Native Plants

Presented by Ann Bone, MGEV

What is a Native Plant?

The only truly native plants are the ones still growing where they originated.

But for our purposes, a native plant is considered to be a species that existed in what is now the northern half of Georgia prior to the arrival of European settlers …

Today, that would be a plant that has proven its adaptability to our Georgia ecological niche over the past several thousand years.

There were many native trees, shrubs, perennials, vines, grasses and food crops

And then the Colonists arrived…..

When ships returned to Europe, they contained exotic plants no one there had ever seen. It quickly became a status symbol to landscape in Europe with “New World” plants. Magnolias, most types of pines, potatoes and tomatoes. (Brother Gardeners, by Andrea Wulf

And vice-versa - settlers brought trees, flowers and food crop plants from “the old country”, like the Norway maple, now the most common tree in the eastern US. and the Leyland cypress (thank you, England!)

AND, a lot of land was cleared for farming and cities, destroying natural habitat

Then what?

Some newly-introduced plants failed to thrive in Georgia - tulips, lupines

Some survived with a lot of care - camelias, boxwood, liriope, Japanese maples, hostas, Asian azaleas, autumn fern, roses

Some thrived and became “naturalized”, like Norway Maples, English ivy

And some became “invasive”

Kudzu

Oriental Bittersweet

Multiflora Rose

Japanese honeysuckle

Autumn olive

Asian wisteria

What’s the Big Deal about Native Plants?

As we gather more information about our current environment, we have noticed:

- Fewer birds
- Fewer bees
- Fewer insects in general, such as lightning bugs
- Rampant invasion of non-native plants like kudzu, Japanese climbing fern, Mimosa, Japanese honeysuckle, English ivy, bamboo, autumn olive and more
- Invasion by alien insect species such as Japanese beetle, Formosan termite, African bee, tiger mosquito and more
- Invasive pathogens such as “sudden oak disease”

What does this have to do with Native Plants?

90% of insect herbivores can only eat plants with which they share an evolutionary history. Native insects will NOT be able to survive on alien plant species.

- As native plants have been replaced by “alien” plants or construction:
  - Fewer nesting places for native birds, insects and other animals
  - Less native food for birds, insects and other animals
  - No natural “consumers” to hold invasive alien plants in check
- As the insects leave, the birds and animals which feed on them also leave
  - Fewer butterflies
  - Fewer lightning bugs
  - Fewer birds
  - Fewer everything native to our area
- Restoring Native Plants brings back the insects, birds and animals

Here’s the logic….

The leaf chemistry of each plant species on earth is unique. Indigenous insects and animals eat what they have evolved eating and live where their ancestors instinctively lived. One plant is NOT the same an another.

For example, few existing insects will eat poison ivy, tulip trees or ferns. But over 1,400 species munch on white oaks, willows and cherries.

For example, Monarch butterflies will ONLY lay eggs on Asclepias (Milkweed), a native plant; not a single species of butterfly or moth will lay eggs on a Butterfly Bush (Buddleia), which is not a native plant.

Bradford pear leaves
(toxic to wildlife that try to eat them!)

Red Oak, yummy!

Butterflies and moths (lepidopterans) = 50% of insect herbivores in the U.S. (Bringing Nature Home, Douglas W. Tallamy, 2007)

Oaks support 534 species of lepidopterans

Willows support 456 species

Cherries, plums - 456

Birch - 413

Poplar, cottonwood - 368

Blueberries, cranberries - 288

Maple, box elder - 285

Elm - 213

Pine - 203 (plus lightning bugs!)

Hickory - 200

Hawthorn - 159

Alder, Spruce - 156

Ash, Basswood, Linden - 150

Filbert, hazelnut, walnut, butternut - 130

Beech - 126

Chestnut - 125

Atlanta-area Native Trees, over 50’

American Holly

Eastern Red Cedar

Magnolias, Southern, Sweetbay

Oaks, White, Southern Red, Swamp Chestnut, Willow, Shumard Red, Post, Black

Maples, Southern Sugar, Red,

River Birch

Shagbark Hickory

American Beech

Pines, Shortleaf, Spruce pine, Loblolly, Virginia,

White Ash

Sweetgum

Tulip Poplar

Basswood (American Linden)

Southern Magnolia

Magnolia grandiflora

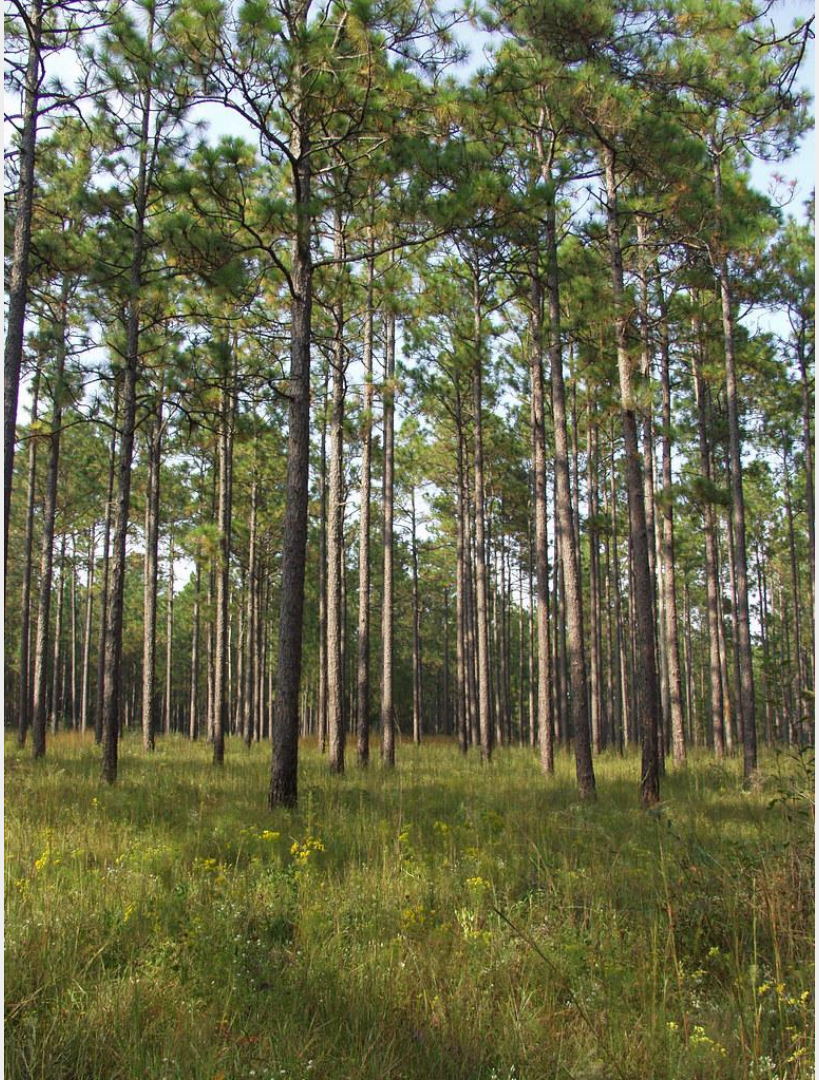
Full sun, rich soil

Pines

Pinus

Want Lightning Bugs?

Retain those pine trees!



Tulip Poplar

Liriodendron tulipfera

One of the earliest sources of nectar in the spring for migrating birds

Sweetgum

Liquidambar styraciflua

Paectes abrostoloides (a small brown moth) lays eggs, caterpillars hatch and eat the leaves, birds eat the caterpillars, etc., etc. etc.

Native Understory Trees (Atlanta area)

Yaupon Holly

Florida Anise

Maples, Southern Sugar, Striped, Red

Alder

Serviceberry

Devil’s Walking Stick

Pawpaw

Hornbeam

Redbud, Eastern

Persimmon

Sourwood

Sassafras

Winged Sumac

Hawthorne

Hophornbeam

Grancy Graybeard (Fringe tree)

Flowering Dogwood

Witchhazel

Fringe Tree
(Grancy Graybeard)

Chionanthus virginicus

Fragrant small tree, purple fruits in the autumn
Full sun to part shade, rich soil

Hawthorn

A “Top 20” tree for hosting Lepidoptera
Spring flowers and fall fruit!

Sassafras

Being decimated now by Asian beetles

Native Shrubs (Atlanta area)

Leucothoe

Mountain Laurel

Rhododendron, wild, dwarf

Bottlebrush Buckeye

American Beautyberry

Sweetshrub

Clethra

Strawberrybush

Fothergilla

Spicebush

Arrowwood

St. John’s Wort

Oakleaf Hydrangea

Piedmont Azalea, hoary azalea

Virginia stewartia

Dwarf huckleberry

Sevenbark (wild hydrangea)

Virginia sweetspire

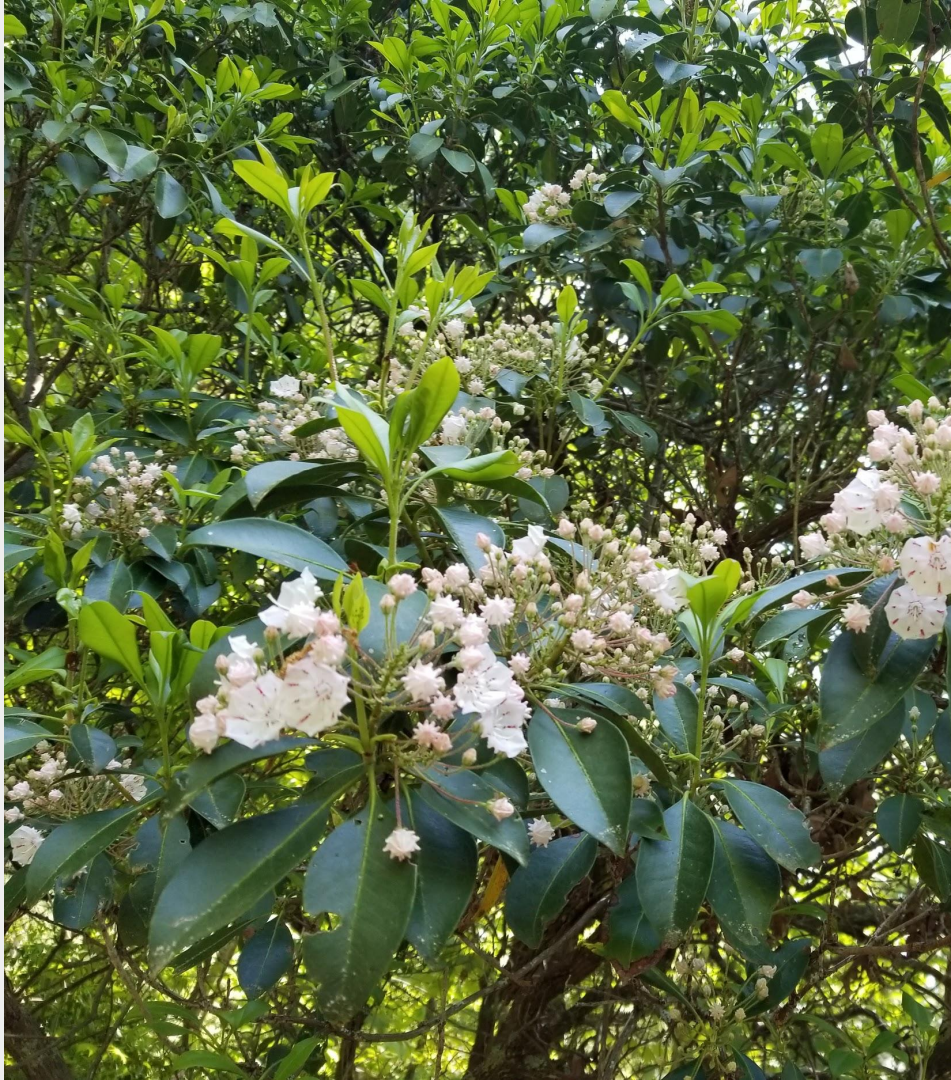
Viburnum, Mapleleaf, Walters

Mountain Laurel

Kalmia latifolia

Evergreen

Cool, moist acidic soil
Best is moderate to part shade



Sweet Shrub

Calycanthus

Deciduous shrub with spicy fragrance

Part shade

Shrubby St. John’s Wort

Hypericum prolificum

Diverse habitats from wet lowlands to dry cliffs, woodlands

Flame Azalea
Piedmont Azalea

Rhododendron calendulaceum
Rhododendron canescens

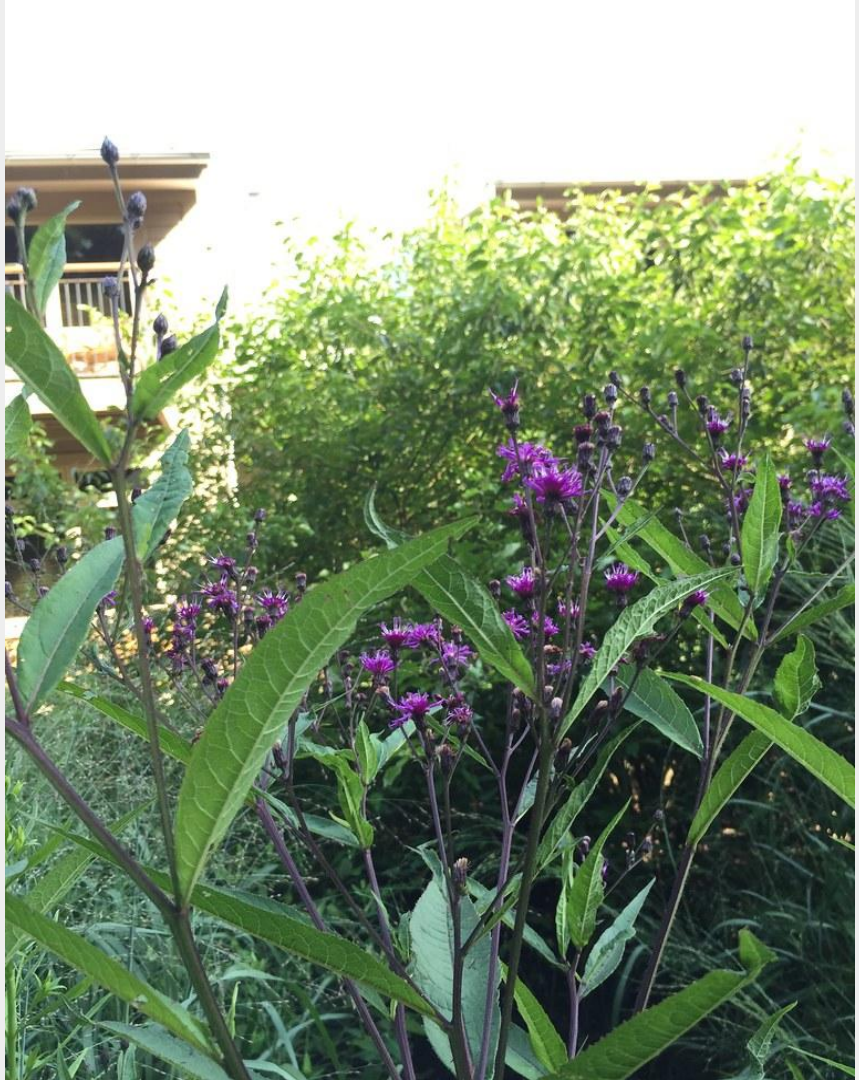
Found in dry open woods on west-facing slopes, acid soil

Ironweed

Vernonia gigantea

Six to ten feet tall, aggressive spreader with deep roots.

Wet, open bottomlands



Beautyberry

Calicarpa americana

Best autumn-fruiting shrub
Excellent wildlife food

Full sun to part shade

Atlanta-area Native Perennials, evergreen

Dwarf Crested Iris

Iris cristata

Cherokees drank tea for liver health

Oak woodlands and along streams

Appalachian Stone Crop

Sedum glaucophyllum

Native Americans used the seeds in cough syrup

Light shade, dry

Blue-Eyed Grass

Sisyrinchium augustifolium

Cherokees cooked and ate this plant to improve digestive regularity

Sun

Atlanta-area Native Perennials, Sun

Calico Aster

Symphyotrichum lateriflorum

Fall color, tiny blooms

Full sun

Common Cinquefoil

Potentilla simplex

Antiseptic and astringent
Cherokees used it as a gargle for mouth ailments

Sun or shade

Crimsoneyed Rosemallow

Hibiscus moscheutos

“Best herbaceous perennial”

Loves wet soil, sun

False Indigo Baptisia

Used as food by larvae of several Lepidoptera species, including jaguar flower moth

Milkweeds, Butterfly Weed

Asclepias quadrifolia
Asclepias tuberosa

Great laxative and can be used for making bowstrings

Sun

Price’s Wood Sorrel

Oxalis macrantha

Yep, *that* oxalis…..

Grows pretty much anywhere

Fleabane

Erigeron

Used by Native Americans to treat menstrual problems, headaches and bad vision

Sun, dry conditions

Red Turtlehead

Chelone obliqua

Used as an appetite stimulant

Full sun to part shade, moist

Cardinal Flower

Lobelia cardinalis

Used by Native Americans as a worm expellant
TOXIC - can cause death

Sun, part shade, moist

Joe Pye Weed

Eupatorium purpureum

Widely used to treat kidney stones and fever till the 19th century. Butterflies love this!

Sun

Crimson Bee Balm

Monarda didyma

Colonists used the leaves as a tea-substitute, especially after the Boston Tea Party

Sun

Goldenrod

Solidago canadensis

NOT to be confused with ragweed!
Pain relief, anti-inflammatory, diuretic

Open, dry areas

Rudbeckia
Black-eyed Susan, coneflower

Favorite food of cabbage moths and dot moths

Sun

Liatris
Blazing Star

Food for flower moth larvae,
A favorite of bees

Sun

Obedient Plant

Physostegia virginiana

Adaptable to drought or poor drainage, good nectar source or butterflies and hummingbirds

Sun

Atlanta-area Native Perennials
Woodland
(light shade)

Blood Root

Sanguinaria canadensis

Used for body dyes by Native Americans

Dry woods and thickets

Black Cohosh

Actaea racemosa

Good as an insect repellent, treatment for snakebites, labor pains and menopausal symptoms
Woodland openings

Blue Cohosh

Caulophyllum thalictroides

Supposedly eases toothaches and childbirth but is not considered a “safe” plant

Shade, moist

Goat’s Beard

Aruncus dioicus

Moist woodlands

Robin’s Plantain

Erigeron pulchellus

Used to burn to rid dwellings of bed bugs and fleas

Part shade, moist soil

Star Chickweed

Stellaria pubera

Native Americans used as a gargle for sore throats

Shade, moist

Trout Lily

Erythronium amricanum

Root tea used to break fevers, crushed leaves used to heal wounds

Woodlands

Common Blue Violet

Viola sororia

Native Americans used these for corn soaks to repel insects.

Self-seeding, part shade

Pink Lady's Slipper

Cypripedium acaule

Sedative

Acidic soil, partial shade

Mayapple

Popophyllum peltatum

Fruits used in jams
Roots and leaves are poisonous

Woodlands

Trilliums

AKA Sweet Betsy, Large-Flowered Trillium,
Painted Trillium,
Southern Nodding Trillium
Sweet White Trillium,
Vasey's Trillium, Yellow Trillium

Deciduous woodlands

Jack-in-the-Pulpit

Arisaema triphyllum

Cooked roots are edible

Woodlands

Wild Comfrey

Cynoglossum virginianum

Native Americans used this as a wound treatment, for digestive disorders and as a mild sedative

Part shade, dry woodlands

Ramp

Allium tricoccum

Food source

Moist deciduous woodlands

Woodland Phlox

Phlox divaricata

Found in rich, moist woodlands

Indian Pipes

Monotropa uniflora

Found in rich shady woods

Ephemeral, moisture after dry

Native Groundcovers (Atlanta area)

Everlasting Mouse Ear

Wild Ginger

Running Cedar

Partridgeberry

Haircap Moss

Lyreleaf Sage -*Salvia lyrata*

Butterweed

Green-and-Gold

Pachysandra (Allegheny spurge)

Foamflower

Strawlily

Foam Flower

Lovely shade flower….
Leaves used to treat burns and skin ailments

Shade

Green and Gold

Chrysogonum virginianum

Evergreen groundcover

Evergreen

Partial shade

Native Vines

Crossvine

Carolina Jessamine

Smilax (ugh)

Curly Clematis

Climbing Hydrangea

Coral Honeysuckle

Virginia Creeper

Passionflower (Maypop)

American Wisteria

Carolina Jessamine

Gelsemium sempervirens

“Best flowering vine”
Evergreen

Full sun, moist soil

Atlanta-area Native Grasses

Inland Sea Oats

Chasmanthium latifolium

“Best ornamental perennial grass”

Moist shade

Pink Muhly Grass

Muhlenbergia capillaris

Tough plant!
Can withstand heat, poor soil

Full sun to part shade

Native Ferns (Atlanta area)

Marginal fern, Marginal shield fern

Christmas fern

Northern Maidenhair fern

Ebony Spleenwort

Southern Lady fern

Sensitive fern

Cinnamon fern

Royal fern

Bracken

New York fern

Netted Chain fern

Christmas Fern

Polystichum acrostichoides

Evergreen fern

Moist shade

Cinnamon Fern

Osmunda cinnamomea

Found in wet, acidic soils

Deep shade or filtered sun

Ebony Spleenwort

Asplenium platyneuron

Loves wooded slopes, is drought tolerant!

Part shade to full shade

Maidenhair Fern

Adiantum pedatum

Cherokees used the leaves to make a hair rinse. Also used as a powder to smoke and as snuff

Moist forests

Lady Fern

Athyrium filix-femina

Prefers damp, shady woodlands but will tolerate part sun

Sensitive Fern

Onoclea sensibilis

Fronds are sensitive to frost

Moist woodlands, marshes
Part to full shade

Netted Chain Fern

Woodwardia areolata

Well-mannered fern for ground cover over wet, shady places

What about Vegetables? Are any “Native”?

Of the food crops already growing in Georgia pre-Columbus:

Amaranth came from the Aztecs

Avocados came from Mexico and Central America

BEANS are Native!

Cacao came from the Mayans

Cassava (yuca) came from the Amazon

Chia was grown by the Aztecs

Corn came from Mexico 10,000 years ago

Papaya was grown by the Mayans

Peanuts were first grown in Bolivia

Peppers developed in Mexico

Potatoes were first cultivated by the Inca

Quinoa originated in the Andean highlands

SQUASH, PUMPKINS, ZUCCHINIS and HARD SHELLED GOURDS are Native!

SUNFLOWERS originated here!

Sweet potatoes originated in Central America

Tomatillos came from the Aztecs

Tomatoes originated in the Andean region

Native vs Alien

Native plants

- Feed indigenous insects, birds and animals
- Provide breeding and nesting places
- Are much easier to establish and care for
- Survive on natural rainfall once established
- Outcompete some alien plants for space and nutrients

Native vs Alien

Alien plants

- Can be very expensive
- Can be time and resource-consuming
- Don’t play a significant role in feeding insects and animals
- Don’t play a significant role in sheltering wildlife and insects
- Can be invasive

MORAL - If it isn’t being chewed on, it’s not earning its space in the garden!

Going Native is an easy two-step dance

1. Follow the rule of attrition: when an alien plant dies, replace it with a native species that comes closest to displaying the habit, size, texture and color of the lost alien.

2. Redesign small patches of your existing garden or create a whole new garden area on the edge of or behind an existing garden or an existing lawn.

Some tips

- Plant in groves or swaths for maximum beauty and effect.

- Native borders should be wide - as wide as possible and densely planted. It’s good if you can’t see the ground, because you have then succeeded in providing safe sites for things that need them.

- Keep and use your leaf litter to fertilize, mulch and conserve water. Shaded leaf litter is perfect for dwarf crested iris, bloodroot, Jack-in-the-pulpit, trout lilies and mayapples, for example.

Do’s and Don’ts

DO purchase native plants from a reliable and recognized nursery.

DON’T attempt to dig up natives found “in the wild” without proper authorization. Plant poaching has become a major concern.

DO join a native plant rescue group (such as Georgia Native Plant Society)

Native Plant Nurseries

Baker Environmental Nursery, Hoschton, GA www.bakerenvironmentalnursery.com

Nearly Native Nursery, Fayetteville, GA www.nearlynativenursery.com

Beech Hollow Wildflower Farms, Canton GA Scottdale, GA www.beechhollowfarms.com

Night Song Native Plant Nursery, Canton GA www.nightsongnatives.com

Georgia State University Perimeter College Botanical Garden, Decatur, GA no direct website available

Native Forest Nursery, Chatsworth, GA www.nativeforestnursery.com

Cottage Garden Natives, Lithonia, GA www.cottagegardennatives.com