

# Thrips - General Life Cycle



1. (a) Western flower thrips, *Frankliniella occidentalis*  
(b) Common blossom thrips, *Frankliniella schultzei*  
(c) Chilli thrips, *Scirtothrips dorsalis*
2. Oviposition blisters
3. First instar nymph
4. Second instar nymph
5. Pre-pupa
6. Pupa is hidden in soil (or curled leaves for Chilli thrips) and is not typically seen.

*More detailed descriptions on the reverse.*



## Signs & Symptoms



- Above: Discolored cucumber flower
- Top middle: Feeding damage on cabbage
- Top right: Irregular ripening due to TSWV
- Bottom right: Strawberry bronzing
- Bottom middle: Feeding damage on pepper

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 Photo Credits: 1a, 4, and 5 - Lyle Buss, University of Florida | 3 and 6 - Jeff Cluever, University of Florida | 1b, 1c, flower, and pepper images - Vivek Kumar, University of Florida | 2 - P.M.J. Ramakers, Applied Plant Research (Bugwood.org) | Tomato infected with TSWV - Gary Vallad, University of Florida | Feeding damage on cabbage and strawberry bronzing image - Hugh Smith, University of Florida

# An Introduction to Thrips

## General Morphology:

### *What does it look like?*

Thrips are difficult to see with the unaided eye, adults averaging between 0.5-1.5mm long. Their bodies range from a pale yellow to darker brown and they have slender wings fringed with fine hairs (setae). With a hand lens, the even smaller juveniles can be spotted in the field. Larvae resemble the adult stage in almost every aspect minus the wings. Occasionally, wing buds are visible during the pre-pupal stages.

## General Biology:

### *What is its life cycle?*

Variations in the length of each life stage occur between thrips species but in general:

1. Females deposit eggs directly in the host tissue.
2. Larvae emerge and begin to feed on the plant.
3. After two molts, the larva enters the pre-pupal stage (lasts about 1 day) during which wing buds are developing externally.
4. Gradually the immobile pupa forms with the antennae folded over its back (occurs in the soil or curled leaves and is rarely seen).
5. Adults emerge from the pupa after 2-3 days.

## Pest Host Range:

### *Where is it found?*

From the temperate zone to the tropics, thrips have over 100 host species. A few of these economically significant crops in Florida are strawberry, tomato, pepper, cucurbits, cotton, and ornamental flowers.

## Natural Enemies:

### *Predators & Parasitoids*

Predatory mites, minute pirate bugs, lacewing larvae, and lady beetles (and larvae) are some natural enemies. Predatory thrips are under investigation. Other biocontrol agents include pathogenic fungi and parasitic nematodes.

## Signs & Symptoms:

### *What type of damage does it cause?*

- ❑ Chilli thrips, common blossom thrips, and Western flower thrips, have been known to cause significant foliar, flower bud, and fruit damage.
- ❑ They vector many different viruses such as tomato spotted wilt virus (TSWV), groundnut ringspot virus (GRSV), chilli leaf curl virus (CLCV), peanut necrosis virus (PNV), tobacco streak virus (TSV), and watermelon silver mottle virus (WsMoV).
- ❑ Common symptoms include distorted leaves and fruits, discoloration and bleaching of leaves and flowers, necrotic tissues, defoliation, and overall stunted growth.