

Standing Cypress, Black-eyed Susan, Horsemint

# Native and Adapted Plants for Central Texas

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## **Class Topics**

#### Part I: The Basics

- A. Why Native and Adapted?
  - Native plants (why important)
  - Adapted plants (benefits, considerations)
  - Other terms (cultivars, invasives)
- B. Eco-regions, Adaptations, and Wildlife Value of Native Texas Plants

Part II: Getting to Know the Guide

**Part III: Plant Selections for Specific Garden Needs** 

# Why Native and Adapted?

For the benefit of our Austin and Texas wildlife and landscape, it is helpful to select plants that:

- Are water-wise
- Are drought-tolerant
- Have wildlife value (esp. natives)
- Are naturally resistant to pests and diseases (esp. natives)
- Need less maintenance and fertilizing
- → Also, higher survivability saves money!



Bumblebee on Shrubby Boneset, or White Mistflower

#### What is native?

- A native species is one that exists naturally in an eco-region without human introduction, direct or indirect.
- Native flora and fauna in an ecological community, having evolved together, are often interdependent.



Autumn Sage (Cherry Sage), Datura, Blackfoot Daisy

## Why Are Native Plants Important?

- They protect Texas' biodiversity
- They gain back natural ecosystems for our native flora and fauna → wildlife interdependence
- They are specially adapted to handle Texas soil and weather
- They use less water and require less maintenance, fertilizing, and pest control
- They protect our watersheds
- They keep Texas beautiful!



# **Adapted Plants**

- Adapted plants are non-invasive, non-native plants that are able to thrive in the local climate and soil conditions.
- Adapted plants might come from other regions of Texas, the U.S., or the world.



# Benefits of Adapted Plants

- Increased choices
- Many are readily available
- Might fit a design need
- Some have wildlife value

If you have to amend a soil's pH, or have to fertilize or water excessively to keep a plant alive, that plant is not well adapted for the area.



Shrimp Plant Justicia brandegeana

Photo: austintexas.gov

# Cultivars

 Cultivars are varieties selected and/or bred by humans for a particular trait, then propagated to maintain them.

Note: Depending on the variety, a cultivar might no longer function in the ecosystem in terms of wildlife value (seeds, nectar, pollen, chemistry). If you are planting for wildlife, it is helpful to research first!



#### Texas Noxious and Invasive Plants

Chinaberry Source: nps.gov

Not all adapted plants are good choices. It is important to know their habits and how they spread.

Invasive plants are plants that spread easily, grow rapidly, and have serious potential for causing economical or ecological harm, especially to agriculture, horticulture, native plants, ecology, and/or waterways.

Chinese Tallow



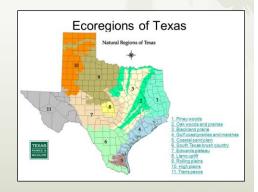


In natural areas, invasive plants can quickly outcompete native plants for space, nutrients, water, and sunlight.

A Closer Look at Natives

# Texas Has 11 Ecoregions

An **ecoregion** is a major ecosystem area with distinctive geography, characteristic flora and fauna, and like environmental conditions.



#### Why do regional plants matter?

- A plant native to another area of Texas might not grow well in your area.
- Native wildlife depend heavily on regional vegetation and ecosystem webs.

# Central Texas Ecoregions

- Travis County = primarily Edwards
  Plateau + Blackland Prairies (the
  Balcones Fault is the division line)
- Central Texas also includes Cross Timbers and Prairies as well as Post Oak Savannah



#### Edwards Plateau

- Home of dense Ashe Juniper-Oak woodlands and grassy savanna
- Honeycombed with caves and aquifers
- Covered by limestone and granite; caliche slopes
- Home to many endemic plants and animals
- Clearing for timber and grazing drastically altered the plateau

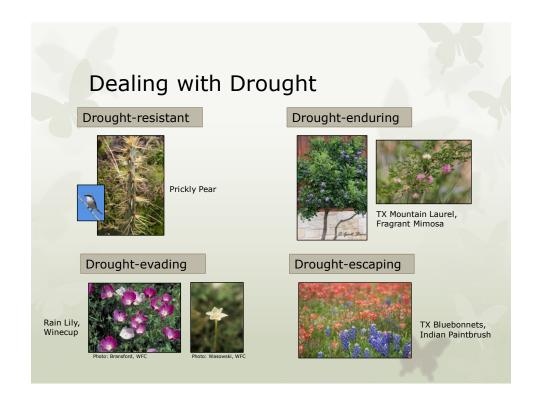


## **Blackland Prairies**

- Described by early settlers as "a vast endless sea of grasses and wildflowers" with scattered clumps of trees and riparian woodlands
- O Rich, deep clay soil
- Once a vast area of massive plant diversity; today endangered
- Habitat for more than 500 fauna species, including 327 bird species







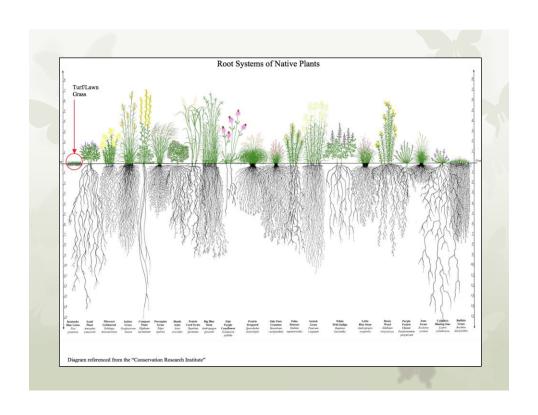
# Other Adaptations

#### Some native plants:

- o go dormant in the winter
- have fire resistance or fire response
- have long seed dormancy
- o time blooms after last freeze
- are flexible!

Mealy Blue Sage, Purple Coneflower





#### Natives Protect Our Watershed

- Native root systems:
  - Help water infiltrate soil: groundwater to aquifer
  - Moderate floods and droughts
  - Help control erosion
  - Help clean polluted water



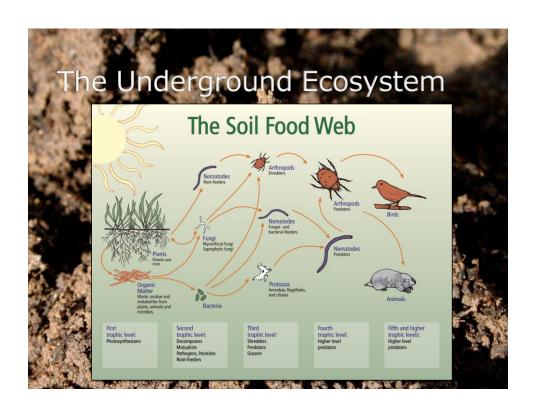
 Using natives reduces use of chemicals that pollute our water systems

Native plants improve water quality

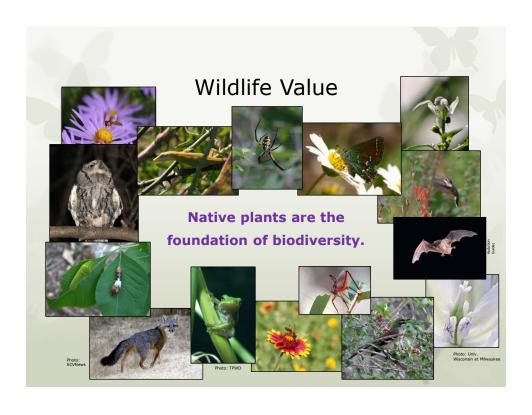
# Natives Are Naturally Fertilized

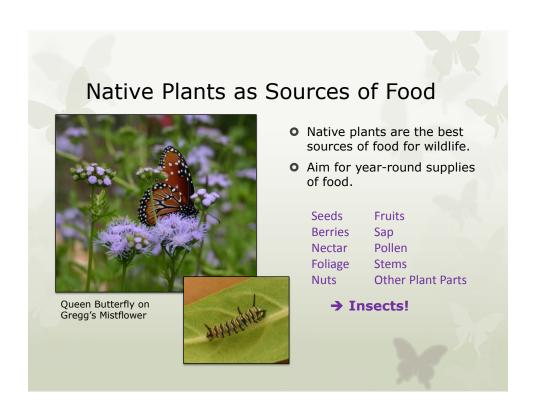
Native plants thrive best when natural soil processes are allowed to exist. They get their necessary nutrients as soil organisms consume organic matter.

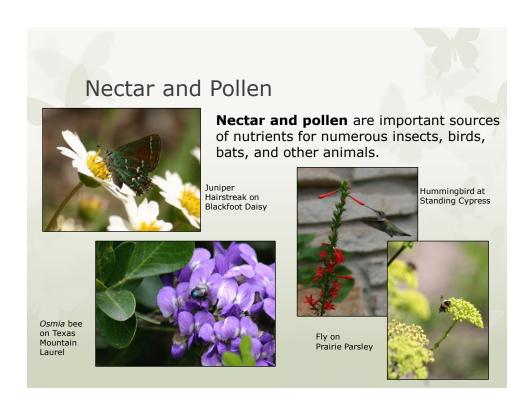






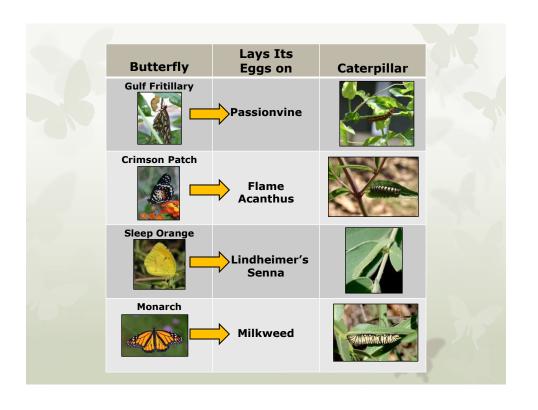


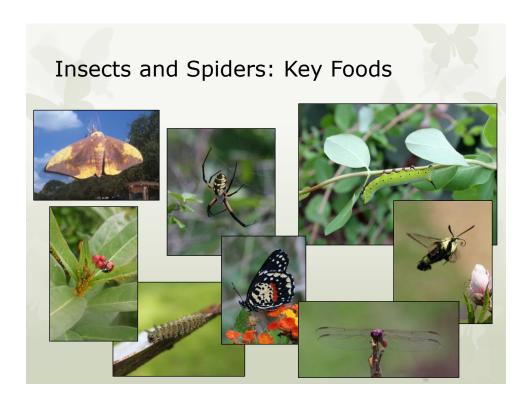








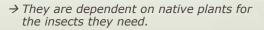




## Birds Need Insects in Great Numbers



- Most songbirds (96%) feed high-protein caterpillars and spiders to their young – hundreds per day
- The seasonal presence of insects is a trigger for the migration of many bird species

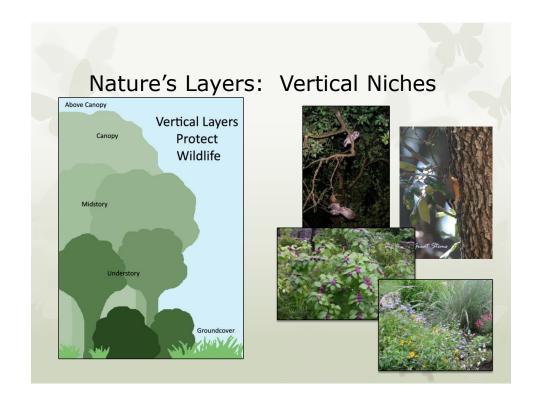




Carolina Chickadee, Barn Swallow, Bewick's Wren







# Sources of Places to Raise Young



Carolina Wren

Sleepy Orange Caterpillar on Lindheimer's Senna

Many places that provide cover are also good places for raising young (including laying eggs).

Mature trees Dense shrubs Snags Hollow logs Bunch grasses Leaf litter Host plants Groundcover Meadows Water plants Brush piles Bark, leaves

# Water Sources

Foliage, flowers, and fruit provide sources of water for many fauna species, especially when other water is scarce.





Texas Persimmon *Diospyros texana* 

rana



Red Mulberry Morus rubra





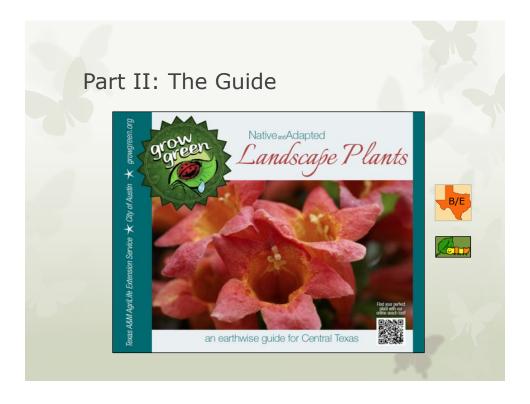
## Adapted Plants and Wildlife Value

Many adapted plants do provide nectar, fruits, and other elements of value to certain wildlife.

- However, research has shown that pollinators are 4 times more attracted to native plants.
- Leaf chemistry dictates what specialist insects, such as many butterflies and moths, need. The caterpillars and adults then become key food sources in the ecosystem.
- Nutrients from native berries are more likely to be most appropriate for the animals that evolved with them.



Native host plant: Coral Honeysuckle



# Learn First, Plant Later

Researching ANY plant species you are considering can help prevent countless problems later. Look at:

- Size at full growth
- Plant needs (light, water, soil pH, etc.)
- Seasonal/weather tolerance
- Spreading habits
- Wildlife interest
- Maintenance
- Pests
- Gardener reviews

# Development and Database

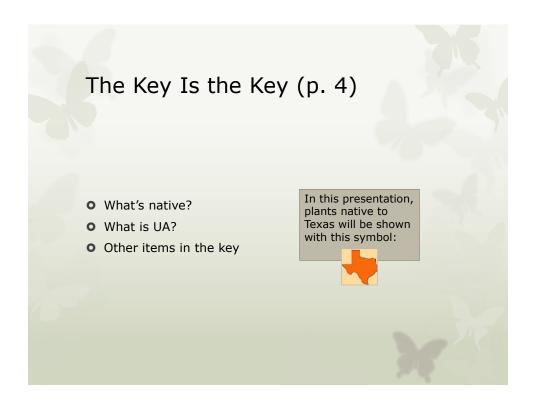
- Why was it created, and why is it special?
- Who contributed?
- What is the phone number if you need many guides?

#### **Online Grow Green Database**

(<u>www.growgreen.org</u>):

http://austintexas.gov/department/growgreen/plant-guide

- Sections: Trees, Small Trees/Large Shrubs, Shrubs and Roses, Perennials, Yuccas/Agaves, Succulents/Cacti/Sotols, Ornamental and Prairie Grasses, Vines, Groundcovers, Turf Grasses, FAQ, Plants to Avoid, Index
- What's changed? More natives, removed deerresistance and availability columns, removed rain garden and water plant lists





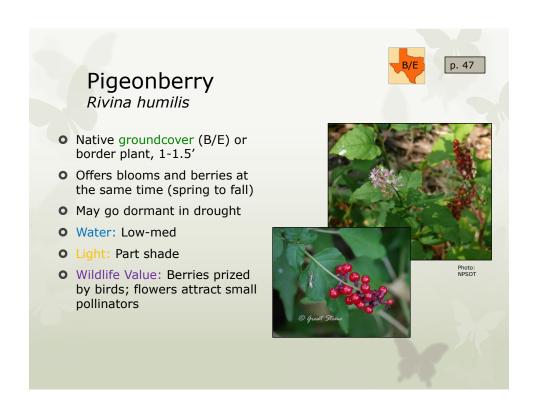
#### Question:

What deciduous oak tree is native to the Edwards Plateau and is considerably smaller than other regional oaks, making it a good choice for small yards?



#### Question:

In what season(s) does the groundcover Pigeonberry bloom and produce fruit?



# Frogfruit Phyla nodiflora

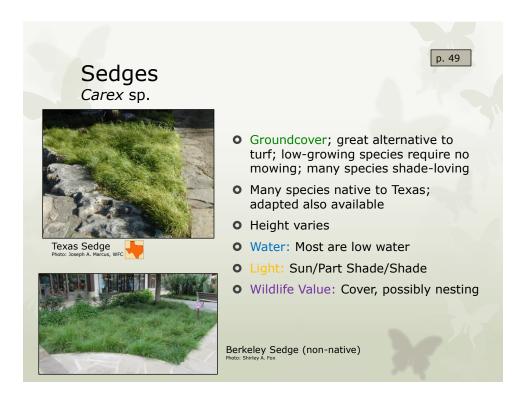




- Native low-growing groundcover (B/E)
- **o** 6-8"
- Spreads rapidly under right conditions
- Water: L-M (tolerates wet)
- Light: Sun/Part Shade
- Wildlife Value: Host plant for Phaon Crescentspot, Buckeye, and White Peacock butterflies; attracts small pollinators; provides cover for toads and other small critters

#### **Question:**

What kind of plants are *Carex* spp., and on what page would you find information on them?





#### **Question:**

What plant has the scientific name *Aloysia virgata*?

# Sweet Almond Verbena Aloysia vergata O Non-native semi-evergreen shrub (from Argentina) O Very fragrant white flower spikes O Needs room! 4-8'+ O Water: Low-Med Light: Sun/Part shade O Blooms in warmer months; dies back in harsh winters O Wildlife Value: Pollinator magnet

## Texas Kidneywood



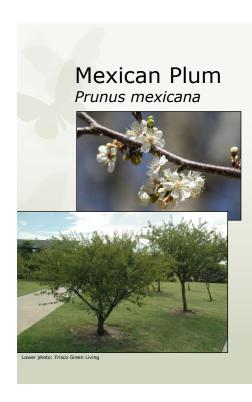
Eysenhardtia texana



- Deciduous shrub with small leaves (can prune for shape)
- Fragrant white flower spikes
- Fast-growing; airy nature provides light shade to plants below
- Blooms often from spring to fall
- Water: Very low
- Light: Likes full sun and bright shade
- Wildlife Value: Pollinator magnet; host plant for Dogface butterfly

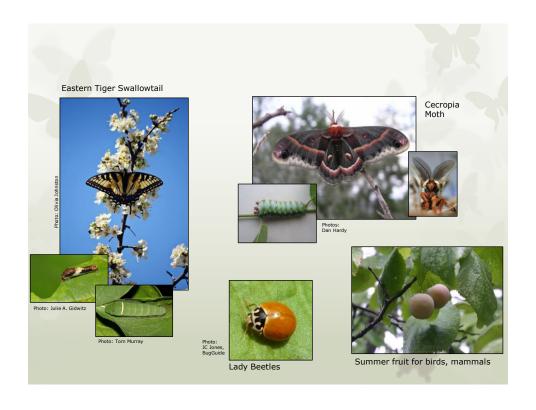
#### **Question:**

What eco-region(s) is Mexican Plum naturally found in?





- Small native deciduous tree (B/E), 15-20'
- · Great understory tree
- Lovely plant, though summer foliage may look ragged
- Water: Low
- Light: Sun/Part shade
- Wildlife Value: Host plant for Eastern Tiger Swallowtail and Cecropia Moth; summer fleshy fruit for birds and mammals; dense foliage for nesting and cover; early blooms for pollinators



# Mexican Redbud Cercis canadensis var. 'mexicana'





- Small deciduous tree, 10-15'
- Native to west Texas
- Water: Most drought-tolerant of the Redbud varieties. Needs well-drained soil.
- Light: Sun/Part Shade
- Wildlife Value: Early spring blooms for pollinators; Henry Elfin Butterfly host plant; cover; nesting site



#### **Question:**

I'm looking for a vine to go on a trellis in front of my A/C unit. I want it to be deciduous so that it shades the unit in summer but lets light in during winter. A yellow or orange color would be nice in that spot, but I don't want it to be too aggressive. What could I get?

# Mexican Flame Vine Pseudogynoxys chenopodioides





- Non-native deciduous woody vine (from Mexico)
- Bright orange-red daisy-like flowers throughout warmer seasons
- Dies back in cold winters
- Easy to propagate; reaches 10'+
- Water: Low
- Light: Full sun to light shade
- Wildlife Value: Attracts bees, butterflies, birds

# Carolina Jessamine

Gelsemium sempervirens

- Evergreen vine (native to East Texas)
- All parts are poisonous! Don't eat it.
- High-climbing, 6-20'
- Fragrant yellow trumpet-shaped flowers
- Water: medium
- Light: Sun/Part Shade
- Soil: pH adaptable, prefers acidicneutral
- Wildlife Value: Attracts hummingbirds and other pollinators





#### **Question:**

How tall does a Skyflower (Duranta) shrub grow?

# Duranta Skyflower

p. 23

Duranta erecta



- Sometimes evergreen shrub (native to Mexico to S. America)
- 5-10' tall
- Leaves and berries are toxic
- · Dies back in cold winters
- Water: Low-medium
- Light: Sun/Part shade
- Wildlife Value: Attracts

butterflies

#### **Question:**

What is particularly interesting about the common name for *Nolina texana*, Basket Grass?

# **Basket Grass**

Nolina Texana





- Clumping evergreen perennial native to Edwards Plateau
- Not a true grass (member of the Lily Family)
- 2', with leaves 4' long don't plant close to walkway
- Water: Very low
- O Light: Sun/Part Shade
- Wildlife Value: Provides cover; attracts pollinators; host plant for Atea and Sandia hairstreak butterflies

#### **Question:**

What is one positive and one negative characteristic of the shrub Flame Acanthus?

# Flame Acanthus

Anisacanthus quadrifidus

- Deciduous shrub (native to Edwards Plateau)
- Very drought tolerant; blooms in hot summer
- Spreads easily
- Water: Very low
- Light: Sun/Part Shade
- Wildlife Value: Attracts hummingbirds; host plant for Crimson Patch Butterfly

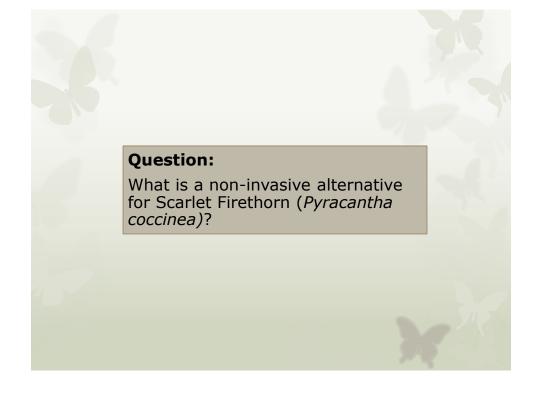




#### **Question:**

What are two common names for *Ehretia anacua*?





# Evergreen Sumac Rhus virens



- Evergreen shrub
- 8-10'
- Fall blooms and berries, high in Vitamin C
- Water: Low
- Light: Sun/Part shade
- Wildlife Value: Provides food and cover; host plant



Dusky-blue Groundstreak Photo: Karl and Dorothy Legler

# Plants for Select Garden Needs

# Selections Based on Garden Needs

#### Choose plants based on:

- o Interests, favorites
- Garden type and/or environment (light, shade, design style, etc.)

# Pay attention to the needs and habits of plants:

- Water requirements
- Soil pH
- Light/shade needs
- Size at full growth
- Habits (How does it spread? Will it have a dormant period?
- Wildlife considerations



### The Best Advice: Diversity

- Group plants with similar needs
- Diversity in flora = diversity in fauna = better protection for garden
- Consider bloom and fruiting times
- Evergreen and deciduous
- Layers
- Variety in colors and flower types

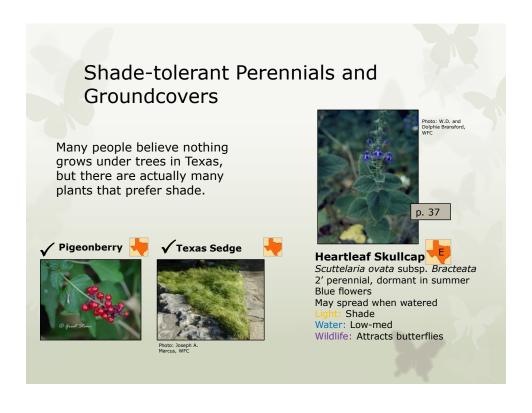










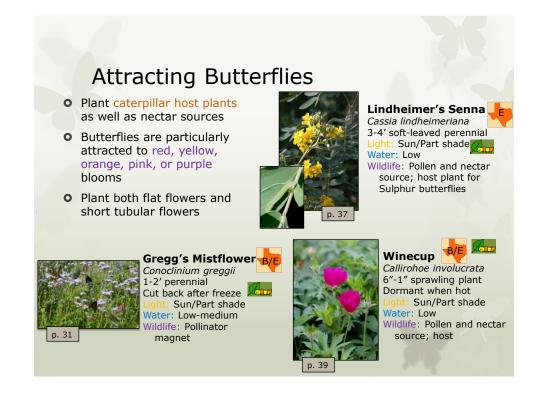










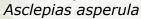


# Antelope Horn Milkweed









1-2' deciduous perennial

Light: Sun

• Water: Low-med

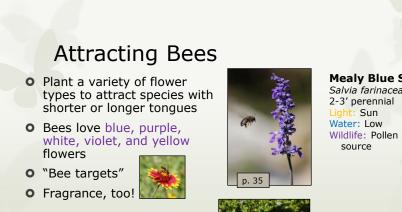
Wildlife: Pollinators; host plant for Monarch and Queen butterflies











Mealy Blue Sage 18/E Salvia farinacea Wildlife: Pollen and nectar





Zexmenia Wedelia texana 1.5-2.5' perennial Sun/Part shade Water: Low Wildlife: Pollen and nectar source; host plant



Wildlife: Provides food and

cover; host plant

Wildlife: Year-round

nectar/pollen source





Drought-hardy plants are a must in Texas. Fortunately, there's a variety, and their use brings texture to your garden.



Prickly Pear
Opuntia spp.
3-5' cactus
Light: Sun
Water: Low
Wildlife: Bees; some
animals consume pads
or fruit



Artichoke Agave
Agave parryi v. truncata
2-3' succulent
Light: Sun/Part shade
Water: Low
Wildlife: Cover for small
arthropods; pollen/
nectar if blooming



Big Muhly

Muhlenbergia linaneimeri
3-4' bunch grass
Light: Sun/Part shade

Water: Low-med

Wildlife: Cover; nesting
material; host plant





Gayfeather
Liatris spp.
1-3' perennial
Purple fall blooms
Light: Sun
Water: Very low
Wildlife: Great nectar
source for insects



Melampodium leucanthum 6-12" perennial Does not like wet feet Light: Sun Water: Very low Wildlife: Nectar/pollen for small insects



Agarita

Mahonia trifoliata
3-7' shrub with sharp leaves
Light: Sun/Part shade
Water: Very low
Wildlife: Early blooms,
spring berries



Red Yucca
Hesperaloe parviflora
2-4' agave with coral
spike
Light: Sun/Part shade
Water: Very low

Light: Sun/Part shade Water: Very low Wildlife: Attracts hummingbirds

## Hot and Dry/Xeric, cont'd



Esperanza

Tecoma stans 4-6' deciduous shrub ht: Sun Water: Low Wildlife: Great nectar

source for bees and hummingbirds



**Damianita** 

Chrysactinia mexicana 1' evergreen perennial Fragrant foliage ght: Sun Water: Very low Wildlife: Great nectar source for bees and

small butterflies

**Buffalograss** 

Bouteloua dactyloides 3-12" turf grass Often grown with Blue Grama and Curly Mesquite Sun Water: Low

Wildlife: Seeds for birds, host plant for Skipper butterflies

# Screening Plants



**Wax Myrtle** 

Morella cerifera 12-15'+ evergreen shrub Plant away from structures t: Sun/Part shade Water: Medium Wildlife: Berries, cover, host

plant for two Hairstreak butterflies



Photo: Forest & Kim Starr

#### Pineapple Guava

Feijoa sellowiana 6-10' evergreen shrub Pink blooms, edible fruit t: Sun

Water: Low-med Wildlife: Attracts pollinators



**Cherry Laurel** 

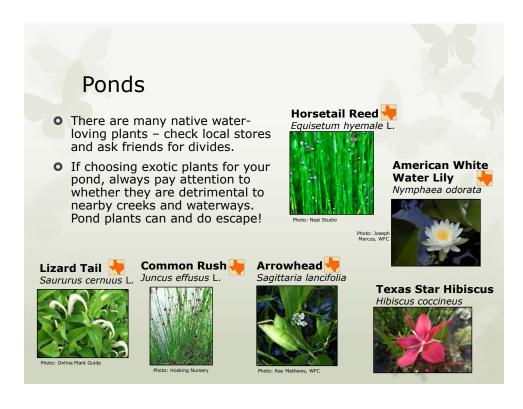
Prunus caroliniana 15-20'+ evergreen shrub White flowers, dark fruit, poisonous leaves Sun/Part shade

Water: Medium Wildlife: Attracts birds and pollinators



Sandankwa Viburnum

Viburnum suspensum 6-8' evergreen shrub Fragrant, white waxy flowers, red berries Freeze might damage Sun/Part shade Water: Medium



#### **Deer-Resistant Plants**

Plants with strong scents, tastes, or textures are least palatable to deer.

Examples include: Sages/Salvias, Basket Grass, Big Muhly, Chocolate Daisy, Chile Pequin, Texas Betony, Damianita, Milkweed, Shrubby Skullcap, Texas Lantana, Flame Acanthus, and more



#### Where to Find Information

- O Austin's Native and Adapted Landscape Plants (also, www.growgreen.org)
- General Native Texas Plant info (Wildflower Center):

http://www.wildflower.org/explore/

- Central Texas Horticulture: http://aggie-horticulture.tamu.edu/travis/
- TC Master Gardener Help Desk and Daphne Richards
- O Caterpillar Host Plants: http://texasento.net/CenTexPInts.pdf (Austin Butterfly Forum)

http://wwwtest.utexas.edu/tmm/tnhc/entomology/buterfly/tnhc-tx-butterfly-gardening.pdf (Univ. of Texas)

O Bird Favorites (Travis Audubon):

http://travisaudubon.org/home/wp-content/uploads/2011/03/Bird-PlantsTravis-September2010.pdf



### Where to Buy Natives and Adapted

**Local nurseries:** Several offer many native and good adapted choices, including:

- Barton Springs Nursery (South-Central Austin)
- Natural Gardener (South Austin)
- Vivero Growers (en route to Dripping Springs)
- It's About Thyme (South Austin)
- The Great Outdoors (South Austin)
- Shoal Creek Nursery (Central Austin)
- Red Barn (North Austin)
- Green 'n Growing (Pflugerville)
- Round Rock Gardens (Round Rock)
- McIntire's Garden Center (Georgetown)

**Native Plant Sales:** At the **Wildflower Center**'s spring (April) and fall (October) plant sales, you can get hard-to-find natives for your garden. Also, our local **Native Plant Societies** periodically host sales.

Native Seeds: Native American Seed at www.seedsource.com



