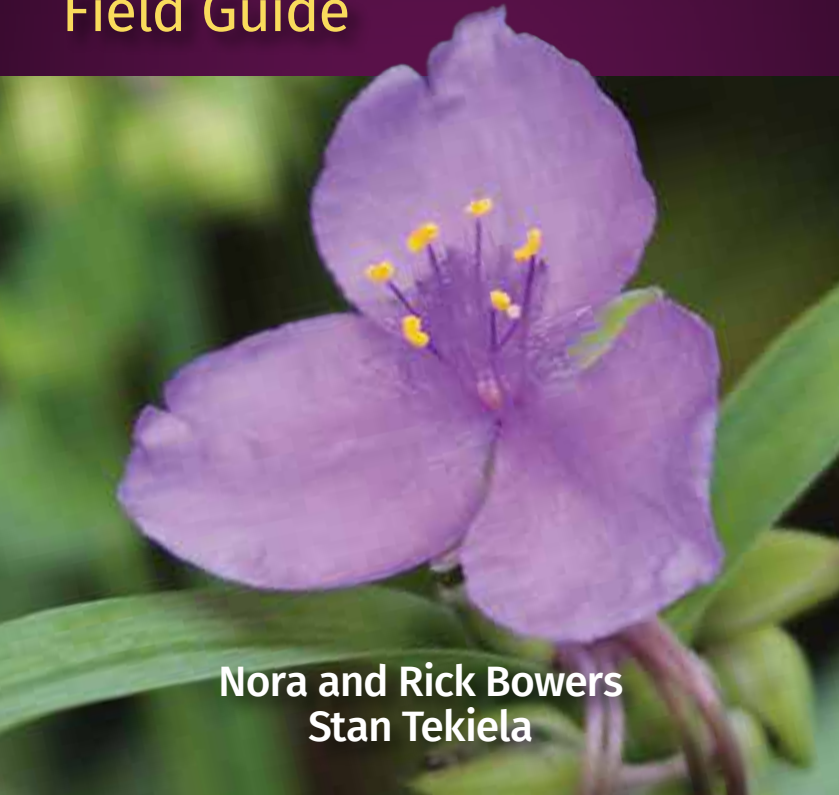
2ND EDITION

Wildflowers *of the* Carolinas

Field Guide



Nora and Rick Bowers
Stan Tekiela

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Nora and Rick Bowers
Stan Tekiela

Adventure Publications
Cambridge, Minnesota

Dedication

To my sister, Beth, for sharing her love of flowers with me—Nora

To Matt Johnson, who always kept plants on my mind and taught me so much about them—Rick

To my daughter, Abigail Rose. The sweetest flower in my life—Stan

Acknowledgments

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A very special thanks to the following people and institutions who shared their knowledge of plants with us: Daniel Moerman for the Native American Ethnobotany website, University of Michigan-Dearborn; Dan Tenaglia for his plant identification website at www.alabamaplants.com; Alan S. Weakley for making his *Flora of the Carolinas, Virginia, Georgia, and Surrounding Areas* available online; Laura White at Stevens Nature Center, Cary, North Carolina; the Flora of North America website; University of North Carolina Herbarium; and North Carolina Botanical Garden at Chapel Hill.

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THE CAROLINAS AND WILDFLOWERS

The Carolinas are great places for wildflower enthusiasts! From the coastal plain in the east to the Appalachian Mountains in the west, this means the Carolinas are fortunate to have an extremely diverse, often unique and a very healthy variety of wonderful wildflowers.

Wildflowers of the Carolinas Field Guide is an easy-to-use field guide to help the curious nature seeker identify 200 of the most common and widespread wildflowers in North and South Carolina. It features, with several exceptions, the herbaceous wildflowers of the Carolinas. Herbaceous plants have green soft stems and die back to the ground each autumn. Only a few plants with woody stems have been included, because these particular plants are very common and have large showy flowers.

STRATEGIES FOR IDENTIFYING WILDFLOWERS

Determining the color of the flower is the first step in a simple five-step process to identify a wildflower.

Because this guide is organized by color, identifying an unknown wildflower is as simple as matching the color of the flower to the color section of the book. The color tabs on each page identify the color section.

The second step in determining the identity of a wildflower is the size. Within each color section, the flowers are arranged by the size of the flower, or flower cluster, from small to large. A plant with a single, small, yellow flower will be in the beginning of the yellow section while a large white flower will be toward the end of the white section. Sometimes flowers are made up of many individual flowers in clusters that are perceived to be one larger flower. Therefore, these will be ordered by the size of the cluster, not the individual flower. See page 432 for rulers to help estimate flower and leaf size.

Once you have determined the color and approximate size, observe the appearance of the flower. Is it a single flower or cluster of flowers? If it is a cluster, is the general shape of the cluster flat, round or spike? For the single flowers, note if the flower has a regular, irregular, bell or tube shape. Also, counting the number of petals might help to identify these individual flowers. Compare your findings with the descriptions on each page. Examining the flower as described above should result in narrowing the identity of the wildflower down to just a few candidates.

The fourth step is to look at the leaves. There are several possible shapes or types of leaves. Simple leaves have only one leaf blade but can be lobed. Compound leaves have a long central leaf stalk with many smaller leaflets attached. Twice compound leaves have two or more leaf stalks and many leaflets. Sometimes it is helpful to note if the leaves have toothed or smooth margins (edges), so look for this also.

For the fifth step, check to see how the leaf is attached to the stem. Some plants may look similar but have different leaf attachments so this can be very helpful. Look to see if the leaves are attached opposite of each other along the stem, alternately, or whorled around a point on the stem. Sometimes the leaves occur at the base of the plant (basal). Some leaves do not have a leaf stalk and clasp the stem at their base (clasping) and in some cases the stem appears to pass through the base of the leaf (perfoliate).

Using these five steps (color, size, shape, leaves and leaf attachment) will help you gather the clues needed to quickly and easily identify the common wildflowers of the Carolinas.

USING THE ICONS

Sometimes the botanical terms for leaf type, attachment and type of flower can be confusing and difficult to remember. Because of this, we have included icons at the bottom of each page. They can be used to quickly and visually match the main features of the plant to the specimen you are viewing without even needing to completely understand the botanical terms. By using the photos, text descriptions and icons in this field guide, you should be able to quickly and easily identify most of the common wildflowers of the Carolinas.

The icons are arranged from left to right in the following order: flower cluster type, flower type, leaf type, leaf attachment and fruit. The first two flower icons refer to cluster type and flower type. While these are not botanically separate categories, we have made separate icons for them to simplify identification.

Flower Cluster Icons

(icon color is dependent on flower color)

Flat Round Spike

Any cluster (tightly formed group) of flowers can be categorized into one of three cluster types based on its over-all shape. The flat, round and spike types refer to the cluster shape, which is easy to observe. Technically there is another cluster type, composite, which appears as a single daisy-like flower but is actually a cluster of many tiny flowers. Because this is often perceived as a flower type, we have included the icon in the flower type section. See page 9 for its description.

Some examples of cluster types

Flat

Round

Spike

Flower Type Icons





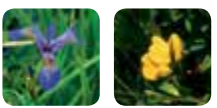
(icon color is dependent on flower color)

Regular **Irregular** **Bell** **Tube** **Composite**

Botanically speaking, there are many types of flowers, but in this guide, we are simplifying them to five basic types. Regular flowers are defined as having a round shape with three or more petals, lacking a disk-like center. Irregular flowers are not round but uniquely shaped with fused petals. Bell flowers are hanging with fused petals. Tube flowers are longer and narrower than bell flowers and point up. Composite flowers (technically a flower cluster) are usually round compact clusters of tiny flowers appearing as one larger flower.

Some examples of flower types

Regular



Irregular

Bell

Tube

Composite

Composite cluster: Although a composite flower is technically a type of flower cluster, we are including the icon in the flower type category since most people not familiar with botany would consider it as a flower type, not a flower cluster. A composite flower consists of petals (ray flowers) and/or a round disk-like center (disk flowers). Sometimes a flower has only ray flowers, sometimes only disk flowers or both.

Leaf Type Icons


Simple


Simple Lobed


Compound


Twice Compound


Palmate

Leaf type can be broken down into two main types; simple and compound. Simple leaves are leaves that are in one piece; the leaf is not divided into smaller leaflets. It can have teeth or be smooth along the edges. The simple leaf is depicted by the simple leaf icon. Simple leaves may have lobes and sinuses that give the leaf a unique shape. These simple leaves with lobes are depicted by the simple lobed icon.

Some examples of leaf types


Simple


Simple Lobed


Compound


Twice Compound


Palmate

Compound leaves have two or more distinct, small leaves called leaflets that arise from a single stalk. In this field guide we are dividing compound leaves into regular compound, twice compound or palmately compound leaves. Twice compound leaves are those that have many distinct leaflets arising from a secondary leaf stalk. Palmately compound leaves are those with three or more leaflets arising from a common central point.

Leaf Attachment Icons





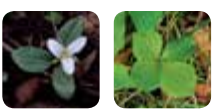

Alternate **Opposite** **Whorl** **Clasping** **Perfoliate** **Basal**

Leaves attach to the stems in different ways. There are six main types of attachment, but a plant can have two different types of attachments. This is most often seen in the combination of basal leaves and leaves that attach along the main stem either alternate or opposite (cauline leaves). These wildflowers have some leaves at the base of the plant, usually in a rosette pattern, and some leaves along the stem. In these cases, both icons are included; for most plants, there will only be one leaf attachment icon.

Some examples of leaf attachment

Alternate

Opposite



Whorl

Clasping

Perfoliate

Basal

Alternate leaves attach to the stem in an alternating pattern while opposite leaves attach to the stem directly opposite from each other. Whorled leaves have three or more leaves that attach around the stem at the same point. Clasping leaves have no stalk and the base of the leaf partly surrounds the main stem. Perfoliate leaves are also stalkless and have a leaf base that completely surrounds the main stem. Basal leaves are those that originate at the base of a plant, near the ground, usually grouped in a round rosette.

Fruit Icons

  (icon color is dependent on berry or pod color)

Berry **Pod**

In some flower descriptions a fruit category has been included. This may be especially useful when a plant is not in bloom or when the fruit is particularly large or otherwise noteworthy. Botanically speaking, there are many types of fruit. We have simplified these often confusing fruit categories into two general groups, berry and pod.

Some examples of fruit types

Berry **Pod**

The berry icon is used to depict a soft, fleshy, often round structure containing seeds. The pod icon is used to represent a dry structure that, when mature, splits open to release seeds.

BLOOMING SEASON

Most wildflowers have a specific season of blooming. For example, you probably won't see the common spring-blooming Spring Beauty blooming in summer or fall. Knowing the season of bloom can help you narrow your selection as you try to identify an unknown flower. In this field guide, spring usually means March, April and May. Summer refers to the last half of June, July and August. Fall usually means September and October.

LIFE CYCLE/ORIGIN

The life cycle of a wildflower describes how long a wildflower lives. Annual wildflowers are short-lived. They sprout, grow and bloom in only one season, never to return except from seed. Most wildflowers have perennial life cycles that last many years. Perennial wildflowers are usually deeply rooted plants that grow from the roots each year. They return each year from their roots, but they also produce seeds to start other perennial plants. Similar to the annual life cycle is the biennial cycle. This group of plants takes two seasons of growth to bloom. The first year the plant produces a low growth of basal leaves. During the second year, the plant sends up a flower stalk from which it produces seeds, from which new plants can be started. However, the original plant will not return for a third year of growth.

Origin indicates whether the plants are native or non-native. Most of the wildflowers in this book originate in the Carolinas and are considered native plants. Non-native plants were often unintentionally introduced when they escaped from gardens or farms. Most non-native plants are now naturalized in North and South Carolina.

Some plants are also considered invasive (nonnative and capable of destructive spread) or noxious (detrimental to the environment, people or economy). Learn more about the problem plants and other invasives in the Carolinas by visiting the following resources:

South Carolina
South Carolina Plant Pest List, www.clemson.edu/invasives
North Carolina
North Carolina Invasive Plant Council, http://nc-ipc.weebly.com/nc-invasive-plants.html

HABITATS

Some wildflowers thrive only in specific habitats. They may require certain types of soil, moisture, pH levels, fungi or nutrients. Other wildflowers are generalists and can grow just about anywhere. Sometimes noting the habitat surrounding the flower in question can be a clue to its identity.

RANGE

The wide variety of habitats in the Carolinas naturally restricts the range of certain wildflowers that have specific requirements. Sometimes this section can help you eliminate a wildflower from consideration just based on its range. However, please keep in mind that the ranges indicated are general notations on where the flower is commonly found. They are general guidelines only and there will certainly be exceptions to these ranges.

NOTES

The Notes are fun and fact-filled with many gee-whiz tidbits of interesting information such as historical uses, other common names, insect relationship, color variations and much more. Much of the information in this section cannot be found in other wildflower field guides.

CAUTION

In the Notes, it is mentioned that in some cultures, some of the wildflowers were used for medicine or food. While some find this interesting, DO NOT use this guide to identify edible or medicinal plants. Some of the wildflowers in the Carolinas are toxic or have toxic look-alikes that can cause severe problems. Do not take the chance of making a mistake. Please enjoy the wildflowers with your eyes or camera. In addition, please don't pick, trample or transplant any wildflowers you see. The flower of a plant is its reproductive structure, and if you pick a flower you have eliminated its ability to reproduce.

Transplanting wildflowers is another destructive occurrence. Most wildflowers need specific soil types, pH levels or special bacteria or fungi in the soil to grow properly. If you attempt to transplant a wildflower to a habitat that is not suitable for its particular needs, the wildflower most likely will die. Also, some wildflowers, due to their dwindling populations, are protected by laws that forbid you to harm the plants in any way. The good news is many of our wildflowers in North and South Carolina are now available at local garden centers. These wildflowers have been cultivated and have not been dug from the wild. More gardeners are taking advantage of the availability of these wildflowers, planting native species and helping the planet.

Enjoy the Wild Wildflowers!

Nora, Rick and Stan

Common Name

Scientific name

Color Indicator

Family: plant family name

Height: average range of mature plant

Flower: general description, type of flower, size of flower, number of petals

Leaf: general description, size, leaf type, type of attachment, toothed or smooth

Fruit: berry or pod

Bloom: spring, summer, fall

Cycle/Origin: annual, perennial, biennial, native, non–native

Habitat: general environment in which you are likely to find the flower

Range: an approximate range where the flower is found

Stan's Notes: helpful identification information, history, origin and other interesting, "gee-whiz" nature facts

Not all icons are found on every page. See preceding pages for icon descriptions.

CLUSTER TYPE **Spike** | FLOWER TYPE **Irregular** | LEAF TYPE **Palmate** | LEAF ATTACHMENT **Basal** | FRUIT **Pod**

Narrowleaf Blue-eyed Grass

Sisyrinchium angustifolium

Family: Iris (Iridaceae)

Height: 4–20" (10–50 cm)

Flower: blue, ½" (1 cm) wide, 6 petals, each notched and tipped with tiny point, bright yellow center; group of flowers on short stalk from longer leaf-like stem

Leaf: thin and grass-like, up to 2" (5 cm) long, bright green, pointed; leaves and flattened winged flower stalks often confused with blades of grass

Fruit: spherical green pod, turning reddish brown or purplish black, ¼" (.6 cm) wide, lengthwise grooves score outside skin into 4 parts

Bloom: spring, summer

Cycle/Origin: perennial; native

Habitat: wet soils, meadows, roadsides, open moist woods, stream banks, swamp edges, sun

Range: throughout

Notes: One of over 40 species of blue-eyed grass in North America, this plant is the most common of several species in the Carolinas. Easily mistaken for clumps of grass when not in bloom, but actually belongs to the Iris family. Has six similar petals and sepals that are shallowly notched and have tiny tips. Stems can be bluish purple. Unlike other irises, which spread by horizontal rhizomes, this primitive iris has fibrous vertical roots.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Simple**	**Basal**	**Pod**

Azure Bluet

Houstonia caerulea

Family: Madder (Rubiaceae)

Height: 2–4" (5–10 cm)

Flower: pale blue (sometimes sky blue to bluish lavender or white), ½" (1 cm) wide, 4 petals fused into a short tube and then flared out around a bright yellow center; each erect delicate-looking flower on single stalk

Leaf: oval, ½" (1 cm) long, purplish red to green, basally and oppositely attached to reddish stem; 1–2 pair of stalkless upper leaves are much smaller

Bloom: spring, summer

Cycle/Origin: perennial; native

Habitat: acid soils, moist sandy banks, rocky streamsides, open woods, meadows, forest edges, lawns

Range: throughout

Notes: Also known as Quaker Ladies, this delicate flower is relatively large when compared to the small rosette of leaves from which it grows. Another common bluet in the Carolinas, Venus' Pride (pg. 195), has much larger and many more leaves than this plant. Azure Bluet spreads by creeping, mostly underground stems (rhizomes), hence it is found in thick clumps. It makes a great ground cover in shady spots in gardens and lawns. Look for this wildflower in March and April, when daffodils and other spring flowers are blooming in yards.

Round-lobed Hepatica

Anemone americana

Family: Buttercup (Ranunculaceae)

Height: 4–6" (10–15 cm)

Flower: pale blue to lavender (can be pink or white), ½–1" (1–2.5 cm) wide, composed of 5–9 petal-like sepals with 3 green bracts underneath; sits on a single hairy stalk that may droop

Leaf: lobed, 1–3" (2.5–7.5 cm) wide, divided into 3 rounded lobes, basally attached to thin hairy stalk

Bloom: spring

Cycle/Origin: perennial; native

Habitat: dry to moist soils that are rich or acid, deciduous woods, sun or shade

Range: western two-thirds of the Carolinas

Notes: One of the springtime ephemerals, Round-lobed Hepatica retains its leaves all winter and quickly sends up flowers each spring before the trees have a chance to produce leaves and shade it out. Leaves from the previous year are dark purple to brown, while new growth is light green. "Hepatica" in the common name is derived from a Greek word for "liver," referring to the lobed leaves that resemble the three lobes of a liver. Because of this, early herbalists erroneously thought the plant was good for treating liver troubles. Also called Liverleaf. The stems of pollinated flowers lengthen and droop near to the ground, allowing easy access for ants to collect and disperse the seeds.

FLOWER TYPE **Regular**

LEAF TYPE **Simple Lobed**

LEAF ATTACHMENT **Basal**

Violet Wood Sorrel

Oxalis violacea

Family: Wood Sorrel (Oxalidaceae)

Height: 4–8" (10–20 cm)

Flower: bluish violet (sometimes all white), ¾" (2 cm) wide, made up of 5 flaring petals; erect flower atop its own stalk; flower stalk rises above the leaves

Leaf: compound, 1½" (4 cm) wide, made up of 3 heart-shaped leaflets; each leaflet, ¾" (2 cm) wide, green or with reddish spots above, maroon below; leaves on reddish purple leafstalks, 4" (10 cm) long, basally attached; leaf resembles a clover leaf

Bloom: spring

Cycle/Origin: perennial; native

Habitat: moist to dry soils, rocky woodlands, riverbanks, grassy borders of forests, clearings, partial shade

Range: throughout

Notes: A delicate plant that lacks stems. The leafstalks and flower stalks, all of which arise from a central underground point, easily break off if disturbed. Flowers are usually bluish violet with a cream-colored base, but can be all white. Spreads by underground runners (rhizomes). Usually found growing in woodland edges. Like other wood sorrels, Violet Wood Sorrel contains oxalic acid, hence the genus name *Oxalis*. The species name *violacea* describes the color of the flowers. Overlaps with the similar-looking invasive Pink Wood Sorrel *(Oxalis debilis)* in South Carolina.

FLOWER TYPE **Regular** | LEAF TYPE **Compound** | LEAF ATTACHMENT **Basal**

Garden Cornflower

Centaurea cyanus

Family: Aster (Asteraceae)

Height: 1–4' (30–122 cm)

Flower: pure blue (sometimes magenta, pink or white) flower head, 1" (2.5 cm) wide, disk flowers only; feathery magenta-tipped green bracts cup the flower head; 1 flower head atop each branch; 25–100 ragged flower heads per plant

Leaf: long and narrow, 5" (13 cm) long, smooth or shallow-toothed margin or with small lobes; alternately attached to green-gray stem streaked with red

Bloom: summer, fall

Cycle/Origin: annual; non-native

Habitat: dry or disturbed soils, pastures, roadsides, sun

Range: throughout

Notes: This frequently cultivated flower is found in wildflower seed mixes and sown along highways by the North Carolina Department of Transportation. A native of the Mediterranean area, it has become invasive. Now found almost everywhere in the United States (especially in the Southeast) where there are disturbed soils, but rare in the mountainous counties of the Carolinas. Ironically, listed as endangered in Great Britain. Also called Bachelor's Button, referring to its use in Old England by single women to signal marital availability. American Goldfinches love the ripe seeds. Treasured for its rare pure blue color and often used in dried flower arrangements.

FLOWER TYPE **Composite** LEAF TYPE **Simple** LEAF ATTACHMENT **Alternate**

Common Blue Violet

Viola sororia

Family: Violet (Violaceae)

Height: 4–10" (10–25 cm)

Flower: deep blue or deep violet to lavender (can be white), 1" (2.5 cm) wide, 5 distinct petals surrounding a white center with the 3 lower petals strongly veined; flower usually below leaves on its own flower stalk

Leaf: characteristically heart-shaped, 2–4" (5–10 cm) wide, scalloped teeth, woolly surface, rolled edges, basally attached on woolly stalk

Fruit: cylindrical brown pod with many tiny brown seeds

Bloom: spring

Cycle/Origin: perennial; native

Habitat: disturbed soils, wet or moist woodlands, gardens, partial shade

Range: throughout

Notes: There are some 60 species of violet in the United States and over 500 worldwide. Many botanists now lump together many previously divided violet species under the single species name *sororia*. Looks very similar to the other blue or purple violets, and like all violets, the flower color is highly variable. Often "pops up" in shady gardens and in lawns. Spreads mostly by underground runners, but also by seed. Leaves are high in vitamins and have been used in salads or cooked as greens. A host plant for fritillary butterflies.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Irregular	**Simple**	**Basal**	**Pod**

Common Selfheal

Prunella vulgaris

Family: Mint (Lamiaceae)

Height: 6–12" (15–30 cm)

Flower: thick compact spike cluster, 1–2" (2.5–5 cm) long, of blue-violet-to-pink flowers; each flower, ½" (1 cm) long, made up of 2 petals (lips); upper lip forms a "hood" over fringed, paler blue lower lip

Leaf: lance-shaped, 1–3" (2.5–7.5 cm) long, toothless, on short stalk; oppositely attached leaves sometimes have tiny wing-like leaves growing from point of attachment (node); erect 4-angled stem; multiple unbranched stems from base

Bloom: spring, summer, fall

Cycle/Origin: perennial; non-native

Habitat: wet soils, disturbed areas, pastures, lawns, fields, along roads, bottomland forests, sun to light shade

Range: throughout

Notes: Also known as Selfheal or Heal-all. It is used in folk medicine by many cultures throughout the world. Most commonly used in throat remedies and, lately, for herpes and skin lesions. Preferring light shade, Selfheal will grow in large patches in lawns and adapt to being mowed to a height of 2 inches (5 cm). Like most other members of the Mint family, Selfheal has a square stem, opposing leaves and emits a faint aroma when crushed. The lower lip of the flower acts as a landing platform for insects.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT
Spike	**Irregular**	**Simple**	**Opposite**

Bird's Foot Violet

Viola pedata

Family: Violet (Violaceae)

Height: 4–10" (10–25 cm)

Flower: deep to pale blue, purple and white or all white, 1½" (4 cm) wide, 5 distinct petals surrounding a small orange center; colored petals have a lined white throat; lower petals wider than upper; flower usually higher than leaves on its own flower stalk

Leaf: characteristically narrowly lobed, 1–2" (2.5–5 cm) wide, divided into 3 main lobes that resemble a bird's foot; each main lobe is also lobed; each leaf rises from the base of plant on its own leafstalk

Bloom: spring

Cycle/Origin: perennial; native

Habitat: dry rocky or sandy soils, open fields, open woods, partial sun

Range: western two-thirds of the Carolinas

Notes: Bird's Foot Violet looks similar to the Common Blue Violet (pg. 29), but it has larger flowers with petals that are much more irregularly sized and shaped. As with all violets, the color of its flower varies widely. Fortunately, its "bird's foot" leaves make this violet one of the easiest to identify. Look for it growing from cracks in rocks and in dry open fields. Related to the garden pansy, a commonly cultivated annual.

FLOWER TYPE **Irregular** | LEAF TYPE **Simple Lobed** | LEAF ATTACHMENT **Basal**

Spiderwort

Tradescantia occidentalis

Family: Spiderwort (Commelinaceae)

Height: 10–24" (25–61 cm)

Flower: blue to rose (can be pink to white), 1–2" (2.5–5 cm) wide, 3 petals around a golden yellow center; found in clusters of up to 10 flowers; flowers open a few at a time

Leaf: grass-like, 15" (38 cm) long, folded lengthwise to form a V-shaped groove, clasping the stem

Bloom: spring, summer

Cycle/Origin: perennial; native

Habitat: moist or dry soils, sandy ridges, river bottomlands, disturbed sites, meadows, roadsides, sun

Range: throughout

Notes: An unusual-looking plant with exotic-looking flowers, which open in the morning and often wilt by noon on hot days. "Spider" comes from several characteristics unique to the plant, including the angular leaf attachment (suggestive of the legs of a sitting spider) and the stringy mucilaginous sap that strings out like a spider's web when the leaf is torn apart. "Wort" is from *wyrt*, Old English for "plant." Genus name *Tradescantia* is for J. Tradescant, an English gardener. Range overlaps in the western Carolinas with Zigzag Spiderwort *(T. subaspera)* (not shown), which has obvious to somewhat zigzag stems between the alternately attached leaves that are shorter and slightly wider than those of Spiderwort.

FLOWER TYPE **Regular** | LEAF TYPE **Simple** | LEAF ATTACHMENT **Alternate** | LEAF ATTACHMENT **Clasping**

Virginia Iris

Iris virginica

Family: Iris (Iridaceae)

Height: 12–36" (30–91 cm)

Flower: pale blue or lavender to pinkish white, 3" (7.5 cm) wide, 3 horizontal drooping sepals with pale yellow streak on white bases, 3 smaller upward-curving petals that are solid-colored; all have dark purple veins; 2–6 flowers on a sometimes branching stalk

Leaf: flat and sword-shaped, 16–36" (40–91 cm) long, bright green, smooth light green margin, flexible, pointed tip sometimes droops, 2–4 leaves per plant

Fruit: 3-parted elliptical green capsule, turning brown, 2" (5 cm) long

Bloom: summer

Cycle/Origin: perennial; native

Habitat: wet soils, open woods, meadows, freshwater and brackish marshes, along lakes, sun to partial shade

Range: eastern half and scattered locations in the western counties of the Carolinas

Notes: Can form colorful dense masses when growing in rich soils. Water loving, Virginia Iris is most common near the coast. Often planted near garden ponds, this fragrant and hardy flower is easily cultivated. Used medicinally by Cherokee Indians, but the roots are poisonous without proper preparation. Some people develop a rash after touching the foliage.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Irregular	**Simple**	**Basal**	**Pod**

Eastern Bluestar

Amsonia tabernaemontana

Family: Dogbane (Apocynaceae)

Height: 12–36" (30–91 cm)

Flower: loose round cluster, 3–6" (7.5–15 cm) wide, of a few to many blue-to-lavender flowers; each star-shaped flower, 1" (2.5 cm) wide, composed of 5 narrow petals fused into a slender tube and flaring out

Leaf: broadly lance-shaped, 3–6" (7.5–15 cm) long, bright green, turning golden yellow in fall, prominent whitish middle vein above, fine hairs below

Fruit: cylindrical greenish pod, turning brown, 3–5" (7.5–13 cm) long; pods are erect and found in pairs

Bloom: late spring

Cycle/Origin: perennial; native

Habitat: moist sandy soils, open woods, roadsides, sun

Range: throughout

Notes: Often cultivated in wildlife or perennial gardens or planted in masses for borders. Wonderful floral resource that attracts butterflies, bees and hummingbirds. Closely related to milkweed, the stem exudes a milky sap when broken. The sap does not seem to contain the deadly alkaloids of milkweed, but it does discourage browsing by deer—a boon for gardeners. The leaf shape of Eastern Bluestar is somewhat variable, as there are three recognized varieties of this species.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Round	**Tube**	**Simple**	**Alternate**	**Pod**

Wild Lupine

Lupinus perennis

Family: Pea or Bean (Fabaceae)

Height: 12–36" (30–91 cm)

Flower: spike cluster, 3–7" (7.5–18 cm) long, of pea-like blue, pink or white flowers; individual flower, ⅔" (1.6 cm) wide, is made up of what appears to be 3 petals (called, from the top down, standard, wing and keel), but are actually 5 petals fused together

Leaf: palmate, 5–10" (13–25 cm) wide, made up of 7–11 small leaflets; leafstalk basally attached

Fruit: fuzzy green fruit, turning black, up to 2" (5 cm) long, pea-pod-shaped, containing 10–20 small brown-to-black seeds

Bloom: late spring, early summer

Cycle/Origin: perennial; native

Habitat: dry sandy soils, open woods, fields, roadsides, sun

Range: eastern half of the Carolinas

Notes: Found in sand dunes, clearings and open woods in the eastern half of the Carolinas. These pea-like flowers open under the weight of an insect, revealing horned-shaped stamens that deposit pollen on the visitor. Range overlaps with the closely related Oak Ridge Lupine *(L. diffusus)* (not shown), and the particularly showy Lady Lupine *(L. villosus)*. American Indians rubbed the leaves on their skin, as they believed a compound in it helped them control horses. A larval host for the rare frosted elfin butterfly.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Spike	**Irregular**	**Palmate**	**Basal**	**Pod**

Pickerelweed

Pontederia cordata

Family: Pickerelweed (Pontederiaceae)

Height: aquatic

Flower: spike cluster, 4–6" (10–15 cm) long, of blue-to-violet flowers; individual flower, ½" (1 cm) long, is composed of 3 upper petals (the middle upper petal has 2 small yellow spots) and 3 lower petals

Leaf: heart- or lance-shaped, 4–10" (10–25 cm) long and ½–6" (1–15 cm) wide, waxy, parallel veins, smooth margin, indented at base where stalk attaches; basal leaves rise from an underwater root

Bloom: summer, fall

Cycle/Origin: perennial; native

Habitat: lakes, wetlands, ponds, streams, wet roadside ditches, freshwater marshes, full to partial sun

Range: throughout

Notes: Pickerelweed is an aquatic plant rooted to the bottoms of bodies of fresh water or wet areas. Its leaves and flowers protrude above the water. Forms large colonies, spreading by short rhizomes. Preferring shallow water, Pickerelweed helps filter polluted water in marshes. Common name refers to the Pickerel, a fish that shares a similar aquatic habitat. Pickerelweed is a good choice for a water garden. Geese and muskrats eat the leaves. Flowers are highly attractive to pollinating insects. Its young leaves are edible in salads, and the roasted or dried seeds are nutritious.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT
Spike	**Irregular**	**Simple**	**Basal**

Blue Mistflower

Conoclinium coelestinum

Family: Aster (Asteraceae)

Height: 12–36" (30–91 cm)

Flower: disk-shaped flat cluster, 4–8" (10–20 cm) wide, of lilac blue-to-magenta flower heads; each flower head made up of 40–70 tubular disk flowers that are cupped by pointed green bracts with burgundy tips

Leaf: arrowhead-shaped, 2–4" (5–10 cm) long, deeply grooved above and with a round-toothed margin; lower leaves smaller than upper leaves; oppositely attached to single fuzzy green or red stem

Bloom: summer, fall

Cycle/Origin: perennial; native

Habitat: moist soils, thickets, low woods, stream banks, roadside ditches, meadows, sun to partial shade

Range: eastern two-thirds of the Carolinas

Notes: Blue Mistflower is similar to plants in the genus *Ageratum* and is even commonly called Wild Ageratum. Frequently cultivated in butterfly and perennial gardens along with *Ageratum* plants, which are also in the Aster family. Produces eye-catching blooms when planted in masses in a garden. Attracts a multitude of butterflies, large and small, bees, and many other insect pollinators. The North Carolina Department of Transportation uses this species in highway plantings.

CLUSTER TYPE **Flat** | FLOWER TYPE **Composite** | LEAF TYPE **Simple** | LEAF ATTACHMENT **Opposite**


fruit

Bursting-Heart

Euonymus americanus

Family: Bittersweet (Celastraceae)

Height: 4–6' (1.2–1.8 m); shrub

Flower: purplish green or cream-colored, ½" (1 cm) wide, 5 petals circling a green center; single or groups of 2–3 inconspicuous flowers on stalks growing from leaf attachment (axis); many flowers per plant

Leaf: oval, 1½–4" (4–10 cm) long, pointed at both ends, finely toothed, attached to 4-angled twigs

Fruit: bright red capsule, ⅝" (1.5 cm) wide, rounded, warty, 3-lobed, splits open to reveal 4–5 fleshy orange-to-scarlet seeds

Bloom: summer

Cycle/Origin: perennial; native

Habitat: moist to dry sandy soils, rich deciduous woods, wooded slopes, streamsides, near springs, swamps, partial shade to full sun

Range: throughout

Notes: This open sprawling bush is notable not for its dull flowers, but for its bright red fruit and yellow, orange and red fall leaves. Also called American Strawberry Bush due to the unopened fruit, which resemble strawberries. All parts of this plant are said to be poisonous, but wild turkeys and songbirds eat the seeds without apparent ill effects. Usually deciduous (sometimes evergreen), the green foliage is a favorite food of deer and rabbits.

FLOWER TYPE **Regular** | LEAF TYPE **Simple** | LEAF ATTACHMENT **Opposite** | FRUIT **Pod**


fruit

Smooth Solomon's Seal

Polygonatum biflorum

Family: Asparagus (Asparagaceae)

Height: 1–4' (30–122 cm)

Flower: green, ½–1" (1–2.5 cm) long, bell-shaped, 6 petals; flowers hang in groups of 2–10 (mostly 2) on stalks, 1" (2.5 cm) long, which arise from leaf attachment

Leaf: lance-shaped, 2–6" (5–15 cm) long, toothless, stalkless, clasps upper part of arching stem; conspicuous parallel veining makes the leaf look light green

Fruit: round green berry, turning blue to black, ¼" (.6 cm) wide; hanging in clusters of 2–10 (usually 2) berries

Bloom: spring

Cycle/Origin: perennial; native

Habitat: moist soils, deciduous woods, thickets, shade

Range: most of the Carolinas

Notes: Also called True Solomon's Seal, use this rhyme to distinguish between this species and False Solomon's Seal: "Solomon's Seal, to be real, must have flowers along its keel." Distinguished by long arching stems that grow up to 6½ feet (2 m) tall. When a stalk breaks away, it leaves a distinctive round mark resembling the seal of King Solomon. Species name suggests two flowers, but it can grow up to ten per leaf axis. Grows from a large underground stem, which American Indians gathered for food. However, the stems may leave one's mouth tingling or numb.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Bell	**Simple**	**Alternate**	**Berry**

Waterspider Bog Orchid

Habenaria repens

Family: Orchid (Orchidaceae)

Height: 4–36" (10–91 cm); semi-aquatic

Flower: dense spike cluster, 1–3" (2.5–7.5 cm) long, of numerous greenish white flowers; each flower, ¾" (2 cm) wide, thin side petals curve upward and outward; shape of flower resembles a small spider; cluster appears overall yellowish green

Leaf: lance-shaped, 2–9" (5–23 cm) long, succulent, edges curl inward; leaves alternately clasping stem, getting progressively smaller toward top of stem

Fruit: thin reddish brown capsule, ⅓–⅝" (.8–1.5 cm) long

Bloom: spring, summer, fall

Cycle/Origin: perennial; native

Habitat: wet soils, bogs, marshes, wet places on land such as roadside ditches, lakeshores, edges of ponds or stream margins, sun

Range: southeastern North Carolina; eastern half of South Carolina

Notes: "Bog Orchid" is a good name for this semi-aquatic flower. Almost flat when floating in shallow water, but erect in wet earth. Common, but hard to spot since it often grows among floating mats of other aquatic vegetation, blending in with the leaves. Spreads by runners and plantlets, sometimes forming large colonies. *Repens* is Latin for "creeping," referring to its growing habit. Flowers emit a strong odor at night, probably to attract moths.


CLUSTER TYPE
Spike


FLOWER TYPE
Regular


LEAF TYPE
Simple


LEAF ATTACHMENT
Alternate


LEAF ATTACHMENT
Clasping


FRUIT
Pod


fruit

Jack-in-the-pulpit

Arisaema triphyllum

Family: Arum (Araceae)

Height: 12–36" (30–91 cm)

Flower: erect spike cluster, 2–3" (5–7.5 cm) long, of a green "club" (spadix or "Jack") sitting inside a green striped or mottled purplish "hood" (spathe or "pulpit") at top of a single stalk; spadix base is lined with tiny male or female flowers, protected by the spathe

Leaf: compound, 5–12" (13–30 cm) long, of 3 leaflets, dull green, smooth margin, deeply veined; 1–2 (female plant has 2; male has 1) leaves per plant

Fruit: shiny green berry, turning red in fall, ½" (1 cm) wide, found in cone-shaped clusters

Bloom: spring

Cycle/Origin: perennial; native

Habitat: wet soils, bogs, moist deciduous woods, shade

Range: throughout

Notes: Also called Indian Turnip because American Indians cooked its short, thickened, underground stem (corm) as food. However, no part of the plant is edible as it contains calcium oxalate crystals, which cause a burning sensation in the mouth. Its large three-parted leaves are often confused with those of White Trillium (pg. 293), but each leaflet of Jack-in-the-pulpit has a deep vein around its margin. If disturbed or affected by other stress, the female plant declines in vigor and may stop producing fruit.

CLUSTER TYPE
Spike

LEAF TYPE
Compound

LEAF ATTACHMENT
Alternate

FRUIT
Berry

Crane Fly Orchid

Tipularia discolor

Family: Orchid (Orchidaceae)

Height: 8–20" (20–50 cm)

Flower: very loose spike cluster, 4–8" (10–20 cm) long, of many green and maroon-brown flowers; each flower, ½" (1 cm) wide, 3 pointed sepals, 3 petals; central petal skewed from rest, forming a lighter-colored lip and thin translucent green spur; green center column is blunted and cylindrical

Leaf: oval, 2–4" (5–10 cm) long, dull green with raised maroon spots above, shiny beet red below, wavy margin, on a long leafstalk; 1 leaf per plant

Fruit: pointed oval green pod, turning reddish brown, ½" (1 cm) long, drooping

Bloom: summer

Cycle/Origin: perennial; native

Habitat: rich soils, oak-pine woods, under sweetgum trees

Range: throughout

Notes: The single leaf emerges in fall, persists through winter and spring and wilts before the plant flowers in summer. Flower resembles a small crane fly, thus the common name. In western North Carolina, may be mistaken for Adam and Eve *(Aplectrum hyemale)* (not shown), which has a striped, green-and-white leaf and pinkish purple-and-cream flowers. Pollinated by small moths. Oddly, pollen attaches to and is transported on one of the moth's compound eyes.

CLUSTER TYPE **Spike** | FLOWER TYPE **Regular** | LEAF TYPE **Simple** | LEAF ATTACHMENT **Basal** | FRUIT **Pod**

Orange Milkwort

Polygala lutea

Family: Milkwort (Polygalaceae)

Height: 6–15" (15–38 cm)

Flower: dense spike (can be round) cluster, ½–1½" (1–4 cm) long, of many tiny bright orange flowers with sharply pointed tips; each flower made up of 3 fused petals and 5 sepals, pointed "wings" formed by 2 of the sepals; leafless flower stalk

Leaf: basal, oval, 1–2" (2.5–5 cm) long; stem leaf, lance-shaped, ⅝–1" (1.5–2.5 cm) long; leaves narrower farther up stem; both types wider toward tip, fleshy

Bloom: spring, summer, fall

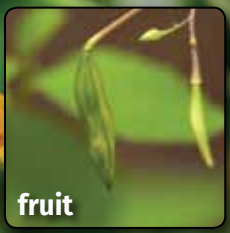
Cycle/Origin: biennial; native

Habitat: sandy or acid soils, swamps, bogs, open pinewoods, cypress pond edges, ditches, sun to partial shade

Range: eastern half of the Carolinas

Notes: Low growing, often among taller grasses, but conspicuous due to its orange flower clusters. Appears like a single flower; actually is a cluster of numerous and densely packed, tiny flowers. Also called Candyflower or Bog Bachelor's Button. *Polygala* means "much milk," for the belief that cows eating plants in the genus would produce more milk. *Lutea* is Latin for "yellow," the color of the cluster when dried. American Indians used the plant to treat heart and blood diseases.

CLUSTER TYPE **Spike** | FLOWER TYPE **Irregular** | LEAF TYPE **Simple** | LEAF ATTACHMENT **Alternate** | LEAF ATTACHMENT **Basal**


fruit

Jewelweed

Impatiens capensis

Family: Touch-me-not (Balsaminaceae)

Height: 3–5' (.9–1.5 m)

Flower: orange, 1" (2.5 cm) long, covered with reddish brown spots, has a large open mouth that leads to a long thin sharp-curved tube (spur)

Leaf: oval, 1–3" (2.5–7.5 cm) long, sharp-toothed margin, on short leafstalk, 1" (2.5 cm) long

Fruit: thin pod-like green container, 1¼" (3 cm) long, banana-shaped, contains small brown seeds

Bloom: summer, fall

Cycle/Origin: annual; native

Habitat: wet soils, wetlands, along streams, bogs, bottomlands, moist forests, shade

Range: throughout

Notes: When ripe, the pod-like containers explode when touched, dispersing seeds in all directions. This action, along with the dark spots on its flowers, give rise to its other common name of Spotted-Touch-me-not. Stems are nearly translucent and contain a slimy sap that can be used to soothe the sting from nettles or Poison Ivy. Scraping off the dark brown covering of a ripe seed reveals a sky blue nutlet inside. An important nectar source for hummingbirds. Pale Touch-me-not *(I. pallida)* (not shown) of the North Carolina mountains is similar, but has yellow flowers that have fewer spots than this species.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Tube	**Simple**	**Alternate**	**Pod**


fruit

Crossvine

Bignonia capreolata

Family: Trumpet Creeper (Bignoniaceae)

Height: 40–56' (12.2–17 m); vine

Flower: orange and yellow, 1½–2" (4–5 cm) long, trumpet-shaped, made up of 5 fused petals, orange outside, yellow with orange streaks inside the throat; many hanging flowers per vine

Leaf: compound, 2 oval leaflets, 2½–6" (6–15 cm) long, smooth margins, pointed tips; 1 branching tendril with sticky cups on ends, semi-evergreen, turning reddish purple; square dark purple stem

Fruit: J-shaped greenish pod, turning reddish brown, 6" (15 cm) long, flat and thin; has many seeds

Bloom: spring, summer

Cycle/Origin: perennial; native

Habitat: fertile woods, floodplains, swamps, roadsides, sun

Range: throughout

Notes: Named for the cross shape seen in the interior of its cut stem. Produces masses of beautiful, showy flowers when in full sun. Modified leaflet tendrils have sticky cups that enable it to cling to a building or tree to reach sunlight; it will also drape over a wall or fence. Can be used to replace non-native clinging vines on trellises or arbors, but it is aggressive and must be trimmed back regularly or it will invade areas where it is not wanted. Often planted in wildlife gardens, as its abundant nectar attracts hummingbirds.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Tube	**Compound**	**Opposite**	**Pod**


fruit

Butterfly-weed

Asclepias tuberosa

Family: Dogbane (Apocynaceae)

Height: 12–24" (30–61 cm)

Flower: large flat cluster, 2–3" (5–7.5 cm) wide, of small, deep orange flowers; each flower, ⅜" (.9 cm) wide, of downward-curving petals; flower color varies from all yellow to red

Leaf: lance-shaped, 2–6" (5–15 cm) long, widens near tip, hairy, smooth margin; mostly alternately (sometimes oppositely) attached near top of hairy stem

Fruit: erect narrow green pod, turning brown, 6" (15 cm) long, covered with fine hairs; small clusters of pods have large brown seeds with silken "parachutes" to carry away each seed

Bloom: summer

Cycle/Origin: perennial; native

Habitat: dry (prefers sandy) soils, pastures, along roads, sun

Range: throughout

Notes: Also called Butterfly Milkweed. Found in clumps, this true milkweed lacks milky sap; instead, its stem and leaves contain clear sap. Species name *tuberosa* refers to its large taproot, which makes it nearly impossible to transplant. Can be grown from seed. Single stems branch only near the top and flower clusters harbor up to 25 individual flowers. Roots and stems have been used in folk medicine. A host for Queen and Monarch butterfly caterpillars.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Flat	**Irregular**	**Simple**	**Alternate**	**Pod**

Indian Blanket

Gaillardia pulchella

Family: Aster (Asteraceae)

Height: 2–24" (5–61 cm)

Flower: daisy-like, tricolored flower head, 2–3" (5–7.5 cm) wide, made up of 8–14 triangular (orange, red or purple) petals with 3-lobed (usually yellow or orange) tips surrounding a domed maroon center

Leaf: narrowly oblong or spoon-shaped, ½–3½" (1–9 cm) long, fuzzy above, usually a smooth (sometimes toothed or lobed) margin; upper leaves smaller and clasping; multi-branched, sticky-haired stem

Bloom: spring, summer, fall

Cycle/Origin: annual, perennial, biennial; native

Habitat: sand flats, dunes, old pastures, disturbed sites, sun

Range: scattered locations in the Carolinas, mostly along the coast

Notes: Also called Firewheel because the flower resembles a child's pinwheel, with its maroon center surrounded by an orange or red ring that, in turn, is encircled by a ring of yellow. Readily self-seeds and forms large colorful masses of flowers that blanket the ground, thus the common name, Indian Blanket. Many state highway departments plant this eye-catching flower along roads. Hardy and drought tolerant, it is often grown in wildflower gardens since it needs little care and the flowers last a long time. The flowers are a favorite of bees.

FLOWER TYPE **Composite** LEAF TYPE **Simple** LEAF ATTACHMENT **Alternate**

Turk's-cap Lily

Lilium superbum

Family: Lily (Liliaceae)

Height: 3–10' (.9–3 m)

Flower: orange and yellow, 2–3" (5–7.5 cm) wide, 6 backward-curving petals (actually 3 petals and 3 sepals) circling central green star with yellow center; all petals covered with dark purplish spots

Leaf: narrowly lance-shaped, 2–10" (5–25 cm) long, sharply pointed tip; whorl of 4–20 leaves

Fruit: oblong angular green pod, turning brown when mature, 2" (5 cm) long

Bloom: summer

Cycle/Origin: perennial; native

Habitat: wet soils, meadows, woods, backwater swamps

Range: western mountainous counties of North Carolina

Notes: The tallest lily in eastern North America. Commonly found in streamside forests of Appalachian Mountain valleys and in impressive masses along the Blue Ridge Parkway. Once common along country roads, but occurs less often since ditches are now drained and mowed. Closely resembles Carolina Lily (pg. 71), but lacks that flower's sweet fragrance. Produces 3–30 showy, dangling flowers per plant. The curled-back flower petals look like a Turkish cap, hence part of the common name. Grows from a large scaly underground bulb, which American Indians gathered for food.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Simple**	**Whorl**	**Pod**

Yellow Fringed Orchid

Platanthera ciliaris

Family: Orchid (Orchidaceae)

Height: 12–36" (30–91 cm)

Flower: cone-shaped loose spike cluster, 2–8" (5–20 cm) long, of 25–115 apricot-to-orange (sometimes yellow) flowers; each flower, 2" (5 cm) long, 3 petals form erect "hood," 2 form drooping side "wings," 1 tongue-like petal (lip) heavily fringed on edges with downward- and backward-curving spur

Leaf: lance-shaped, 2–16" (5–40 cm) long, pointed tip; leaves smaller toward top of smooth stem

Bloom: summer

Cycle/Origin: perennial; native

Habitat: acid seeps, pinewoods, stream or pond edges, marshes, roadsides, meadows, along railroads

Range: throughout

Notes: One of the showier wildflowers in the Carolinas in July and August, this species occurs in more kinds of habitats than do other orchids. A shorter relative, Crested Yellow Orchid *(P. cristata)* (not shown), has flowers that start blooming in June and have much shorter spurs. Although "Yellow" in the common name, the usually orange-colored flowers are pollinated by butterflies. Once common, and while apparently not at risk in the Carolinas, it is listed as threatened or endangered throughout most of its range. Thus, please do not dig up this plant or pick the flowers.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	LEAF ATTACHMENT
Spike	**Irregular**	**Simple**	**Alternate**	**Clasping**

Carolina Lily

Lilium michauxii

Family: Lily (Liliaceae)

Height: 1–4' (30–122 cm)

Flower: yellowish orange, 3" (7.5 cm) wide, 6 sharply backward-curving pointed petals (actually 3 petals and 3 sepals) around protruding dangling flower parts; each petal burnt orange on outer portion, becoming light orange, then green at base; petals covered with small maroon spots; 1–6 hanging flowers per stalk

Leaf: teardrop-shaped, 1½–4½" (4–11 cm) long, widest above the middle, fleshy, pointed tip, wavy edges; whorl of 3–10 leaves; 2–4 whorls per stem

Fruit: winged oval green pod, 1–2" (2.5–5 cm) long

Bloom: summer

Cycle/Origin: perennial; native

Habitat: moist soils, upland pine-oak forests, swamps, along roads, rich open woods, sun

Range: eastern third of the Carolinas

Notes: Carolina Lily became the official state *wildflower* of North Carolina in 2003. Should not to be confused with the state's official *flower,* American Dogwood, which is actually an early spring-blooming tree. The only native lily in the Carolinas with a sweet strong fragrance. Pollinated by butterflies such as Eastern Tiger Swallowtails. Similar to Turk's-cap Lily (pg. 67), but lacks the central green star, and its leaves are mostly along the middle of the stem.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Simple**	**Whorl**	**Pod**

Pine Lily

Lilium catesbaei

Family: Lily (Liliaceae)

Height: 12–36" (30–91 cm)

Flower: orange or crimson, 3–4½" (7.5–11 cm) wide, spreading bowl-shaped, each of 6 petals curving outward and downward is broad, pointed, wavy-edged, has yellow base with magenta spots and on a green stalk that attaches at base of tall yellow-orange flower parts; 1–3 (usually 1) erect flowers at end of stalk

Leaf: flattened, grass-like, 1–3" (2.5–10 cm) long, pointed tip, grows upward or closely pressed to stem

Fruit: ridged oblong green capsule, 1–2" (2.5–5 cm) long

Bloom: summer, fall

Cycle/Origin: perennial; native

Habitat: moist soils, roadsides, sandhills, pitcher plant bogs, native Longleaf Pine and Slash Pine savannahs

Range: eastern half of the Carolinas

Notes: The largest flower of any native lily in North America. Needs sunlight provided by an open canopy, historically created by frequent fires in the wild. Once common, but now less so due to same-age pine plantations replacing native pine stands. Very difficult to find for purchase, but please don't dig up the plant or collect the seeds. Plant in moist spots in gardens to attract its main pollinators, the beautiful Palamedes and Spicebush Swallowtail butterflies.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Simple**	**Alternate**	**Pod**

Deptford Pink

Dianthus armeria

Family: Pink (Caryophyllaceae)

Height: 6–24" (15–61 cm)

Flower: pink to rose, ½" (1 cm) wide, with 5 petals covered with tiny white spots, irregularly toothed edges; groups of 3–9 flowers; several groups per plant

Leaf: basal, narrow and grass-like, 1–4" (2.5–10 cm) long, light green, numerous, often covered with tiny white hairs; stem leaves (cauline), 5–10 pair, oppositely attached to hollow hairy stem

Bloom: spring, summer

Cycle/Origin: annual, biennial; non-native

Habitat: dry soils, old fields, open woods, roadsides, along railroads, disturbed areas, sun

Range: western two-thirds of North Carolina, northern one-third of South Carolina

Notes: Now naturalized throughout much of the Carolinas, this non-native wildflower was introduced from England. The first part of the common name refers to the town of Deptford (now part of London), where the species was apparently originally found. The genus *Dianthus* includes nearly 300 species, most of which are annuals originating from Europe. Closely related to carnations. The flowers are covered with white spots and have unusual jagged edges. Long needle-like bracts rise from the base of the flowers, extending beyond the petals.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	LEAF ATTACHMENT
Regular	**Simple**	**Opposite**	**Basal**

Virginia Springbeauty

Claytonia virginica

Family: Miner's Lettuce (Montiaceae)

Height: 6–10" (15–25 cm)

Flower: white to pink to lavender, ½–¾" (1–2 cm) wide, 5 pink-veined petals and a slightly yellow-tinted center; flowers are showy and upright

Leaf: narrow and grass-like, 2–4" (5–10 cm) long; leaves oppositely attached midway up the stem; usually 1 to several pairs of leaves per plant

Bloom: early spring

Cycle/Origin: perennial; native

Habitat: wet soils, deciduous woods, clearings in woods

Range: throughout

Notes: An attractive flower that blooms early in spring, hence its common name. The pink veins on the petals act as runways to guide insects to the nectar. As they "taxi in," the insects load up on pollen by brushing against stamens, then fly to another flower, where they deposit a few grains onto the receptive stigma. Often grows in large patches, reproducing from small underground tubers. The potato-like tubers were once gathered for food, and as a result, Springbeauty populations are now reduced. Do not dig up this plant—a variety can be purchased at local garden centers. One of many plants in the Miner's Lettuce family, a group of about 500 species of plants worldwide.

FLOWER TYPE **Regular** LEAF TYPE **Simple** LEAF ATTACHMENT **Opposite**


fruit

Pink Fuzzybean

Strophostyles umbellata

Family: Pea or Bean (Fabaceae)

Height: 2–7' (.6–2.1 m); vine

Flower: pink to lavender, ½–¾" (1–2 cm) wide, broadly pea-like; 3–4 flowers well above leaves on flower stalk, 12" (30 cm) long

Leaf: compound, 1¼–3¼" (3–8 cm) long, divided into 3 narrowly oval leaflets; each leaflet, ¾–2" (2–5 cm) long, smooth margin, blunt or pointed tip, hairy; leaves alternately attached to twining stem

Fruit: narrow green pod, turning dark brown, 1¼–2¼" (3–5.5 cm) long, shaped like a string bean and finely haired, contains many seeds

Bloom: summer, fall

Cycle/Origin: perennial; native

Habitat: dry rocky or sandy soils, woods, fields, disturbed sites, partial shade to sun

Range: throughout

Notes: Common name is for the pink flower and the hairy bean-like pod. Also called Wild Bean, it is often cultivated for its delicate flowers and its ability to quickly cover a trellis or fence. The annual Amberique-bean *(S. helvola)* (not shown) looks similar, but it has leaflets with two or three lobes. Bobwhite Quail, turkeys and doves enjoy the seeds of both of these members of the Pea or Bean family.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Irregular	**Compound**	**Alternate**	**Pod**

Pennsylvania Smartweed

Persicaria pensylvanica

Family: Buckwheat (Polygonaceae)

Height: 2–7' (.6–2.1 m)

Flower: cylindrical spike cluster, ⅝–2" (1.5–5 cm) long, of numerous pink (can be whitish pink or white) flowers; each tiny bowl-shaped flower made up of 5 bluntly fingernail-shaped petals and petal-like sepals around a white center

Leaf: lance-shaped, 5–6" (13–15 cm) long, slightly drooping, tip pointed, leafstalk encased with a smooth sheath; alternately attached to reddish nodes of stem; sticky-haired stem branches widely near base

Bloom: summer, fall

Cycle/Origin: annual; native

Habitat: moist to wet soils, freshwater or brackish mud flats, disturbed sites, waste ground, along railroads, sun

Range: throughout

Notes: "Smart" in the common name refers to the sharp burning sensation the leaves produce when eaten. The seeds are an outstanding food source for a wide variety of wildlife such as waterfowl, game birds, mice, raccoons, muskrats and fox squirrels. Plant in wildlife gardens to attract these interesting birds and animals. Pennsylvania Smartweed is one of many other species in the Buckwheat family in the Carolinas, with most considered somewhat weedy.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT
Spike	**Regular**	**Simple**	**Alternate**

Littleleaf Sensitive-briar

Mimosa microphylla

Family: Pea or Bean (Fabaceae)

Height: 3–7' (.9–2.1 m); vine

Flower: round cluster, ¾" (2 cm) wide, of a multitude of tiny tubular bright pink flowers; flower parts supporting pollen rise above tubules, appearing like yellow dots floating in the air; each cluster grows singly on stalk

Leaf: twice compound, 2½–6" (6–15 cm) long, divided into 3–5 pair of oblong leaflets and again into 8–11 pair of tiny subleaflets; leaf on long thorny leafstalk attached to sprawling vine; thorns on stems shaped like a cat's claw

Fruit: long slim green pod, turning brown, 1½–3" (4–7.5 cm) long, sharp edges densely covered with thorns

Bloom: summer, fall

Cycle/Origin: perennial; native

Habitat: disturbed areas, edges of woods, fields, knolls, sun

Range: throughout

Notes: "Littleleaf" is for the tiny subleaflets, which are less than ¼ inch (.6 cm) long, and "Sensitive" is for their response to touch—they fold together for 4–5 minutes after being lightly touched. All subleaflets close even when only one nearby is tapped. This protects the foliage, presenting thorns on the leafstalks to any grazing deer or rabbits. Plant behavior usually doesn't occur quickly enough for us to detect the motion, but one is able to do so with this plant.

CLUSTER TYPE
Round

FLOWER TYPE
Tube

LEAF TYPE
Twice Compound

LEAF ATTACHMENT
Alternate

FRUIT
Pod

Procession Flower

Polygala incarnata

Family: Milkwort (Polygalaceae)

Height: 8–24" (20–61 cm)

Flower: short spike cluster, ½–1½" (1–4 cm) long, of densely clustered bright pink-to-pale lavender flowers; each slim flower, ½" (1 cm) long, petals forming tube, spreading into 8 short pointed lobes; white center; pointed, purplish white or greenish white bracts

Leaf: narrowly oblong, ¼–½" (.6–1 cm) long, pointed tip; leaves close against and sparse along slender smooth stem; stem single or with a few branches

Fruit: oval, flattened, purplish green pod; blunted on each end; contains black seeds

Bloom: summer

Cycle/Origin: annual; native

Habitat: dry or sandy soils, forest edges, woods, fields, sun

Range: throughout most of the Carolinas

Notes: Named Procession Flower for its historical use in garlands worn or carried by Catholics celebrating The Fifth Sunday After Easter. Has the largest individual flower of any of the tiny-flowered milkworts in the Carolinas, but looks like a single short colorful flower atop an apparently leafless stem from a distance. Flowers open a few at a time, from the bottom up. The root was used for respiratory ailments and is still sold in some pharmacies. Apparently not at risk in the Carolinas, but imperiled in much of the Midwest.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Spike	**Irregular**	**Simple**	**Alternate**	**Pod**

Snakemouth Orchid

Pogonia ophioglossoides

Family: Orchid (Orchidaceae)

Height: 8–16" (20–40 cm)

Flower: pale or rose pink (sometimes lavender or white), ½–1½" (1–4 cm) long, 3 slim elliptical sepals and 2 similar petals; tongue-like horizontal modified third petal, fringed on edges, veined with magenta and with a line of pink, white, then yellow bristles mid-point; bract beneath flower; 1–3 flowers atop stem

Leaf: lance-shaped, 1–3½" (2.5–9 cm) long, pointed tip, 1 cauline leaf clasps the stem midway, 1 leaf clasps the base

Bloom: summer

Cycle/Origin: perennial; native

Habitat: wet or acid soils, bogs, roadsides, open meadows, along railroads, abandoned gravel pits, sun

Range: scattered throughout

Notes: Greek for "bearded," the genus name *Pogonia* refers to the hair-like bristles midline on the lower petal. Pollen-seeking bees are fooled by the yellow bristles—the real pollen is actually hidden and deposited on the back of the unsuspecting bee, to be carried away to the next flower. Although uncommon in the Carolinas, it can be abundant where it does occur, forming large colonies by spreading runners.

Sandywoods Chaffhead

Carphephorus bellidifolius

Family: Aster (Asteraceae)

Height: 8–36" (20–91 cm)

Flower: loose flat cluster, 1–1½" (2.5–4 cm) wide, of 2–40 pink-to-lavender flower heads; each flower head, ¼" (.6 cm) wide, made up of tubular disk flowers with conspicuous protruding flower parts

Leaf: numerous basal, spoon-shaped, 1½–6" (4–15 cm) long, stalked; stem (cauline) leaf, narrow, lance-shaped, becoming much smaller farther up the stem, stalkless; cauline leaves alternate at wide intervals along the several smooth stems

Bloom: summer, fall

Cycle/Origin: perennial; native

Habitat: dry sandy soils, sandhills, roadsides, scrub oak woodlands, pine barrens, partial to full sun

Range: eastern half of the Carolinas

Notes: When present, this aster is an indicator that you are in the Carolina pinelands. Most common in the sandhills and along the Carolina coast, it tolerates even drier soils than do others in the genus. Sandywoods Chaffhead is affectionately regarded by butterfly watchers since its flowers are an excellent nectar source for a variety of butterflies, which visit the blooms along country roads.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	LEAF ATTACHMENT
Flat	**Composite**	**Simple**	**Alternate**	**Basal**

Trailing Phlox

Phlox nivalis

Family: Phlox (Polemoniaceae)

Height: 1–12" (2.5–30 cm)

Flower: pink or pale lavender to white, 1" (2.5 cm) wide, made up of 5 jagged- or smooth-tipped, heart-shaped petals surrounding a star-shaped center with a pink dot near the points of the star; petals fused to form a long narrow tube; 2–3 flowers sit atop erect reddish stalk that is hairy and sticky

Leaf: narrow, awl-shaped, ½–1" (1–2.5 cm) long; shiny evergreen leaves densely packed and oppositely attached along a woody hairy stem; stem spreads along the ground

Bloom: spring

Cycle/Origin: perennial; native

Habitat: dry sandy soils, acid soils, slopes, deciduous woods, pinewoods, roadsides, sun to partial shade

Range: western two-thirds of South Carolina, middle third of North Carolina

Notes: Trailing Phlox is found in large colorful patches due to its creeping stems, hence "Trailing" in its common name. The genus name *Phlox* is Greek for "flame" and refers to the twisted shape of the closed flower bud. Look for the heart-shaped petals with a shallow notch at the top of the heart to help identify this flower.

FLOWER TYPE **Regular** | LEAF TYPE **Simple** | LEAF ATTACHMENT **Opposite**

Annual Phlox

Phlox drummondii

Family: Phlox (Polemoniaceae)

Height: 4–24" (10–61 cm)

Flower: dark pink (usually), but variable, 1" (2.5 cm) wide, made of 5 blunt-tipped overlapping petals surrounding contrasting center, petals fuse at base to form a long narrow tube; loosely clustered flowers sit high above leaves atop hairy sticky stem

Leaf: oblong, 2–4" (5–10 cm) long; lower leaves oppositely attached, upper leaves alternate on stem that has many glandular hairs

Bloom: spring, summer

Cycle/Origin: annual; native

Habitat: dry to moist sandy soils, roadsides, disturbed areas, old fields, abandoned lawns, dunes, sun

Range: eastern half of the Carolinas

Notes: Native to central and eastern Texas, Annual Phlox is widely cultivated and has escaped and naturalized in the sandy soils of disturbed areas in the eastern half of the Carolinas. The flowers come in a variety of colors, including pink, magenta, lavender, red and white. This is a fragrant flower that likes cool spring weather and does best at temperatures below 85°F (29°C). Annual phlox is widely planted or naturalized along roadsides.

FLOWER TYPE **Regular** | LEAF TYPE **Simple** | LEAF ATTACHMENT **Alternate** | LEAF ATTACHMENT **Opposite**


fruit

Handsome Harry

Rhexia virginica

Family: Meadowbeauty (Melastomataceae)

Height: 8–36" (20–91 cm)

Flower: bright pink or lavender, 1–1½" (2.5–4 cm) wide, 4 hairy irregular oval or heart-shaped petals; curved, dangling, yellow flower parts; urn-shaped calyx

Leaf: oval, 1–3" (2.5–7.5 cm) long, green or with red patches, hairy, fine-toothed margin; each pair of leaves rotated at right angles to next pair

Fruit: pitcher-shaped green pod, turning bright red to brown, ⅔" (1.6 cm) long, 4-sided with triangular point at each corner, hole opens at top when ripe

Bloom: summer, fall

Cycle/Origin: perennial; native

Habitat: moist soils, roadsides, pond edges, pinewoods, bogs

Range: throughout the Carolinas, except in the central counties of each state

Notes: Of the seven species of meadowbeauty in the Carolinas, this is the most widespread, occurring throughout the eastern half of the U.S. Mostly pollinated by bumblebees by "buzz pollination." The bee vibrates its flying muscles after landing, causing pollen to flow out of the anthers. Collecting the pollen to eat later, the bee unwittingly pollinates the next flower upon landing. The flowers close upon pollination, but will remain open for two days if not pollinated, with the yellow stamens turning red on the second day.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Simple**	**Opposite**	**Pod**


fruit

Maryland Meadowbeauty

Rhexia mariana

Family: Meadowbeauty (Melastomataceae)

Height: 8–36" (20–91 cm)

Flower: pale pink (can be lavender or white barely washed with pink), 1–2" (2.5–5 cm) wide, 4 irregular oval petals; long, curved, dangling, orange flower parts; pitcher-shaped green or red calyx

Leaf: lance-shaped, 1–2" (2.5–5 cm) long, green with red spots, hairy above and below, toothed red or green margin with red hair projecting from each tooth; squarish stem has short to very long white hairs

Fruit: vase-shaped red pod, ¼" (.6 cm) long, 4-sided

Bloom: summer, fall

Cycle/Origin: perennial; native

Habitat: moist soils, marshes, ditches, along railroads, pond edges, wet meadows, along streams, sun

Range: throughout

Notes: The four pair of prominent anthers projecting from a pitcher-shaped calyx and the vase-shaped seedpods lead to another common name, Meadow Pitcher. Has white hairs on stem, with the white-flowered variety tending to have the longest hairs. This particular species spreads by creeping underground stems to form large colonies. Planted in wet spots in gardens, it makes a good ground cover with long-blooming flowers. Young leaves of plants in the genus *Rhexia* have a tart, sweet taste and can be eaten raw in salads.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Simple**	**Opposite**	**Pod**

Spotted Beebalm

Monarda punctata

Family: Mint (Lamiaceae)

Height: 12–36" (30–91 cm)

Flower: ragged spike cluster, 1–2" (2.5–5 cm) wide, of lance-shaped, downward-curving, prominent pink-to-purple or white and green bracts (often mistaken for petals) and yellowish flowers with maroon spots; each flower, 1" (2.5 cm) long, of 2 petals (lips); 2–5 clusters alternate with bracts along upper stem

Leaf: lance-shaped, 1–3" (2.5–7.5 cm) long, oppositely attached to hairy square grayish stem

Bloom: summer, fall

Cycle/Origin: annual, perennial, biennial; native

Habitat: dry sandy soils, dunes, roadsides, rocky woodlands

Range: throughout North Carolina, eastern half of South Carolina

Notes: Plants in the Mint family can be identified by their square stems and oppositely attached leaves. In addition, the stems and leaves of most plants in the family are scented. Spotted Bee Balm has a unique tiered arrangement in its flowerheads that somewhat resembles a Chinese pagoda. Sometimes called Dotted Horsemint, American Indians used it to treat fevers and colds or hung it up to dry, perfuming a lodge with its minty fragrance. Naturally occurs most commonly in the flatlands and nearby hills close to the Carolina coast. Often cultivated in gardens, its nectar attracts hummingbirds.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT
Round	**Irregular**	**Simple**	**Opposite**


fruit

Perennial Pea

Lathyrus latifolius

Family: Pea or Bean (Fabaceae)

Height: 1–7' (.3–2.1 m); vine

Flower: loose spike cluster, 1–5" (2.5–13 cm) long, of 4–10 pea-like pink flowers; each flower, 1" (2.5 cm) wide, on a long stem

Leaf: compound, 4" (10 cm) long, of 2 lance-shaped or elliptical leaflets; each leaflet, 1–3" (2.5–7.5 cm) long, at end of a flat winged stalk; may have a forked thread-like projection (tendril) from the tip of leafstalk; multiple stems with many branches

Fruit: slender bean-like green pod, turning yellow, 2½–4" (6–10 cm) long, contains 10–15 cylindrical poisonous blackish seeds

Bloom: summer, fall

Cycle/Origin: perennial; non-native

Habitat: disturbed soils, roadsides, fields, waste areas, sun

Range: throughout

Notes: This non-native plant is very invasive, readily escaping from cultivation or overrunning a garden. A weak-stemmed vine that climbs on other plants by taking hold with its forked tendrils. Has two pair of narrow pointed appendages (stipules) at the base of each leafstalk. Stems and leafstalks are winged. However, the flower stalk lacks wings and can grow to up to 8 inches (20 cm) long. Flowers are usually pink, but can be pink and white or blue to white.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Spike	**Irregular**	**Compound**	**Alternate**	**Pod**

Bashful Wakerobin

Trillium catesbaei

Family: Lily (Liliaceae)

Height: 8–20" (20–50 cm)

Flower: pink to white, turning rose-pink with age, 1½–2" (4–5 cm) long, of 3 wavy-edged, strongly backward-curling petals with dark rose veins and whitish bases, 3 bluntly pointed, purplish green sepals and long curved yellow flower parts; single large flower atop stalk droops below the leaves

Leaf: oval, 3–6" (7.5–15 cm) long, green or slightly purplish, pointed tip, slightly raised smooth margin; whorl of 3 leaves at top of purplish green stem

Fruit: oval green berry, turning white, ½" (1 cm) long

Bloom: spring, summer

Cycle/Origin: perennial; native

Habitat: moist rich acid soils, slopes, often near tree bases in bottomland forests, rhododendron thickets, shade

Range: western two-thirds of the Carolinas

Notes: "Bashful" is for the nodding flower, appearing to hide its blushing pink "face" below its leaves. The most abundant trillium in the Carolinas, especially common on the wide plateau between the flat eastern coast and the Appalachian Mountains in the western portion of each state. *Trillium* means "triple" in Latin, referring to the three petals and three sepals of the flower. Named for Mark Catesby, who published the first book about plants of the Carolinas in 1731.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Simple**	**Whorl**	**Berry**

Virginia Tephrosia

Tephrosia virginiana

Family: Pea or Bean (Fabaceae)

Height: 12–24" (30–61 cm)

Flower: compact spike cluster, 1½–3" (4–7.5 cm) long, of pink-and-white pea-like flowers; each flower, ¾" (2 cm) long, of white or cream upper petal (standard), pink wings and lower rose pink petals (keel); hairy pointed bell-shaped sepals (calyx)

Leaf: compound, 7" (18 cm) long, feather-like, of 11–25 elliptical, bluntly pointed leaflets; each leaflet, 1" (2.5 cm) long, grayish, hairy, oppositely attached; leaves alternate on multiple stems with long hairs

Fruit: hairy green pod, turning brown to black, 2" (5 cm) long, pea-like, flattened lengthwise

Bloom: summer

Cycle/Origin: perennial; native

Habitat: dry sandy acid soils, thickets, woods, dunes, sun

Range: throughout

Notes: *Tephros* is Greek for "hoary," for the grayish cast produced by the hairs on the leaves and stems. Some wildlife and livestock avoid the poisonous leaves, thus another common name, Goat's Rue. Both Southern and Northern Cloudywing butterfly caterpillars utilize this plant for food, despite the leaves containing rotenone, a chemical used as an insecticide. American Indians put the leaves in streams to stun fish, scooping them up when they floated to the surface.

CLUSTER TYPE	FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Spike	**Irregular**	**Compound**	**Alternate**	**Pod**


fruit

Carolina Rose

Rosa carolina

Family: Rose (Rosaceae)

Height: 24–36" (61–91 cm); shrub

Flower: pink (sometimes white), 2" (5 cm) wide, made up of 5 thumbnail- or heart-shaped petals; broad center of more than 50 yellow flower parts (stamens)

Leaf: compound, composed of 5–7 broadly oval leaflets; each leaflet, ¾–1½" (2–4 cm) long, smooth, pointed tip, coarse-toothed margin; olive green or reddish stem with straight thorns; leaves turn dull red in fall

Fruit: globular green fruit, turning slightly yellow, then red, ¼" (.6 cm) wide, pulpy; hangs on the shrub until the next spring; referred to as a rose hip

Bloom: summer

Cycle/Origin: perennial; native

Habitat: dry soils, thickets, meadows, fencerows, sun

Range: throughout

Notes: Wild roses have petals in a single layer, while most cultivated roses have many layers of petals. Rose hips are edible and have seeds rich with vitamin C; they stay on the shrub in winter, providing food for wildlife. Sometimes called Pasture Rose, this species has fragrant flowers and spreads by suckers, forming thickets that make good cover for birds and other animals. The non-native Cherokee Rose *(R. laevigata)* (not shown), seen along country roads in southern South Carolina, has only 3 leaflets per leaf and long spines on its large rose hips.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Compound**	**Alternate**	**Berry**

Pink Lady's Slipper

Cypripedium acaule

Family: Orchid (Orchidaceae)

Height: 6–15" (15–38 cm)

Flower: deep rosy pink, 2½" (6 cm) long, inflated lower petal (slipper) with red veins and a groove down the middle, 3 pointed, twisted, greenish brown sepals; 1 large flower tops each leafless stalk

Leaf: broadly elliptical, 4–10" (10–25 cm) long, silvery below, deep parallel veins; basally attached in pairs

Fruit: pod-like green container, turning brown, 1–2" (2.5–5 cm) long; pod is elliptical and erect

Bloom: spring, summer

Cycle/Origin: perennial; native

Habitat: dry to moist acid soils, bogs, low pinewoods, shade

Range: throughout North Carolina, northwestern South Carolina

Notes: Also called Moccasin Flower. Found in large colonies in mountain pinewoods and in bogs near the North Carolina coast. One of the largest orchids in the Carolinas, it produces only one flower (rarely two) per stalk. Flower is usually a deep rosy pink (sometimes white), turning pale pink with age. Small bees enter flower through a slit running the length of the slipper. Once inside, the bee can't back out, so it proceeds toward two escape holes at the top of the slipper, picking up a pollen sac along the way, which is deposited in the next orchid. Please do not attempt to transplant.

FLOWER TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Irregular	**Simple**	**Basal**	**Pod**

Pinkladies

Oenothera speciosa

Family: Evening Primrose (Onagraceae)

Height: 8–24" (20–61 cm)

Flower: pink, 2–3" (5–7.5 cm) wide, bowl-shaped, 4 broadly heart-shaped overlapping petals with darker pink veins, shallowly notched on outer edge; yellow center ringed with white; solitary flower attaches directly to each upper leaf junction (axis)

Leaf: lance-shaped or oval, 1–3" (2.5–7.5 cm) long, smooth margin, shallowly toothed or deeply cleft pointed lobes; multiple stems

Fruit: slim green pod, turning brown, ½–1" (1–2.5 cm) long, club-shaped, 4-sided, lengthwise grooves

Bloom: summer

Cycle/Origin: perennial; non-native

Habitat: dry soils, disturbed sites, lawns, fallow fields, sun

Range: throughout the Carolinas, except in the western mountainous counties

Notes: Also called Showy Evening Primrose, for the delicate-looking, shell-pink flowers. Despite its fragile appearance, the plant is fairly heat and drought tolerant. Although in the Evening Primrose family, the flowers are open only in daylight and are pollinated by day-flying insects. Originating in Mexico and the Southwest, this pretty bloom is widely cultivated and has naturalized over much of the southern U.S. Spreads by creeping roots. Can be invasive, overtaking gardens.

FLOWER TYPE	LEAF TYPE	LEAF TYPE	LEAF ATTACHMENT	FRUIT
Regular	**Simple**	**Simple Lobed**	**Alternate**	**Pod**

Henbit Deadnettle

Lamium amplexicaule

Family: Mint (Lamiaceae)

Height: 6–16" (15–40 cm)

Flower: round cluster, 2–3" (5–7.5 cm) wide, of 4–5 pink-to-purple flowers; each flower, 1" (2.5 cm) long, made up of 1 dark pink, hairy, protruding upper lobe and 2 light pink lower lobes with dark rose spots

Leaf: rounded or fan-shaped, lobed, 1" (2.5 cm) wide, 5 lobes, bluntly toothed, green with purple edges, upper surface very wrinkled; upper leaves stalkless, attaching just below flowers; lower leaves stalked; square hollow green stem with purplish base

Bloom: spring, summer

Cycle/Origin: annual, biennial; non-native

Habitat: dry soils, old fields, disturbed sites, parks, sun

Range: throughout

Notes: Like other members of the Mint family, the flower of Henbit Deadnettle looks somewhat like a tiny orchid. Unlike other mints, its leaves and stems do not have the characteristic minty fragrance when crushed. Introduced from Europe and the Mediterranean to the southern states for erosion control, this short plant has become an invasive weed throughout the United States. It can grow plantlets from pieces of the stem, thus when it is tilled under with the soil, it often forms large populations that cover entire fields with a colorful pink carpet of flowers.

CLUSTER TYPE **Round** | FLOWER TYPE **Irregular** | LEAF TYPE **Simple Lobed** | LEAF ATTACHMENT **Opposite**

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GLOSSARY

Alternate: A type of leaf attachment where the leaves are singly and alternately attached along the stem, not paired or in whorls.

Annual: A plant that germinates, flowers and sets seed during a single growing season and returns the following year only from seed.

Anther: A part of the male flower that contains the pollen.

Axil: The angle formed between a stem and a leafstalk.

Axis: A point on the main stem from which lateral branches arise.

Basal: Leaves at the base of a plant, near the ground, usually grouped in a round rosette.

Bell flower: A single downward-hanging flower with petals fused together that form a bell-like shape.

Berry: A fleshy fruit containing one or many seeds (e.g., a grape or tomato).

Biennial: A plant that lives for only two years, and blooms in the second year.

Bract: A leaf-like structure usually found at the base of a flower, often appearing as a petal.

Bulb: A short, round, underground shoot used as a food storage system, common in the Onion family.

Calyx: The name for the collective group of all of the sepals of a flower.

Cauline: Leaves that attach to the stem distinctly above the ground, as opposed to basal leaves that attach near the ground.

Clasping: A type of leaf attachment where the leaf base partly surrounds the plant's main stem at the point of attachment; the leaf grasps the stem without a leafstalk.

Cluster: A group or collection of flowers or leaves.

Composite flower: A collection of tiny flowers that appear as one large flower. Usually made up of ray and disk flowers, pertaining to members of the Aster family (e.g., common daisy).

Compound leaf: A single leaf composed of a central stalk and two or more leaflets.

Coniferous: Plants that do not shed their leaves each autumn (e.g., pine and spruce).

Corm: A short, thickened, vertical, underground stem used to store food.

Deciduous: Plants that shed their leaves each autumn (e.g., maples and oaks).

Disk flower: The small tubular flowers in the central part of a composite flower in the Aster family, such as the center of a daisy.

Ephemeral: Lasting for only a short time each spring.

Flat cluster: A group of flowers that form a flat-topped structure, which enables insects to easily land and thereby complete pollination; exhibited by plants of the Carrot family (e.g., Queen Anne's Lace).

Gland: A tiny structure, usually secreting oil or nectar, sometimes found on leaves, stems, stalks and flowers, such as in Gumweed.

Irregular flower: A flower that does not have the typical round shape, usually made up of 5 or more petals that are fused together in an irregular shape (e.g., pea or bean flower).

Leaflet: One of many leaf-like parts of a compound leaf. A compound leaf is made up of two or more leaflets.

Lip: The projection of a flower petal, or the "odd" petal, such as the large inflated petal of an orchid; may also refer to the lobes of a petal.

Lobed: A simple leaf with one or more indentations (sinuses) along its edge that do not reach the center or base of the leaf, (e.g., dandelion or oak leaf).

Margin: The edge of a leaf.

Mycorrhiza: A mutually beneficial relationship between a fungus and the root system of a plant.

Node: The place or point of origin on a stem where leaves attach (or have been attached).

Opposite leaves: A type of leaf attachment where the leaves are situated directly across the stem from each other.

Palmate: A type of compound leaf where three or more leaflets arise from a common central point which is at the end of a leafstalk, such as in Wild Lupine.

Parasitic: A plant or fungus that derives its food or water chiefly from another plant, to the detriment of the host plant.

Perennial: A plant that lives from several to many seasons, returning each year from its roots.

Perfoliate: A type of leaf attachment where the base of a leaf is connected around the main stem so that the stem appears to pass through the stalkless leaf (e.g., Boneset).

Petal: A basic flower part, usually brightly colored, serving to attract pollinating insects.

Pistil: The female part of a flower made up of an ovary, style and stigma, often in the center of a flower.

Pod: A dry fruit that contains many seeds (e.g., a pea pod).

Pollination: The transfer of pollen from the male anther to the female stigma, resulting in the production of seeds.

Ray flowers: One of many individual outer flowers of a composite flower in the Aster family (e.g., a single petal of a daisy flower).

Regular flower: A flower with 3–20 typical petals arranged in a circle.

Rhizome: A creeping, underground, horizontal stem.

Rosette: A cluster of leaves arranged in a circle, often at the base of the plant, as in Common Mullein.

Round cluster: A group of many flowers that form a round structure, giving the appearance of one large flower.

Saprophytic: A plant or fungus that lives on dead organic (plant) matter, neither parasitic nor making its own food (e.g., Indian Pipe).

Seed head: A group or cluster of seeds.

Sepal: A member of the outermost set of petals of a flower, typically green or leafy but often colored and resembling a petal (e.g., lily).

Sheath: A tubular leaf-like structure that surrounds the stem (e.g., Spotted Coralroot).

Simple leaf: A single leaf with an undivided or unlobed edge.

Spadix: A highly specialized, thickened spike with many small flowers that are crowded together (e.g., Jack-in-the-pulpit). See spathe.

Spathe: A large, usually solitary, petal-like bract often enclosing a group of flowers, such as a spadix (e.g., Jack-in-the-pulpit). See spadix.

Spike cluster: Many flowers on a single spike-like stem, giving the appearance of one large flower.

Spur: A hollow, tube-like appendage of a flower, usually where nectar is located (e.g., Jewelweed).

Stamen: Collectively, the male parts of a flower consisting of an anther and filament.

Stem leaf: Any leaf that is found along a plant's stem, as opposed to a leaf at the base of a plant (basal). See cauline.

Stigma: The female part of the flower that receives the pollen.

Stipules: A pair of basal appendages of a leaf, not attached to the leaf blade.

Stolon: A creeping stem on the surface of ground (e.g., Creeping Charlie).

Toothed: The jagged or serrated edge of a leaf, resembling the teeth of a saw.

Tube flower: Similar to a bell flower with fused petals that form a tube, usually turned upward, not hanging downward.

Whorled: A circle or ring of three or more similar leaves, stems or flowers originating from a common point.

Wing: A flat extension at the base of a leaf or edge of a leafstalk, sometimes extending down the stem of the plant.

Woody: Stems that are hard and brown, usually with bark; not a soft green stem.

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About the Authors

Nora Mays Bowers is a writer and a member of the North American Nature Photography Association. Rick Bowers is a naturalist and a writer, and he has been a nature photographer for more than 40 years. The Bowers' credits include magazines, calendars, and books on cacti, mammals and wildflowers.

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