Native Plant Society of Texas- Houston Chapter Native Plant Guide- Updated March 2022

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Visit our **Facebook** page at <u>https://www.facebook.com/Native-Plant-Society-of-Texas-Houston-Chapter-108454152626553</u>

NPSOT-Houston Newsletters and Event List/Calendar are available at www.npsot.org\houston_Follow us on Twitter @NPSOT_HOU

Introduction Welcome to the Houston Chapter of the Native Plant Society of Texas (NPSOT-Houston)

Our mission is to introduce you to the beauty, versatility and low-care needs of plants native to Houston and surrounding areas.

We provide local-area field trips in spring and fall, informative monthly speaker presentations, an annual plant/seed swap, and our popular **Wildscapes Workshop – Landscaping with Natives to Attract Wildlife** in September. Learn about natives, how to care for them, sharing your garden with wildlife, and more at our monthly meetings. Members often bring plants to share and your mystery plants can be identified.

Please consider joining us! We are a non-profit 501(c)(3) organization with nominal, tax-deductible membership fees of \$45 per year for an individual and \$60 per family, \$35 per year for seniors and limited incomes, also \$100 Patron, \$250 Benefactor, and \$500 Supporting. Your name/email address information is kept strictly private and never sold. In addition to our local chapter, the state organization highlights a different Texas ecoregion with a three day Fall symposium featuring speakers, workshops, many field trips, photo contests and more. A Spring Symposium is held annually at the LadyBird Johnson Wildflower Center in Austin. A glossy full-color newsletter with interesting native and ecoregion articles is sent quarterly. An emailed meeting reminder is sent monthly, with a list of events and notices.

NPSOT-Houston Chapter also has a quarterly newsletter and many information pages on bird- butterfly- and hummer-attracting natives; trees, shrubs, vines and groundcover suggestions; native plant nurseries; landscapers; and more, included in this document. Updates can be found on our website: <u>http://npsot.org/houston</u>

Like us on Facebook! Follow us on Twitter (@NPSOT-HOU) and (#txplants)! Watch us on YouTube! On Meetup – Join www.meetup.com/Native-Plant-Society-of-Texas-Houston-Chapter

We have a **Native Landscaping Certification Program** in Houston. Join us for classes on landscaping with native plants suited to our area of Texas. We'd love to meet you! <u>https://npsot.org/houston/native-plant-info</u>

NATIVE PLANT SOCIETY OF TEXAS

The purpose of the Native Plant Society of Texas is to promote the conservation, research and utilization of the native plants and plant habitats of Texas, through education, outreach and example.

ORGANIZATION

The Native Plant Society of Texas ("NPSOT") was founded in 1980 for the purpose of protecting the botanical legacy of Texas. The mission of NPSOT is to promote the conservation, research and utilization of the native plants and plant habitats of Texas, through education, outreach and example.

NPSOT is a nonprofit tax-exempt organization under Section 501(c)(3) of the IRS Code and is funded primarily by the annual dues of its members and by individual and corporate contributions and foundation grants.

At the community level, there are more than twenty-five NPSOT chapters across Texas. Membership is open to individuals, families, groups, and businesses sharing an interest in and an appreciation of the native plants of Texas.

GOALS

To educate both its members and the general public, and to foster a greater awareness and understanding of our native flora; To preserve rare and endangered species and their habitats; To encourage landscaping with appropriate native plants, for their beauty, ease of maintenance, and waterconserving qualities; To protect, conserve and restore native plants threatened by development; To encourage the responsible propagation of native plants; To promote an appreciation and understanding of current, historical and potential uses of native plants.

CSCSCS

NEWSLETTER

All NPSOT members receive a subscription to the Native Plant Society of Texas NEWS. This quarterly publication features original articles on a range of subjects of potential interest to our members: gardening with native species, destinations within Texas special for their native plants, nontechnical research papers by eminent plant scientists, propagation notes, news about public programs relating to natives.

The NEWS also includes a calendar of local, regional and national events, book reviews, and a resource list of nurseries and landscape professionals across the state specializing in native plants.

ANNUAL MEETING

A highlight of the year is the annual members' meeting, held each October in a different vegetational region of Texas. In addition to the regular business meeting, and educational symposium is featured, celebrating the unique flora of that region. An awards banquet, exhibitions, seminars, and field trips within the area complete the weekend program.

CHAPTER ACTIVITIES

Members are encouraged to join existing chapters, to share their own knowledge and experience and to learn from others.

Individual chapters frequently arrange field trips to parks, preserves, botanical gardens and research centers, in addition to scheduled chapter meetings, plant and seed exchanges, and informal lectures by native plant professionals and knowledgeable amateurs. A number of chapters have also been active in community work projects, plant surveys, habitat restoration, landscaping projects. If you are interested in forming a new chapter where none exists, let us know; the state office can help you get it organized.

MEMBERSHIP

We invite you to participate as a member of the Native Plant Society of Texas. Membership is open to any individual, family or organization. Membership is renewable annually, and extends for a year from the date we receive your original payment.

If you wish to join, please indicate your category of membership, then clip and mail this application, along with the appropriate remittance, to:

NATIVE PLANT SOCIETY OF TEXAS P.O. Box 3017 Fredericksburg, Texas 78624

Select your membership category:
 Individual \$45 Couple/Family \$60 Student/Senior/limited income \$35 Patron \$100 Benefactor \$250 Supporting \$500 Lifetime (one time payment) \$1200 Other
Name
Address
City
State Chapter
ZipPhone
E-Mail

JOIN ONLINE AT <u>www.npsot.org</u>

SOURCES OF NATIVE PLANTS IN THE HOUSTON AREA

The nurseries listed below carry a variety of plants, including some native species. The availability of native plants will vary from nursery to nursery and by season. *Please call ahead for availability, hours and directions.* Some nurseries are willing to order specific plants if requested.

Alspaugh's Ace Hardware 2720 West Lake Houston Pkwy Kingwood, TX 77339 281-360-2231 <u>http://alspaughs.com/services</u>

The Arbor Gate 15635 FM 2920 – Tomball, TX 77375 281-351-8851 <u>www.arborgate.com</u>

Bill Bownds Tree Nursery 10519 FM 1464 – Richmond 77469 281-277-2033 http://billbowndsnursery.com

Buchanan's Native Plants 611 East 11th Street Houston 77008 713-861-5702 www.buchanansplants.com

Caldwell Nursery 2436 Band Rd. - Rosenberg 77471 281-342-4016 www.caldwellhort.com

Doremus Wholesale Nursery 2167-CR 1550 Warren, Texas 77664 409-547-3536 (wholesale only) edoremus@aol.com www.facebook.com/doremus.nursery

The Enchanted Forest 10611 FM 2759 – Richmond 77469 281-937-944<u>9 www.myenchanted.com</u>

Enchanted Gardens Nursery 6420 FM 359 Richmond 77469 281-341-1206 http://myenchanted.com

Greenstar Wetland Plant Farm 1300 W 19th St #70205 Houston, TX 77008 281-989-5517 <u>info@greenstarwetlands.com</u> <u>https://greenstarwetlands.com</u> Houston Arboretum Native Plant Sales www.houstonarboretum.org

Houston Audubon's Natives Nursery 440 Wilchester Blvd. – Houston, TX 77079 713-932-1639 www.houstonaudubon.org

Joshua's Native Plants 502 West 18th St. Houston 77008 713-869-6911 www.Joshuasnativeplants.com

Kingwood Garden Center 1216 Stonehollow Dr. Kingwood, TX 77339 281-358-1805 www.kingwoodgardencenter.com

Maas Nursery 5511 Todville Rd Seabrook, TX 77586 281-474-2488 www.maasnursery.com

> MD Native Plants by appointment only 713-628-7575 Ktart2001@yahoo.com

Morning Star Prairie Plants 21107 Pecan Bend - Damon, TX 77430 713-446-2509 by appt. only <u>morgy@consolidated.net</u> www.facebook.com/SupportSustaina bleAgriculture

Native American Seed Junction, Texas 1-800-728-4043 <u>info@seedsource.com</u>, www.seedsource.com

Native Plant Society of Texas-Clear Lake Chapter Spring or Fall Plant Sale www.npsot.org/wp/Clearlake NPSOT-Houston Chapter Wildscapes Workshop & Native Plant Sale (Sept.) www.npsot.org/wp/Houston

Nature's Way Resources

John Ferguson, M.S., P.G. 101 Sherbrook Circle Conroe, Texas 77385 **(281) 507-5303 Cell** www.natureswayresources.com

Nelson Water Gardens &

Nursery 281-391-4769 1502 Katy Fort Bend Road – Katy, TX 77493 www.nelsonwatergardens.com

New World Botanical 2701 Lone Star Pkwy Montgomery, Tx 77356 936-689-8751 martinsimonton@gmail.com

Peckerwood Garden

20559 FM 359 Road – Hempstead, TX 77445 976-826-3232 – on open days or by appt only <u>www.peckerwoodgarden.org</u>

> RCW Nurseries 15809 State Highway 249 Houston 77086 281-440-5161 www.rcwnurseries.com

Next Door Nursery https://next-doornursery.myshopify.com

Rusty Dog Gardens https://rustydoggardens.com

Treesearch Farms (wholesale only) 7625 Alabonson Road Houston 77088 713-937-9811 <u>www.treesearchfarms.com</u>

This information sheet was prepared by the Native Plant Society of Texas – Houston Chapter. The nurseries and organizations listed above are provided for your information only. The list does not imply endorsement by the Native Plant Society of Texas. If you would like more information about Texas natives, we offer monthly speaker/slide programs, field trips, member newsletter, and books. We meet on 3rd Thursdays of most months. Contact <u>DKnowlesPE@aol.com</u> for changes to this page.

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NATIVE HOST PLANTS FOR SOUTHEAST TEXAS

BUTTERFLIES

Butterfly

Plants

Giant Swallowtail	Lime Prickley Ash, Hercules Club, Common Hop Tree
Pipevine Swallowtail	Aristolochia species (pipevines) A.erecta, A. reticulata, A. tomentosa
Zebra Swallowtail	Paw Paw (Asimina triloba, A. parviflora)
Black Swallowtail	Apiaceae (Prairie Parsley)
Tiger Swallowtail	Ash species, Black Cherry
Spicebush Swallowtail	Spicebush, Sassafras, Sweetbay Magnolia
Palamedes Swallowtail	Red Bay, Sassafras, Sweetbay Magnolia 🛛 👝 🕵 🏸
Cloudless Sulphur, Sleepy Orange	Senna, Partridge Pea
Little Sulphur	Senna, Partridge Pea, Powderpuff
Soapberry Hairstreak	Western Soapberry
Banded Hairstreak	Oaks, Hickories, Walnuts
Northern Hairstreak, Horace's Hairstreak	Oak species (Bur, Willow, Water, Swamp Chestnut, Red)
Red Banded Hairstreak	Sumacs, Southern Wax Myrtle, Croton, Oaks
Cedar Hairstreak	Eastern Red Cedar
Henry's Elfin	Redbud, Vaccinium, Hollies, Viburnum, Mexican Buckeye
E. Pine Elfin	Loblolly Pine, Longleaf Pine
Cassius Blue, Marine Blue	Rattlebox, various legumes
Snout Butterfly	Hackberry species
Gulf Fritillary and Variegated Fritillary.	Passion flower (Passiflora incarnata, P. foetida, P.lutea)
Texas Crescent	Flame Acanthus, Ruellia, Water Willow
Phaon Crescent	Frog Fruit (Phyla incisa)
American Painted Lady, Pearl Crescent	Asteraceae: Asters, Sunflowers, Echinacea, Coreopsis, Eupatorium, Liatris, Rudbeckia
Question Mark	Elm, Hackberry species, nettle
Red Admiral	Nettle (Urtica), False Nettle (Boemeria)
Painted Lady	Thistle, Mallows (Malvaceae), Hibiscus, Sida
Buckeye	Toadflax, Plantain (Plantago), Ruellia
Red Spotted Purple	Black Cherry, Cottonwood, Hawthorns
Viceroy	Willows, Cottonwood, Cherry trees
Hackberry Emperor & Tawny Emporer	Hackberry species
Little Wood Satyr	Various grasses
Monarch and Queen	Asclepiadaceae, Milkweed species
Long Tailed and Spotted Skippers	Legumes (Acacia, Baptisia, Mimosa, Sesbania, Senna, Sophora, Amorpha)
Dorantes Longtail	Legumes (Acacia, Baptisia, Mimosa, Sesbania, Senna, Sophora, Amorpha)
Wild Indigo and Funeral Duskywings.	Baptisia, Lupines, Louisiana Vetch, Rattlebush
Common Checkered Skipper	Sidas, Globe-mallows, other Mallows
Swarthy Skipper	Little Bluestem
Clouded and Fiery Skippers	Grasses
Broad Winged (Marsh) Skipper	Sedges, Marsh Millet
Dun Skipper (Sedge Skipper)	Sedges
Eufala and Common Roadside Skippers	Grasses
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Prepared by Glenn Olsen from these References: Butterflies of Houston: John & Gloria Tveten, Checklist Of The Vascular Plants Of Texas: Hatch, Gandhi, Brown, Butterflies Of North America: John Feltwell, The Milkweed And Its World Of Animals: Ada and Frank Graham, A Textbook Of Entomology: Herbert H. Ross, Manual of Cultivated Plants: L.H. Bailey This is a partial list; many more native plants are food sources for butterflies & moths!

Native Vines for the Houston Area

Native **Coral Honeysuckle** (Lonicera sempervirens) is not aggressive like its cousin the exotic Japanese honeysuckle that smothers everything in its path. Reddish green stems anchor the dark green leaves to form a shrub-like appearance. The leaves clasp the stem. Coral Honeysuckle decorates fences



and arbors with elongated red trumpet-shaped flowers with yellow centers. The flowers bloom throughout the year and attract hummingbirds, especially in the winter months. Birds eat the clusters of red or orange berries that appear in September through October. Birds have also been known to nest inside the vine thicket. Coral Honeysuckle can take any kind of soil: sand, loam or clay, even poor drainage. It likes morning sun and afternoon shade. If it gets full sun be sure to shade the roots with plants or rocks.

Passionflower vine (Passiflora incarnata) has 3 inch lavender blooms that are beautiful, intricate and unique. The flower has numerous wavy filaments that spread out like a lacy parasol. The bloom period is April to September. The medium to dark green leaves are deeply three lobed and are the larval host plant for the colorful (orange with small silver spots) Gulf Fritillary butterfly. The deciduous passionflower will get 10 to 20 feet tall. The fruit looks like a small melon, gets about 4" and is yellow-orange when ripe. The fruit can be eaten raw or made into a drink or jelly.

Yellow Passionflower vine (Passiflora lutea) has similar flowers: 1 inch cream yellow to greenish yellow. The bloom period is May through September. Yellow Passionflower is a much more delicate vine: reaching about 10 feet with soft, pale green leaves, barely 3 lobed and wider than long. The fruit is a blue-black berry.

Trumpet Creeper (Campsis radicans) is a vigorous and woody vine, able to climb tall trees and cover fences. Often called trumpet vine or hummingbird vine, it produces orange-red trumpet flowers all summer. Hummingbirds flock to the blooms. The dark green composite leaves, orange flowers, and long seed pods add different textures to the landscape. Trumpet creeper grows in a variety of moist soils, in partial shade to full sun conditions. A variety of cultivars have been developed from the native species and are less aggressive.

Carolina Jessamine (Gelsium sempervirens) is an evergreen, high climbing vine with long narrow leaves. Carolina Jessamine is spectacular in winter, featuring bright yellow trumpet blooms with a spicy fragrance that last throughout February and March. It can grow in sand, loam or clay with poor drainage.

Crossvine (Bignonia capreolata) is another hummingbird attractor. The spring trumpet blooms are brick-red on the outside and yellow inside. It can grow in shade or sun.

Texas Native Grapevines (Vitis species) are great food and habitat sources for birds. Grape vines, which are attractive additions to the landscape, are also useful for providing shade. Common Texas grapes vines include the Mustang Grape, the Muscadine Grape, the Riverbank Grape and the Graybark Grape. Fifteen grape species are native to Texas.

This information sheet was prepared by the Native Plant Society of Texas - Houston Chapter. If you would like more information on Texas natives, we offer monthly speaker/slide programs, field trips, a newsletter, and books to purchase. Meetings the third Thursday of most months.

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NATIVE PLANTS FOR EROSION CONTROL

Vegetation is one of the most important defenses for controlling erosion. Plants function in two primary ways in this battle. First are the root systems that pervade the subsurface and help to hold the soils in place. Second is the ability of the foliage to intercept and dissipate the energy of the rain before it strikes the soil. Most of the suggested plants have desirable root architecture for stabilizing the soil. The remainder are recommended for their ability to grow in difficult conditions such as dense shade or saturated soils.

TREES AND SHRUBS

River Birch Betula nigra Tolerates sandy soils and streamside conditions. Will tolerate sun or shade.

Green Ash *Fraxinus pennsylvanica* Green Ash has been determined to have the best root architecture for erosion control. They are long-lived and tolerate of a wide range of soils.

Black Willow Salix nigra Provides excellent soil holding ability and grows fast.

Bald Cypress *Taxodium distichum* One of the longest lived of all trees, Bald Cypress has the ability to grow in wet or dry soils such as can occur in streamside conditions. The root system does an excellent job of stabilizing saturated soils and resists blowing over even in strong winds.

Cream Wild Indigo Baptisia bracteata var. leucophaea Beautiful yellow pea like flowers, plant is 1 -2 feet tall with a wide habit.

Rough-leaf Dogwood *Cornus drummondii* Quite different from its more well known cousin Flowering Dogwood *Cornus florida,* Rough-leaf Dogwood tolerates full sun and a much wider range of soils and tends to thicket with an interconnected root system which gives great soil stabilization.

Elderberry Sambucus Canadensis A semi-woody shrub that frequently forms a small short-lived tree. Its soil stabilizing ability results from its propensity to spread by underground stems forming large colonies.

Coral Berry *Symphoricarpos orbiculatus* This deciduous shrub will tolerate a wide range of soils and exposures. It will tolerate considerable shade. It tends to colonize by underground stems, which is a characteristic favorable for erosion control.

Virginia Sweetspire *Itea virginica* A deciduous shrub that often gets beautiful red coloration in the fall. The fragrant tassels of white flowers are an added bonus in this native that adapts well in moist soils. Like many shrubs that perform well for soil stabilization, it colonizes well by underground stems. Native to Liberty county and east Texas.

Southern Dewberry *Rubus trivialis* Dewberry forms extremely dense mats of tangled stems and foliage that both shield the soil from hard rains and hold highly erodible soils such as pure streamside sands. Dewberries are edible to humans and wildlife.

HERBACEOUS PERENNIALS

Obedient Plant *Physostegia spp. Physostegia angustifolia* blooms in April, while the better known *Physostegia virginiana* is an early fall bloomer. The indigenous *Physostegia praemorsa* is native here in Harris County. Each of these species provide good soil holding ability due to their dense spreading habits that go through the winter as evergreen ground-hugging rosettes.

Pigeonberry *Rivina humilis* Related to 'Poke Salad" *Phytolacca americana,* this is a great groundcover for partial sun to shade. Pigeonberry plants have fluffy bloom spikes that rapidly turn into attractive berries that are adored by birds. In sunnier positions, the foliage develops an attractive red tint.

Frog fruit *Phyla incisa* Frog fruit will grow almost anywhere, from standing water to crawling out over asphalt. It is a mat forming evergreen in the Verbena family.

Mallows *Hibiscus spp.* Several of the native species of Hibiscus have extensive fleshy root systems that are effective in soil stabilization. Species include *Hibiscus coccineus, H. moscheutos, H. militaris, H. aculeatus, and Kosteletzkya virginica*

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Native Plants That Provide a Food Source for

Hummingbirds

This is only a partial list. Hummingbirds use many other native plants. Many of these species are available at native plant nurseries.

Flowers: (herbaceous) Cardinal Flower (Lobelia cardinalis) Blue sage (Salvia azurea) Scarlet sage (Salvia coccinea) Beebalm (Monarda citriodora, M. fistulosa, M. punctata, M. lindheimeri) Sunflowers (Helianthus sp.) Arkansas yucca (Yucca arkansana) Milkweed (Asclepias tuberosa) Carolina Larkspur (Delphinium carolinianum) Columbine (Aquilegia canadensis A. hinckleyana) Cupleaf Penstemon (P. murrayanus) Foxglove- Purple Beard Tongue (Penstemon cobaea) Gulf Coast Penstemon (Penstemon tenuis) Gayfeather (Liatris species) Fall Obedient Plant (Physostegia virginiana) Standing Cypress (Ipomopsis rubra) Lyre leaf sage (Salvia lyrata)

Shrubs: (woody)

Texas Lantana (Lantana urticoides) Turk's Cap (Malvaviscus arboreus drummondii) Indigo bush (Amorpha fruticosa) Eastern Coral Bean (Erythrina herbacea)

Vines:

Coral Honeysuckle (Lonicera sempervirens) Crossvine (Bignonia capreolata) Trumpet Creeper (Campsis radicans) Carolina Jessamine (Gelsemium sempervirens)

Trees:

American Elderberry (Sambucus canadensis) Flowering Dogwood (Cornus florida) Eastern Redbud (Cercis canadensis) Green Hawthorn (Crateagus viridis) Red Buckeye (Aesculus pavia) Wild Black Cherry (Prunus serotina)



This is a publication of the Native Plant Society of Texas- Houston Chapter. Address: NPSOT-H, Box 131254, Houston, TX 77219-1254.

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BEWARE:

There May Be Invasive Plants in Your Backyard

Help Stop the Spread of America's Worst Weeds

The Nature Conservancy is asking Americans to check their yards and gardens for plants that can escape cultivation and cause tremendous damage to the natural environment and the local economy.

Plants such as privet, Japanese honeysuckle, pittosporum, eleagnus, ligustrum, nandina, Chinese tallow, kudzu and Chinese wisteria have been used widely in horticulture and landscaping, and can be found in backyards and business lots across the region. At first glance these plants may look pretty, but their beauty is deceptive. Known as invasive species, plants like these are typically transplants from distant places. Once free from the natural checks and balances in their native habitats, these alien invaders establish themselves in new areas and quickly spread out of control. They hoard light, water and nutrients, and can alter entire ecosystems by displacing native species, altering fire regimes and changing soil chemistry.

With intentional and unintentional assistance from people, these problematic plants are spreading at an alarming rate, infecting natural areas across the United States.

"Keeping invasive plants out of America's backyards helps the environment and the economy," said Steve McCormick, president of The Nature Conservancy. "Taking the time to remove invasive plants and replace them with non-invasive varieties is a great example of bringing new energy to the old adage: think globally, act locally."

Because many invasive plants are spread by unsuspecting gardeners, it is important to learn about invasives before shopping at local nurseries. Check websites such as <u>www.invasive.org</u> for the latest on invasives. This site lists the worst invasive plants for each region of the country. If you see one of these plants at your local nursery, do not buy it, and talk to the nursery owner about discontinuing its sale. It is important to control invasives and prevent them from destroying natural ecosystems.

Texas has many beautiful native trees and flowers that look stunning in a garden setting and do not add to the invasives problem. Information about many natives can be found at http://aggie-horticulture.tamu.edu/ornamentals/natives/tamuhort.html and http://aggie-horticulture.tamu and http://aggie-horticulture.tamu and http://aggie-horticulture.tamu and http://aggie-horticulture.ta

On the national level, The Nature Conservancy is working with nursery and horticulture groups to identify invasives that might voluntarily be removed from the market. "Nursery growers, landscape designers and others who make their career in horticulture have become increasingly concerned with the problems related to invasive plants," said Wayne Mezitt, board member and past president of the American Nursery & Landscape Association (ANLA), and owner of Weston Nurseries in Massachusetts. "We see our role as educators, helping our customers and the public, as well as fellow nursery folk across the country, understand how invasive plants impact them."

The threat posed by invasive species – both plant and animal – to the survival of native species is exceeded only by the threat of habitat loss. The cost to the national economy is estimated as high as <u>\$137 billion per</u> <u>year</u>, due primarily to losses in agriculture, forestry and fisheries, as well as the cost of clearing invasive-clogged waterways and fighting invasive-fueled fires.

You can help stop the introduction and spread of invasive species. Help protect native plants and animals by following these six easy guidelines:

1. **Verify** that the plants you are buying for your yard or garden are **not invasive**. Replace invasive plants in your garden with non-invasive alternatives. Nonnative plants that reproduce can become invasive. 2. When boating, **clean** your boat thoroughly before transporting it to a different body of water.

3. Clean your boots before you hike in a new area to get rid of **hitchhiking weed** seeds and pathogens.

4. Don't "**pack a pest**" when traveling. Fruits and vegetables, plants, insects and animals can carry pests or become invasive themselves.

5. **Don't release** aquarium fish and plants, live bait or other exotic animals into the wild.

6. Volunteer at your local park, refuge or other wildlife area to help **remove invasive species**. Help **educate** others about the threat.

This page has been prepared from Nature Conservancy publications and is presented by the Native Plant Society of Texas- Houston Chapter. <u>www.npsot.org\houston</u>

Native Plant Society of Texas- Houston Chapter

Invasives Q&A

www.npsot.org/houston Information from The Nature Conservancy



QUESTION: What is an invasive species?

ANSWER: Invasive species are those plants, animals and other organisms that are introduced into new areas, where, free from their natural competitors, they are able to proliferate and persist to the detriment of the native environment. Impacts from invasive species may include widespread harm to the environment, the economy and human health.

QUESTION: What is a non-native plant?

ANSWER: This depends on where you are. In the USA, we usually define non-native plants as those which have arrived since the time of European contact. But on closer inspection, the issue is actually much more complicated. For example, humans may transplant USA species to regions outside of their native range, but which are still within the USA. For example, a California poppy growing in Alabama would be considered a non-native plant.

QUESTION: Are all invasive species non-native?

ANSWER: Not always. Occasionally a native plant may start acting like an invasive species. Usually this is because of some human-caused habitat change. One example would be a change in water quality because of agricultural runoff; another might be the abnormal suppression of fire. In these situations, fixing the underlying environmental problem would be the best solution.

QUESTION: Why not just let them be?

ANSWER: If the weeds do not harm the native biodiversity, we do not expend our precious resources of money, staff, and volunteers in fighting them. But if the non-native plants harm native plants and animals, we are compelled to take action. If we did nothing, we would decrease the effectiveness of our work.

QUESTION: How do weeds harm native plants and animals?

ANSWER: Thick growths of non-native weeds can displace the native plants that once provided food and shelter for the native animals. As weed populations rise, native species populations fall. The worst weeds even change the character of the entire habitat by changing important processes like fire, nutrient flow, flooding, etc.

QUESTION: How do invasive species behave in their native lands?

ANSWER: In their native habitats, these species are quite often found in small, well-behaved populations. This is because they occur with other organisms that keep the plant populations in balance. It is not until the species are removed from their habitat that their invasive characters emerge.

QUESTION: Are all invasive species plants?

ANSWER: No. In fact, some of the worst invasive species are animals. The effects of zebra mussels, feral pigs, and many other non-plant invaders are devastating to native biodiversity.

QUESTION: Why do these invasive plant species explode in population?

ANSWER: Recall that the invaders are usually non-native species. Free from the herbivores and parasites which keep them in check in their native range, they reproduce rapidly. They increase their numbers, unfettered by natural controls. They displace the native plants. When the populations of native plants are reduced, the animals that depend upon them may perish. The functions of the entire ecosystem are disrupted. Invasive species are truly a form of biological pollution.

QUESTION: Doesn't the addition of a non-native species increase biodiversity (i.e. species diversity)?

ANSWER: Yes, if you are only concerned about the number of species in the short term. No, if you want to maintain the natural array species unique to an area. Consider, for example, the rosy wolfsnail of the southeastern USA. This was introduced by humans to Hawai'i, Mauritius, and other islands in the Pacific and Indian Oceans. Global biodiversity did not benefit by this introduction. The rosy wolfsnail began killing native snails. Ultimately, it was responsible for driving to extinction dozens of snail species. Both local and global biodiversity suffered. Invasive species are usually existing perfectly well in their native lands. Introducing them to new habitats does them no good, and risks the integrity of native ecosystems.

QUESTION: Plants move around naturally---isn't the arrival of new plants a natural process?

ANSWER: It is true that plants do change their ranges, usually over periods of thousands of years. We are not concerned with these slow changes. The invasions we are worried about are the ones that humans have caused, and which are resulting in the suffering in our native biodiversity.

QUESTION: What is the solution the problem of invasive plants, particularly those that can be found in yards in gardens?

ANSWER: The solution is a combination of removing invasive plants, preventing new introductions, and restoring native habitats. The survival of native species depends upon our actions.

TOP 100 NATIVE PLANTS

FOR HARRIS AND ADJACENT COUNTIES

These Native Plants are recommended based upon a combination of their regional suitability for landscaping AND their value to wildlife. These plants grow well in the soil conditions of Harris and surrounding counties, including gumbo, AND provide value to wildlife such as birds, butterflies and beneficial insects. Each species is hardy for the Gulf Coast climate. Most plants do not require fertilizing, or any special treatment, except proper care until established. Naturally, if the plant becomes stressed or diseased special treatment is recommended. Please see other references for growth characteristics (height, width, evergreen, etc.) and appropriate planting conditions (sun, shade, moisture, etc.) for each species. Appropriate planting vields a healthier and more attractive plant.

Ten Big Trees: Swamp Chestnut Oak, Live Oak, Willow Oak, Loblolly Pine, Bald Cypress, Sweetgum, American Elm, White (Upland) Ash, Green (Swamp) Ash, Drummond Red Maple

Ten Small Trees: American Holly, Yaupon Holly, American Fringe Tree, Laurel Cherry, Eastern Redbud, Green Hawthorn, Carolina Buckthorn, Rusty Black-haw Viburnum, Farkleberry, Texas Persimmon

Ten Large Woody Shrubs (can grow to small tree size): Southern Wax Myrtle, Deciduous Holly, Yaupon Holly (thicket former), Rough Leaf Dogwood (thicket former), Elderberry (thicket former), Flame Leaf Sumac (thicket former), Parsley Hawthorn, Ohio Buckeye, Red Buckeye, Buttonbush

Ten Small Shrubs: American Beautyberry, Texas Lantana, Arrowwood Viburnum, Virginia Sweetspire, Red Chokecherry, Coralberry, Fragrant Sumac, Narrow Leaf Yucca, Yellow Sophora, Dwarf Palmetto

Ten Perennials For Sun: Purple Coneflower, Scarlet Sage, Maximilian Sunflower, Kansas Gayfeather, Eastern Gamagrass, Switch Grass, Indian Grass, Pink Evening Primrose, Guara, Giant Coneflower

Ten Perennials For Shade: Turk's Cap, Strawberry Bush, Cardinal Flower, Farkleberry, Blue Mistflower, Big Thicket Hibiscus, Gulf Coast Penstemon, Spring Obedient Plant, Fall Obedient Plant, Arkansas Yucca

Ten Vines For Sun: Coral Honeysuckle, Purple Passionflower, Carolina Jessamine, Carolina Snailseed, Globe Berry, Common Greenbriar, Mustang Grape, Prairie Rose, Trumpet Creeper, Curly Clematis

Ten Vines For Shade: Virginia Creeper, Cross Vine, Yellow Passionflower, Saw Greenbriar, Wooly Pipevine, Texas Dutchman's Pipe, Pitcher Clematis, Leather Clematis, Climbing Milkweed, Virginia Dutchman's Pipe

Ten Groundcovers For Sun: Frog Fruit, Knotroot Bristlegrass, Gulf Coast Muhly, Prairie Verbena, Little Bluestem, Indian Blanket, Winecup, Powderpuff (mimosa strigulosa), Creeping Spotflower, Carolina Ponyfoot

Ten Groundcovers For Shade: Pigeonberry, Coralberry, Wood Fern, Spiderwort, Cherokee Sedge, Horseherb, Carolina Elephant Foot, Partridgeberry, White Avens, Missouri Violet

References:

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August 2004

DROUGHT TOLERANT Native Plants

TREES:

Texas Persimmon (Diospyros texana), a deciduous tree, grows to 35 feet, white blooms in Spring, good fall color.

In spring the **Two-Winged Silverbell** tree (Halesia diptera) has dainty white bell-shaped flowers, loved by hummingbirds. Silverbell, native to SE Texas, grows to 30 feet, likes well-drained soil and has yellow fall color.

Short Leaf Pine (Pinus echinata) is a medium to large tree, growing to over 100 feet tall.

Loblolly Pine (Pinus taeda) is evergreen and grows to 110 feet.

Long Leaf Pine (Pinus palustrus) provides good wildlife habitat, grows to over 100 feet tall, long lived.

Cedar Elm (Ulmus Crassifolia) is a medium sized tree to 60 feet, with the smallest leaves of our native elms and is used as an ornamental shade tree.

Mexican Buckeye (Ungnadia speciosa) has fragrant pink flowers in Spring, attractive compound leaves in the summer, interesting fruits, yellow fall color, and brown speckled bark in winter. Buckeye typically grows as an understory tree in the Pineywoods, but it is also found on the Post Oak Savannah, Blackland Prairies and Edwards Plateau.

SHRUBS:

Butterfly Weed (Asclepias tuberosa) has clusters of brilliant orange flowers from April to November. It is extremely drought tolerant but needs excellent drainage with very sandy soil. Butterflies, particularly monarchs, love it. **Green Milkweed** (Asclepias viridis) has green flowers.

St. Andrew's Cross (Ascyrum hypericoides) is a small shrub with yellow flowers that bloom June to September.

Yaupon Holly (Ilex vomitoria) is an area-native evergreen shrub or small tree to 25' with stiff branches that make a dense cover that birds like to nest in. Yaupon can tolerate sun or shade and wet or dry soil. Red berries are attract many birds including woodpeckers and songbirds.

Wax Myrtle (Myrica cerifera) is an evergreen shrub or small tree up to 19 feet that is extremely drought tolerant when established. The leaves have a pleasant scent when crushed. The tiny 1/8" gray berries are eaten by 40 different species of birds. This tough local native can grow in sun or shade and wet or dry soil. **Dwarf Wax Myrtle** (Myrica pusilla) grows to under six feet tall and requires dry soil.

Native Texas Lantana (lantana urticoides) has bright yellow and orange flowers and leaves that are smaller than the invasive alien lantana camara.

Scarlet Sage or Tropical Salvia (Salvia coccinea) has spikes of red, orange, pink, coral or white blooms from spring to frost. Mealy Blue Sage or Blue Salvia (Salvia farinacea), a prairie plant, has 3 to 9 inch spikes of blue flowers that bloom continually from spring to frost

Gulf Coast Laurel or **Yellow Sophora** (Sophora tomentosa) has velvety, silvery, compound leaves. It only grows along the Gulf Coast and needs a sheltered location so it doesn't freeze. Gulf Coast Laurel blooms from April to November with yellow blooms that last a long time and seed pods that stay on the plant.

Coral Berry (Symphoricarpos orbiculatus) blooms midsummer and has distinctive red berries. Coralberry is attractive to butterflies and birds.

Arkansas yucca (Yucca arkansana), native from South Central to North Central Texas, grow 1 to 2 feet tall with tall bloom stalks bearing clusters of white bells.

This information sheet was prepared by the Native Plant Society of Texas - Houston Chapter. We offer monthly speaker/slide programs, field trips, a newsletter, and more. Meetings – third Thursdays of most months.

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Native Grasses

for Your Landscape

Little Bluestem

Native grasses provide food and shelter for birds and other wildlife. Dragonflies use grass stems for perches. Insects, lizards, and toads use the clumps of grass as shelter, especially in the winter. Birds find the grass seed particularly appetizing in the fall and winter, when other foods are scarce. Birds also utilize the grass blades as nesting material in the spring. Insects, spiders, toads and lizards - even snakes are important ingredients to any healthy prairie, yard or ecosystem, so please refrain from using pesticides and insecticides. Many grasses are host plants for butterflies and moths.

The "Big Four" tallgrass prairie grasses are Big bluestem, Little bluestem, Yellow Indiangrass and Switchgrass. These are warm season grasses and provide excellent benefits for wildlife.

Big bluestem (Andropogon gerardii) Also known as "turkeyfoot" grass, big bluestem is the king of tallgrass prairies. There's no mistaking this trademark grass with its turkeyfoot-like branches. It can reach heights of 6 to 9 feet in optimal conditions.

Little bluestem (Schizachyrium scoparium) A tufted perennial bunchgrass, little bluestem changes colors with the seasons and reaches a height of 5 feet or more.

Switchgrass (*Panicum virgatum*) Switchgrass forms large clumps, sometimes 6 feet high and more than 6 - 8 feet wide. Switchgrass can be used in wet areas, too - around ponds and creeks or low spots.

Yellow Indiangrass (Sorghastrum nutans) This beautiful and important prairie grass reaches a height of 6 feet. Once a dominant prairie grass, Indiangrass is evidence of a quality prairie. Indiangrass/switchgrass and Indiangrass/bluestem plant communities are among the most imperiled ecosystems on earth.

Gulf muhly (Muhlenbergia capillaris) Gulf muhly provides some of the showiest seasonal colors. The seed stalks turn a beautiful feathery pink in fall and then become a cream or straw color in winter. Gulf muhly is only about knee-high, with an airy shape, so you have several choices about how or where to use it. Have you ever seen it in the wild around Houston spangled with seaside goldenrod or yellow composites? Just gorgeous!

Eastern gamagrass (*Tripsacum dactyloides*) Gamagrass is a handsome grass growing 8 feet tall. The leaves are bright green even during a drought. Gamagrass is a cool season grass, so it blooms early, goes dormant, and blooms again in fall. The inflorescence is wonderfully interesting. The large segmented seeds are striking.

Broadleaf wood oats (Chasmanthium latifolium) Broadleaf wood oats prefers partial shade areas. It can grow 2-3 feet tall. The drooping seeds resemble golden oats when ripe and are eaten by a variety of wildlife.

Sugarcane Plumegrass (Erianthus qiganteus) Sugarcane plumegrass can reach 6 –10 feet tall with large, fluffy white plumes. It grows naturally at the edge of large ponds and wetlands.

Sideoats grama (Bouteloua curtipendula) Sideoats grama is the state grass of Texas. This grass usually reaches a height of 2 - 3 feet, but can grow 5 feet or more. It prefers partial or dappled shade. It is an excellent food source for birds.



Native grasses can be gorgeous when in bloom. They add graceful texture to a landscape. You can plant them in large containers as accents or plant several acres of them. Native grasses prevent erosion and improve soil. Grasses have extensive fibrous root systems that can go down 17 feet or more. Native grasses can be cut, mowed or left alone. Most of the grasses listed here mature and bear seed in the fall. For continuous color, plant wildflowers along with the grasses for spring and summer color until your grasses bloom in September. The grasses will be especially colorful in October and your landscape will be ever changing and richly diverse.

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Sideoats grama

Native Trees

That Thrive in Poorly Drained Black Gumbo Soil

<u>Bald Cypress</u> (*Taxodium distichum*) is a long-lived shade tree (to 100') with feathery leaves and yellow-to-rust fall color. Leaves fall for the winter. The fruit is a 1" round cone.

<u>Swamp Chestnut Oak</u> (*Quercus michauxii*) leaves turn bright red in the fall. This long-lived shade tree can grow to 80 feet. It can take standing water for up to a week. A beautiful tree.

Live Oak (*Quercus virginiania*) is an evergreen tree which means that the leaves stay on throughout the year. This shade tree grows 40 to 80 feet tall with a short truck, low branching and a broad-spreading rounded crown.

Willow Oak (Quercus phellos) has long, narrow willow-like leaves so there's not much to rake in fall.

<u>**River Birch**</u> (*Betula nigra*) is a lovely shade tree which grows to a height of 90 ft. and has triangular leaves rounded on the bottom which turn yellow in the fall. The flaking bark is outstanding. Saplings have red cherry-like bark and later peachy-white flaking to reveal darker peach-colored bark.

Black Gum (*Nyssa sylvatica*) is a large shade tree to 100 feet with short crooked branches which come off the trunk at right angles. It turns bright red in early fall (sometimes even in August). Female black gum trees bear 1/2 inch black berries which birds relish.

Drummond Red Maple (*Acer rubrum var. drummondii*) is a large shade tree to 90 feet tall. It grows fast but can live 50 years and features red flowers in January on males, and red winged fruits on females in spring called samuras. If the winter weather is cold enough, Drummond red maple leaves turn yellow then red before falling.

<u>Green Ash</u> (*Fraxinus pennsylvanica*) is a fast growing shade tree to 50' with yellow fall color. Female Green Ashes have bunches of green matchstick-sized fruit which birds love.

Fringe Tree (*Chioanthus virginicus*) is an understory tree that blooms in spring with fragrant long-petaled white flowers that look like a fringe all over the tree. The leaves are 4 to 8 inches long.

Parsley Hawthorn (*Crataegus marshallii*) is an understory tree to 20 feet whose leaves look like parsley. This thorny tree has sparkling white flowers in spring with pink stamens, followed by red 1/3 inch fruit in the fall which birds and small mammals love, and yellow fall color. The gray bark flakes to reveal the orange inner bark. Butterfly larvae eat the foliage and birds like to nest in the tree.

Rough-leaf Dogwood (*Cornus drummondii*) is very different from its "cousin" the showy flowering dogwood (Cornus florida). The rough-leaf dogwood has clusters of white blooms in spring rather than the large white bracts of its cousin. This suckering tree has white berries in the fall.

Snowbell (*Styrax americana*) is a small shade tolerant (moist, acidic soils) ornamental tree with oval leaves that only gets 10 feet high. It has white blooms all over the tree in spring that hang downward showing the yellow stamens.

Indigo-bush Amorpha or False Indigo (*Amorpha fruticosa*) is an understory tree with small compound leaves and 4-8 inch spikes of purple flowers with electric orange anthers in spring. It gets 5 to 10 feet high and is good for erosion control.

<u>Sweetbay Magnolia</u> (*Magnolia virginiana*) is much smaller than the Southern Magnolia and likes swampy places. It has the same fragrant white flowers in spring but smaller (2"-3"). This understory tree is semi-evergreen, the leaves have white undersides.

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Native Shrubs

That Thrive in Poorly Drained Black Gumbo Soil

Strawberry Bush (Euonymus americana) is named after its fruit which resemble strawberries (not edible). The one" scarlet fruits remain through fall, splitting open to show orange-red seeds. This upright shrub has green stems and deciduous leaves that turn bright red in the fall.

Wax Myrtle (Myrica cerifera) is an evergreen shrub or small tree to 18'. The leaves have a pleasant scent when brushed against. The tiny 1/8" gray berries on females are eaten by 40 different species of birds and the wax on the berries is used to make bayberry candles. This tough area native can grow in sun or shade and wet or dry soil. It's a very fast grower - just add water. It will also sucker to form a thicket.

Buttonbush (Cephalanthus occidentalis) is a deciduous shrub that lives in shallow water (up to 6") or plant in the ground. If you want butterflies get Buttonbush. The late May to fall repeat blooms are perfectly round white balls with a heavy perfume. The bark has a speckled appearance and the fall nutlets are a favorite of waterfowl.

Virginia Sweetspire (Itea virginica) has fragrant drooping white spires in spring. This 5' shrub has fall color ranging from yellow, orange, red and purple; in mild winters you get to enjoy these changing colors until spring.

Yaupon Holly (Ilex vomitoria) is an area-native evergreen shrub or small tree to 25' with stiff branches that make a dense cover that birds like to nest in. The birds like to eat the translucent red berries which are hard so they leave them on the tree all winter. Yaupon is so adaptable it tolerates sun or shade and wet or dry soil. There is also a yellow-berried form.

Possumhaw Holly (Ilex decidua) loses its leaves and is bare all winter. However, the female shrub or small tree is loaded with red berries all winter and is a standout.

Ti-Ti ("tye-tye") or **Leatherwood** (Cyrilla racemiflora) is an outstanding semi-evergreen shrub that will grow in standing water (up to 6") or planted in the ground. In late May the fragrant white flower spikes look like petticoats. In summer the fruits turn rust color or ivory. In fall some of the leaves turn bright red and stay on the bush making a colorful picture.

Dwarf Palmetto (Sabal minor) is a hardy, evergreen, fan-shaped palm. The stems are underground and the large leaves can reach 5'. It sends up a long bloom stalk to 6', with a spray of fragrant whitish blooms then it has fruit like black grapes which birds devour.

Possumhaw Viburnum (Viburnum nudum) has white flower clusters in March which turn into clusters of tiny pink, then blue-black fruit which taste like raisins. Birds love the fruits too. Possumhaw has outstanding wine-red fall color.

Salt Marsh Mallow (Kosteletzkya virginica) upright, branching shrub to 6 feet; The mallow grows in wet, often saline soils. It forms dense showy clumps and the gray-green pointed leaves are fuzzy. 2 to 3" pink hibiscus-like flowers bloom from June-November and attract hummingbirds and swallowtail butterflies.

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Drummond Red Maple Black Gum Nyssa sylvatica Acer Rubrum var. drummondii Hop Hornbeam Ostrya virginiania Red Buckeye Aesculus pavia Red Bay Persea borbonia Gum Bumelia Bumelia lanuginosa Honey Mesquite Prosopis glandulosa American Hornbeam Carpinus caroliniana Cherry-laurel Prunus caroliniana Sugarberry Celtis laevigata Mexican Plum Prunus mexicana Flowering Dogwood Cornus florida Black Cherry Prunus serotina Green Haw Crataegus viridis Flatwoods Plum Prunus umbellata Deciduous Holly Ilex decidua Buckthorn Rhamnus caroliniana Ink-berry Holly Ilex glabra Flame leaf Sumac Rhus copallina American Holly Ilex opaca Smooth Sumac Rhus glabra Sassafras Sassafras albidum Winterberry Holly Ilex verticillata Yaupon Holly Ilex vomitoria Winged Elm *Ulmus alata* American Elm Ulmus americana Sweetgum Liquidambar styraciflua Southern Magnolia Magnolia grandiflora Cedar Elm Ulmus crassifolia Sweet Bay Magnolia Magnolia virginiana Slippery Elm Ulmus rubra Pyramid Magnolia Magnolia pyrmidata Farkleberry Vaccinium arboreum Red Mulberry Morus rubra Arrow-wood Viburnum Viburnum dentatum Water Tupelo Nyssa aquatica Rusty Black-haw Viburnum Viburnum rufidulum

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Native Plants for Shady Areas

American Beautyberry (Callicarpa americana) deciduous shrub, 4 to 8 feet height; This shrub has a sprawling effect and does quite well in the shade. Although this shrub prefers moist, well-drained soil, it can withstand drought conditions with minimal watering. Beautyberry adapts to many soil types, including clay. Bright magenta berries cluster all around the stem in late summer and last until the birds eat them all. This shrub adds wonderful color to a late summer landscape, as well as nice texture with its airy effect. The fall migrant robins and cedar waxwings, as well as the resident mockingbirds and blue jays love the berries as they ripen in the fall.

Pigeonberry (Rivina humilis) perennial groundcover, 1 to 2 feet height; This perennial is absolutely fabulous to brighten up a shady area. It does well under drought conditions. Pigeonberry is often seen growing in the wild at the base of a large tree or shrub. With supplemental water, pigeonberry may achieve a thicker groundcover. This perennial is not a large plant, so it does not stand out when viewed from a distance, but a grouped arrangement adds beautiful color and texture to a shade garden. Pigeonberry holds a reddish tinge all year and creates a wispy texture. It features pink or white blooms and red berries which are a favorite

Turk's Cap (Malvaviscus arboreus) deciduous perennial shrub, 2 to 4 feet height with spreading branches 8 -12 feet wide. This shrub can handle most conditions, although it survives a drought much better with a little supplemental watering in shade or partial shade. If grown in full sun locations, it will need additional watering to perk it up during long, dry periods. The deep red tubular blooms start as early as March, if the winter was mild. The shrub will bloom almost non-stop throughout the year. It will freeze back somewhat in the winter and will spread to 12 feet if not pruned back. This shrub is a favorite nectar source for hummingbirds and swallowtail butterflies.

Pokeberry, Poke-Salad (Phytolacca americana) perennial shrub, 4 to 8 feet height; part shade to sun; This shrub may freeze back during the winter but resprouts from the roots. It requires supplemental water to survive droughts. The bark is red and the leaves bright green, adding color throughout the summer. The berries begin in mid-summer, ripening to dark purple by the summer's end. Mockingbirds, mourning doves, and inca doves have been seen guarding these shrubs and gobbling ripe berries. The berries do leave stains and all parts of the plant are poisonous.

Horseherb (Calyptocarpus vialis) groundcover, 8 to 10 inches height, partial to full shade; Horseherb prefers well-drained soil and grows well around the base of trees where grass will not grow. It is not aggressive and does not climb, although it will outcompete grass in shady areas. Horseherb can be mowed and will withstand light foot traffic. As part of a wildscape, it provides shelter for insects, lizards, and toads. The small, flat yellow flowers remain in bloom from spring to fall. It will freeze in the winter and come back from the roots in the spring. Horseherb is a boon for the lazy gardener who wants a plant that will thrive in shade with little care. It is also called Hierba del Caballo and Straggler Daisy.

Chile Pequin (Capsicum frutescens) almost evergreen shrub 2 to 5 feet in height with woody base and spreading top; Also called bush pepper or chilipitin, this is a true native Texas pepper. White flowers bloom throughout the year, eventually turning into bright red spicy peppers. The vibrant green leaves and colorful red peppers are a stunning combination in the landscape. Birds and people value the peppers as a food source. The chile pequin prefers moist soil in shady spots.

American Snowbell (Styrax americana) widely branched small tree (or large shrub) reaching a height of 10 feet or less; The snowbell grows along edges of swamps and creeks, preferring rich, moist soil. It can handle dappled to part shade conditions. The fragrant, bell-shaped flowers bloom in May or June. Another species, the Downy American Snowbell (Styrax americanum var. pulverulentum) has fuzzy twigs and prefers sandy, moist soils. The flowers serve as a nectar source for hummingbirds, butterflies/moths, and honeybees.

Witch Hazel (Hamamelis virginiana) deciduous shrub to 10 feet in height and 8 feet in width; Witch hazel's bright yellow blooms are seen in the fall and winter after the leaves have dropped. During the summer it sports thick foliage, with leaves turning a variety of colors in the fall prior to dropping. Witch hazel prefers moist, well-drained soils and dappled shade. The seeds ripen in late summer and are eaten by several bird species.

Coralberry (Symphoricarpos orbiculatus) hardy, nearly evergreen shrub, usually 2 to 6 feet in height; Also called snowberry, this shrub makes great hedges or thick groundcovers under trees in dappled to part shade. Coralberry spreads by rhizomes and is used for erosion control under harsh conditions. The greenish white flowers bloom during the summer months, becoming reddish-pink berries that persist through the winter. This winter food source is important to many bird and wildlife species.

Rusty Blackhaw Viburnum (Viburnum rufidulum) large evergreen shrub to tree, ranging 10 to 15 feet in height, but can reach 30 feet under excellent conditions; The shiny green leaves of this viburnum change to a beautiful maroon red color in the fall prior to dropping. The bright white flowers bloom in the early spring and attract butterflies and honeybees. The flowers become drooping clusters of black berries or "haws" that are desired by birds galore. The rusty blackhaw prefers well-drained soils. It will grow in dappled shade to full sun conditions. Two other species, the Maple-leaf Viburnum (Viburnum acerifolium) and the Arrowwood Viburnum (Viburnum dentatum) are also possibilities for Houston-area landscapes. The maple-leaf, 2 to 6 feet in height, prefers shady spots and sandy soils. The arrowwood, 3 to 15 feet; grows in many types of soil, but prefers moist sandy soils in part shade.

Coralbean (Erythrina herbacea) shrub multi-branching from base, 6 to 15 feet in height; Coralbean has fat, almost heart-shaped green leaves, armed with recurved prickly spines beneath. Braving the spines is worth it, however, due to the brilliant red flower spikes that bloom spring through fall. These tubular red flowers are desired as nectar sources by hummingbirds during the migration. Coralbean is usually evergreen in mild winters, but may freeze back and resprout from the roots in spring in colder winters. This shrub prefers part shade to full sun in any type of soil. The red seeds are beautiful but poisonous.

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Native Texas Plants That Provide Food, Shelter or Nesting For *Birds*

Medium to Large Size Trees

American Holly American Sycamore Bur Oak Black Cherry Blackgum Cherry Laurel Drummond Red Maple Eastern Red Cedar Hackberry or Sugarberry Live Oak Loblolly Pine Longleaf Pine

Small Trees

Acacia Hirta American Hop Hornbeam (Ironwood) Barberry Hawthorn Blueberry Hawthorn Carolina Buckthorn Elderberry Flowering Dogwood Farkleberry Fragrant Sumac Green Hawthorn Gum Bumelia (Chittamwood)

Shrubs

American beautyberry Blackberry Pokeberry Inkberry Holly

Vines

Carolina snailseed Coral Honeysuckle Crossvine Greenbriar (Smilax) Muscadine Grape Mustang Grape

<u>Grasses</u>

Knotroot Bristlegrass (Setaria species) Switch Grass (Panicum species)

Wildflowers

Cardinal Flower Coneflowers Coreopsis (Tickseed) Native Pecan Post Oak Red Mulberry Southern Red Oak Shortleaf Pine Swamp Chestnut Oak Sweetgum White Hickory Water Oak Willow Oak White Oak

Mexican Plum Possumhaw (Deciduous Yaupon Holly) Parsley Hawthorn Pignut Hickory Rough Leaf Dogwood Southern Wax Myrtle Shining Sumac Black Willow Wooly Bumelia Yaupon Holly



Rusty Blackhaw Viburnum Southern Wax Myrtle (dwarf form available) Winterberry Holly Yaupon Holly (dwarf form available)

Riverbank Grape Yellow Passionflower (passiflora *lutea*) Maypop Passionflower (passiflora *incarnata*) Trumpet Creeper Virginia Creeper

Florida Paspalum (Paspalum species) Eastern Gama Grass

Salvia Azurea Sunflowers Thistles (Centaura)

Publication of the Native Plant Society of Texas - Houston Chapter Many other native plants provide important habitat and food for birds. **www.npsot.org\houston**

NATIVE GROUNDCOVERS

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MAIIVE ONCOME						
Latin Name	Common Name Gra	Form asses, Sedg	Habit ges, Rushes	Longevity	Site Cond.	Moisture
Bouteloua curtipendula	sideoats grama grass	grass	low	perennial	sun	dry
Bouteloua gracilis	blue grama grass	grass	low	perennial	sun	dry
Buchloe dactyloides	buffalograss	grass	low, spreading	perennial	sun	dry
Chasmanthium latifolium	broadleaf woodoats	grass	to 3 feet	perennial	shade	moist
Chasmanthium sessiliflor	narrowleaf woodoats	grass	to 3 feet	perennial	shade	moist
Echinochloa walteri	Walter's barnyardgrass	grass	low	annual	sun	wet
Elymus virginica	Virginia wildrye	grass	to 3 feet	perennial	shade	dry
Elymus canadensis	Canada wildrye	grass	to 3 feet	perennial	shade	dry
Eragrostis spp.	lovegrass	grass	to 3 feet	perennial	sun	dry
Carex cherokeensis	cherokee sedge	sedge	low	perennial	shade	moist
Carex flaccosperma	thin-fruit sedge	sedge	low	perennial	shade	moist
Carex leavenworthii	narrowleaf sedge	sedge	low	perennial	shade	moist
Equisetum hymale	horsetail rush	rush	to 3', spreading	perennial	sun	wet/moist
Leptochloa spp.	sprangletop	grass	to 6 feet	perennial	sun	moist
Muhlenbergia capillaris	muhly grass	grass	to 3 feet	perennial	sun	dry
Muhlenbergia lindherimeri	Lindheimer's muhly	grass	to 3 fet	perennial	sun	dry
Panicum hemitomon	maidencane	grass	wetlands	perennial	sun	wet
Panicum virgatum	switchgrass	grass	to 6 feet	perennial	sun	moist
Paspalum plicatulum	brownseed pasp.	grass	to 4 feet	perennial	sun	dry
Rhynchospora colorata	White topped sedge	sedge	To 18 inches	perennial	sun	wet
Setaria geniculata	knotroot bristlegrass	grass	to 2 feet	perennial	sun	dry
Setaria macrostachya	plains bristlegrass	grass	to 2 feet	perennial	sun	dry
Tridens strictus	longspike tridens	grass	to 4 feet	perennial	sun	dry
Tripsacum dactyloides	eastern gama grass	grass Forl	tall, clumping	perennial	shade/sun	moist
Amsonia tabernaemontana	blue star flower	forb	Spring blooms	perennial	shade/sun	moist
Calyptocarpus vialis	prostrate lawnflower	forb	low, spreading	perennial	sun	dry
Gaillardia pulchella	indian blanket	forb	2 to 3 feet	annual	sun	dry
Lysimachia radicans	trailing yellow loosestrife	forb	to 2 feet	perennial	sun	moist
Mitchella repens	partridgeberry	forb	low, berries	perennial	shade	dry
Nothoscordum bivalve	crow's poison	bulb	to 1 foot, Spring	perennial	shade/sun	dry
Penstemon tenuis	Gulf Coast penstemon	forb	Spring blooms	perennial	sun/shade	moist
Phyla incisa	frogfruit	forb	low, spreading	perennial	sun	moist
Physostegia virginiana	obedient plant	forb	spreading	perennial	sun	moist
Rivina humilis	pigeonberry	forb	to 6 inches	perennial	shade	dry
Ruellia humilis	wild petunia	forb	low	perennial	shade/sun	dry
Ruellia malacosperma	softseed ruellia	forb	low	perennial	shade/sun	moist
Salvia coccinea	scarlet sage	forb	2 to 6 feet	perennial	shade/sun	dry
Salvia lyrata	lyre-leaf sage	forb	to 18 inches	perennial	shade/sun	dry
Siphonoglossa pilosella	hairy tubetongue	forb	low	perennial	shade/sun	dry
Spilanthes americana	creeping spot flower	forb	low, spreading	perennial	sun	moist
Symphoricarpos orbiculatus	coralberry	forb	2 to 3 feet	perennial	shade	moist
Verbena bipinnatifida	prairie verbena	forb	low, spreading	annual	sun	dry
Verbena canadensis	rose vervain	forb	low, spreading	perennial	sun	dry
Verbena tenuisecta	moss vervain	forb	low	perennial	sun	dry
Viola walteri	Walter's violet	forb	low	perennial	shade	dry
White avens	geum canadense	forb Vin	low	perennial	sun	moist
Mimosa strigillosa	powderpuff	vine	low, spreading	perennial	sun	dry
Parthenocissus quiquefolia	virginia creeper	vine	deciduous	perennial	shade/sun	dry
Rubus trivialis	dewberry	vine	spreading, thorns	perennial	sun	dry
Polystichum acrostichoid	Christmas fern	<i>Ferr</i> fern	ns low	perennial	shade	dry
Thelypteris kunthii	southern shield fern	fern	to 2 feet	perennial	shade	moist
Woodwardia areolata	chain fern	fern	to 1 foot	perennial	shade	moist
Woodwardia virginica	Virginia chain fern	fern	to 1 foot	perennial	shade	moist
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Benefits of Naturescaping



with Native Plants

There are many benefits to naturescaping, whether practiced in place of or in addition to traditional landscaping. The benefits include, but are not limited to, the following:

- **Ease of Use** Native plants evolved to grow in local conditions and to predictable sizes. They do not require watering (except during establishment), chemical pesticides and fertilizers, or frequent cutting.
- **Public Health** (lowers cancer rates)- Traditional landscaping uses large amounts of synthetic pesticides and fertilizers, some of which are suspected carcinogens. During rains, these chemicals often run off into public water supplies.
- Air Pollution- Landmowers, weedeaters and blowers use large quantities of fossil fuels, creating greenhouse gas and other pollutants. Lawnmowing may cause up to 5% of total air pollution, and an Exxon Valdez of oil is spilled by lawnmowers each year in the U.S. Traditional landscaping also contributes to noise pollution.
- Saves you Money -The cost of maintaining a naturescape is dramatically less than that of a traditional landscape because a naturescape essentially takes care of itself. Naturescapes also save you time and how valuable is your time?
- Water Use- In the West, 60% of consumed water goes to lawns; in the East, 30%. This water diversion harms the environment, kills fish, and returns polluted water to our streams and rivers. It also costs you on irrigation system installation and maintenance, and on your water bill.
- **Song Birds** -Our song bird populations having dropped steadily 5-10% per year, depending on the species for the last several decades, and there is no end in sight. The loss is primarily due to habitat loss. Adopting naturescaping is critical if song birds are to find food and shelter.
- Enhanced Livability -An ecologically functional landscape offers so much more than a sterile, static landscape. It stimulates our children with color, sound and wonder. It is cleaner, quieter and healthier, and may increase property values.

Traditional landscaping attempts to create a landscape that "looks" the same regardless of location. This is, in part, pushed by nurseries that sell the same plant across wide markets, maximizing revenue through efficiencies of scale. (Nurseries aggressively market this limited number of plants through garden magazines, local newspapers, and radio and television programs, etc.) It is also driven by landscape designers who tend to use the same plants regardless of where the site is (less burdensome than learning new plants). Lastly, it is driven by homeowners and property managers who grew up learning one set of plants and understandably use those plants as a frame of reference as they move about the country.

These and other forces have created an atmosphere that emphasizes using the same plants regardless of location and changing a site to accommodate these plants. Site changing often entails installing irrigation, bringing in new soil or soil amendments, regularly applying chemical products (pesticides, fertilizer, etc.), and frequently cutting, pruning and weeding. This is traditional landscaping. Resulting monocultures may cause extinction of many species.

This page is adapted from a U.S. EPA publication. The Native Plant Society of Texas- Houston Chapter <u>www.npsot.org/houston</u>



Natives Instead of Common Exotics (NICE) Bird and Butterfly Habitat Plants-Shrubs & Trees



Small Shrubs:

Use:

Evergreen Native Shrubs: Dwarf Yaupon Holly, Yaupon Holly, Dwarf Wax Myrtle, Wax Myrtle, or Deciduous Native Shrubs: Beautyberry, Fragrant Sumac, Buttonbush, Turk's Cap, Texas Lantana *Instead of Exotics:*

Wax Leaf Ligustrum, Indian Hawthorn, Boxwood, Privet, Variegated Privet, Chinese Abelia, Oleander, Eleagnus, Nandina, Vitex, Buddleia, Lantana Camara

Large Shrubs:

Use:

Evergreen Native Shrubs: Yaupon Holly, Carolina Cherry Laurel, Wax Myrtle or Deciduous Native Shrubs: Beautyberry, Elderberry, Texas Acacia, Strawberry Bush, Carolina Buckthorn, Rusty Blackhaw Viburnum, Arrow wood Viburnum, Flame Leaf Sumac, Palmetto, Black Willow

Instead of Exotics:

Wax Leaf Ligustrum, Red Tip Photinia, Privet, Variegated Privet, Oleander, Eleagnus, Chinese Fringe Tree

Small Trees:

Use:

Redbud, Green Hawthorn, Deciduous Holly, Cherry Laurel, Parsley Hawthorn, American Holly, Red Buckeye, Sweet Bay Magnolia, Farkleberry, Smooth Sumac, Flame-Leaf Sumac, Tooth-Ache Tree *Instead of Exotics*:

Bradford Pear, Crape Myrtle, Wax Leaf Ligustrum, Red tip Photinia

Medium Sized Trees:

Use:

Red Buckeye, American Hop Hornbeam, Hornbeam, Common Persimmon, Gum Bumelia, Flowering Dogwood, Rough-leaf Dogwood, Redbud, Carolina Buckthorn, Drummond Red Maple, Green Hawthorn, American Holly *Instead of Exotics:*

Bradford Pear, Chinese Elm (also known as lacebark, Drake, Allee, Bosque Elm), Crape Myrtle, Red tip Photinia, Chinese Tallow, Goldenrain Tree, Chinese Umbrella Tree (also known as Chinaberry Tree or Melia), Mimosa, Nonnative Palm Trees, Zelkova

Tall Trees:

Use:

Loblolly Pine, Long Leaf Pine, Sweet Gum, Sugarberry, Southern Magnolia, Water Tupelo, American Elm, Winged Elm, Cedar Elm, Live Oak, Water Oak, Willow Oak, Post Oak, Drummond Red Oak, Southern Red Oak, American Beech, White Oak, American Sycamore, Bald Cypress, Sweetgum, Swamp Chestnut Oak, Turkey Oak, Pecan, Nutmeg Hickory, Shagbark Hickory, Black Cherry, Green Ash, White Ash

Instead of Exotics:

Chinese Elm (also known as lacebark, Drake, Allee, Bosque Elm), Eucalyptus, Nonnative Palm trees, Goldenrain Tree, Nonnative Sycamore Trees, Sawtooth (Chinese) Oak

Many exotic plants are also invasive plants. Plants from other areas may become invasive when introduced into new areas. For many reasons, it can take hundreds of years for an exotic plant to be recognized as invasive. Planting invasive plants is environmentally destructive and can best be avoided by planting plants native (adapted over thousands of years) to your location. This is a publication of the Native Plant Society of Texas- Houston Chapter <u>www.npsot.org/houston</u>

Landscapers Who Use Native Plants in Their Landscape Designs

If requested, landscapers may use native plants in their landscape designs. It is hard to find a landscaper that knows about local native plants. Many landscapers consider plants from other eco-regions, states and countries to be native; so tell the landscaper if you would prefer to use native plants that are truly native to your area. Native plants are part of local ecosystems and they are essential to the survival of native life forms. Native plants are low maintenance and require little water, fertilizer or pesticides once established.

Go Native Landscaping for Birds and Butterflies Glenn Olsen 713-516-5679 www.gonativelandscaping.org

Gulf Coast Ecological Designs

Philippa Johnstone 832-541-6669 <u>gulfcoastecodesigns@gmail.com</u> <u>www.facebook.com/gulfcoastecodesigns</u>

For Seeds and Plants, Check Native American Seed: <u>www.seedsource.com</u> Other sources of plants include organizations listed on the plant resources page such as:

Morning Star Prairie Plants 21107 Pecan Bend - Damon, TX 77430 713-

446-2509 by appt. only <u>morgy@consolidated.net</u> <u>www.facebook.com/SupportSustainableAgri</u> culture Greenstar Wetland Plants

4646 County Road 181 Alvin, TX 77511 832-224-3430 https://greenstarwetlands.com

Suggestions for Native Plant Gardens:

- Include as many different kinds of native plants as possible, to attract and provide food sources for a wide variety of insects, birds and other creatures.
- Include more butterfly food source plants by "hiding" food source plants behind larger plants.
- Be patient with plant availability (don't use out-of-ecoregion plants because native plants are not immediately available). Make a list of desired native plants and ask for them.
- Learn to love moths; we have amazing moths such as the luna, io, and polyphemus moth. Make all your lights motion sensing so you can experience beautiful darkness and support our moths and fireflies.
- Include native grasses such as gulf coast muhly, little bluestem and brownseed paspalum. Grasses for shade include slender woodoats, inland sea oats, virginia wildrye and Eastern gama grass. Many native ferns thrive in shade.
- To encourage reseeding, minimize mulching around annuals such as gaillardia, coreopsis, etc.
- Include a water element that is safe and accessible for creatures large and small. Put a rock in a dish and rinse it out often.
- A landscape with many levels (tall trees, medium trees, small trees, large shrubs, small shrubs, grasses and shorter plants) will provide habitat for many varieties of wildlife
- Allow sufficient space for full growth of perennial plants.



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Why Use Native Plants?

Landscaping with native plants improves the environment. Native plants are hardy because they have adapted to the local conditions. Once established, native plants do not need pesticides, fertilizers, or watering. Not only is this good for the environment, it saves time and money. A native landscape does not need to be mowed like a conventional lawn. This reduces the demand for non-renewable resources and improves the water and air quality. The periodic burning (or mowing when burning is not practical) required for maintenance of a prairie landscape mimics the natural prairie cycle and is much better for the environment.

Landscaping with native wildflowers and grasses helps return the area to a healthy ecosystem. Diverse varieties of birds, butterflies and animals, are attracted to the native plants, thus enhancing the biodiversity of the area. The beauty of native wildflowers and grasses creates a sense of place, both at home and work. The native plants increase our connection to nature, help educate our neighbors, and provide a beautiful, peaceful place to relax.

Reduced Use of Pesticides Since native plants have adapted to local conditions, they are more resistant to pest problems. Sometimes individuals use non-persistent pesticides, which break down into harmless components, before sowing native plant seeds to minimize competition from the weeds. Once the native plants are established, pesticides are seldom needed.

Improved Air Quality Native landscaping practices can help improve air quality on a local, regional and global level. Locally, smog (ground level ozone) and air toxics can be drastically reduced by the virtual elimination of the need for lawn maintenance equipment (lawn mowers, weed edgers, leaf blowers, etc.) which is fueled by gasoline, electricity or batteries. All of these fuel types are associated with the emissions of the following air pollutants: carbon monoxide (CO), carbon dioxide (CO2), nitrous oxides (NOx), sulfur dioxide (SO2), VOCs (volatile organic compounds) and air toxics such as benzene. Gasoline lawn and garden equipment, on average, produces 5% of ozone-forming VOCs in areas with smog problems. This equipment also emits toxics and particulates.

Regionally, NOx and SO2 released from lawn maintenance equipment react with water in the atmosphere to form acid rain. Globally, native landscaping practices help to combat global warming in two ways. Carbon dioxide (CO2) is a major greenhouse gas and by reducing the use of lawn maintenance equipment, the associated CO2emissions are also reduced. Native plants help to reduce the amount of CO2 in the atmosphere by taking in CO2 and storing the carbon in the body of the plants, roots and soil. Native plants work much better than traditional mowed grass as a carbon sink due to their extensive root systems and increased ability to retain and store water.

Improved Water Quality In conventional landscaping, pesticides are often wrongly applied at times when target insects are not vulnerable. Overuse and inappropriate use often kill beneficial insects and other wildlife. Less than 10% of all insects are harmful to plants. Pesticides have the potential to cause serious human health problems when not handled properly or applied according to the label directions. By eliminating or minimizing the use of pesticides and fertilizers, these pollutants will not run-off into streams, lake, and bays. This improves the quality of the water and the aquatic life in it. In healthy water systems. natural controls, such as fish, frogs, and snails will help keep insect populations under control and reduce algae buildup.

A publication of the U.S EPA http://www.epa.gov/greenacres/index.html#Benefits reprinted by the Native Plant Society of Texas- Houston Chapter www.npsot.org\houston

Native Plants for Rain Gardens

Moisture Loving Plants, Wet Areas

Aquatic Milkweed (Asclepias perennis) Carolina Water-hyssop (Bacopa caroliniana) Swamp Marigold (Bidens aristosa) Swamp Lily (Crinum americanum) Titi, Leatherwood (Cyrilla racemiflora) White Top Sedge (Dichromena colorata) Blue Mud Plantain (Heteranthera limosa)

Ferns (most ferns do well in damp areas): Southern Maidenhair Fern (Adiantum capillus-veneris) Ebony Spleenwort (Asplenium platyneuron) Lady Fern (Athyrium filix-femina) Rattlesnake Fern (*Botrychium virginianum*) Southern Wood Fern (*Dryopteris ludoviciana*)

Moisture Loving Plants, Drier Areas:

Woodoats (Chasmanthus latifolium)
Slender Woodoats (Chasmanthus laxum)
Blue Mist Flower (Eupatorium coelestinum)
Virginia Wildrye (Elymus virginicus)
Swamp Sunflower (Helianthus angustifolius)
Maximillian Sunflower (Helianthus maximiliani)
Scarlet Rose Mallow (Hibiscus laevis)
Marshmallow Hibiscus (Hibiscus moscheutos)
Carolina Spiderlily (Hymenocallis caroliniana)
Salt Marsh Mallow (Kosteletzkya virginica)
Cardinal Flower (Lobelia cardinalis)
Gulf Muhly Grass (Muhlenbergia capillaris)

Blue Water Leaf (Hydrolea ovata) Southern Blue Flag Iris (Iris virginica) Spring Obedient Plant (Physostegia intermedia) Fall Obedient Plant (Physostegia virginiana) Yellow Meadow Beauty (Rhexia lutea) Meadow Beauty (Rhexia mariana) Virginia Meadow Beauty (Rhexia virginica)

Sensitive Fern (Onoclea sensibilis) Cinnamon Fern (Osmunda cinnamomea) Royal Fern (Osmunda regalis) Netted Chain Fern (Woodwardia areolata) Virginia Chain Fern (Woodwardia virginica)

> Gulf Coast Penstemon (Penstemon tenuis) Swamp Rose (Rosa palustris) Giant Coneflower (Rudbeckia maxima) Hairy Wild Petunia (Ruellia humilis) Dwarf Palmetto (Sabal minor) Seaside Goldenrod (Solidago sempervirens) Blue-eyed Grass (Sisyrinchium angustifolium) Prairie Blue Eyed Grass (Sisyrinchium campestre) Prairie Spiderwort (Tradescantia_occidentalis) Ohio Spiderwort (Tradescantia ohioensis) Eastern Gamagrass (Tripsacum dactyloides) Cherokee Sedge (Carex cherokeensis)

Shrubs, Understory Trees and Vines that do well near Rain Gardens

Southern swamp maple (Acer rubrum) American Beauty-berry (Callicarpa americana) Buttonbush (Cephalanthus occidentalis) American Fringetree (Chionanthus virginicus) Parsley Hawthorn (Crataegus marshallii) Carolina Jessamine (Gelsimium sempervirens) Deciduous Holly (Ilex decidua) Sweetbay Magnolia (Magnolia virginiana) Southern Wax Myrtle (Myrica cerifera) Eastern Hop-hornbeam (Ostrya virginiana) Red Bay (Persea borbonia) Carolina Rose (Rosa carolina) Prairie Rose (Rosa setigera) Sassafras (Sassafras albidum) Coral-berry (Symphoricarpos orbiculatus) Farkleberry (Vaccinium arboretum) Arrowood Viburnum (Viburnum dentatum)



Virginia Meadowbeauty (Rhexia virginica)

What is a Rain Garden? A rain garden is a shallow depression designed to capture stormwater runoff from your roof and other impervious areas around your home, allowing runoff to soak into the ground and protect water quality. Rain gardens can increase groundwater recharge and reduce erosion and flooding, while providing other benefits to the environment. Site the rain garden in a place with good drainage (to minimize mosquitos, water should not stand more than three days). Full or intermediate sunlight is best. A relatively flat section of your yard that has well-drained soil may be a good place for construction. With soil dug from the depression, build a berm, or small earthen dam, on the downhill side of the rain garden to keep water in the garden. Stabilize the berm with mulch or ground cover to prevent erosion, and provide a place for water to overflow from the garden in flood events. **Benefits of Rain Gardens:** When planted with native plants, rain gardens provide habitat for wildlife and increase the number and diversity of fun-to-watch birds and butterflies. Be sure to inspect your rain garden periodically during and/or immediately after rainfall events to confirm the rain garden retains water as designed. Enjoy your new rain garden!

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Suggested Native Texas Plants for Habitat Gardens

Wildflowers

Cardinal Flower- likes moisture Coneflowers Coreopsis (Tickseed & Lanceleaf) Spiderwort Gaillardia

Medium to Large Size Trees

American Holly American Sycamore Cherry Laurel Drummond Red Maple Eastern Red Cedar Hackberry or Sugarberry Live Oak Loblolly Pine Native Pecan (small nuts)

Small Trees

American Hop Hornbeam (Ironwood) Carolina Buckthorn Elderberry Flowering Dogwood Farkleberry Fragrant Sumac Green Hawthorn Gum Bumelia (Chittamwood) Mexican Plum

<u>Shrubs</u>

American beautyberry Blackberry Rusty Blackhaw Viburnum

<u>Vines</u>

Coral Honeysuckle Crossvine- vigorous growth, bright flowers Mustang Grape Riverbank Grape Carolina Jessamine- yellow flowers

<u>Grasses</u>

Gulf Coast Muhly Grass- beautiful low grass Buffalo Grass- turf grass, low water requirements Indian Grass- tall attractive grass Inland Sea Oats (does well in shade) Salvia Azurea, S. Coccinea Sunflowers Ratibida (Mexican Hat) Thistles (Centaura) Turk's Cap

Post Oak Southern Red Oak Swamp Chestnut Oak

Sweetgum Water Oak Willow Oak White Oak Magnolia



Possumhaw (Deciduous Yaupon Holly) Parsley Hawthorn Pignut Hickory Rough Leaf Dogwood Southern Wax Myrtle Shining Sumac Black Willow Yaupon Holly

Arrowwood Viburnum Southern Wax Myrtle (dwarf form available) Yaupon Holly (dwarf form available)

Yellow Passionflower Maypop Passionflower Trumpet Creeper- vigorous growth, orange flowers Virginia Creeper

Virginia Wildrye (does well in shade) Brown seed Paspalum Eastern Gama Grass- wide and tall

These plants provide great food and habitat for birds, butterflies and other wildlife. <u>www.npsot.org/houston</u>

Native Pond Plants by Andrea DeLong-Amaya, Dir. of Horticulture, Lady Bird Johnson Wildflower Center

Latin Name	Common Name	Duration	Habit	Sun	Water
Asclepias incarnata	Pink Milkweed, Swamp milkweed, Swamp-Milkweed	Perennial	Herb	Sun, Part-shade	Wet, Moist
Bacopa monnieri	Coastal Water-hyssop, Herb-of-grace, Water hyssop	Perennial	Herb	Sun, Part-shade	Wet, Moist
Canna glauca	Canna, Maraca amarilla	Perennial	Herb	Sun, Part-shade	Wet, Moist
Cladium mariscus ssp. jamaicense	Jamaica swamp sawgrass, Saw-grass	Perennial	Grass/Grass- like	Sun, Part-shade	Wet, Moist
Echinodorus berteroi	Upright burrhead	Annual	Herb		
Echinodorus cordifolius	Creeping burrhead, Lance-leaf Burhead, Radican Sword	Annual	Herb	Shade	Wet
Eleocharis quadrangulata	Squarestem spikerush	Perennial	Grass/Grass- like	Sun	
Equisetum hyemale	Canuela, Horsetail, Scouring rush, Scouringrush horsetail	Perennial	Herb	Sun, Shade, Part-shade	Wet, Moist
Fuirena simplex	Umbrellagrass, Western umbrella-sedge	Perennial	Grass/Grass- like		
Heteranthera dubia	Grassleaf mudplantain, Water Stargrass	Annual	Herb		
Hibiscus laevis	Halberdleaf rosemallow or hibiscus, Scarlet rose mallow	Perennial	Shrub	Sun, Part-shade	Moist
Hibiscus moscheutos	Crimson-eyed rose-mallow, Crimsoneyed rosemallow, Marshmallow hibiscus	Perennial	Shrub	Sun, Part-shade	Wet, Moist
Hydrolea ovata	Blue Water Leaf, Hairy Hydrolea, Ovate false fiddleleaf	Perennial	Herb	Part-shade	Wet
Hymenocallis liriosme	Spider Lily, Spring Spider Lily, Spring spiderlily	Perennial	Herb	Part-shade	Moist
Iris virginica	Great Blue Flag, Virginia iris	Perennial	Herb	Sun	Wet
Juncus effusus var. solutus	Lamp rush, Soft Rush	Perennial	Herb	Part-shade	Wet
Justicia americana	American water-willow, Water-willow	Perennial	Herb	Sun, Part-shade	Wet, Moist
Kosteletzkya virginica	Salt Marsh-mallow, Seashore mallow, Virginia fen-rose, Virginia saltmarsh mallow	Perennial	Subshrub	Sun	Moist
Lobelia cardinalis	Cardinal flower, Cardinalflower	Perennial	Herb	Sun, Shade, Part-shade	Wet, Moist
Ludwigia octovalvis	Mexican Primrose Willow, Mexican primrose-willow, Narrow-leaf Water Primrose, Seedbox	Perennial	Shrub	Sun, Part-shade	Moist
Ludwigia peploides	Creeping water-primrose, Floating primrose-willow	Perennial	Herb	Sun	
Marsilea macropoda	Big-foot water-clover, Water-clover, Clover-fern	Perennial	Herb, Fern	Sun, Shade, Part-shade	Wet
Najas guadalupensis	Common Water Nymph, Najas, Southern waternymph	Annual	Herb	Sun	Wet
Nelumbo lutea	American lotus, Yellow lotus, Yellow water lotus	Perennial	Herb	Sun	Wet
Nuphar lutea	Cow lily, Spatter dock, Yellow cow lily, Yellow pond-lily	Perennial	Herb	Part-shade	Wet
Nymphaea odorata	American white water-lily, American white waterlily, Fragrant water lily, White water lily	Perennial	Herb	Sun, Shade, Part-shade	Wet
Physostegia intermedia	Intermediate or slender false dragonhead, Marsh obedient plant, Obedient-plant, Spring obedient plant	- Perennial	Herb	Sun, Part-shade	Moist
Pluchea odorata var. odorata	Marsh Fleabane, Sweetscent	Perennial	Herb	Sun	Moist
Pontederia cordata	Pickerel Weed, Pickerelweed	Perennial	Herb	Sun, Part-shade	Wet, Moist
Potamogeton diversifolius	Threadleaf Pondweed, Waterthread pondweed	Perennial	Herb	Sun	
Potamogeton nodosus	Knotty Pondweed, Longleaf pondweed	Perennial	Herb	Sun, Part-shade	Wet
Rhynchospora colorata	Starrush whitetop, Star sedge, White-topped sedge	Perennial	Grass/Grass- like	Sun, Part-shade	Wet
Rhynchospora corniculata	Horned Beakrush, Shortbristle horned beaksedge	Perennial	Grass/Grass- like	Sun	
Sagittaria platyphylla	Delta arrowhead	Perennial	Herb	Part-shade	Wet
Saururus cernuus	Lizard's tail, Lizard's-tail	Perennial	Herb	Shade, Part-shade	Wet, Moist
Schoenoplectus americanus	Chairmaker's bulrush	Perennial	Grass/Grass- like		
Schoenoplectus californicus	California bulrush, California club-rush, Giant Bulrush	Perennial	Herb	Sun	
Thalia dealbata	Powdery alligator-flag, Powdery thalia, Water canna	Perennial	Herb	Part-shade	Wet
Vallisneria americana	American eelgrass, Eel-grass, Water-celerv Pe	erennial	Herb	Sun, Part-shade	Wet

www.wildflower.org



To Feed the Birds, First Feed the Bugs

Doug Tallamy's book "Bringing Nature Home" stresses the importance of nurturing native plants like goldenrod.

DOUG TALLAMY and his wife, Cindy, built their house years ago in the middle of 10 acres of former hayfields. But they don't sit inside much. Most of their spare time is spent cutting Oriental bittersweet and Japanese honeysuckle out of cherry and oak trees. They saw down thickets of autumn olive and multiflora rose and paint the cut stems with an herbicide that goes down into the roots and kills them.

The land was so thick with multiflora rose that they couldn't walk, so Mr. Tallamy cut paths with hand loppers. They work with handsaws, not a chain saw. And they paint on the herbicide, rather than spraying it, because they don't want to damage the treasures below: under those thorny rose bushes might be seedlings of black oak, Florida dogwood, black gum or arrowwood viburnum, which, if protected from deer, could flourish in the cleared space. A meadow cleared of autumn olive can resprout with goldenrod, joe-pye weed, milkweed, black-eyed Susans and many other natives crucial to wildlife.

It's hard work, but the Tallamys love being outside. And they share a vision, an imperative, really, that Mr. Tallamy lays out in a book, "Bringing Nature Home" (Timber Press, \$27.95). They are struggling to plant the native species that are needed for insects and animals to flourish. As exotic ornamentals leap the garden fence and out-compete the native plants, many creatures are starving to death because they did not evolve with the exotics and simply can't eat them.

"I'm not trying to recreate the ancient ecosystem," said Mr. Tallamy, who is chairman of the department of entomology and wildlife ecology at the <u>University of Delaware</u>, in Newark, Del., 15 miles southeast of here. "That is gone. I'm trying to create biodiversity." He pointed to a row of white pines he and his wife planted five years ago to screen out a half-mile racetrack and a 120-stall horse barn as big as a box store. "You wouldn't have found white pines here back in the old days," he said of the tree. "But a lot of things eat white pine, like sawflies."

The white pine is an Appalachian native, and its natural range stops about 30 miles west of here, he said. But its wide use since Colonial times gradually expanded its range, allowing its associated insects to hitch a ride. Last spring was too cold and wet for moth and butterfly larvae, he said, but the bluebirds nesting in a box in the meadow were desperate to feed their young. "They found the sawflies in those pines and raised the entire brood on them, flying back and forth, back and forth," Mr. Tallamy said.

Many natives provide food for insects and birds, and so when young trees sprout in an inconvenient place — too close to the back door, or in front of a window — Mr. Tallamy delays pulling them out. "I went to take this black cherry out and there were 13 tiger swallowtail larvae on it," he said, standing by a sapling by the back steps. He bent over yet another, even smaller black cherry that had sprouted between the stones of the front walkway. "Anybody else would pull this out, but see this?" he asked, pointing to a drab little remnant of a leaf that some young larva had fashioned into a winter home. "That's a little hybernaculum for the red-spotted purple, which is a butterfly that people want in their gardens."

Although gardeners might believe that when they plant a butterfly bush, native to China, they are helping butterflies, they are merely attracting the adults who sip the nectar. The plant cannot be eaten by the butterfly larvae. Even a lowly fly maggot, which lives inside the hard round galls often seen on the stems of goldenrod, has an important place in the ecosystem. "Fly maggots are really high in proteins and fats, and chickadees love them," Mr. Tallamy said. "We give chickadees seeds, but when they get one of those maggots, they can really make it through the cold winter night."

So if you cut down the goldenrod, the wild black cherry, the milkweed and other natives, you eliminate the larvae, and starve the birds. This simple revelation about the food web — and it is an intricate web, not a chain — is the driving force in "Bringing Nature Home." The book evolved out of a set of principles that Mr. Tallamy jotted down at the request of students at the University of Delaware, and of gardeners attending his public lectures.

They all wanted lists of plants: what attracted what, which was then eaten by what, and so on. So he began to map a food web for the suburban or urban backyard. The typical garden might hold weeping cherries and rhododendrons, lilacs and crape myrtles. That is beautiful, perhaps, but it's a barren wasteland to native insects and thus birds. Almost all North American birds other than seabirds — 96 percent — feed their young with insects, which contain more protein than beef, he writes.

He cites the work of Michael Rosenzweig, an evolutionary biologist based at the <u>University of Arizona</u>, who has analyzed data from all over the world and found a one-to-one correspondence between habitat destruction and species loss. In Delaware, for instance, state ecologists say that 40 percent of all native plant species identified in 1966 are threatened or extinct; 41 percent of native birds that depend on forest cover are rare or absent.

So the message is loud and clear: gardeners could slow the rate of extinction by planting natives in their yards. In the northeast, a patch of violets will feed fritillary caterpillars. A patch of phlox could support eight species of butterflies. The buttonbush shrub, which has little white flowers, feeds 18 species of butterflies and moths; and blueberry bushes, which support 288 species of moths and butterflies, thrive in big pots on a terrace. (Appropriate species for other regions are listed by local native plant societies.) You don't have to cut down the lilacs, but they are doing nothing for the insects and birds. "It's as if they were plastic," Mr. Tallamy said. "They're not hurting anything, except that they're taking space away from something that could be productive."

The Rew Pork Times In the Garden http://www.nytimes.com/2008/03/06/garden/06garden.html

Native Ferns and Fern Allies of the Houston Area

Native Ferns (Vascular plants with complex leaves (deep veins & leaves) and spores)

Southern Maidenhair Adiantum capillus-veneris Stalked Adder's Tongue Ophioglossum petiolatum **Ebony Spleenwort** Asplenium platyneuron Southern Adder's Tongue Ophioglossum vulgatum **Black-stemmed Spleenwort** Asplenium resiliens **Cinnamon Fern** Osmunda cinnamonea Lady Fern Athyrium filix femina, var. asplenoides **Royal Fern** Osmunda regalis Eastern Mosquito Fern Azolla caroliniana Purple Cliff-brake Pellaea atropurpurea **Dissected Grape Fern** Botrichium dissectum **Ovate-Leaved Cliff-brake** Pellaea ovata **Sparse-Lobed Grape Fern** *Botrichium iternatum* Wright's Cliff-brake Pellaea wrightiana Winter Grape Fern Botrichium lunaroides **Broad Beech Fern** Phegopteris hexagonoptera Rattlesnake Fern Botrichium virginanum **Resurrection Fern** Pleopeltis polypodioides Alabama Lip Fern Cheilanthes alabamensis **Christmas Fern** *Polystichum acrostichoides* Eaton's Lip Fern Cheilanthes eatonii Whisk-fern Psilotum nudum Wooly Lip Fern Cheilanthes tomentosa Bracken Fern Pteridium aquilinum var. Log Fern Dryopteris celsa. pseudocaudatum Southern Wood Fern Dryopteris ludoviciana Wood Fern Thelypteris kunthii Black-Footed Quillwort Isoetes melanopoda Hairy Maiden Fern Thelypteris hispidula var. Lace Fern Microlepia strigosa versicolor Sensitive Fern Onoclea sensibilis Marsh Fern Thelypteris palustris **Bulbous Adder's Tongue** Ophioglossum Blunt-lobed Cliff Fern Woodsia obtusa subs. obtusa Netted Chain Fern Woodwardia areolata crotalophoroides Limestone Adder's Tongue Ophioglossum engelmannii Virginia Chain Fern Woodwardia virginica Slender Adder's Tongue Ophioglossum nudicaule

Native Fern Allies (Vascular plants, with simple leaves (or leafless) and spores)

Horsetail Equisetum hyemale	Large-foot Pepperwort Marsilea macropoda
Smooth Horsetail Equisetum laevigatum	Hairy Water-Clover Marsilea vestita
Appressed Bog Club-Moss Lycopodiella appressa	Slender Bog Club-moss Pseudolycopodiella caroliniana
Foxtail Bog Club-Moss Lycopodiella alopecuroides	Riddell's Spike-Moss Selaginella arenicola subs. riddelli
Prostrate Bog Club-Moss Lycopodiella prostrata	Meadow Spike-Moss Selaginella apoda

Publication of the Houston Chapter of the Native Plant Society of Texas, information from Walt and Carolyn Hesson, longtime NPSOT members. www.npsot.org/houston

HOW TO

ADD NATIVE PLANTS TO YOUR YARD

- Reduce the size of your lawn; plant native plants in part of your yard to create natural areas such as a butterfly garden, a rain garden, a meadow, and tall grass area; look at remaining natural areas for inspiration.
- **Plant native shrubs** wax myrtle and yaupon holly instead of the commonly sold invasive exotics privet & ligustrum, etc. Remove invasive plants (ligustrum, privet, Chinese tallow, nandina, etc.) to reduce the number of invasive plants in parks and natural areas.
- Plant native trees instead of common exotic crape myrtles. Beautiful low maintenance small to medium sized native trees such as redbud, Mexican plum, sweetbay magnolia, American holly, American fringetree, American hornbeam, red buckeye, ohio buckeye, deciduous holly and others will provide habitat for wildlife.
- Don't have a yard? Plant a few natives in a pot, or become an advocate of nature, ask schools and other organizations to remove invasive exotic plants.
- Share plants and seeds, become a member of your local native plant society! <u>www.npsot.org</u>

www.npsot.org/houston

NATIVE PLANT FACTS

- More than 4500 plants are native to Texas and plants that are native to your eco-region (your part of Texas) are best for your yard.
- **Troublesome Invasive Plants:** Most common landscape plants such as crape myrtle, ligustrum privet, indian hawthorn, nandina, elephant ear, lacebark elm, etc., are nonnative plants (plants native to other parts of the world). Many of these plants are very invasive.
- Insects that consume native plants provide much of the food for birds.
- Nonnative plants may support a few species of wildlife; one native plant species can support hundreds of wildlife species <u>HOMEGROWN NATIONAL PARK</u>
- Invasive exotic plants such as the Chinese tallow cover millions of acres, creating monocultures, eliminating biodiversity and replacing millions of acres of wildlife habitats.
- Native plant landscapes do not require pesticides or excessive maintenance; this reduces air pollution, spilled oil and the waste of time, money and fuel.
- Butterflies, Native Birds, Pollinators and other wildlife must have native plants for survival. Add a few native plants to your yard; birds and butterflies will appreciate it!

www.npsot.org\houston

Learn More About

Local Native Plants

Photographs and information about many native plants (trees, shrubs, grasses & forbs, etc.) can be found at these websites:

- LadyBird Johnson Wildflower Center Native Plant
 - Information Network (NPIN) <u>http://www.wildflower.org</u>
- Noble Foundation <u>http://www.noble.org/apps/plantimagegallery</u>
- TAMU Benny Simpson Native Trees and Shrubs <u>http://aggie-horticulture.tamu.edu/ornamentals/natives</u>
- Native American Seed <u>www.seedsource.com</u>
- Native Prairies Assoc. of Texas (NPAT) <u>www.texasprairie.org</u>
- USDA plants database <u>http://plants.usda.gov</u>
- EFloras <u>http://efloras.org</u>
- Native Plant Society of Texas (NPSOT) <u>www.npsot.org</u>
- Wild Ones (Native Plants, Native Landscaping) <u>http://www.for-wild.org</u>
- Native Landscaping <u>www.epa.gov/greenacres</u>

More ways to learn more about nature and native plants:

- Join a local nature group such as the Outdoor Nature Club Botany Group (meets at Bayland Community Center) <u>www.outdoornatureclub.org</u> and others.
- Join field trips to natural areas with local environmental groups such as the native plant society <u>www.npsot.org\houston</u>, the Butterfly Society <u>www.naba.org/chapters/nababest</u> , Houston Audubon <u>www.houstonaudubon.org</u> , the Houston Sierra Club <u>www.houston.sierraclub.org</u> and others.
- Become a local Master Naturalist: There are many local chapters with training sessions each year, Heartwood (Conroe), Gulf Coast (Houston), Galveston Bay Area Cradle of Texas (Angleton), and Coastal Prairie (Rosenberg) <u>http://txmn.org</u>