# TIPS FOR TAKING PHOTOS

# Why do I need photos?

- More information is better!
- Photos give context to plant problems
- Good for personal recordkeeping

Photo of a Diaprepes root weevil taken on a blueberry farm (with hand and blueberry for scale)

Healthy blueberry plant in the same field, indicating not all plants were affected by weevil larvae feeding

Photo: Morgan Byron, DPM, Cooperative Agricultural Pest Survey, FDACS-DPI

# What equipment can I use?

- Any smartphone with a camera
- Microscope attachment for smaller insects
  - Many of them require you to remove your phone case
- Handheld microscope
- Dissecting microscope

Mealybug under a dissecting microscope

Example magnifying/microscope attachment

Photos: Mealybug (Sage Thompson, University of Florida; Microscope attachment (arbico-organics.com)

# INSECTS

# What should you include?

- Up to six pictures can be submitted to CPDN
- Photos of host and damage
- Multiple life stages

Photo: Left (Jennifer Carr, University of Florida), Right (Ayanava Majumdar, Alabama Cooperative Extension System, Bugwood.org #5384002)

# What should you include?

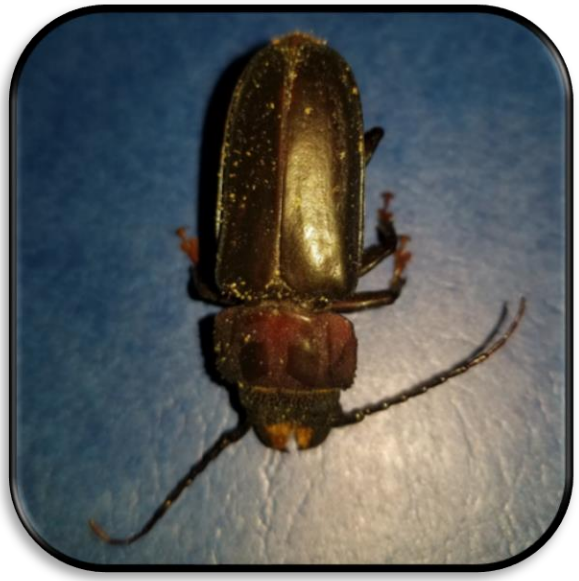
- Take pictures of the whole insect from the **top and the side**
- Clear images of the head, thorax, and abdomen
- Antennae
- Wings
- Scale


Can you tell the differences between these two specimens?

Photos: Net-winged beetle: Jon Yuschock, Bugwood image #5432152
Dycladia moth: Andreas Kay, (CC BY-NC-SA 2.0), https://www.flickr.com/photos/andreaskay/19244757349

# Tips for insect pictures

- Color can aid identification in many cases
- Consider the background – dark background for a black insect may be better
- Retain the specimen for future submission
- Review pictures while taking them
- Send the original image

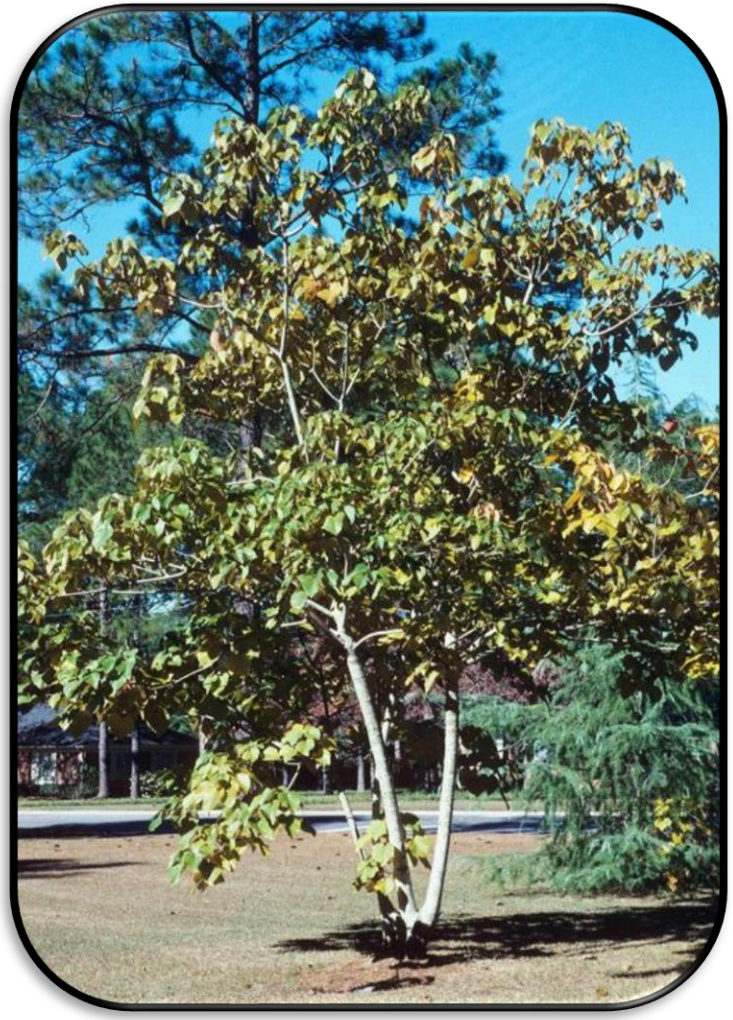


Photos: Sage Thompson, University of Florida

# PLANTS

# What should I include?

- Variety of clear photos
- Show an overall growing form
- Close-up of:
  - Leaves (top and underside)
  - Leaf arrangement
  - Fruit
  - Bark
  - Buds
  - Flowers



Tungoil Tree

Photo: John Ruter, University of Georgia, Bugwood.org 1581046

# Tips for plant photos

- Avoid taking photos in midday
- Fill the frame with the object as much as possible
- In one photo, include the surrounding environment
- Use a background to force focus

Leather flower (*Clematis* sp.)

Photo: John Ruter, University of Georgia, Bugwood.org 1582716

# PLANT PATHOGENS

# What should you include?

- Symptomatic tissue
- Margin of healthy and symptomatic tissue
- Photos of potential vectors
- Signs of the pathogen
  - Ooze
  - Fuzzy growth
  - Bumps on the necrotic area

Completely dead plants are not useful for identification

# What should you include?

- Photos of the entire plant
- Photos of the growing area
  - Is the plant in a natural area?
  - Is the infected plant growing in a container?
  - Is the infected plant growing in a garden setting or a raised bed?
  - How many plants are affected in the area?

These olive trees are growing in a well-drained, orchard setting in full sun

Photo: Morgan Byron, DPM, Cooperative Agricultural Pest Survey, FDACS-DPI

# Example

Leaf blotch on *Amaryllis* spp.

Spores extruding from pycnidia

Photos: (Left) Bruce Watt, University of Maine, Bugwood.org 5458318 and (Right) 5458307

# Plant Pathogens may not be identifiable through photos

- Diagnosis of plant pathogens through photos will be a best guess in most cases
- May be able to narrow down to fungal, bacterial, viral, abiotic
- A physical sample is often needed to confirm diagnosis

# Citations


- Buss, L.J. Digital photography for diagnostics and DDIS. (https://ddis.ifas.ufl.edu/html/presentations/Digital%20Photography%20for%20CPDN%202010%20-%20Lyle%20Buss.pdf)
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