

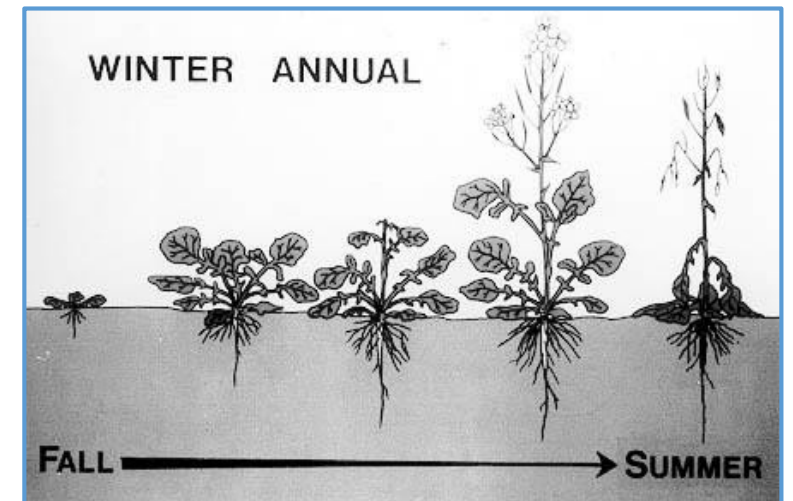
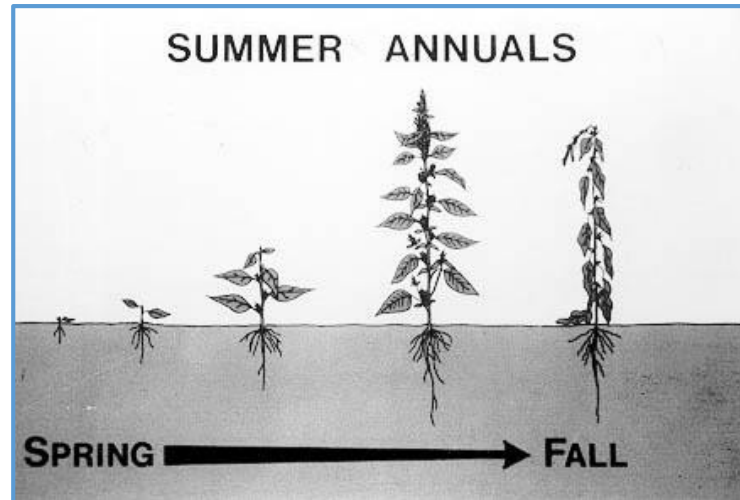
Plants 101



By Val Kehoe

Classifications

- Annuals
 - Hardy
 - Half hardy
 - Tender
- Biennials
- Perennials
 - Woody
 - Herbaceous



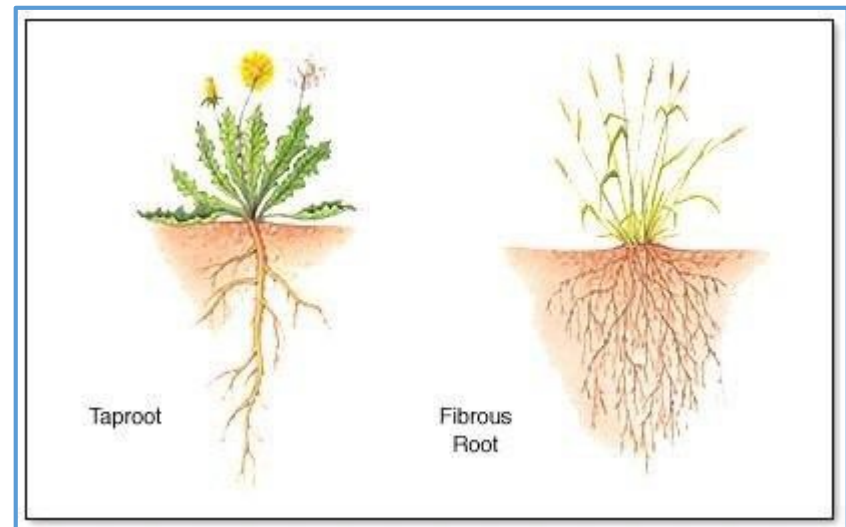
Annuals

- 1 yr life cycle
 - Germinate, grow, bloom, set seed
 - Pollinated
- Bloom profusely
 - Invest all energy into blooms
 - Continuous color
- Home owner favorite
- Inexpensive
 - Fast growing
- Produce large amounts of seed



Annuals

- Fibrous root system
 - Generally no tap roots
- Some plants are treated as annuals
 - Tender perennials
 - *Lantana*, *Geranium*, *Coleus*
- Not cold hardy in our zone!
- Overwintering tiresome
 - Suitable space





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Conclusions

PROS

- ❑ Inexpensive
- ❑ Germinate readily
- ❑ Fast growth
- ❑ Continuous bloom
- ❑ Readily available

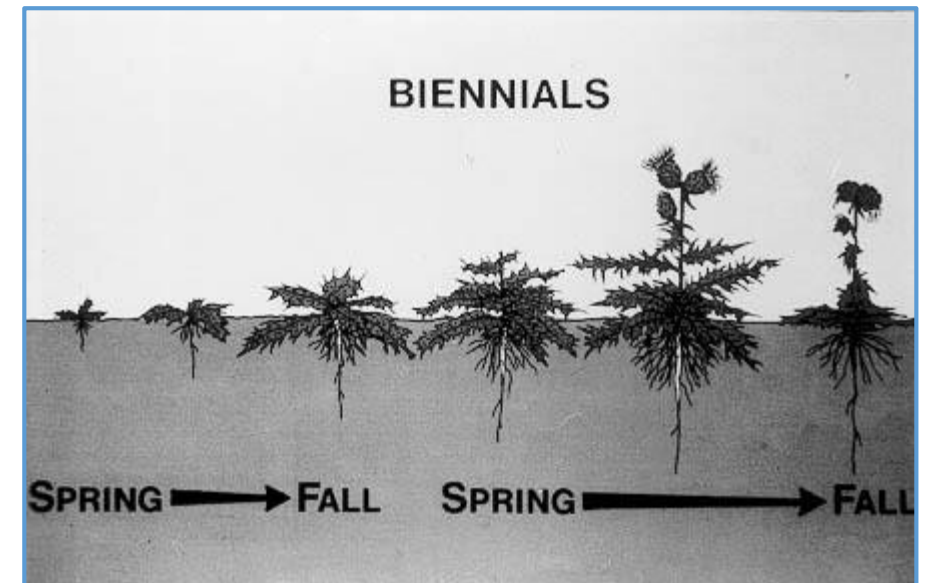
CONS

- ❑ Short-lived
- ❑ Annual planting
- ❑ Primarily non-native
- ❑ Maintenance (watering)
- ❑ Frost tender

BIENNIALS



- Completes life cycle in 2 years
- First year
 - Vegetative growth
- Second year
 - Flowers, fruits, seeds
- Plants look differ drastically in appearance
- Weeds
 - Control in first year
 - Do not allow to reseed
- Ornamentals
 - Second year bloom, long wait
 - Take into consideration for designs





Conclusions

- ❑ Long wait for blooms
 - ❑ Must allow plants to seed
 - ❑ Several generations on site
- Ensure annual blooms
- ❑ Check seed packet

PLANT IN	SUN/SHADE	PLANTING DEPTH	SPACE SEEDS	DAYS TO GERMINATE	MATURE HEIGHT
Jan - July	Full sun or Part shade	1/8 inch	1 inch	14 - 21 days	2 1/2 to 3 feet

Mrs. Scott Elliot Columbine (*Aquilegia caerulea*)

5174

PERENNIAL

Spring/summer/bloom.
Frost hardy

TO START EARLY INDOORS

In early spring, 6 to 8 weeks before last expected frost date, sow seeds 1 inch apart in seed starting mix. Cover 1/8 inch deep, keep moist and provide a strong light source

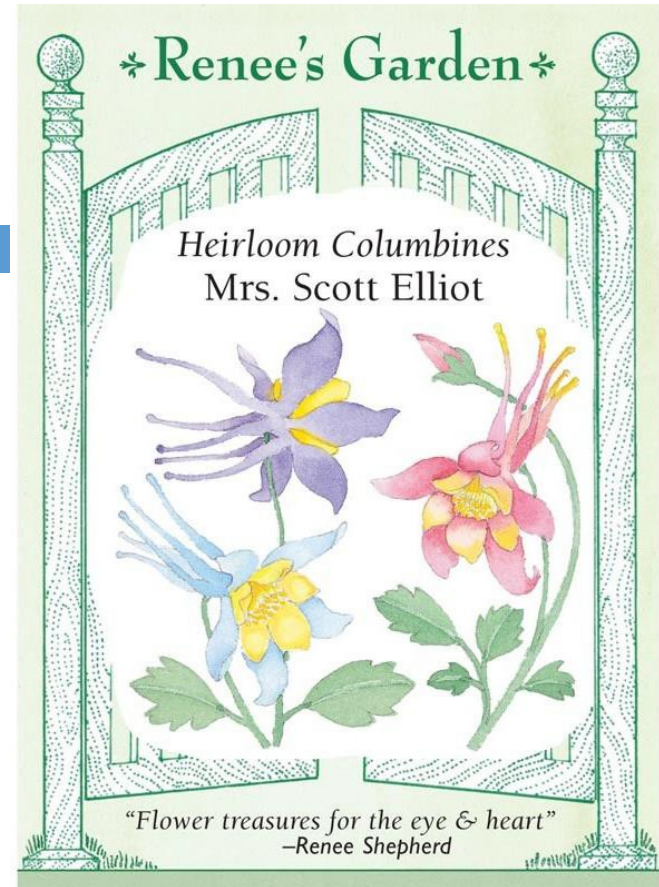
GROWING NOTES

Perennial Columbines sown indoors in January will bloom the same year. Seeds sown later, any time until mid-summer, will establish themselves to bloom the following spring. In hot summer areas, plant in partial shade. Where summers are moderate, plant in full sun. Columbines thrive in moist, fertile soil.

until seedlings are ready to plant outdoors. Be patient; these small perennial seeds germinate slowly in 14 to 21 days. Once seedlings are large enough to handle, transplant 2 to 3 inches apart into a deeper container so root systems have room to develop. Feed every 2 weeks with half-strength fertilizer. When plants are 2 to 3 inches tall, gradually acclimate to outdoor conditions and plant 12 to 18 inches apart in fertile, well-drained soil in sun or partial shade.

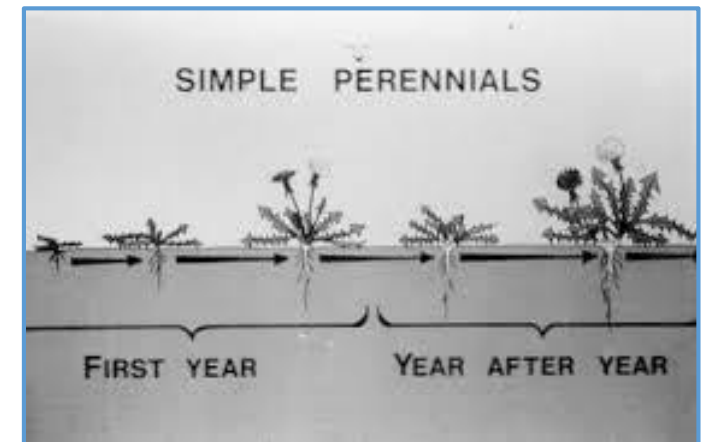
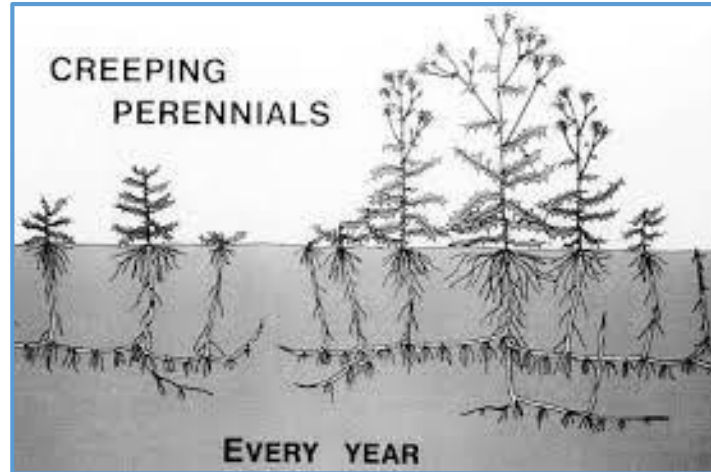
TO START OUTDOORS

Sow seeds in fine textured, well-drained soil when danger of frost is past. Space seeds 2 to 3 inches apart, cover 1/4 inch deep and gently firm soil. Keep evenly moist. When seedlings are well-established, thin 12 to 18 inches apart.



PERENNIALS

- 3+ yrs
- In cold climates
 - Plant dies back over winter
- In warm climates
 - Plant remains
- Deep, vigorous root system
 - Often tap roots
 - Bulbs, corms, rhizomes, tubers
- Perennials do not have to be hardy!





WOODY VS NON-WOODY

- Non-woody: herbaceous perennials
- Hardy or tender



Conclusions

PROS

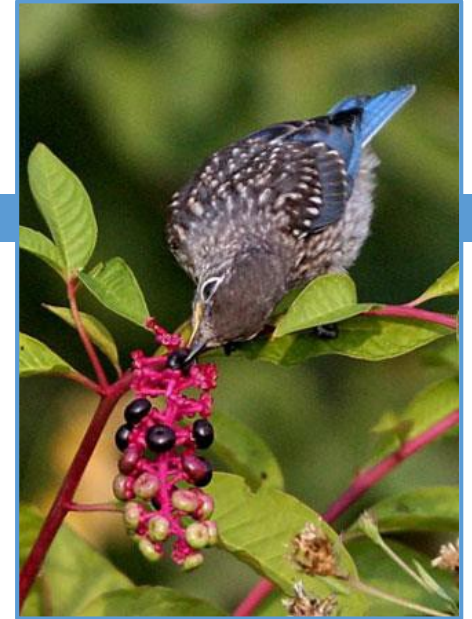
- ❑ Longevity
- ❑ No annual planting
- ❑ Gradual spread
- ❑ Less maintenance (long term)
- ❑ More natives available

CONS

- ❑ More expensive to purchase
- ❑ Grow slower
- ❑ Longer wait for blooms
- ❑ No continuous bloom

Wildlife Friendly

- ❑ Nectar/pollen source
- ❑ Host plant
- ❑ Fruit/seeds
- ❑ Shelter/habitat
- ❑ Nesting material



Non-natives



- Alyssum
- Calendula
- Cleome
- Cosmos
- Cranesbill
- Crocus
- Cuphea
- English Daisy
- Heather
- Forget-Me-Not



- Marigold
- Nasturtium
- Sage
- Sedum
- Snowdrop
- Sunflower
- Sweetpea
- White Clover
- Yellow Mustard
- Zinnia

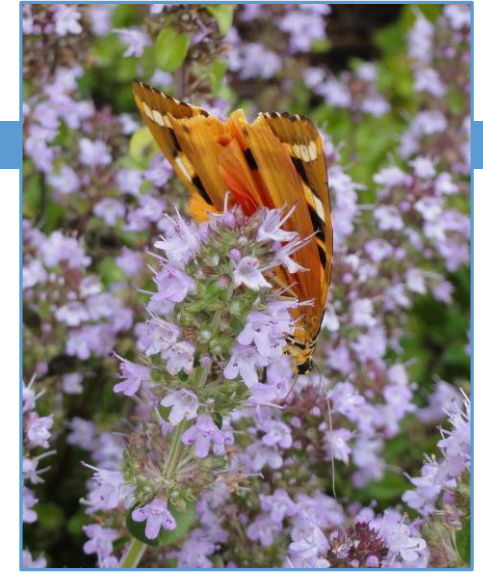


Herbs

- Anise
- Basil
- Borage
- Chamomile
- Cilantro
- Dill
- Fennel
- Lavender



- Mint
- Marjoram
- Oregano
- Parsley
- Rosemary
- Sage
- Thyme



Native Plants



- Popularity rise
- Wildlife benefits
 - Insects
 - Pollinators
 - Animals
- Ecological benefits
 - Water
 - Fertilizer
 - P&D control
- More widely available



Where

- Predetermined
- Sun loving
- Frequently visited
- Visible
- Self-seeding
- Roads/Sidewalks
- Salt use
- Accessibility
- Wildlife aspect
- Accessibility/Shelter/Proximity
- Future expansion



When

- Spring

 - Watering needed over summer

 - Allows plants to root

- Autumn

 - Less availability of plants

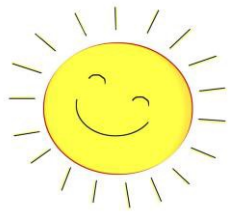
 - Weed control

- Are plants being grown from seed or plugs?

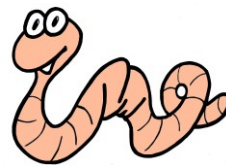
- Seed requires cold treatment



Know Your Site



- Light
 - Shade vs Sun
- Dampness
 - Wet vs Dry
- Soil texture
 - Clay vs Loam
- Soil structure
 - Compact vs Loose
- Soil fertility
 - Poor vs Rich
- Soil pH
 - Acid vs Alkaline
- Exposure
 - Wind



Starting

- ❑ Seeds/Plugs/Pot plants
 - Kill grass
 - Kill weeds
- ❑ Weed seed bank
- ❑ Do not till the soil
 - Weed seeds
 - Competition



What

- Familiarity
- Aesthetics
 - Flowers
 - Foliage
 - Habit
- Wildlife value
 - Flowers/Seeds/Fruits
- Plant nature
 - Aggressive/Dominant
 - Well-behaved
- Maintenance requirements



Thank YOU and
Good Luck!

