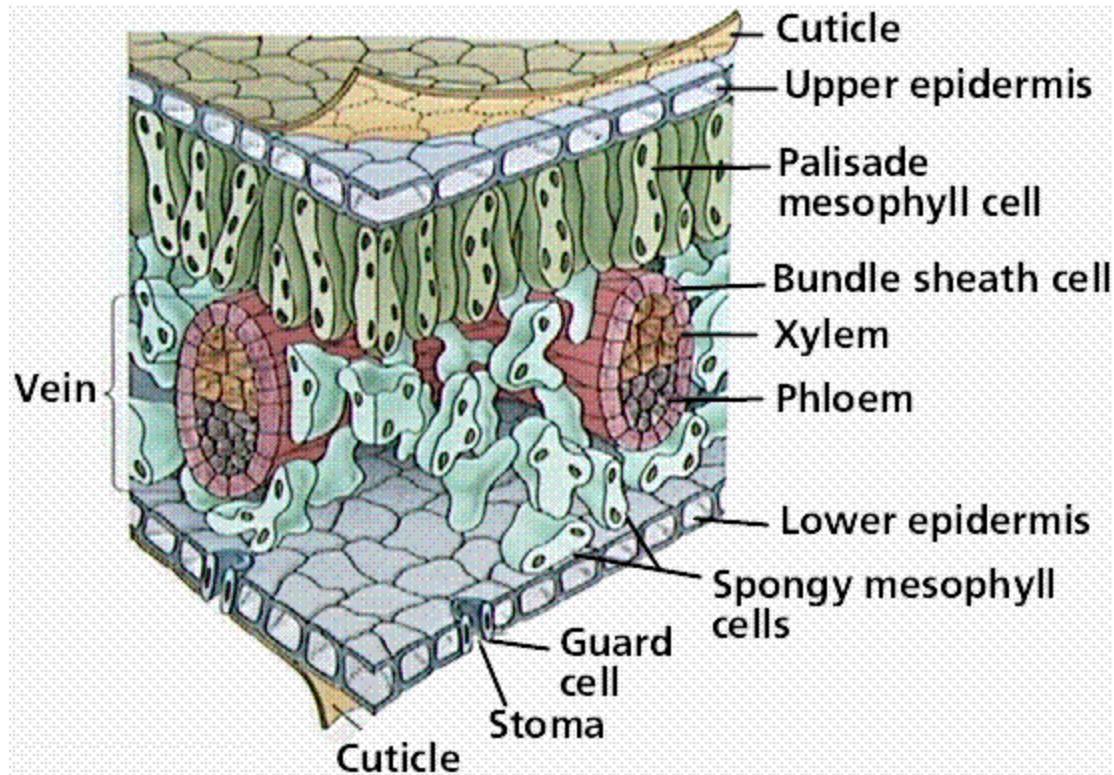


Southern New Jersey African Violet Club

**Insects that Affect Growth Development
and Life of an African Violet
and Effective Insecticides**

Presented By: **Joseph Argentine, PhD.
Entomologist**

Cross Section of a Leaf



Chewing Insects

- Mouthparts designed to rip chunks of leaf
- Caterpillars and Beetles



Sucking Insects

- Mouthparts piercing, like mosquitoes
- Feed on plant fluids (phloem)
- Like mosquitoes some can transmit diseases
- Aphids and whiteflies



Rasping Insects

- Rasp surface of leaf and suck up liberated fluid
- Thrips and mites

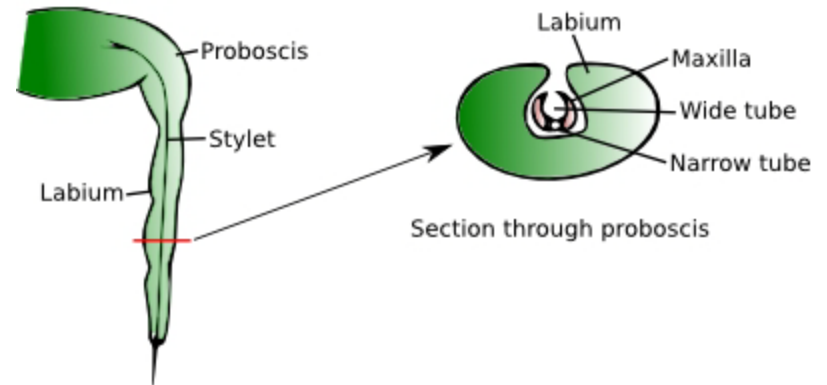
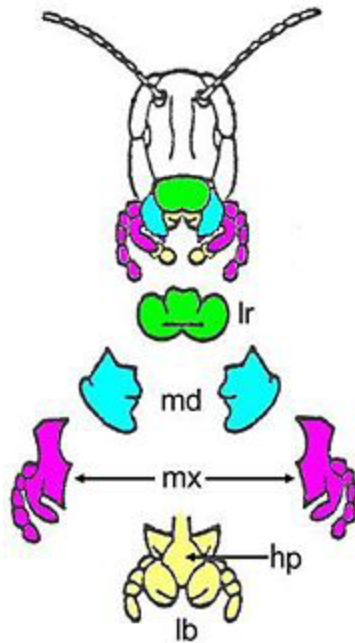


Mouthparts

Chewing

vs.

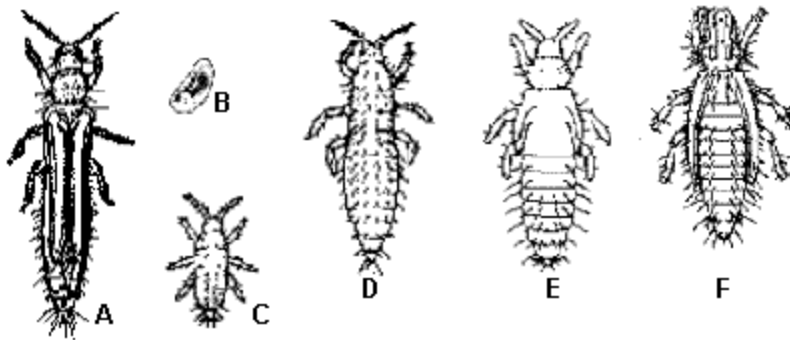
Sucking



Rasping?

Thrips

- Adults “Fringed” winged insect (feathery), but generally weak fliers
- Minute – approximately 1/16 inch or 1.5 mm
- Some species feed on nearly every type of flowering plant. Some are predaceous
- Adults have wings, larva are wingless or have wing buds
- Short generation time and parthenogenesis = potential population explosion



Signs of Thrips Damage



Pollen all over flower



Feeding damage on flower



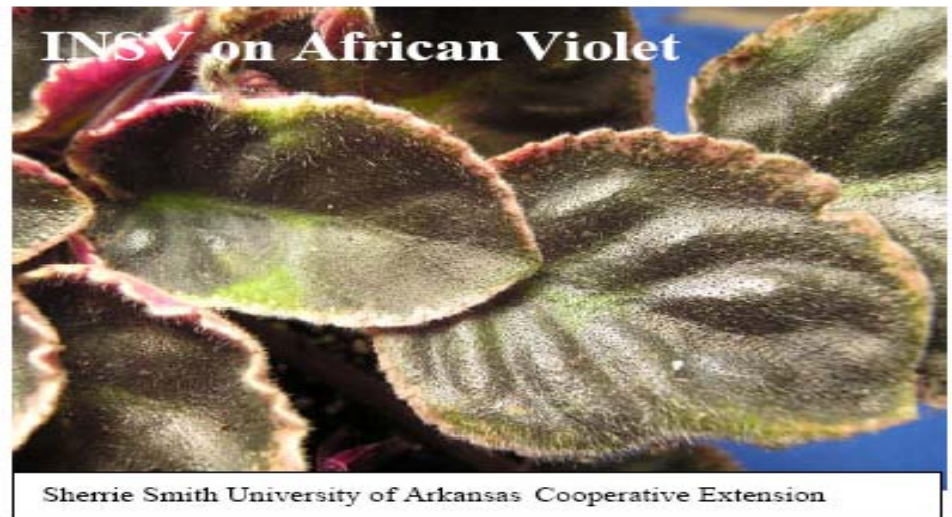
Chlorosis on petunia leaf



Rasping feeding damage

Impatiens Necrotic Spot Virus (INSV)

- Disease of hundreds of plants
- Transmitted by thrips
- Symptoms include browning, ring spots, mottling, wilting and stunting
- Plant Viruses are incurable - discard plant and control thrips!



Mealy Bugs

- Sucking insect pest – cottony looking
- Approximately 1/8 inch or 3 mm long
- Typically are found on stems and leaf axils
- Can cause leaves to wilt and yellow
- Heavy infestations will leave honeydew secretions, which can lead to sooty mold and other fungus problems



Cyclamen Mites

- Arachnids, not insects
- Tiny! 1/100 inch-Need magnification to see
- Cause leaf curling and darkening at the edge, while the rest of the leaf turns yellow.



African violet
plant with
cyclamen mite
injury.



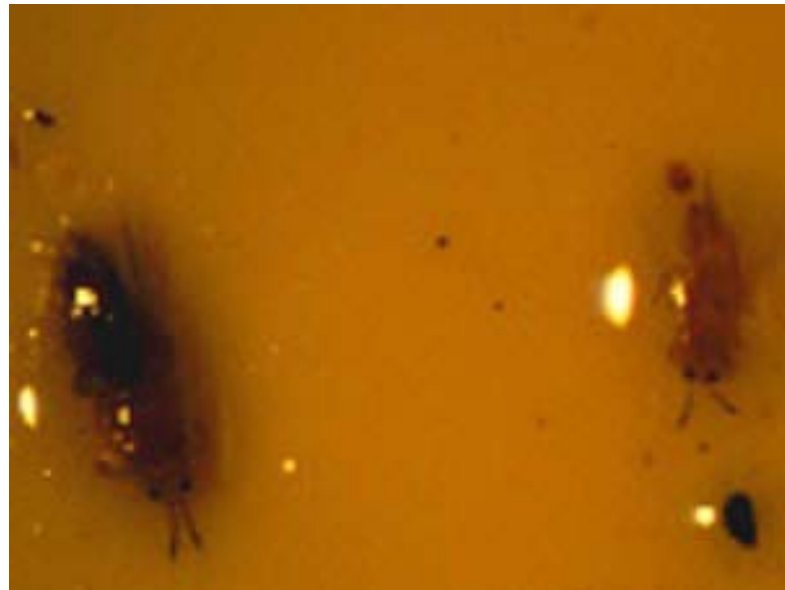
Two Spotted Spider Mite

- Arachnid
- Minute, barely visible
- Lifecycle can be complete in 8 days!
- Produce webs, as well as curling at the leaf edge and leaf necrosis



Monitoring

- Routine visual inspection of plants
- Can use yellow or blue sticky cards to monitor for thrips, aphid and whitefly infestations.



Insecticides

- Always follow directions!
- Too little may not control insects
- Too much can possibly damage plant
- Make sure formulation will not cause phytotoxicity (Plant damage resulting from a chemical treatment.)
- Use gloves and eye protection

Abamectin (Avid)

- Best against thrips and mites
- More costly, but worth it
- Good residual activity
- Has some activity to mealy bugs and aphids

Spinosad (Conserve)

- Many of the same characteristics of Avid
- Organic insecticide

Acephate

- Good systemic activity (gets into phloem)
- Cheap and easy to get
- Malathion also okay, but not as good

Imidacloprid (Bayer)

- Excellent against sucking pests and thrips
- Not active against mites

Pyrethroids - “thrins”

- **Pyrethrin, Permethrin, Resmethrin, Bifenthrin**
- Good broad activity
- Moderate activity against mites