Herbaceous Plants

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Definition:
Herbaceous – non-woody plants, lacking significant lignification of vasculature (above ground).

Life Cycles
- Annuals
- Biennials
- Perennials
**Annuals**
- Grow, flower, set seed in one season
- You plant seed or seedlings?
- Hardening off
- Rework soil each year
- Some self-seeding

**Biennial**
- 2 Seasons to Complete Life Cycle
- Seed or Seedlings?
- 1 year for some
- Examples
  - Foxgloves ?
  - Canterbury Bells
  - Hollyhock ?
  - Sweet William ?

**Perennials**
- May be herbaceous or woody
- 2 Years or More
- Short and Long Blooming Seasons
- Permanent
Herbaceous Perennials

- Examples
  - Iris
  - Peonies
  - Chrysanthemums
  - Daylilies

Herbaceous Perennials - Bulbs

- Division
- Spring Flowering Planted in Fall
  - Hyacinths, Tulips, Daffodils
- Summer Flowering Planted in Spring
  - Dahlias, Begonias, Canna
  - Dug & Stored Indoors

Culture of Perennials

- Often easy to grow
  - don’t require reworking the bed annually
- Soil
  - consider center of origin
- Light
  - variable
Culture of Perennials

- Moisture
  - variable
- Some are for xeriscapes
  - some not

Herbaceous Plants

What is the largest herbaceous plant?

- Banana?
- Philodendron?
- Other?
Herbaceous Plants

How long does an herbaceous plant live?

- 1 year?
- 2 years?
- 3 or more years?
  - How long???
Traditional use of herbaceous plants

Can we use herbaceous plants here?

Non-traditional uses
Xeriscapes
Herbaceous Plants - Uses

Bedding/ Foundation
Naturalized
Groundcover
Houseplants
Etc.
Herbaceous Plants - Uses

Naturalized
Herbaceous Plants - Uses

Groundcover
Herbaceous Plants – Uses - Container Gardening

Good for water conservation, small areas, and indoor gardening
You can control the soil.
You can move them to optimum locations.
You can move them indoors in the winter.
You can use super efficient irrigation techniques such as olla irrigation.

Buried unglazed clay pot

Plant roots “find” water
## Irrigation System Efficiency

<table>
<thead>
<tr>
<th>Method</th>
<th>Productivity (in kg plant per cubic meter of water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>closed furrow (basin)</td>
<td>0.7</td>
</tr>
<tr>
<td>sprinkler</td>
<td>0.9</td>
</tr>
<tr>
<td>drip</td>
<td>1.4</td>
</tr>
<tr>
<td>porous capsule (pressure)</td>
<td>1.9</td>
</tr>
<tr>
<td>deep pipe</td>
<td>2.4</td>
</tr>
<tr>
<td>porous capsule (no pressure)</td>
<td>2.5</td>
</tr>
<tr>
<td>buried clay pot</td>
<td>2.5 to 6</td>
</tr>
<tr>
<td>wick</td>
<td>&gt;4</td>
</tr>
</tbody>
</table>
Use large pots for large plants or combinations of small plants, small pots for dwarf flowers and vegetables.

You can combine flowers and vegetables.
Herbaceous Plants
Care –
Depends on the plant
bulbs, herbaceous perennials, annuals, etc.

Care - annuals
Soil – this is a short-term planting site and can be re-worked annually
Add organic matter unless the plant is best adapted to xeric, sandy/gravelly soils
Fertilizer may be incorporated or applied later

Care - perennials
Culture of Bulbs

- Soil
  - consider plant’s origin
- Light
  - spring flowering - full sun
  - summer flowering - may need some shade
- Wind – protect!!

Care - bulbs

Proper planting – remember this is a long-term planting
  - well prepared soil, deeply
  - addition of phosphate
  - organic matter for some

Spring-flowering divide in late summer or fall
Summer-/fall-flowering divide in fall or spring
Houseplants divide when dormant
Care - succulents

Use a well-drained soil
Don’t over water
May need light shade
(surprise!)
Herbaceous Plants – Propagation – making more

Many different means of propagation
  Seed
  Cuttings/layering
  Specialized structures (separation, division)
  Tissue culture, grafting (esp. cacti)

Herbaceous flowering plants
Amaryllis (Hippeastrum spp.)
- Perennial
- 16-24” x 12”
- Part shade
- Blooms in late winter
- Moist, well drained soils, with organic matter
- Native to tropics, don’t freeze
- Potted plant
- Requires cool, dry autumn to flower

Columbine (Aquilegia x hybrida)
- Perennial
- 16-24” x 12”
- Part shade to full sun
- Blooms in spring (summer in cool areas)
- Moist, well drained, neutral pH soils.
- Propagated by seed
- Most zones except tropics
- Borders, mass planting, cut-flowers

Coreopsis
- Perennial
- Propagated by division
- Full sun
- Flowers yellow to orange
- 6”-3’ x 1-3’
- Well-drained soil
- Zones: 4-10
- Dwarf for ground cover or edging, beds, borders, cutting flowers, containers
Penstemon (Penstemon spp.)

- Perennial
- Propagated from seed
- Blooms blue to red to mauve.
- Tolerate full sun, but prefers partial shade
- Ground covers, sub shrubs, and plants with flower stalks to 4 feet.
- Well-drained soil

Russian Sage (Perovskia atriplicifolia)

- Perennial, native to Central Asia and Tibet.
- Cold treat seed for 10 days and sow into container. Can be grown from cuttings.
- Flowers are blue spikes
- Full sun with a well-drained soil
- Hardy to zone 4 to 8,000ft

Snow-in-Summer (Cerastium tomentosum)

- Evergreen perennial
- Full Sun
- White flowers
- 8”x24”
- Medium water use
Russell Lupine (*Lupinus polyphyllus*)
- Perennial
- Nick hard seed coat with nail file or soak overnight to speed germination
- Sun/shade
- 36”x36”
- Hardy to Zone 2
- High water use

Goldsturm (*Rudbeckia fulgida*)
- Perennial
- Full Sun
- Yellow
- 24” x 24”
- Zones: 4-10
- Great fall color and long lasting

Valerian (*Centranthus ruber*)
- Perennial
- Part/Full
- Rose pink flower in June
- 18 to 36”
- Zones: 3-10
- Medium water use, good for sunny borders
Yarrow (Achillea millefolium)

- Perennial
- Germinates readily from seed. Sow with no cover or very light cover of soil.
- Elevation: 3,000 - 9,500ft.
- Highly adaptable. Can grow in habitats ranging from deserts to alpine tundra.

Gaillardia

- Perennial
- Full Sun
- Red flowers with yellow margins, low growing to 12" to 24" x same
- Medium water use

Purple Coneflower (Echinacea purpurea)

- Perennial
- Seed
- Full Sun
- Purple or White
- 60" x 24"
- Moist soil
- Medium water use; not particularly drought tolerant.
- Blooms in mid-summer
Butterflyweed (*Asclepias tuberosa*)
- Perennial
- Seed propagated
- Full sun
- Bright orange flowers.
- 30” x 30”
- Well drained soil
- Low water use, drought tolerant.

Chocolate Flower (*Berlandiara lyrata*)
- Perennial
- Seed propagation is sporadic
- Bright yellow with deep red center. Thick chocolate fragrance.
- Full Sun
- 16” x 16”
- Well drained soils
- High water use, but fairly drought tolerant.

Liatris (*Liatris punctata*)
- Perennial
- Easily seeded or transplanted.
- Purple blooms last 2-4 weeks.
- Full Sun
- 36” x 36”
- Prefers adverse soil conditions (i.e. gravelly, infertile, shallow).
Desert Zinnia (Zinnia grandiflora)
- Perennial
- Can grown from seed, low germination rate.
- Full sun
- Vibrant yellow of the flower.
- Blooms from midsummer until fall.
- 4” x 6”
- Prefers a dry, well-drained soil.
- Extremely dry-loving
- Zones 4 - 7.

Mexican Evening Primrose (Oenothera berlandieri)
- Perennial
- Seed propagated
- Full Sun
- White then pink. Will bloom all summer with water.
- 12” x 60”
- Prefers well-drained soils
- Low-water use groundcover

Hardy Geraniums
- Perennial
- Transplanted, spread by runners
- Full sun/Part shade
- White, red, pink, blue. Spring bloom.
- Groundcover
Poppy Mallow (Callirhoe sp.)
- Perennial
- Transplanted
- Full sun/Part shade
- Dark pink/purple
- Creeping
- Deep rooted
- Uses little water

Daylily (Hemerocallis)
- Perennial
- Transplanted
- Full sun/Part shade
- Many colors. Early, mid-season, late season, and reblooming
- Tuberous roots/crown
- Very adaptable
- Uses little water
- Easy

Tiger Lily (Lilium sp.)
- Perennial
- Transplanted
- Full sun/Part shade
- Non-tunicate bulb
- Easiest of lilies
Lambs Ears (Stachys byzentina)
- Perennial
- Transplanted
- Full sun
- Attractive wolly, white leaves
- White flower spikes with purple flowers
- Groundcover
- Low water

Shasta Daisy (Chrysanthemum x superbum)
- Perennial
- Transplanted
- Full sun
- White flowers
- Mounding
- Bloom late summer

Euphorbia Myrsenitis
- Perennial
- Transplanted
- Full sun
- Yellowish flowers
- Mounding, groundcover
- Bloom early spring
Lenten Rose (Helleborus hybrids)
- Perennial
- Transplanted
- Full sun
- Multicolored flowers
- Small
- Bloom late winter

Hardy Orchid (Bletillia spp.)
- Perennial
- Transplanted
- Partial shade
- Lavendar or white flowers
- Small
- Bloom late spring

Iceplant (several genera in Aizoaceae)
- Perennial
- Transplanted
- Full sun
- Brightly colored flowers
- Succulent groundcover
- Bloom spring, summer, and fall
More Examples

• There are many more than those shown here
• Some are xeric, some are not
• Some require more care than others
Ornamental Grass

• Usually not mowed
  – trimmed down once a year
  • timing depends on whether it is cool-season or warm-season grass
Ornamental Grass

- Planted less densely than turfgrass
- Grown for color, form, texture, and ornamental seed heads
  - attractive to wild-life

Ornamental Grass

- Some are short
  - blue sheep fescue
- Some are tall
  - Pampas grass
  - Giant Sacaton
- Some intermediate
  - Thread-grass

Ornamental Grass

- Most are not rhizomatous or stoloniferous
  - they don’t creep across the ground
- May or may not readily reproduce by seed
Ornamental Grass

• Provide year-round landscape interest
• May replace shrubs or accent plants
• Often low water demand plants
• Easy to maintain
• Appropriate for New Mexico

Native Grasses

Little Bluestem
Little Bluestem

Blue Avena

Blue Avena in winter
Mexican Threadgrass