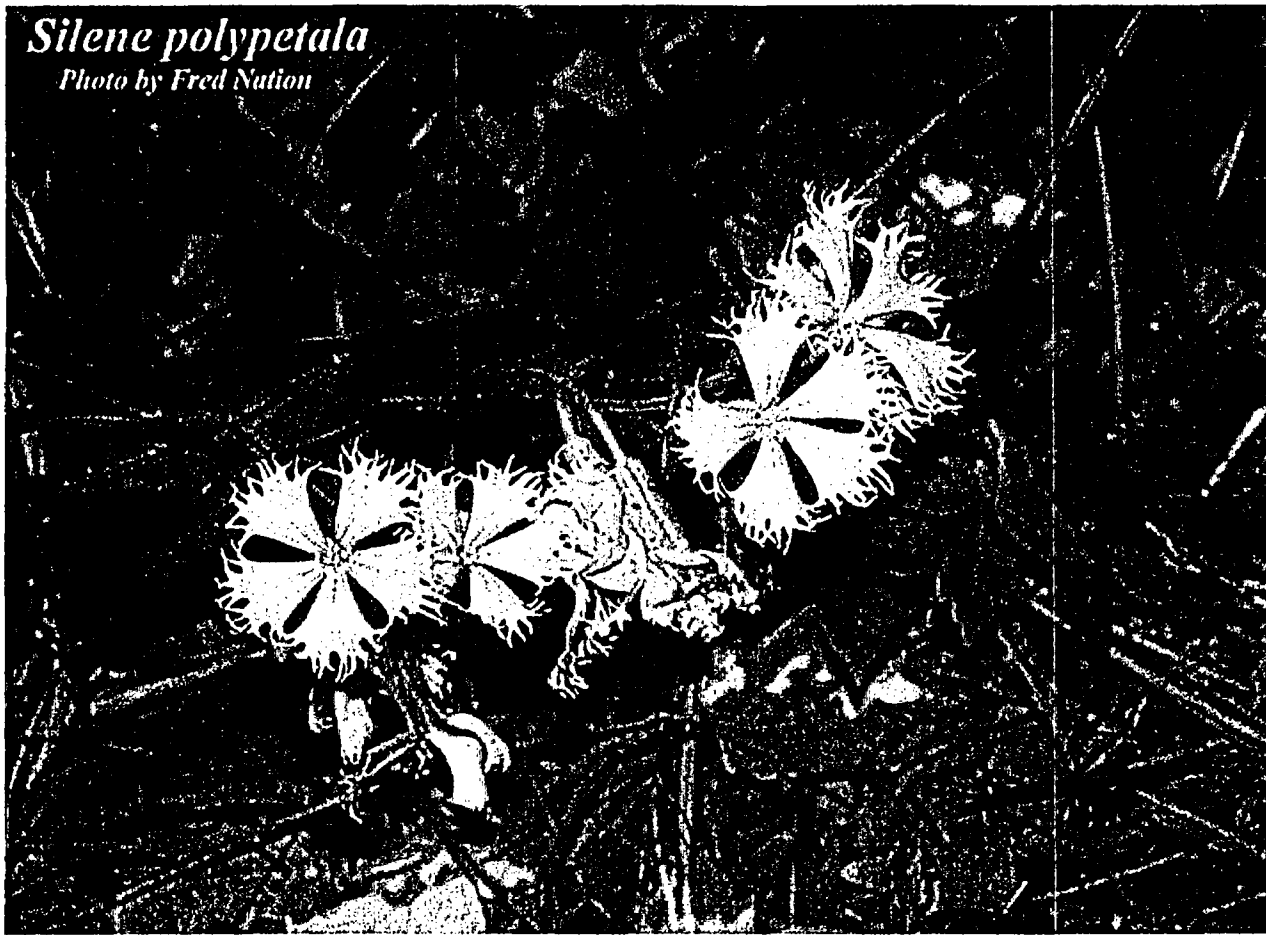
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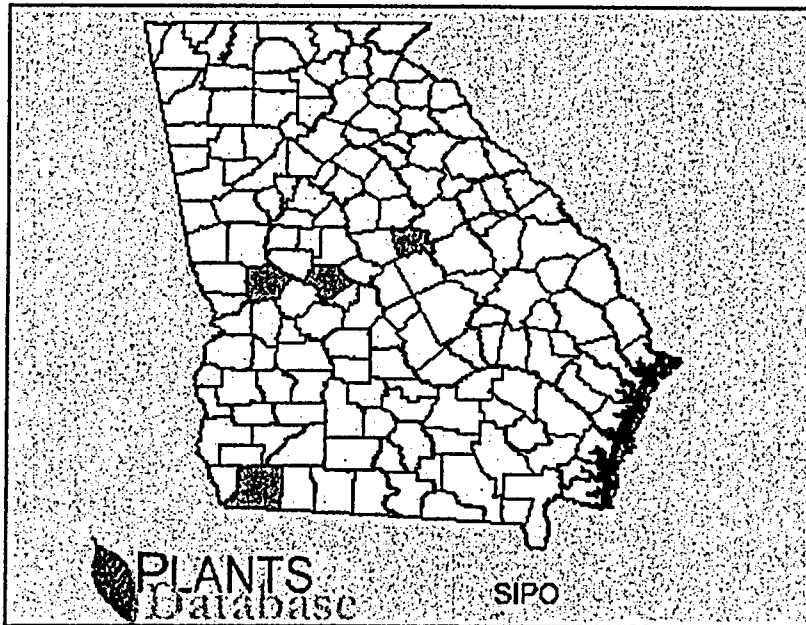
412 Hardwood forest

900 Bottomland Hardwood

434 mixed Pine-Hardwood

*Silene polypetala*  
Photo by Fred Nation






### County Distribution of SIPO In Georgia

*Silene polypetala* (Walt.)  
Fern. & Schub.  
eastern fringed catchfly

[Return to the  
SIPO Plant Profile Page](#)

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# *Stewartia malacodendron* Linnaeus

1

Silky Camellia

Tea Family, THEACEAE

## LEGAL STATUS:

State: RARE

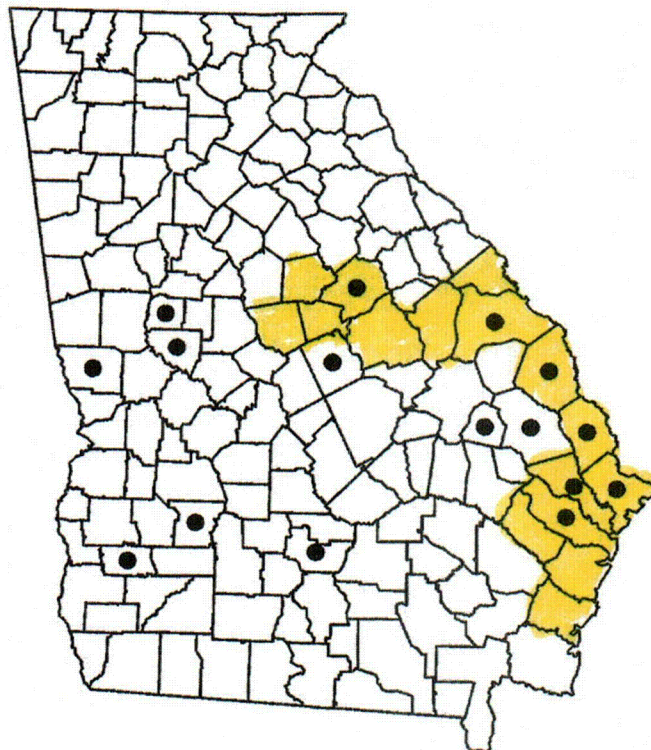
Federal: None

**SYNONYMY:** None in current usage.

**RANGE:** Mostly Coastal Plain, rarely in the adjacent Piedmont foothills, from Virginia south through the coastal states to eastern Texas and in the Mississippi Embayment to southcentral Arkansas. Recorded from 16 counties in Georgia (see map).

**ILLUSTRATION:** Flowering branch, 0.6x. Source: original drawing by Vicky Holifield.

**DESCRIPTION:** Deciduous shrub or small tree to 6 m tall. The young twigs are hairy; the leaf buds are enclosed by two overlapping scales covered with silvery hairs. The leaves are alternate, 5-11 cm long, 2.5-5.0 cm wide, ovate to elliptic, sharply pointed, finely toothed, and minutely hairy on the veins beneath and on the margins. The showy, camellia-like flowers are 7-8 cm wide, solitary in the leaf axils, on short stalks to 5 mm long, and subtended by two persistent floral bracts, which are each 2-4 mm long and as wide. The five sepals are 8-11 mm long, 5-9 mm wide,



their margins fringed with hairs. The five petals are 4-5 cm long, 3-5 cm wide, obovate to rounded, wavy-margined, creamy white and fused at the base. The numerous stamens are purplish, their stalks fused at the base into a 1 mm long tube, with the unfused portion of the stalks about 10 mm long and basally silky-hairy. The ovary also has silky hairs, and is nearly round, about 5 mm long during flowering, with a single style, which is 3-5 mm long, and terminated by four or five stigmas. The fruit is a woody capsule, 12-16 mm long, 12-18 mm wide, with the surface weakly angled and silky with silvery hairs. The base of the style persists on the fruit as an apical point or beak, 1.0-1.5 mm long. There are 2-4 seeds in each of four or five chambers within the fruit. The seeds are 5-7 mm long, 4-6 mm wide, wingless, plump, ovoid, shiny, and purplish to reddish-brown. **Flowering period:** late April to June; **fruiting period:** June to October. **Best search time:** during flowering, when plants are most conspicuous.

**HABITAT:** Found in the understory of rich, wooded bluffs and ravine slopes, also in the open edges of transition zones (ecotones) between sandhills and creek swamps.

**SPECIAL IDENTIFICATION FEATURES:** The *Stewartias* are understory shrubs with deciduous, finely toothed leaves; with camellia-like flowers; and, with telltale 2-scaled leaf buds that are covered with silky, whitish hairs. There are two species found in Georgia. Seemingly restricted to North Georgia, mountain camellia (*Stewartia ovata*) has dull, thin, winged seeds; tapered, strongly angled fruits; flowers on longer (1-2 cm) stalks; and longer (6-15 cm long) leaves, with winged stalks. In contrast, silky camellia (*S. malacodendron*) has shiny, plump, wingless seeds; short-beaked, weakly angled fruits; flowers on shorter (less than 1 cm) stalks; and shorter (4-10 cm long) leaves, with wingless stalks.

**MANAGEMENT RECOMMENDATIONS:** Avoid alteration of the water table. Hand thinning of shading trees in its vicinity, if done carefully, may be beneficial to this species.

**REMARKS:** *Stewartia*, like many other species in this book, exemplifies a floristic link with eastern Asia: this genus of 6-10 species is restricted to that area and the eastern United States. Linnaeus described this species in his *Species Plantarum* (1753), based on material collected by John Clayton in Virginia. Linnaeus named the genus in honor of a Scottish earl, John Stuart, despite the different spelling. The first collection from Georgia was made no later than 1913. Related genera of the tea family found in Georgia include *Franklinia*, *Gordonia*, and the cultivated *Camellia*. *Stewartia malacodendron* is rare throughout its range.

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412 Hardwood Forest

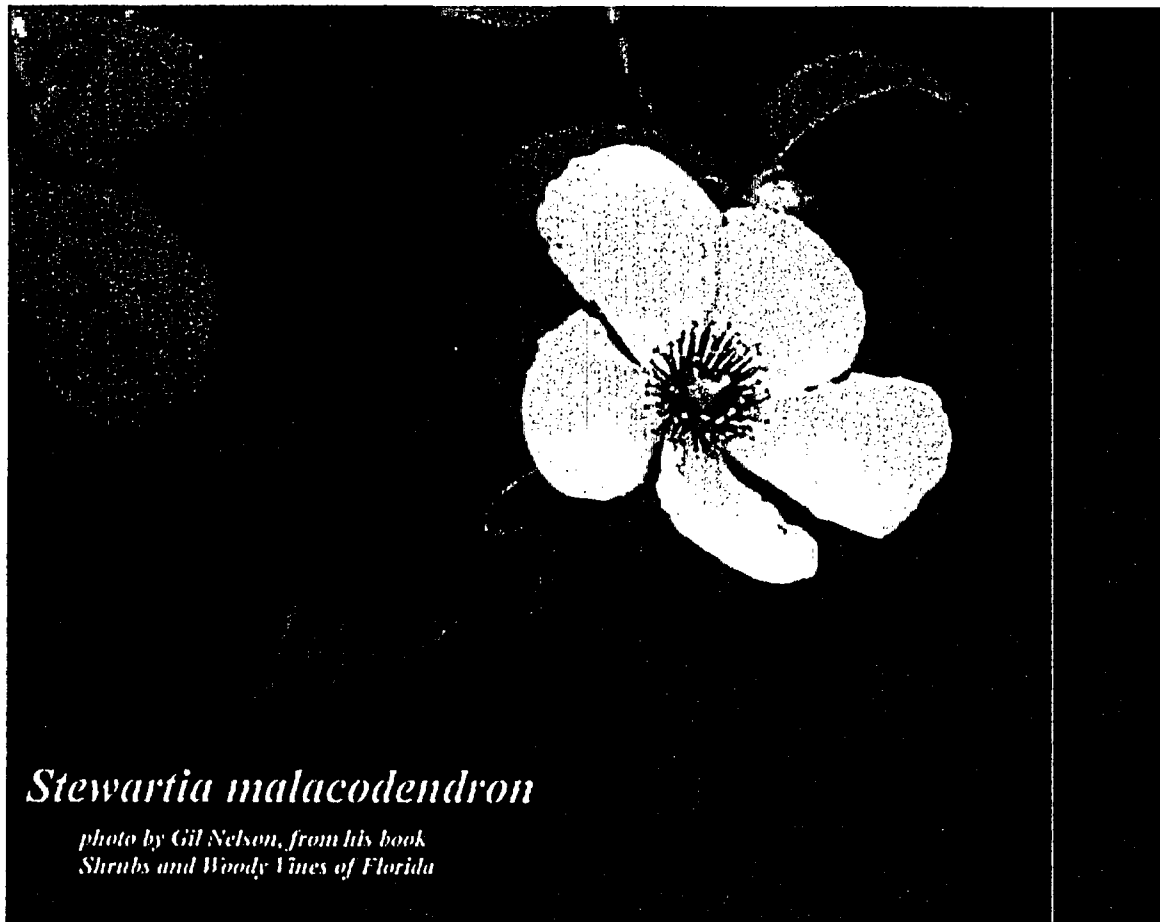
900 Bottomland Hardwood

434 Mixed Pine Hardwood



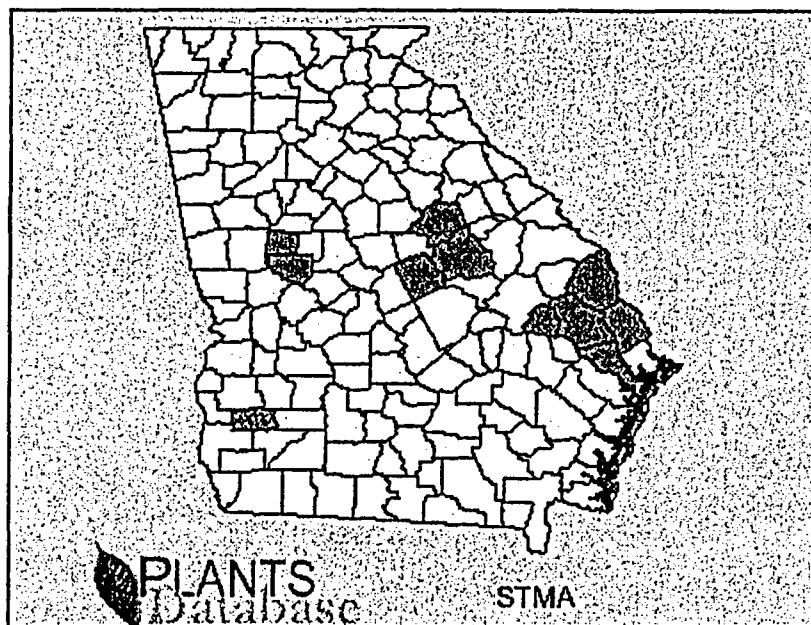
*Stewartia malacodendron*

Photo by Guy Anglin



*Stewartia malacodendron*

*photo by Gil Nelson, from his book  
Shrubs and Woody Vines of Florida*



### County Distribution of STMA in Georgia

*Stewartia malacodendron* L.

silky camellia

[Return to the  
STMA Plant Profile Page](#)

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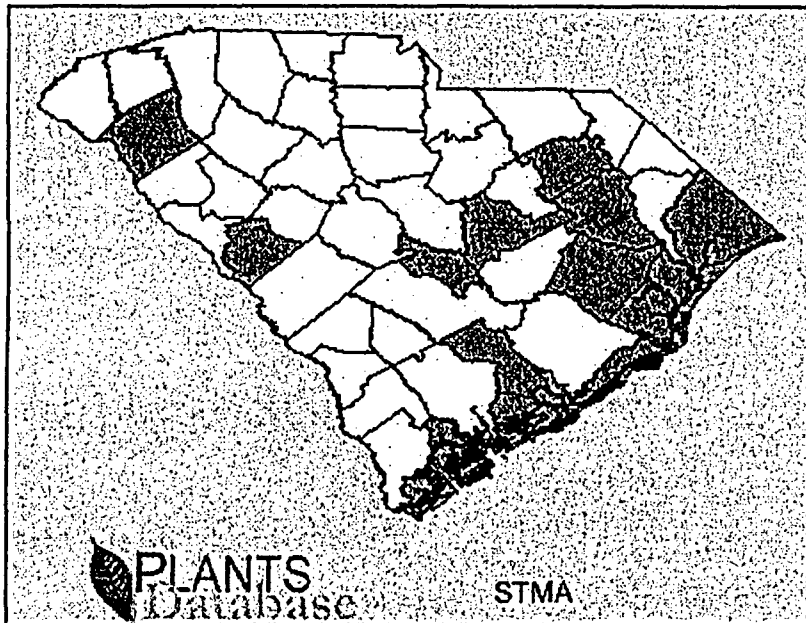
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**County Distribution of  
STMA in South Carolina**

*Stewartia malacodendron* L.

silky camellia

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STMA Plant Profile Page**

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# *Stylisma pickeringii* (Torrey ex M. A. Curtis) Gray var. *pickeringii*

1

Pickering Morning-glory, Pickering Dawnflower

Morning-glory Family, CONVULVULACEAE

## LEGAL STATUS:

State: THREATENED  
Federal: CANDIDATE

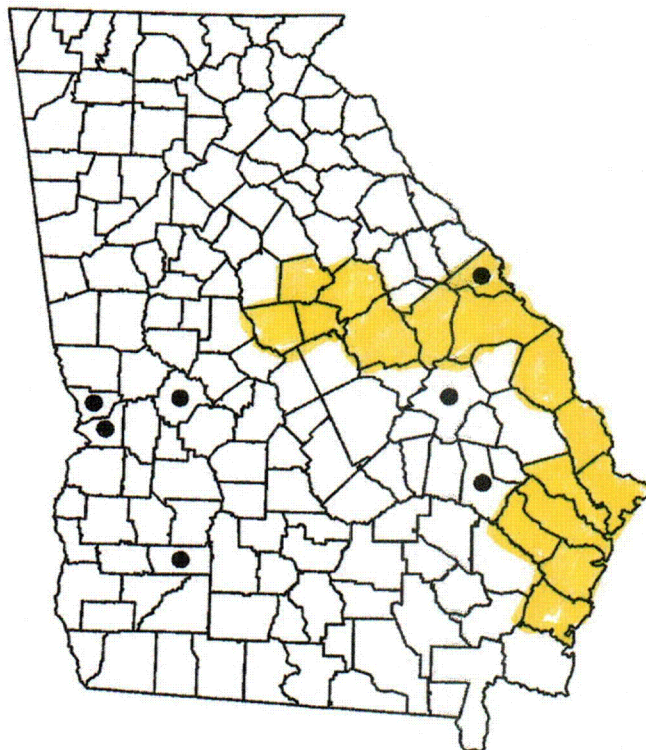
## SYNONYMY:

*Bonamia pickeringii* (Torrey ex M. A. Curtis) Gray  
*Breweria pickeringii* (Torrey ex M. A. Curtis) Gray  
*Convolvulus pickeringii* Torrey ex M. A. Curtis

**RANGE:** Scattered on the Coastal Plain, especially on sandhills along the Fall Line, from Alabama to southeastern North Carolina; disjunct in the Pine Barrens of New Jersey. Recorded from seven counties in Georgia (see map).

**ILLUSTRATION:** flowering branch, trailing with upright leaves, 1x; note long bracts on flower stalks. Source: original drawing by Vicky Holifield.

**DESCRIPTION:** Perennial, creeping vine. The stems sprawl over the ground from a central crown, each primary stem to 1-2 m or more in length and capable of branching extensively, forming, when luxurious, an intertwined network of trailing stems. The leaves are held upright, and are entire, linear, 2.5-7.0 cm long, 1-3 mm



wide, with the apex acute to obtuse, and with the base narrowly tapered to a short (2 mm) leafstalk. The flowers are axillary, solitary or in clusters with as many as five flowers atop a stalk 3-7 cm long, about as long or longer than subtending leaves. Near the base of the flowers are conspicuous bracts that are leaflike, linear, and 1.5-2.5 cm long. The flowers are white, 1.2-1.8 cm wide, with five fused petals forming a funnel-like shape. The five sepals are 4-6 mm long, 3-5 mm wide, ovate, and covered with yellowish-brown hairs. The ovary has a single style that is evenly cleft; each style branch is 2-3 mm long (style base is 3-4 mm long), and ends in a knob-shaped (capitate) stigma. The fruit is a globose capsule with one or two seeds. **Flowering period:** late May to mid-August; **fruiting period:** June to October. **Best search time:** during flowering, since plants deteriorate rapidly toward the end of a droughty summer.

**HABITAT:** Found in coarse, white sands on sandhills near the Fall Line, and on a few ancient dunes along the Flint and Ochoopee Rivers. These are scrub habitats with scant litter accumulation, sparse ground cover, and little canopy cover, the latter consisting mostly of scattered scrubby oaks and pines.

**SPECIAL IDENTIFICATION FEATURES:** The genus *Stylisma* is differentiated from other morning-glories by having small, funnel-like flowers on stalks about as long or longer than the subtending leaves; and styles with two branches, each with a knobby stigma. The Pickering morning-glory is striking in the field with its narrow, linear leaves held upright, usually at a 60-degree angle or more from the ground. In addition, *Stylisma pickeringii* has floral bracts longer (more than 1.5 cm long) than the flowers. Only one other *Stylisma* in Georgia has linear leaves and occurs in the same habitat as Pickering morning-glory. This is *S. patens* var. *angustifolia*. In contrast, its leaves are nearly horizontal and its floral bracts are shorter (less than 1 cm long) than the flowers.

**MANAGEMENT RECOMMENDATIONS:** Control encroachment of woody vegetation through prescribed burning. Timber removal, if desired, may be beneficial to this light-loving plant.

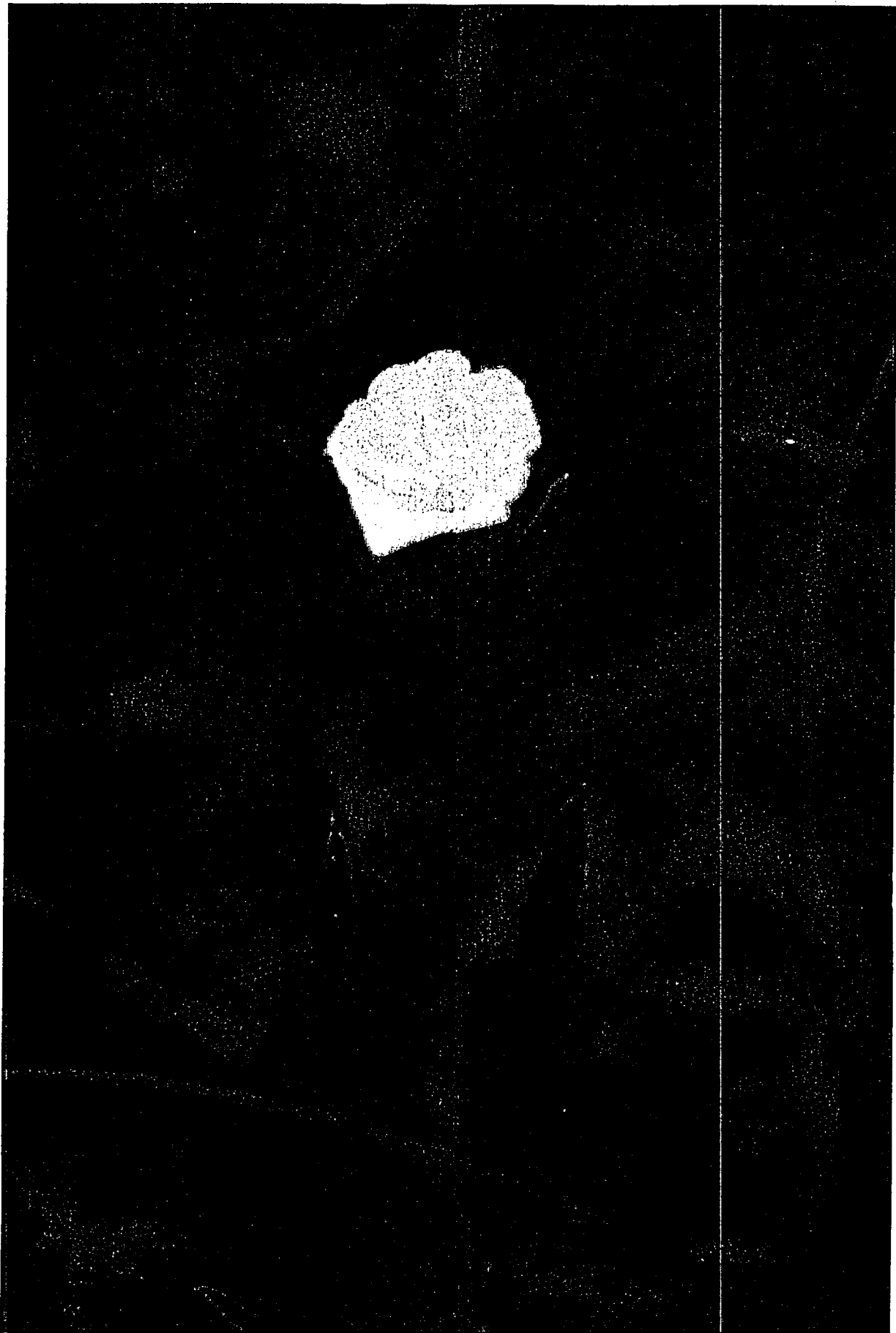
**REMARKS:** Moses Ashley Curtis described this species in 1835, as a *Convolvulus*, based on his collection of the previous year from Wilmington, North Carolina. Asa Gray transferred it to *Stylisma* in 1857. A second variety, *S. pickeringii* var. *pattersonii* occurs from Texas to Illinois and is not particularly rare. In 1901 Alfred Cuthbert made the first collection of var. *pickeringii* from Georgia, in Richmond County. It has since been found at about a dozen locations in Georgia. *Stylisma pickeringii* is rare throughout its range. It has a state status of Endangered in both New Jersey and North Carolina.

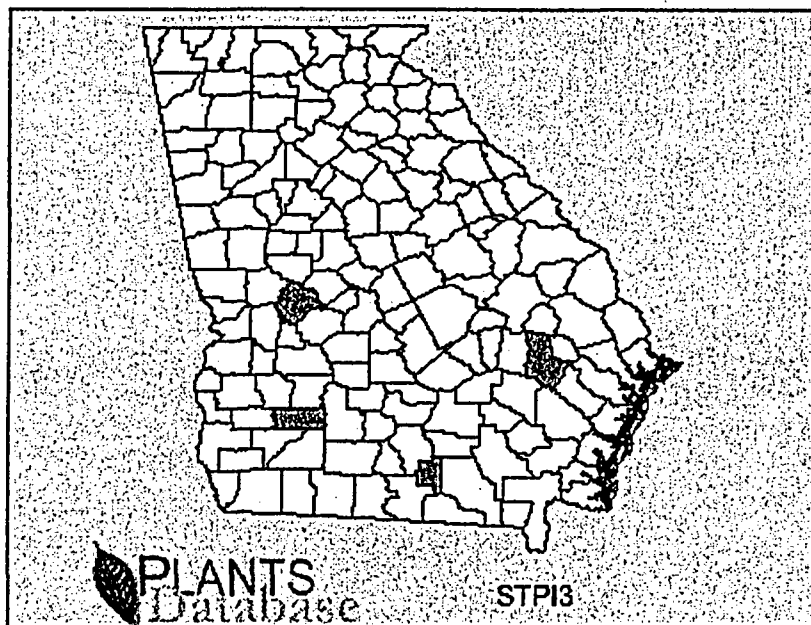
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512 Sandhill







**County Distribution of STPI3 In Georgia**

*Stylisma pickeringii* (Torr. ex M.A. Curtis) Gray  
Pickering's dawnflower

**Return to the STPI3 Plant Profile Page**

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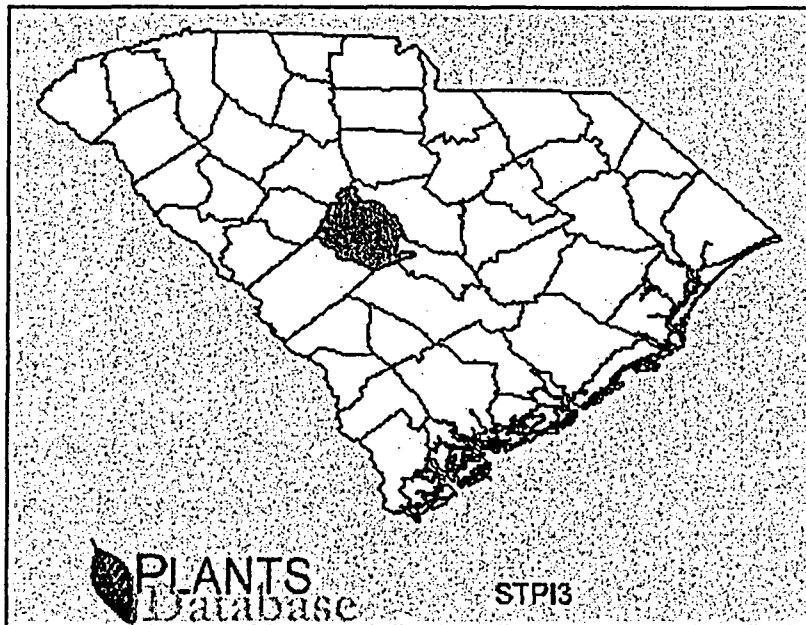
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**County Distribution of  
STPI3 In South Carolina**

*Stylisma pickeringii* (Torr. ex  
M.A. Curtis) Gray  
Pickering's dawnflower

**Return to the  
STPI3 Plant Profile Page**

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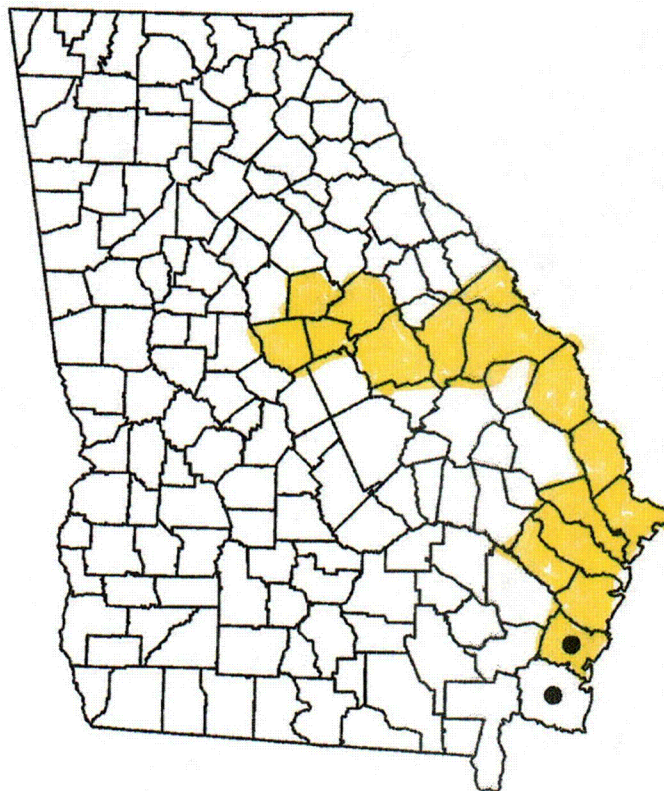
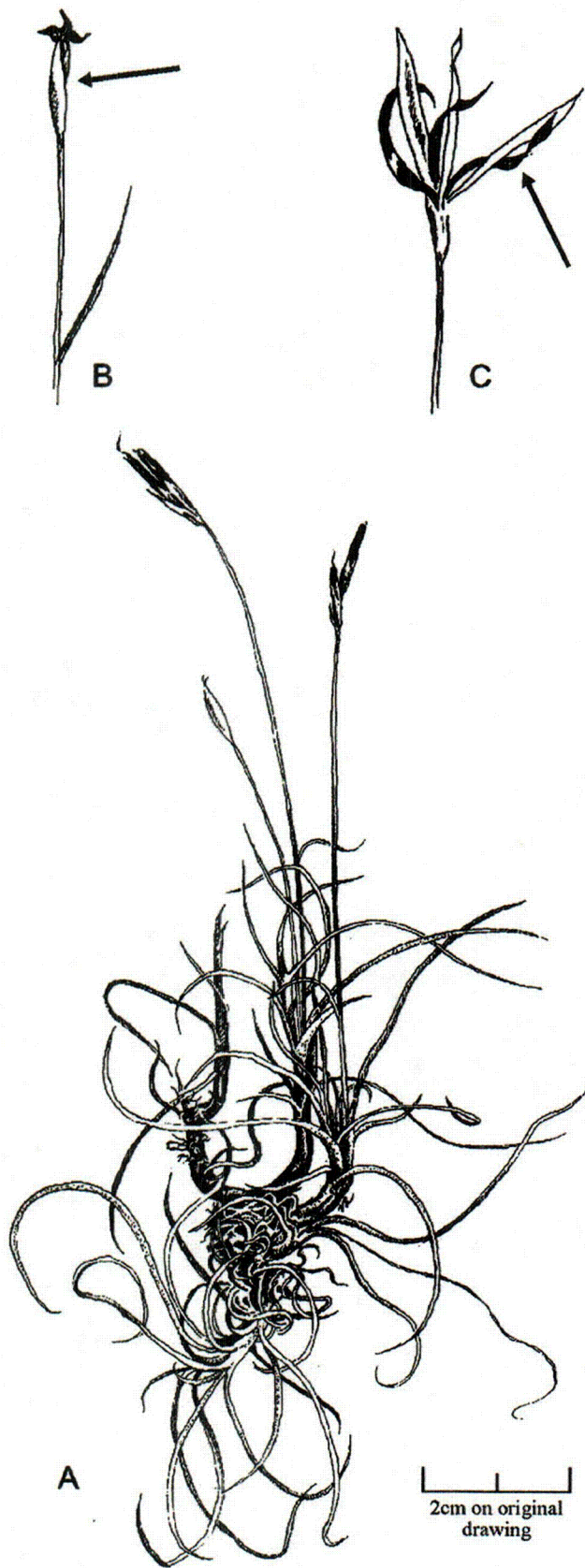
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# *Tillandsia recurvata* (Linnaeus) Linnaeus

1

Ball-moss, Bunch-moss

Air Plant Family, BROMELLIACEAE



## LEGAL STATUS:

State: THREATENED

Federal: None

## SYNONYMY:

*Renalmia recurvata* Linnaeus

*Diaphoranthema recurvata* (Linnaeus) Beer

**RANGE:** Outer Coastal Plain of southeastern Georgia into Florida, becoming abundant on the Florida Peninsula, mostly in coastal areas westward to the Patagonia Mountains of Arizona; scattered throughout Central America, to several islands of the West Indies, south to Argentina. Recorded from two counties in Georgia (see map).

**ILLUSTRATION:** (A) plant habit, 1x; (B) spike, 1x; note one open flower; (C) spike, with one fruit (capsule) split open, showing three valves and three septa (darkened), 1x; note one septum strongly twisted. Source: original drawing by Vicky Holifield.

**DESCRIPTION:** Epiphytic perennial herb, sometimes persisting on fallen limbs. Plants are 4-23 cm tall when in flower, with densely bunched stems, resembling loose "balls of moss." The leaves are opposite and 2-ranked, meaning that when a branch tip is viewed end-on, the leaves are in two rows. The leaves are round in cross section, 0.5-2.0 mm in diameter, linear, soft, 3-17 cm long,

and somewhat recurved. Each leaf pair is subtended by a hair-fringed sheath, which conceals the stem. Both leaves and subtending sheaths are densely covered with tawny scales resulting in foliage that has a dull, gray-green coloration and a scurfy texture. The flowers are produced in a terminal spike, on a leafless stalk (scape) up to 13 cm long, with tawny scales, and one or two bracts. Each flower cluster contains 1-2 (rarely to 5) flowers subtended by scaly, floral bracts similar to the three pale green sepals, which are lanceolate, 4-9 mm long, and sharply pointed. The three petals are longer, 12-14 mm long, narrow, and pale violet to white. The fruit is a capsule, 2-3 cm long, narrowly cylindrical, abruptly short-beaked, with numerous seeds. The seeds have cottony, plume-like hairs that aid in their dispersal; they become exposed to the wind by twisting of the reddish-brown capsule valves when the fruit matures. **Flowering period:** May to September; **fruiting period:** June to December. **Best search time:** all year, since plants are evergreen and the "ball-moss" habit is distinctive.

**HABITAT:** Found mostly on branches of live oak (*Quercus virginiana*) in Georgia, especially near the coast, either in urban or more natural settings such as evergreen hammocks and swamp forests.

**SPECIAL IDENTIFICATION FEATURES:** One of perhaps five or six bromeliads (air plants) native in Georgia, ball-moss is readily distinguishable. The plants have stems with numerous, gray-green, interwoven leaves that tend en masse to take the shape of a ball, usually 5-15 cm in diameter. Spanish-moss (*Tillandsia usneoides*) with its pendulous festoons and ball-moss (*T. recurvata*) both have 2-ranked leaves (see above description); the other native air plants have leaves in spiral clusters and resemble miniature pineapple plants.

**MANAGEMENT RECOMMENDATIONS:** Of horticultural interest: protect from removal by irresponsible persons.

**REMARKS:** *Tillandsia* is an American genus of over 400 species, mostly in the tropics. Although a few species can sometimes be found growing on rocks, most are epiphytes. These are non-parasitic plants, like the greenfly orchid (*Epidendrum conopseum*), that typically grow perched on trees. The species of *Tillandsia* most familiar to Georgians is one of the least typical of the genus: Spanish "moss" (*T. usneoides*). Linnaeus first described ball-moss in his *Species Plantarum* in 1753, as *Renealmia recurvata*. He gave the species its present name in his second edition of *Species Plantarum* in 1762. Wilbur Duncan made the first collection from Georgia on Jekyll Island (Glynn County) in 1982, after he was shown the plant by Taylor Schoettle. It has also been observed at other locations, one within the city limits of Brunswick. *Tillandsia recurvata* is at the

periphery of its range in Georgia, and is vulnerable to over-collecting by nurserymen and bromeliad enthusiasts.

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201 Forested Urban - Deciduous

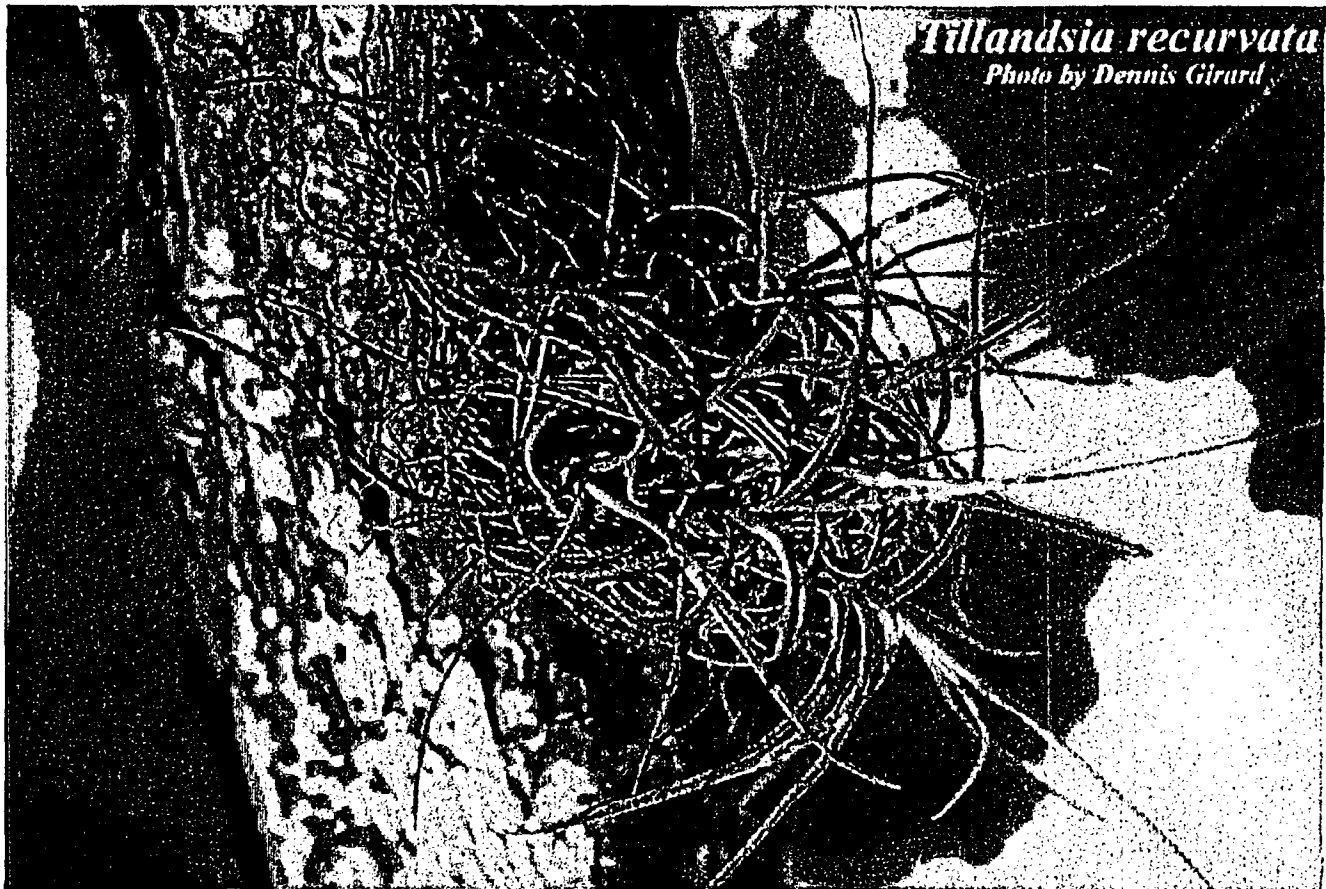
202 Forested Urban Evergreen

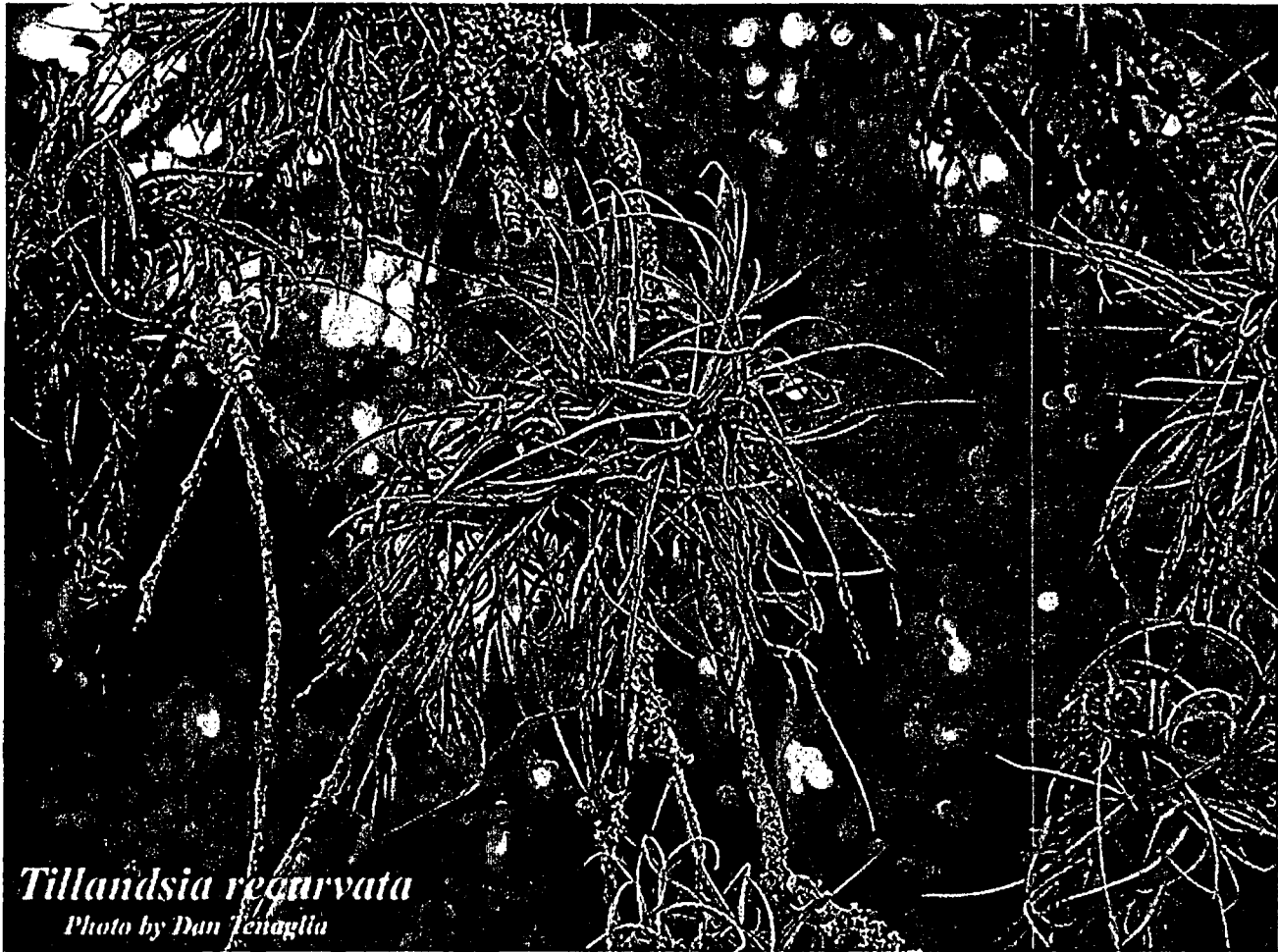
203 Forested Urban - Mixed

420 Live Oak

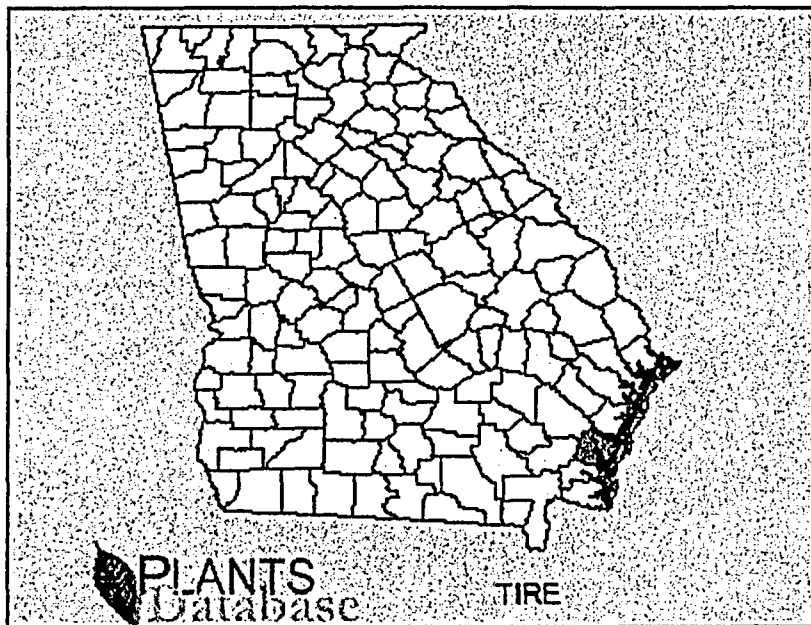
890 Cypress-Gum Swamp.

990 Evergreen Forested Wetland





*Tillandsia recurvata*  
Photo by Dan Fenaglia





**County Distribution of TIRE in Georgia**

*Tillandsia recurvata* (L.) L.  
small ballmoss

**Return to the TIRE Plant Profile Page**

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# *Trillium reliquum* Freeman

Relict Trillium, Relict Toadshade

Lily Family, LILIACEAE

**LEGAL STATUS:**

State: ENDANGERED

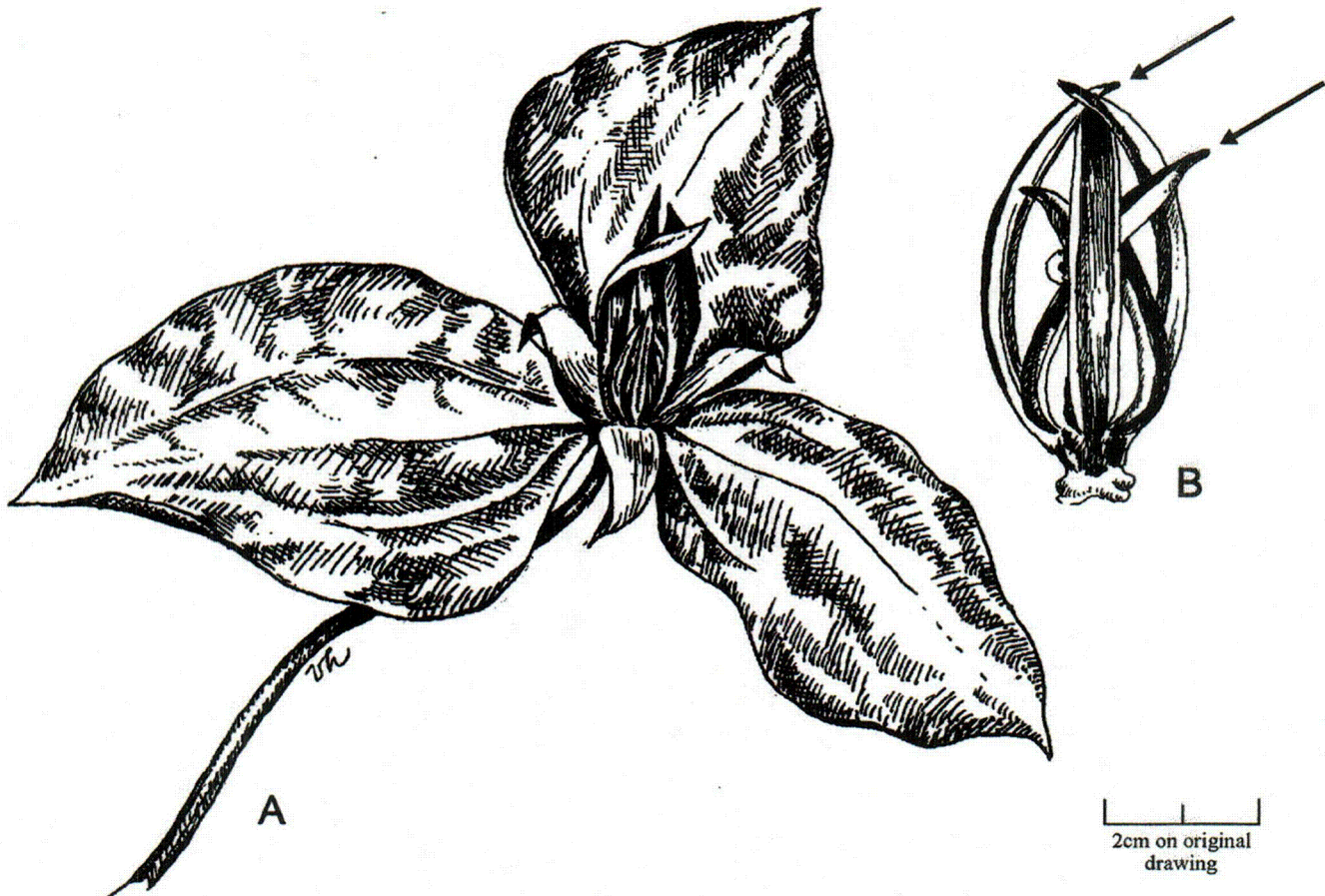
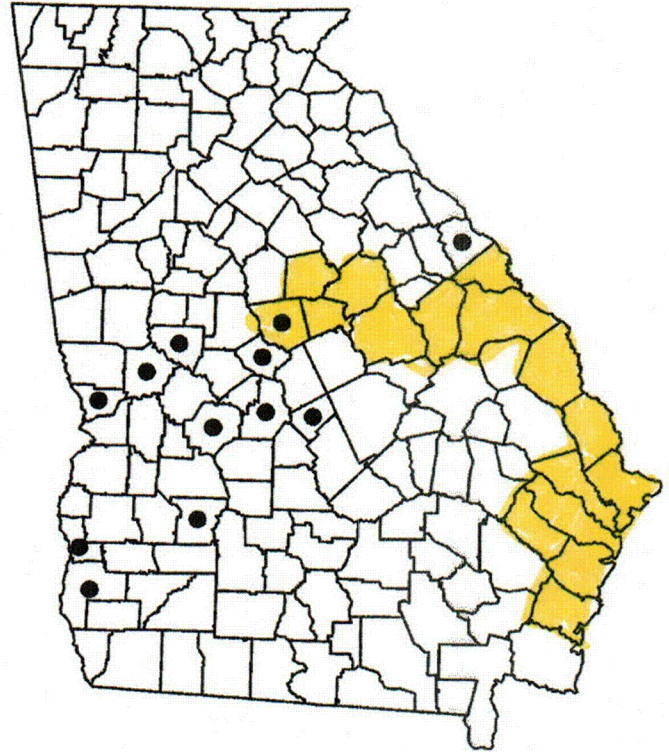
Federal: ENDANGERED

**SYNONYMY:** None in current usage.

**RANGE:** Coastal Plain of southeastern Alabama and adjacent southwestern Georgia; near the Fall Line on both the Coastal Plain and the Piedmont Plateau in westcentral Georgia; and disjunct just above the Fall Line along the Savannah River in Georgia and adjacent South Carolina. Recorded from 12 counties in Georgia (see map).

**ILLUSTRATION:** (A) flowering stem, 1x; (B) inner flower parts, stamens surrounding pistil, 3x; note prominent beaks at tips of stamens. Source: original drawing by Vicky Holifield.

**DESCRIPTION:** Perennial herb. *Trillium reliquum* is one of the trilliums with a stalkless (sessile) flower placed in the center of a whorl of three strongly mottled leaves. The stem is curved, 5-25 cm long, often with the leaf whorl nearly resting on the litter layer. The leaves are elliptic to orbicular, 5-14 cm long, almost as wide, and narrowing to a pointed apex where the margins are nearly



straight, thus the apex is sharply pointed and evenly tapered (acute). The leaves have five shades of color from green through blue-green to silver, with a strong, central, silvery streak on the upper surface. The flowers, 22-60 mm long, are less than half as long as the leaves, and emit an unpleasant, fetid odor. The three sepals are loosely spreading, usually purplish on the inner surface. The three petals are more erect, slightly twisted, and range in color from dark purple to yellow. The stamens are about half as long as the petals, and the tip of the anther is prolonged into a distinct beak (see illustration). The fruit is an ovoid to globose, fleshy capsule, 1.0-1.5 cm in diameter, with about 10-45 plump seeds. **Flowering period:** March to April; **fruiting period:** May to early June. **Best search time:** during flowering, since features of the flower are needed for positive identification.

**HABITAT:** Found in hardwood forests. In the Coastal Plain, these often with boulders or ledges with soft limestone; in the Piedmont, in deep loamy soils, either in rich ravines or adjacent alluvial terraces with numerous other spring-flowering herbs.

**SPECIAL IDENTIFICATION FEATURES:** Relict trillium is distinguished by the following suite of characters. The stamens are prolonged into prominent beaks. The flowers are relatively small, only half as long as the leaves. The flowers emit a foul, carrion odor. The leaves are elliptic to nearly round, with an acute apex, and strikingly mottled, with a silver stripe down the middle on the upper side. Plants are low to the ground, since the stems of the larger, flowering individuals are curved, not straight. The trilliums most likely to grow with relict trillium are *Trillium catesbaei*, *T. cuneatum*, and *T. maculatum*. These all have erect stems, larger (especially longer) flowers, and, most importantly, their stamens are blunt at the tip, never prolonged into a distinctive beak 1 mm long or longer.

**MANAGEMENT RECOMMENDATIONS:** Avoid disturbance. At most this species will tolerate only hand thinning of trees in its vicinity, and only if done carefully. Control exotic weeds, especially Japanese honeysuckle. Of horticultural interest: protect from removal by irresponsible persons.

**REMARKS:** Although Alfred Cuthbert collected this trillium in 1901, from near Augusta (most likely in extreme southeastern Columbia County), it was not described as new until 1975 (Freeman, 1975). It has been found at fewer than 30 sites, the majority in Georgia. John Freeman named this plant for its distribution pattern: widely separated concentrations of populations in relatively undisturbed situations. This suggests that modern day occurrences are relictual—scattered remnants of a once more abundant species. Opinions vary as to the

higher taxonomy of the trilliums. Although placed in the lily family (Liliaceae) by Arthur Cronquist, both Armen Takhtajan and Robert Thorne place *Trillium* in the trillium family (Trilliaceae). The ongoing Flora of North America Project follows Cronquist, as do the authors of *Protected Plants of Georgia*. For a review of these systems of family classification, see Flora of North America Editorial Committee (1993). *Trillium reliquum* is rare throughout its range. It has sustained significant habitat loss due to clearing of forest land for agriculture and conversion of hardwood forest to pine plantation. Several populations are in danger due to a buildup of aggressive weeds such as Japanese honeysuckle, Chinese privet, and kudzu.

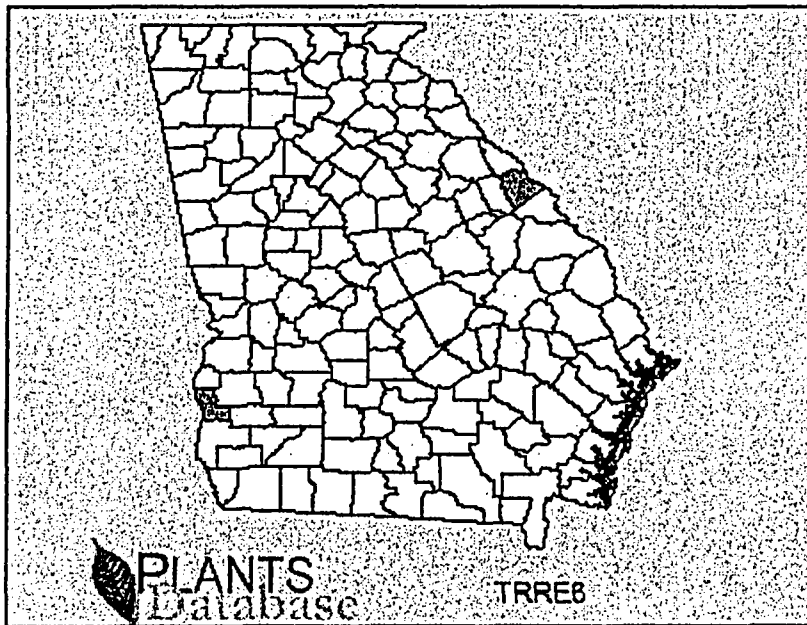
#### SELECTED REFERENCES

- Currie, R. R. 1991. Recovery plan for relict trillium (*Trillium reliquum* Freeman). United States Fish and Wildlife Service, Atlanta, Georgia. 29 pp.
- Flora of North America Editorial Committee. 1993. Flora of North America. Volume 1. Introduction. Oxford University Press, New York. 372 pp.
- Freeman, J. D. 1975. Revision of *Trillium* subgenus *Phyllantherum* (Liliaceae). *Brittonia* 27:1-62.
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412 Hardwood forest

434 Mixed Pine - Hardwood

900 Bottomland Hardwood





**County Distribution of TRRE6 in Georgia**

*Trillium reliquum* J.D. Freeman  
Confederate wakerobin

**Return to the TRRE6 Plant Profile Page**

Our county data are based primarily on the literature, herbarium specimens, and confirmed observations. Not all populations have been documented, however, and significant gaps in the distribution shown above may not be real. Please use the Distribution Update module to improve the data by adding your new distribution information to PLANTS. Remember that only native and naturalized populations are mapped!

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# **Bird Spread Sheet**

# **Protected Bird Species List**

## Protected Bird Species in Georgia

Find details for the birds on this list at [NatureServe](http://NatureServe).

Date of information - 10/22/2004  
16 birds on this list

Scientific Name	Common Name	State Status (what's this?)	Federal Status (what's this?)
<i>Aimophila aestivalis</i>	Bachman's Sparrow	R	
<i>Campephilus principalis</i>	Ivory-billed Woodpecker	E	LE
<i>Charadrius melodus</i>	Piping Plover	T	(LE,LT)
<i>Charadrius wilsonia</i>	Wilson's Plover	R	
<i>Corvus corax</i>	Common Raven	R	
<i>Dendroica kirtlandii</i>	Kirtland's Warbler	E	LE
<i>Elanoides forficatus</i>	Swallow-tailed Kite	R	
<i>Falco peregrinus</i>	Peregrine Falcon	E	(PS:LE)
<i>Haematopus palliatus</i>	American Oystercatcher	R	
<i>Haliaeetus leucocephalus</i>	Bald Eagle	E	(PS:LT,PDL)
<i>Mycteria americana</i>	Wood Stork	E	(PS:LE)
<i>Picoides borealis</i>	Red-cockaded Woodpecker	E	LE
<i>Sterna antillarum</i>	Least Tern	R	(PS:LE)
<i>Sterna nilotica</i>	Gull-billed Tern	T	
<i>Thryomanes bewickii</i>	Bewick's Wren	R	
<i>Vermivora bachmanii</i>	Bachman's Warbler	E	LE

NOTE: This is a working list and is constantly revised ([see element occurrence data disclaimer](#)). For the latest changes, acknowledgment of numerous sources, interpretation of data, or other information connected with this list, please contact:

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Click [here](#) to send e-mail

Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Bird species**

STATUS KEY:		
FE= Federally Endangered	GE= Georgia Endangered	A= Accidentals
FT= Federally Threatened	GT= Georgia Threatened	M= Migratory
EX= Extinct	GR= Georgia Rare	I= Introduced to Georgia
	GU= Georgia Unusual	X= Extirpated in Georgia

View list by Common Name or in Taxonomic Order

Scientific Name	Common Name	Status
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**ORDER: Gaviiformes (Loons)****Family Gaviidae**

<i>Gavia immer</i>	Common Loon	
<i>Gavia stellata</i>	Red-throated Loon	GU

**ORDER: Podicipediformes (Grebes)****Family Podicipedidae**

<i>Podiceps auritus</i>	Horned Grebe	
<i>Podiceps grisegna</i>	Red-necked Grebe	A
<i>Podiceps nigricollis</i>	Eared Grebe	A
<i>Podilymbus podiceps</i>	Pied-Billed Grebe	

**ORDER: Procellariiformes (Petrels, Shearwaters, and Storm-Petrels)****Family Procellariidae**

<i>Pterodroma hasitata</i>	Black-capped Petrel	GU
<i>Calonectris diomedea</i>	Cory's Shearwater	
<i>Puffinus griseus</i>	Sooty Shearwater	GR
<i>Puffinus puffinus</i>	Manx Shearwater	GR
<i>Puffinus lherminieri</i>	Audubon's Shearwater	GU



**Family Hydrobatidae**

<i>Oceanites oceanicus</i>	Wilson's Storm-petrel	GU
<i>Oceanodroma castro</i>	Band-rumped Storm-petrel	GR

**ORDER: Pelecaniformes (Pelicans, Anhingas and Cormorants)**

**Family Sulidae**

<i>Sula bassanus</i>	Northern Gannet	GU
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**Family Pelecanidae**

<i>Pelecanus erythrorhynchos</i>	American White Pelican	
<i>Pelecanus occidentalis</i>	Brown Pelican	FE GE

**Family Anhingidae**

<i>Anhinga anhinga</i>	American Anhinga	
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**Family Phalacrocoracidae**

<i>Phalacrocorax auritus</i>	Double-crested Cormorant	
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**ORDER: Ciconiiformes (Hérons, Egret, Storks, Ibis, Bitterns and Vulture)**

**Family Ardeidae**

<i>Botaurus lentiginosus</i>	American Bittern	GU
<i>Ixobrychus exilis</i>	Least Bittern	
<i>Ardea herodias</i>	Great Blue Heron	
<i>Ardea albus</i>	Great Egret	
<i>Egretta thula</i>	Snowy Egret	
<i>Egretta caerulea</i>	Little Blue Heron	
<i>Egretta tricolor</i>	Tricolored Heron	
<i>Egretta rufescens</i>	Redish Egret	A
<i>Bubulcus ibis</i>	Cattle Egret	
<i>Butorides virescens</i>	Green Heron	
<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	GU
<i>Nyctanassa violacea</i>	Yellow-crowned Night-heron	GU

**Family Threskiornithidae**

<i>Eudocimus albus</i>	White Ibis	
<i>Plegadis falcinellus</i>	Glossy Ibis	GU
<i>Ajaia ajaja</i>	Roseate Spoonbill	A

**Family Ciconiidae**

<i>Mycteria americana</i>	Wood Stork	FE GU
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**Family Cathartidae**

*Cathartes aura* Turkey Vulture

*Coragyps atratus* Black Vulture

**ORDER: Anseriformes (Ducks and Geese)**

**Family Anatidae**

<i>Dendrocygna bicolor</i>	Fulvous Whistling-duck	GR
<i>Cygnus columbianus</i>	Tundra Swan	GR
<i>Anser albifrons</i>	Greater White-fronted Goose	GR
<i>Chen caerulescens</i>	Snow Goose	GR
<i>Chen rossii</i>	Ross' Goose	A
<i>Branta canadensis</i>	<u>Canada Goose</u>	
<i>Aix sponsa</i>	<u>Wood Duck</u>	
<i>Anas crecca</i>	Green-winged Teal	
<i>Anas rubripes</i>	American Black Duck	GU
<i>Anas platyrhynchos</i>	<u>Mallard</u>	
<i>Anas acuta</i>	Northern Pintail	GU
<i>Anas discors</i>	<u>Blue-winged Teal</u>	
<i>Anas clypeata</i>	Northern Shoveler	
<i>Anas strepera</i>	Gadwall	
<i>Anas americana</i>	American Wigeon	
<i>Aythya valisineria</i>	Canvasback	GU
<i>Aythya americana</i>	Redhead	GU
<i>Aythya collaris</i>	<u>Ring-necked Duck</u>	
<i>Aythya affinis</i>	Lesser Scaup	
<i>Aythya marila</i>	Greater Scaup	GR
<i>Clangula hyemalis</i>	Long-tailed Duck (Oldsquaw)	GR
<i>Melanitta fusca</i>	White-winged Scoter	GU
<i>Melanitta nigra</i>	Black Scoter	
<i>Melanitta perspicillata</i>	Surf Scoter	GU
<i>Bucephala albeola</i>	Bufflehead	
<i>Bucephala clangula</i>	Common Goldeneye	GR
<i>Lophodytes cucullatus</i>	<u>Hooded Merganser</u>	
<i>Mergus merganser</i>	Common Merganser	A
<i>Mergus serrator</i>	Red-breasted Merganser	
<i>Oxyura jamaicensis</i>	Ruddy Duck	

**ORDER: Falconiformes (Falcons, Hawks, Eagles and Ospreys)**

**Family Accipitridae**

<i>Pandion haliaetus</i>	Osprey	GU	
<i>Elanoides forficatus</i>	Swallow-tailed Kite	GR	←
<i>Ictinia mississippiensis</i>	Mississippi Kite	GU	
<i>Haliaeetus leucocephalus</i>	Bald Eagle	(FT) (GT)	←
<i>Circus cyaneus</i>	Northern Harrier		
<i>Accipiter striatus</i>	Sharp-shinned Hawk	GU	
<i>Accipiter cooperii</i>	Cooper's Hawk		
<i>Accipiter gentilis</i>	Northern Goshawk	A	
<i>Buteo lineatus</i>	Red-shouldered Hawk		
<i>Buteo platypterus</i>	Broad-winged Hawk		
<i>Buteo jamaicensis</i>	Red-tailed Hawk		
<i>Buteo lagopus</i>	Rough-legged Hawk	A	
<i>Aquila chrysaetos</i>	Golden Eagle	GR	

**Family Falconidae**

<i>Falco sparverius</i>	American Kestrel	
<i>Falco columbarius</i>	Merlin	GU
<i>Falco peregrinus</i>	Peregrine Falcon	(FT) (GT)

**ORDER: Galliformes (Turkeys, Quail, Pheasant and Bobwhite)**

**Family Cracidae**

<i>Ortalis vetula</i>	Plain Chachalaca
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**Family Phasianidae**

<i>Meleagris gallopavo</i>	Wild Turkey
<i>Bonasa umbellus</i>	Ruffed Grouse

**Family Odontophoridae**

<i>Colinus virginianus</i>	Northern Bobwhite
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**ORDER: Gruiformes (Cranes, Rails, Limpkins, Gallinule and Coots)**

**Family Rallidae**

<i>Coturnicops noveboracensis</i>	Yellow Rail
<i>Laterallus jamaicensis</i>	Black Rail
<i>Rallus longirostris</i>	Clapper Rail
<i>Rallus elegans</i>	King Rail
<i>Rallus limicola</i>	Virginia Rail
<i>Porzana carolina</i>	Sora

*Porphyryla martinica* Purple Gallinule  
*Gallinula chloropus* Common Moorhen  
*Fulica americana* American Coot

**Family Aramidae**

*Aramus guarauna* Limpkin A

**Family Gruidae**

*Grus canadensis* Sandhill Crane GU

**ORDER: Charadriiformes (Shorebirds, Gulls and relatives)**

**Family Charadriidae**

*Pluvialis squatarola* Black-Bellied Plover  
*Pluvialis dominica* American Golden-plover GR ←  
*Charadrius wilsonia* Wilson's Plover  
*Charadrius semipalmatus* Semipalmated Plover  
*Charadrius melodus* Piping Plover FE GT ←  
*Charadrius vociferus* Killdeer

**Family Haematopodidae**

*Haematopus palliatus* American Oystercatcher GR ←

**Family Recurvirostridae**

*Himantopus mexicanus* Black-necked Stilt GU  
*Recurvirostra americana* American Avocet GU

**Family Scolopacidae**

*Tringa melanoleuca* Greater Yellowlegs  
*Tringa flavipes* Lesser Yellowlegs  
*Tringa solitaria* Solitary Sandpiper  
*Catoptrophorus semipalmatus* Willet  
*Actitis macularia* Spotted Sandpiper  
*Bartramia longicauda* Upland Sandpiper GR M  
*Numenius phaeopus* Whimbrel  
*Numenius americanus* Long-billed Curlew  
*Limosa fedoa* Marbled Godwit  
*Arenaria interpres* Ruddy Turnstone  
*Calidris canutus* Red Knot  
*Calidris alba* Sanderling  
*Calidris pusilla* Semipalmated Sandpiper  
*Calidris mauri* Western Sandpiper

<i>Calidris minutilla</i>	Least Sandpiper	
<i>Calidris fuscicollis</i>	White-rumped Sandpiper	
<i>Calidris melanotos</i>	Pectoral Sandpiper	
<i>Calidris maritima</i>	Purple Sandpiper	
<i>Calidris alpina</i>	Dunlin	
<i>Calidris himantopus</i>	Stilt Sandpiper	
<i>Tryngites subruficollis</i>	Buff-breasted Sandpiper	
<i>Limnodromus griseus</i>	Short-billed Dowitcher	
<i>Limnodromus scolopaceus</i>	Long-billed Dowitcher	GU
<i>Gallinago gallinago</i>	Common Snipe	
<i>Scolopax minor</i>	American Woodcock	
<i>Phalaropus tricolor</i>	Wilson's Phalarope	
<i>Phalaropus lobatus</i>	Red-Necked Phalarope	
<i>Phalaropus fulicaria</i>	Red Phalarope	

**Family Laridae**

<i>Stercorarius pomarinus</i>	Pomarine Jaeger	
<i>Stercorarius parasiticus</i>	Parasitic Jaeger	
<i>Larus atricilla</i>	Laughing Gull	
<i>Larus pipixcan</i>	Franklin's Gull	A
<i>Larus philadelphia</i>	Bonaparte's Gull	
<i>Larus delawarensis</i>	Ring-billed Gull	
<i>Larus argentatus</i>	Herring Gull	
<i>Larus fuscus</i>	Lesser Black-backed Gull	
<i>Larus marinus</i>	Greater Black-backed Gull	
<i>Sterna nilotica</i>	Gull-billed Tern	(GT) ←
<i>Sterna caspia</i>	Caspian Tern	
<i>Sterna maxima</i>	Royal Tern	
<i>Sterna sandvicensis</i>	Sandwich Tern	
<i>Sterna hirundo</i>	Common Tern	
<i>Sterna forsteri</i>	Forster's Tern	
<i>Sterna antillarum</i>	Least Tern	(GT) (FE) ←
<i>Sterna anaethetus</i>	Bridled Tern	
<i>Sterna fuscata</i>	Sooty Tern	
<i>Chlidonias niger</i>	Black Tern	
<i>Rynchops niger</i>	Black Skimmer	

**ORDER: Columbiformes (Pigeons and Doves)****Family Columbidae**

<i>Columba livia</i>	Rock Dove	I
<i>Streptopelia decaocto</i>	Eurasian Collared-dove	I
<i>Zenaida asiatica</i>	White-winged Dove	A
<i>Zenaida macroura</i>	<u>Mourning Dove</u>	
<i>Ectopistes migratorius</i>	<u>Passenger Pigeon</u>	EX
<i>Columbina passerina</i>	Common Ground-dove	

**ORDER: Psittaciformes (Parrots, Parakeets, and Macaws)****Family Psittacidae**

<i>Conuropsis carolinensis</i>	Carolina Parakeet	EX
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**ORDER: Cuculiformes (Cuckoos and Ani)****Family Cuculidae**

<i>Coccyzus americanus</i>	<u>Yellow-billed Cuckoo</u>	
<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	
<i>Crotophaga ani</i>	Smooth-billed Ani	A

**ORDER: Strigiformes (Owls)****Family Tytonidae**

<i>Tyto alba</i>	Barn Owl	
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**Family Strigidae**

<i>Otus asio</i>	<u>Eastern Screech Owl</u>	
<i>Bubo virginianus</i>	<u>Great Horned Owl</u>	
<i>Nyctea scandiaca</i>	Snowy Owl	A
<i>Strix varia</i>	<u>Barred Owl</u>	
<i>Asio flammeus</i>	Short-eared Owl	GR A
<i>Asio otus</i>	Long-eared Owl	A
<i>Aegolius acadicus</i>	Northern Saw-whet Owl	GR A

**ORDER: Caprimulgiformes (Nightjars, Goatsuckers and Nighthawks)****Family Caprimulgidae**

<i>Chordeiles minor</i>	<u>Common Nighthawk</u>	
<i>Caprimulgus carolinensis</i>	<u>Chuck-will's-widow</u>	
<i>Caprimulgus vociferus</i>	<u>Whip-poor-will</u>	

**ORDER: Apodiformes (Swifts and Hummingbirds)**

**Family Apodidae**

*Chaetura pelagica* Chimney Swift

**Family Trochilidae**

*Archilochus colubris* Ruby-throated Hummingbird

*Selasphorus rufus* Rufous Hummingbird A

**ORDER: Coraciiformes (Rollers, Kingfishers and relatives)**

**Family Alcedinidae**

*Ceryl alcyon* Belted Kingfisher

**ORDER: Piciformes (Woodpeckers, Toucans and relatives)**

**Family Picidae**

*Colaptes auratus* Northern Flicker

*Sphyrapicus varius* Yellow-bellied Sapsucker

*Picoides pubescens* Downy Woodpecker

*Picoides villosus* Hairy Woodpecker

*Picoides borealis* Red-cockaded Woodpecker

*Dryocopus pileatus* Pileated Woodpecker

*Campephilus principalis* Ivory-billed Woodpecker

*Melanerpes carolinus* Red-bellied Woodpecker

*Melanerpes erythrocephalus* Red-headed Woodpecker

FE GE ←  
FE EX? ↩

**ORDER: Passeriformes (Perching birds)**

**Family Tyrannidae**

*Contopus cooperi* Olive-sided Flycatcher A

*Contopus virens* Eastern Wood-pewee

*Empidonax flaviventris* Yellow-bellied Flycatcher

*Empidonax virescens* Acadian Flycatcher

*Empidonax alnorum* Alder Flycatcher A

*Empidonax traillii* Willow Flycatcher

*Empidonax minimus* Least Flycatcher A

*Sayornis phoebe* Eastern Phoebe

*Sayornis saya* Say's Phoebe A

*Pyrocephalus rubinus* Vermilion Flycatcher A

*Myiarchus crinitus* Great Crested Flycatcher

*Tyrannus verticalis* Western Kingbird A

*Tyrannus tyrannus* Eastern Kingbird

*Tyrannus dominicensis* Gray Kingbird GR  
*Tyrannus forficatus* Scissor-tailed Flycatcher A

**Family Alaudidae**

*Eremophila alpestris* Horned Lark GU

**Family Hirundinidae**

*Progne subis* Purple Martin  
*Tachycineta bicolor* Tree Swallow  
*Stelgidopteryx serripennis* Northern Rough-winged Swallow  
*Riparia riparia* Bank Swallow  
*Petrochelidon pyrrhonota* Cliff Swallow  
*Hirundo rustica* Barn Swallow

**Family Corvidae**

*Cyanocitta cristata* Blue Jay  
*Aphelocoma coerulescens* Scrub Jay A  
*Corvus brachyrhynchos* American Crow  
*Corvus ossifragus* Fish Crow  
*Corvus corax* Common Raven GUSR ←

**Family Paridae**

*Poecile carolinensis* Carolina Chickadee  
*Baeolophus bicolor* Tufted Titmouse

**Family Sittidae**

*Sitta canadensis* Red-breasted Nuthatch  
*Sitta carolinensis* White-breasted Nuthatch  
*Sitta pusilla* Brown-headed Nuthatch

**Family Certhiidae**

*Certhia americana* Brown Creeper

**Family Troglodytidae**

*Thryothorus ludovicianus* Carolina Wren  
*Thryomanes bewickii* Bewick's Wren AGR ←  
*Troglodytes aedon* House Wren  
*Troglodytes troglodytes* Winter Wren  
*Cistothorus platensis* Sedge Wren  
*Cistothorus palustris* Marsh Wren

**Family Regulidae**



*Regulus satrapa* Golden-crowned Kinglet  
*Regulus calendula* Ruby-crowned Kinglet

**Family Sylviidae**

*Polioptila caerulea* Blue-gray Gnatcatcher

**Family Turdidae**

*Sialia sialis* Eastern Bluebird  
*Catharus fuscescens* Veery  
*Catharus minimus* Gray-cheeked Thrush M  
*Catharus bicknelli* Bicknell's Thrush A  
*Catharus ustulatus* Swainson's Thrush M  
*Catharus guttatus* Hermit Thrush  
*Hylocichla mustelina* Wood Thrush  
*Turdus migratorius* American Robin

**Family Mimidae**

*Dumetella carolinensis* Gray Catbird  
*Mimus polyglottos* Northern Mockingbird  
*Toxostoma rufum* Brown Thrasher

**Family Sturnidae**

*Sturnus vulgaris* European Starling I

**Family Motacillidae**

*Anthus rubescens* American Pipit  
*Anthus spragueii* Sprague's Pipit A

**Family Bombycillidae**

*Bombycilla cedrorum* Cedar Waxwing

**Family Laniidae**

*Lanius ludovicianus* Loggerhead Shrike

**Family Vireonidae**

*Vireo griseus* White-eyed Vireo  
*Vireo flavifrons* Yellow-throated Vireo  
*Vireo solitarius* Blue-headed Vireo  
*Vireo gilvus* Warbling Vireo M  
*Vireo philadelphicus* Philadelphia Vireo  
*Vireo olivaceus* Red-eyed Vireo

**Family Parulidae**

<i>Vermivora bachmanii</i>	<u>Bachman's Warbler</u>	FE GE EX? ←
<i>Vermivora pinus</i>	Blue-winged Warbler	GR
<i>Vermivora chrysoptera</i>	<u>Golden-winged Warbler</u>	GU
<i>Vermivora peregrina</i>	Tennessee Warbler	
<i>Vermivora celata</i>	Orange-crowned Warbler	M
<i>Vermivora ruficapilla</i>	Nashville Warbler	M
<i>Parula americana</i>	Northern Parula	
<i>Dendroica petechia</i>	Yellow Warbler	
<i>Dendroica pensylvanica</i>	Chestnut-sided Warbler	
<i>Dendroica magnolia</i>	Magnolia Warbler	M
<i>Dendroica tigrina</i>	Cape May Warbler	M
<i>Dendroica caerulescens</i>	Black-throated Blue Warbler	
<i>Dendroica coronata</i>	<u>Yellow-rumped Warbler</u>	
<i>Dendroica nigrescens</i>	Black-throated Gray Warbler	A
<i>Dendroica virens</i>	Black-throated Green Warbler	
<i>Dendroica fusca</i>	Blackburnian Warbler	
<i>Dendroica dominica</i>	Yellow-throated Warbler	
<i>Dendroica pinus</i>	Pine Warbler	
<i>Dendroica kirtlandii</i>	<u>Kirtland's Warbler</u>	FE M ↵
<i>Dendroica discolor</i>	Prairie Warbler	
<i>Dendroica palmarum</i>	Palm Warbler	
<i>Dendroica castanea</i>	Bay-breasted Warbler	
<i>Dendroica striata</i>	Blackpoll Warbler	
<i>Dendroica cerulea</i>	<u>Cerulean Warbler</u>	
<i>Mniotilta varia</i>	Black-and-white Warbler	
<i>Setophaga ruticilla</i>	American Redstart	
<i>Protonotaria citrea</i>	Prothonotary Warbler	
<i>Helmitheros vermivorus</i>	Worm-eating Warbler	
<i>Limnothlypis swainsonii</i>	<u>Swainson's Warbler</u>	
<i>Seiurus aurocapillus</i>	Ovenbird	
<i>Seiurus noveboracensis</i>	Northern Waterthrush	M
<i>Seiurus motacilla</i>	Louisiana Waterthrush	
<i>Oporornis formosus</i>	Kentucky Warbler	
<i>Oporornis agilis</i>	Connecticut Warbler	
<i>Oporornis philadelphia</i>	Mourning Warbler	M

<i>Geothlypis trichas</i>	Common Yellowthroat	
<i>Wilsonia citrina</i>	<u>Hooded Warbler</u>	
<i>Wilsonia pusilla</i>	Wilson's Warbler	M
<i>Wilsonia canadensis</i>	Canada Warbler	
<i>Icteria virens</i>	<u>Yellow-breasted Chat</u>	

**Family Thraupidae**

<i>Piranga rubra</i>	<u>Summer Tanager</u>	
<i>Piranga olivacea</i>	Scarlet Tanager	
<i>Piranga ludoviciana</i>	Western Tanager	A

**Family Emberizidae**

<i>Pipilo chlorurus</i>	Green-tailed Towhee	A
<i>Pipilo erythrophthalmus</i>	<u>Eastern Towhee</u>	
<i>Aimophila aestivalis</i>	<u>Bachman's Sparrow</u>	GR ←
<i>Spizella arborea</i>	American Tree Sparrow	A
<i>Spizella passerina</i>	<u>Chipping Sparrow</u>	
<i>Spizella pallida</i>	Clay-colored Sparrow	
<i>Spizella pusilla</i>	Field Sparrow	
<i>Pooecetes gramineus</i>	Vesper Sparrow	
<i>Chondestes grammacus</i>	Lark Sparrow	
<i>Passerculus sandwichensis</i>	Savannah Sparrow	
<i>Ammodramus savannarum</i>	<u>Grasshopper Sparrow</u>	
<i>Ammodramus henslowii</i>	<u>Henslow's Sparrow</u>	
<i>Ammodramus leconteii</i>	Le Conte's Sparrow	
<i>Ammodramus nelsoni</i>	Nelson's Sharp-tailed Sparrow	A
<i>Ammodramus caudacutus</i>	Saltmarsh Sharp-tailed Sparrow	
<i>Ammodramus maritimus</i>	Seaside Sparrow	
<i>Passerella iliaca</i>	Fox Sparrow	
<i>Melospiza melodia</i>	<u>Song Sparrow</u>	
<i>Melospiza lincolnii</i>	Lincoln's Sparrow	
<i>Melospiza georgiana</i>	Swamp Sparrow	
<i>Zonotrichia albicollis</i>	White-throated Sparrow	
<i>Zonotrichia querula</i>	Harris's Sparrow	A
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	
<i>Junco hyemalis</i>	Dark-eyed Junco	
<i>Calcarius lapponicus</i>	Lapland Longspur	A

<i>Plectrophenax nivalis</i>	Snow Bunting	A
<b>Family Cardinalidae</b>		
<i>Cardinalis cardinalis</i>	<u>Northern Cardinal</u>	
<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	
<i>Guiraca caerulea</i>	Blue Grosbeak	
<i>Passerina cyanea</i>	Indigo Bunting	
<i>Passerina ciris</i>	<u>Painted Bunting</u>	
<i>Spiza americana</i>	Dickcissel	A
<b>Family Icteridae</b>		
<i>Dolichonyx oryzivorus</i>	Bobolink	M
<i>Agelaius phoeniceus</i>	<u>Red-winged Blackbird</u>	
<i>Sturnella magna</i>	<u>Eastern Meadowlark</u>	
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird	A
<i>Euphagus carolinus</i>	Rusty Blackbird	
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird	
<i>Quiscalus quiscula</i>	<u>Common Grackle</u>	
<i>Quiscalus major</i>	Boat-tailed Grackle	
<i>Molothrus ater</i>	Brown-headed Cowbird	
<i>Icterus spurius</i>	Orchard Oriole	
<i>Icterus galbula</i>	Baltimore Oriole	
<i>Icterus bullockii</i>	Bullock's Oriole	A
<b>Family Fringillidae</b>		
<i>Carpodacus purpureus</i>	Purple Finch	
<i>Carpodacus mexicanus</i>	<u>House Finch</u>	
<i>Loxia curvirostra</i>	Red Crossbill	A
<i>Carduelis flammea</i>	Common Redpoll	A
<i>Carduelis pinus</i>	Pine Siskin	
<i>Carduelis tristis</i>	<u>American Goldfinch</u>	
<i>Coccothraustes vespertinus</i>	Evening Grosbeak	
<b>Family Passeridae</b>		
<i>Passer domesticus</i>	House Sparrow	I

<b>KEY:</b>		
FE= Federally Endangered	GE= Georgia Endangered	A= Accidentals

<i>FT= Federally Threatened</i>	GT= Georgia Threatened	M= Migratory
<i>EX= Extinct</i>	GR= Georgia Rare	I= Introduced to Georgia
.	GU= Georgia Unusual	X= Extirpated in Georgia

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## *Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History & Georgia Department of Natural Resources  
2 May 2000

Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

**Storks**



Georgia - E  
 South Carolina -  
 Federal - E

**Wood Stork, *Mycteria americana***

**Scientific Name:** The genus name comes from the Greek *mykter* (a nose), referring to the Wood Stork's large bill. The species name is the Modern Latin meaning "American" or from the Western Hemisphere.

**Classification**

- Phylum:** Chordata
- Subphylum:** Vertebrata
- Class:** Aves
- Order:** Ciconiiformes
- Family:** Ciconiidae

**Species Description**

**Size:** 102 cm (40 in) long; 155 cm (61 in) wingspan. **Color:** White body. Black tail, legs, and flight feathers. Other things to look for: The combination of a grayish, bald head and a large yellow down-curved bill is distinctive for this species.

**Life Cycle**

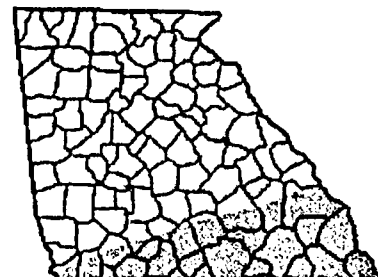
The Wood Stork does not breed until it is 4 years old. The breeding season begins in mid-December, peaks in mid-March, and ends in late April. This is a highly colonial species, nesting in aggregations. It prefers to nest in cypress trees, from 15-24 m (50-80 feet) above the ground. The male and female build the nest with sticks, twigs, and vegetation. The female usually lays 3 eggs that are incubated by both adults for 28-32 days. The young are semi-altricial, and are cared for by the parents until 55-60 days after hatching.

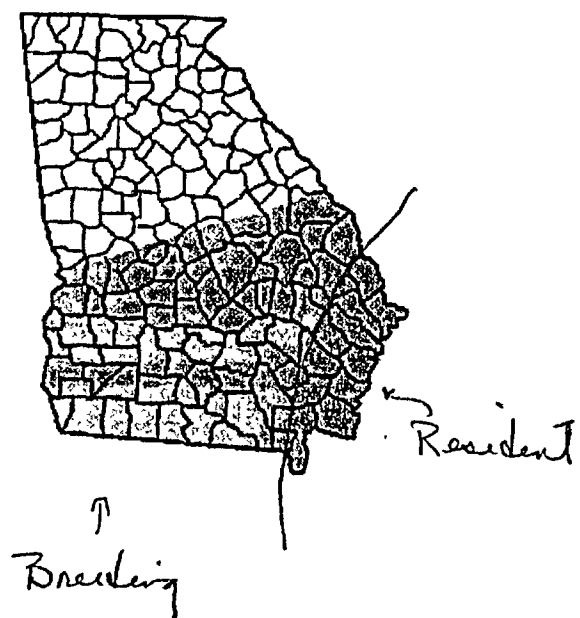
**Natural History**

The Wood Stork is the only stork in North America. It frequents mangroves, swamps, marshes, and streams. It forages in very shallow water by placing its open bill in the water and systematically moving it until it contacts a prey item. When the prey is contacted, the Wood Stork snaps its powerful bill on the prey in an action which is one of the fastest reflexes in the animal world. Food items include fish, amphibians, aquatic invertebrates, and crustaceans.

**Range**

In the United States, the Wood Stork remains all year in isolated coastal areas of the Southeast. After the breeding season, some individuals travel north beyond the normal range in a post-breeding dispersal. In Georgia during the breeding season, adults can be found in coastal areas, with post-breeding individuals being seen sporadically in the lower three-fourths of the state.





### **Conservation Status:**

The Wood Stork is Federally listed as Endangered, and is also state listed as Endangered in Florida, North Carolina, and South Carolina. The destruction of nesting areas and changes in land use and water levels in Florida wetlands have attributed to the decline of this species.

### **Similar Species:**

Some Egrets and Herons are similar in size to the Wood Stork, but all other species lack the combination of the large yellow downcurved bill, bald head, and black tail and flight feathers.

*Birds: Classification, Species list, References:*

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*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000



Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Kite**

Georgia listed - Rare  
South Carolina - Endangered  
Federal - None

**Swallow-tailed Kite, *Elanoides forficatus***

**Scientific Name:** The genus is derived from the combination of two Greek words, *elanos* (a kite) and *oideos* (resembling). The species name *forficatus* is also based on the Greek meaning deeply forked, which refers to the tail.

**Classification**

**Phylum:** Chordata

**Subphylum:** Vertebrata

**Class:** Aves

**Order:** Falconiformes

**Family:** Accipitridae

**Species Description**

**Size:** 58 cm (23 in) in length; 122 cm (48 in) wing span. **Color:** The body has a sharply contrasting black and white pattern, with the tail, back, and flight feathers being black, and the underside of the body and head being white. The bill, eyes, legs, and feet are charcoal to black. Other things to look for: The forked tail is a defining characteristic of this species. The adults have a longer tail than younger birds, and birds' ages can be determined according to this feature when numerous Swallow-tailed Kites are at migration roosts.

**Life Cycle**

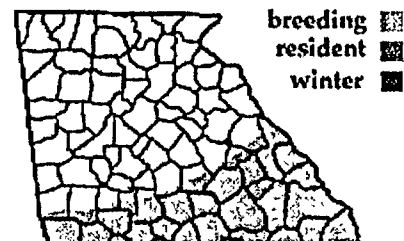
The nesting season runs from mid-March, peaks in April, and ends in mid-May. The nest is built near water in large trees, usually pines. The nest is 60-130 feet high in the treetops. Both the male and female participate in nest building, using sticks, twigs, and other materials. The nest is platform-style and lined with fine materials. The female lays 2-4 (usually 2) eggs that are incubated by both adults for 28 days. The young are semi-altricial and tended by both adults for 36-42 days after hatching.

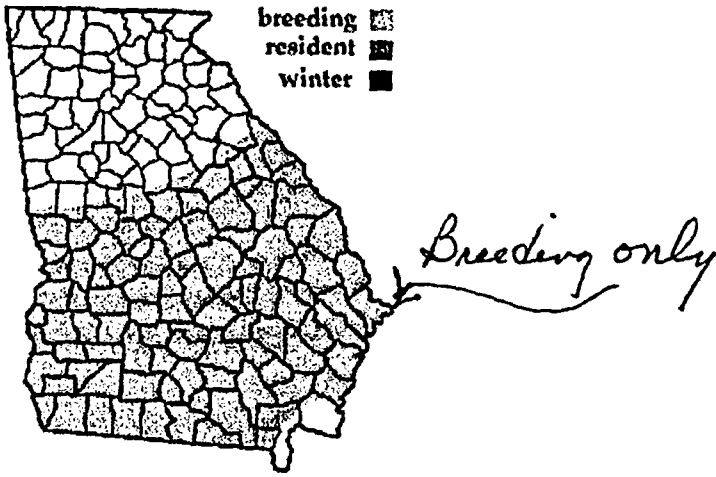
**Natural History**

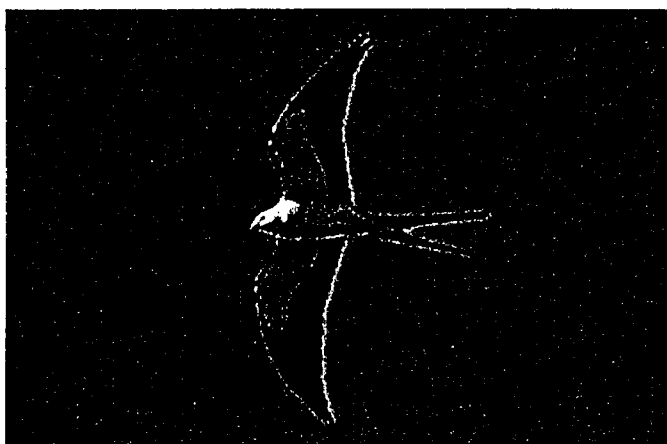
The Swallow-tailed Kite occurs primarily in swamps and forested wetlands, usually near nesting sites. It feeds on insects, reptiles, and amphibians. It forages by gliding in the air and catching insects, and also by taking reptiles and amphibians off of the ground or from plants. The Swallow-tailed Kite drinks by skimming the surface of water, gathering the water in its bill. This species migrates over long distances.

**Range**

The breeding range includes the Coastal Plains of the Southeast. The majority of the breeding population occurs in Florida, but some breeding individuals are seen in South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana. The Swallow-tailed Kite winters in South America.







### **Conservation Status**

This species is considered of special concern throughout the Southeast. It is listed as Endangered in South Carolina, and Threatened in Texas. Drainage of wetlands, land use changes, and shooting have been responsible for the decline of this species.

### **Similar Species**

With its distinctive tail, the Swallow-tailed Kite is readily identified if seen clearly, although from great distances identification becomes more difficult.

*Birds: Classification, Species list, References*

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*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

South Carolina -  
Georgia State Listed - R  
Federal - None

Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

# Sparrows

## Bachman's Sparrow, *Aimophila aestivalis*

**Scientific name:** The genus name is derived from the combination of two Greek words, *aima* (blood) and *phila* (fond of), but the reason for this name is unknown. The species name is a Latin word meaning "summery."

### Classification

- Phylum:** Chordata
- Subphylum:** Vertebrata
- Class:** Aves
- Order:** Passeriformes
- Family:** Emberizidae

### Species Description

**Size:** 15 cm (6 in) in length. **Color:** Brown or grayish-brown overall; buffy or gray ear patch; thin dark stripe extending behind the eye; light eyebrow; breast and sides buffy or gray; belly white. Other things to look for: Rounded tail and large bill.

### Life Cycle

The breeding season begins in late April, peaks in May, and extends to mid-July. The breeding habitat includes pine woods, especially in areas with a dense understory. The cup-shaped nest is built by the female on the ground out of grass and other plant material. The nest may be domed with grass for protection. The female lays 3-5 eggs that she incubates for 14 days. The young are altricial and fledge 10-11 days after hatching. If the female is disturbed on the nest, she may perform a distraction display by dragging her wing or feigning injury to draw a predator away from the nest.

### Natural History

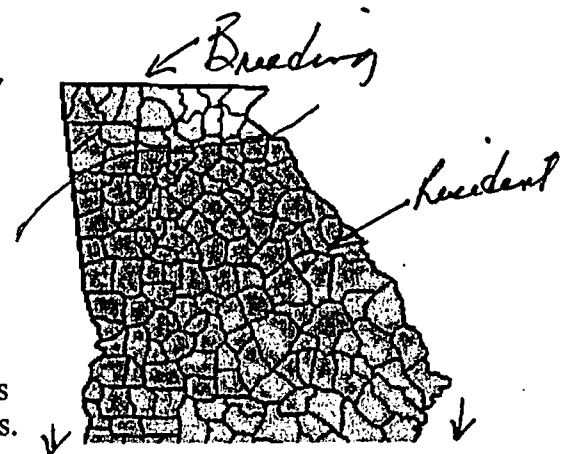
The Bachman's Sparrow most often frequents pine woodlands and dry wooded areas. Its diet includes seeds, insects, spiders, and other small invertebrates. Food is gathered by searching the ground and low vegetation. Some individuals of this species are migratory.

### Range

During the breeding season, the Bachman's Sparrow occurs throughout most of the southeastern United States. During the winter, birds may be found from coastal North Carolina, south through Florida and west from Georgia to southern Arkansas and Louisiana.

### Conservation Status

The range of this species is steadily shrinking and its numbers appear to be declining for unknown reasons.





It is listed as Endangered in Tennessee and Threatened in North Carolina, Oklahoma, and Kentucky. It is being monitored throughout the rest of the Southeast.

### **Similar Species:**

Similar species include the Field Sparrow and the Grasshopper Sparrow. Field Sparrows are smaller and have a pink bill. Grasshopper Sparrows are also smaller, and have pale streaking on their breast and flanks, a light crown stripe, and a short tail.

*Birds: Classification, Species list, References.*

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*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Eagles****Eagles**

South Carolina - T  
Georgia - E  
Federal - LT

**Bald Eagle, *Haliaeetus leucocephalus***

**Scientific Name::** The genus is derived from two Greek words, *halos* (the sea) and *aetos* (eagle). The species name is also derived from two Greek words, *leukos* (white) and *kephalos* (head), which describes the white head of the adults.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves  
**Order:** Falconiformes  
**Family:** Accipitridae

**Species Description**

**Size:** 79-94 cm (31-37 in) in length; 178-229 cm (70-90 in) wingspan. **Color:** Adults over four years old have a distinctive color pattern, with a white head and white tail, although the head can have some black flecking until at least seven years of age. During the first year, a Bald Eagle is all or mostly dark. After the first year, birds have variable mottling of "dirty white" feathers in their dark plumage until they reach adult plumage.

**Life Cycle**

The breeding season begins in November and extends into May. The male and female build a very large, bulky nest out of twigs and sticks. The nest is usually built 9-18 m (30-60 feet) above the ground. Nesting sites include conifers, other trees, and cliffs. Bald Eagles maintain a long-term pair bond, and nests are sometimes reused many years in a row, with new material being added. One nest was used every year for 35 years. The female lays 1-3 (usually 2) eggs that she and the male incubate for 34-36 days. The young are semi-altricial, and leave the nest in 70-98 days.

**Natural History**

The Bald Eagle usually frequents areas near open water. In the winter many birds take advantage of dams that maintain open water, and bird densities in these areas are high. Fish are the primary food of the Bald Eagle. It captures fish by hunting from a perch until the prey comes by, by eating dead fish, or by taking fish from a neighboring gull, osprey, or other fish-eating animal. Eagles will often also eat waterfowl and rabbits.

**Range**

The Bald Eagle can be found in most of the United States except for the extreme elevations. Except during migration, it is not usually seen far from coastal areas, inland lakes, or rivers. The northern





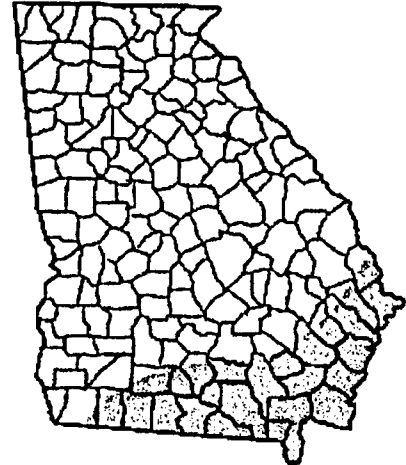
limits to this species in the winter is defined by the availability of open water. In the extreme southern portions of Georgia, Bald Eagles can be found in low numbers in the winter and breeding season. During the winter there are also occasional sightings of the Bald Eagle in other parts of the state.

### Conservation Status

The Bald Eagle subspecies *H. l. leucocephalus* is listed as Federally Endangered. The decline of this population was caused primarily by DDT, other pesticides, and heavy metal poisoning. These chemicals cause eggshell thinning or eggs without shells. A thinned eggshell will not usually support the weight of an incubating adult and rarely survives until hatching.

### Similar Species

Immature Bald Eagles can be easily confused with the Golden Eagle and vultures from a distance. The Golden Eagle has banding on the tail and lacks the random splotchy white pattern of an immature Bald Eagle. The flight pattern of a Bald Eagle is distinctly different from that of a Turkey Vulture. The Bald Eagle soars with its wings horizontal or slightly drooped. The Turkey Vulture holds its wing tips up to form a "V." The Black Vulture is smaller, with a smaller head and shorter tail. The Black Vulture also has light patches on the outer portion of its wings.



↑  
Breeding

*Birds: Classification, Species list, References*

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***Georgia Wildlife Web***

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

## Falcons



South Carolina -  
 Georgia - E  
 Federal - LE

### Peregrine Falcon, *Falco peregrinus*

**Scientific Name:** The genus name comes from the Low Latin *falco* (falcon), which was also derived from the Latin, *falx* (sickle). The species name is the combination of Latin words, *per* (through), *ager, agri* (field), and *inus* (pertaining to). Together, they make up peregrinus, Latin for "foreign or wandering."

### Classification

- Phylum:** Chordata
- Subphylum:** Vertebrata
- Class:** Aves
- Order:** Falconiformes
- Family:** Falconidae

### Species Description

**Size:** 41-51 cm (16-20 in) in length; 91-112 cm (35-44 in) wing span. **Color:** Most of head dark black or brown, with a dark wedge below eye; buff color on throat, extending to upper chest and partially up each side of the neck; belly, feathers covering upper legs, and tail are barred; back and wings dark; legs yellow.

### Life Cycle

Peregrine Falcons are able to breed at 3 years of age. The breeding season probably begins in March and extends into May. Nesting habitat is highly variable, including more traditional cliffs or trees, and man-made structures like towers and the ledges of tall buildings. The nest is usually a scrape lined with fine materials. The female lays 2-6 (usually 3-4) eggs that she incubates for 29-32 days. The incubating female is fed by the male. The young are semi-altricial and stay in the nest for 35-42 days after hatching. Juvenile birds are dependent on their parents for care for several months after they hatch.

### Natural History

In more wild habitat, the Peregrine Falcon frequents open areas like marshes, fields, swamps, and tidal areas. Since its reintroduction into the eastern United States, however, the Peregrine Falcon has colonized many urban areas because of increased nesting sites (and nesting ledges being created on buildings). The Peregrine Falcon eats a wide variety of birds, including waterfowl, doves, shorebirds, and passerines. Cities have also provided a good source of food, the Rock Dove (pigeon). The Peregrine Falcon captures its prey on the wing, usually striking it with its talons and knocking the bird out of the air or killing it immediately. It can reach speeds of up to 200 miles per hour while diving to strike its prey.

### Range

Within the United States, this species is most common in the West during the breeding season and in coastal



areas during the winter. In the Southeast the Peregrine Falcon is most common on the coasts and in Florida during the winter.

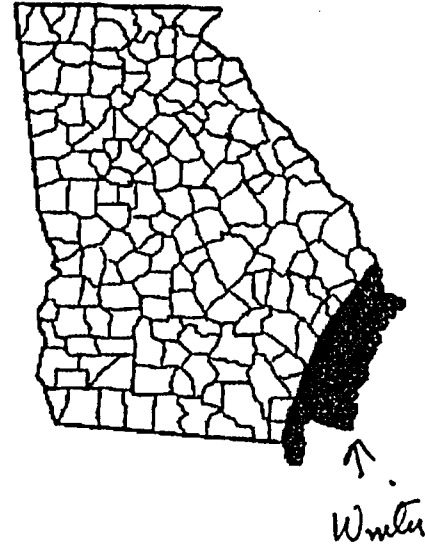
### **Conservation Status**

In 1984, the American Peregrine Falcon subspecies was Federally listed as Endangered, and the Arctic Peregrine Falcon subspecies was listed as Federally Threatened. Ten years later, the Arctic Peregrine Falcon was removed from the list and in 1999 the American Peregrine Falcon was removed. However, this species is still listed as Endangered by every southeastern state. The Peregrine Falcon's decline was attributed to pesticides, specifically DDT, either by causing death directly or by reducing reproductive success to near zero. Since the banning of DDT and reintroduction projects, this species is well on its way to recovery.

### **Similar Species**

In the Southeast, the two species most similar to the Peregrine Falcon are the American Kestrel and the Merlin. The American Kestrel is much smaller than the Peregrine Falcon (27 cm (10.5 in) in length) and has a rusty-colored back and tail. The Merlin is also much smaller (31 cm (12 in) in length), lacks the large black wedge that occurs on the face, and has a more boldly barred tail than the Peregrine Falcon.

*Birds: Classification, Species, list, References*



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***Georgia Wildlife Web***

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000



Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

# Plover



South Carolina -  
 Georgia - T  
 Federal - LT

## Piping Plover, *Charadrius melodus*

**Scientific name:** The genus name is a Latin term meaning "a plover." The species name is a Latin word meaning "a melody," which refers to this bird's song.

### Classification

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves  
**Order:** Charadriiformes  
**Family:** Charadriidae



### Species Description

**Size:** 18 cm (7.25 in) in length. **Color:** Breeding season: Pale brown above, lighter below; black band across forehead; bill orange with black tip; legs orange; white rump. **Male:** Complete or incomplete black band encircles the body at the breast. **Female:** Paler head band; incomplete breast band. **Winter coloration:** Bill black; all birds lack breast band and head band.

### Life Cycle

The breeding season begins in late April and extends into late August. Breeding habitat is commonly coastal beaches with sand, gravel, or pebbles. The nest is a scrape created by both the male and female. The female lays 3-5 (usually 4) eggs that both adults incubate for 25-31 days. The young are precocial and leave the nest within a few hours of hatching. Both adults care for the young, but the female will sometimes stop caring for the young sooner than the male does. The young become independent 20-32 days after they hatch.

### Natural History

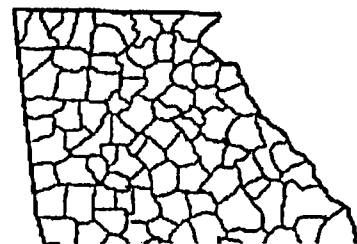
The non-breeding habitat of the Piping Plover is very similar to its nesting habitat. The diet consists of crustaceans, insects, and mollusks. The food is usually found by probing into the sandy soil for the items. This species is migratory.

### Range

During the breeding season, the Piping Plover occurs in the northern, central, and eastern United States. It occurs all year in coastal eastern and southern United States.

### Conservation Status

The Piping Plover is listed as an Endangered species in the states of the Great Lakes Region, and as a Threatened species in all the states of the Southeast









except Arkansas. Populations of the Piping Plover have declined because of extensive hunting in the past and now are continuing to decline because of habitat loss and recreational use of coastal areas. Many nests are destroyed by vehicles driving along the coastal beaches.

### **Similar Species**

The most similar species are the Snowy Plover, Wilson's Plover, and Semi-palmated Plover. In breeding plumage both the Snowy and Wilson's Plovers have completely black bills. The Wilson Plover's bill is also much thicker than that of the Piping Plover. The breeding Semi-palmated Plover has more black on the face, darker back and wings, and duller colored legs. In winter, the Snowy Plover has black on its head and neck, and the Semi-palmated Plover is darker overall with a brown neck band.

*Birds: Classification, Species list, References*

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*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

# Oystercatcher



South Carolina -  
 Georgia - R  
 Federal - none

## American Oystercatcher, *Haematopus palliatus*

**Scientific Name:** The name of the genus is derived from the combination of two Greek words, *haima* (blood, the color of) and *pous* (foot). This refers to the pink to red color of this bird's foot. The species name comes from the Latin *palliatus* (wearing a cloak), which refers to its dark back.

### Classification

- Phylum: Chordata
- Subphylum: Vertebrata
- Class: Aves
- Order: Charadriiformes
- Family: Haematopodidae

### Species Description

**Size:** 47 cm (18.5 in) length **Color:** The head, tail, and back are black; the bill is bright red-orange; the underside is white. **Other things to look for:** While the bird is in flight, a white stripe on the wing and rump shows against the black wings and tail.

### Life Cycle

The breeding season begins in early April, and lasts through July. The American Oystercatcher breeds on coastal beaches, among the rocks or dunes, and occasionally in the salt marshes. The nest is a small scrape on the ground, which is sometimes lined with broken shells and other material. The female lays 2-4 (usually 3) eggs that both adults incubate for 24-27 days. The young are precocial and are cared for by both adults for 34-37 days. The young leave the nest 1-2 days after hatching.

### Natural History

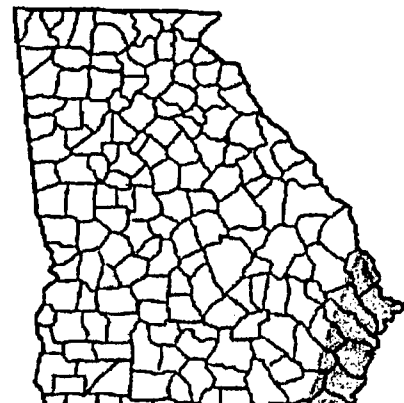
The main habitat of this species is coastal areas. The American Oystercatcher finds its food by probing the sand, rocks, and other substrates in the coastal waters. The diet includes marine invertebrates, crabs, marine worms, and occasionally fish. This species is migratory.

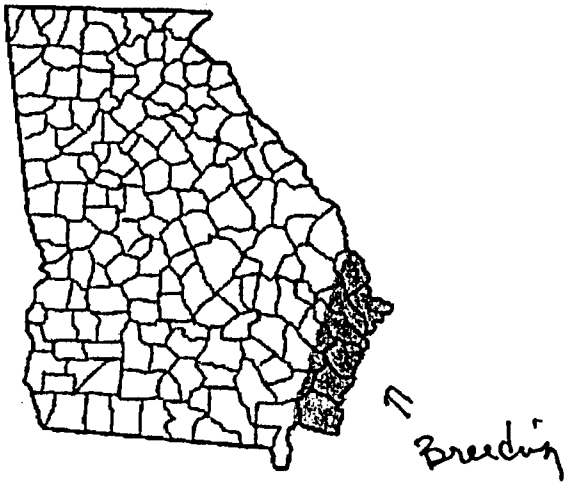
### Range

The American Oystercatcher is found throughout the coastal United States, except in the northwest. The winter range for some of these birds extends to Central America and coastal South America.

### Conservation Status

The increase in beach use by humans has reduced the range of this species. This species is fairly common in appropriate habitat and is not listed as Threatened or Endangered in the Southeast.







### **Similar Species:**

This species is similar in size to other shorebirds. The distinctive red-orange bill and black head make it very difficult to mistake an American Oystercatcher for any other species.

*Birds: Classification, Species, list, References:*

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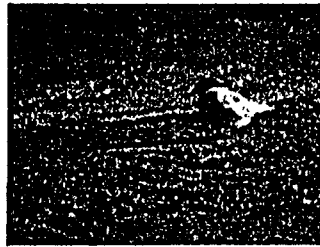
*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

Terns

Georgia - R  
South Carolina -  
Federal - LE

**Least Tern, *Sterna antillarum***

**Scientific name:** The genus name is a Modern Latin word derived from Old English meaning "a tern." The species name, *antillarum*, is a Modern Latin word meaning "of the Antilles," the archipelago of islands southeast of Florida that separates the Caribbean Sea and Gulf of Mexico from the Atlantic Ocean.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves **Order:** Charadriiformes

**Family:** Laridae

**Species Description**

**Size:** 23 cm (9 in) in length; 51 cm (20 in) wingspan. **Color:** Adults: Black cap, nape, and eye stripe; white forehead, lower face, and underparts; gray wings and tail; outer primaries (flight feathers) darker gray; bill, legs, and feet yellow. Juveniles: Mottled browns and grays above. Other things to look for: The Least Tern is the smallest tern in North America and has a long forked tail.

**Life Cycle**

The breeding season begins in May. Breeding habitat includes areas of sandy or gravel beaches along the coast, rivers, or lakes. The Least Tern nests in colonies. The nest scrape is built by the female in the sand or gravel and sometimes is lined with fine plant material. The female lays 1-3 (usually 2) eggs that she and the male incubate for 20-22 days. The young are semi-precocial and remain in the nesting area for 19-20 days. They are cared for by both adults during that time.

**Natural History**

The habitat used by the Least Tern during the non-breeding season is similar to its breeding season habitat. Its diet consists of fish, aquatic invertebrates, and crustaceans. The Least Tern finds its food by searching while in flight and diving into the water to catch the prey. This species is migratory.

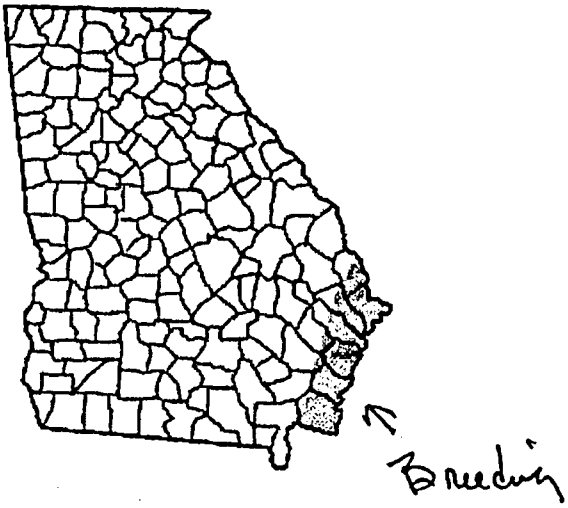
**Range**

During the breeding season, the Least Tern occurs throughout most of the coastal United States and inland along some of the larger river systems. This species winters from Mexico to northern South America.

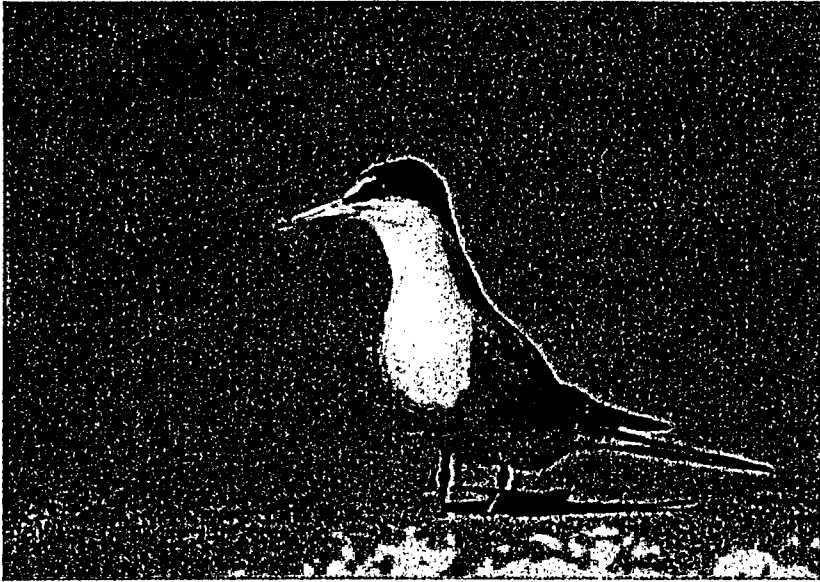
**Conservation Status**

This species is federally listed as Endangered. In the









Southeast, the Least Tern is state-listed as Endangered in Kentucky, Tennessee, Louisiana, and Arkansas. Its decline began with hunting of this bird for its plumes for the fashion industry in the late 1800s and early 1900s, until the Migratory Bird Treaty Act of 1918 was enacted to protect all native bird species. Many urban pests, like cats, rats, and humans, disturb nesting birds and may cause the Least Tern to desert its nest.

### **Similar Species**

The most similar species are the other terns with long forked tails, including the Roseate Tern and Forester's Tern. Both of these species are larger than the Least Tern, have a black forehead instead of the Least Tern's white one, and have red-orange feet and legs.

*Birds: Classification, Species list, References*

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*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Woodpeckers**

South Carolina - E  
Georgia - E  
Federal - LE

**Red-cockaded Woodpecker, *Picoides borealis***

**Scientific name:** The genus name *Picoides* is from the Latin word *picus* (a woodpecker) and the Greek word *eidos* (resemblance). The Latin species name *borealis* (northern) was a mistake, as this bird occurs in the southern, not northern, United States.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves  
**Order:** Piciformes  
**Family:** Picidae

**Species Description**

**Size:** These are small woodpeckers, 22 cm (8.5 in) from beak tip to tail tip.  
**Color:** Back and wings with a black and white ladder pattern. Black cap and white patch on the cheek. Black bill. Belly and breast white, with black spots on the outer breast. Males have a small red tuft behind the eye which is difficult to see.

**Life Cycle**

The Red-cockaded Woodpecker has an uncommon social system known as cooperative breeding. The birds live as family groups of 2 - 5 individuals. The breeding pair is often accompanied by offspring from a previous year, known as "helpers," which assist their parents in many nesting activities. Breeding season lasts from mid-April to late July. Favored habitat is open, mature pine forest. The nest is built in the breeding male's roost cavity, typically excavated 10-13 m (30-40 ft) above ground in pines that are very old (usually more than 80 years). The breeding female lays 2-5 (average, 3) glossy white eggs. Incubation lasts 10 days and is performed by the parents and sometimes by helpers. Parents and helpers feed the nestlings, which fledge 26-29 days after hatching.

**Natural History**

Suitable habitat is very specific for these birds. They inhabit old pine forests with open understory maintained by frequent, natural lightning fires. The home range of each family group includes a cluster of cavity trees. Cavity trees of this species always have a cavity entrance in which the edges of the hole are thickly coated with pine sap or resin. The woodpeckers peck holes around the cavity entrance to release the sticky resin, which helps deter predators such as rat snakes from invading the nest. Family groups are highly social and forage closely together on the upper branches and trunks of pines for ants, beetles, and other insects.





## Range

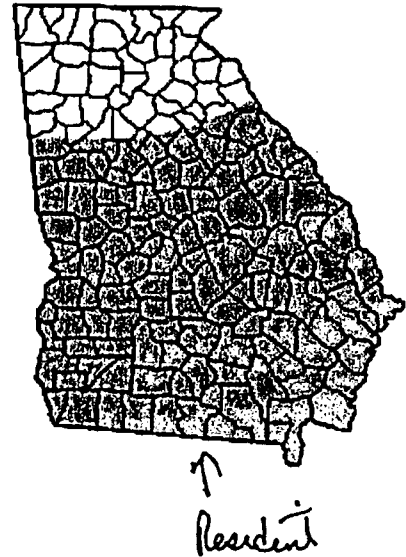
Populations and suitable habitat are fragmented throughout southern Georgia and the rest of the southeastern United States.

## Conservation Status

The Red-cockaded Woodpecker has been listed as an Endangered Species by the U.S. Department of the Interior since 1968. Efforts to manage population viability on federal lands were started in 1985.

## Similar Species

The Red-cockaded Woodpecker may be confused with other small black and white woodpeckers in the southeastern United States. The Downy Woodpecker and the Hairy Woodpecker both have white backs rather than the black and white ladder found on the Red-cockaded Woodpecker. Another similar bird, the Yellow-bellied Sapsucker has a red forehead and white patches on its wings and rump which are not present in the Red-cockaded Woodpecker.



*Birds: Classification, Species list, References*

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**Georgia Wildlife Web**

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Vertebrates

Amphibians  
 Reptiles  
 Birds  
 Mammals

**Woodpeckers**

Georgia - E  
 South Carolina -  
 Federal - LE

**Ivory-billed Woodpecker, *Campephilus principalis***

**Scientific Name:** The genus comes from the combination of two Greek words, *campa* (a caterpillar) and *philos* (loving). The species name is Latin meaning "principal," referring to the earlier belief that caterpillars were the primary food of this species.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves  
**Order:** Piciformes  
**Family:** Picidae

**Species Description**

**Size:** 50 cm (19.5 in) in length. **Color:** Mostly black, with a red crest on the male (the female has no red on the head). A large white stripe runs from behind the eye and down the neck on both sides of the head. When the bird is at rest, large white patches are visible near the ends of the wings. While it is flying, white is visible on both the upper and lower portions of the inner flight feathers. The bill is an ivory color.

**Life Cycle**

The known breeding season occurred from approximately January to April. The Ivory-billed Woodpecker required snags in mature old-growth forest for nesting. Nests ranged 4.5-21 m (15-70 feet) in height. The female laid 1-5 (usually 2-3) eggs that both adults incubated for approximately 20 days. The male incubated at night and the female incubated during the day. The young were altricial and fledged within 35 days of hatching. Apparently the male did most of the nest sanitation and brooding.

**Natural History**

The habitat where this species once occurred was mature old-growth forest and cypress swamps. The Ivory-billed Woodpecker diet consisted mostly of wood-boring insects such as beetle larvae, but it also ate other insect, fruit, and seeds. It was the only U.S. woodpecker able to pry unloosened bark off trees. It more commonly fed on insects in dead or dying portions of live trees.

**Range**

Today this woodpecker has no known range within the United States, and it is unlikely that any populations continue to exist outside the United States. Its former range was in the southeastern United States, including all of the Southeast north to southeastern North Carolina, west to Missouri, and southwest through Oklahoma and Texas. The last positive sightings of the Ivory-billed Woodpecker were in Cuba in 1987.



Although there have been more recent reports, none have been verified.

### **Conservation Status**

The Ivory-billed Woodpecker is Federally listed as Endangered, and is thought to be extinct. Loss of habitat is thought to be the major cause of this species' decline and extinction.

### **Similar Species**

The species most similar to the Ivory-billed Woodpecker is the Pileated Woodpecker. The Pileated Woodpecker is smaller than an Ivory-billed Woodpecker, but adults of both have a red crest and dark bill. While a Pileated Woodpecker is in flight, very little white is visible from above, and the wing lining is white from below. The Pileated Woodpecker also has white on the chin and a small white eye stripe that extends from behind the eye to the red crest.

*Birds: Classification, Species list, References*

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*Georgia Wildlife Web*

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Georgia - R  
 South Carolina -  
 Federal - none

Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

*Wren, Bewick*

**Scientific name:** The genus name comes from the combination of two Greek words, *thryon* (a reed) and *manes* (a cup), which probably refers to the nesting habitat and nest shape of this species. The species name was given to honor Thomas Bewick, an author who published many works on British birds.

**Classification:**

- Phylum:** Chordata
- Subphylum:** Vertebrata
- Class:** Aves
- Order:** Passeriformes
- Family:** Troglodytidae

**Species Description:**

**Size:** 13 cm (5.25 in) in length. **Color:** Reddish-brown above (western birds are more gray); white eyebrow; white underneath; brown and white barring on the outer feathers and the underside of the tail. Other things to look for: A stocky bird with a long thin bill and with a long tail which is commonly held up in wren-like fashion.

**Life Cycle:**

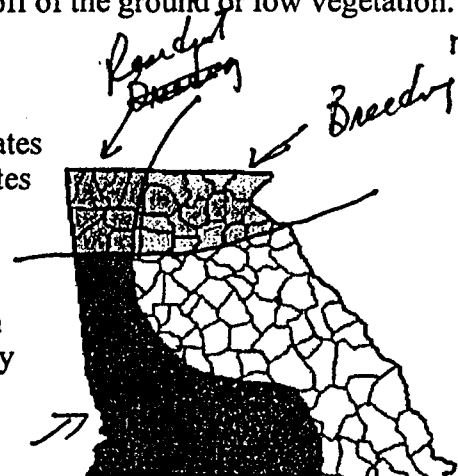
In the eastern United States, the breeding season begins in mid-April, peaks in May, and extends until late June. Breeding habitat includes many wooded areas. The nest is usually built on the ground to 20 feet ( m) above the ground in a cavity or in a tree. On the ground, the nest is usually placed in a crevice or among tree roots. The cavity or crevice is lined with grass and other material. The female lays 4-11 (usually 5-7) eggs that she incubates for 12-14 days. The young are altricial and fledge 14 days after hatching.

**Natural History:**

Since most birds of this species are non-migratory, the non-breeding habitat is similar to the breeding habitat. The diet consists primarily of insects, but also includes spiders. The Bewick's Wren catches food by picking items off of the ground or low vegetation. Some individuals of this species are migratory.

**Range:**

The Bewick's Wren occurs all year in the coastal states of the western United States and in the southern states west of the Mississippi River. birds east of the Mississippi can be found in the Appalachian states during the breeding season and in the southeastern states for the winter. In Georgia, the Bewick's Wren occurs only in the mountain areas in the north. Many populations are year-round residents, but some migrate south for the winter.



Winters







### **Conservation Status**

Populations of this species east of the Mississippi River are declining. The subspecies *Thryomanes bewickii altus* is state-listed as xxxThreatened in North Carolina, Tennessee, and Alabama and Of Special Concern in Kentucky.

### **Similar Species**

The species most similar to the Bewick's Wren is the Carolina Wren. The Carolina Wren is slightly larger and has a buffy chest and belly. The tail of the Carolina Wren does not have the white that is found on the tail of the Bewick's Wren.

*Birds: Classification, Species list, References,*

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*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Warblers****Bachman's Warbler, *Vermivora bachmanii***

**Scientific name:** The genus name comes from the combination of two Latin words, *vermis*(worm) and *voro*(to eat). The species name was given to honor John Bachman, a minister and friend to John J. Audubon. Bachman discovered this species.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves **Order:** Passeriformes

**Family:** Parulidae

**Species Description**

**Size:** 11 cm (4.25 in) in length. **Color:** Male: Yellow forehead; black crown patch; gray nape; yellow chin and belly; black bib; olive back, wings, and upper side of tail; pale yellow undertail coverts. Female: Yellow forehead; gray crown patch; gray nape; yellow chin and belly; black bib; pale olive back, wings, and upper side of tail; pale yellow to white undertail coverts. Other things to look for: The song was a series of buzzy notes remaining on one pitch.

**Life Cycle**

Breeding habitat consisted of bottomland forests, usually those associated with water. These birds used canebrakes and other areas with dense understories. The nests were normally low, 1-4 feet ( m) above the ground. The nest was cup-shaped, and was built from leaves, grass, moss, and other plant material and lined with finer material and Spanish Moss. The female laid 3-5 (usually 4) eggs that she incubated for an unknown period. The young were altricial, and probably remained in the nest for around 1-2 weeks.

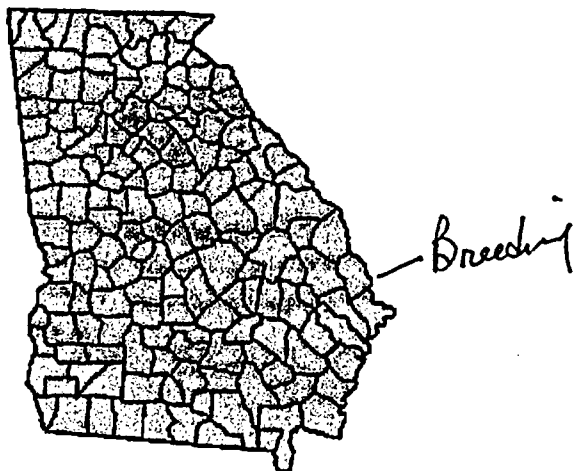
**Natural History**

This bird's breeding habitat appeared to be wet forested areas, although little information is available on migration and wintering habitat. The diet consisted of insects, mostly caterpillars, spiders, and other small invertebrates. It was a low forager, searching among the leaves and probing into leaf clusters searching for prey. This species is thought to have been migratory.

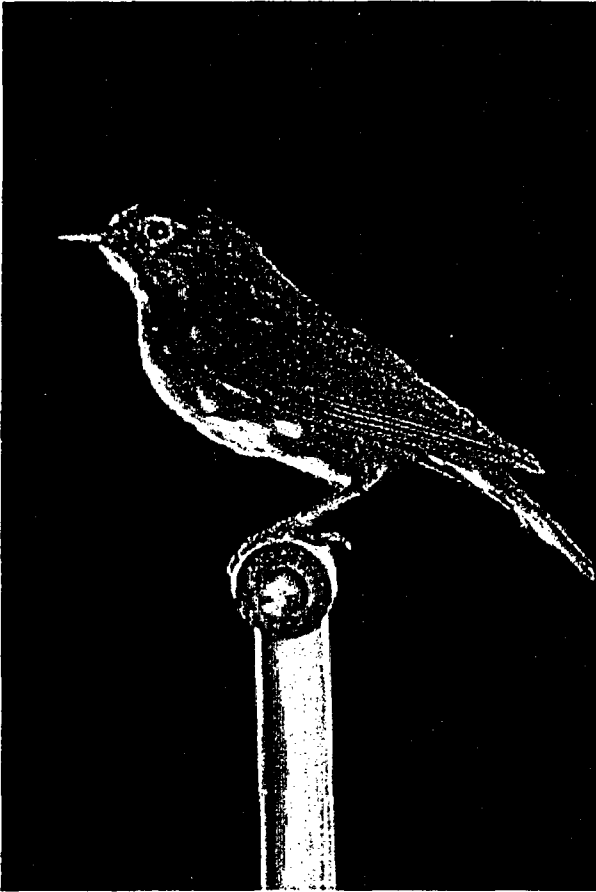
**Range**

Bachman's Warbler occurred in the southeastern United States during the breeding season. The only positive winter reports for this species were in Cuba and southern Florida.





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### **Conservation Status**

Bachman's Warbler is thought to be extinct. By the early 1900s, reports of this warbler were scarce. The last positive sighting was in the early 1960s. The decline of this species is attributed to the destruction of bottomland hardwood forests and drainage of wetlands and swamps. Problems on the wintering grounds, including several hurricanes in the 1930s, may also have attributed to this species decline.

### **Similar Species**

The most similar species is the Hooded Warbler. The sides of the face, belly, and undertail coverts of the Hooded Warbler are all yellow. It also has large white patches on the outer tail feathers.

*Birds: Classification, Species list, References*

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*Georgia Wildlife Web*

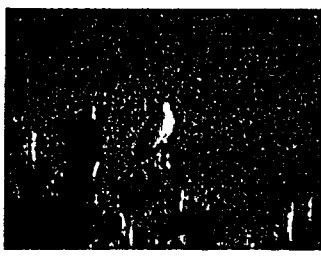
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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

**Warblers**



South Carolina -  
 Georgia - E  
 Federal - LE

**Kirtland's Warbler, *Dendroica kirtlandii***

**Scientific name:** The genus name is derived from the combination of two Greek words, *dendron* (a tree) and *oicos* (inhabits), which refers to the members of this genus spending most of their time in the trees. The species name was created to honor Dr. J. P. Kirtland, a naturalist and doctor in Ohio where this species was first found.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves **Order:** Passeriformes

**Family:** Parulidae

**Species Description**

**Size:** 15 cm (5.75 in) in length. **Color:** Gray-blue above with dark streaking on back; yellow underparts; dark streaking on flanks; white eye ring that is broken in the middle; white undertail coverts; white tail spots near the tips of the outer tail feathers; male has two indistinct whitish wing bars. Other things to look for: While sitting, this bird commonly pumps its tail, moving the tail downward quickly, then moving it back up.

**Life Cycle**

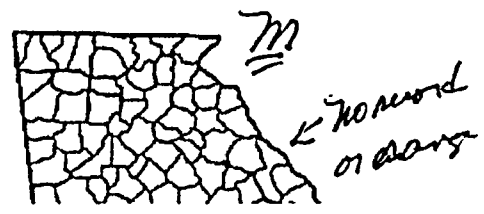
The breeding season begins in late May and extends to early July. This species breeds in areas of young Jack Pines. The Jack Pine needs burning to help its seeds germinate, so areas maintained for this species require controlled burning to increase available nesting habitat. Both adults build the cup-shaped nest on the ground out of plant material and line it with fine grass and other material. The female lays 3-5 (usually 4-5) eggs that she incubates for 14-15 days. The male feeds the female while she is incubating. The young are altricial and fledge 12-13 days after hatching.

**Natural History**

Kirtland's Warbler winters in areas with dense understories or scrub thickets. Except for singing males who perch on top of young Jack Pines, most of the activity of these birds takes place near or on the ground. The diet consists mostly of insects, which are taken by searching the pine needles, on leaves, and on the surface of the ground. This species is migratory.

**Range**

The breeding distribution of the Kirtland's Warbler is limited to isolated areas in Michigan. The only known wintering areas are the Bahama Islands, although some other less reliable reports have placed them elsewhere. In Georgia, this species might be seen during migration.







### **Conservation Status**

The Kirtland's Warbler is Federally listed as an Endangered species. Fire suppression programs have reduced the quality of the habitat for this warbler. Its decline has been attributed to habitat loss, habitat modification, and parasitism by the Brown-headed Cowbird. The Brown-headed Cowbird lays its eggs in other birds' nests, allowing the host parents to raise its young instead of or in addition to their own. Since the 1970s, cowbird removal programs have increased the reproductive ability of the Kirtland's Warbler.

### **Similar Species**

The most similar species is the Prairie Warbler. The Prairie Warbler is smaller (12 cm), and it has face patterning that the Kirtland's Warbler lacks. The Palm Warbler is also similar, but it has bright yellow undertail coverts.

*Birds: Classification, Species list, References.*

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*Georgia Wildlife Web*

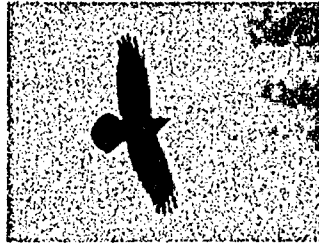
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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

**Perching Birds**



Georgia - R  
 South Carolina -  
 Federal -

**Common Raven, *Corvus corax***

**Scientific name:** The genus name, *Corvus*, is Latin meaning "a crow." The species name is from the Greek word *korax* (a raven).

**Classification**

- Phylum: Chordata
- Subphylum: Vertebrata
- Class: Aves
- Order: Passeriformes
- Family: Corvidae

**Species Description**

**Size:** 61 cm (24 in) in length. **Color:** Black overall. Other things to look for: Long, thick bill; wedge-shaped tail.

**Life Cycle**

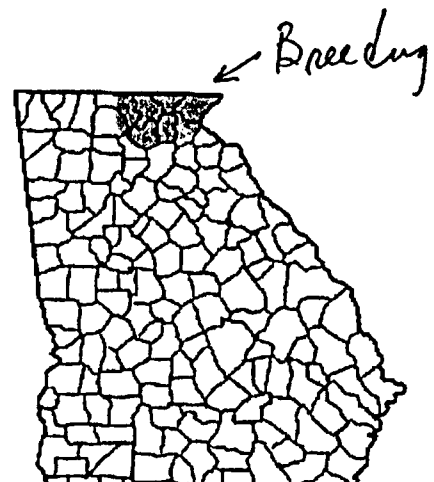
The breeding season begins in early March and extends until the end of April. Breeding habitat is wooded mountainous regions with rocky cliffs and ledges. The cup-shaped nest is built by both adults on a cliff or ledge, or sometimes in a tree. The nest is built of sticks and twigs and lined with shreds of bark and hair. The female lays 3-7 (usually 4-6) eggs that she incubates for 18-21 days. The male feeds the female while she incubates the eggs. The young are altricial and fledge in 38-44 days after hatching.

**Natural History**

The foraging habitat of the Common Raven includes a variety of habitats in upper elevations such as woodlands, fields, and field edges. Its diet includes small mammals, insects, carrion, mollusks, berries, and garbage. It finds and eats most of its food on the ground. It will break mollusk shells by repeatedly dropping them on rocks or other hard surfaces. The Common Raven is also known as a species that "caches" food, meaning that it will hide and sometimes even bury food to be eaten later.

**Range**

The Common Raven occurs in the western United States, the Appalachians in the east, and throughout most of Canada all year. In Georgia it is uncommon, but it is sometimes seen in the northeastern parts of the state.



**Conservation Status**

It was once thought that this species damaged livestock and game animals; therefore, the Common Raven was extensively trapped. Today this species is listed as Endangered by the states of Kentucky and



Tennessee.

### **Similar Species**

The species most similar to the Common Raven in the eastern United States are the American Crow, and the Fish Crow. The American Crow (45 cm in length) and the Fish Crow (39 cm in length) are both smaller than the Common Raven. Both also lack the thick bill and wedge-shaped tail of the Common Raven.

*Birds: Classification, Species List, References.*

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*Georgia Wildlife Web*

*Search Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000



Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Terns****Gull-billed Tern, *Sterna nilotica***

**Scientific name:** The genus name is a Modern Latin word derived from Old English meaning "a tern." The species name is Latin meaning "of the Nile," the location where this species was first described.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves  
**Order:** Charadriiformes  
**Family:** Laridae

**Species Description**

**Size:** 36 cm (14 in) in length; 86 cm (34 in) wingspan. **Color:** Mostly white below and light gray above; black bill, legs, and feet. **Breeding plumage:** Black crown and nape. **Winter plumage:** Top of head, back, wings, and tail gray; under parts white. **Other things to look for:** Large thick bill and a deeply notched tail.

**Life Cycle**

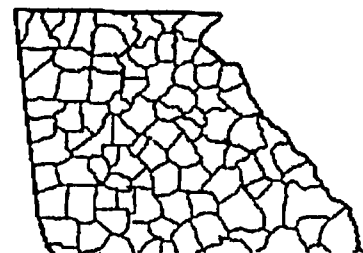
The breeding season usually begins in early May and extends to early August. The Gull-billed Tern nests in colonies, commonly with large numbers of nests in an area. It often nests with Common Terns and Black Skimmers. Breeding habitat includes sand, gravel, or shell beaches, or some grassy areas of coastal islands. The nest is usually built in a depression on the ground. Both the male and female line the depression with grass and other vegetation. The female lays 1-4 (usually 2-3) eggs that both adults incubate for 22-23 days. The young are semi-precocial and leave the nest a few days after hatching. The young are dependent upon the adults for 28-35 days after hatching.

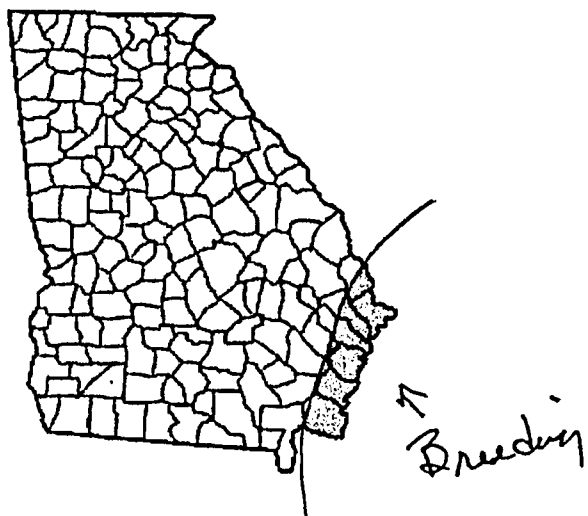
**Natural History**

The habitat this species uses during the non-breeding season is similar to its breeding season habitat. Its diet includes insects, small mammals, frogs, crustaceans, and sometimes bird eggs, bird young, and fish. Unlike many of the other terns, the Gull-billed Tern forages mostly over land, sitting on a perch and flying out to catch insects in mid-air. This species is migratory.

**Range**

During the breeding season, the Gull-billed Tern occurs in the eastern and southern coastal United States. It is also seen during the winter along the southern coastal United States. Its winter range extends to central coastal areas of South America.

**Conservation Status**



yellow



This species is not common, but is not yet listed as Threatened or Endangered in any part of its southeastern range. The numbers of Gull-billed Terns are declining. The original massive decline in numbers was caused by hunters gathering plumes for the fashion industry of the late 1800s and early 1900s, during which time these birds were eliminated from the northern portion of their breeding range.

### **Similar Species**

Some other terns are very similar to the Gull-billed Tern. The black legs and feet and the thick bill of this tern differentiates it from species such as the xxxForester's Tern and the Least Tern.

*Birds: Classification, Species list, References*

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*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History and Georgia Department of Natural Resources  
1 June 2000

Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Plover**

South Carolina -

George - R

Federal -

**Wilson's Plover, *Charadrius wilsonia***

**Scientific name:** The genus name is a Latin term meaning "a plover." The species is named after Alexander Wilson, who is considered the "Father of American Ornithology." He recorded many observations of birds in America, which were later published by George Ord in *American Ornithology*.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Aves  
**Order:** Charadriiformes  
**Family:** Charadriidae

**Species Description**

**Size:** 20 cm (7.75 in) in length. **Color:** Black bill; grayish pink legs. **Males:** Brown above; black chest band; black lores (area between the bill and the eyes); black head stripe. **Females:** Brown above; brown chest band, crown, lores, and face patch.

**Life Cycle**

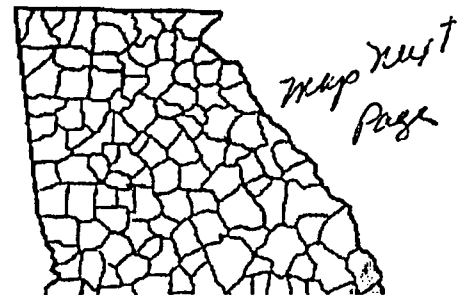
The breeding season begins in early April and extends into August. Nesting occurs on sandy beaches near the coast. The Wilson's Plover is a colonial nester, nesting in loose groups, sometimes with oystercatchers and terns. The male creates a nest scrape where the female lays the eggs. The scrape is commonly concealed by surrounding stones, driftwood, and other debris. The female lays 2-4 (usually 3) eggs that both adults incubate for 23-24 days. The female usually incubates during the day, while the male takes most of the night shift. The young are precocial and leave the nest within hours of hatching. They are cared for by both adults for approximately 21 days.

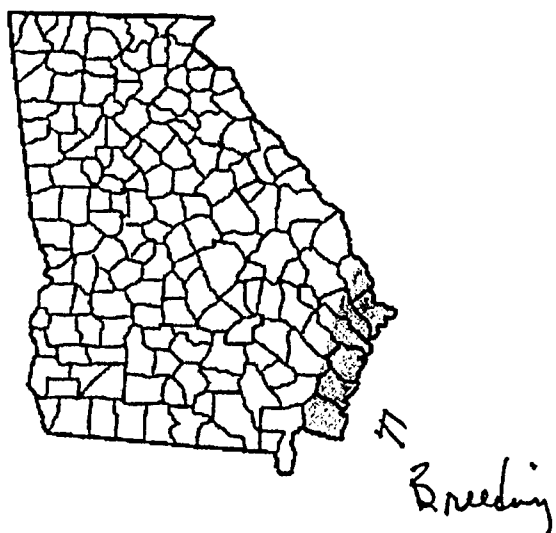
**Natural History**

The non-breeding habitat of the Wilson's Plover includes a variety of coastal areas such as sandy beaches, tidal flats, and small water sources. The diet consists mostly of crustaceans and insects. Wilson's Plover feed both at night and during the day by moving on the ground in search of food at the water's edge. This species is migratory.

**Range**

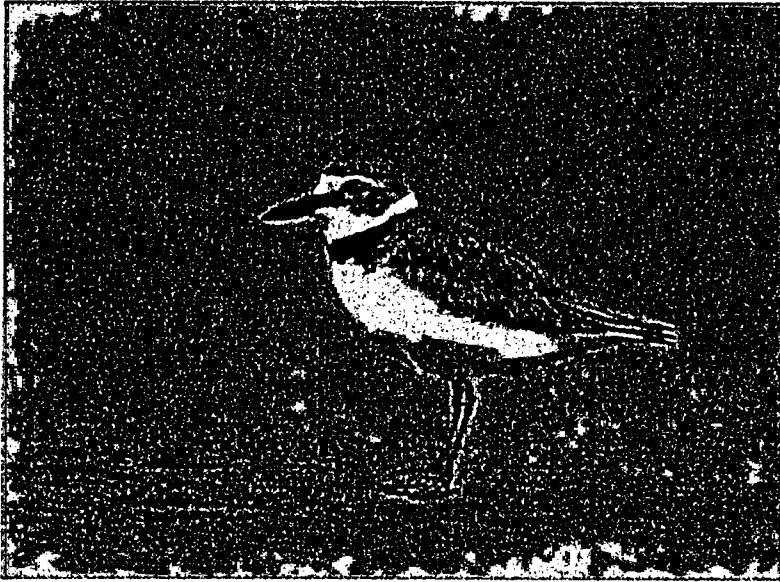
During the breeding season, the Wilson's Plover occurs in eastern and southern coastal areas of the United States. It winters from southern coastal Florida south to northern South America, usually along the Atlantic and Gulf coasts. In Georgia it occurs along the coast during the breeding season.

**Conservation Status**



all yellow

1



This species is not listed as Threatened or Endangered in any part of its southeastern range.

### **Similar Species**

The most similar species include the Semi-palmated Plover, Piping Plover and Snowy Plover. All three species have much smaller and thinner bills, and have a smaller body size than the Wilson's Plover. The orange legs of the Semi-palmated Plover and the Piping Plover differentiate them from the Wilson's Plover. The black legs of the Snowy Plover also identifies it from the pink-legged Wilson's Plover.

*Birds: Classification, Species list, References*

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*Georgia Wildlife Web*

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# **Amphibian Spread Sheet**

# **Protected Amphibian Species List**

## Protected Amphibian Species in Georgia

Find details for the amphibians on this list at [NatureServe](#).

Date of information - 10/22/2004  
7 amphibians on this list

Scientific Name	Common Name	State Status (what's this?)	Federal Status (what's this?)
<i>Ambystoma cingulatum</i>	Flatwoods Salamander	T	LT
<i>Amphiuma pholeter</i>	One-toed Amphiuma *	R	
<i>Aneides aeneus</i>	Green Salamander *	R	
<i>Cryptobranchus alleganiensis</i>	Hellbender *	R	(PS)
<i>Haideotriton wallacei</i>	Georgia Blind Salamander *	T	
<i>Notophthalmus perstriatus</i>	Striped Newt	R	
<i>Plethodon petraeus</i>	Pigeon Mountain Salamander *	R	

NOTE: This is a working list and is constantly revised ([see element occurrence data disclaimer](#)). For the latest changes, acknowledgment of numerous sources, interpretation of data, or other information connected with this list, please contact:

Greg Krakow - Data Manager  
Georgia Department of Natural Resources  
Wildlife Resources Division  
Georgia Natural Heritage Program  
2117 U.S. Highway 278 S.E.  
Social Circle, Georgia 30025-4714  
Phone: (770)918-6411  
Fax: (706)557-3033  
Click [here](#) to send e-mail

\* out of range of study area

# **Amphibian Field Identification Sheets**

Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Salamanders**

Georgia - T  
South Carolina -  
Federal - T

Flatwoods Salamander, *Ambystoma cingulatum*

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Amphibia  
**Order:** Caudata  
**Family:** ambystomatidae

**Species Description**

**Size:** 9 - 13 cm (3.5 - 5 in).

**Color:** Dark, almost black with gray markings on its back. The markings may look like fine lines, a net, or circles. Its belly is black with gray specks.

**Other things to look for:** This is a small Mole Salamander, not as robust as other members of this genus. The head is not quite as blunt as in other *Ambystoma* species. It has 15 costal grooves.

**Life Cycle & Natural History**

Breeding occurs in the late fall. Fertilization is internal. The female lays small clumps of eggs on damp ground near water. Hatching occurs when winter rains flood the area where the eggs have been laid, usually 20 to 40 days later. Transformation to adult form occurs in the spring, three to four months later.

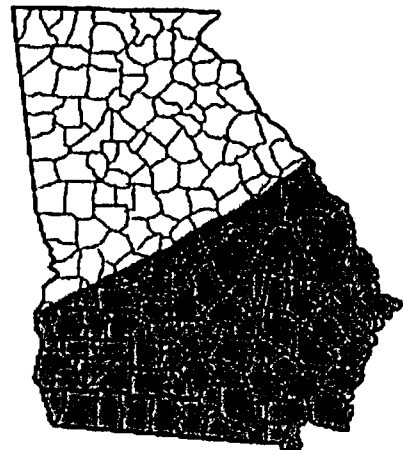
Members of the Mole Salamander Family (ambystomatidae) are aptly named because they spend most of their time underground. This salamander burrows near water or moves about under debris on the forest floor. It is nocturnal and most likely to be seen during the fall courtship and breeding period. The Flatwoods Salamander is found in flatwoods dominated by longleaf or slash pines, and is very closely associated with the pine/wiregrass habitat. It is carnivorous, and is an opportunistic feeder, primarily eating earthworms and arthropods. It needs shallow winter ponds to breed and does not do well in ponds that contain fish.

**Range**

The Flatwoods Salamander is found in the pine woodlands and cypress swamps of the Coastal Plain.

**Conservation Status**

This species is listed as Threatened in Georgia, South Carolina, Alabama, and Florida both by the individual states and by the federal government. Its population has declined dramatically over the last fifteen years. The main threat is habitat destruction caused by clear-cutting, burning, and soil disturbance by heavy machinery. Protection of pine/wiregrass habitat is



essential for the survival of this species. Pine wetlands should be protected and not dredged or drained.

### **Similar Species**

There are no other Mole Salamanders that can be confused with this species in Georgia. Some Slimy Salamanders have a similar appearance, but they also have noticeably sticky mucous secretions.

*Amphibians: Classification, Species list, References.*

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*Georgia Wildlife Web*

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# Flatwoods Salamander

*Ambystoma cingulatum*

Habitat:

Lives in seasonally wet, pine flatwoods and pine savannas

Breeding in ephemeral habitats, including roadside ditches, borrow pits, marsh pasture ponds, swamps, and pond cypress (*Taxodium ascendens*) and black gum (*Nyssa sylvatica*) ponds.

Life History:

Petranka's Salamanders of the United States and Canada  
Page 50-53

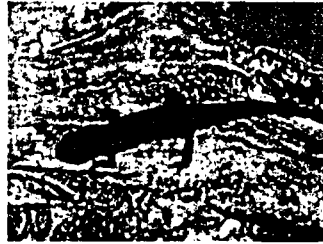
Color plates in the book are Plate 4 (adult) and Plate 5 (larva stage)

Listed in Georgia: **T**  
Federally listed in Georgia: **LT**

Vertebrates

- Amphibians
- Reptiles
- Birds
- Mammals

***Salamanders***



*Georgia - R*  
*South Carolina -*  
*Federal - None*

**Striped Newt, *Notophthalmus perstriatus***

**Scientific name:** The generic name comes from the Greek words *notos*, for back, and *ophthalmos*, for eye. This refers to the eye-like spots on the back of some species in this genus. The species name for the Striped Newt comes from the Latin *per*, for completely and the New Latin *striatus*, for striped, indicating that this species has complete stripes along the body rather than broken ones.

**Classification**

- Phylum:** Chordata
- Subphylum:** Vertebrata
- Class:** Amphibia
- Order:** Caudata
- Family:** salamandridae

**Species Description**

**Size:** A small salamander, 5 - 10 cm (2 - 4 in) long.  
**Color:** Olive green to dark brown back with a distinguishing dull to bright red stripe running down both sides of the back. The stripe is solid on the body, but may be broken into dashes on the head and tail. The back may also have some red spots or a light stripe down the center of the back. The belly is yellowish with black specks.  
**Other things to look for:** The Striped Newt is slender and has relatively dry skin. The eft is red to orange-red and has stripes like the adult.

**Life Cycle & Natural History**

Little is known about this species' habits. Courting and mating occur in late winter and early spring. Fertilization is internal. Eggs are laid in late spring and hatch in four weeks. Both the larva and the adult are aquatic. The eft stage is uncommon in this species, but may be important for dispersal of the species during the fall and winter rains. Neotony, represented in this species by the retention of portions of the external gills in adults, is common.

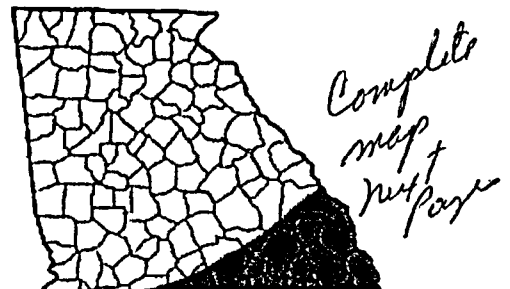
The Striped Newt eats small insects, worms, frog eggs, and tadpoles. This newt requires shallow, unpolluted water and some vegetation. Isolated sinkhole ponds in the sand hills or semi-permanent Carolina Bays are ideal habitats.

**Range**

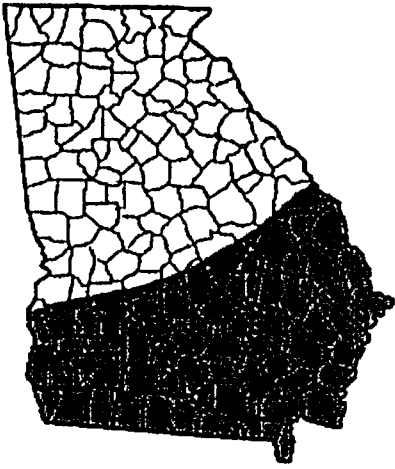
The Striped Newt is found throughout the lower Coastal Plain of Georgia.

**Conservation Status**

The Striped Newt is listed as Rare in Florida and Georgia and is being considered for Federal Status.







Draining sinkholes, bays, and temporary summer pools may have harmful effects on this newt.

### **Similar Species**

The red spots on the back of an Eastern Newt are outlined in black, and the Eastern Newt does not have a red stripe running down the sides of its back. Other salamanders have slippery or slimy skin.

*Amphibians: Classification, Species list, References*

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*Georgia Wildlife Web*

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**Patuxent Wildlife Research Center**

## ARMI National Atlas for Amphibian Distributions

[Plethodon list](#) | [Plethodontidae list](#) | [Caudata list](#) | [ARMI Atlas Home](#)

### **Pigeon Mountain salamander** **Caudata > Plethodontidae > Plethodon > *Plethodon petraeus***



These maps have been adapted from the "United States Amphibian Atlas Database" assembled at Ball State University by Laura Blackburn, M.S., Priya Nanjappa, M.S., and Michael J. Lannoo, Ph.D. (2002). Development of this database was supported in part by grants and/or matching funds from the National Fish and Wildlife Foundation, United States Fish and Wildlife Service, and Disney Wildlife Conservation Fund.

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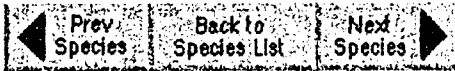
U.S. Department of the Interior | U.S. Geological Survey | Patuxent Wildlife Research Center

Contact: Priya Nanjappa | URL: <http://www.pwrc.usgs.gov/armiatlas/> |

Maps Last Updated: September 2004

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# The Frogs & Toads of Georgia



## Gopher Frog - *Rana capito* ⌂



- **Diagnostic Features:**
  - Size: 2.5 to 3.5 inches
  - Color:
    - Variable, but dark, ranging from gray to brown
  - Other:
    - Spots black, reddish brown or dark brown, but faint
    - Warts always prominent, variable in shape, almost pavementlike
    - Short, plump frog
    - Ventral surfaces heavily marked with dark flecks
  - Sexual Dimorphism:
    - Males may have yellow on the dorsolateral ridges, on the warts, along upper jaw, and in armpits and groins

### Natural History:

- Habitat:
  - Sandy
- Behavior:
  - Daytime, Gopher Tortoise burrows and other deep shelter
  - Active at night
- Breeding:
  - January - March
  - Explosive Breeders, normally after heavy rains
  - Egg mass is a large globular cluster attached to stems

**Voice:** Sonogram : Call ( Okaloosa County, FL, & Taylor County GA)

- A deep snore, like the distant roar of an outboard motor; more continuous and hoarser than the Southern Leopard Frog

**Tadpoles:**

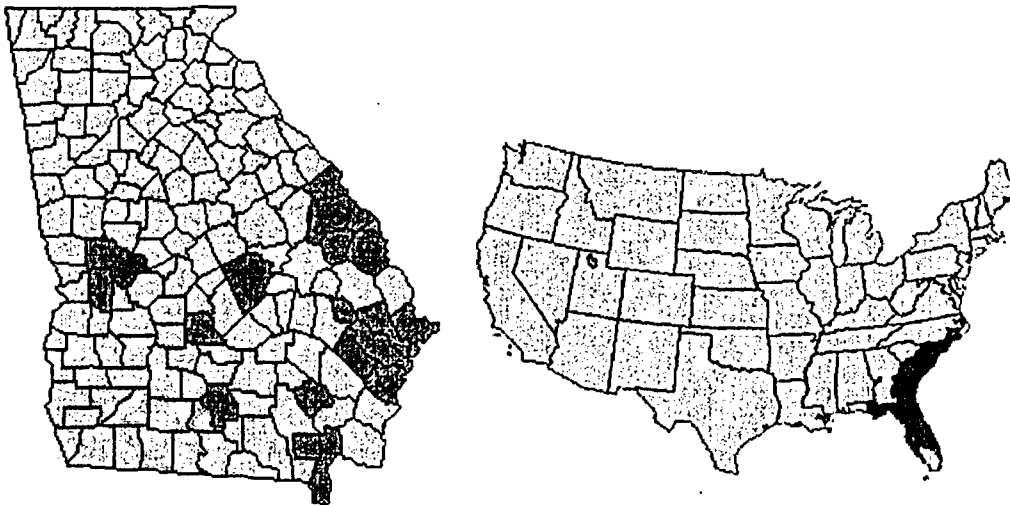
- Tadpole stage 85 - 100 days
- Transformed young are 27 - 38 mm long



- LTRF usually 2/3; regardless of size, stage or range
- iris always with iridophores in life; length of one side of A- 2/width of medial gap ca. .5; P-2/P-3 ca. 1.7; P-1 without a medial gap; midventral marginal papillae large; submarginal papillae few to absent; dorsal fin originates near tail-body junction and forms medium arch; white lip line usually absent; variable, depending on turbidity, from uniformly dark to uniformly pale, fins usually clear but may have bold markings; lentic, usually temporary sites, breeds explosively in early spring throughout Mississippi Embayment and Gulf and Atlantic coastal plains (no accurate means of distinguishing between *R. arcolata*, *R. capito*, and *R. pipiens* + *R. sphenoccephala*)

**Range:**

- In North America, it is found in the coastal plain of the Carolinas, south Georgia to southern Florida.
- In Georgia, it is found scattered thru the southeast part of the state.



- In Light Blue: Williamson, Gerald K. & Moulis, Robert A., *Distribution of Amphibians and Reptiles in Georgia*, Special Publication No. 3, Savannah Science Museum, Inc. Savannah, Georgia, 1994
- In Green: Sound Recordings
- In Yellow: From Both '94 study and Sound Recordings
- In Magenta: Photograph, not found by '94, may or may not be sound record
- In Medium Blue: Photograph and in '94 study, may or may not be sound record
- In Orange: County Record by other Herp Atlas Volunteers
- In Red: US Distribution from various sources

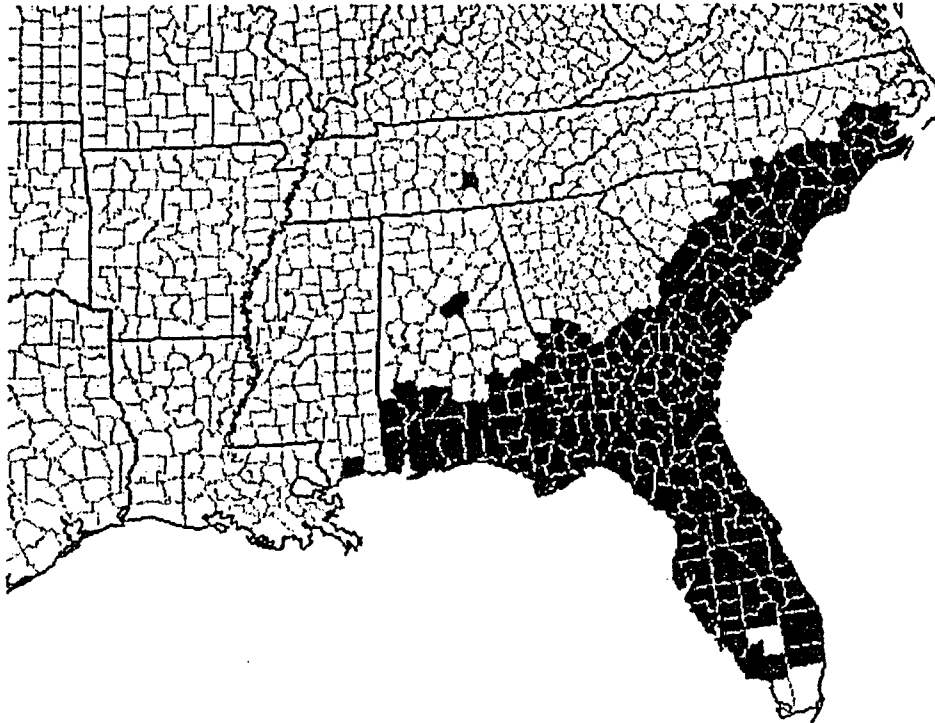


Patuxent Wildlife Research Center

## ARMI National Atlas for Amphibian Distributions

[Ranidae list](#) | [Anura list](#) | [ARMI Atlas Home](#)

**gopher frog**  
**Anura > Ranidae > *Rana capito***



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Contact: [Priya Nanjappa](#) | URL: <http://www.pwrc.usgs.gov/armiatlas/> |

Maps Last Updated: September 2004

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# **Reptile Spread Sheet**

# **Protected Reptile Species List**



## Protected Reptile Species in Georgia

Find details for reptiles on this list at [NatureServe](#).

Date of information - 10/22/2004  
13 reptiles on this list

Scientific Name	Common Name	State Status (what's this?)	Federal Status (what's this?)
<i>Caretta caretta</i>	Loggerhead *	T	LT
<i>Chelonia mydas</i>	Green Sea Turtle *	T	(LE,LT)
<i>Clemmys guttata</i>	Spotted Turtle	U	
<i>Dermochelys coriacea</i>	Leatherback Sea Turtle *	E	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	T	LT
<i>Eretmochelys imbricata</i>	Hawksbill Sea Turtle *	E	LE
<i>Glyptemys muhlenbergii</i>	Bog Turtle	T	(LT,T(S/A))
<i>Gopherus polyphemus</i>	Gopher Tortoise	T	(PS:LT)
<i>Graptemys barbouri</i>	Barbour's Map Turtle	T	
<i>Graptemys geographica</i>	Map Turtle	R	
<i>Graptemys pulchra</i>	Alabama Map Turtle	R	
<i>Lepidochelys kempii</i>	Kemp's Or Atlantic Ridley *	E	LE
<i>Macrochelys temminckii</i>	Alligator Snapping Turtle	T	

NOTE: This is a working list and is constantly revised (see [element occurrence data disclaimer](#)). For the latest changes, acknowledgment of numerous sources, interpretation of data, or other information connected with this list, please contact:

Greg Krakow - Data Manager  
Georgia Department of Natural Resources  
Wildlife Resources Division  
Georgia Natural Heritage Program  
2117 U.S. Highway 278 S.E.  
Social Circle, Georgia 30025-4714  
Phone: (770)918-6411  
Fax: (706)557-3033  
[Click here](#) to send e-mail

\* range outside of  
study area

# **Reptile Field Identification Sheets**



Home : Reptiles : Alligator Snapping Turtle

### Alligator Snapping Turtle *Macrolemys temminckii*

by Jeff LeClere



Alligator snapping turtle, captive specimen



Alligator snapping turtle, head and beak

#### Status

NOTE: The Iowa DNR does not recognize the alligator snapping turtle as a species known to occur in Iowa. If they are found in Iowa, they would likely be found in the Mississippi River and connected backwaters in the southeastern part of the state. Any turtle suspected of being an alligator snapping turtle should be held and the DNR or us should be immediately contacted. We would also like verified reports of this species adjacent to Iowa in Illinois.

#### Description

This is Iowa's largest turtle species. Average adult size is from 15 to 26 inches carapace length (Conant and Collins, 1998). Unlike most of Iowa's aquatic turtle species, male alligator snapping turtles grow larger than females. The males also

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have their cloacal openings positioned past the margin of their carapace edge. The strong, well developed carapace is brown or black, but may be obscured by mud or algae. There are three lengthwise keels down the carapace. These are prominent in young and adults alike. The marginals are smooth on all sides except the rear in which they become like jagged teeth in feeling and appearance. The plastron is small resulting in a large amount of flesh exposed on the underside. The skin is brown.

The head is massive in relation to the shell. This is especially obvious in large specimens. There are many fleshy projections about the neck. All ages have strong jaws with a very hooked beak, strong claws, and a long smooth tail. There is a pink fleshy projection on the tongue. This turtle can be confused with no other except the common snapping turtle. With careful observation, however, they can easily be distinguished from one another. Alligator snappers have three very pronounced jagged ridges down the back well into adulthood; common snappers have these ridges when they are young but rapidly fade in adults. The top of the tail is smooth in alligator snappers; in common snappers, the top of the tail has a saw toothed ridge. The head is huge, the beak is strongly hooked with a very wide gape (almost parrot-like) and the inside of the mouth is gray; in common snappers, the head is smaller, the beak is less strongly hooked, smaller gape, and the inside of the mouth is pink or light colored. Hatchling gator snappers are 35 to 40 mm long and look like the adults.

### **Subspecies**

There are no subspecies of the alligator snapping turtle, *Macrolemys temminckii*, recognized.

### **Range**

If the alligator snapping turtle occurs in Iowa at all, it would most likely be found in the Mississippi River from Lee to Muscatine County.

### **Habitat**

The alligator snapping turtle lives in large muddy rivers. The Mississippi and large tributaries in southeastern Iowa provide this type of situation.

### **Habits**

Alligator snapping turtles (sometimes called 'gator snappers) have the same scenario in Iowa that the eastern massasauga, *Sistrurus catenatus*, has in Minnesota: they are suspected of occurring here, people swear that they have seen them, their surrounding ranges make it possible, but no one has ever truly documented them from the state. 'Gator snappers are included in Iowa's herpetofauna on the basis of a sighting from the Rock River near its junction with the Mississippi River in Illinois (Smith, 1961), and a newspaper article from Muscatine, Iowa, which is adjacent to the Illinois sighting.

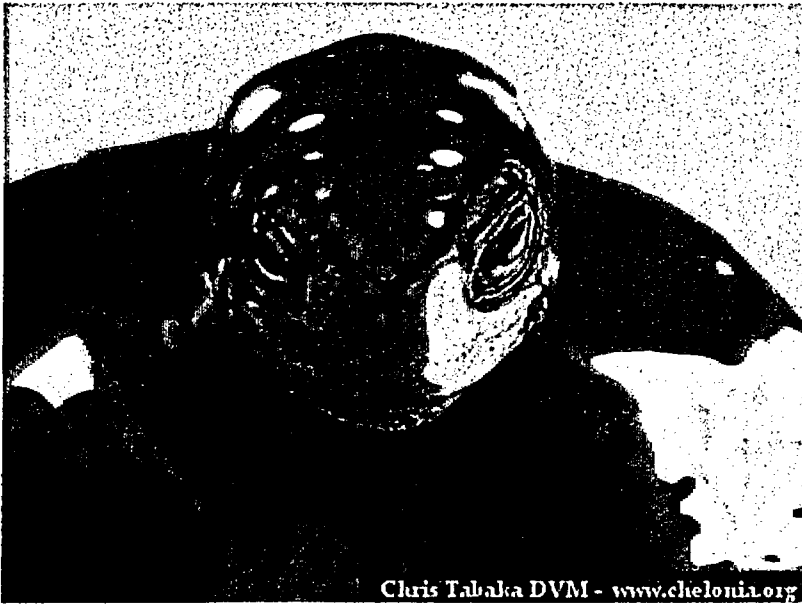
Alligator snapping turtles rarely bask out of water as adults. They may spend time in shallow water to raise their temperature. They also do not move across land except for gravid females and if they are forced by the drying of their home. This is usually avoided because they live in large rivers.

Mating seems to occur in spring, with females laying 9 to 44 eggs in a clutch (Allen and Neill, 1950). The turtles hatch two or three months later.

'Gator snappers are well-known for their extremely aggressive behavior. Their strong jaws are capable of giving a serious, painful bite, although the resulting damage is sometimes exaggerated. While very pugnacious on land, they usually try to crawl or swim away if they are confronted underwater. The gape of the mouth is huge, and the beak is so strongly hooked, that it resembles a parrot beak. They often bury themselves in the mud at the bottom of shallow waters with only their head protruding. With their long necks, they occasionally reach the waters surface and take in air through their nostrils.

In the evening and at night they become active and hunt for food. Alligator snapping turtles are omnivorous. They eat anything they can catch and also various water plants, roots, and fruits. Small prey are swallowed whole; larger items are torn apart with the front claws and swallowed in pieces. Snappers are usually too slow to catch healthy game fish, but 'gator snappers have developed a trap to fool them. They sit motionless at the bottom of the river. They open their huge mouth, which is dark on the inside, and move the pink fleshy 'worm attached to their tongue. A hungry fish sees the 'worm and swims in to catch it. Suddenly the snapper snaps its mouth shut with incredible speed and power. The fish does not know what hit it and the snapper has a meal. Like many other Iowa water turtles, snappers must eat food underwater; their fixed tongue makes it very difficult to swallow out of water.





Vertebrates

Amphibians  
 Reptiles  
 Birds  
 Mammals

**Turtles****Gopher Tortoise, *Gopherus polyphemus***

**Scientific name:** The genus name is the Latinized name of a small burrowing mammal, the pocket gopher, a reference to this turtle's burrowing habits. The species name *polyphemus* was the name of the cave-dwelling giant in the Odyssey, an ancient Greek story. It is presumably applied to this turtle for its burrowing habits and strength.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Reptilia  
**Order:** testudines  
**Family:** testudinidae

**Species Description**

**Size:** The largest terrestrial turtle of the southeastern United States. Adults average 15 - 24 cm (5.9 - 9.4 in) in length. The record is 38 cm (15 in).

**Color:** The carapace varies in color from dark brown to grayish-black. The plastron is yellowish. The exposed skin of the head, neck, and legs is grayish black.

**Other things to look for:** This turtle has shovel-like front legs, stumpy hind legs, and an unhinged plastron.

**Life Cycle**

Depending on geographic location, sexual maturity in females occurs between 10 and 21 years of age, when the turtle has a carapace length of 22 - 27 cm (8.7 - 10.6 in).

Most mating occurs in the spring but some mating activity occurs in the fall. Nesting occurs from late April to mid-July, but most eggs are laid from mid-May to mid-June.

In an open, sunny location, 1 - 25 white spherical eggs are laid in a flask-shaped cavity excavated in loose soil. The eggs hatch in 80 - 110 days and the young tortoises dig their way to the surface. An adult Gopher Tortoise may reach 25 years of age and some probably live twice that length of time.

**Natural History**

The Gopher Tortoise inhabits areas of well-drained, deep, sandy soils and open-canopied forests, such as sandhill and ridge pine-scrub oak forests, pine flatwoods, oak hammocks, and beach scrub forest. It avoids moist soils in low-lying areas. This tortoise is considered a keystone species. Both active and abandoned Gopher Tortoise burrows are used by over 100 species of vertebrates and invertebrates. Burrows are usually straight and vary from 2.7 - 6.1 m (8.8 - 20 ft) in length and 1.4 - 2.8 m (4.6 - 9.2 ft) in depth. The burrow has an enlarged chamber at the end where the tortoise



sleeps and can turn around. The Gopher Tortoise has a well-defined home range and uses several different burrows throughout the year. The Gopher Tortoise is an herbivore and mainly eats grasses and forbs, but it may also eat fungi, fruits, and carrion. Gopher Tortoise eggs and young are eaten by a variety of small carnivorous mammals such as raccoons, skunks, armadillos, foxes, and opossums. In addition Red-tailed Hawks, Indigo Snakes, Coachwhips, Kingsnakes, and fire ants all feed on young or eggs.

### Range

The Gopher Tortoise ranges from the Atlantic Coastal Plain of extreme southern South Carolina west along the Gulf of Mexico's coastal plains to extreme eastern Louisiana and peninsular Florida. Due to habitat loss, its population has rapidly declined and this species is now dispersed as isolated populations within this range.

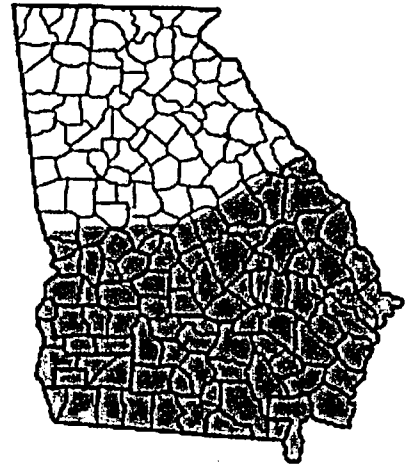
### Conservation Status

The Gopher Tortoise is listed as a Threatened species by state and federal law. Major perils are habitat loss and disturbance.

### Similar Species

The Eastern Box Turtle can be distinguished by its hinged plastron, smaller adult size, and patterned shell.

*Reptiles: Classification, Species list, References*



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*Georgia Wildlife Web*

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Sharon Chancellor - [www.chelonia.org](http://www.chelonia.org)



# Barbour's Map Turtle (Carr and Marchand, 1942)

## *Graptemys barbouri*



**Range:** Florida - Barbour's Map Turtle (*Graptemys barbouri*) is found in the Apalachicola, Chatahoochee and Chipola Rivers . Alabama - It is found in the Chattahoochie River. Georgia - *G. barbouri* is found in the Chatahoochie and Flint River systems.

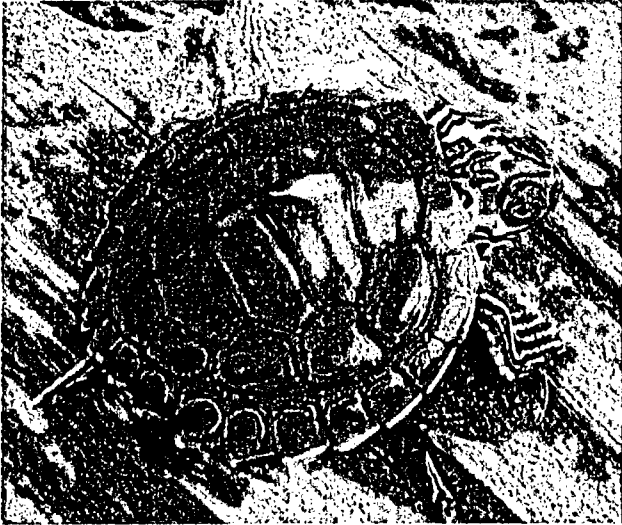
**Description:** This is a medium to large size turtle. Males are about 3.5 to 5.5 inches as adults and females are about 6 to 12.5 inches long. This turtle is part of the broad head group of map turtles and therefore is mostly a crustacean (mollusk) eater, but they are also opportunistic so insects (especially males and juveniles) and fish could also be eaten. It has a domed shell keel that is exaggerated as a hatchling and slowly wears down with age, especially old females. This turtle differs from *G. pulchra* (Alabama Map Turtle), *G. gibbonsi* (Pascagoula Map Turtle) and *G. ernsti* (Escambia Map Turtle) in having a transverse bar. (I am sure some are asking what a transverse bar is?) If you turn the turtle over and look at its chin, it will have a letter V or U. The point of the V faces the frontal part of the turtle. This turtle is included in the "*pulchra*" complex of broad headed species. It is definitely the most unique of the *G. ernsti*, *G. gibbonsi*, *G. pulchra* group.

**Habitat:** This turtle lives in a large sandy/muddy limestone rivers. Juveniles and males prefer brush piles along the sides of the river. Females, once again, prefer deeper water and tend to bask a little bit further out into the river. Basking tends to be on large stems of trees instead of small branches. Note: this turtle lives in what I would call "heaven". There is no other place like the Apalachicola River system. The water is rather clear and you can snorkle to see these magnificent animals. Oh ya, watch out for alligators!

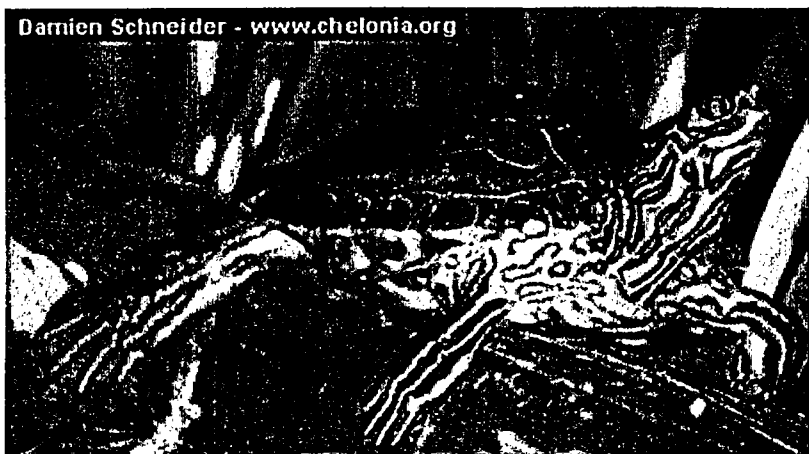
**Legal Status:** Regulated in Florida, 2 per person. Protected in Alabama. Protected in Georgia.

**Other Information:** In the parts of the rivers where I have looked for *G. barbouri*, it was not uncommon. In some parts of these rivers, *Trachemys scripta scripta*, appears to be as common. Other species that are found in the same places as *G. barbouri* are *Pseudemys concinna* (River

Cooters), *Trachemys scripta scripta* (Yellowbelly Sliders), *Sternotherus minor minor* (Loggerhead Musk), *Sternotherus odoratus* (Common Musk), *Kinosternon subrubrum subrubrum* (Eastern Mud Turtle), *Macrochelys temminckii* (Alligator Snapping Turtles, not Loggerheads as named by the locals), and *Apalone spinifera aspera*, (Gulf Coast Spiny Softshell), *Apalone ferox* (Florida Softshell). *G. barbouri*, a broad head species, can be found with no other *Graptemys* species.

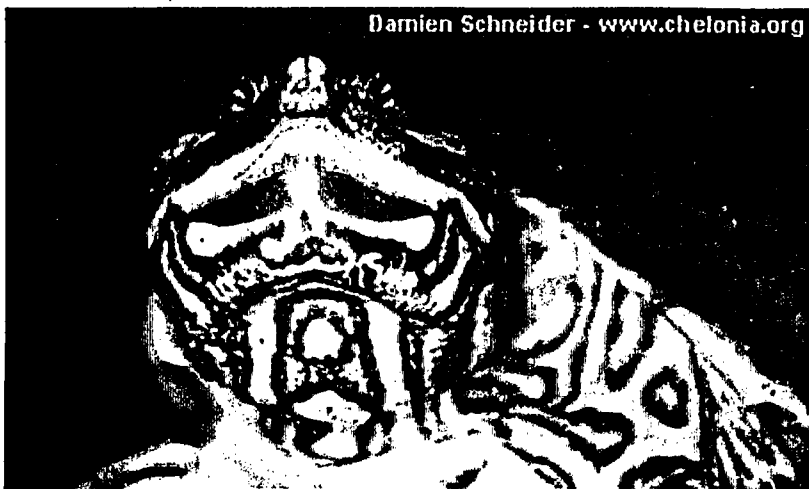


A hatchling *G. barbouri* basking in the Chipola River



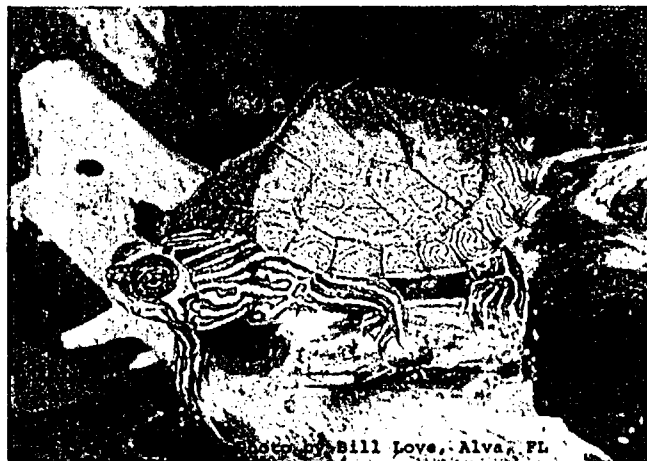


Damien Schneider - [www.chelonia.org](http://www.chelonia.org)



# Alabama Map Turtle (Baur, 1893)

## *Graptemys pulchra*



**Range:** Alabama - The Alabama Map Turtle (*Graptemys pulchra*) is found in the Alabama, Tombigbee, Tensaw, Black Warrior and Coosa Rivers. Georgia - It is found in the Coosa and Tallapoosa Rivers. It is also found in many of the streams, lakes and creeks that are proximal or connected to these rivers.

**Description:** This is a medium to large size turtle. Males are about 3.5 to 5 inches as adults and females are about 5.5 to 11.5 inches long. This turtle is part of the broad head group of map turtles and therefore is mostly a crustacean (mollusk) eater, but they are also opportunistic so insects (especially males and juveniles) and fish could also be eaten. It has a domed shell keel that is exaggerated as a hatchling and slowly wears down with age, especially old females. This turtles differs from *G. ernsti* (Escambia Map Turtle) and *G. gibbonsi* (Pascagoula Map Turtle) in having a flatter carapace. *G. pulchra* has a full mask on the top of its head unlike *G. ernsti* and *G. gibbonsi*. The Alabama map turtle is basically a brown turtle, unlike the Pascagoula and the Escambia map turtles which have orange, yellow and green colors on the carapace and plastron. *G. pulchra* does not have a plastral pattern except for the 5 horizontal lines that outline the rows of scutes.

**Habitat:** This turtle lives in large sandy/muddy rivers as well as in rocky streams. Juveniles and males prefer brush piles along the sides of the river. I even witnessed one basking vertically on the side of a Cypress tree. Females, once again, prefer deeper water and tend to bask a little bit further out into the river. Basking tends to be on large stems of trees instead of small branches.

**Legal Status** Protected in Alabama, Rare in Georgia and therefore Protected.

**Other Information:** In the parts of the rivers where I have looked for *G. pulchra*, it was not uncommon. In some parts of these rivers, *Pseudemys concinna*, appears to be as common. Other species that are found in the same places as this species are *Graptemys nigrinoda nigrinoda* (Northern Black-knob Sawback Map), *Graptemys nigrinoda delticola* (Southern Black-knob Sawback), *Pseudemys concinna* (River Cooters), *Trachemys scripta scripta x elegans* (Yellowbelly x Red Eared Slider), *Sternotherus minor peltifer* (Stripeneck Musk), *Sternotherus depressus*

(Flattened Musk), *Macrolemys temminckii* (Alligator Snapping Turtles, not Loggerheads as named by the locals), and *Apalone spinifera aspera*, (Gulf Coast Spiny Softshell). As mentioned previously, *G. nigrinoda nigrinoda* is part of the narrow head group. *G. pulchra*, a broad head species, can be found along side *G. n. nigrinoda*, a narrow-head species. I have found that in a three mile section of river, *G. pulchra* or *G. n. nigrinoda* can be the dominate basking turtle in a certain area. While going up river in this three mile section, the most dominate *Graptemys* species changed three times.



Notice the full mask on this *Graptemys pulchra* in Central Alabama



The Tallapoosa River

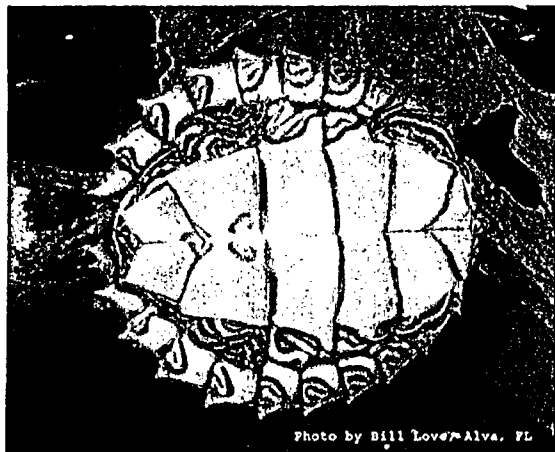
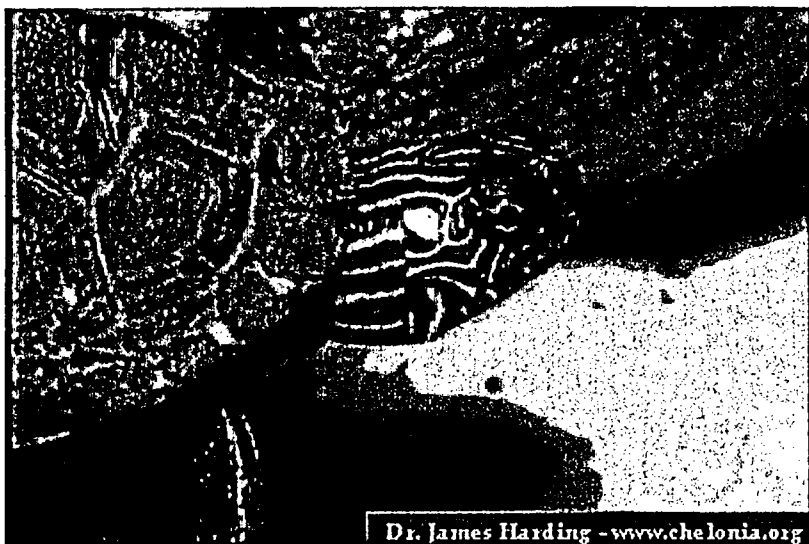
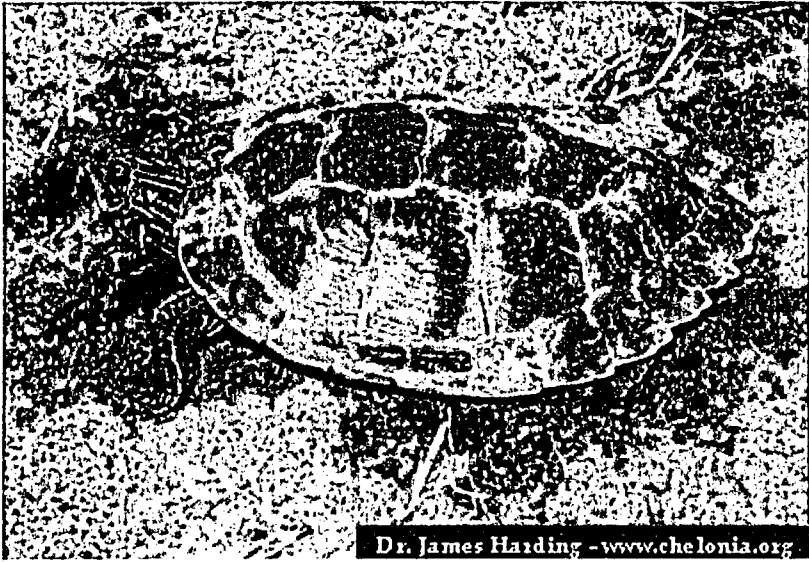


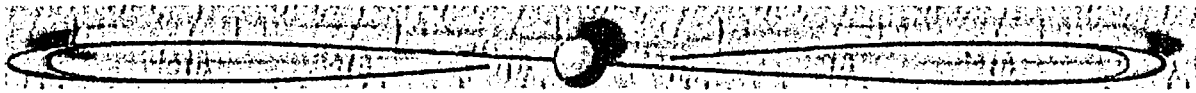
Photo by Bill Love/Alva, FL



Dr. James Harding - [www.chelonia.org](http://www.chelonia.org)

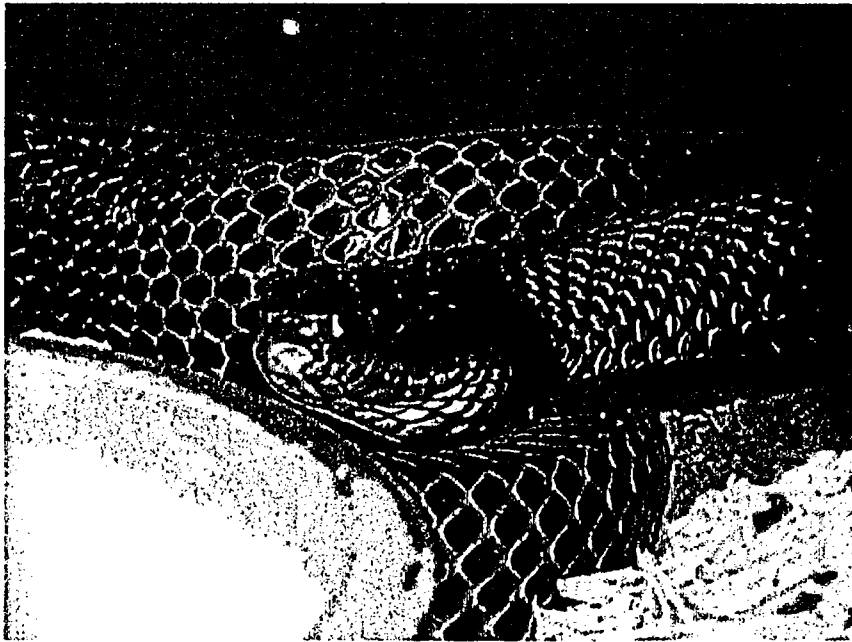


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# Drymarchon corais couperi

(Eastern Indigo snake)



Male

In almost every book on snakes there is a picture of this remarkable snake. Back in the early 70's it was highly requested and prices were hitting the roof. It is still expensive, but possible to buy. The indigo snake is the largest of the north american snakes reaching 250 cm in length. This subspecies inhabit the southeastern corner of the United States mainly in Florida, but it is rare. There are many different subspecies of Drymarchon living as far south as Argentina. The subspecies varies in color but the eastern indigo is considered the prettiest of them all, with its black body that can shine in an indigoblue color especially after shedding and often a reddish throat. It is a bulky snake with an almost triangular body shape. Older males gets keeled scales on their back.

The eastern indigo snake is often found in the burrow systems of

the Gopher turtle, but can be seen outside especially in the early spring basking in the morning sun. Food items consists of almost anything that is not too big including mammals, birds, eggs, amphibians, reptiles even snakes larger than themselves.

Like most other snakes they lay eggs and the juveniles are about 50 cm when they hatch. Juveniles can be hard to feed unless they are offered small snakes as food.

When disturbed all indigos can raise the front of their body and spread the neck vertically (opposite cobras) and hiss loudly.



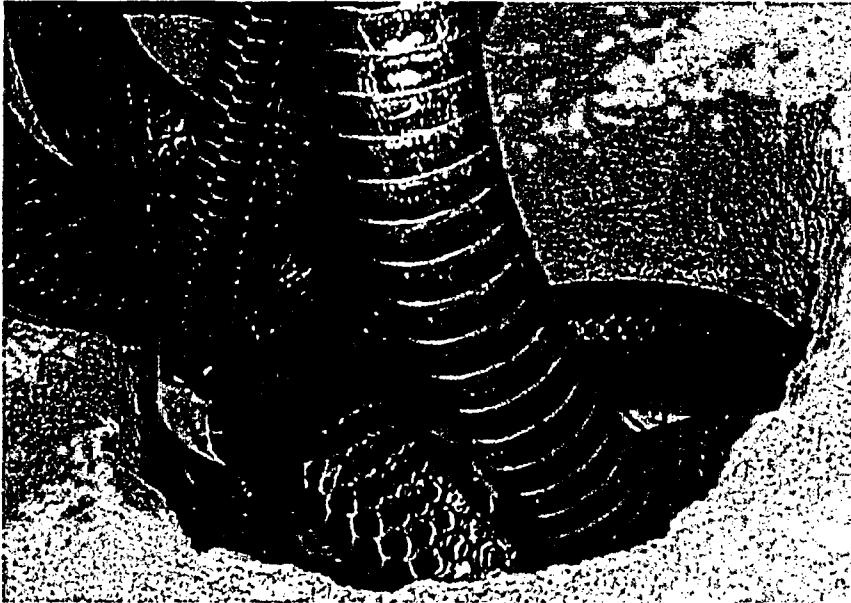
Female

It takes space to keep these animals. Their size and the fact that they can eat a mate makes it a better choice to keep them separate especially during the juvenile state in large terraria. Even adults are best kept alone to avoid cannibalism and only introduced to each other under close observation for mating.

They prefer a cooler climate than most North American snakes and react when temperature rises.

Their food items are mice, smaller rats and day-old chickens, but when we got ours one of them only ate small fish. Their growth is fast...very fast and they mature in 2-3 years. Unlike most colubrids they mate in the beginning of the winter. We got infertile

eggs in the summer 2004 from a very small female.



Copulation





# **Mammals Spread Sheet**

# **Protected Mammal Species List**

# Protected Mammal Species in Georgia

Date of information - 4/1/2004  
9 mammals on this list

Find details for the mammals on this list at [NatureServe](http://NatureServe).

Scientific Name	Common Name	State Status (whats this?)	Federal Status (whats this?)
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	R	
<del><i>Eubalaena glacialis</i></del>	<del>Northern Right Whale</del>	<del>E</del>	<del>LE</del>
<i>Felis concolor coryi</i>	Florida Panther ✓	E	LE ←
<i>Felis concolor couguar</i>	Eastern Cougar ✓	E	LE ←
<del><i>Megaptera novaeangliae</i></del>	<del>Humpback Whale</del>	<del>E</del>	<del>LE</del>
<i>Myotis grisescens</i>	Gray Myotis	E	LE ←
<i>Myotis sodalis</i>	Indiana Myotis	E	LE ←
<i>Neofiber alleni</i>	Round-tailed Muskrat	T	
<i>Trichechus manatus</i>	Manatee ✓	E	LE ←

*Puberty Det*  
✓ ✓

✓ ✓  
✓ ✓

✓ ✓

✓ ✓

✓ ✓

✓ ✓

NOTE: This is a working list and is constantly revised (see element occurrence data disclaimer). For the latest changes, acknowledgment of numerous sources, interpretation of data, or other information connected with this list, please contact:

Greg Krakow - Data Manager  
Georgia Department of Natural Resources  
Wildlife Resources Division  
Georgia Natural Heritage Program  
2117 U.S. Highway 278 S.E.  
Social Circle, Georgia 30025-4714  
Phone: (770)918-6411  
Fax: (706)557-3033  
[Click here to send e-mail](#)

412 — 437  
440  
441  
620  
890  
900  
930  
990

# **Mammal Field Identification Sheets**



Vertebrates

Amphibians  
Reptiles  
Birds  
Mammals

**Muskrat****Roundtail Muskrat, *Neofiber alleni***

**Scientific Name:** The genus *Neofiber* is from the Greek *neos* (new) + the Latin *fiber* (beaver) = (new beaver), and the specific name *alleni* is the Latinized name of Arthur A. Allen a noted mammalogist.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Mammalia  
**Order:** rodentia  
**Family:** Muridae  
**Subfamily:** Arvicolinae

**Species Description**

Resembles a small muskrat, from 381 - 546 mm (15 - 21.5 in) in total length, but tail is round instead of flattened on the sides like muskrats. The coarse guard hairs (outer fur) are dark brown and glossy. The dense underfur is a rich brown at the tip on the back and shifts to gray at the base, pale buff belly.

**Biology**

Breeds throughout the year but peaks in late autumn. After 26 - 29 days gestation, 1 - 4 young are born; females producing from 4 - 6 litters per year. At 14 - 18 days of age young are able to care for themselves and are weaned by 21 days, reaching sexual maturity (able to reproduce) at 90 - 100 days.

**Natural History**

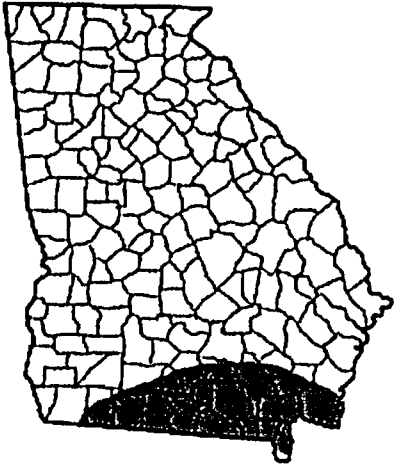
Roundtail muskrats inhabit shallow freshwater marshes that have sandy bottoms and dense aquatic vegetation. This species builds dome-shaped lodges of aquatic grasses and plants, attaching them to emergent vegetation over a bed of sphagnum moss. The lodge is frequently built at the base of a cypress tree or clumps of brush. The interior of the lodge houses a nest chamber lined with fine dry grasses, and generally two entrances which exit underwater. Feeding platforms are also built near the lodge, consisting of a pad of plant material. They are elevated slightly above the waters surface, and contain one or two plunge holes for quick escapes from predators. It is most active shortly after dark and just before dawn. Aquatic grasses make up the bulk of its diet but stems, roots, and seeds are also eaten. Major predators of the Roundtail Muskrat are herons, owls, hawks, snakes, and bobcats. Population densities can range from 25 - 100 individuals per acre in good habitat. This species is not trapped commercially for pelts and is a protected species in Georgia (see Conservation Status).

**Range**

Endemic to the extreme southeastern corner of Georgia and peninsular Florida.



map next  
p. 6



### **Conservation Status**

The roundtail muskrat is listed as a Threatened species in the state of Georgia and is protected from trapping and hunting.

### **Similar Species**

Roundtail muskrats are distinguished from the muskrat by two characters: they are noticeably smaller and have a round tail, not a laterally compressed tail.

*Mammals: Classification, Species list, References*

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*Georgia Wildlife Web*

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Information provided by: The Georgia Museum of Natural History & Georgia Department of Natural Resources  
9 April 1999





Home ➤ Kingdom Animalia ➤ Phylum Chordata ➤ Subphylum Vertebrata ➤  
 Class Mammalia ➤ Order Sirenia ➤ Family Trichechidae ➤ Species **Trichechus manatus**

## ***Trichechus manatus*** (West Indian manatee)

Information

Pictures

Specimens

Classification



2005/02/05 02:17:53.259 US/Eastern

By Helen Edwards

### **Geographic Range**

Kingdom: Animalia  
 Phylum: Chordata  
 Subphylum: Vertebrata  
 Class: Mammalia  
 Order: Sirenia  
 Family: Trichechidae  
 Genus: Trichechus  
 Species: **Trichechus manatus**

The West Indian manatee or sea cow (*Trichechus manatus*) is commonly found in shallow coastal areas, but can also be found in shallow rivers, estuaries, and canals. In the United States this species is concentrated around Florida in the winter months and migrates as far north as Virginia and as far west as Louisiana in summer months. The range of this species extends through the Caribbean, along the eastern coast of Central America and the northern coast of South America as far as northeastern Brazil.

(FPL 1989, Rathbun 1990)

**Biogeographic Regions:** nearctic Q (native Q); neotropical Q (native Q); antarctica Q (native Q); atlantic ocean Q (native Q).

### **Habitat**

West Indian manatees are capable of withstanding large changes in salinity and move freely

between freshwater and marine habitats. They can be found in shallow rivers, canals, saltwater bays, estuaries and coastal areas. Because of their extremely low metabolic rate and absence of a thick layer of insulating body fat, they are restricted to tropical and subtropical waters.

This species may inhabit clear or muddy waters. Because of their large size, manatees prefer water reaching at least 1 to 2 meters in depth. These animals are most commonly found travelling in waters 3 to 5 meters deep and waters over 6 meters are generally avoided.

If the water is deep enough and the currents are not too strong (under 5 kilometers per hour), manatees are capable of travelling large distances upstream on inland rivers. In St. John's river, manatees live up to 200 km away from the ocean. Manatees found in the Gulf of Mexico are rarely more than a kilometer from the mouth of a river.

(FPL 1989, Rathbun 1990)

**Aquatic Biomes:** rivers and streams; coastal Q.

## Physical Description

<p><b>Mass</b> 1500 kg (high); avg. 200-600 kg (3300 lbs; avg. lbs)</p> <p><b>Length</b> 4.50 m (high); avg. 3 m (0.18 in; avg. 0.12 in)</p>
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The average body length of an adult West Indians manatee is approximately 3 meters but some individuals can reach a length of 4.5 meters including the tail. The average weight of these manatees ranges between 200 and 600 kg, however the largest individuals can weigh up to 1,500 kg. These upper figures are unusual in manatees and females generally reach greater lengths and weights than the males of the species. Newborns measure between 1.2 and 1.4 meters and weigh approximately 30 kg. The adults are grey or brown whereas newborns are darker, a coloration they lose at about one month.

Manatees are somewhat seal-shaped with forelimbs (flippers) adapted for a completely aquatic life and no hind limbs. Lungs extend the length of the animal's body, which is important in controlling position in the water column. Hair is distributed sparsely over the body and the surface layer of skin is continually sloughing off. This is believed to reduce the build-up of algae on their skin.

(FPL 1989, Rathbun 1990)

**Some key physical features:** endothermic Q; bilateral symmetry Q.

## Reproduction

Although individuals of this species are largely solitary, mating herds form when a female is in estrus. These groups are made up of bulls pursuing the sexually receptive female. Courting

bulls establish a dominance hierarchy for mating rights while the female attempts to avoid these males during most of her estrus cycle.

Females may attract up to 20 males, which pursue her for one week to one month.

Males reach full reproductive maturity between the ages of 9 and 10, but they are capable of mating as early as 2. Females are capable of reproduction at 4 to 5 years of age. Young females lack the skills necessary to raise calves and are less successful breeders. Most females breed successfully between the ages of 7 and 9. Gestation periods for West Indian manatees range from 12 to 14 months and calves are dependent on their mothers for about 2 years. One calf is produced at a time, however twins have been occasionally recorded. The inter-birth interval is 3 to 5 years, but this period may be shortened in the event of the early death of a calf. Calves nurse underwater from teats near the forelimbs. Calves are born with both molars and premolars and can begin consuming plants soon after birth, usually within the first 3 weeks.

The mother-young pair is the only stable, long-term association within the species. It has been suggested that the mother and her young can recognize each other after weaning and the association continues, to a certain extent, through the subadult years of the young. This long period of parental care might aid in the transfer of information about migration routes and other learned information.

(FPL 1989, Nowak 1999, Rathbun 1990)

**Key reproductive features:** gonochoric/gonochoristic/dioecious (sexes separate); sexual ♀.

## Behavior

The West Indian sea cow has evolved in areas with no natural predators and as a result the members of this species have had no need to develop complex behaviors for predator avoidance. In addition, the areas inhabited by this species have fairly constant temperatures year-round and an abundant food source. Without the need for group foraging techniques or group defense, this species is largely solitary, occasionally forming loose aggregations.

Manatees are not territorial and do not observe any social hierarchy. Most groups are temporary associations, without regard to sex or age. One exception is herds of juvenile males, which are temporary groups that arise from the exclusion of such individuals from reproductive activities. In addition temporary mating herds develop when a female is in estrus.

Manatees use their tail to propel themselves forward and are surprisingly agile in the water. They are capable of complex maneuvering including somersaults, rolls, and swimming upside-down. They are active day and night, resting for several hours at a time near the surface of the water or at the bottom. While resting on the bottom, they rise to the surface to breathe every few minutes.

Manatees use various forms of communication in the water. Individuals rub themselves against hard surfaces, possibly secreting a scent to convey information about the reproductive state of the resident females. Manatees also have an acute ability to hear and squeals are often used to keep contact between a mother and calf. Vision seems to be the preferred method of navigation.

(FPL 1989, Nowak 1999, Rathbun 1990)

**Key behaviors:** motile Q.

## Food Habits

The snout of West Indian manatees is bent further down than other species in this family. This may be related to the food habits of this species. West Indian manatees feed mainly on sea grasses growing on the sea floor and the orientation of the mouth aids in grasping these plants. One of the unique characteristics of manatees is their flexible split upper lip which is used to pass food to the mouth. Manatees are opportunistic feeders, eating the leaves of most plants that can be manipulated by the upper lip. Manatees may also use their flippers to dig up the roots of these plants. This variable diet is most likely necessary to meet their nutritional demands. Some manatees may also eat invertebrates and will eat fish both in captivity and in the wild.

Because of the low nutritional value of the plants consumed, manatees must graze for 6 to 8 hours a day. Each day they consume 5-10 percent of their body weight, which can be over 100 kg in a large individual. This low-nutrient diet also has also contributed to the the development of low metabolic rates. Manatees can survive on 25% percent less energy than a typical mammal of similar size.

Manatees feed on abrasive plants and, as a result, their molars are continually replaced throughout life as they wear down. Hind-gut fermentation is another adaptation to the herbivorous diet of the manatee, aiding in breaking down the cellulose of the plants eaten.

(FPL 1989, Nowak 1999, Rathbun 1990)

## Economic Importance for Humans: Negative

N/A

## Economic Importance for Humans: Positive

For centuries West Indian manatees have been hunted for their meat, hide, and bones. This hunting continues in many South and Central American countries. The domestication of manatees has been suggested. Their status as an endangered species makes this an unlikely option. It has also been suggested that manatees be used as a method of aquatic weed control within their range. However, it has been shown that the amount of plant material consumed by these animals is not large enough to make this a viable option.

As the state's official marine mammal, the Florida manatee (a subspecies of *Trichechus manatus*) is of particular interest to tourists visiting the area.

(FPL 1989)

## Conservation Status

While manatees have no natural predators, their numbers are threatened by human activities. Because of their low reproductive rate, it is difficult for the species to rebound from a decline in numbers. Although the population in Florida has historically been hunted by Native Americans and, later, by the European inhabitants, it was never the victim of commercial hunting. In other parts of their range West Indian manatees have been exploited commercially and, in some cases, this continues. Although protection laws exist in countries

such as Costa Rica and Venezuela, illegal poaching still occurs.

One of the main causes of manatee mortality is collisions with motorboats. Manatees are also killed in canal locks and found entangled in fishing nets. They are also threatened by the loss of (or damage to) sea beds due to agricultural and industrial runoff. These same pollutants have been shown to accumulate in the tissues of manatees and some could be toxic to the animals.

Manatee conservation efforts were initiated as early as the eighteenth century, when the English established Florida as a marine sanctuary for the species. In 1893 a state law was established to protect manatees. At the start of the twentieth century fines were established for the killing of a manatee. Manatees are now protected by the U.S. Marine Mammal Act (1972), the U.S. Endangered Species Act (1973), and the Florida Manatee Sanctuary Act (1978).

(Marsh 1994, Oshea 1998, Reynolds 1995, FPL 1989)

## Contributors

Helen Edwards (author), University of Michigan: February, 2000.

Phil Myers (editor), Museum of Zoology, University of Michigan: February, 2000.

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**To cite this page:** Edwards, H. 2000. "Trichechus manatus" (On-line), Animal Diversity Web. Accessed February 09, 2005 at [http://animaldiversity.ummz.umich.edu/site/accounts/information/Trichechus\\_manatus.html](http://animaldiversity.ummz.umich.edu/site/accounts/information/Trichechus_manatus.html).

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**U.S. FISH AND WILDLIFE SERVICE  
DIVISION OF ENDANGERED SPECIES**

**SPECIES ACCOUNTS**

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Source: *Endangered and Threatened Species of the Southeastern United States (The Red Book)* FWS Region 4 -- As of 8/93

## FLORIDA PANTHER

### *Felis concolor coryi* (Bangs)

**FAMILY:** Felidae

**STATUS:** Endangered throughout its range, *Federal Register*, March 11, 1967.

**DESCRIPTION:** The Florida panther is a large, long-tailed cat with a great deal of color variation: pale brown or rusty upper parts, dull white or buffy under parts; tail tip, back of ears, and sides of nose are dark brown or blackish. Mature male panthers examined in the wild in Florida since 1978 have weighed from 102 to 154 pounds (Roelke 1990, Roelke and Glass 1992) and measured nearly 7 feet from nose to tip of tail. Females were considerably smaller, with a weight range of 50 to 108 pounds (Roelke 1990) and measuring about 6 feet (U.S. Fish and Wildlife Service 1987).

**FEEDING HABITS:** Preliminary analyses of panther diets in the southwest Florida study area indicate that panthers subsist on a variety of mammalian prey dominated by white-tailed deer, wild hog, and in some areas raccoon. Analysis of 83 scats and 22 kills since 1986 indicate a difference in food habits between the north and south portions of the study area. Deer and hogs accounted for 42 percent and 22 percent, respectively, in the south, and 23 percent and 63 percent, respectively, in the north. Occurrence of small prey appeared similar between areas (Maehr 1988b).

**REPRODUCTION AND DEVELOPMENT:** Only preliminary data is available on Florida panther reproduction. Existing data indicates that breeding may occur throughout the year with a peak in the winter/spring period, a gestation period of around 90 to 95 days, litter sizes of 1 to 4 kittens, and a breeding cycle of 2 years for females successfully raising young to dispersal, which occurs around 18 to 24 months. A female has successfully reproduced at 22 to 23 months, and a male has possessed fertile sperm and exhibited reproduction at 26 to 30 months, (Belden 1988, Maehr 1988a, Roelke 1986, O.L. Bass and D.S. Maehr personal communications).

Male panthers examined to date exhibit an exceedingly high proportion of abnormal sperm forms (more than 90 percent), with the major defect involving the acrosome or head of the spermatozoa. In addition, 12 of 27 males (44 percent) examined between 1981 and 1990, exhibited unilateral cryptorchidism - one testicle does not descend properly into the scrotum (Roelke 1990). As of June 1993, sixty-five percent (11 of 17) of living males were cryptorchid. Concern over this condition heightened in 1992, when 2 male kittens were found to be bilaterally cryptorchid (neither testicle descends), rendering them functionally sterile (Roelke and Glass 1992).

As part of the genetic preservation effort, a sperm bank was established in 1988 to cryopreserve (freeze-store) semen collected from free-ranging males.

Data on development indicate that at 12 to 14 days of age, kitten weights ranged from 1 pound, and 4 ounces, to 1 pound and 12 ounces, and at 21 days weights were around 4 pounds. Males 6 to 10 months of age weighed 33 to 66 pounds; 14 to 19 months, 85 to 86 pounds; and 24 to 36 months, 92 to 93 pounds. Females 4 to 6 months weighed 25 to 39 pounds; 6 to 10 months, 33 to 49 pounds; 14 to 20 months, 56 to 70; and 24 to 48 months, 50 to 80 pounds (Roelke 1990, Roelke and Glass 1992).

**RANGE AND POPULATION LEVEL:** The historic range included eastern Texas or western Louisiana and the lower Mississippi River valley east through the Southeastern States in general (Arkansas, Louisiana, Mississippi, Alabama, Florida, Georgia, and parts of Tennessee and South Carolina) (Young and Goldman 1946). Even though numerous sighting reports continue to surface annually throughout its historic range, it is unlikely that viable populations of the Florida panther presently occur outside Florida. The only known self-sustaining population occurs in south Florida, generally within the Big Cypress Swamp physiographic region and centered in Collier and Hendry Counties. Within the last decade, radio-instrumented panthers have also utilized habitats in Broward, Dade, Glades, Highlands, Lee, and Monroe Counties. Scattered verified sign has been documented (late 1980's) along the St. Johns River drainage (Belden and Frankenberger 1988) from northern Okeechobee County north to southern Putnam County (Belden personal communication 1989). Currently, the wild population is estimated to be comprised of 30 to 50 adult animals.

**HABITAT:** In general, panther population centers appear to indicate a preference toward large remote tracts with adequate prey, cover, and reduced levels of disturbance. A telemetry study on the Florida panther was initiated in south Florida by the Florida Game and Fresh Water Fish Commission (Commission) in 1981. This initial study has since been expanded by the Commission, and the National Park Service initiated additional studies in 1986. One of the goals of these telemetry projects is to learn more about panther habitat. As of June 1993, data had been gathered from 54 radio-instrumented panthers.

Data from panthers monitored by the Commission in southwest Florida since 1985 indicate that, overall, habitat use is highly diverse and varies from north to south. Diversity of habitats used by panthers is greater in northern parts of the study area and dominated by uplands (hardwood hammocks, low pinelands, and palm forests). Lower diversity and predominately wetland habitat use are characteristic of southern areas (mixed swamp and cypress swamp). Appropriate cover is an important component of habitats used, especially during hunting, denning, and day-bedding. Saw palmetto was the dominant cover in 72 percent of observed day bedding sites.

Annual home-range sizes of 26 instrumented panthers monitored in southwest Florida varied from 20 to 457 mi<sup>2</sup>. Home ranges averaged 200 mi<sup>2</sup> for resident adult males, 75 mi<sup>2</sup> for adult females, 241 mi<sup>2</sup> for transient males, and 69 mi<sup>2</sup> for subadult females (Maehr *et al.* 1991).

**MANAGEMENT AND PROTECTION:** The initial recovery plan was prepared by the Florida Panther Recovery Team and was approved by the Fish and Wildlife Service on December 17, 1981. This plan was revised by the Florida Panther Interagency Committee's Technical Subcommittee and approved by the Fish and Wildlife Service on June 22, 1987. The recovery objective, as presented in the revised plan, is to achieve three viable, self-sustaining populations within the historic range of the panther. This is to be accomplished through three principal sub-objectives:

1. Identify, protect, and enhance existing panthers rangewide and protect and manage habitats;
2. Establish positive public opinion support for the management of the panther; and,

### 3. Reintroduce panthers into areas of suitable habitat.

Implementation of many of the recovery plan's tasks is presently underway. Some tasks have already been completed. Ongoing recovery actions primarily focus on protecting and enhancing the existing wild population, developing and implementing genetic management strategies (which includes the management of a captive breeding population), and locating candidate reintroduction sites and developing reintroduction technologies that will lead to successful population reestablishment programs in other historic range areas. A Habitat Preservation Plan for panther habitat in south Florida was completed in July 1993. A rangewide candidate reintroduction site identification and evaluation project is underway and should be completed during 1993. Genetic restoration strategies presently under consideration include a program to reinstitute gene flow into the panther from an adjoining subspecies, as occurred naturally prior to isolation. The primary thrust of the recovery effort is being generated through the Florida Panther Interagency Committee (Committee). This Committee was organized in 1986 to ensure that the principal agencies assigned lead roles in recovery implementation (U.S. Fish and Wildlife Service, National Park Service, Florida Game and Fresh Water Fish Commission, and Florida Department of Natural Resources) initiate and implement all recovery activities in a cooperative and coordinated manner.

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- \*\*U.S. Fish and Wildlife Service. 1987. Florida Panther (*Felis concolor coryi*) Recovery Plan. Prepared by the Florida Panther Interagency Committee for the U.S. Fish and Wildlife Service, Atlanta, Georgia. 75 pp.
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pp.

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U.S. Fish and Wildlife Service  
117 Newins-Ziegler Hall  
University of Florida  
Gainesville, Florida 32611-0307

Telephone: 904/392-1861





Vertebrates

Amphibians  
 Reptiles  
 Birds  
 Mammals

**Cats****Mountain Lion, *Felis concolor***

**Scientific name:** The genus *Felis* Latin for "cat." The species name is the Latin word *concolor* (having same color), and refers to the fact that the body of the adult Mountain Lion is one color, without spots or stripes.

**Classification**

**Phylum:** Chordata  
**Subphylum:** Vertebrata  
**Class:** Mammalia  
**Order:** carnivora  
**Family:** Felidae

**Species Description**

**Size:** This is the largest of the wild cats in North America. Total length ranges from 2.1 - 2.7 m (7 - 9 ft), and weight ranges from 36.3 - 90.7 kg (80 - 200 lbs). The tail is usually 61 - 91.4 cm (2-3 ft) long.

**Color:** Tawny. Sides of the muzzle, backs of ears, and tip of tail are black. Belly fur is buff or nearly white in color. Young are spotted and have a ringed tail until six months of age.

**Other things to look for:** This is a large, unspotted, long-tailed cat.

**Life Cycle**

Mountain Lions begin breeding at 3 years of age and may breed at any season, with peaks in April and May. A litter of 1 - 6 kittens is born 82 - 98 days after mating. The female gives birth in a den located in a hollow log or crevice in a rock ledge. Kittens begin eating meat at 6 weeks of age but continue to suckle till 12 weeks of age. The female brings food to the den for several weeks, then brings the kittens to eat at her kills. After 2 months the den is abandoned, and kittens follow the female, but stay in temporary shelters while she hunts. At 6 months of age, the kittens follow the female while she hunts and remain with her for more than a year, dispersing by the time they are 2 years of age.

**Natural History**

The Mountain Lion requires a large territory for its individual home range (the area necessary to support the individual). Home range size may be from 13 - 62 square kilometers (5 - 24 square miles), depending on the abundance of food, habitat, and the individual's reproductive condition. Females with young require larger territories than

females without young. Males and females may share overlapping home ranges, but individuals of the same sex do not. To avoid close contact with others, a Mountain Lion will leave scratch and scent marks to tell others that this territory is occupied. The Mountain Lion generally hunts for food at night. Deer make up 65 - 80% of its diet. It will also eat Wild Pigs, Raccoons, Armadillos, rodents, and rabbits. After killing a large animal such as a deer or pig, the Mountain Lion may cover it with leaves and other debris after the initial feeding, then come back later to finish eating its kill. The Mountain Lion may live for 15 - 18 years in the wild. Kittens are sometimes killed by other Mountain Lions. Adult deaths are generally caused by injuries from large prey, fighting with other Mountain Lions, and disease.

### Range

The Mountain Lion was once found throughout the United States in varied habitats from swamps to prairies, and mountains of the eastern and western states. Now it is restricted to wilderness areas of the American West and a remnant population in southern Florida. In Georgia it is possible that the Mountain Lion may occur in wilderness areas of the Blue Ridge mountains and within the Okefenokee Swamp.

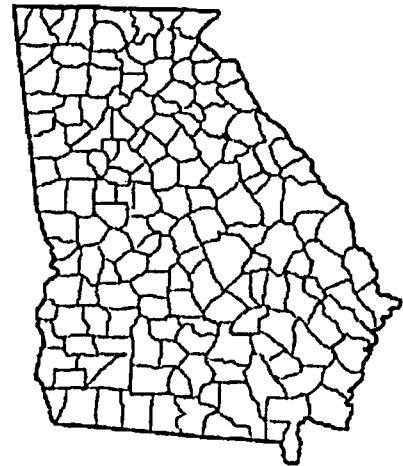
### Conservation Status

The Mountain Lion is a protected species in Georgia and is listed as an Endangered species. Most other states also protect this species from hunting and trapping.

### Similar Species

No other wild cat species grows as large as the Mountain Lion and has such a long tail.

*Mammals: Classification, Species list, References.*



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***Georgia Wildlife Web***

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# **Exotic Species**

## ***Triadica sebifera* (L.) Small (Chinese Tallow Tree)**

Information Last Reviewed August 2002

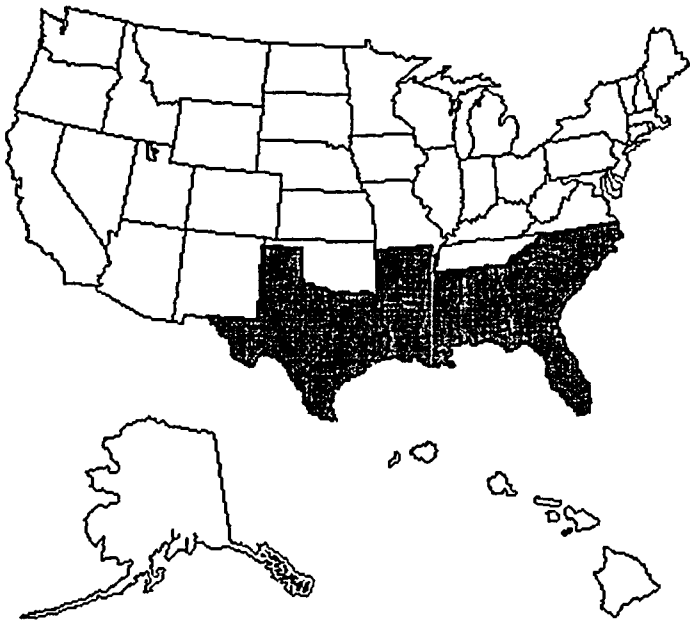


**Family:** Euphorbiaceae

### **Home Range/U.S. Introduction:**

Chinese tallow tree is native to China and was introduced into the United States as an ornamental. It is a prolific seed producer and has escaped from cultivation and become naturalized.

### **U.S. Range Map:**



### **Species Description:**

Chinese tallow tree is a small to medium-sized monoecious tree. The leaves are alternate, simple, and net-veined. The petiole is long with two glands on the upper side near the blade. The blade is rhombic-ovate, entire, with an acuminate apex and a round to truncate base. Leaves of Chinese tallow tree turn red in the fall, making it a popular ornamental. The flowers are imperfect, with green sepals and no petals, and are produced in a terminal spike. The staminate flowers are terminal in the spike and the pistillate ones are near the base. The fruit is a three-locular capsule with three seeds. The seeds are globose-flattened, 6-9 mm in diameter, turn white with age, and often persist on the tree into winter.

### **Growth Characteristics:**

Plants grow in abandoned fields, pastures, waste areas, and forests. The species grows in a wide range of environmental conditions: wet to dry and shade to full sun. It reproduces by seeds only, but one plant can produce hundreds of seeds. The seeds seem to have a tremendous ability to germinate under adverse conditions. The

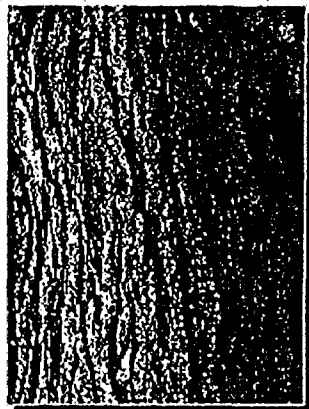
plant is a fast-growing tree, hence its popularity as a shade tree ornamental.

**Problems:**

The fast-growing habit, massive seed production, and great seed germinability allow this species to invade areas occupied by natives. It can outcompete most natives and soon displaces them. The plants seem not to be eaten by livestock and thus dominate in pastures.

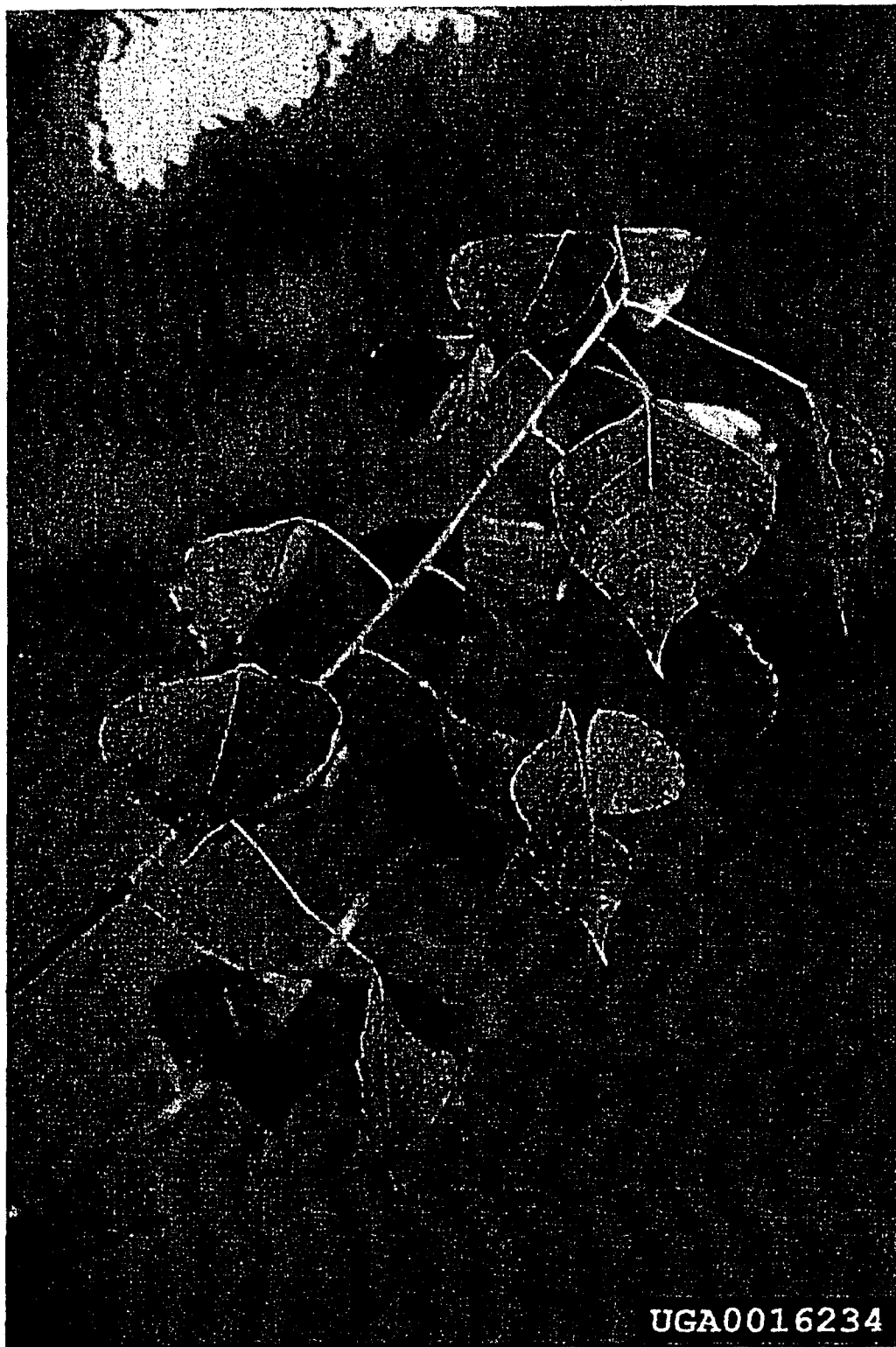


***Triadica sebifera* (L.) Small (Chinese Tallow Tree) Picture**





UGA0016032



# IMPERATA CYLINDRICA (L.) RAEUSCHEL

Poaceae (Gramineae)/Grass Family

**Common Name:** Cogon grass  
**Synonymy:** *Imperata cylindrica* (L.) Beauv.; *I. brasiliensis* Trinius misapplied  
**Origin:** Southeast Asia

**Botanical Description:** Perennial grass, growing in loose or compact tufts, from stout, extensively creeping, scaly rhizomes with sharp-pointed tips. Leaf sheaths relatively short, glabrous or pubescent; ligule a membrane, 0.5-1 mm long. Leaf blades erect, narrow and pubescent at base, flat and glabrous above, to 1.2 m (4 ft) tall and to 2 cm (< 1 in) wide, with whitish midvein noticeably off-center; blade margins scabrous, blade tips sharp pointed. Inflorescence a narrow, dense terminal panicle, white silky and plume-like, to 21 cm (8 in) long and 3.5 cm (1.5 in) wide. Spikelets crowded, paired on unequal stalks, with each spikelet surrounded by long white hairs.

**Ecological Significance:** Considered one of the top 10 worst weeds in the world, reported by 73 countries as a pest in a total of 35 crops (Holm *et al.* 1977). Introduced to the United States in 1911 near Mobile, Alabama as packing material in a shipment of plants from Japan (Dickens 1974, Tabor 1949, Tabor 1952); and into Mississippi as a forage crop from the Philippines before 1920 (Dickens and Buchanan 1971, Patterson *et al.* 1979, Tabor 1949 and 1952, Tanner and Werner 1986). Replanted to Florida from Mississippi for forage and soil stabilization in Gainesville, Brooksville, and Withlacoochee (Hall 1983, Tabor 1949)—these areas now with high densities of naturalized populations (Dickens and Buchanan 1971, Willard 1988). By 1949, more than 405 ha (1,000 acres) of the grass established in central and northwest Florida (Dickens 1974). Now frequent along transportation and utility corridors throughout Florida. Has invaded dry to moist natural areas in over 20 counties (EPPC 1996), including habitats of federally listed endangered and threatened native plant species (K. C. Burks, Florida Department of Environmental Protection, 1997 personal communication).

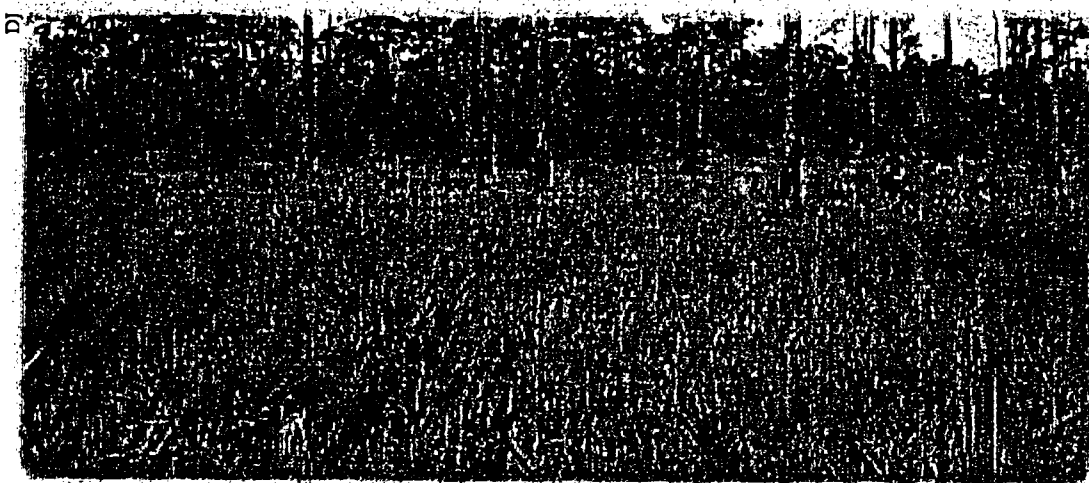


Leaf blade, off-center midvein

## COGON GRASS

**Distribution:** Commonly found in humid tropics but has spread to warm temperate zones worldwide (Hubbard *et al.* 1944). Currently reported for all of Florida, plus parts of Alabama, Georgia, Louisiana, and Mississippi, along with an adventive (but perhaps not persistent) population in South Carolina (Allen and Thomas 1991, Elmore 1986, Bryson and Carter 1993).

**Life History:** Fast-growing; thrives in areas of minimal tillage, such as orchards, lawns, and roadsides (Patterson *et al.* 1979). Produces new rhizomes readily, facilitating the plant's spread at newly colonized sites; can propagate by rhizome fragments but does not survive well under regular deep tilling (Wilcut *et al.* 1988). Roots and rhizomes remarkably resistant to fire (Bryson and Carter 1993). Disperses over long distances into a variety of habitats by windborne seeds (Bryson and Carter 1993). Flowers in spring or fall, or year-round in central and south Florida (Willard 1988).



In Everglades National Park (foreground)



Dense panicle

South Carolina Rare, Threatened &  
Endangered Species Inventory  
Aiken County, South Carolina

## South Carolina Rare, Threatened & Endangered Species Inventory

### Species Found In Aiken County

Data Last Updated June 9th, 2003.

NOTE: Due to personnel limitations, this site has not been updated recently. Additional information is available. Please check the information on this web site, and then contact [Julie.Holling@dnr.sc.gov](mailto:Julie.Holling@dnr.sc.gov) to verify that no additional information has been reported before continuing with your project.

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	LEGAL STATUS
ACIPENSER BREVIROSTRUM	SHORTNOSE STURGEON	G3	S3	FE/SE
AESCULUS PARVIFLORA	SMALL-FLOWERED BUCKEYE	G2G3	S1	RC
AGALINIS LINIFOLIA	FLAX LEAF FALSE-FOXGLOVE	G4?	S?	SC
ALLIUM CUTHBERTII	STRIPED GARLIC	G3	S?	SC
AMBYSTOMA TIGRINUM TIGRINUM	EASTERN TIGER SALAMANDER	G5T5	S2S3	SC
ARISTIDA CONDENSATA	PIEDMONT THREE-AWNED GRASS	G4?	S?	SC
ASTRAGALUS VILLOSUS	A MILK-VETCH	G4	S?	SC
ATRYTONE AROGOS	AROGOS SKIPPER	G3G4	S?	SC
CALAMOVILFA BREVIPILIS	PINE-BARRENS REED-GRASS	G4	S?	NC
CAREX CHEROKEENSIS	CHEROKEE SEDGE	G4G5	SR	SC
CAREX COLLINSII	COLLINS' SEDGE	G4	S1	SC
CAREX ELLIOTTII	ELLIOTT'S SEDGE	G4?	S?	SC
CAREX FOLLICULATA	LONG SEDGE	G4G5	S1	SC
CAREX SOCIALIS	SOCIAL SEDGE	G4	S?	SC
CAROLINA BAY		G?	S?	SC
CLADRASTIS KENTUKEA	YELLOWWOOD	G4	S1	RC
CLEMMYS GUTTATA	SPOTTED TURTLE	G5	S5	ST
COLONIAL WATERBIRD		G?	S?	SC
CONDYLURA CRISTATA	STAR-NOSED MOLE	G5	S3?	SC
COREOPSIS ROSEA	ROSE COREOPSIS	G3	S2	RC
CORYNORHINUS RAFINESQUII	RAFINESQUE'S BIG-EARED BAT	G3G4	S2?	SE

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CROTON ELLIOTTII	ELLIOTT'S CROTON	G2G3	S?	SC	
CYSTOPTERIS PROTRUSA	LOWLAND BRITTLE FERN	G5	S?	SC	
DELPHINIUM CAROLINIANUM	CAROLINA LARKSPUR	G5	S?	SC	
DIRCA PALUSTRIS	EASTERN LEATHERWOOD	G4	S?	SC	
ECHINACEA LAEVIGATA	SMOOTH CONEFLOWER	G2	S1	FE/SE	*
ECHINODORUS PARVULUS	DWARF BURHEAD	G3Q	S2	SC	
ELEOCHARIS ROBBINSII	ROBBINS SPIKERUSH	G4G5	S?	SC	
ENEMION BITERNATUM	FALSE RUE-ANEMONE	G5	S1	RC	
EUONYMUS ATROPURPUREUS	WAHOO	G5	S1	SC	
FORESTIERA LIGUSTRINA	UPLAND SWAMP PRIVET	G4G5	S1	SC	
GAURA BIENNIS	BIENNIAL GAURA	G5	S?	SC	
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	G3	S1	SE	*
HALESIA PARVIFLORA	SMALL-FLOWERED SILVERBELL-TREE	G?	S?	SC	
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	G4	S2	FT/SE	*
HETERODON SIMUS	SOUTHERN HOGNOSE SNAKE	G2	S?	SC	
HYLA AVIVOCA	BIRD-VOICED TREEFROG	G5	S5	SC	
HYMENOCALLIS CORONARIA	SHOALS SPIDER-LILY	G2Q	S2	NC	
ILEX AMELANCHIER	SARVIS HOLLY	G4	S3	SC	
IPOMOPSIS RUBRA	RED STANDING-CYPRESS	G4G5	S?	SC	
JUNIPERUS COMMUNIS	GROUND JUNIPER	G5	S?	SC	
KALMIA CUNEATA	WHITE-WICKY	G3	S1	NC	
LASIURUS CINEREUS	HOARY BAT	G5	S?	SC	
LINDERA SUBCORIACEA	BOG SPICEBUSH	G2	S?	RC	
LUDWIGIA SPATHULATA	SPATULATE SEEDBOX	G3G4	S?	SC	
MACBRIDEA CAROLINIANA	CAROLINA BIRD-IN-A-NEST	G2G3	S?	SC	
MAGNOLIA CORDATA	PIEDMONT CUCUMBER TREE	G?Q	S?	SC	
MAGNOLIA PYRAMIDATA	PYRAMID MAGNOLIA	G4	S1	RC	
MICRURUS FULVIUS	EASTERN CORAL	G5	S2	SC	



	SNAKE			
MYRIOPHYLLUM LAXUM	PIEDMONT WATER-MILFOIL	G3	S2	RC
NEOTOMA FLORIDANA	EASTERN WOODRAT	G5	S3S4	SC
NEOTOMA FLORIDANA FLORIDANA	EASTERN WOODRAT	G5T5	S3S4	SC
NERODIA FLORIDANA	FLORIDA GREEN WATER SNAKE	G5	S2	SC
NESTRONIA UMBELLULA	NESTRONIA	G4	S2	SC
NOLINA GEORGIANA	GEORGIA BEARGRASS	G3G5	S?	SC
PARONYCHIA AMERICANA	AMERICAN NAILWORT	G3?	S?	SC
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	G3	S2	FE/SE *
PITUOPHIS MELANOLEUCUS	PINE OR GOPHER SNAKE	G4	S3S4	SC
PITYOPSIS PINIFOLIA	PINE-LEAVED GOLDEN ASTER	G4	S?	SC
PLATANThERA LACERA	GREEN-FRIDGE ORCHIS	G5	S1	SC
PTILIMNIUM NODOSUM	HARPERELLA	G2	S1	FE/SE *
RANA CAPITO	GOPHER FROG	G3	S1	SE *
RHODODENDRON FLAMMEUM	PIEDMONT AZALEA	G3	S2	SC
RHYNCHOSPORA INUNDATA	DROWNED HORNEDRUSH	G3G4	S?	SC
RORIPPA SESSILIFLORA	STALKLESS YELLOWCRESS	G5	S?	SC
RUELLIA CAROLINIENSIS SSP CILIOSA	A PETUNIA	G5T3T4	S?	SC
SAGITTARIA ISOETIFORMIS	SLENDER ARROW-HEAD	G4?	S2	SC
SARRACENIA RUBRA	SWEET PITCHER-PLANT	G3	S1	SC
SCIRPUS ETUBERCULATUS	CANBY BULRUSH	G3G4	S?	SC
SCIURUS NIGER	EASTERN FOX SQUIRREL	G5	S4	SC
SEMINATRIX PYGAEA	BLACK SWAMP SNAKE	G5	S?	SC
SOLIDAGO AURICULATA	EARED GOLDENROD	G4	S?	SC
SPILOGALE PUTORIUS	EASTERN SPOTTED SKUNK	G5	S4	SC
SPOROBOLUS PINETORUM	CAROLINA DROPSEED	G3	SR	SC
STYLISMA PICKERINGII VAR PICKERINGII	PICKERING'S MORNING-GLORY	G4T2T3	S1	SC

SYNGONANTHUS FLAVIDULUS	YELLOW PIPEWORT	G5	S1	RC
TREPOCARPUS AETHUSAE	AETHUSA-LIKE TREPOCARPUS	G4G5	S?	SC
TRILLIUM DISCOLOR	FADED TRILLIUM	G3	S?	SC
TRILLIUM LANCIFOLIUM	NARROW-LEAVED TRILLIUM	G3	S1	NC
TRILLIUM PUSILLUM VAR PUSILLUM	LEAST TRILLIUM	G3T2	S1	NC
TRILLIUM RELIQUUM	RELICT TRILLIUM	G2	S1	FE/SE
URSUS AMERICANUS	BLACK BEAR	G5	S3?	SC

\*

For detailed location information about rare & endangered species, please contact Julie Holling .

[ [County Selection Map](#) | [Heritage Trust Home Page](#) | [SCDNR Home Page](#) ]

\* species in study area

[Return to species data...](#)

## KEY

**SRANK** - the Nature Conservancy rating of degree of endangerment in South Carolina:

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- S1** - Critically imperiled state-wide because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation
- S2** - Imperiled state-wide because of rarity or factor(s) making it vulnerable
- S3** - Rare or uncommon in state
- S4** - Apparently secure in state
- S5** - Demonstrably secure in state
- SA** - Accidental in state (usually birds or butterflies that are far outside normal range)
- SE** - Exotic established in state
- SH** - Of historical occurrence in state, with possibility of rediscovery
- SN** - Regularly occurring in state, but in a migratory, non-breeding form
- SR** - Reported in state, but without good documentation
- SX** - Extirpated from state
- S?** - Status unknown
-

## KEY

### STATUS - legal status:

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- FE -** Federal Endangered
  - FT -** Federal Threatened
  - PE -** Proposed for Federal listing as Endangered
  - PT -** Proposed for Federal listing as Threatened
  - C -** Candidate for Federal listing
  - NC -** Of Concern, National (unofficial - plants only)
  - RC -** Of Concern, Regional (unofficial - plants only)
  - SE -** State Endangered (official state list - animals only)
  - ST -** State Threatened (official state list - animals only)
  - SC -** Of Concern, State
  - SX -** State Extirpated
-