HERBACEOUS ORNAMENTALS

Handouts:
- MontGuide: Growing Annual Flowers
- MontGuide: Choosing Biennials and Perennials for Montana Gardens
- Magazine article: Matching the Colors of Your House & Garden
- Herbaceous Ornamentals/Native Plants Study Guide
Herbaceous Ornamentals

• Non-woody part of a landscape, comprised of annuals, biennials, perennials, bulbs and ornamental grasses
• Add color, form, and interest
• Can easily be moved
• Can be containerized, enhancing architectural elements
Annuals

• Complete life cycle (seed to seed) in one year
• Provide continuous bloom (cut flowers)
• Fill in while permanent plants mature
• Mostly used in containers and bed edgings for pops of color
• Inexpensive
Annuals-Categories

• Tender: intolerant to any frost and may not grow well in cool conditions

• Semi-hardy: tolerate light frost down to 28°F

• Hardy: tolerate frost and cool conditions
Annuals-Tender

- Most are native to tropical regions
- Sensitive to cold, easily damaged by frost
- Most will not germinate when soil temps are below 60°F
- Best as transplants vs. seed
- Wait 2-3 weeks after last frost to plant outdoors
- Examples: ageratum, celosia, coleus, impatiens, begonia, verbena
Annuals-Semi-hardy

- Tolerate periods of damp, cold weather but can be damaged by frost
- Do not require warm soil to germinate
- Many are adapted to hot summer weather and may bloom all summer
- Examples: cleome, cosmos, petunia
Annuals-Hardy

- The most cold tolerant, can survive light frost and some freezing
- Not necessarily heat tolerant and may decline during hot summer conditions
- Examples: sweet alyssum, stocks, viola
Biennials

- Life cycle is completed over two growing seasons:
  - 1\textsuperscript{st} year only produce vegetative parts
  - 2\textsuperscript{nd} year, after cold period, flower, seed then die
- Examples: hollyhock, foxglove, canterbury bells, sweet william
Perennials

• Non-woody plants that live and flower for 3 or more years
• Die back to the ground in the winter
• Easily propagated through division
• Examples: basket of gold, daylily, phlox, poppy, speedwell
Bulbs

- General term for corm, rhizome, tuber
- Technically a perennial (regenerate yearly)
- Dramatic when mass planted
- Usually first color in the spring
- Often categorized by season of bloom or hardiness
  - Spring flowering
  - Summer flowering
  - Fall flowering
- Hardy
- Tender
Bulbs-Spring Flowering

• Plant in the fall, need cold period
• Emerge early in the spring
• Bloom for a short period of time
• Die back to the ground and return the following spring
• As a rule, usually hardy
• Examples: crocus, daffodil, tulip, hyacinth
Bulbs-Summer Flowering

• Plant in spring after last frost
• Provides color between spring flowering bulbs and other perennials
• Most are tender (treat like annuals unless dug for storage)
• Examples:
  • Hardy: Iris, lily, allium
  • Tender: gladiola, dahlia
Bulbs - Fall Flowering

- Bloom mid to late fall
- Examples: hardy cyclamen, lily, autumn crocus
- Usually hardy
Ornamental Grasses

• Most are perennials
• Add texture, movement and winter interest
• Cut back in spring when new growth starts to appear
• Propagated through crown division (usually in spring)
Ornamental Grasses

• Divided into warm-season and cool-season
  • **Warm-season**: grow best under warm conditions, divide/plant in spring, slow to get going, thrive between 75-85°F.
  • **Cool-season**: do better in cooler temperatures, plant in spring, divide late summer/fall, grow best at temps. above freezing to 75°F.

• Categorized by mature size
  • Tall = greater than 5’ high
  • Medium = 2-5’in height
  • Short = less than 2’ tall
Ornamental Grasses-Tall

• Over 5’ in height
• Often used to hide unattractive structures or mechanical components
• Make excellent backgrounds for flowering ornamentals
• Examples: big bluestem, switchgrass, basin wildrye
Ornamental Grasses-Medium

• 2-5’ in height

• Have a variety of uses in the landscape
  • Borders, rock gardens, mixed beds, native plantings

• Examples: feather reed grass, little bluestem, tufted hair grass, blue oat grass,
Ornamental Grasses-Short

• Less than 2’ in height
• Often used as ground covers, bed edge plantings, naturalized landscapes, rock gardens
• Can be used in containers
• Examples: blue fescue, idaho fescue, blue grama, prairie junegrass, indian ricegrass
Designing Flower Beds & Borders

• Consider:
  • Color
  • Texture
  • Size and shape

• Odd numbers are more aesthetically pleasing (3,5,7...)

• Group or mass plant (same plants or same color)

• Plan for continual blooms all season
Designing Flower Beds & Borders

• Be aware of their preferred growing conditions (read the planting label or seed package)
• Most important: right plant in the right place
  • Location (sun, shade, soil conditions)
• Then think about:
  • Color
  • Height and width at mature size
  • Period of bloom
• There are no mistakes, plants can be easily moved
• Keep a garden journal
Designing Flower Beds & Borders

Read the tags:

• Light requirements
• Soil requirements
• Moisture requirements
• Height & width at maturity
• Spacing
• Color
• Time of bloom
• General care
Designing Flower Beds & Borders - Color

- Flower, foliage, structures
- The color wheel
- Primary colors are red, blue, and yellow
- A hue is a pure color
- A lighter color of a hue is a tint
- A color darker than a hue is a shade
Designing Flower Beds & Borders - Color

• Warm colors
  – Red, yellow and orange
    • Use in shady areas
    • Use to shorten perspective

• Cool colors
  – Blue, violet (purple) and green
    • Use to “cool” hot patios, driveways or sidewalks
    • Are better viewed up close
Color Schemes

• Analogous
  – Adjacent colors on the color wheel
  – Example: red and orange

• Complementary
  – Opposite colors on the color wheel
  – Example: yellow and violet

• Triadic Harmony
  – Use 3 colors equal distance from each other on color wheel
  – Example: red, yellow, blue
Designing Flower Beds & Borders - Texture

• Size and density of leaves, flowers, grass blades, seed heads
• Large leaves and bold flowers have a “coarse” texture
• Small leaves and flowers have a “soft” texture
• Mix of different textures is visually pleasing
Designing Flower Beds & Borders -
Size and shape

• Plant size
  – Don’t crowd, consider mature height and width

• Plant shape
  – Habit or form, natural or manicured

• Keep tall plants toward the back or middle and low growing plants toward the edges

• Let heights intermingle in places to avoid a step profile

• Curved bed edges vs. straight
  • Easier to mow
  • Softer, less formal
  • Mimics nature
Have fun with it!
Site & Soil Preparation

• Consider the aspects of site selection

• Soil must provide good drainage and aeration
  – Good soil preparation is more important for perennials than annuals
  – Amend in the fall if possible so amendments can break down

• Remove existing grass and plant material

• Incorporate 2-3” or 1-2 cu. yds./1000 sq.ft of organic matter to about 12”
Site & Soil Preparation

• Having the soil tested is always a good idea
  – Mont Guide MT200705AG

• Phosphorus fertilizer is best mixed into soils prior to planting
  – P is immobile in the soil

• General purpose fertilizer (10-10-10) can be used in spring
  – Always follow manufacturers recommendations

• Most plants have specific soil requirements
  – Choose the right plant for the site!
Edging

• Helps prevent grass from getting into the flower bed
• Should be at least 3” deep to keep weeds out
• Flower bed looks more “finished”
• Helps keep mulch inside the bed and out of your lawn
Planting

• Plants should become established before winter
• Spring planting – no earlier than ~ 3 weeks prior to average last frost date
• Fall planting – no later than ~ 6 weeks prior to average first frost date
• 3 ways to plant perennials
  – Seed
  – Containerized plants
  – Bare root perennials
Seeds

• Mixtures and single cultivars
• Hybrids cost more but are usually more uniform in size and more vigorous
• Try to start with fresh seed
• Saving seeds?
  – Most perennials do not grow true to type from seed saved from old plants
Starting Seeds Indoors

- Try starting indoors much like vegetables (for transplants)
- 4-6 weeks prior to planting in the garden
- Start in flats using quality potting mix
- Make sure there is adequate light
- Water with mist or bottom water
- Thin to one plant per cell
- When there are two true leaves, transplant to larger (roughly 1 ½”) pots or flats
- Air movement such as an electric fan will keep plants healthier indoors
- Use mild fertilizer (1/2 recommended rate)
Direct sowing of seeds

• Easiest and most economical way of planting annuals
• Seeds need to be thinned for desired density (or clip if other roots will be disturbed)
• Follow the seed packet for instructions
• The surface of clay soils will cake over preventing water infiltration and the seedling to emerge
  – Plant into and cover with vermiculite to alleviate this problem
• Plant seeds approximately 1/2” deep or 2 ½ times the diameter of the seed
• Soil temperatures 60+° F are generally best
Planting Containerized

• Dig the hole 2x larger than the container (same depth)
• Remove the plant
  – Tip upside down, supporting soil with your hand
  – Gently tap the pot and pull it off the soil ball
  – Loosen roots, butterfly if necessary
• Place so the crown is at the same soil level as the pot
  – Too deeply, won’t flower. Too shallow, dry out
• Spread out roots and backfill hole with soil
• Water well and recheck soil level
Transplants

- Plants will bloom earlier
- ¼ lb N / 100 square feet
  - For 5-10-10, 5 lbs / 100 sq. ft. (every 2-3 weeks)
- Add O.M.
  - However, annuals don’t need a very rich soil, but do need nutrients
- Check planting tag or literature for spacing
- Plant so that the soil is at the same level as that of the pot
- Water in immediately
Transplanting Tips

• Harden off transplants
• Plant late in the afternoon on a cloudy day if possible
• Try not to “pull” the plant from the pot but rather “push” up from the bottom
• If buying transplants pick from the center of the table at the garden center
  – Usually get the most water when times are busy at the greenhouse
  – Try to buy transplants without flowers and without disease or insects
• To see if they have insects, look on the bottom side of the leaves and give them a shake
Planting

• Inspect plants prior to purchase
  – New roots = creamy white
  – Not root-bound
  – Foliage is not leggy

• Store plants in a cool, dry place until planting

• Avoid deep planting or they may not bloom!
  – For instance, peonies will not flower if planted too deep
Planting Bare Root

- Bare root are sold without soil
- Soak in tepid water
- Trim trailing or damaged roots
- Make a mound for the roots to drape over
- Place plant so crown is at the same depth as in the nursery
- If no crown, buds should be no deeper than 1 inch (peonies)
  - Treat divisions from your friends like bare root plants
  - They should be dormant!
Bulbs

• Plant bulbs 2-3 times deep as they are tall with the “nose” pointing up
• Use a bulb planter or dibber or plant in masses and cover with soil
• Bulbs can be “layered” in the ground for a mixture
• Divide bulbs after several years (approx. 4 years) or if the bulbs stop flowering
Planting Depths for Bulbs

1. BEARDED IRIS
   - Jun-Sept
2. TUBEROUS BEGONIA
   - Mar-June
3. ANEMONE
   - Fall or Spring
4. FREESIA
   - Early Fall
5. MUSCARI
   - Fall
6. SPARAXIS
   - Oct-Nov
7. CROcus
   - Fall
8. RANUNCULUS
   - Fall or Spring
9. BULB IRIS
   - Fall
10. HYACINTH
    - Sept-Nov
11. CALLA
    - Fall or Spring
12. GLADIOLUS
    - Spring weather
13. IXIA
    - Fall
14. SCILLA
    - Sept-Oct
15. DAFFODIL
    - Sept-Nov
16. DAHLIA
    - Late spring
17. LILY
    - Fall
Watering

• Watering frequency
  This varies with:
  • Sun and wind exposure
  • Temperature
  • Soil type
  • Individual plants’ water needs

• Try to water separately from lawn
  – Keep the soil moist, but not soaking wet for first few weeks
  – Progress to longer intervals (4-6 days) to encourage roots to expand into surrounding soil
  – Soaker hoses or drip irrigation is best
Mulching

- Retains moisture
- Keeps soil cooler (but apply later in spring when the soil has warmed)
- Weed prevention
- Wood chip (bark) mulches and grass clippings (watch herbicide residual)
- Mulches can rob the nitrogen, so you may need a bit more fertilizer
- Don’t use black plastic
- Layer 4” to 6”
Culture & Maintenance - Maintenance

• During growing season
  – Periodic weeding
  – Staking if necessary
  – Insect and disease control
  – Deadheading
Weeding

• Weeds compete for nutrients and water
  – They also make a flower bed look unkempt
• Try to pull weeds by hand
  – Less disruption on roots
• Avoid shallow feeder roots of the flowers
• Never use a hand trowel or hoe
• Use a hand rake or weeding tool
Deadheading

- Deadheading is the removal of faded flowers
- If the plant goes to seed less energy is spent on flowering
- Pinch off or cut off the flowers back to the previous branch
- Shear plants that have smaller flowers like alyssum (don’t shear off more than 1/3 the plant)
- This is when you monitor for disease and insect pests
Culture & Maintenance - Maintenance

• Tender bulbs will not survive Montana winters and need to be lifted from the ground and stored indoors

• Examples: Dahlias, gladioli, caladiums, and tuberous begonias
  – After frost, lift with fork or spade
  – Cut tops back
  – Air dry bulbs (cure if necessary)
  – Set in box in a bed of newspaper, peat moss, vermiculite, dry sawdust or sand
  – Store in a cool, dry place free from frost
Culture & Maintenance - Division

- After 3-5 growing seasons, divide to prevent overcrowding
- Spring to early-summer blooming perennials (poppies, peonies)
  - Usually divide in fall or when foliage dies
- Mid-to late summer and fall blooming perennials (mums, asters)
  - Divided in spring before growth begins
Culture & Maintenance - Division

- Iris and daylilies are usually divided immediately after flowering.
Pruning

• A common question is whether to prune back perennials before winter
• Some perennials have winter interest such as ornamental grasses
• If pruning, use a rule of thumb – exactly that: the length of your thumb
Questions?