



Cornell University

John Sanderson
Cornell University
Email: jpg3@cornell.edu

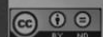


Cheryl Frank Sullivan
University of Vermont
Email: cfrank@uvm.edu



Thrips

Pest & Natural Enemy ID
Greenhouse Scout School
Session 5: March 12, 2025



David R. Gillespie

Applied Bio-
Best in Class

Cheryl Frank Sullivan

University of Vermont

Email: cfrank@uvm.edu



Part 2: Natural Enemy ID

Statewide IPM Project
© 2000 Regents, University of California

Dalotia coriaria

(Coleoptera: Staphylinidae)



Steinernema feltiae

(Rhabditida: Steinernematidae)



Stratiolaelaps scimitus

(Acari: Laelapidae)





Orius insidiosus

(Hemiptera: Anthocoridae)

- Minute pirate bug
- Predator
- Pierces its prey with its mouthparts and sucks out body fluids
- Attacks thrips, aphids, mites and other soft-bodied pests

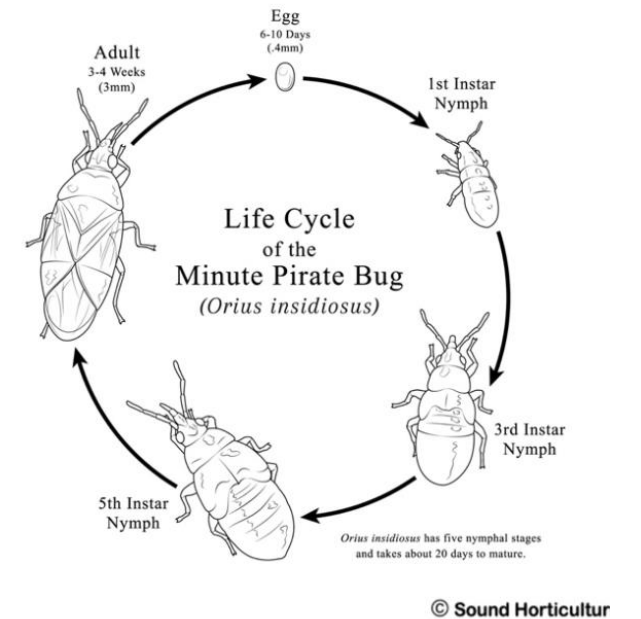
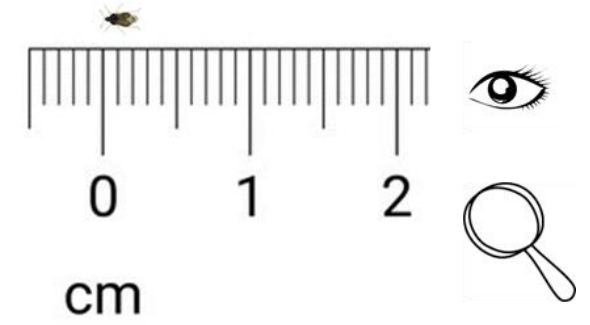




Appearance: Adults ~2-2.5 mm, distinctive black and white color pattern. Nymphs ~0.5 – 1.8mm (depending on age), yellow-brown/orangish color.

Life cycle: ~3 wks to complete at 70°F (21°C). Adults lay eggs in plant tissue and live ~ 3wks. Diapause in fall (& naturally occurring).

Monitoring: Often found in flowers with pollen or with prey, usually will only find one at a time (they may eat each other!), can get stuck on sticky cards.



© Sound Horticultur

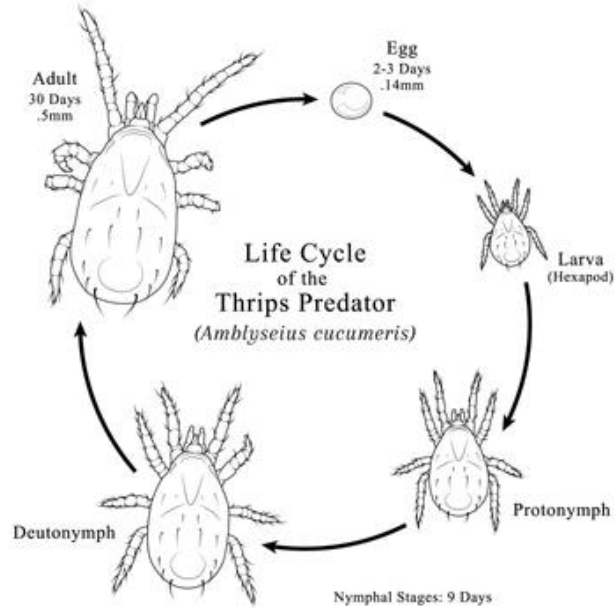
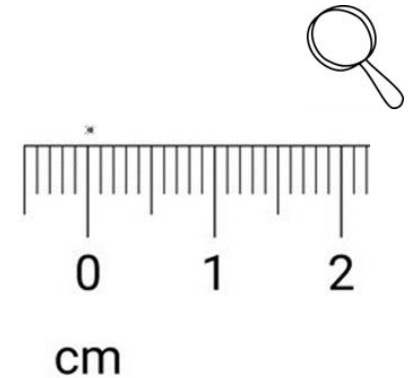


(Photos by Cheryl Frank Sullivan, Univ. of VT)



Neoseiulus* (= *Amblyseius*) *cucumeris
(Mesostigmata: Phytoseiidae)

N. cucumeris



© Sound Horticulture
Illustrations by Morgan Mulholland

Appearance: Adults ~0.5mm, pear shaped, white-tan color. 8-legged. Eggs are oval, translucent, ~0.14mm

Life cycle: ~10-12 days to complete at 68°F (20°C). Eggs are laid on leaf hairs along the veins on the lower surface of leaves. Adults live ~ 30 days.

Monitoring: Foliar-dwelling. Use magnifier (10-15×). Often found in flowers with pollen or on leaf undersides with prey and observed after plant tapping over paper.



(Photo by Elise Lobdell)



(Photos by Cheryl Frank Sullivan, Univ. of VT)

Beauveria bassiana

(Hypocreales: Cordycipitaceae)

- Entomopathogenic (insect-killing) fungus.
- Microbial pesticide (biopesticide).
- Several strains available (i.e., GHA, Ant-03, PPRI-5339).
- Conidia/spores formulations like wettable powders or oil-based emulsifiable suspensions for foliar and soil applications.
- Spores germinate and penetrate exoskeleton, grow inside and release toxins killing pests, then emerge and sporulate to infect others.



Recap

For thrips with both foliar and soil-dwelling stages.



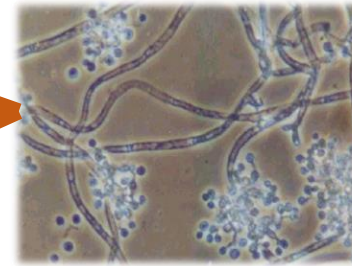
O. insidiosus



N. cucumeris



B. bassiana



S. scimitus

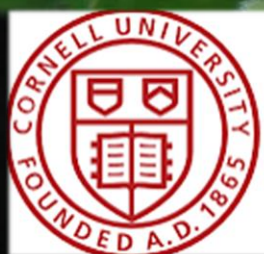


S. feltiae



D. coriaria

Thank You!



Cornell University



© March 2025; Univ. of Vermont Entomology Research Laboratory.

This work is supported by the National Institute of Food & Agric., U.S. Dept. of Agric., through the Northeast Sustainable Agric. Research & Education program under subaward number ONE22-419), UVM Extension and College of Agriculture and Life Sciences.

Any opinions, findings, conclusions, recommendations, use of tradenames and corporations expressed herein are those of the authors and do not necessarily reflect the view of or an endorsement by the sponsors or institutions. Images are subject to copyright and are used herein with permissions. For educational purposes only. Not for reproduction without permission from the author(s).

