

The Journal of the South Carolina Native Plant Society



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Joining or Renewing: Some Critical Points

The membership management system is designed to **enable interested people to join** the Society and to **renew** their membership; to enable the Society to **generate mailing and e-mail lists**; and to **identify member interests**. This system is run by **skilled volunteers**. The member information is maintained and updated in an Excel spreadsheet that is stored safely off-line. This database information is distributed only to a small list of responsible officers. The system recognizes that not everyone has access to, or interest in, computer communication. Thus, we make available an **on-line membership application and renewal feature**, as well as **paper forms that serve the identical purpose** (www.scnps.org and click **Membership**). The paper forms can be downloaded and printed for use.

Application and renewal forms have to find their way to the appropriate Society officers. A paper form should be mailed (with check for

continued next page

The Asters of South Carolina

Bill Stringer

The milkweeds have faded, the sunflowers are waning, the grasses are blooming, when there comes a burst of blue tints on the roadside, or in the forest edges. What is it? It is the growing season's parting shot, the asters! Just when we think the season is over, the asters come on to bring down the curtain on the growing season. Asters, the star flowers, the namesake genus for a large, diverse family of flowering plants, the *Asteraceae*.

Once upon a time, South Carolina was blessed with 36 species in the genus *Aster*, beautiful plants every one. Back then, you were most likely an *Aster* if you were a perennial herbaceous forb, with rhizomes, composite flowers, and numerous white to blue ray flowers. Fortunately all those species are still here, but are traveling under other names now. Thanks to morphological (physical characteristics), cytological (chromosome numbers) and molecular (DNA) analyses done during the 80's and 90's, the North American *Aster* genus has been dismembered, and the species distributed among ten genera. The asters of our state are now found in six genera. We can still use aster in the common names as before, but go to any up-to-date flora book or website for our region, and you won't find many species with the genus name *Aster*. There are only two surviving members of the genus *Aster* in all of North America, and they are not found in our region. So in this article Aster refers to an "expired" genus name, while aster will be part of a common name.

See *Asters* on pg 4

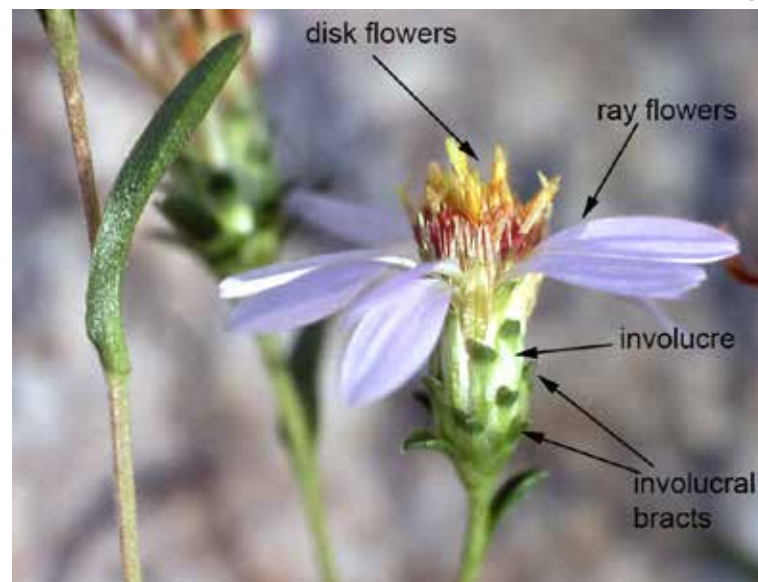


Figure 1. Important parts of a typical aster flower head.

Note: involucre bracts are also called phyllaries. Photo courtesy of JC Semple at <http://www.science.uwaterloo.ca/~jcsemple/Eurybia.htm>.

dues) to the address supplied on the form. The on-line forms can be filled out and submitted on-line, at which point you are referred to a secure Pay-pal webpage, where payments can be submitted electronically. **Renewals are due in January of each year.**

The forms and payment must arrive at the desk of the officers who maintain the membership system. The **forms with contact and interest information** must reach the **database manager**, who maintains the membership data in an Excel spreadsheet. The database manager has volunteered for this important job. His/her role is to **accurately** enter each member's contact and interest information into a unique row in the Excel spreadsheet. Because we are becoming a large organization, and because this person has a **personal life to maintain**, in addition to their volunteer effort, all of us owe it to this person to make our individual forms as easy to work with as possible. This means that you should **always remember to check Renewal on the paper form if you are a renewing member.** And you should always strive to **write as legibly as possible.** Maybe your spouse can read your hen-scratching, but a stranger on the opposite end of the state may not be able to. If you join or renew through the website, the legibility issue is avoided. There are **separate forms** for new members and member renewals on the website, **so you must check to be sure you have selected the correct form.** New members receive a **new member welcome**

packet, so if your **new member** submits a **renewal form**, he/she may not receive this packet.

The dues payment must go to the desk of another volunteer, the **Society treasurer**, who maintains our money accounts. If you join or renew via a paper form, your form and check should be mailed to the PO address supplied on the form. Here it will be separated into **member form** and **payment**, and those will be mailed to database manager and the treasurer, respectively. If you **join or renew on-line**, the data form and the payment are automatically sent to the appropriate officers for processing.

If all goes well, you will be assured of receiving newsletters, event schedules, etc., dependably. If the member data person incorrectly interprets your hieroglyphics, you won't get your mail, and the Society **gets it back at the post office** with a significant **bill to be paid** on each returned piece. If you are **away from your mailing address for extended periods**, and your mailbox fills up, we also get your mail back with a returned mail bill. So please make arrangements to have your mail forwarded or otherwise picked up.

If we are all careful to do our part in this process, the job of the responsible officers is easier, you get your mail in dependable fashion, and we all have more time to get out into nature and enjoy our important clients, our wonderful native communities.

The Plight of the Honey (and other) Bees

Bill Stringer, SC Native Plant Society

We are seeing a surge of reporting on the plight of honey bees and native bees that serve as pollinators for many of our food crops. Most vegetable, berry and tree fruit crops depend on bees to carry out the pollination required for producing the tomatoes, blueberries and apples, etc. that we eat. What can we, as rural and urban homeowners, do to help stem this decline?

The populations of these important facilitators of food crop production are plunging due to a number of causes, some identified, and some still clouded in mystery. Pest mites, fungal and bacterial diseases, and certain insecticides that are widely used to control crop pests have all been implicated. Another factor with potential to have large negative effects is the current increasing reliance by farmers on wind-pollinated crops such as corn and wheat. These plants rely on wind to spread their pollen, and thus don't produce nectar that bees harvest for energy and honey production. Areas with a large proportion of the crop acreage devoted to these wind-pollinated crops will have a low value as bee habitat.

But most of us are not farmers, so we don't make decisions on which crops to grow, or which pesticide to use on millions of acres. So what can we do? A lot, it turns out. You probably have white clover in your lawn; most lawns do. Ever notice all those bees flying around the clover flowers when you are mowing? They are after the nectar and pollen



Honeybee on white clover (*Trifolium repens*).

from those flowers, and are very happy to find your “weedy” white clover. Yet a significant number of home owners apply an herbicide to their lawn in a futile effort to eradicate the clover. My suggestion?: leave the clover, and supplant the pride in a uniform, dark green grass lawn with the knowledge that you are helping our great friends the pollinators. You might say, “Well, I don’t have a vegetable garden, so why do I need bees?” It turns out that honeybees will easily fly as far as 3 miles in search of pollen and nectar. So you can help feed bees from across town. And your berry-bearing shrubs that songbirds congregate on in winter? They need bees as well.

Another easy thing we can do is to not be so quick to mow our “edges” to control “unsightly” flowering plants that grow there. Managers of roadside rights-of-way can make a huge contribution by reducing the frequency of mowing roadsides. I am an ardent admirer of native sunflowers, milkweeds and other wildflowers that grow naturally on our roadsides. In particular, by early July, I know where every butterfly milkweed plant can be found along the roads that I frequent. If you’ve ever looked closely at a milkweed or sunflower in bloom, you’ve seen how many honeybees, native bees and butterflies are working the flowers. Yet, two to three times during a growing season, I will travel those roads, and note with sadness that the mowers were there yesterday, and all those blooms are gone. Where are those bees going to find a replacement food source for today? With luck they can find a white clover lawn nearby? Well, maybe not. We could reduce the number of mowings, reduce the cost of right-of-way maintenance, and improve the lives of our pollinator friends. NOTE: For a lot more information on how we can improve the lives of our pollinator friends, see [Attracting Native Pollinators: Protecting North America’s Bees and Butterflies](#), by the Xerces Society (ISBN 978-1-60342-695-4).

Other bees, such as native bumblebees, carpenter bees, and others also serve as important pollinators. So you discover that carpenter bees are drilling holes in your wood railings and porch furniture. Should you rush to get the aerosol insecticide? Ask yourself, have you ever seen a porch rocker fall apart because of bumblebee drilling? I have been around a while, and I have yet to see it.

The point is, we need to expand our horizons, and evolve our esthetic, to make room for more wildflowers in our surroundings. We will be helping to support bees and other pollinator insects, and where there are more insects there will be more songbirds. So, here’s a challenge for you: next summer, stop along a country road (find a safe pull-over spot), step off the road shoulder, and take a few minutes to look (closely) at the plants growing on the edges (beyond the mowed grass). You will find there are lots of different forb species growing there. And if they are blooming, you will see lots of bees and other insects working the flowers. There is authentic beauty to be found in this natural diversity, and in the knowledge that we can improve the functioning of the ecosystems that surround us, by doing nothing at all!



Honeybee on butterfly milkweed (*Asclepias tuberosa*)



Native bees on dandelions



Bumblebee on leadplant (*Amorpha canescens*).

(Asters, from page 1)

The asters are all members of the *Asteraceae* family, along with the sunflowers and numerous other flowering plant groups. They have composite flowers, with the same ray and disc flowers, involucre, and phyllaries that we found in the sunflowers (see summer 2013 issue). We will examine our asters briefly, and will present the new scientific name for each one, to make it easier to find information on them in the new crop of flora texts that are coming onto the scene. We will examine the members of *Eurybia*, *Ampelaster*, *Ionactis*, and *Symphyotrichum* that are found in South Carolina. These genera are generally lavender to blue or violet in color, but a few species have white flowers. There are a few asters in the genera *Doellingeria* and *Sericocarpus*, the white-topped asters, but we will save these for another time.

The photos are selected to show distinctive characters of the species, such as leaves, stems and flower heads. The terms used in the descriptions are identified in Figure 1 and 2. I am very grateful to several photographers and websites for the use of their images.



Figure 2. A typical aster caudex, the woody stem base, from which roots and shoots originate. Photo courtesy of Dan Tenaglia & <http://www.missouri-plants.com>.

Only one species in the genus *Ampelaster* is found:

Ampelaster carolinianus climbing aster: Woody, viny perennial shrub; from rooting stems; deciduous (appears evergreen from new fall, winter growth). Leaves basal and cauline, alternate, sessile, margins entire. Involucres bell-shaped; Phyllaries spreading, reflexed. Rays 30+, rose-purple to pink, 1.5 to 2.5 cm; Disk flowers yellow to rose-purple. Coastal counties, open marshy or wet sites.

Eurybia. There are 9 *Eurybia*'s found naturally occurring in our State:

Eurybia avita Alexander's rock aster: Herbaceous perennial; stems 1 to 1.5ft., from short rhizomes. Leaves basal and cauline, long, narrow, sessile or petiolate, bases clasping. Involucres bell-shaped; Phyllaries 4 to 5 series,

appressed or reflexed. Rays 8 to 20, white to violet, 0.5 to 1.0 cm; Disk flowers yellow. Piedmont counties, along edges of rock outcrops.

Eurybia chlorolepis mountain aster: Herbaceous perennial, stems 1 to 3 ft., from long rhizomes. Leaves basal and cauline, petiolate, sharply serrate. Involucre bell-shaped; Phyllaries ovate, in 4 to 5 series, not glandular. Rays 8 to 16, white to lilac, 1.5 to 2.0 cm; Disk flowers yellow, turning purple. Mountain counties, high elevation mixed forest sites.

Eurybia compacta slender aster: Herbaceous perennial, stems 1 to 2.5 ft., in clumps from thickened caudex. Leaves basal and cauline, thickened, scabrous, clasping, margins serrate. Involucres round to bell-shaped, Phyllaries 24 to 30 in 4 – 5 series, reflexed, ovate. Rays 5 to 20, blue, violet to lavender, 0.5 to 1.0 cm; Disk flowers pale yellow, turning purple. Lower piedmont to coastal counties, dry sandy woodland sites.

Eurybia divaricata white wood aster: Herbaceous perennial, stems 24 – 48“, from long woody rhizomes. Leaves basal and cauline, petiolate, cordate, serrate, with glandular hairs on veins. Involucres round to bell-shaped; Phyllaries 25-30 in 4 – 5 series; purple at tips. Rays 5 to 10, white, 0.5 to 1.2 cm; Disk flowers yellow, turning purple. Piedmont counties; dry to mesic sites in open forests and edges.

Eurybia macrophylla bigleaf aster: Herbaceous perennial, stems up to 4 ft., glandular, in dense clumps from branched rhizomes. Leaves basal and cauline; thick, serrated, petiolate. Involucres broadly bell-shaped; Phyllaries up to 35 in 5-6 series, purple tinged. Rays 9 to 20, white to purple, 1.0 to 1.5 cm; Disk cream colored going to purple. Upper piedmont counties, open hardwood forest, moist shady edges.

Eurybia mirabilis bouquet aster: Herbaceous perennial, stems 2 to 4 ft., not in clumps, from coarse, woody rhizomes. Leaves basal and cauline, serrate, scabrous on bottom. Involucres bell shaped; many in 5 to 7 series, oblong. Rays 7 to 15, white to lavender, 1.0 to 1.5 cm; Disk pale yellow going to purple. Piedmont and Sandhills counties, on circum-neutral soil sites.

Eurybia paludosa southern swamp aster: Herbaceous perennial, stems 1 to 3 feet, in clumps from rhizomes, reddish. Leaves basal and cauline, long, narrow, firm, scabrous, petiolate; Involucres bell-shaped; Phyllaries 40 to 60 in 4 - 5 series, dark green, leaf-like. Rays 15 to 30, deep lavender to purple, 1.5 to 2.0 cm; Disk yellow. Coastal plains counties, margins of ponds and marshes

Eurybia spectabilis eastern showy aster: Herbaceous perennial, stems 1 – 3 ft., from ends of rhizomes and old stem bases. Leaves basal and cauline, firm, reticulate veins, serrate. Involucres bell-shaped; Phyllaries 30 – 70, in 5 – 6 series, oblong to spatulate. Rays 15 – 30, violet to purple, 1.5 to 2.5 cm; Disk yellow. Lower piedmont & sandhills counties; sandy dry soils, granite outcrops.

Eurybia surculosa creeping aster: Herbaceous perennial, stems 1 to 3 ft., clumps from slender scaly rhizomes. Leaves basal and cauline, firm, scabrous, petioles short-winged to absent. Involucres slightly bell-shaped; Phyllaries 30 – 60 in 4 to 5 series, oblong, tips spreading. Rays 10 to 30, blue to violet, 1.0 to 1.6 cm; Disks pale yellow turning to purple. Coastal plains and mountain counties, mesic sandy soils, open woods and edges.

Only one species in the genus ***Ionactis*** is found:

Ionactis linariifolius Stiff-leaved aster: Herbaceous perennial, stems erect, 6 to 18 inches, from taproot. Leaves cauline, sessile, narrow-linear, stiff. Involucres bell-shaped; Phyllaries in 2 to 6 series, appressed, linear. Rays 7 to 21; violet to bluish, sometimes white, 1.0 to 2.0 cm; Disk flowers yellow. Coastal plains and upper piedmont counties; dry-mesic woods edge sites.

Symphotrichum is the largest genus of asters in South Carolina:

Symphotrichum concolor eastern silver aster: Herbaceous perennial, stems 1 to 3 ft.; several arising from a woody, corm-like crown. Leaves greenish gray, sessile, silky hairy, upper leaves appressed to stem. Involucres narrowly bell-shaped, Phyllaries in 3 to 5 series; lanceolate-oblong, appressed. Rays 8 to 12, rose-purple, 1.0 to 2.0 cm; Disk pink turning to purple. Distributed throughout the State, mesic to dry soils; roadsides and old fields.

Symphotrichum cordifolium common blue wood aster: Herbaceous perennial, stems 1 to 4 ft., in clumps from branched rhizomes, reddish, glabrous. Leaves thin, margins serrate, ovate with chordate bases, petiolate. Involucres cylindrical; Phyllaries in 3 to 6 series, linear-lanceolate, often red tipped. Rays 10 to 16, lavender to purple, 0.8 to 1.2 cm; Disk cream colored turning to purple. Mostly in upper piedmont counties; mesic loamy to rocky soils, open forests, stream banks.

Symphotrichum dumosum rice button aster: Herbaceous perennial, stems 1.5 to 4 ft., in clumps from long thick rhizomes. Leaves cauline, firm, scabrous, with axillary leaf clusters, petioles. Involucres cylindrical to bell-

shaped; Phyllaries in 4 to 6 series, oblong, slightly spreading. Rays 15 to 30, pale blue to white, 0.5 to 1.0 cm; Disk pale yellow turning to pink. Found throughout state, in moist soils in open woods to open lowland sites.

Symphotrichum elliotii Marsh American-Aster: Herbaceous perennial, stems 2 to 5 ft., from long rhizomes, sometimes purplish. Leaves firm, elliptic serrate, with long petioles. Involucre narrow bell-shaped; Phyllaries in 5 to 6 series, linear, spreading. Rays 25 to 50, pink to lavender, 0.5 to 1.5 cm; Disk pale yellow to pink to brown. Coastal and mountain counties; found in boggy areas and brackish marshes.

Symphotrichum georgianum Georgia aster: Herbaceous perennial, stems 1.5 to 3 ft., in open colonies from rhizomes, with glandular hairs. Leaves cauline, firm, scabrous, edges revolute, sessile, with glandular hairy margins. Involucres bell-shaped; Phyllaries in 4 to 7 series, oblong, spreading. Rays 12 to 24, deep blue to dark purple, 1.5 to 2.0 cm; Disk white going to purple. Piedmont counties, mesic to dry sandy soils, edge sites.

Symphotrichum grandiflorum large-flower aster: Herbaceous perennial, stems 2 to 3 ft., colonial from woody rhizomes. Leaves cauline, stiff, scabrous, sessile, margins entire, bases cordate. Involucres bell-shaped; Phyllaries 3 to 4 series, spatulate, spreading. Rays 14 to 30, light to reddish purple, 1.5 to 2.5 cm; Disk yellow turning to purple. Sandhills counties, sandy soils, woods edges and road edges.

Symphotrichum laeve smooth blue aster: Herbaceous perennial, stems 1 to 3 ft., glaucous, from short rhizomes with sturdy caudex. Leaves cauline, thick, glaucous, glabrous, ovate, petiolate. Involucres cylindrical to bell-shaped; Phyllaries 4 to 6 series, lanceolate, appressed. Rays 12 to 20, pale blue to dark blue, 0.6 to 1.2 cm; Disk yellow turning to reddish purple. Upper piedmont and sandhills counties, mesic to dry sites, sandy soils.

Symphotrichum lanceolatum white panicle aster: Herbaceous perennial, stems 1 to 4 ft., colonial, from long, thick rhizomes. Leaves cauline, thin, scabrous, blades elliptic, sessile. Involucres bell-shaped; Phyllaries in 4 to 6 series, slightly spreading, linear. Rays 16 to 40, white to pale blue, 0.5 to 1.5 cm; Disk yellow turning purple. Piedmont counties, mesic to wet soils, wetland edges.

Symphotrichum lateriflorum calico aster: Herbaceous perennial, stems 1 to 4 ft., in clumps, from short woody rhizomes and caudex. Leaves cauline, thin, margins serrate, petiolate, blades ovate. Involucres cylindrical to

bell-shaped; Phyllaries in 3 to 4 series, oblong, slightly spreading. Rays 8 to 15, white, rarely pink to purple, 0.5 cm; Disk light yellow, turning reddish purple. Mostly sandhills to coastal plains counties, shady sites (deciduous forests) dry to mesic soils.

Symphotrichum nova angliae New England aster: Herbaceous perennial, stems 2 to 4 ft., clumps from short rhizomes & woody caudex, purplish toward tip. Leaves cauline, thin but stiff, ciliate, sessile, oblong, lanceolate, scabrous. Involucres hemispheric; Phyllaries 3 to 5 series, long, dark green to purple, spreading. Rays 40 to 60, dark rose to deep purple, 0.8 to 1.3 cm; Disk yellow turning to purple. Upper piedmont, rich moist soils along woods edges, marshes.

Symphotrichum novi-belgii New York aster: Herbaceous perennial, stems 1 to 3 ft., colonial to clumpy, from long rhizomes, reddish. Leaves thick, firm, petiolate, blades lanceolate. Involucres bell-shaped; Phyllaries in 3 to 4 series, oblong to linear. Rays 15 to 35, blue to purple, 1.0 to 2.0 cm; Disk yellow turning to reddish-brown. Coastal plains counties, moist sandy to marshy sites.

Symphotrichum patens Late purple aster: Herbaceous perennial, stems 1 to 3 ft., clumpy from woody caudex and long rhizomes, scabrous. Leaves thick, stiff, blades spatulate, winged petioles, bases cordate. Involucres bell-shaped; Phyllaries 4 to 7 series, appressed, lanceolate to linear. Rays 12 to 24, lavender to purple, 1.0 to 2.0 cm; Disk yellow turning to purple. Piedmont and upper coastal plain, mesic soils at woodland borders, old fields.

Symphotrichum phlogifolium thin-leaf late purple aster: Herbaceous perennial, stems 2 to 4 ft., clumpy, soft hairy, from woody caudex (no rhizomes). Leaves thin, sessile to short petioles, hairy to scabrous. Involucre cylindrical; Phyllaries in 4 to 6 series, linear to lanceolate, tips purplish. Rays 9 to 17, reddish purple, 1.0 to 2.0 cm; Disk white with purple lobes. Mountain counties, mesic soils in mixed hardwood forest and edges.

Symphotrichum pilosum hairy white old-field aster: Herbaceous perennial, stems 1 to 4 ft., clumpy, from stout caudex, glabrous to soft hairy. Leaves thin, glabrous with margins hairy, petiolate, blades oblong to lanceolate. Involucre bell-shaped; Phyllaries in 4 to 6 series, appressed, oblong to linear. Rays 16 to 30, white to pale pink, 0.5 to 0.8 cm; Disk light yellow turning to red-purple. Throughout the state, mesic soils in old fields, waste places.

Symphotrichum puniceum purple-stem aster: Herbaceous perennial, stems 3 to 6 ft., clumpy, from short thick rhizomes, hairy, reddish-purple. Leaves dark green, thin, scabrous, petiolate, lanceolate. Involucres bell-shaped; Phyllaries in 4 to 6 series, spatulate, tips spreading, purple tinged. Rays 20 to 40, blue to purple, 1.2 to 1.8 cm; Disk yellow turning to purple. Piedmont to sandhills counties, wet to marshy sites.

Symphotrichum racemosum smooth white old-field aster: Herbaceous perennial, stems 1.5 to 3 ft., clumpy from long rhizomes and woody caudex. Leaves cauline with leaf clusters in axils, thin, scabrous, petiolate, blades elliptic. Involucres cylindrical; Phyllaries in 4 to 6 series, oblong to lanceolate, appressed. Rays 16 to 20, white to pink, 0.5 to 0.8 cm; Disk pale yellow turning to pink or red. Outer coastal plain, marshy to brackish sites.

Symphotrichum subulatum eastern annual saltmarsh aster: Herbaceous annual, stems single, 1 to 4 ft., from taproots, reddish-purple. Leaves thin, glabrous, cauline, sessile. Involucres cylindrical; Phyllaries in 3 to 5 series, lanceolate, appressed, purple tinged. Rays 16 to 30, white to lavender, 0.1 to 0.3 cm; Disk yellow. Outer coastal plain, brackish marshes.

Symphotrichum tenuifolium perennial saltmarsh aster: Herbaceous perennial, stems 2 to 3 ft., clumpy from rhizomes, glabrous, purple. Leaves thick, entire, ovate, sessile. Involucres narrow, turbinate; Phyllaries 4 to 5 series, lanceolate, appressed, tinged with purple. Rays 10 to 24, white to pink, 0.5 to 1.0 cm; Disk yellow turning purple. Outer coastal plain, brackish marshes.

Symphotrichum undulatum wavy-leaf aster: Herbaceous perennial, stems 1 to 4 ft., clumpy from short rhizomes and woody caudex. Leaves thin, with tiny hairs on bottom, scabrous on top, purplish petioles. Involucres bell-shaped; Phyllaries 4 to 5 series, oblong, appressed. Rays 12 to 16, blue to purple, 0.5 to 1.2 cm; Disk light yellow becoming purple. Statewide, dry to well-drained soils in open forest or edges.

Symphotrichum urophyllum white arrowleaf aster: Herbaceous perennial, stems 1.5 to 4 ft., clumpy from short rhizomes & woody caudex, upper stem hairy. Leaves hairy on bottom, glabrous on top, serrate, petiolate. Involucre cylindrical; Phyllaries in 4 to 6 series, recurved-spreading, lanceolate, tips purple. Rays 8 to 15, white to pale pink, 0.5 to 1.0 cm; Disk cream colored turning to pink. Dry to mesic, stony or limestone sites, very open forest or edges.

Symphotrichum walteri Walter's aster: Herbaceous perennial, stems 1 to 3 ft., colonial from long rhizomes and corm-like caudex. Leaves bright green, thick, firm, very short, triangular, sessile. Involucres bell shaped; Phyllaries in 4 to 5 series, oblanceolate, scabrous. Rays 10 to 26, blue to purple, 0.5 to 1.0 cm; Disk yellow. Coastal plains, on clay soils, open pine-oak scrub, fields, roadsides.

So there they are, the asters of our State. Beautiful, resourceful summer to mid-autumn bloomers in white, lavender, pink, blue or purple. Growing in wet to mesic to dry sites on roadsides, rights-of-way and woods edges. Coming soon to a roadside near you. Be sure you get out to see the show!



Mountain aster (*Eurybia chlorolepis*). Photo courtesy of MW Denslow at <http://www.flickr.com/photos/one-bilwa-leaf/3798947281/in/photostream/>



Climbing aster (*Ampelaster carolinianus*). Photo courtesy of Mary Keim at <http://www.flickr.com/photos/> & <http://www.mtcubacenter.org/plant-finder>

Slender aster (*Eurybia compacta*). Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/plants.htm>



Alexander's rock aster (*Eurybia avita*). Photos courtesy of JC Semple at <http://www.science.uwaterloo.ca/~jcsemple/Eurybia.htm> & PD McMillan at www.namethatplant.net

White wood aster (*Eurybia divaricata*). Photos courtesy of Ellen Honeycutt (<https://www.blogger.com/profile/00063791602271573091>) & NC Native Plant Soc. <http://www.ncwildflower.org/>



Bigleaf aster (*Eurybia macrophylla*). Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/aster.htm>



Dwarf aster (*Eurybia mirabilis*). Photo courtesy of Wes Burnett at www.namethatplant.net



Southern swamp aster (*Eurybia paludosa*) Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/aster.htm>



Eastern showy aster (*Eurybia spectabilis*). Photos courtesy of Thomas H. Kent at http://www.florafinder.com/Species/Eurybia_spectabilis.php



Creeping aster (*Eurybia surculosa*). Images courtesy of <http://jimmccormac.blogspot.com/2007/09/two-cool-asters.html>



Stiff-leaved aster (*Ionactis linariifolius*). Photos courtesy of John Gwaltney at <http://www.southeasternflora.com/>



Eastern silver aster (*Symphyotrichum concolor*). Photos courtesy of John Gwaltney at http://www.southeastern-flora.com/species_list.asp



Blue wood aster (*Symphyotrichum cordifolium*). Photos courtesy of Thomas H. Kent at http://www.florafinder.com/Species/Symphyotrichum_cordifolium.php



Rice button aster (*Symphyotrichum dumosum*). Photos courtesy of Arieh Tal at http://www.nttlphoto.com/botany/asters-goldenrods/Asters/Symphyotrichum/Dumosum/s_dumosum.htm



Marsh American aster (*Symphyotrichum elliotii*). Photos courtesy of floridanatives & Mary Keim



Georgia aster (*Symphyotrichum georgianum*) Courtesy of Karin Hicks (Southern Meadows), and Jim Allison at <http://www.jimbotany.com/>



Smooth blue aster (*Symphyotrichum laeve*). Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/aster.htm>



Big-flowered aster (*Symphyotrichum grandiflorum*). Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/aster.htm>



White panicle aster (*Symphyotrichum lanceolatum*). Photo courtesy of Thomas H. Kent at http://www.florafinder.com/Species/Eurybia_spectabilis.php



Calico aster (*Symphyotrichum lateriflorum*).
Photos courtesy of John Gwaltney at http://www.southeasternflora.com/species_list.asp



New England aster (*Symphyotrichum novae angliae*).
Photos courtesy of John Gwaltney at http://www.southeasternflora.com/species_list.asp



New York aster (*Symphyotrichum novi-belgii*).
Photos courtesy of Thomas H. Kent at http://www.florafinder.com/Species/Symphyotrichum_novi-belgii.php



Late purple aster (*Symphyotrichum patens*)
Photos courtesy of Jim Allison at <http://www.jimbotany.com/> and John Gwaltney at http://www.southeasternflora.com/species_list.asp



Thin-leaf purple aster (*Symphyotrichum phlogifolium*).
Photo courtesy of Birder20714 at <http://www.flickr.com/photos/26803925@N05/10628061245/in/photostream/>



Smooth white oldfield aster (*Symphiotrichum racemosum*) . Photo courtesy of David G. Smith at <http://www.delawarewildflowers.org/index.php>



Hairy white oldfield aster (*Symphiotrichum pilosum*). Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/aster.htm>



Eastern annual saltmarsh aster (*Symphiotrichum subulatum*). Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/aster.htm>



Purplestem aster (*Symphiotrichum puniceum*). Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/aster.htm> .



Perennial saltmarsh aster (*Symphyotrichum tenuifolium*).
Photo courtesy of John Gwaltney at http://www.south-easternflora.com/species_list.asp
and Arie Tal at <http://www.nttlphoto.com/botany/asters-goldenrods/Asters>



White arrowleaf aster (*Symphyotrichum urophyllum*)
Photos courtesy of Smith, R.W. in LBJ Wildflower Center Digital Library & Rob Curtis at <http://www.inaturalist.org/observations/402141>



Wavyleaf aster (*Symphyotrichum undulatum*). Photos courtesy of Jeffrey Phippen at <http://www.jeffpippen.com/plants/aster.htm>



Walter's aster (*Symphyotrichum walteri*). Photos courtesy of Jean Everett, PhD, College of Charleston.

Descriptive information on all species from http://www.efloras.org/volume_page.aspx?volume_id=1019&flora_id=1

Southeasternflora.com: A Practical Resource for Native Plant Identification

By John Gwaltney, website manager and Chairman, Forestry Suppliers, Inc.

Southeasternflora.com provides a wealth of plant identification information that is both comprehensive and easy to use. Whether you are an amateur or professional, this site is an invaluable resource that is only a mouse click away.

Although there are many informative web sites with good descriptions and photographs to help confirm the identification of a plant, most do not help *identify* the plant in question. Southeasternflora.com was created to help the user to identify their plant specimen.

Originally created to help fill the void of plant identification books in middle and high school libraries, Southeasternflora.com is a valuable resource to help identify native or naturalized plants in the southeastern United States. Started in the summer of 2005, the site database covers more than 1,600 species of trees, shrubs, vines, and herbaceous plants, and contains over 31,000 photographs. And because Southeasternflora.com is a work in progress, new plants and improved photographs are being added to the database as found.

The site contains a section for the identification of the specimen that asks for information about the plant... flower color, plant form, leaf type, leaf arrangement, etc. You can also search for all plants within a family or genus. There is a section that lists all plants on the site by scientific names including currently accepted names as well as synonyms. There is also a list by common names. The glossary section (<http://www.southeasternflora.com/glossary.asp>) helps users define plant forms, leaf arrangements, and leaf types. The reference section lists many published references and links to many well-respected and useful internet sites.

To identify a specimen, start by identifying the flower color. If other information is known, such as plant form, leaf type, or leaf arrangement, answer those questions, and the list of possibilities is reduced further. The site returns a set of thumbnail photographs of all plants that meet the criteria listed by the user. Once a thumbnail that resembles the specimen is found, simply click the thumbnail and the user is taken to the page for that species. On the plant species page, more detailed photographs

will illustrate different parts of the plant. Most species have several views of the flowers from different angles, as well as detailed photos of parts of the flower. Other photos show leaves, leaf parts, stems, stem parts, and sometimes the basal portions of plants.

Another valuable feature is the plant notes section to help further distinguish similar species. These notes may include information about blooming time, the number of flowers in a particular part of the plant, whether a plant has a distinctive fragrance when the leaf is crushed, or some other feature that cannot be photographed or might be missed upon a first inspection.

Professionals who have been extremely helpful in identification of plants and in helping to find new plants are Heather Sullivan, Heritage Botanist and Herbarium Curator with The Mississippi Museum of Natural Science; Charles Bryson, Ph.D. Research Botanist with USDA-ARS (retired); Brian Keener, Ph.D. Associate Professor, University of West Alabama; and Tate Thriffiley, Ecologist with USDA Forest Service, DeSoto National Forest in Mississippi.

NOTE: Keep in mind that it is always a good idea to use several references to confirm the identity of your specimen.

Editor's Note: This website has been the source of many photos used in articles written for this Journal on native plant genera.



Home page

The Art and Science of Growing Native Azaleas in the Southeast

Rick Huffman

In the Southeast, we are blessed to have a large diversity of native azaleas (*Rhododendron* species) to select for our landscapes. These plants are often referred to by old timers as ‘Honeysuckle Azaleas’. In some people’s perspective, our native azaleas are the most gracious and beautiful of our native shrubs. According to native azalea specialist and nurseryman Ernest Koons, III, “Absolutely no other native American plant group compares with the native azaleas in variety and brilliance of color and fragrance, on shrubs large and small with bloom-times from early spring to late summer.” I whole heartily agree with his statement.

But successful selection and planting of native azaleas can often be frustrating for those unfamiliar with the proper planting and maintenance requirements for native azaleas. The educational journey to understand these plants begins with knowing a bit about the family of plants that native azaleas belong. Native azaleas belong to a family called *Ericaceae* or heaths. Also, in this family are Laurels (*Kalmia*), and Blueberries/Huckleberries (*Vacciniums*). The signature requirements for native azaleas are that they are acid loving, need well drained soils, and require low nutrients. This information tells us that site selection and soils are important considerations when selecting a native azalea species for your yard.

There are four basic things to consider when selecting and planting your native azaleas:

- 1) sunlight and shade requirements;
- 2) planting depth;
- 3) soil drainage class; and
- 4) watering regime to establishment.

People often think of native azaleas as shade-loving plants. The truth is they tolerate shade, but thrive in sunny locations that get morning sun and afternoon shade. I often tell our clients to think of them along a woodland edge or as a patio specimen where there is lots of sun.

The second biggest mistake is planting them too deep. They require that 1/4th of the root crown remain above ground level. The root crown is the junction between the stem and the root system. I suggest that folks dig a hole 1 1/2 times as wide as the root ball and only as deep as the root ball depth. This enables the roots to spread laterally, but avoids covering the root crown, which commonly results in crown rot and death.

In the Piedmont, our soils are commonly shallow with a heavy clay subsoil, and thus can be slow to drain. Amend soil with pine bark mulch to a 50/50 consistency of soil to pine bark mulch and back fill the loose medium into the hole and mound soil to the crown. I always recommend that folks use mycorrhizal fungi in the planting medium. The beneficial fungi help recruit nutrients, moisture, and stimulate root production. The product can be purchased on line at www.bioplex.com.

Watering thoroughly means to water to a point of saturation or run off begins, then water at least twice weekly for about six weeks. I usually do not suggest fertilizers but if a person feels the need, I recommend a very small amount of 12-6-6 balanced fertilizer added as leaves begin to emerge.

The species that I feel merit consideration in the upstate are:

Piedmont Azalea	<i>Rhododendron canescens</i> (Pink)	Fragrant	Late March/Mid April
Florida Azalea	<i>Rhododendron austrinum</i> (Orange/Yellow)	Fragrant	April to May
Flame Azalea	<i>Rhododendron candendulaceum</i> (Red/Orange)		May
Plumleaf Azalea	<i>Rhododendron prunifolium</i> (Red/Orange)	Fragrant	May
Pinxter Azalea	<i>Rhododendron periclymenoides</i> (Pink)	Fragrant	April

To be sure that you select species adapted to your locale, go to http://plants.usda.gov/adv_search.html, go to County distribution and type **S** to take you to South Carolina, scroll down to click on your county, enter *Rhododendron* under Genus, select lower 48 under Native status, and then click Display Results. This will give you a list of native azalea species found naturally in your area.

Lowcountry Chapter Progress

The Lowcountry Chapter of the South Carolina Native Plant Society was established in 1999 and is represented by approximately 200 members from Charleston, Berkeley and Dorchester counties. The Chapter is centered in Charleston. The group meets on the third Tuesday evening during the months of September through June for lecture presentations followed by a related field trip on the following Saturday morning. The evening meetings are held at The Citadel in a spacious lecture hall with excellent sound & video capabilities. The refreshments are catered by Fast & French, a downtown Charleston restaurant, presenting delicious offerings of fruit, bread & cheeses as well as a nice offering of other finger foods. We supply wine, juice & soft drinks as well as homemade goodies various members bring from home. We have found out by our members comments that this effort is much appreciated as a small touch to enhance attendance.

Field trips are arranged to coordinate with the lectures and are consistently among the premiere offerings in the Charleston area. The turnout is predictably strong to the point that we are considering dividing some outings into two groups so that those attending can be closer to and interact more with the leader. We have an increasing number of members and guests who are new to native plants, so these field trips are an important instructional tool. The varied professional contacts of our Board members open up a lot of doors to unique properties not otherwise available and certainly add to the appeal of the field trips.

During 2012 /'13 we started to have some joint meetings and field trips with the Charleston Natural History Society (CHNS- Audubon). Both groups have supplied speakers to the effort. There is a certain crossover of memberships; however both groups feel that the partnership may help to induce more people to join the other group as well.

We participated in a field trip & picnic at the CNHS's McAlhany Nature Preserve, a 367 acre tract with one mile of Edisto River frontage. The property is undergoing a multi-year restoration from farmland to native plants & trees. The combined talents of the two groups made for a productive & informative visit. We are supplying a speaker to an upcoming Audubon meeting on the value of home gardening with native plants in attracting birds and butterflies as well as the many other benefits of natives.

The Chapter has fostered excellent relationships with three very special natural areas around Charleston – Magnolia Plantation, Charlestowne Landing and Cypress Gardens. Magnolia has furnished us a scenic trail through varied habitat. We maintain and use the trail to act as a nursery for some of our plant rescue materials as well as a

hands-on experience for our membership. We also provide occasional labor to assist the staff at the plantation as they experience seasonal overload. Magnolia very generously provided facilities for our recent SCNPS state symposium. We have awarded several grants to local communities in support of native plant projects.

Charlestowne Landing is the site of our popular spring & fall plant sales. The sales are not only good fundraisers but also draw new members each time. We have a display garden of natives in the park center which has plant & SCNPS identifying signage. Our members periodically visit the garden for maintenance.

Cypress Gardens has become an interesting involvement for the Chapter. This is a large preserve with acres of natural native plants and offers us a chance to have an association with a site in a rapidly growing area on the outskirts of Charleston. We hope that this involvement will help us grow membership in Dorchester and Berkeley counties.

We participate in recent long range planning sessions for the Francis Marion Forest. We emphasized the need to continue prescribed burns, minimized mowing and preserving native plant areas while still providing habitat for the other varied recreational uses in the forest.

The Laura Matthews Bay is a favorite project for the Chapter. Many of our members contribute work days and also help during managed burns on the Society's very own Carolina bay.

We represent the SCNPS with a display at a variety of nature-oriented events throughout Charleston during the year. Our display offers education, plant identification, hard-to-find botanical books and membership information. We have hosted two statewide SCNPS symposia, and are on tap to host the upcoming one in 2015.

Our membership is growing; our Board is making a concerted effort to involve the group in the many opportunities of membership. We would like to involve members in Chapter leadership as a way of providing a future of fresh thinking and varied presentations through the years.

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