

Cornell University

**John Sanderson**

Cornell University

Email: [jps3@cornell.edu](mailto:jps3@cornell.edu)

# Aphids

Pest & Natural Enemy ID  
Greenhouse Scout School  
**Session 2:** Feb. 20, 2025



**Cheryl Frank Sullivan**

University of Vermont

Email: [cfrank@uvm.edu](mailto:cfrank@uvm.edu)

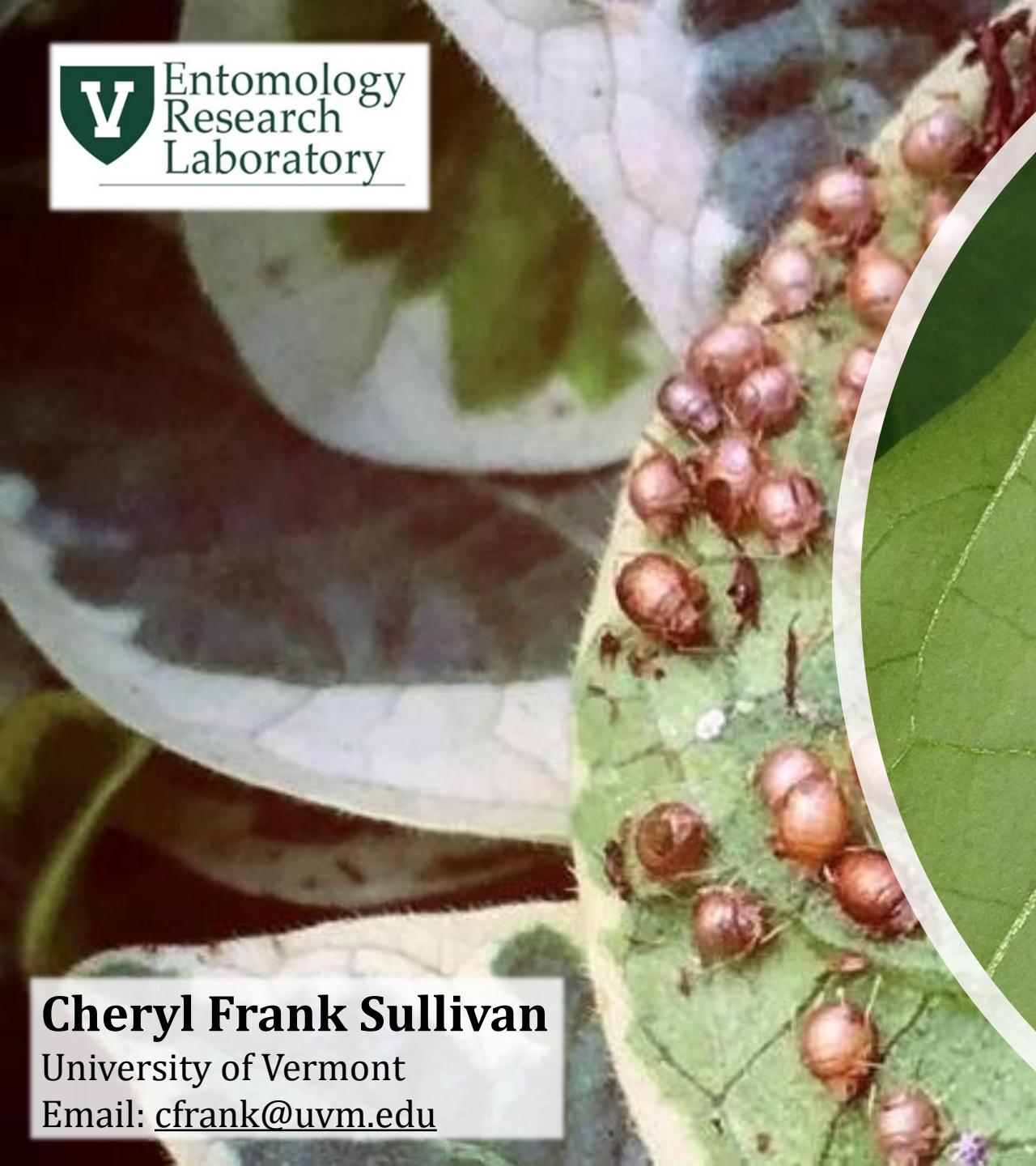




Entomology  
Research  
Laboratory

## Part 2: Natural Enemy ID

**Cheryl Frank Sullivan**  
University of Vermont  
Email: [cfrank@uvm.edu](mailto:cfrank@uvm.edu)





de IPM Program  
egents, University of California

*Orius spp.*  
(Hemiptera: Anthocoridae)

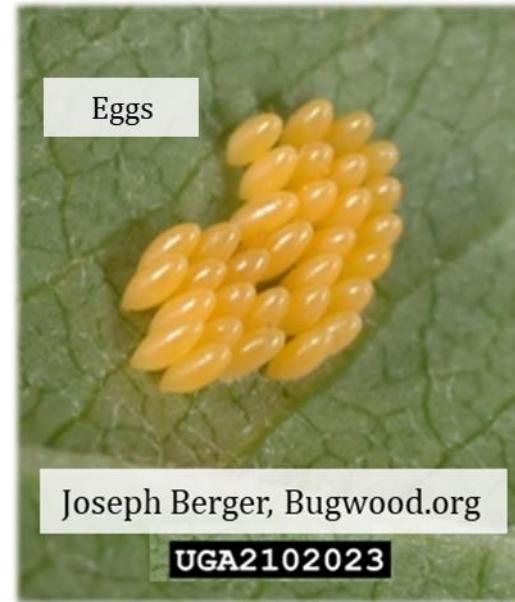
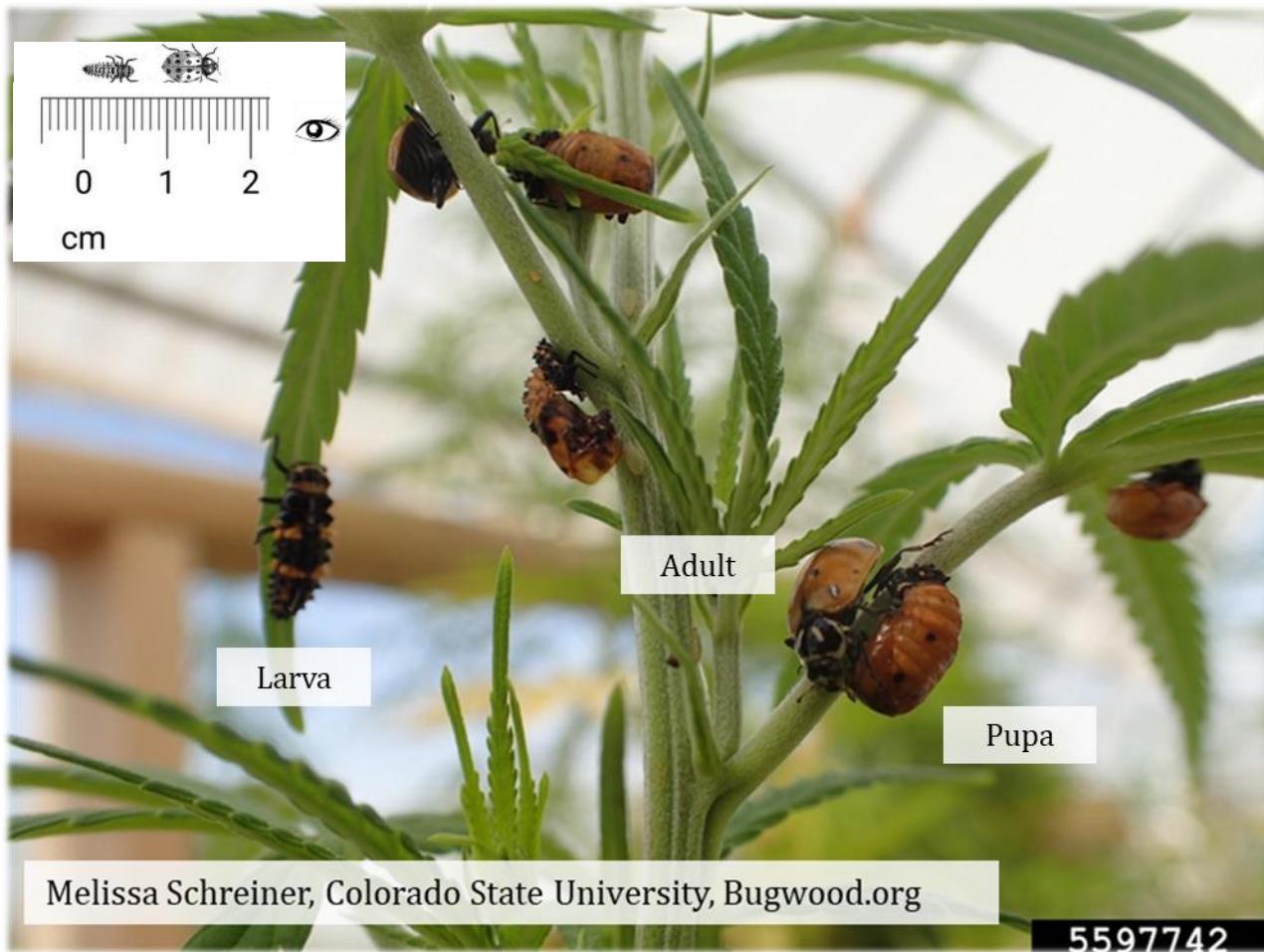


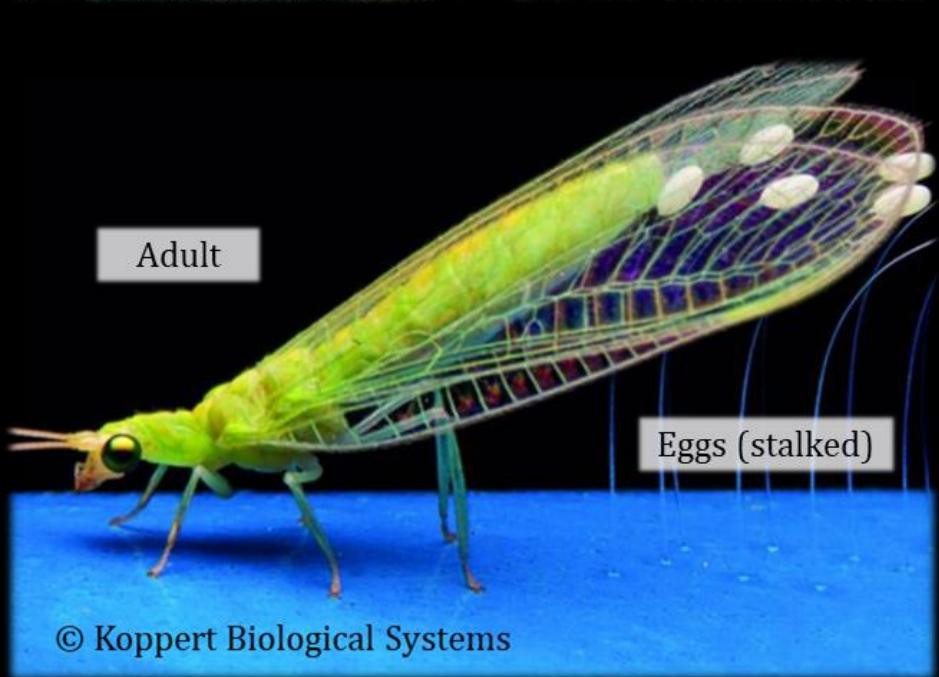
PM Project  
ts, University of California

# Lady Beetles

## *Hippodamia convergens*

### and other natural occurring spp. (Coleoptera: Coccinellidae)





**Brown Lacewings**  
*Micromus variegatus*  
(Neuroptera: Hemerobiidae)



Adult



Larvae

# Syrphid Flies (Diptera: Syrphidae)



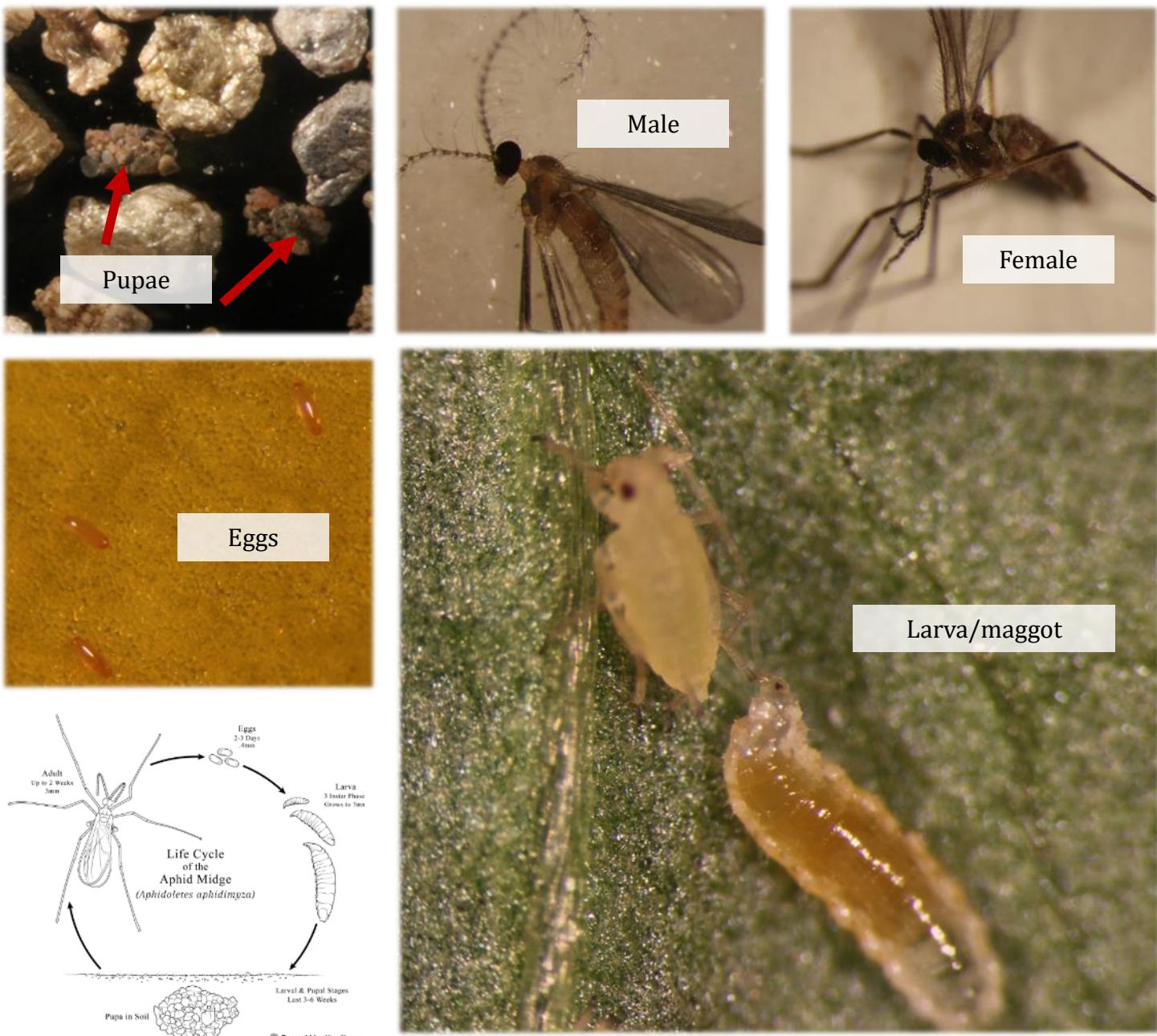
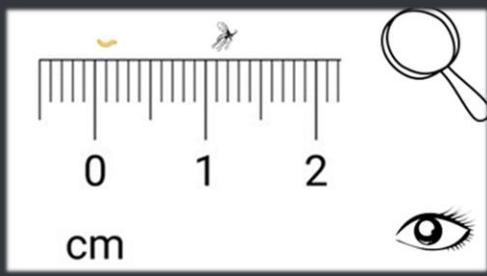
# *Aphidoletes aphidimyza* (Diptera: Cecidomyiidae)



**Appearance:** Adults 2-3 mm mosquito-like with long antennae (males longer than females with longer hairs), eggs oval and orange (0.1-0.3 mm), larvae are orange maggots (2-3 mm).

**Life cycle:** 24 days at 70 °F (21°C) to complete; egg, 3 larval stages, and adults visible, pupae in soil. Larvae are predatory.

**Monitoring:** Check aphid infestations, focus on leaf undersides for eggs and larvae, adults can be caught on sticky traps.



Photos by John Sanderson, Cornell Univ.



Eggs



Larvae/maggots





Larva

Eggs



Look for carcasses of aphids  
killed by *Aphidoletes*

# Aphid Parasitoids (Wasps)



Mummies (parasitized aphids)

# *Aphidius* spp. (Hymenoptera: Braconidae)

**Green peach & melon aphid**  
*A. colemani*

**Appearance:** Adults ~ 3-5 mm long, slender, black color with long beaded antennae and constricted waist (*A. ervi* larger than *A. colemani*).

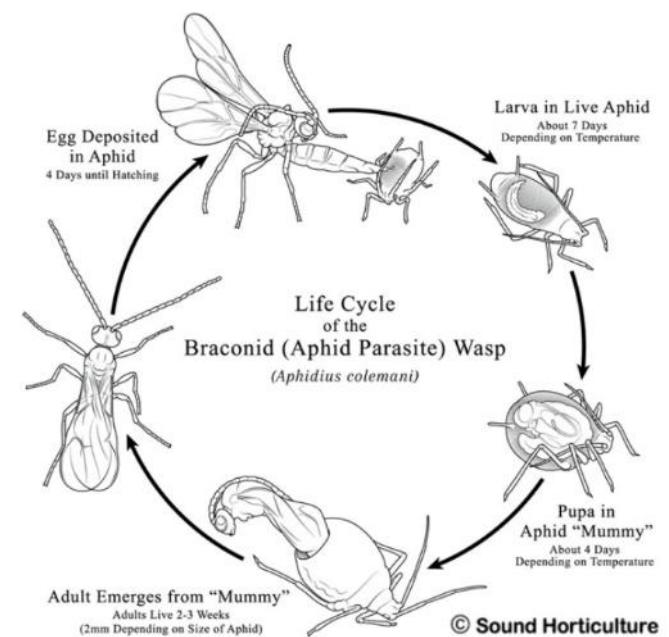
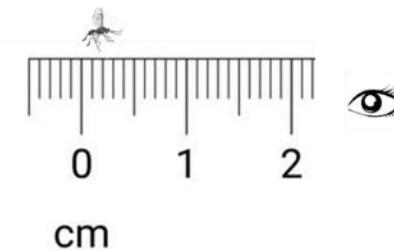
**Life cycle:** Single eggs laid in aphid nymphs, larvae develop inside feeding on aphid insides, "mummies" with pupae turn golden brown after 2-3 weeks.

**Monitoring:** Check aphid infestations, focus on leaf undersides for mummies, exit holes indicate wasp emerged. Will get caught on sticky cards.

**Green peach aphid**  
*A. matricariae*



**Potato/foxglove**  
*A. ervi*



# Aphid Banker Plants

Supports *Aphidius colemani* for  
green peach aphids.

Don't place card near these!



# *Aphelinus abdominalis* (Hymenoptera: Aphelinidae)

Attacks potato/foxglove aphids (among others)

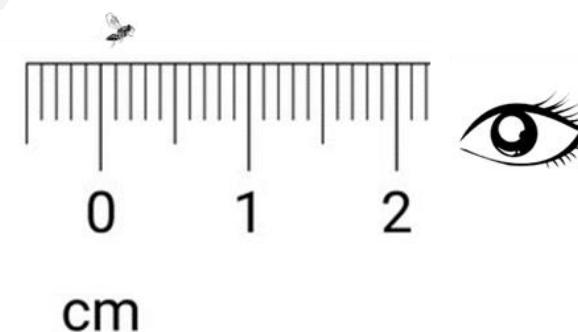
**Appearance:** Adults ~ 2 mm long with yellow-brown abdomen and short antennae.

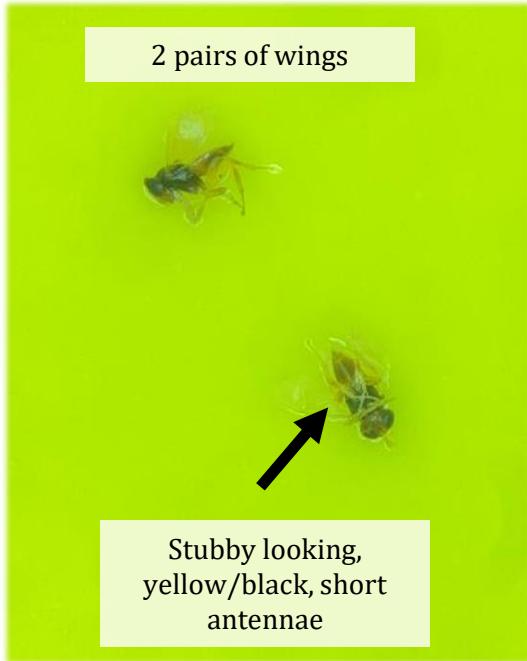
**Life cycle:** Single eggs laid in mid-aged aphid nymphs, mummies turn black after 2-3 weeks.

**Monitoring:** Check aphid infestations, focus on leaf undersides for mummies, exit holes indicate wasp emerged. Will get caught on sticky cards.

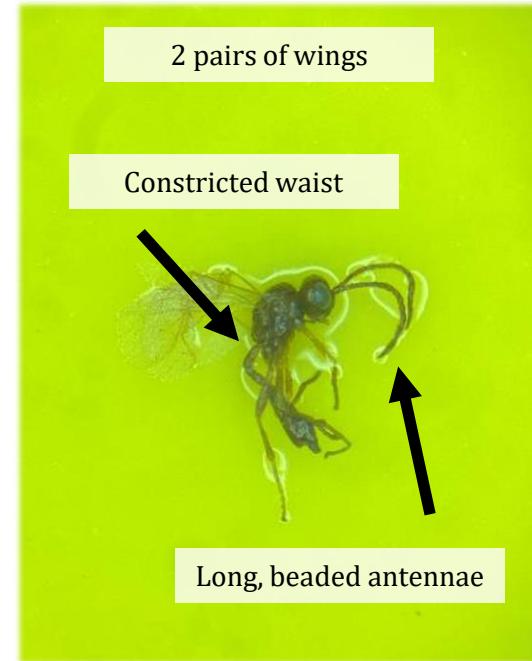


©Koppert Biological Systems

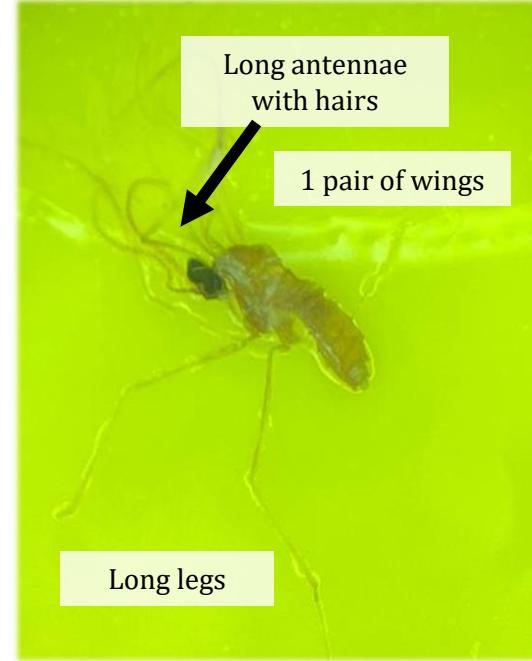




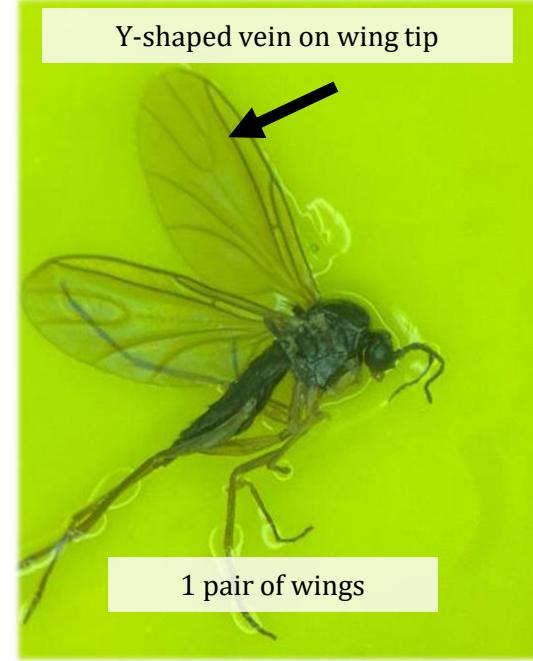
*Aphelinus* (wasp)



*Aphidius* (wasp)



*Aphidoletes* (fly)



Fungus Gnat (fly)

# Recognition Recap



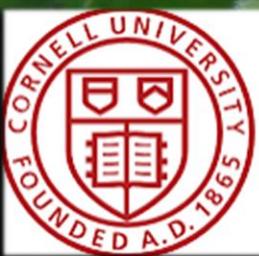
# *Anystis baccarum* (Craze Mite)

- Has erratic searching behavior  
'whirligig mite'
- Generalist (attacks aphids, thrips, mites, and more, other biocontrol agents and each other)
- "Large" red mite (~1–1.5 mm)  
(around 2x the size of other predatory mites commercially produced)
- Research is ongoing



Photo by Applied Bio-nomics, Ltd.

# Thank You!



Cornell University



© February 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).

