

# **Identifying Insects & Mites in New England Greenhouses**

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# Most Common Greenhouse Arthropod Pests & **Beneficials:**

**Whiteflies**

**Aphids & pred. midge**

**Thrips**

**Mites**

**Fungus gnats**

**Shore flies**

**Parasitic Wasps**

# Whiteflies

**Whiteflies are difficult to control.**

**Prevention is very important.**

**Biological controls can work well in some situations.**

**If you use sprays, leaf undersides must be well covered by spray.**

# **Whitefly-prone Crops:**

**Abutilon, Chenille plant,  
Clerodendron, Crysanthemum,  
Gerbera daisy, Hibiscus, Lantana,  
Poinsettia, Scaevola, Tomato,  
Regal Geranium, Scented  
Geranium, Rosemary, Verbena,  
Zinnia...**

# Whiteflies

Eggs on leaf undersides, spindle-shaped, tiny. Hatch 5-10days



Larvae on undersides of leaves, abt 2 wks.

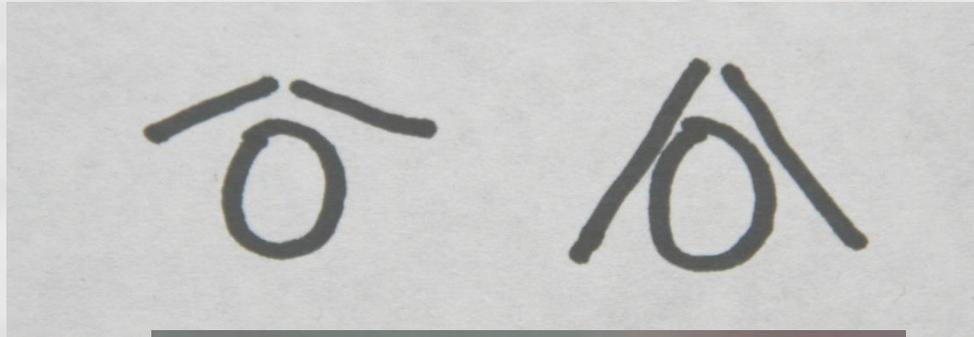


Pupae  
1 week  
Empty pupal cases stay on leaf, bright white color.



# Two common species in our greenhouses

Greenhouse WF, Sweet Potato WF



• Tricky to  
good



without  
light

**These are mostly empty cases of greenhouse whitefly.**



**These are immatures and adults  
of sweet potato whitefly.**



**The black whitefly larvae  
have been parasitized by  
*Encarsia formosa*.**



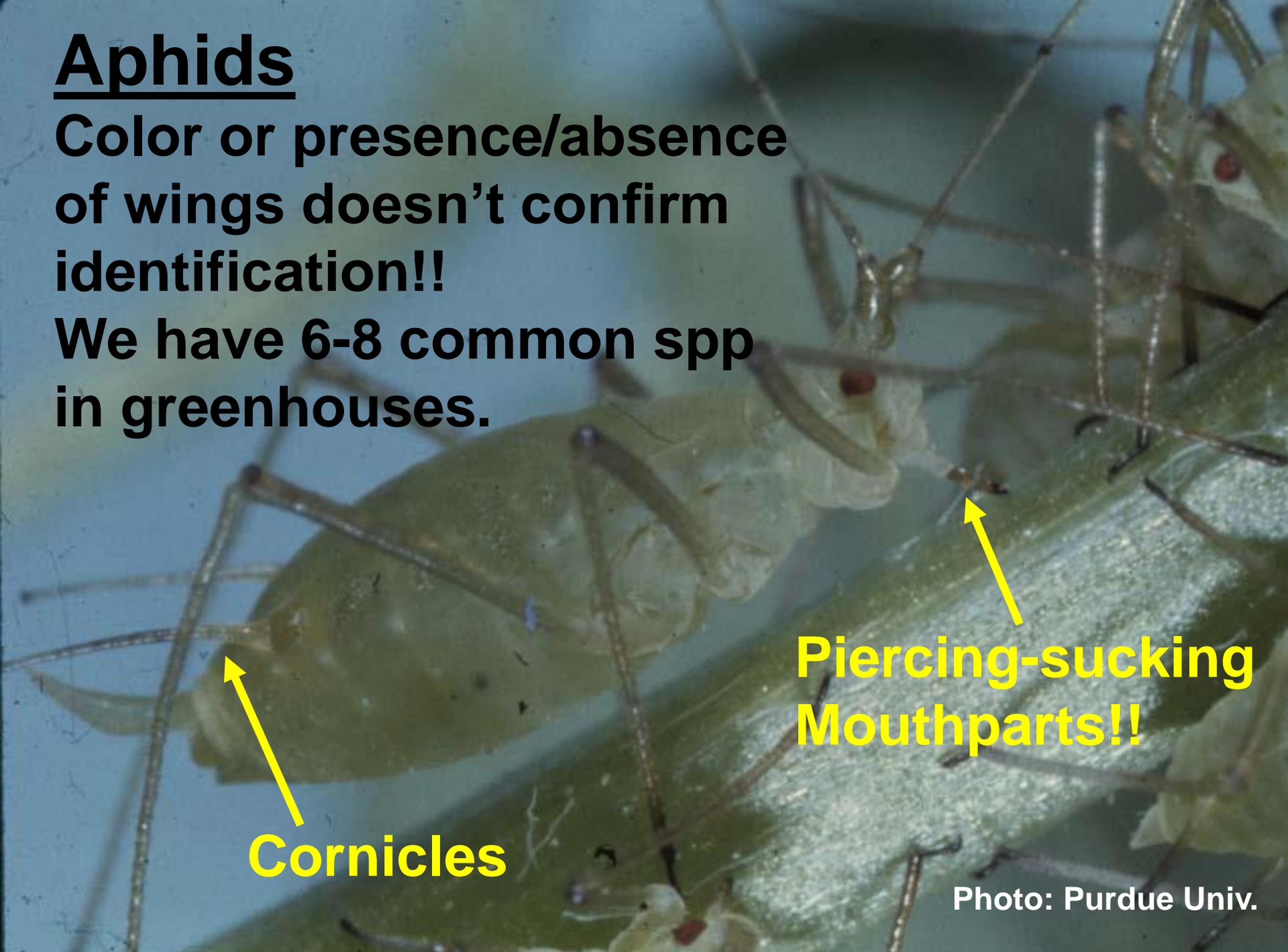
**Parasitic wasps have  
narrow waists**



# Aphids

Color or presence/absence of wings doesn't confirm identification!!

We have 6-8 common spp in greenhouses.



**Cornicles**

**Piercing-sucking Mouthparts!!**

Photo: Purdue Univ.

# Aphids that are winged show:

1. few veins, many being parallel
2. large thick spot towards forewing tip



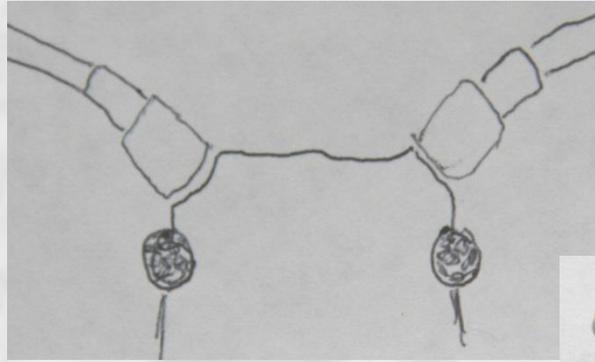
They often  
give birth after getting stuck

Telling aphid species apart requires looking at the head, from above. The shape of the “notch” is important. Really good magnification is necessary.

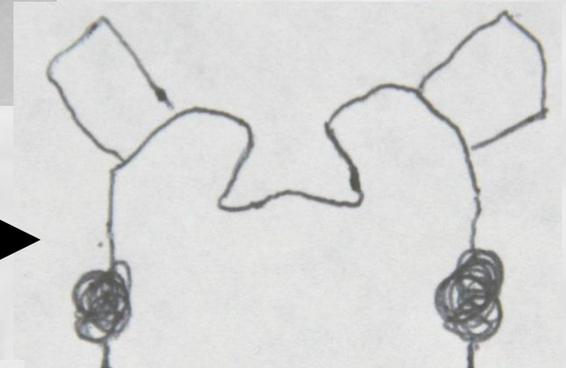


Identifying the species is critical if you plan on using aphid parasites for controls.

**Melon aphid**



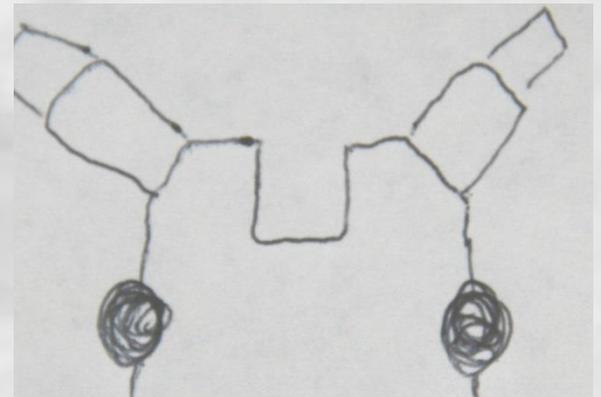
**Green peach aphid** →



**Potato aphid**

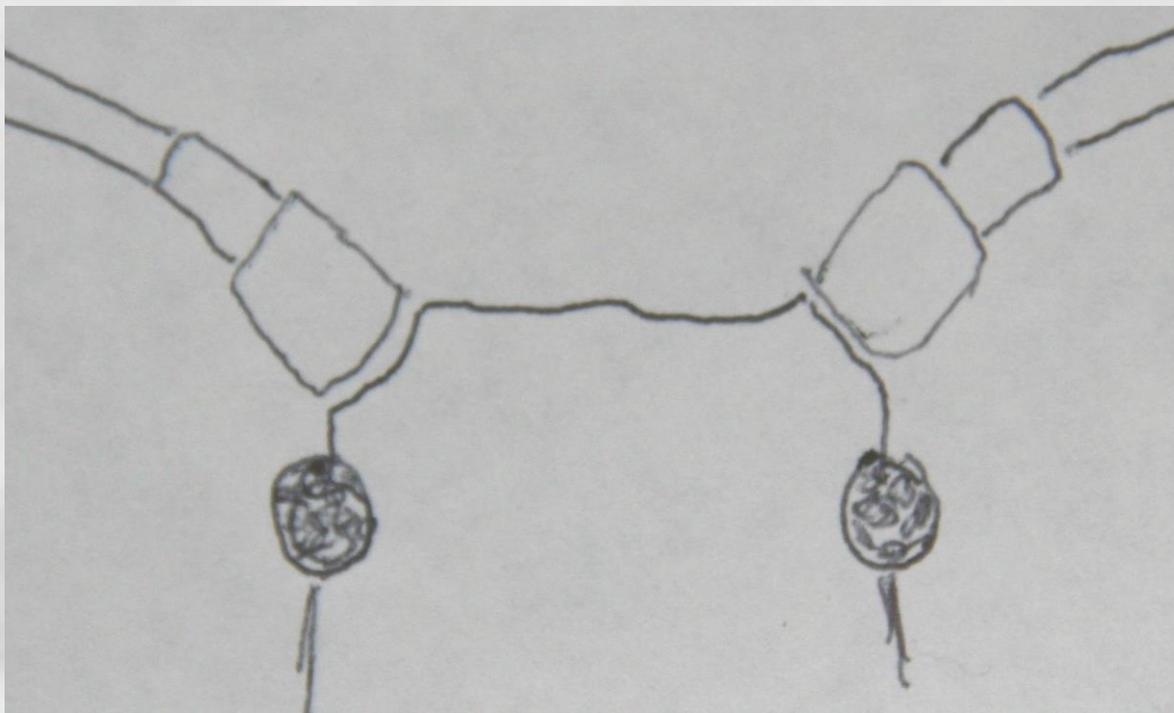


**Foxglove aphid** →



# Melon aphid

## Less important Characters:



- They tend to be towards plant interior, on stems or flower buds.
- Cornicles are dark, although body could be dark or light.



## **Green peach aphid**

**less important character:**

- **They tend to be high on plants, near the growing tips**

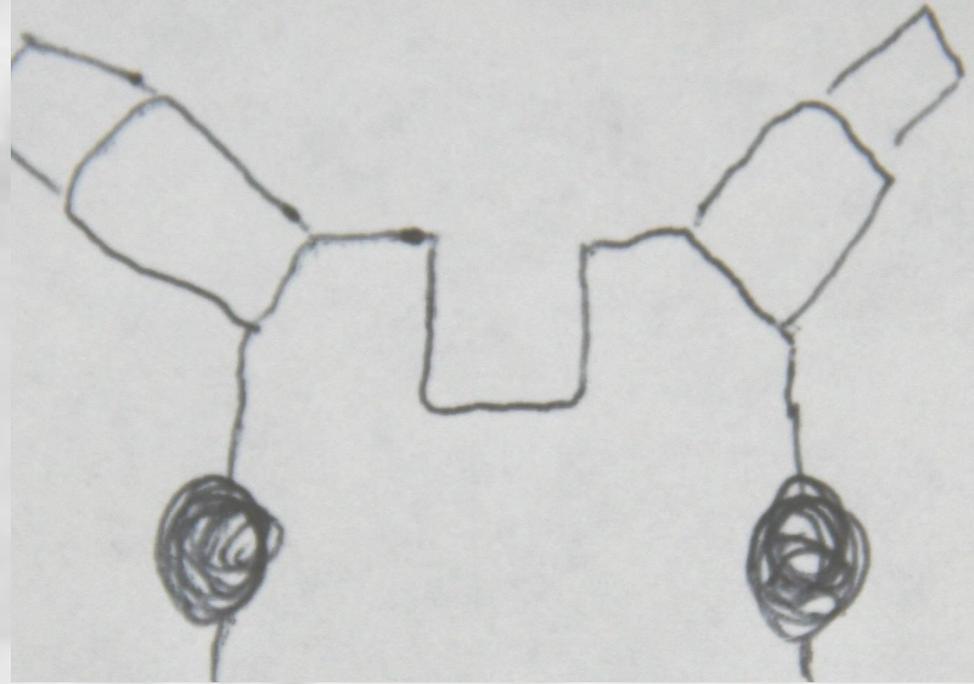
# Potato aphid

Less important characters:

- Often a slightly dark line is visible down the back.
- Various body colors: pink, yellow, green.



# Foxglove aphid



## Less important characters:

- **Body is usually shiny.**
- **Often dark patches near base of cornicles.**

**Melon aphid: Many plants!**

**Green peach aphid: Many plants!**

**Potato aphid: Abutilon, carnation, cineraria, lettuce, rose, tomato, tulip...**

**Foxglove aphid: Anemone, arum, calceolaria, carnation, cineraria, dahlia, geranium, gloxinia, lettuce, nasturtium...**

**Sage, Basil, Coleus, Snaps, Zinnia, Lettuce, Ornamental pepper...**

**White cast skins are an obvious sign of aphids.**



**Aphid mummies: sign of parasites,  
which can be effective.**

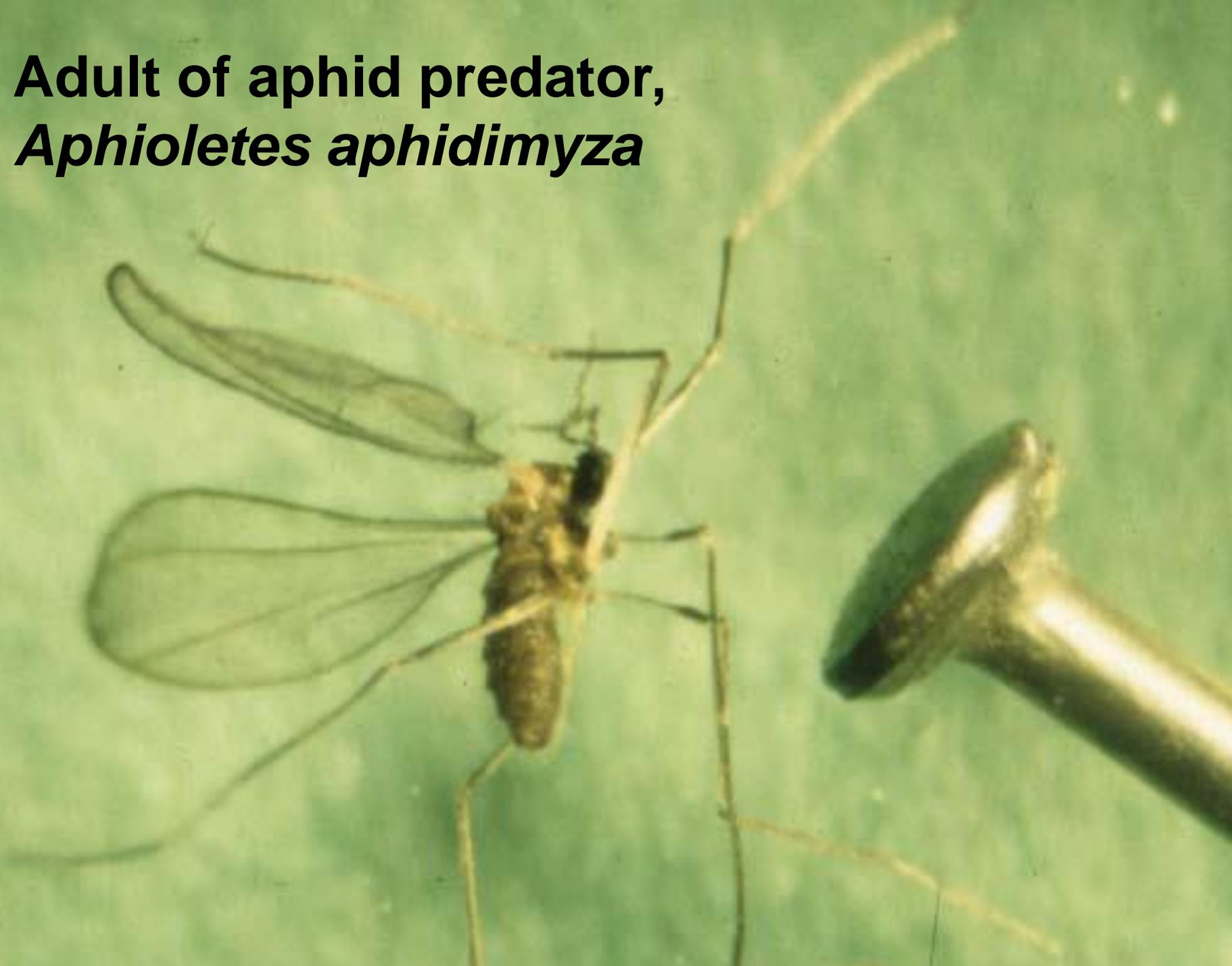


The image shows two specimens of the aphid parasite *Aphidius colemani* against a light green background. Both insects are winged, with transparent wings showing a distinct venation pattern. They have dark, segmented bodies and long, thin antennae. One specimen is positioned in the upper left, and the other is in the middle right. A portion of a metallic pin is visible at the bottom center of the frame.

**These are aphid  
parasites  
*Aphidius colemani***



**Adult of aphid predator,  
*Aphioletes aphidimyza***



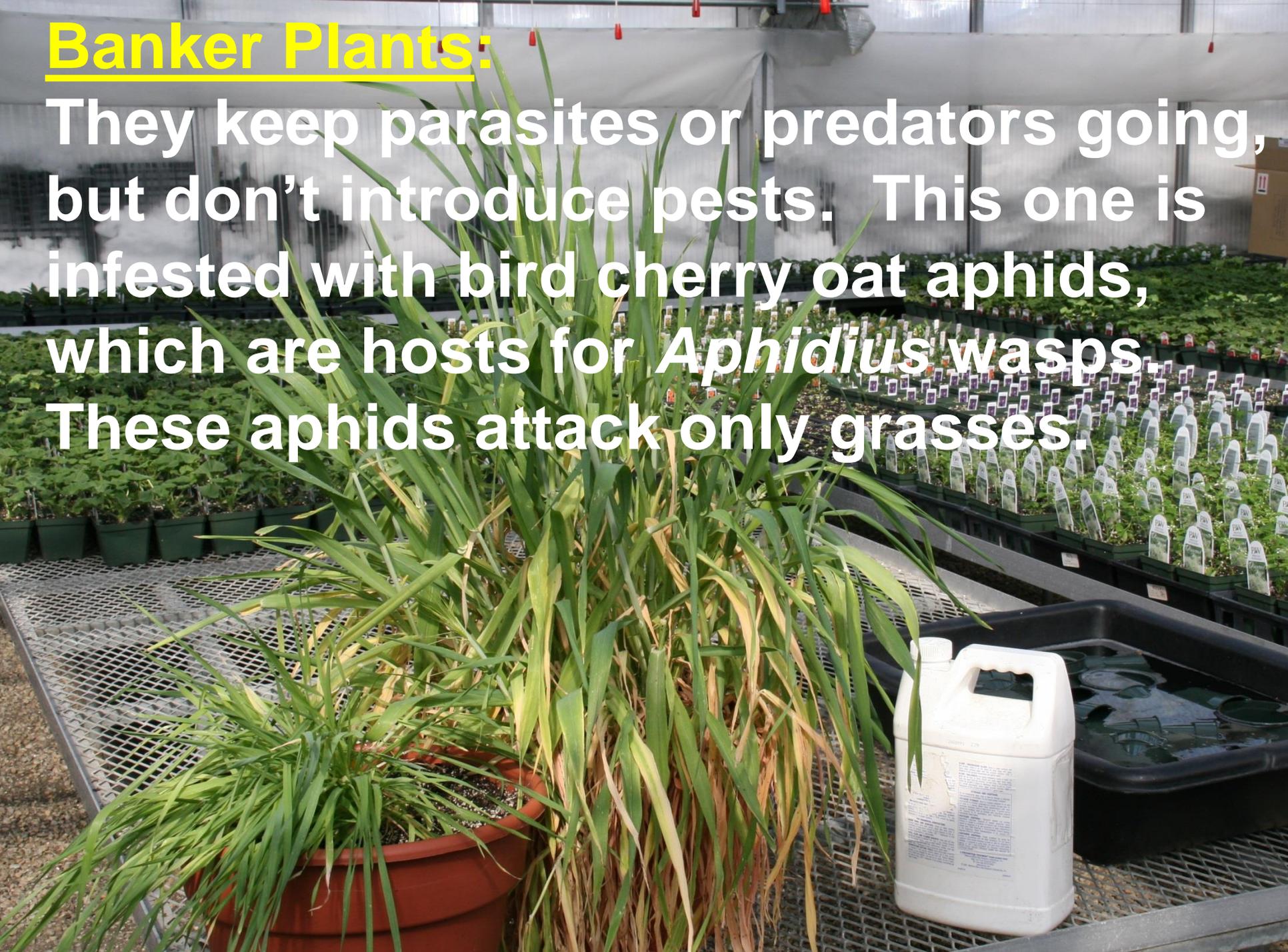


Larva of aphid  
predator,  
*Aphioletes aphidimyza*  
Yes, it is always  
**ORANGE**

Photo: Roger Adams, U Conn.

## Banker Plants:

They keep parasites or predators going, but don't introduce pests. This one is infested with bird cherry oat aphids, which are hosts for *Aphidius* wasps. These aphids attack only grasses.



# Thrips

- Really tiny!
- Long, slender
- Dark eyes
- Short, straight antennae



**With high magnification, you may be able to see their fringe-like wings.**



Western flower Thrips  
Jack Reed, Mississippi State Univ  
[bugwood.org](http://bugwood.org)

5370035

## **Thrips-prone Crops:**

**New Guinea Impatiens, Flowers in bloom...**

**Trick: blow your hot breath onto open flower; this often gets “embedded” thrips to move around and be spotted.**

**Thrips are tough to control. Parasites/predators sometimes help.**

Photos: Dr. Margaret Skinner, UVM

**Sometimes we  
put plants in  
the greenhouse**



Two spotted spider mite

Roughly oval. 2 spots! Tiny!



## Predator mites

- Often hard to identify
- Shape is important; pear, not oval
- Color is less reliable indicator
- Move fast

## **Crops Prone to Mites:**

**Anything in a fairly hot, dry greenhouse**

**Campanula, Jacob's ladder, Legumes,  
Roses, Cyclamen (cyclamen mite),  
Cucumbers...**



*Hypoaspis miles*  
photo by Jack  
Kelly Clark

**TSSM on left, predator mite (*Persimilis* sp) on the right (photo: Jack Kelly Clark)**



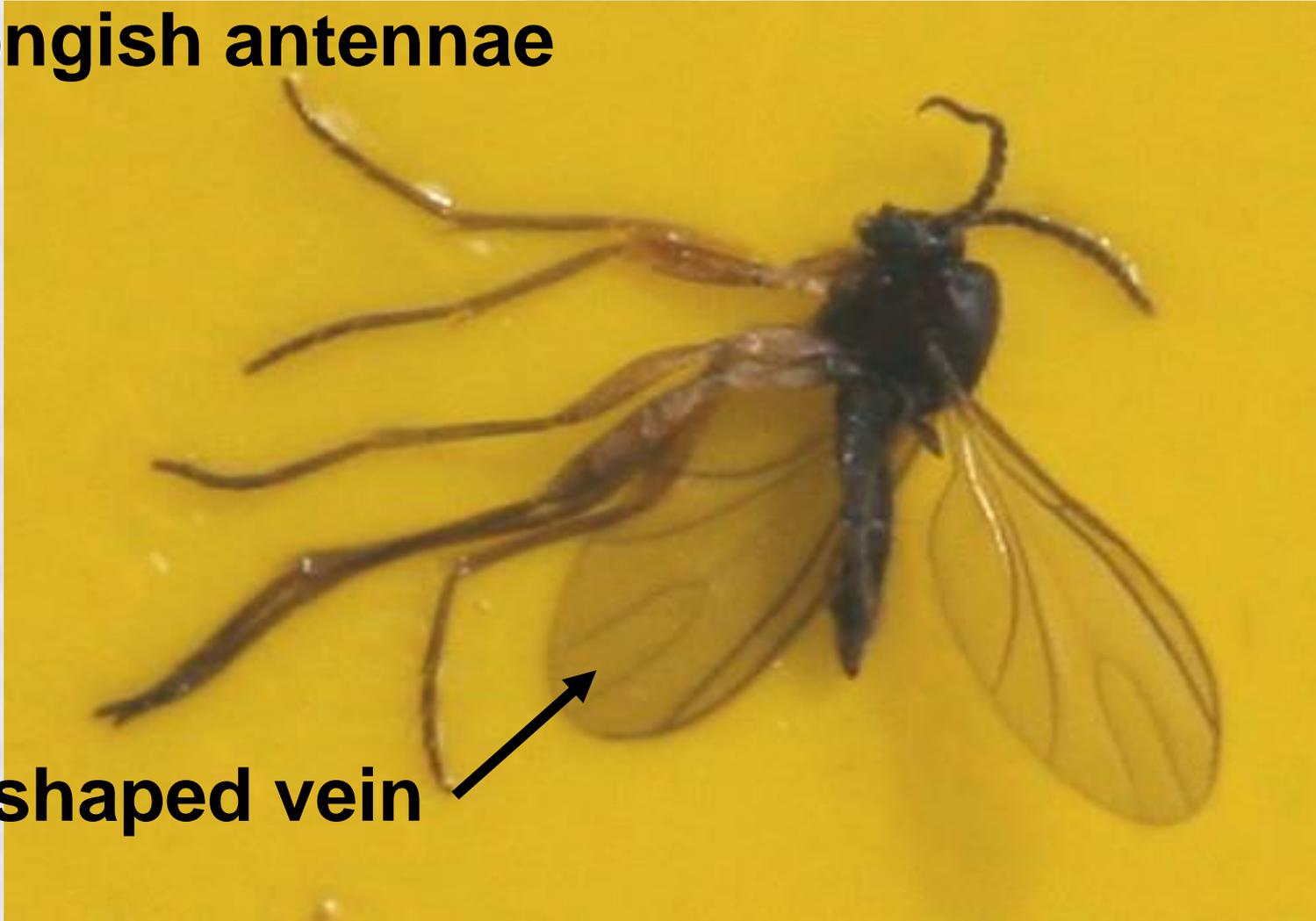
# Fungus Gnats

Long legs

Rel. thin body

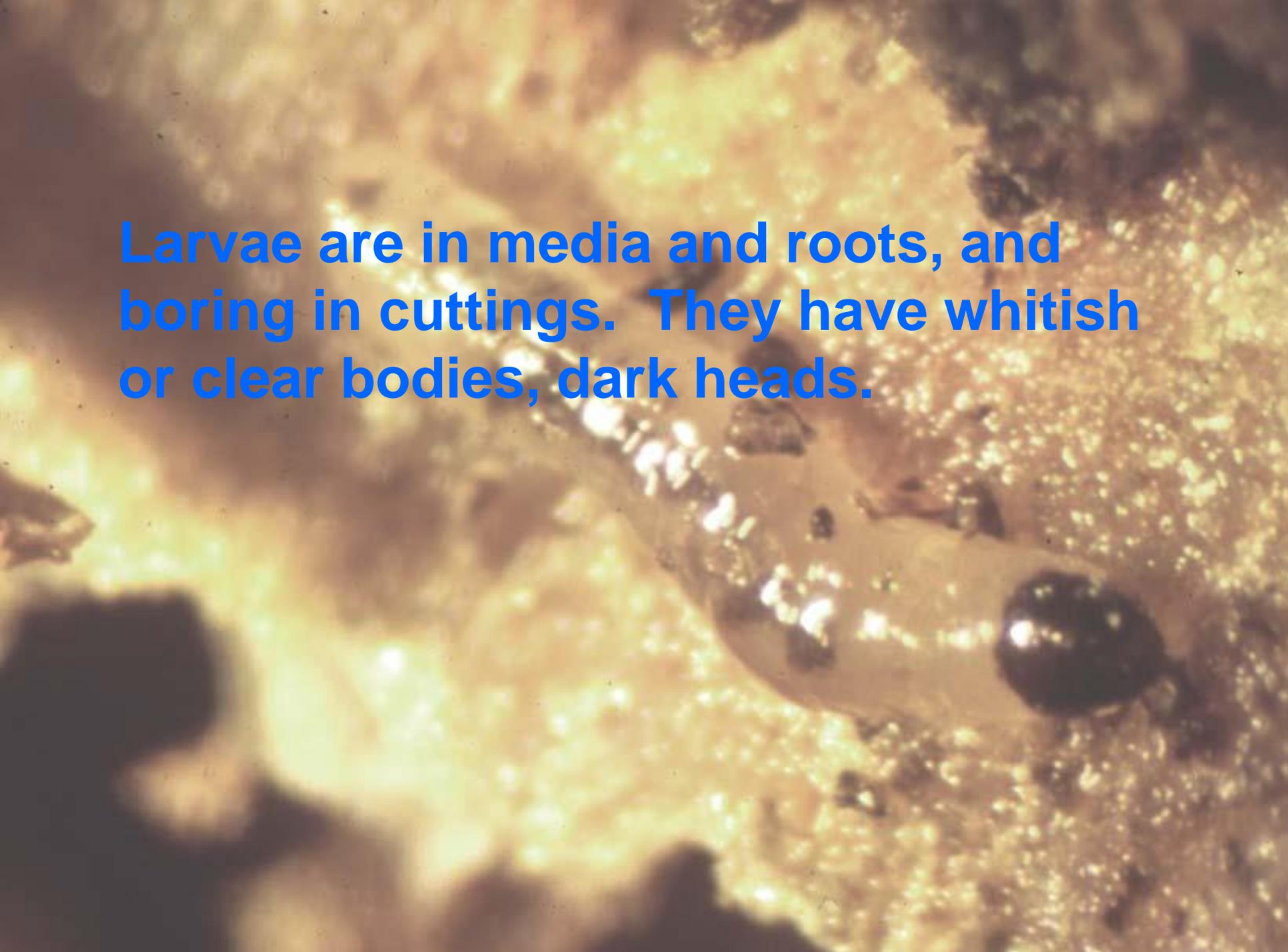
No thread waist

Longish antennae



Y-shaped vein

**Larvae are in media and roots, and boring in cuttings. They have whitish or clear bodies, dark heads.**





## **Fungus Gnat-prone Crops:**

**Anything grown in fairly wet media, especially cuttings and succulents, are prone to fungus gnat problems.**

**The biggest problems I see come from growers over-watering.**

***B.t.i.* drenches or nematodes can be very effective on larval stages.**

# Shore Flies

Smoky wings with  
light spots means  
shore flies.

Mostly a  
nuisance!



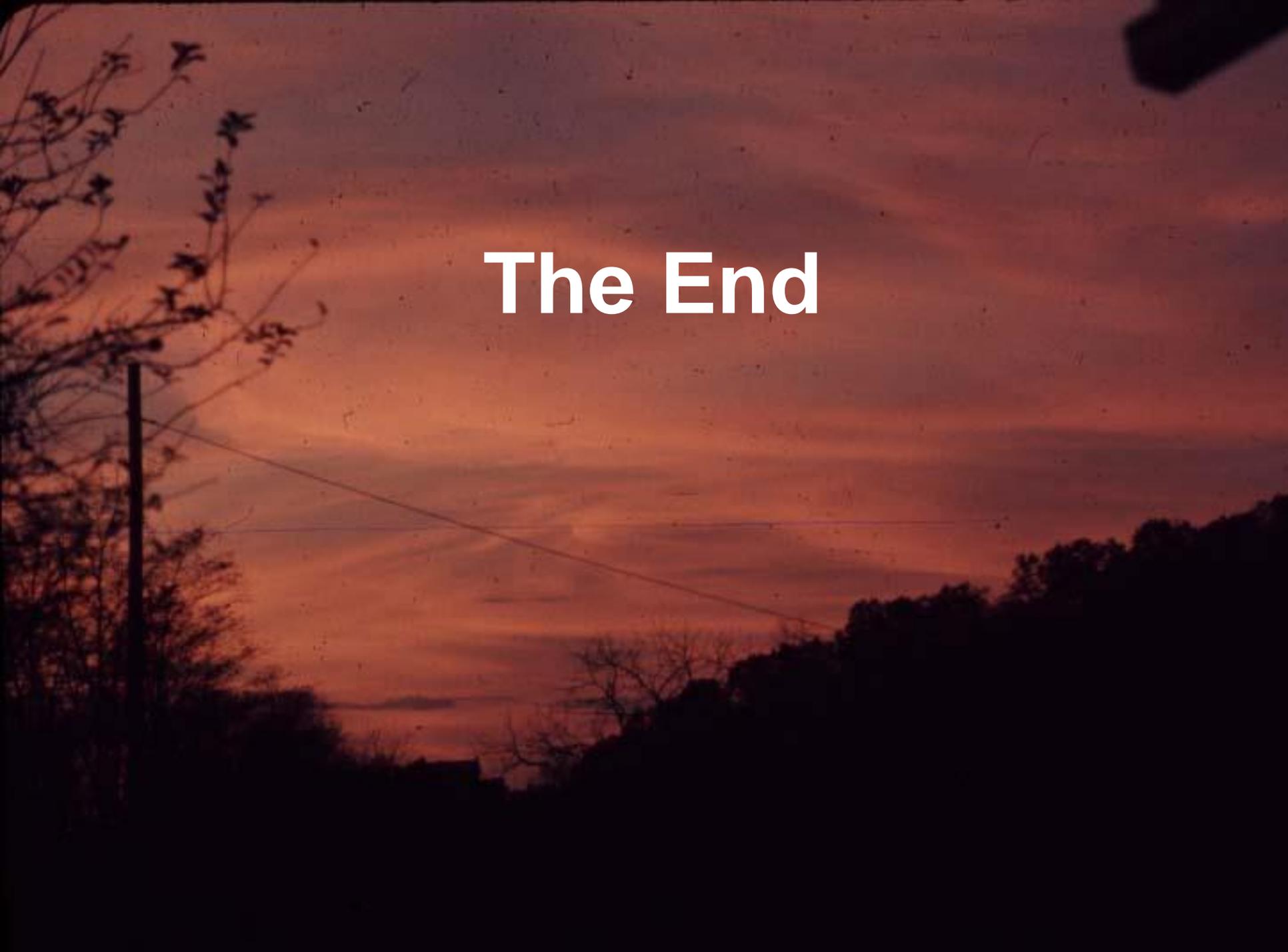
**Larvae live in wet, slimy conditions  
and feed on algae.**

**This is the tail end.**



A photograph showing a drainage grate in a gutter, heavily covered with a thick layer of green algae. The grate is surrounded by several grey plastic pots filled with dark soil. The scene is brightly lit, suggesting an outdoor or well-lit indoor environment. The text is overlaid in the center of the image.

**No algae means no shore flies.  
Control them by controlling algae.**

A photograph of a sunset or sunrise. The sky is a mix of deep orange, red, and purple, with some clouds. The foreground is dark, showing silhouettes of trees and a utility pole. The text "The End" is centered in white.

**The End**