

Houseplant Problems

Identification, prevention, and management

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UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

Statewide Integrated
Pest Management Program

Overview

- What is IPM?
- How do houseplants get pests and problems
- Common houseplant insects and mites
- Common houseplant pathogens
- Prevention and control strategies
- Easy to grow plants
- Care tips



What is IPM?

- A way to effectively manage pests while using methods that minimize risks to humans and the environment
- Relies on biological, cultural, mechanical controls
- Animals, insects, plants, pathogens
- Focuses on pest prevention
- Pesticides used **only** when necessary

Where do pests and problems come from?

- Nurseries, stores, greenhouses
- The outside
- From new plants
- Poor sanitation
 - Diseased soil
- Improper care
 - Unfavorable environments
 - Overfertilization
 - Over/under watering



Common Houseplant Pests

Insects and Mites

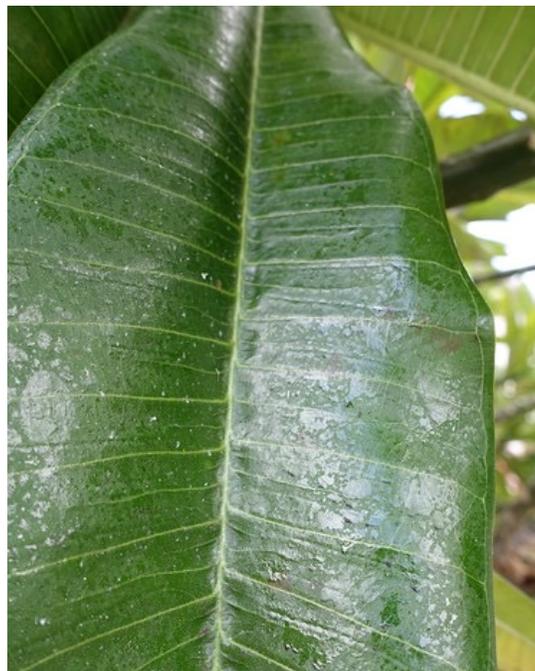
- Fungus gnats
- Mealybugs
- Scales
- Aphids
- Thrips
- Whiteflies
- Spider mites

Pathogens

- Powdery mildew
- Gray mold
- Fungal leaf spots
- Root rot
- Viruses

Honeydew Producing Insects

- Whiteflies, mealybugs, soft scales, and aphids
- Produce a sweet, sticky substance
- Leaves appear wet and shiny
- Attract ants
- Sooty mold grows on the honeydew



Insect and Mite Identification

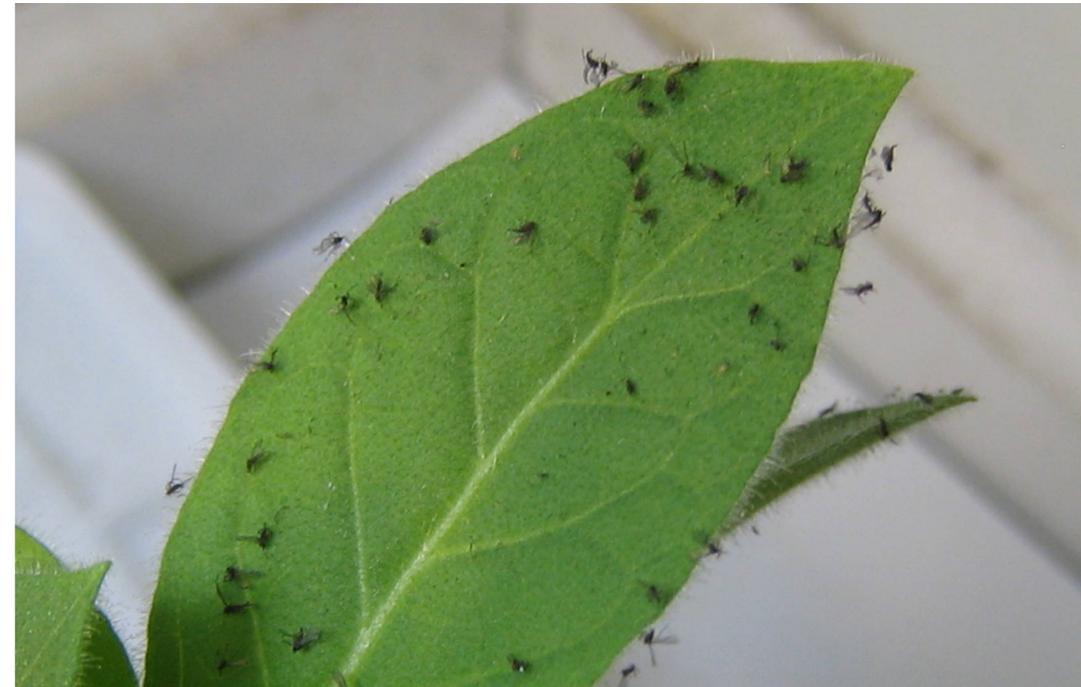


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Fungus Gnats

- Resemble fruit flies or very small mosquitos
- Eggs laid in moist soil, larva feed on plant roots
- Stunted plant growth and wilting
- Thrive in moist environments



Mealybugs

- Small, oval, and white
- Suck on plant sap and excrete honeydew
- Often found where leaves meet the stalk
- Stunted plant growth, wilting, and yellow leaves
- Common on cacti and succulents, orchids, palms



Soft Scales

- Might be mistaken for part of the plant because they are often immobile
- Suck on plant sap and excrete honeydew
- Underside of leaves
- Stunted growth, yellowed leaves
- Common on orchids, bird-of-paradise, ferns, palms, corn plant, snake plant, monstera, philodendron



Aphids

- Many colors
- Suck on plant sap and excrete honeydew
- Leaf curl or distortion
- On new growth and underside of leaves
- Some may have wings



Thrips

- Very small and slender
- Cause irregular scarring and leaf distortion
- Leaves may appear silvery
- Some adults can fly



Whiteflies

- Suck on plant sap and excrete honeydew
- Underside of leaves
- Can be seen flying around plants
- Thrive in warm environments
- Leaves may turn yellow and drop
- Common on poinsettias and begonias



Spider Mites

- Thrive in low humidity, dusty
- Can cause severe damage
- Underside of leaves
- Too small to see without 10x lens
- Stippled leaves or silk webbing
- Downward cupped, leathery, dry leaves that fall off



Control for insects & mites

- Sticky traps (great for monitoring too)
 - Flying insects
- Wash off insects with strong stream of water
 - Not for fungus gnats or scales
- Remove infected leaves or handpick/scrape off insects
- Horticultural oil or insecticidal soap
 - Not for fungus gnats or scales



Control for insects & mites

- Fungus gnats
 - Very difficult to control
 - Eggs are laid in moist soil so water from the bottom (plant saucers are great for this)
 - Cultivate top of the soil to expose eggs and larvae
 - Soil drench of *Bacillus thuringiensis* subspecies *israelensis* (Bti)
 - Repeat applications per product label
- Scales
 - Sprays are **only** effective at crawler, nymph stage
 - Apply a cotton ball soaked with 70% rubbing alcohol directly to the pest
- Mealybugs
 - Apply a cotton ball soaked with 70% rubbing alcohol directly to the pest



Pesticide Use

- Always read the pesticide label!
 - Look to make sure the pesticide can be used indoors and is safe to use on houseplants
 - Use the correct amount (beware, this involves math!)
 - Wear the appropriate personal protective equipment (PPE) to minimize exposure
- Keep children and pets away from the plant until the pesticide has dried



Plant Pathogen Identification

Fungi, bacteria, and viruses that cause disease



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Powdery Mildew

Identify

- White powdery or fuzzy substance on leaves

Prevent

- Lower humidity and increase air flow; reduce leaf wetness

Control

- Remove infected leaves



Gray Mold (Botrytis)

Identify

- Gray to tan lesions on leaves and dusty appearance; wilt

Prevent

- Lower humidity and increase air flow; reduce leaf wetness

Control

- Remove infected leaves



Fungal Leaf Spots

Identify

- Tan to black circular spots

Prevent

- Reduce humidity and increase air flow

Control

- Remove infected leaves



Root Rots

Identify

- Limp or wilting plants, stem lesions, mushy stem, yellow leaves, brown-black colored roots, stinky

Prevent

- Improve soil drainage and prevent overwatering; sanitation

Control

- Remove or separate infected plants



Viruses

Identify

- Mosaic and mottled leaves, distorted leaves, abnormal colorations

Prevent

- Wash hands after using tobacco, inspect plants before buying, control insects

Control

- Throw away infected plants



Houseplant Problem Identification

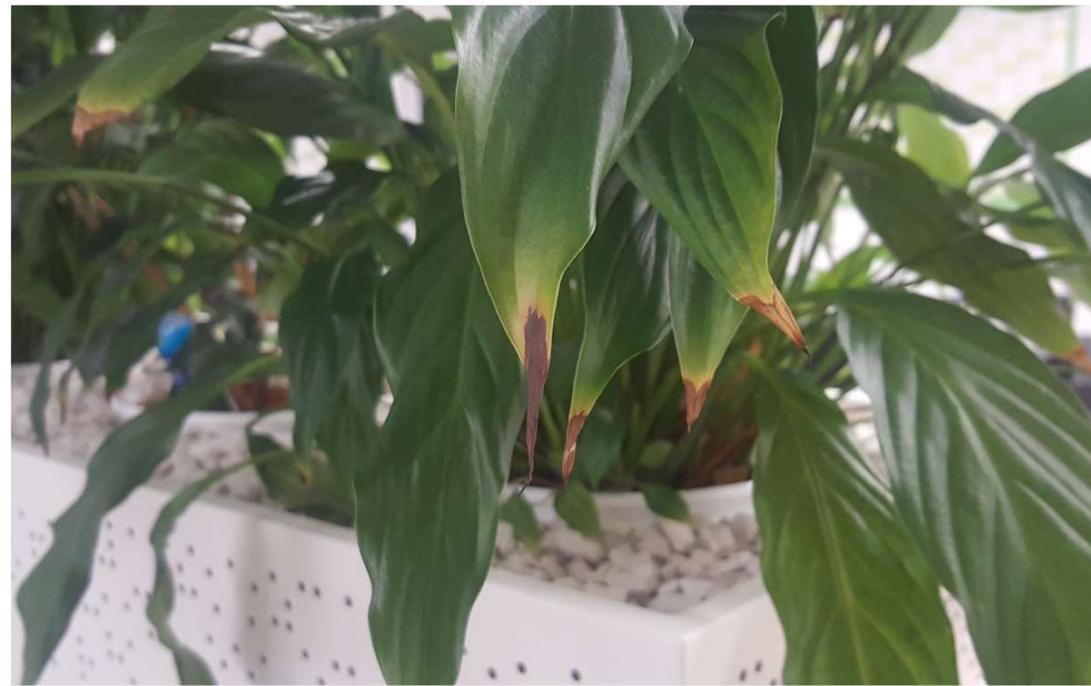


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Brown leaf tips

- Too much or not enough water
- Low humidity
- Too much fertilizer
 - Salt buildup



Wilting

- Too much or not enough water
- Root rot
- Too much fertilizer



Yellow leaves

- Insects
- Too much or not enough light
- Too much or not enough water
- Root rots
- Rootbound
- Needs fertilizer



Leaf spots

- Fungal disease
- Sunburn from too much light
- Cold injury



Torn, gnarled, or tattered leaves

- Curious pets and children can snack on houseplant leaves or tear them
- Many common houseplants can be toxic to pets and children



Easy to Grow Plants

Peace lily



Pothos



ZZ plant



Cast iron plant



Snake plant



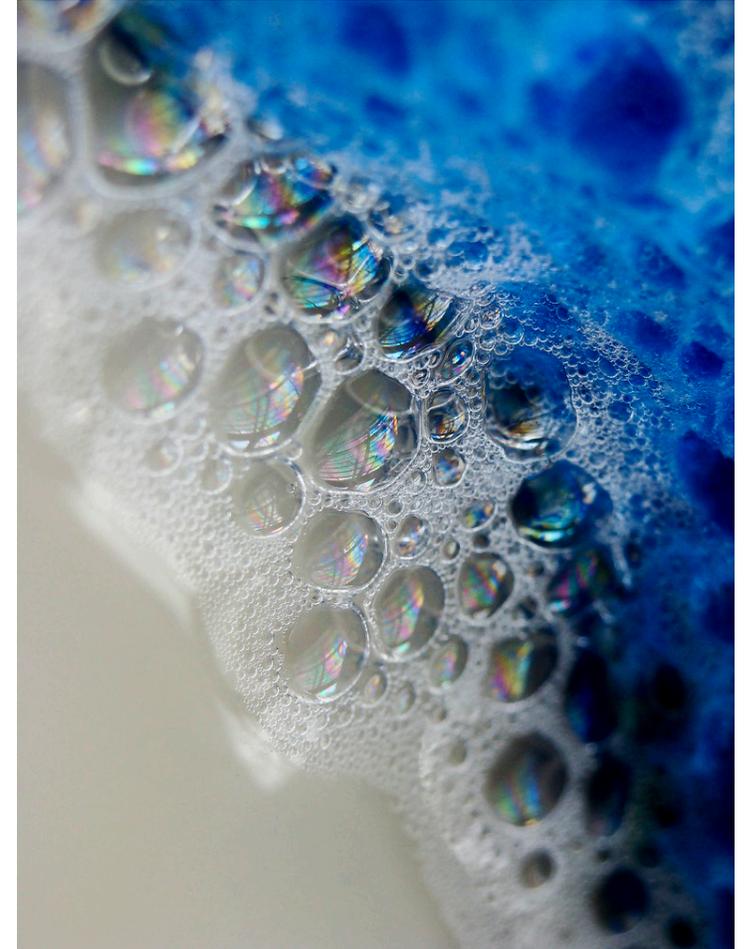
Care Tips

- Get to know your plant
 - Read the plant tag
 - Use a plant ID app
 - Ask your local Master Gardeners
 - Check sunlight, temperature, humidity, fertilizer, and watering requirements
 - Understand what your plant NEEDS



Keep it clean!

- Clean dirty pots or tools with soap and water to remove dirt
- Disinfect to kill pathogens and viruses
 - Dip tools in 70% rubbing alcohol
 - Soak pots in 1 part bleach 9 parts water for 5 to 10 minutes (read the product label)
- Must clean before disinfecting!
- Use clean soil
 - Make sure compost is finished
 - Don't reuse diseased soil
 - Solarize bags or pots of soil to kill pathogens



Good luck!



Want to know more?

- Visit the UC IPM website (ipm.ucanr.edu) for more information on integrated pest management
 - [*Pest Notes: Houseplant Problems*](#)
- Follow [@ucipmurban](#) on social media for more information and tips!
- Contact your local UC Master Gardeners for help with houseplant care and selection

