

Pollinator Gardening for Butterflies in the SC Lowcountry



Carolina
Butterfly Society



Tom Austin

Carolina Butterfly Society &
Edisto Island Open Land Trust

Who am I?



That's me!

- A 12th generation Edistonian
- B.S. in Wildlife & Fisheries Biology, Clemson
- Professional Ecologist and Conservationist
 - Edisto Island Open Land Trust
- Avid, expert naturalist
- *Soon to be Author*
- President of the Carolina Butterfly Society
 - Published entomologist
- *A guy who's built some butterfly gardens!*

What is a Butterfly?

- Insects in Order: Lepidoptera
 - Superfamily: **Papilionoidea**
 - Diurnal (out in the day)
 - “Clubbed” Antennae
- Butterflies drink flower nectar
 - Have a coiled proboscis
- Caterpillars eat plants
 - Each species has its own “host” plants that it will eat
 - Metamorphose into butterflies



Little Metalmark *Calephelis virginensis*

How many butterflies are there?

- In the Charleston Area, we have roughly **130** species of butterfly
- There are 6 butterfly families:
 - Swallowtails Papilionidae
 - Sulphurs Pieridae
 - Hairstreaks Lycaenidae
 - Brushfoots Nymphalidae
 - Skippers Hesperidae
 - Metalmarks Riodinidae



Swallowtails

Papilionidae

- 6 local species
 - 8 total in SC; 7 fairly common
- Large to *very-large* in size
- Spread-winged with curved forewings
- Swallow “Tails”
- Floaty, gliding flight
- Most species host on trees and shrubs
 - Black Swallowtail uses several garden herbs



Sulphurs & Whites

Pieridae

- 14 local species
 - 9 reasonably common
- Medium to small in size
- Closed-winged
- Round or triangular shape in profile
- White, yellow, or orange colored
- Most host on legumes or small herbs



Falcate Orangetip



Sleepy Orange



Checkered White



Great Southern White



Little Yellow

Cloudless Sulphur

Hairstreaks

Lycaenidae

- 21 local species
 - 18 reasonably common
- Small to *very-small* in size
- Closed-winged
- Triangular shape in profile
- Most gray or brown below
 - Many have orange markings
- Many males are iridescent blue above
- Host on all manner of plants
 - Some very specialized



Great Purple Hairstreak



Eastern Pygmy Blue



Juniper Hairstreak



Summer Azure



Red-banded Hairstreak



Eastern Tailed Blue

Brushfoots

Nymphalidae

- 31 local species
 - 29 reasonably common
- Very diverse in size, shape, color, appearance, and behavior
 - Range in size from small to large
 - Open and closed-winged
- All perch on just four feet
- Host on all manner of plants
- Monarchs, Satyrs, Fritillaries, Buckeyes, Snouts, Crescents, Admirals, Ladies, Punctuations...



American Lady



Gulf Fritillary



White Peacock



Intricate Satyr



Monarch



Common Buckeye



Pearl Crescent



Red-spotted Purple



Zebra Longwing

Skippers

Hesperiidae

- 56 local species
 - 37 reasonably common
- Our most diverse family by far
- Medium to *very-small* in size
- Open and closed-winged
- Wedge shape in profile
 - Small, triangular wings
- Fast flying and compact
- Host on all manner of plants
 - Many host on grasses & legumes



Delaware Skipper



Horace's Duskywing



Long-tailed Skipper



Whirlabout Skipper



Lace-winged Roadside-Skipper



Silver-spotted Skipper



Southern Cloudywing



Southern Skipperling

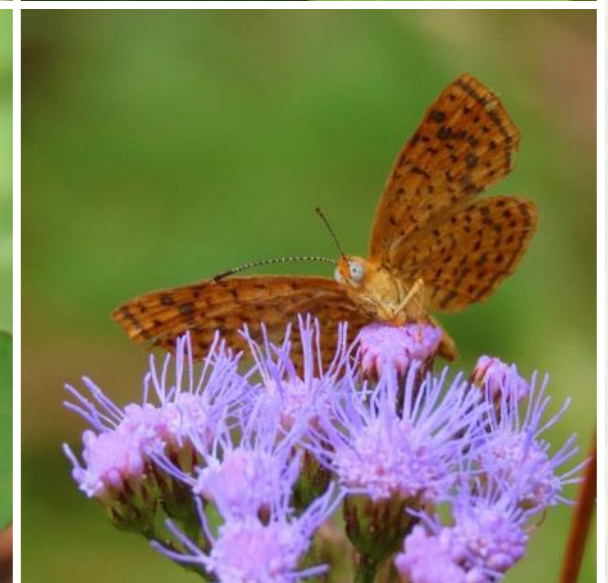


White Checkered-Skipper

Metalmarks

Riodinidae

- Only 1 species in South Carolina
 - Little Metalmark *Calephelis virginiensis*
 - Uncommon to find
- Very small, spread-winged
- Rusty-orange color
- Black “cobweb” pattern above
- Reflective, metallic-silver bands on outer edge of wings
- Hosts mainly on Yellow Thistle *Cirsium horridulum*



Little Metalmark *Calephelis virginiensis*

Migratory Tropicals vs. Sedentary Residents

TROPICAL MIGRANT BUTTERFLIES

- Main populations in Florida, etc.
 - Fly further north each generation
 - Arrive in late-summer or fall
- Make pit-stops at nectar plants
 - Can establish short-term local populations after a mild winter

Cloudless Sulphur, Ocola Skipper, Long-tailed Skipper, Gulf Fritillary, Zebra Longwing, etc.

Monarchs return to tropics; other species don't

RESIDENT BUTTERFLIES

- Local habitat drives populations
 - More consistent each year
 - May spread radially in summer/fall
- Need local host and nectar plants
 - Some very specialized
- Variable flight times; Spring

Swallowtails, Pearl Crescent, Carolina Satyr, Great Purple Hairstreak, Red-spotted Purple, Little Metalmark, Horace's Duskywing, etc.

Common Buckeye



Gulf Fritillary



Spicebush Swallowtail

Red-spotted Purple

Butterfly Life History

- Each species of butterfly has its own unique life history
 - Many specialize on one specific genus or group of host plants
- Caterpillars eat leaves
- Adult butterflies drink nectar
 - They also look for other butterflies and for plants to lay eggs on
- A **butterfly garden** needs nectar **AND** host plants to thrive

Why Garden for Butterflies?

Because they're neat to look at ... *duh!*



- But also, many butterflies are indicator species
 - Easy to see & ID, linked to certain plants, respond quickly to changes
 - Sensitive to insecticides, habitat quality, predator populations, and weather/climate
- Butterflies provide food for wildlife and some control weeds

General Garden Considerations

- *Diversify habitat!*
 - The more diverse conditions you have, the more plant variety you can support
 - **More plant diversity = more butterfly diversity**
- *Let nature take its course!*
 - If a plant does poorly in your garden, move it and try something else
 - If a plant does well, let it do its thing, let it multiply
 - **Let the plants grow where they want to grow, let them meander**
- *Keep it messy!*
 - Leave behind old stems and leaves, to suppress weeds and promote soil health
 - **Habitat for beneficial insects**, refuge for overwintering caterpillars and chrysalises
- *Bridge the gaps!*
 - Consider the area/neighborhood beyond your garden and what it lacks
 - **Within your garden, focus on providing what local butterflies need**
- *Have fun with it!*

Pesticides and Pollinator Gardens

- Insecticides are designed and formulated to **kill insects that eat plants**
- **Butterflies are insects that eat plants**
 - The caterpillars of a few butterfly species are agricultural pests
 - **MOST INSECTICIDES WILL EASILY KILL YOUR BUTTERFLIES**
- Refrain from using **any** insecticides in a butterfly garden
 - Especially do not use systemic insecticides
 - Contact insecticides should only be used precisely, and very sparingly
 - E.G. – Don't spray for mosquitos; don't dust for cutworms
- Herbicides can generally be used safely, *with caveats*
 - Many contain strong soaps/surfactants, so avoid spraying over insects
 - *Also, consider whether that weed might actually be beneficial...*

Making Room for Weeds

- Many weeds are host plants:
 - Frogfruit *Phyla nodiflora*
 - Sicklepod *Senna obtusifolia*
 - Toadflax *Nuttallanthus* spp.
 - Cudweeds *Gamochaeta* spp.
- Others provide nectar:
 - Poor-joe *Hexasepalum teres*
 - Field Aster *Symphyotrichum* spp.
 - Goldenrods *Solidago* spp.
 - Thistles *Cirsium* spp.



Use Native Plants in your Garden

- Pound for Pound, native plants are better for native butterflies
 - Our local butterflies recognize them and seek them out
 - Many double as host plants
 - **Help out beneficial insects and build soil**, which helps all your plants grow
 - **Adapted to our local soils and climates**, need little maintenance or fertilizer
- Many ornamental plants are rarely used by butterflies
 - Some can be terrible invasive species, **which destroy native habitat**
 - *A few are well used by butterflies, without the potential for harm*
- The line between native and exotic can get blurry
 - Some plants are not native to SC but native to North America
 - Tropical Migrant butterflies and those with wide ranges may be adapted to use these

Nectar Plants

- They attract butterflies from the outside world into your garden
- Nectar plants provide food for adult butterflies
 - Adult butterflies don't eat pollen or vegetation, they just sip nectar
 - *Butterflies are actually mediocre pollinators for most plants*
- Butterflies prefer flowering plants that are colorful, broad, flat-topped, and have many small flowers
 - Easy to see, easy to land on, lots of nectar within arms reach
 - Some ornamentals are great nectar plants; some are never touched
- Small butterflies prefer small flowers, big butterflies prefer big flowers
 - Having a selection of colors, sizes, and shapes promotes diversity

Host Plants

- These are the nurseries that raises new butterflies (*inside your garden*)
 - Adult butterflies lay eggs on host plants
 - Those eggs hatch into caterpillars, which eat the host plant's leaves
 - Caterpillars metamorphose into new adult butterflies
- A butterfly should ideally complete its entire life cycle in your garden
 - This ensures you will keep the butterflies around year after year
- Some host plants are also nectar plants, most are just one
- You should strive to provide **BOTH host** and **nectar** plants
 - Especially for your targeted/favorite butterfly species

Butterfly Host Plants

1. Milkweeds [Monarch]
2. Passionflower [Gulf Fritillary]
3. Frogfruit [White Peacock]
4. Field Aster [Pearl Crescent]
5. Rabbit Tobacco [American Lady]
6. Partridge Pea [Cloudless Sulphur]
7. Golden Canna [Brazilian Skipper]
8. Sicklepod [Sleepy Orange]
9. Hercules-Club [Giant Swallowtail]
10. St. Augustine Grass [Carolina Satyr]
11. Dill [Black Swallowtail]
12. Garden Bean [Long-tailed Skipper]



Butterflyweed *Asclepias tuberosa*

- Native to SC & NC
- Perennial
- 18-24in tall
- Flowers early in May-June
 - Umbels of 1/4in flowers
- Prefers dry, sandy soil
 - Well-drained soil a must
- Great nectar plant
- Host plant for: Monarch



Sicklepod *Senna obtusifolia*

- Native(?) to SC, east NC
- Annual
- 36-60in tall
- Flowers early in August-Sept.
- Grows just about anywhere
 - Good volunteer
- Decent nectar plant
- Host plant for: Cloudless Sulphur, Sleep Orange



Purple Passionflower *Passiflora incarnata*

- Native to SC & NC
- Perennial
- Vine, climbing up to 72in high
- Flowers all summer
 - Large and complex flower
- Needs full sun
 - Tolerates many soils
- Okay nectar plant
- Host plant for: Gulf Fritillary, Variegated Fritillary, (rarely) Zebra Longwing



Field Aster *Symphotrichum dumosum*

- Native to SC & NC
- Perennial
- 24-48in tall
- Flowers in Sept.-October
 - Small, 1/2in flowers
- Grows in full sun
 - Tolerates poor soils well
- Good nectar plant
- Host plant for: Pearl Crescent



Rabbit Tobacco *Pseudognaphalium obtusifolium*

- Native to SC & NC
- Annual (germinates in fall)
- 18-24in tall
- Flowers early in Fall
 - Disorganized clusters of flowers
- Grows just about anywhere
- Okay nectar plant
- Host plant for: American Lady



Partridge Pea *Chamaecrista fasciculata*

- Native to SC & NC
- Annual
- 24-60in tall
- Flowers in late summer
- Prefers drier soils and full sun
- Okay nectar, great pollen plant
- Host plant for: Cloudless Sulphur, Little Yellow, Sleepy Orange, Gray Hairstreak



Golden Canna *Canna flaccida*

- Rare native to SC
 - Exotic Cannas work too
- Perennial
- 36-60in tall
- Flowers in May-June
 - Large flowers
- Prefers moist or wet soils
- Okay nectar plant
- Host plant for:
 - Brazilian Skipper



Hercules-Club *Zanthoxylum clava-herculis*

- Native to SC & NC coast
- Large woody shrub, evergreen
- 96-180in
- Flowers April & May
 - Green, inconspicuous flowers
- well-drained soils
 - Causeways, beach dunes
- Nectar plant for smaller B'flies
- Host plant for:
 - Giant Swallowtail



St. Augustine Grass *Stenotaphrum secundatum*

- Native(?) to SC & NC coast
- Perennial
- Groundcover, turfgrass
 - Spreads vigorously
- No nectar nor pollen
- Grows in partial shade
 - Prefers moist, sandy soils
- Host plant for: Carolina Satyr, Little Wood Satyr, Fiery Skipper, Whirlabout Skipper, *and more!*



Dill *Anethum graveolens*

- Non-native
- Annual
- 18-60in tall, variety dependent
- Flowers in mid-spring
 - Varies on planting time
- Can be sensitive to soil and temperature
- Good nectar plant
 - Also edible!
- Host plant for: Black Swallowtail



Garden Bean *Allium ampeloprasum*

- Non-native
- Annual
- Large climbing vine
- Flowers insignificant to B'flies
 - *You can eat the beans!*
- Host plant for:
 - Long-tailed Skipper



Generally Good Native Nectar Plants



<-Sunflowers

Blazing-Stars->



<-Gaillardia

Coreopsis->



<-Frostweed

Bearsfoot->



<-Self-heal

Ironweeds->



<-Obedient Plant

American Asters->



<-Sages

Blue Mistflower->



<-Beebalm

Black-eyed Susan->



<-Thistles

Mountain-Mints->



Muck Sunflower *Helianthus simulans*

- Semi-native from Gulf Coast
 - Oft confused with *H. angustifolius*
- Perennial
- 60-108in tall
 - Absolutely huge on fertile soil
- Flowers in early fall
 - 2-1/2in flowers
- Grows on most soils
 - Prefers moist, rich soils
 - Spreads aggressively
- Great nectar plant



Dense Blazing-Star *Liatris spicata*

- Native to SC & NC coast
 - Many similar species in genus
- Perennial
- 18-30in tall
 - Very compact
- Flowers September-October
 - Long spike of small flowers
- Prefers well drained soils
 - Drought tolerant, forms bulbs
- Great nectar plant



Frostweed *Verbesina virginica*

- Native to SC & some of NC
- Perennial
- 48-72in tall
- Flowers in Sept.-October
 - Umbel of 1/2in flowers
- Grows best in partial shade
- Great nectar plant



Hairy Leafcup *Smallanthus uvedalia*

- Native to SC & NC
- Perennial
- 48-60in tall
 - Bushy growth form
- Flowers mid to late summer
 - 1in flowers
- Prefers partial shade
- Good nectar plant



Obedient Plant *Physostegia virginiana*

- Native to SC & NC
- Perennial
- 18-30in tall
- Flowers in late summer
 - Spikes of 3/4in flowers
- Grows on moist soil
- Can tolerate partial shade
- Good nectar plant



Elliott's Aster *Symphotrichum elliotii*

- Rare native to SC & NC coast
- Perennial
- 30-48in tall
- Flowers in early fall
 - 3/4in flowers across plant
- Grows on wet soils
- Great nectar plant
- Host plant for: Pearl Crescent



Spotted Beebalm *Monarda punctata*

- Native to SC & NC
- Perennial
- 24-36in tall
- Flowers August-September
 - Complex tiered flower spike
- Grows in well-drained soils
- Decent nectar & great pollen
 - *Bees love this stuff!*
- Clump forming, easy to divide



Black-eyed Susan *Rudbeckia hirta*

- Native to SC & NC
- Perennial/Annual
- 18-24in tall
- Flowers in May-June
 - 2in flower
- Grows on most soil types
 - Tolerates light shade
- Okay nectar plant
- Good volunteer



Indian Blanket *Gaillardia pulchella*

- Native to the SC & NC coast
- Annual(-ish)
- 12in tall
- Can flower year round
 - 1-1/4in flower
- Grows just about anywhere
 - Will grow on beach sand
- Okay nectar plant
- Good volunteer



Lance-leaved Tickseed *Coreopsis lanceolata*

- Native to SC & NC
- Perennial
- 18-24in tall
- Flowers in mid-spring
 - 1-1/4in flower
- Grows on most soil types
 - Prefers moist soils
- Okay nectar plant
- Great volunteer



Goldenmane Tickseed *Coreopsis basilis*

- Semi-native from Gulf Coast
- Annual
- 12-18in tall
- Flowers early in May
 - 1in flowers
- Grows on sandy soil
- Okay nectar plant
- Good volunteer



Common Selfheal *Prunella vulgaris*

- Native to SC & NC
- Perennial
- Groundcover to ~12in tall
 - Spreads laterally
- Flowers in Spring
 - Dense spike of tubular flowers
- Grows in partial shade
- Great nectar plant



New York Ironweed *Vernonia noveboracensis*

- Native to SC & NC
- Perennial
- 72-120in tall
 - *Very* tall in ideal conditions
- Flowers August-September
- Needs moist/wet soils
 - Tolerates partial shade
- Good nectar plant



Lyreleaf Sage *Salvia lyrata*

- Native to SC & NC
- Perennial
- Groundcover to 12in tall
- Flowers in April
 - Spike of tubular flowers
- Grows in partial shade
- Decent nectar plant



Blue Mistflower *Conoclinium coelestinum*

- Native to SC & NC
- Perennial
- 18-30in tall
- Flowers late summer/early fall
 - Umbels of 1/4in flowers
- Grows on moist soil
 - Likes partial shade
- Good nectar plant



Yellow Thistle *Cirsium horridulum*

- Native to SC & NC
- Short-lived Perennial
- 18-30in tall
 - Very spiny
- Flowers in early spring
- Grows on moist soil
 - Partial shade to full sun
- Great nectar and pollen plant
- Host plant for: Little Metalmark



Appalachian Mountain-Mint *Pycnanthemum flexosum*

- Native to SC & NC coast
 - Similar species in upstate
- Perennial
- 36-54in tall
- Flowers in summer
- Shade tolerant
 - Grows on well-drained soils
- Great nectar and pollen plants
 - Bees love it!



Ornamental

Herbaceous

1. Yarrow
2. Zinnia
3. Mexican Sunflower
4. Leek
5. Sages
6. Vervains[^]
7. Plumbagos*



Nectar Plants

Woody

8. Lantanas
9. Abelia
10. Chaste Tree*
11. Bottlebrush*
12. Butterfly Bush*[^]



**Not shown in slides*

[^] Invasive in some regions

Yarrow *Achillea millefolium*

- Native to SC & NC
- Perennial
- 24-36in tall
- Flowers in mid-spring
 - Umbels of many small flowers
- Grows just about anywhere
 - Hard to kill
- Decent nectar plant



Zinnia *Zinnia elegans*

- Native to Mexico
- Annual
- 24-72in tall, varies by cultivar
- Flowers in summer-fall
 - Multitude of shapes/colors
- Easy to grow in full sun
 - Tolerates many soils
- Great nectar plant
 - Use cultivars with central disc



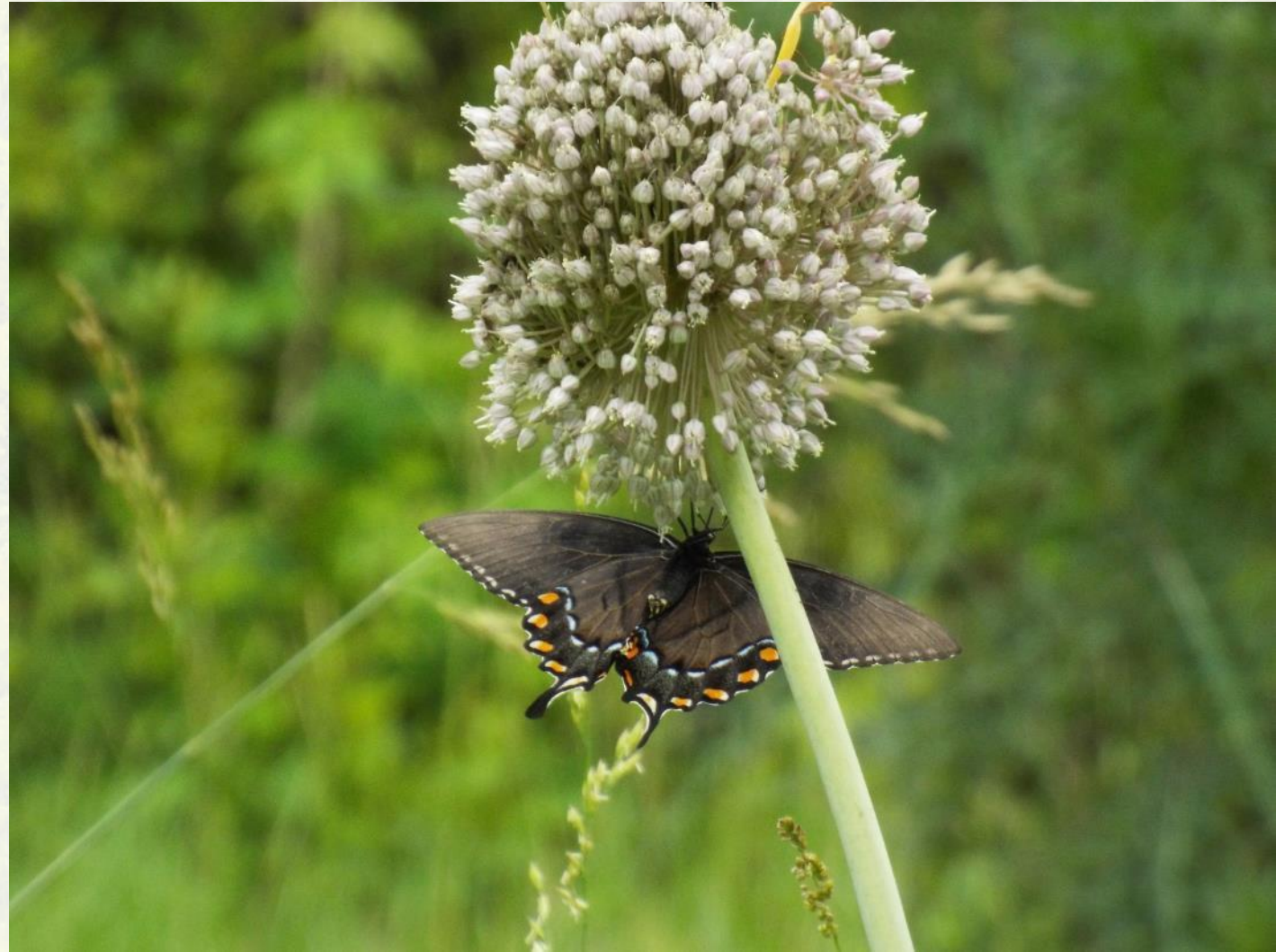
Mexican Sunflower *Tithonia rotundifolia*

- Native to Mexico
- Annual
- 36-60in tall
- Flowers in summer-fall
- Prefers well-drained soils
- Good nectar plant



Leek *Allium ampeloprasum*

- Non-native
- Perennial
- 18in tall leaves, ~30in flower
- Flowers in late-spring
 - Spherical ball of flowers
- Prefers moist soils
- Good nectar plant
 - *Also a vegetable!*



Sages *Salvia* spp.

- Native & Exotic species
- Perennial
- Vary in height, <48in tall
- Flower times variable
- Tubed flowers, varying colors
- Generally easy to grow
 - Variable tolerances
- Decent nectar plants
 - Culinary Sage good for pollen



Vervains *Verbena* spp.

- Native & Exotic Species
- Perennial
- 12-54in tall
- Flower in summer
- Grow just about anywhere
 - Prefer drier soils
 - Can grow where little else will
- Decent nectar plants



Texas Lantana *Lantana urticoides*

- Native to Southwest US
- Woody Shrub
 - Dies back to roots in freeze
- 24-60in tall
- Flowers Spring-Fall
- Likes sandy soils & full sun
 - Hard to kill, drought tolerant
- **Unparalleled** nectar plant



Abelia *Abelia X grandiflora*

- Non-native
- Woody Shrub
- 36-72in tall
- Flowers late-spring & summer
 - Clusters of tubular flowers
- Full sun to partial shade
- Well-drained soils; Hardy
- Decent nectar plant
 - Hummingbirds also like it



Wetland Garden Sites



1. Muck Sunflower
2. Obedient Plant
3. New York Ironweed
4. Golden Canna
5. Powdery Alligator Flag
6. Climbing Aster (& Elliott's)
7. Pickerelweed
8. Aquatic Milkweed
9. Virginia Iris
10. Swamp Bay
11. Dwarf Palmetto
12. Buttonbush

Powdery Alligator Flag *Thalia dealbata*

- Rare native to SC coast
- Perennial
- 48-72in tall
- Flowers spring & summer
 - Tall stalks with 3/8in flowers
- Needs saturated soils
 - Otherwise very hardy
- Okay nectar plant
- Host plant for: Brazilian Skipper



Climbing Aster *Ampelaster carolinianus*

- Uncommon native to SC coast
- Perennial
- Low growing vine
 - Needs a support structure
- Flowers in October-November
- Prefers wet soils
- Good nectar plant



Pickerelweed *Pontederia cordata*

- Native to SC & NC coast
- Perennial
- 24-36in tall
- Flowers mid-spring to mid-Fall
- Grows in standing water
 - Saturated soils are a must
- Great nectar plant
 - Preferred by many butterflies



Aquatic Milkweed *Asclepias perennis*

- Native to SC coastal plain
- Perennial
- 18-24in tall
- Flowers in Summer
- Needs wet soils
- Good nectar plant
- Host plant for: Monarch
 - Used by SC's non-migratory population of Monarchs



Virginia Iris *Iris virginica*

- Native to SC & NC coastal plain
 - Other native Iris species exist
- Perennial
- 18-30in tall
- Flowers in April & May
 - Large, showy flowers
- Needs saturated soils
 - Easy to grow otherwise
- Okay nectar plant
 - Preferred by some wetland adapted butterflies



Swamp Bay *Persea palustris*

- Native to SC & NC coast plain
- Small Tree
- 6-25ft tall
- Flowers in May
- Prefers wet, acidic soils
- Laurel Wilt Disease a concern
- Host plant for:
 - Palamedes Swallowtail



Dwarf Palmetto *Sabal minor*

- Native to SC & NC coastal plain
- Evergreen Shrub
- 30-60in tall
- Flowers in April & May
- Full to Part-Shade
- Prefers wet soil
 - Tolerates many soil types
- Okay nectar plant
 - Great pollen plant



Buttonbush *Cephalanthus occidentalis*

- Native to SC & NC
- Woody Shrub
- 48-84in tall
- Flowers in June & July
 - Spherical Flowers
- Needs saturated soils
- Great nectar & pollen plant
 - Swallowtails love it



Sand Ridge Garden Sites

1. Butterflyweed
2. Indian Blanket
3. Spotted Beebalm
4. Allegheny Chinquapin
5. Sensitive Partridge Pea
6. Elegant Blazing-Star
7. Camphorweed
8. Forked Bluecurls
9. Coral Honeysuckle
10. Poorjoe
11. Narrowleaf Silkgrass
12. Daisy Fleabane



Allegheny Chinquapin *Castanea pumila*

- Native to SC & NC
- Small Tree
- 96-240in tall
- Flowers in May
- Grows on dry well-drained sand
 - Sensitive to *Phytophthora* root-rot
 - Also Chestnut Blight in upstate
- Great nectar & pollen plant
 - Edible nuts



Sensitive Partridge Pea *Chamaecrista nictitans*

- Native to SC & NC
- Annual
- 12-24in tall
- Flowers in late summer
- Grows on dry sands in full sun
- Okay nectar, great pollen plant
- Host plant for: Little Yellow, Sleepy Orange, Gray Hairstreak



Elegant Blazing-Star *Liatris elegans*

- Native to SC Lowcountry
- Perennial
- 12-30in tall
 - Compact
- Flowers September-October
 - Long spike of small flowers
- Needs well-drained soils
 - Drought tolerant, forms bulbs
- Good nectar plant



Camphorweed *Heterotheca subaxillaris*

- Native to SC and southern NC
- Perennial
- 24-42in tall
 - Sprawling bush
- Flowers September-October
 - Sparse, 1in flowers
- Grows on most drier soils
 - Tolerates drought and poor soil
 - Will grow on beach sand
- Decent nectar plant



Forked Bluecurls *Trichostema dichotomum*

- Native to SC & NC
- Annual
 - Reliable Volunteer
- 18-24in tall
- Flowers September-October
- Full sun
- Grows on well-drained soils
 - Tolerates droughty, poor soils
- Not all that great for nectar
 - Decent Pollen plant



Coral Honeysuckle *Lonicera sempervirens*

- Native to SC & NC
- Perennial, semi-evergreen vine
- Can climb over 10ft up
- Flowers spring into summer
- Tolerates dry, poor soils
- Can do well in partial shade
 - Thrives in full sun
- Good nectar plant
 - Hummingbirds love it!



Poorjoe *Hexasepalum teres*

- Native to SC & NC
- Annual
- 6-12in tall
 - Clumping groundcover
- Flowers in Summer
 - Sparsely flowered
- Grows on dry soils
 - Tolerates drought and poor soil
- Good nectar plant
 - Preferred by smaller butterflies



Narrowleaf Silkgrass *Pityopsis graminifolia*

- Native to SC & NC
- Perennial
- 18-30in tall
 - Groundcover most of the year
 - Silver grass-like foliage
- Flowers September-October
- Grows on most drier soils
 - Tolerates drought and poor soil
- Okay nectar plant



Daisy Fleabane *Erigeron strigosus*

- Native to SC & NC
- Annual-ish
- 12-30in tall
 - Compact width
- Flowers May and June
- Grows on well-drained soils
 - Tolerates droughty, poor soils
- Mediocre nectar plant
 - Some small pollinators use it



Partial-Shade Garden Sites



1. Mountain-Mint
2. Lyreleaf Sage
3. Bearsfoot
4. Frostweed
5. Blue Mistflower
6. Common Self-heal
7. Yellow Passionflower
8. Snow Squarestem
9. Hairy Elephant's Foot
10. Coralbean
11. Red Buckeye
12. Devilwood

Yellow Passionflower *Passiflora lutea*

- Native to SC & NC
- Perennial
- Vine, climbing up to 84in high
- Flowers spring & summer
- Needs shade
- Host plant for:
 - Zebra Longwing,
 - Gulf Fritillary
 - Variegated Fritillary



Snow Squarestem *Melanthera nivea*

- Native to SC Sea Islands
- Perennial
- 36-48in tall
- Flowers in late-summer
- Shade tolerant
 - Grows on moist soils
- Good nectar plant
 - Favorite of Zebra Longwings



Hairy Elephant's-foot *Elephantopus tomentosus*

- Native to SC & NC
 - Several species in same genus
- Perennial
- 12in tall flower
 - Otherwise a groundcover
- Flowers late-summer & fall
 - White and Purple morphs
- Shade tolerant
 - Grows on well-drained soils
- Great nectar plant



Coralbean *Erythrina herbacea*

- Native to SC Sea Islands
- Perennial
- 18-36in tall
- Flowers in April-May
- Shade tolerant
 - Well-drained soils
 - Likes mild winters
- Good hummingbird plant



Red Buckeye *Aesculus pavia*

- Native to SC & NC coast plain
- Shrub to small tree
- Generally 36-96in tall
- Flowers in March-April
- Well-drained soils
 - Likes high calcium
- Partial shade preferred
- Goo hummingbird plant



Devilwood *Cartrema americana*

- Native to SC & NC coast plain
- Small Tree
- 10-30ft tall
- Flowers in March
- Partial Shade
- Well-drained soils preferred
- Good nectar for Hairstreaks
 - Good for pollen too



Saltmarsh Margins

1. Frogfruit
2. Sea-Oxeye
3. Saltmarsh Asters
4. Southern Seaside Goldenrod
5. Marsh Pink
6. Carolina Sea Lavender
7. Saltmarsh Mallow
8. Gulf Coast Swallow-Wort
9. Saltmarsh Morning-Glory
10. Hercules-Club
11. Yuccas
12. Groundsel-bushes



Frogfruit *Phyla nodiflora*

- Native to SC & NC coast
- Perennial
- Groundcover
- Flowers Spring & summer
 - Spikes of tiny flowers
- Grows just about anywhere
- Good nectar plant
- Host plant for: Phaon
Crescent, White Peacock



Sea-Oxeye *Borrichia frutescens*

- Native to SC & NC coastline
- Evergreen, succulent
- 24-36in tall
 - Thicket forming shrub
- Flowers May-July
 - Peaks in June
- Sodic soils at high tide line
 - Hammock Islands
- Good nectar & pollen plant



Perennial Saltmarsh Aster *Symphotrichum tenuifolium*

- Native to SC & NC coastline
- Perennial
 - Evergreen rosette
- 12-18in, thin flower stalk
- Flowers October
- Salt flat margins in high marsh
 - Regular tidal inundation
- Decent nectar plant



Southern Seaside Goldenrod *Solidago sempervirens*

- Native to SC & NC coastline
- Perennial
 - Evergreen foliage
- 18-24in, narrow flower stalk
- Flowers October
- Salt marsh margins
 - Hammocks, lawns, roadsides
- Goode nectar & pollen plant
 - Important for Monarchs



Marsh Pink *Sabatia stellaris*

- Native to SC & NC coast
- Annual-ish
- 6-12in tall
 - Wiry, grows with grassy plants
- Flowers June and July
 - Spikes of tiny flowers
- Salt meadows and roadsides
 - Bordering on brackish salinity
- Mediocre nectar plant



Carolina Sea Lavender *Limonium carolinianum*

- Native to SC & NC coastline
- Perennial
 - Evergreen rosette
- 12-18in, wiry flower stalk
- Flowers September
 - Tiny pink flowers
- Salt flat margins in high marsh
 - Hammock islands as well
- Okay nectar plant



Saltmarsh Mallow *Kosteletzkya pentacarpos*

- Native to SC & NC coast
- Perennial
- 48-60in tall
- Flowers in August
 - Large, showy flowers
- Wet soils along brackish marsh
 - Roadside ditches and causeways
- Decent nectar plant
 - Good pollen plant
- Host plant for: Painted Lady



Gulf Coast Swallow-Wort *Pattalias palustris*

- Native to SC & NC coast
- Perennial
- Low-growing vine, up to 48in
- Flowers late-summer
 - Balls of greenish flowers
- Sodic soils at high tide line
 - Causeways, Hammock Islands
- Decent nectar plant
- Host plant for: Monarch, Queen



Saltmarsh Morning-Glory *Ipomoea sagittata*

- Native to SC & NC coast
- Perennial, evergreen
- Low-growing vine, up to 84in
- Flowers Summer
 - Showy flowers
- Damp soils on marsh margins
 - Causeways, roadsides
 - Marshes near brackish levels
- Okay nectar & pollen plant



Moundlily Yucca *Yucca gloriosa*

- Native to SC & NC coastline
- Evergreen shrub, up to 48in
 - Very sharp leaves
- Flowers in Summer, irregular
 - Large, showy flower stalk
- Well-drained, sandy soils
 - Dunes, Hammock islands
- Host plant for:
 - Yucca Giant-Skipper



Groundsel-Bush *Baccharis halimifolia*

- Native to SC & coastal NC
- Woody Shrub, evergreen
- 48-96in tall
- Flowers in October-November
- Grows just about anywhere
 - Salt tolerant
- Good nectar & pollen plant
 - Important for Monarchs



Beach Sand Garden Sites

1. Indian Blanket
2. Camphorweed
3. Frogfruit
4. Coralbean
5. Yuccas
6. Groundsel-bush
7. Hercules-Club
8. Devilwood
9. Cucumberleaf Sunflower
10. Prickly-Pear Cacti
11. Cabbage Palmetto
12. Red Bay



Cucumberleaf Sunflower *Helianthus debilis*

- Native to Gulf Coast
- Annual
- 12-18in tall
- Flowers mainly April-July
- Grows on dry sands
 - Will grow on beach sand
- Good nectar plant
- Good volunteer



Southeastern Prickly-Pear *Opuntia mesacantha*

- Native to SC & NC
 - Several similar species
- Perennial
- 6-18in tall
 - Lays on ground, Sharp spines
- Flowers in May-June
- Grows on dry sands
 - Will grow on beach sand
- Okay nectar plant
 - Good pollen plant



Cabbage Palmetto *Sabal Palmetto*

- Native to SC & NC coastline
- Small Tree
 - Single, unbranched trunk
- 10-25ft tall
- Flowers in May-June
- Very Hardy
 - Salt, shade, & drought tolerant
- Great nectar plant
 - Excellent pollen plant



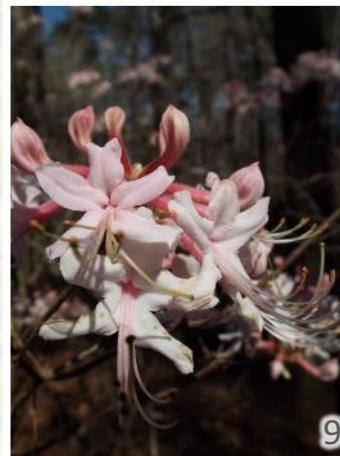
Red Bay *Persea borbonia*

- Native to SC & NC coastline
- Small Tree
- 10-25ft tall
- Flowers in April-May
- Prefers dry, sandy soils
 - Well-drained a must
- Laurel Wilt Disease a concern
- Host plant for:
 - Palamedes Swallowtail



Native Trees & Shrubs

1. Buttonbush
2. Palmettos
3. Allegheny Chinquapin
4. Devilwood
5. Red Buckeye
6. Red Bay & Swamp Bay
7. Chickasaw Plum
8. Sweetleaf
9. Wild Azalea
10. Hercules-Club
11. Groundsel-Bush
12. Black Cherry



Chickasaw Plum *Prunus angustifolia*

- Native to SC & NC
- Large, Woody Shrub
 - Forms thickets
- 60-120in tall
- Flowers in March-April
- Prefers well-drained soils
 - Tolerates poor soils
- Good nectar & pollen plant
 - Edible Fruit
- Host plant for: Tiger Swallowtail, Red-spotted Purple



Sweetleaf *Symplocos tinctoria*

- Native to SC & NC
- Large, Woody Shrub
- 72-144in tall
- Flowers in March
- Prefers well-drained soils
- Full to Part-Shade
- Good nectar & pollen plant
 - Hairstreaks love it
- Host plant for: Kings Hairstreak



Wild Azalea *Rhododendron canescens*

- Native to SC & Southeast NC
- Woody Shrub
 - Forms thickets
- 48-96in tall
- Flowers in March-April
- Part-Shade
- Prefers moist soils
- Good nectar & pollen plant



Black Cherry *Prunus serotina*

- Native to SC & NC
- Medium-sized Tree
- 20-60ft tall
- Flowers in March-April
- Prefers well-drained soils
 - Tolerates poor soils
- Good nectar & pollen plant
 - Edible Fruit
- Host plant for: Tiger Swallowtail, Red-spotted Purple



Vines for Butterflies



1. Passionflowers
2. Climbing Aster
3. Coral Honeysuckle
4. Saltmarsh Morning-Glory
5. Gulf Coast Swallow-Wort
6. Garden Bean
7. Milkvines & Anglepod
8. Butterfly Pea
9. Woolly Dutchman's Pipe

Carolina Milkvine *Matelea carolinensis*

- Scarce native to SC & NC
- Perennial
- Low climbing vine, up to 96in
- Flowers May into June
- Shade tolerant
- Fertile, sandy soils
- Host plant for: Monarch, Queen



Butterfly Pea *Centrosema virginianum*

- Native to SC & NC
- Perennial
- Low vine or Groundcover
- Flowers in Summer
- Shade tolerant
- Prefers well-drained soils
- Okay nectar plant
- Host plant for: Silver-spotted Skipper, Long-tailed Skipper, Zarucco Duskywing, *and more!*



Woolly Dutchman's Pipe *Aristolochia tomentosa*

- Rare Native to SC
- Perennial
- Low climbing vine, up to 120in
- Flowers April & May
 - Crooked, tubular flower
- Prefers Part-shade
- Moist, well-drained soils
- Host plant for:
 - Pipevine Swallowtail



Urban Gardens

NATIVE

1. Indian Blanket
2. Black-eyed Susan
3. Frogfruit
4. Sand Myrtle
5. Cabbage Palmetto
6. Texas Lantana

NON-NATIVE

7. Abelia
8. Tuberous Vervain*
9. White Beggarticks*
10. Tropical Milkweed*

**Plant with care/caution*



Sand Myrtle *Kalmia buxifolia*

- Rare native to SC & NC
- Small woody shrub
- 18-30in tall
 - Stems spread and layer
- Flowers late-March, early-April
- Likes partial shade
- Needs well-drained soils
 - Tolerates poor, acidic soils
 - Likes moisture and pine straw
- Good nectar plant



Tuberous Vervain *Verbena rigida*

- Non-native Species
 - From South America
- Perennial
- 12in tall
- Flowers in spring
- Tolerates heat and abuse well
- Decent nectar plant
- **PLANT WITH CAUTION**
 - Verbenas can be invasive
 - Often spread into disturbed sites



White Beggarticks *Bidens alba*

- Native to Central America
- Annual
- 24-36in tall
- Flowers in both Spring & Fall
- Grows just about anywhere
- Good nectar plant
- **PLANT WITH CAUTION**
 - Spreads aggressively by seed
 - Escapes cultivation easily



Tropical Milkweed *Asclepias curassavica*

- Native to Central America
- Perennial, semi-evergreen
- 24-48in tall
- Flowers almost year-round
- Tolerates heat and abuse
 - Easiest milkweed to grow, by a mile
- Good nectar plant
- **PLANT WITH CAUTION**
 - **MUST** be cut back in fall & covered
 - OE parasite on evergreen leaves



There are many more native plants!

- These are just my personal recommendations and suggestions
 - Specifically tailored for the SC Lowcountry
 - From McCellanville to Hardeeville, and especially Charleston County
 - **USDA Hardiness Zone 9a**
- There are many more plants that do well that I didn't mention
 - Some are very specialized or difficult to grow
 - Some are hard to source easily, and ethically
 - Others I'm just not experienced cultivating
 - There not enough pace in a slideshow to list them all!
- *Check out your local native plant nurseries for more options!*

Where to get Native Plants and Seeds

- Potted Plants and Plugs
 - SC Native Plant Society plant sales
 - Lowcountry Chapter holds both a spring and fall plant sale every year
 - Local Nurseries
 - **Roots and Shoots; Bottle Tree Gardening; Native Plants to the People; and many more!**
- Seeds
 - Some are sold at big box garden centers
 - However, you'll have to go online for specialty seeds
 - Or collect them yourself [*with permission*]
 - Seed heads can be collected from gardens, natural habitats, or along ditches and roadsides
- Pass-along plants
 - Other gardeners may be willing to share seeds and divide their plants

Resources to Learn More:



- **Xerces Society**

- Pollinator Conservation

- **North American Butterfly Association**

- Butterfly Gardening and Conservation

- **SC Native Plant Society**

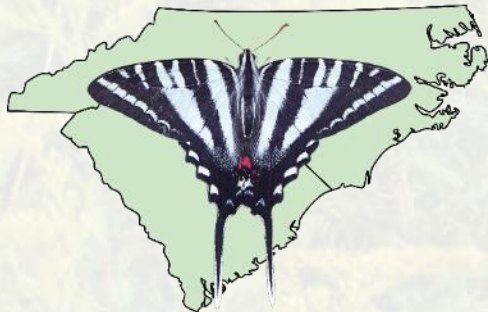
- Native Plants of SC; Plant Sales

- **Carolina Butterfly Society**

- Native Butterflies of SC; Butterfly Walks



*Carolina
Butterfly Society*



Carolina Butterfly Society



Please consider joining!

- Learn about butterfly gardening
- Connect with gardeners and other butterfly enthusiasts
- Go on field trips around the state to find butterflies at cool places
- Help fund grants for local butterfly conservation and research

Questions?

Tom Austin

Land@Edisto.org

Learn More at:
Edisto.org/Butterfly

*Carolina
Butterfly Society*

