



About Orchids

- The orchid family is the largest plant family
- Over 35,000 species
- Every country in the world and every state in the United States, including Alaska, has orchids!

Coelogyne pandurata



Orchids in Wisconsin

- 46 species in 18 genera
- All terrestrial

Epipactis helleborine

Cypripedium acaule,
the Pink Lady-slipper
Photo by Jeffrey R. Hapeman

Vanilla Orchids

- 60 or so species
- Throughout the tropical Americas, including Florida and the Bahamas
- All are vines, several are leafless

Vanilla Orchids

- *Vanilla planifolia* (= *V. fragrans*, *V. vanilla*) grown commercially
- Yellow-green flowers
- Produces fruit when >10 feet
- Vanilla is the orchid "fruit"
- Harvested before it is fully ripe – referred to as vanilla beans
- 6-9" pods are fermented and cured

Where Orchids Are Found

- Tropical rainforests
- Grasslands
- Bogs
- Forests



Brassavola nodosa
"Lady of the Night"



Ansellia africana



Orchids In Nature

- Epiphytes – grow on trees (NOT parasites!)
- Lithophytes – on rock surfaces
- Saprophytes – grow in decaying vegetation on the forest floor
- Terrestrials – grow in soil or sand



Orchid Flowers

- Pollinated by
 - Insects
 - Birds
 - Bats
- Often long-blooming
- Some fragrant
 - Raspberry, coconut, citrus, perfume
- Selections and hybrids



Maxillari(ell)a tenuifolia

Orchid Propagation (Sexual)

- Takes several years from seed to flowering
- Seeds are sown on agar in a flask
- Germinate into protocorms
- Eventually grow into seedlings



Orchid Propagation (Asexual)

- Division of large plants
- Keikis (small plantlets that develop on old stems)



Orchid Growth Habits

- Monopodial ("one-footed")
 - Only one main stem
 - New growth from the crown of the plant
 - Aerial roots common
- *Phalaenopsis*, *Vanda*



Orchid Growth Habits

- Sympodial ("feet together")
 - New seasonal growths
 - Pseudobulbs
 - Rhizome with lateral growth pattern
- *Cattleya*, *Oncidium*



Orchid Structure: Roots

- Characteristic epidermis (velamen) prevents water loss
- For water and mineral uptake
- To attach to substrate



Growing Orchids

***If you can grow houseplants,
you can grow orchids!***



Orchid Care: Potting Medium

- Various substrates, plain or in mixes
 - Bark (fir or redwood)
 - Crumbled charcoal
 - Pebbles
 - On tree-fern or cork slabs
- Drains well
- Allows air penetration



Orchid Care: Watering

- Water thoroughly (until water comes out bottom of pot)
- Allow medium to dry out between watering
- Schedule will vary depending on pot, medium, temp, light
- Use rainwater if possible



Orchid Care: Temperature

Classification based on preferred winter minimums

Classification	Nighttime Temperature	Example
Warm	>60°F	<i>Phalaenopsis</i>
Intermediate	50° to 60°F	<i>Cattleya</i>
Cool	50°F	<i>Cymbidium</i>

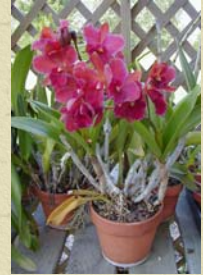
Orchid Care: Humidity

- 50% or higher
- Enhances flowering
- Increase with humidifier or set on gravel trays with water



Orchid Care: Light

- Need optimum for flowering
- Three categories
 - High
 - Medium
 - Low
- Light to medium green-yellow leaves, NOT dark green



Orchid Care: Light

- South or east windows
- Shadow test
- Artificial light
- Be careful of sunburn when changing locations!



- Outdoors in summer

Orchid Care: Fertilizing

- Potting medium
- Recommended
 - Diluted 20-20-20 weekly
 - Blossom-booster (more P, less N) in fall
- Less is better if you're unsure



Orchid Care: Repotting

- Why?
 - Plant has outgrown its pot
 - Medium is degraded
- When?
 - Just as new roots show
 - When roots are 5-6" long



Orchid Care: Repotting

- How?
 - Remove plant
 - Divide if necessary
 - Replace in appropriate sized pot



Suggested Orchids: *Phalaenopsis*

- Monopodial type
- Low light intensity
- Warm temperatures
- Long-lasting flowers



Moth Orchid

Suggested Orchids: *Cattleya* Types

- Sympodial growth
- Medium to high light intensity
- Intermediate temperatures
- Numerous species and hybrids



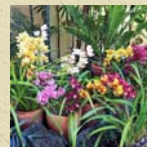
Suggested Orchids: *Dendrobium*

- Sympodial growth
- Varying light requirements
- Intermediate temperatures
- Some have arching sprays of flowers; others bunches at the nodes of stems



Suggested Orchids: *Cymbidium*

- Sympodial growth
- High light intensity
- Cool temperatures
- Attractive, grassy foliage and long-lasting, waxy flowers



Suggested Orchids: *Paphiopedilum*

- Semi-terrestrial, monopodial growth
- Medium light intensity
- Intermediate temperatures
- Exotic blooms



Purchasing Orchids

- Discount retailers
- Local nurseries
- Specialty nurseries
- Mail-order



Selecting an Orchid

■ The Plant

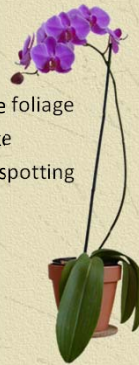
- In proportion to the container
- Healthy roots
- Clean and unblemished
- Turgid and medium green
- Free of visible pests



Selecting an Orchid

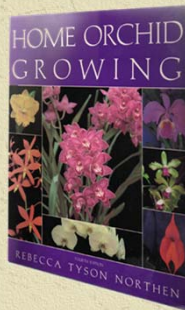
■ The Flowers

- Lustrous and held well above the foliage
- On a strong, well-supported spike
- Unblemished and free of fungal spotting
- Have some buds yet to open
- Are appealing to you



Learning More About Orchids

- Books
- Websites
- Orchid growers
- Orchid shows



Regional Orchid Shows

■ Orchid Quest

Late January / early February
Madison, WI



■ Northeastern Wisconsin Orchid Society Show

Early March
Green Bay, WI

