

Class Insecta, Order Thysanoptera: Thrips

Order Thysanoptera

The name Thysanoptera, derived from the Greek “*thysanos*” meaning fringe and “*ptera*” meaning wings, refers to the slender wings that bear a dense fringe of long hairs. The word Thysanoptera means “fringed wings” and is always spelled with an ‘s’. Thrips are pests of greenhouse and landscape. Western flower thrips vectors plant diseases, such as tomato spotted wilt virus and impatiens necrotic spot virus. There are a few families of predatory thrips. All thrips have piercing-sucking mouthparts, which enable the insects to cut and remove plant or insect juices.

Thrips are generally small insects (under 3 mm). Many species are parthenogenetic. Although Thysanoptera have gradual metamorphosis, many species undergo an extended metamorphosis in which the final immature stage is quiescent, non-feeding, and sometimes even enclosed in a silken cocoon.



Predatory thrips adult. (352) Photo: John Davidson

Morphology

Adults

1. mouthparts: Head narrow forming a conical mouth
2. antennae: short, 6-10 segments
3. legs: Tarsi 1-2 segmented, with eversible adhesive bladders apically
4. body segments: cylindrical.
5. wings: Front and hind wings slender, with a dense fringe of long hairs. Many species are secondarily wingless.

Immatures (larvae)

1. Look similar to adults
2. Feed in same habitat
3. Feed on same food as adults
4. Wingless

Development: Gradual (egg, nymph, adult); many species undergo an extended metamorphosis in which the final immature stage is quiescent, non-feeding, and sometimes even enclosed in a silken cocoon

Life history

habitats: Landscape and greenhouse

feeding: Herbivores and predators

Importance in landscapes

Numerous thrips species are considered greenhouse pests, feeding on plant tissues and vectoring plant diseases, e.g. tomato spotted wilt virus and impatiens necrotic spot virus. There are a few families of predatory thrips. All thrips have piercing-sucking mouthparts, which enable the insects to cut and remove plant or insect juices.

Families

Predatory Thrips (Family Aeolothripidae) mostly predatory species.

Common Thrips (Family Thripidae) herbivores, including many pests such as the flower thrips.

Tube-tailed thrips (Family Phlaeothripidae) largest family in the order; contains numerous pests as well as a few beneficial species.



In the textbook, *IPM of Midwest Landscapes Pests of trees and shrubs*

Order Thysanoptera, Thrips

Family Phlaeothripidae, Phlaeothripid thrips pine thrips, *Gnophothrips* species

Beneficial predators

Order Thysanoptera, Thrips

Family Aeolothripidae, Predatory thrips

Family Phlaeothripidae, Predatory thrips thrips, several species

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EXTENSION



Legislative Citizen Commission
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Conservation Biocontrol 2017 - 2020