Ferns

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Adapted from a presentation by Andy B. Wilson
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What is a Fern?
Ferns are...

- Ancient
- Vascular plants - xylem and phloem, to conduct water and food (unlike mosses)
- Spore-bearing plants - lack flowers, fruits and seeds
- Dependent on water for reproduction (unlike seed production)
Is this a fern?
What about this one?
Fern Facts

- About 12,000 named species
- Source of much of coal deposits formed during the Carboniferous Period
- Fiddleheads of Ostrich Fern are edible
- Fibrous stems of Osmunda and tree ferns are shredded to use as orchid planting medium
- Most important use is ornamental
Fern Habitats

- **Terrestrial** - growing in soil (Cinnamon fern)
- **Epiphytic** - growing upon another plant (Staghorn Fern)
- **Aquatic** - growing in water (Azolla)
Rabbit’s Foot Fern
Rabbit’s Foot Fern

- *Davallia denticulata*
- Native to SE Asia
- Fronds to 2.5 ft. long
- epiphytic
- long, fleshy, creeping rhizome that is covered in scales.
- Easy to grow
Boston Fern, Tuber Sword Fern

- *Nephrolepis cordifolia*
- Considered invasive
- Similar in appearance to the native sword fern, *Nephrolepis exaltata*
- Native to Tropical America, Africa, Asia, Australia, Japan and New Zealand
Tuber Sword Fern

- *Nephrolepis cordifolia*
- Produces rounded tubers, native Sword Fern does not
- Aggressive
- Listed as invasive by FLEPPC
- Usually has stiff erect fronds
Lemon Button Fern
Lemon Button Fern

- *Nephrolepis cordifolia* 'Lemon Button'
- golden-green fronds with rounded edges
- easy-to-grow.
- 3 feet tall & wide
Maidenhair Fern
Maidenhair Fern

- Adiantum raddianum
- Fine-textured fronds on black stalks.
- Medium to bright light and high humidity
- 2 feet tall and wide
‘Kimberley Queen’ Fern
‘Kimberley Queen’ Fern

- *Nephrolepis obliterata* ‘Kimberley Queen’
- Keep in a pot – invasive potential
- Tolerates sun with sufficient water
- Basically carefree
Staghorn Fern
Staghorn Fern

- *Platycerium bifurcatum*
- Epiphytic
- Native to Australia
- 2 types of fronds: foliar or fertile and basal or sterile
Staghorn Fern

- Foliar or fertile fronds bear spores on underside
- Eventually turn dark brown
- Both basal and foliar fronds have small star shaped hairs
Australian Tree Fern
Australian Tree Fern

- Cyathea cooperi, Sphaeropteris cooperi
- Native to Australia
- Grows rapidly
- 30 ft. tall
- Can survive 20 degrees for 4 to 6 hrs
- Florida native tree fern (Ctenitis sloanei) is endangered
Bird’s Nest Fern
Bird’s Nest Fern

- *Asplenium nidus*
- Native to Old World tropics and Hawaii
- Produces erect, stout, un-branched rhizomes
- Fronds up to 5’ long
- Variable species, several cultivars
- Native *Asplenium serratum* is endangered
Resurrection Fern

- *Polypodium polypoidiodes*
- Native to tropical and warm temperate N. & S. America
- var. *Michauxianum* in S.E. U.S.
- Creeping, evergreen epiphytic fern
- Fronds to 8” long
Leather Fern
Leather Fern

- **Acrostichum danaeifolium**
- Native to central & south Florida
- Freshwater or brackish marshes in shade to full sun
- Can grow to heights over 12’ tall
Elkhorn Fern
Elkhorn Fern

- *Microsorum punctatum* ‘Grandiceps’
- Native to old world tropics and subtropics
- Many cultivars - ‘Grandiceps’ has crested fronds
- Terrestrial
Bracken Fern
Bracken Fern

- *Pteridium aquilinum*
- Single most widespread vascular plant in the world
- Large & deciduous
- Spreads rapidly
- Native
- Repels insects
Southern Wood Fern
Southern Wood Fern

- *Thelypteris kunthii*
- Native to S.E. U.S.
- Excellent fern for natural plantings
- Fronds are soft green
- Grows about a foot tall
Cinnamon Fern
Cinnamon Fern

- *Osmunda cinnamomea*
- Native to S.E. U.S., found throughout most of Florida
- Found in wet woods, floodplains, swamps
- Fertile fronds without leafy pinnae
Sword Fern, Wild Boston Fern
Sword Fern, Wild Boston Fern

- **Nephrolepis exaltata**
- Native
- Found in swamps and wet hammocks
- Usually terrestrial but also epiphytic on cabbage palms, oaks and fallen logs
Fluffy Ruffles
Fluffy Ruffles

- Nephrolepis exaltata 'Fluffy Ruffles'
- Medium to bright light and high humidity
- 2-3 feet tall and wide
’Dallas’ fern

- Nephrolepis exaltata ‘Dallas’
- Easy to grow
- Small compact round shape
- Less water
- Grows indoors
‘Tiger’ Fern
‘Tiger’ Fern

- *Nephrolepis exaltata* 'Tiger'
- 2 ft. tall & 3-5 ft. wide
- Partial shade
- Well drained soil – don’t overwater
- Needs cool shade
Autumn Fern
Autumn Fern

- *Dryopteris erythrosora*
- New fronds reddish
- Grows 2 ft. tall & wide
- Cold hardy to 5° F
- Slow growing
Macho Fern
Macho Fern
Giant Sword Fern

- *Nephrolepsis biserrata*
- Native
- 4 feet tall and 5 to 6 feet wide
- well-drained soil
- Can take morning sun
- Loves heat & humidity
Swamp Fern
Swamp Fern

- *Blechnum serrulatum*
- Native
- 2.5 to 3 ft. tall, taller in partial shade in rich moist soil
- Readily spreads by creeping rhizomes
- Attractive year round
Royal Fern
Royal Fern

- *Osmunda regalis*
- Native
- Wet woods, swamps, floodplains, streambanks, bogs
- Fertile fronds dense clusters of sporangia
Wisk Fern
Wisk Fern

- *Psilotum nudum*
- Not a true fern
- Epiphyte or terrestrial in sandy soil
- Native
Holly Fern
Holly Fern

- *Cyrtomium falcatum*
- Native to India, China and Japan
- Tolerates drier air than most ferns
- Leaflets holly-like
- Hardy to 10 °F.
- Grows to 30 in. tall
Invasive Climbing Ferns

Old World Climbing Fern

Japanese Climbing Fern
Generalized Fern Care

Most ferns grow best

- In shade or filtered light
- In moist soil
- With daytime humidity of 60 to 80 percent
- With daytime temperatures of 65 to 80 degrees with a 10 degree drop at night
- In soils high in organic matter
Fertilizing Ferns

- Ferns are sensitive to over fertilization
- Generally use complete fertilizers at $\frac{1}{2}$ recommended rate
  - fish emulsion,
  - soluble fertilizers such as 20-20-20
  - controlled release fertilizers such as Osmocote and Dynamite
- Follow label directions for application
Fern Pests

- Aphids – wash off with water or spray with neem oil
- Mealybugs – spray with neem oil
- Mites – first spray with water then neem oil
- Nematodes – soil borne – hard to combat
- Scales – spray with neem oil
- Snails and Slugs – use Iron Phosphate
Questions?