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NATIVE PLANTS
Low Water, Drought Tolerant Native Plants and the Guests they Attract

Lesley Alward, Presenter
GO NATIVE!

WHY
“NATIVE PLANTS”
Plants that occur naturally in a particular region, ecosystem, or habitat without direct or indirect human intervention.

“REGIONALLY ADAPTED”
NATIVE PLANTS:

1. ARE ADAPTED TO OUR LOCAL CLIMATE
2. ARE ADAPTED TO OUR NATIVE SOILS
3. SUPPORT BIOLOGICAL DIVERSITY & PROVIDE HABITAT
4. ARE BEAUTIFUL & LOW MAINTENANCE
#1 ADAPTED TO OUR LOCAL CLIMATE

- Tolerate wide ranges of temperatures & periodic drought
- Are typically more drought tolerant & require less water than non-natives
PRESCOTT CLIMATE DATA

**Average Temperatures**

- Daily high
- Average
- Daily low
- US average

**Precipitation**

- City Average
- US average
USDA PLANT HARDINESS MAP

Interactive map at http://planthardiness.ars.usda.gov/PHZMWeb/
MICROCLIMATES

• TOPOGRAPHY / ASPECT
• SHADE FACTORS
Low Water
Water-wise
Xeric
Drought Tolerant
Drought Resistant
LOW WATER

- Plants which need no, little, or moderate supplemental irrigation once established.
- Per the Prescott AMA, that means a maximum of 12” of supplemental irrigation annually, not including rain.
- FYI: .62 gallons of water is equivalent to 1” of precipitation on 1 square foot of soil
XERIC

Term coined by Denver Water Board in 1980s, describing plants that evolved with drought & which function completely in dry conditions. They flower, set seed, and generally thrive in dry conditions.
DROUGHT TOLERANT & DROUGHT RESISTANT

Plants which use survival mechanisms, such as defoliating or going dormant, to survive abnormally dry conditions but that need moisture to resume normal lifestyle.
WHAT DO LOW WATER PLANTS LOOK & FEEL LIKE?

- Typically, have fine, lacy foliage or small leaves with reduced leaf surface to reduce water loss
- Thick, succulent, waxy leaves to trap moisture
- Resinous coating on leaves retards water loss
- Hairy or fuzzy leaves to trap moisture
- Grey foliage
- Deep, extensive root systems
Succulence / Succulent

- Plants with fleshy leaves or stems that store water
- Waxy coatings on leaves and/or few or no leaves
- Includes all cacti, agaves, yuccas and others

Agave parryi / Parry’s Agave

Yucca baccata
Banana Yucca
Cacti

- Have scales or spines instead of leaves
- Have thick hard-walled stems, either spongy or hollow, which store water
- Stems are photosynthetic

Echinocereus triglochidiatus
Claret Cup or Hedge Hog Cactus

Optunia engelmannii
Engelmann’s Prickly Pear
Small Leaves

Cercocarpus montanus / Mountain Mahogany

Fallugia paradoxa
Apache Plume

Linum lewisii
Blue Flax

Many Native Grasses
ie. Sideoats Grama
Arizona Cypress
Cupressus arizonica
Drought Avoidance

- Annuals which complete life cycles in 1 year
- Only seeds persist in times of drought

**Ratibida columnaris**
- Prairie Coneflower

**Helianthus annus**
- Common sunflower

**Eschscholzia californica**
- E. Mexicana
- Poppies

**Lupinus arizonicus**
- AZ Lupine

**Gaillardia pulchella**
- Indian blanket

**Machaeranthera tanacetifolia**
- Tansey leaf tansyaster

**Mexican Hat**

**Lupine**

**E. Mexicana**
- Poppies

**Lupinus arizonicus**
- AZ Lupine
#2 ADAPTED TO OUR NATIVE SOILS

- Require no amendments to correct for the alkalinity of our soils
- Require no fertilizers
# ABOUT OUR SOILS

## Nutrient Availability Chart

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<th>5.0</th>
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### Key:
- **NA** = Not Available
- **SA** = Slightly Available
- **MA** = Moderately Available
- **HA** = Highly Available

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**Optimum pH Zone for Soil**

Acidic

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Basic
Native plants have **symbiotic relationships** with mycorrhizal fungi & bacteria that allow them to acquire needed nutrients & phosphorous from the soil without using fertilizers or **amendments**.
#3 SUPPORT BIOLOGICAL DIVERSITY & PROVIDE HABITAT

- Food sources for young & mature species
- Shelter from predators & the elements
- Places to nest & raise young
TREES

Chilopsis linearis
Desert Willow
Cercis occidentalis / Western Redbud

Cercis Mexicana / Mexican Redbud

Cercis reniformis ‘Oklahoma’
Oklahoma Redbud
Salvia greggii  
Autumn Sage

<table>
<thead>
<tr>
<th>Furman’s Red</th>
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<tbody>
<tr>
<td><strong>Zones</strong></td>
</tr>
<tr>
<td><strong>Advantages</strong></td>
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<tr>
<td><strong>Light Requirements</strong></td>
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<tr>
<td><strong>Water Tolerance</strong></td>
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<tr>
<td><strong>Mature Height</strong></td>
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<tr>
<td><strong>Mature Spread</strong></td>
</tr>
<tr>
<td><strong>Bloom Time</strong></td>
</tr>
</tbody>
</table>
Potentilla fruticosa / Shrubby Cinquefoil
Chrysothamnus nauseosa
Rubber rabbitbrush or chamisa

**Zones**: 4 - 8

**Advantages**
- Attract Butterflies
- Bee Friendly
- Deer Resistant
- Native
- Fragrant Flower / Foliage
- Evergreen
- Multiplies / Naturalizes
- Good For Erosion Control
- Good For Hedge / Screen

**Light Requirements**: Full Sun

**Water Tolerance**: Xeric

**Mature Height**: 5-6' tall

**Mature Spread**: 5-6' wide

**Bloom Time**: Early to mid fall
**Sphaeralcea ambigu**

**Desert Globe Mallow**

<table>
<thead>
<tr>
<th>Trait</th>
<th>Information</th>
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<tbody>
<tr>
<td>Hardiness</td>
<td>6 - 9 [What’s My Zone?]</td>
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<td>Heat Zones</td>
<td>2 - 11 [What’s My Zone?]</td>
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<tr>
<td>Plant Type</td>
<td>Perennials, Shrubs</td>
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<tr>
<td>Exposure</td>
<td>Full Sun</td>
</tr>
</tbody>
</table>
| Season of Interest | Spring (Early, Mid, Late)  
|                | Summer (Early, Mid, Late)  
|                | Fall                                             |
|                | Winter                                           |
| Height         | 3' - 4' (90cm - 120cm)                           |
| Spread         | 2' - 3' (60cm - 90cm)                            |
| Spacing        | 36" (90cm)                                      |
| Water Needs    | Low                                              |
| Maintenance    | Low                                              |
| Soil Type      | Loam, Sand                                       |
| Soil pH        | Acid, Alkaline, Neutral                          |
| Soil Drainage  | Well-Drained                                    |
| Characteristics| Showy, Semi-Evergreen                            |
| Native Plants  | United States, California, Rocky Mountains, Utah, Southwest, Nevada, Arizona |
| Tolerance      | Drought, Dry Soil, Rocky Soil                    |
| Attracts       | Butterflies                                      |
Chamaebatiaria millefolium / Fern Bush

<table>
<thead>
<tr>
<th>Zones</th>
<th>4 - 9</th>
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<tbody>
<tr>
<td>Advantages</td>
<td>Attract Butterflies, Easy To Grow, Attract Birds, Bee Friendly, Deer Resistant, Native, Fragrant Flower / Foliage, Evergreen, Good For Hedge / Screen</td>
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<tr>
<td>Light Requirements</td>
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<tr>
<td>Water Tolerance</td>
<td>Low-Water</td>
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<tr>
<td>Mature Height</td>
<td>6-8' tall</td>
</tr>
<tr>
<td>Mature Spread</td>
<td>6-8' wide</td>
</tr>
<tr>
<td>Bloom Time</td>
<td>Summer</td>
</tr>
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</table>
# Rhus aromatica ‘Gro-Low’  
Fragrant Sumac

<table>
<thead>
<tr>
<th>Zones</th>
<th>4 - 9</th>
</tr>
</thead>
</table>
| **Advantages** | ![Butterflies](image)  Attract Butterflies  
  ✔ Easy To Grow  
  ✔ Attract Birds  
  ![Bee](image)  Bee Friendly  
  ![Rabbit](image)  Rabbit Resistant  
  ✔ Native  
  ✔ Low Maintenance  
  ✔ Fragrant Flower / Foliage  
  ✔ Multiples / Naturalizes |
| **Light Requirements** | ![Full Sun](image)  Full Sun  
 ![Morning Sun](image)  Morning Sun & Afternoon Shade |
| **Water Tolerance** | ![Low-Water](image)  Low-Water |
| **Mature Height** | 18” - 2 feet tall |
| **Mature Spread** | 8' wide |
**VINES**

Virginia creeper / Parthenocissus quinquefolia

Clings to walls or use as groundcover
Small berries attract birds
Succulents

Dessert Spoon
Dasilyrion wheeleri

Agave parryi
Parry’s Agave

Red Yucca
Hesperaloa parviflora
Optunia Engelmanii
Prickly Pear Cactus

Echinocereus triglochidiatus
Claret Cup or Hedgehog Cactus
Grasses

Bouteloua gracilis ‘Blond Ambition’ / Blond Ambition Blue Grama Grass

Schizachyrium scoparium / Little Bluestem
Muhlenbergia Rigens
Deer Grass
Food for Butterfly Larvae

Bouteloua curtipendula
Sideoats Grama

Bouteloua gracilis
Blue Grama

Lupinus arizonicus / Arizona Lupine
Perennials / Forbs

Melampodium leucanthum / Blackfoot Daisy
Angelita Daisy / Tetraneuris acaulis

**Hardiness:** 5 – 9

**Climate Zones:**
- 1A, 1B, 2, 2A, 2B, 3, 3A, 3B, 7, 9, 10, 11, 12, 13, 14, 18, 19, 20, 21, 23, 24

**Plant Type:** Perennials

**Exposure:** Full Sun

**Season of Interest:**
- Spring (Early, Mid, Late)
- Summer (Early, Mid, Late)
- Fall
- Winter

**Height:** 10” – 1” (25cm – 30cm)

**Spread:** 1” – 2” (30cm – 60cm)

**Spacing:** 18” (45cm)

**Water Needs:** Low

**Maintenance:** Low

**Soil Type:** Chalk, Loam, Sand

**Soil pH:** Acid, Alkaline, Neutral

**Soil Drainage:** Well-Drained

**Characteristics:** Showy, Evergreen

**Native Plants:**
- United States, California, Midwest, Kansas, Nebraska, North Dakota, South Dakota, Pacific Northwest, Idaho, Rocky Mountains, Colorado, Montana, Utah, Wyoming, Southwest, Nevada, Arizona, New Mexico, Oklahoma, Texas

**Tolerance:** Drought
Blanket flower / Gaillardia grandiflora
Berlandiera lyrata / Chocolate flower

- **Zones**: 4 - 9
- **Advantages**:
  - Attract Butterflies
  - Attract Birds
  - Bee Friendly
  - Deer Resistant
  - Native
  - Fragrant Flower / Foliage
  - Good For Cut Flowers
  - Extended Bloom Time (more than 4 weeks)
  - Multiplies / Naturalizes
- **Light Requirements**: Full Sun
- **Water Tolerance**: Low-Water
- **Mature Height**: 12-15" tall
- **Mature Spread**: 18-24" wide
- **Bloom Time**: Late spring to summer
Conoclinium greggii
Gregg’s Mist Flower
Achillea ‘Moonshine’ / Yarrow Moonshine

Achillea millifolium ‘Red Velvet’
Yarrow ‘Red Velvet’

Deer Resistant
Rabbit Resistant
✓ Fragrant Flower / Foliage
✓ Extended Bloom Time (more than 4 weeks)

‘Paprika’
Rocky Mtn Penstemon
Penstemon Strictus
Mid to late spring

Penstemon pseudospectabilis
Desert Penstemon
Late Spring
Palmer’s Penstemon
Penstemon palmerii

Parry’s Penstemon
Penstemon parryi

Early summer
Fragrant

Late winter - spring

- Deer Resistant
- Attract Hummingbirds
- Rabbit Resistant
- Fragrant Flower / Foliage
- Native
- Evergreen
Heuchera
Coral Bells

Monarda
Bee Balm

Aquilegia chrysantha
Golden Columbine
Perennial Forbs for Monarch Larvae

Asclepias asperula
Antelope Horns

Asclepias tuberosa / Butterfly weed

Asclepias angustifolia
AZ Milkweed

MILKWEEDS

Asclepias subverticillata
Horsetail Milkweed
Ratibida columnifera ‘Mexican Hat’
Prairie Coneflower

Naturalizes! Finches love the seed heads!
CHALLENGES?

SITUATIONS?

COMMENTS?

SOLUTIONS?

QUESTIONS?
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