



Ferns

Pam Brown, Gardening Coach
Pampered Gardeners, LLC

Adapted from a presentation by Andy B. Wilson
Pinellas County Extension

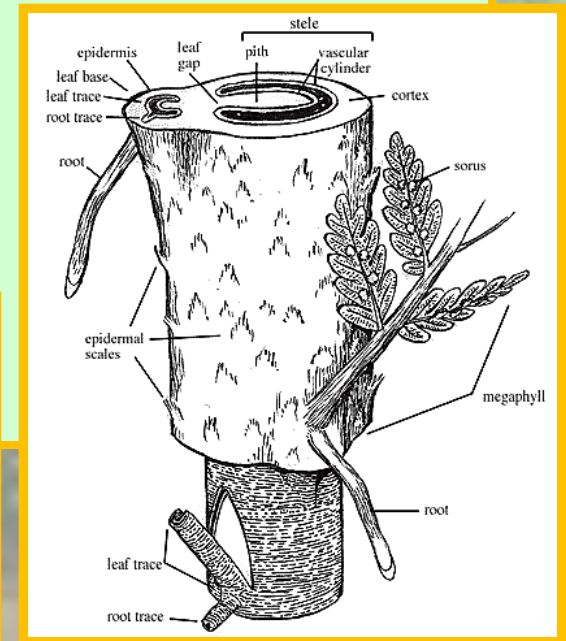
The background of the slide is a photograph of a dense fern forest. The image shows a variety of fern fronds in different shades of green, some in sharp focus and others blurred in the background, creating a sense of depth. The lighting is soft, highlighting the texture of the leaves.

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)

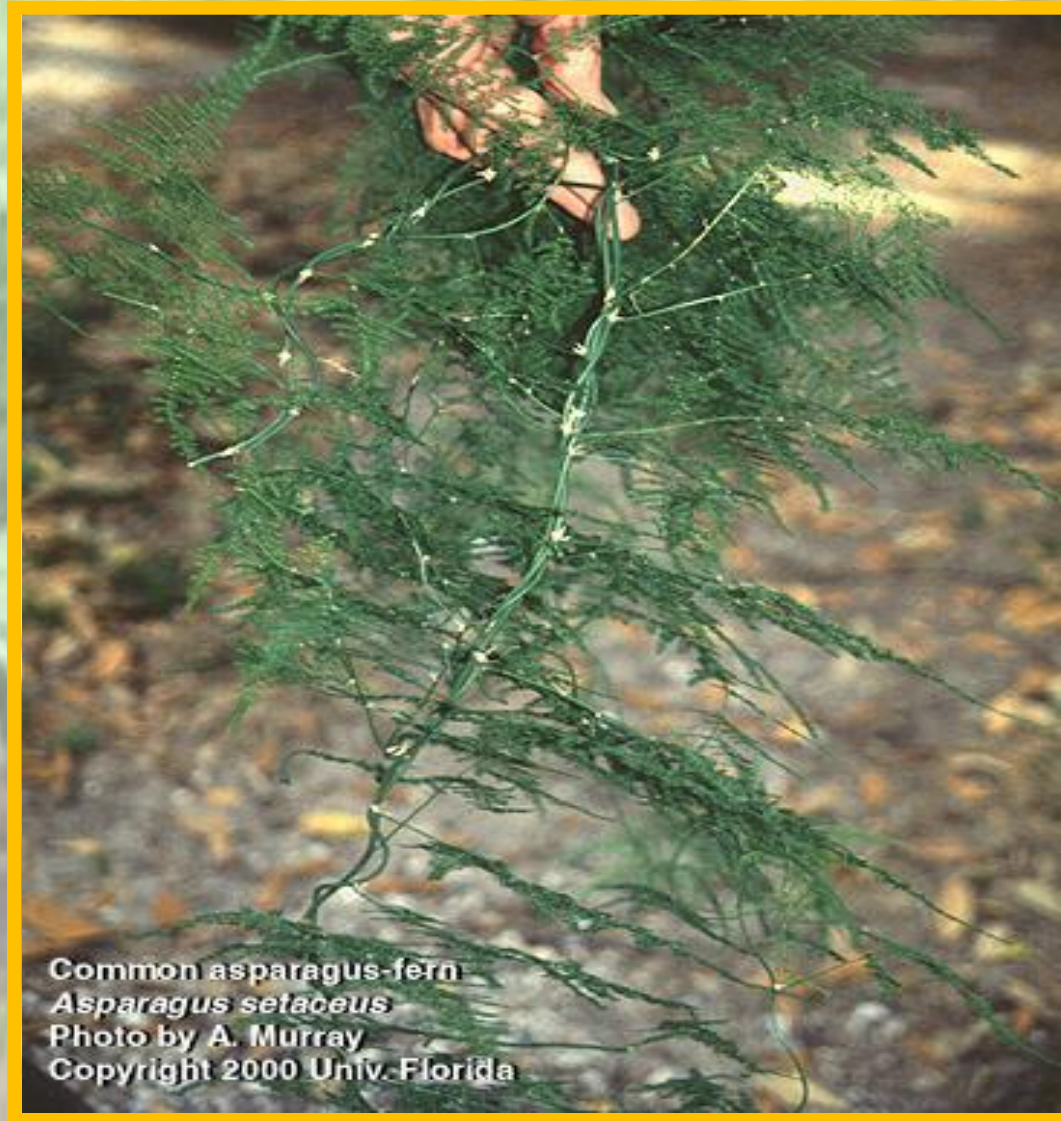


Is this a fern?



Asparagus fern
Asparagus densiflorus
Photo by A. Murray
Copyright 2000 Univ. Florida

What about this one?



Common asparagus-fern
Asparagus setaceus
Photo by A. Murray
Copyright 2000 Univ. Florida

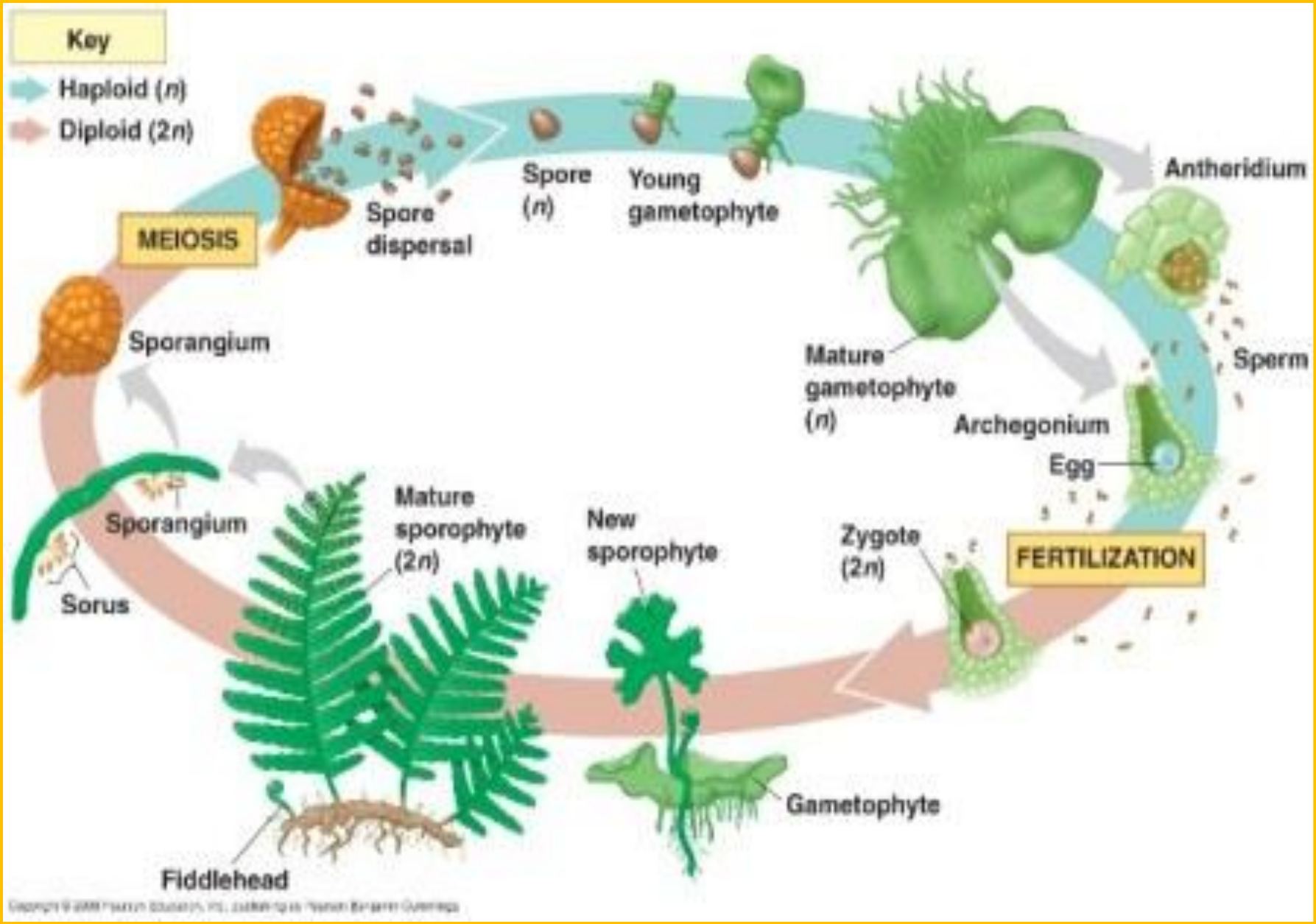
Fern Facts

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

Staghorn Fern

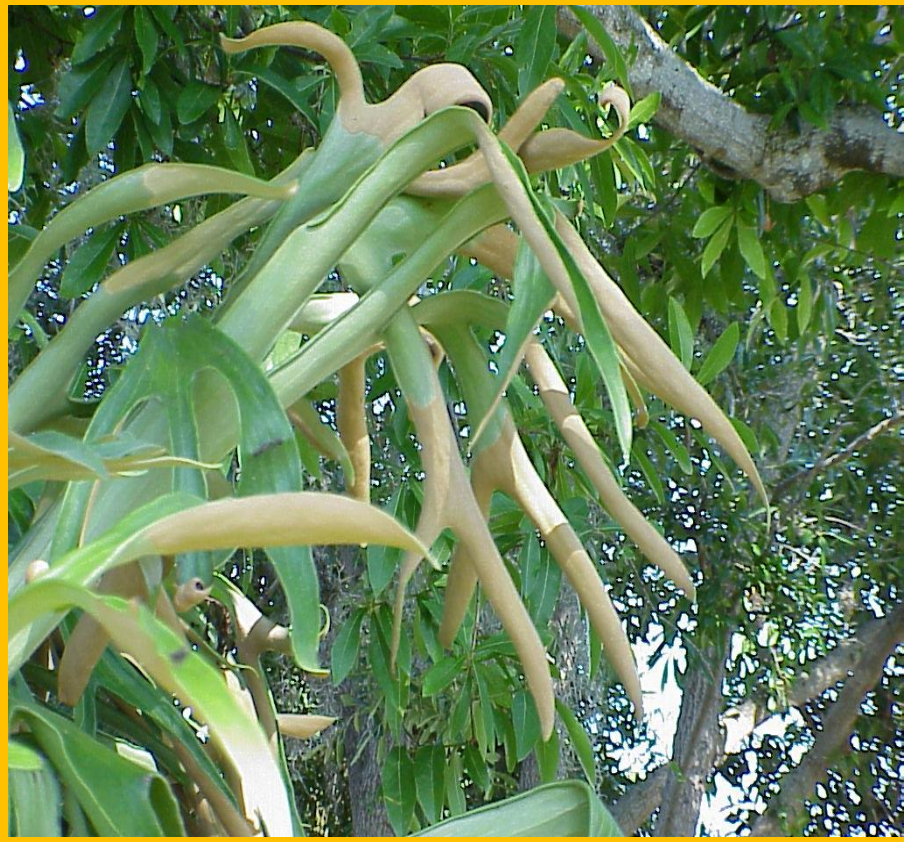


Staghorn Fern



- *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



Resurrection Fern



- *Polypodium polypodioides*
- 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



© Shirley Denton

- *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



- *Microsorium 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



'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



Davey Hallamson, ©2008 H&M, C. Monson E. Anderson

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



- *Nephrolepis 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



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