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Whiteflies

Pest & Natural Enemy ID

Greenhouse Scout School

Session 4: March 6, 2025

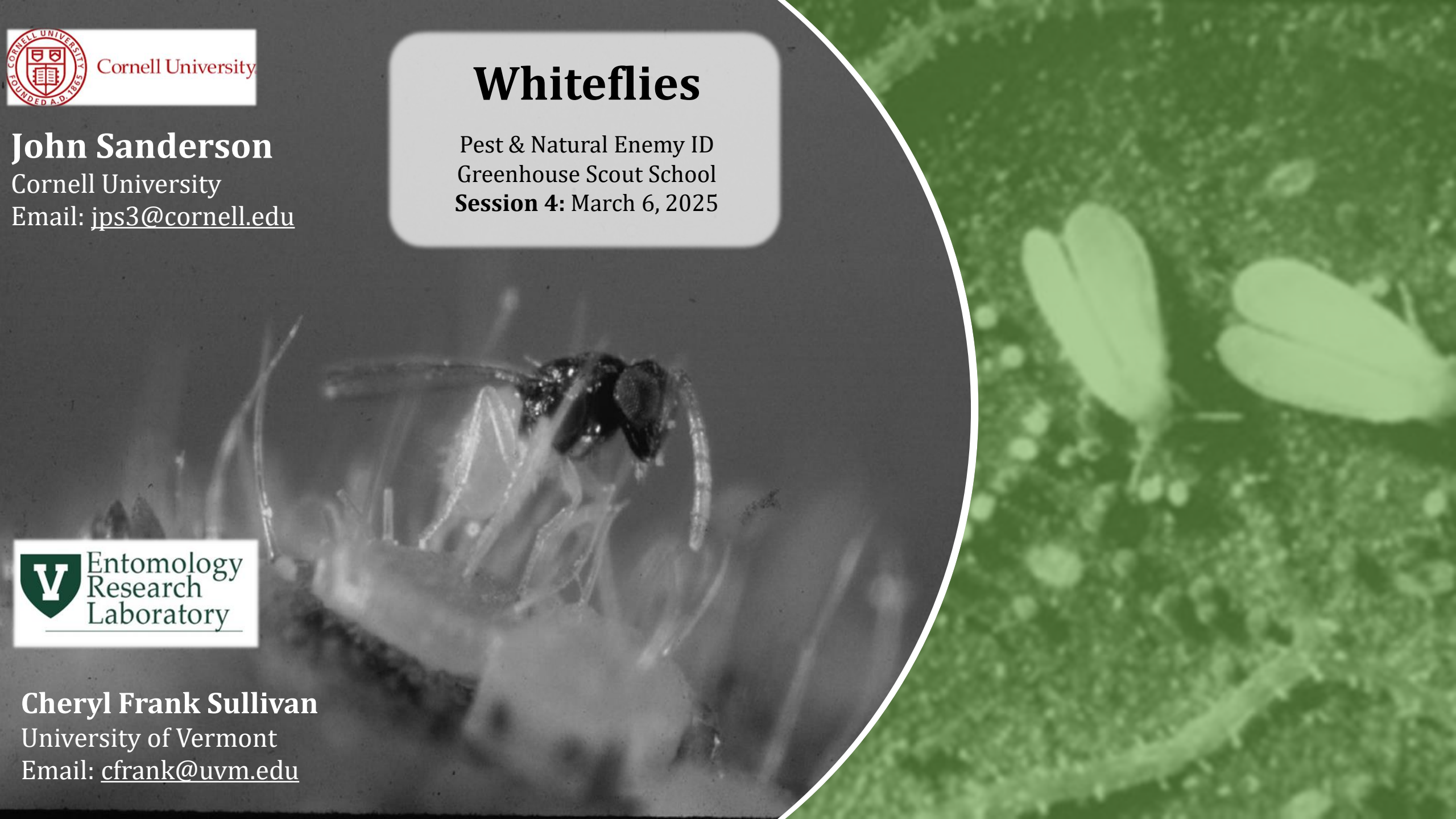


Entomology
Research
Laboratory

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Part 2: Natural Enemy ID



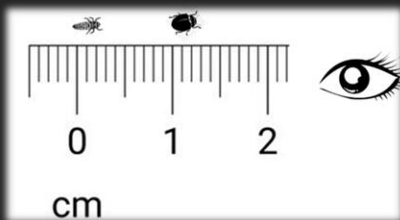
Delphastus catalinae

(Coleoptera: Coccinellidae)

Appearance: Adults ~ 1.4 mm, black in color (females with black head, males with orange); larvae elongated with legs, yellow/cream color; pupa yellow and spherical; eggs yellow and oval laid in clusters on leaf undersides.

Life cycle: ~ 21-25 days at 25-30°C, feeds on eggs and nymphs, prefers to feed on SLWF and avoids feeding on parasitized nymphs, pupation occurs low on plant.

Monitoring: Inspect whitefly infestations and focus on leaf undersides. Use only when WF hotspots have been discovered.



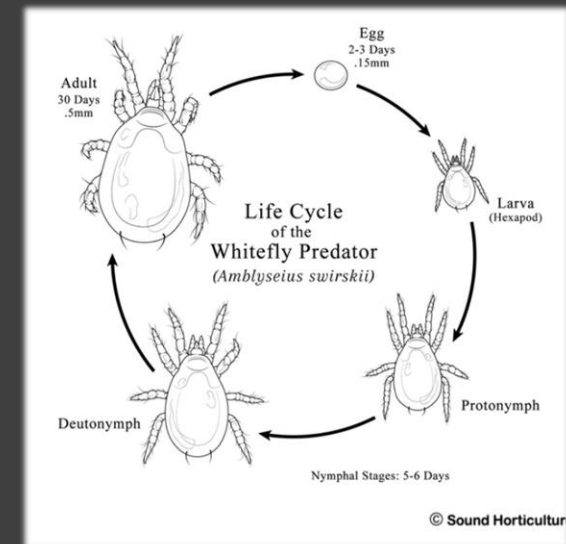
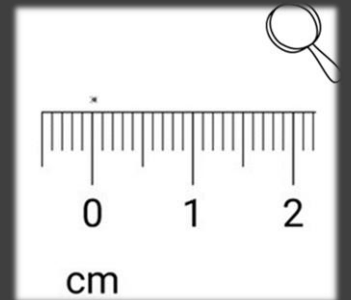
Amblyseius swirskii

(Acari: Phytoseiidae)

Appearance: Adults < 1 mm, larvae 6-legged, nymphs/adults 8-legged. Light cream color, May be confused with *A. cucumeris* (if used for thrips)

Life cycle: All stages (egg, larva, two nymphal stages, adult) visible. Attacks young WF nymphs (also attacks thrips and feeds on pollen).

Monitoring: Check whitefly infestations, focus on leaf undersides, predators are fast moving. Also found in blossoms.



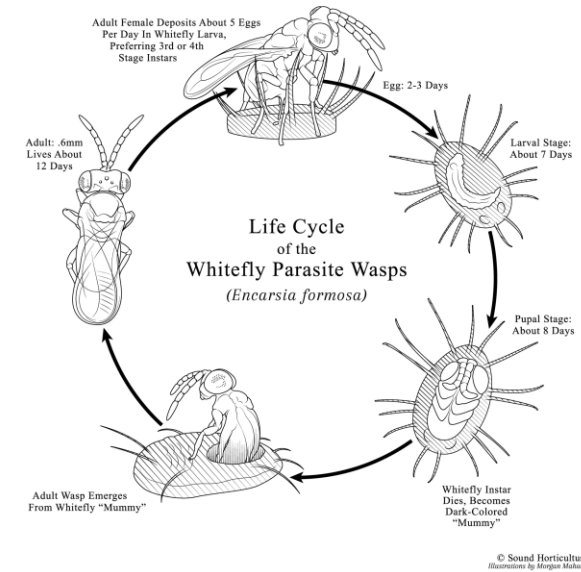
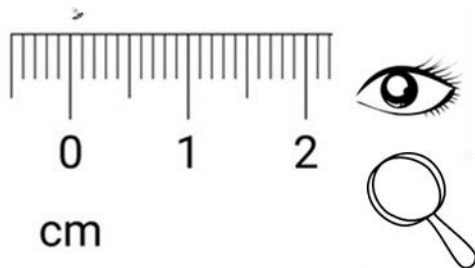
Encarsia formosa

(Hymenoptera: Aphelinidae)

Appearance: Adults < 0.1 mm with black head and thorax and yellow abdomen; immatures develop in GHWF nymphs that turn black (SLWF may also be parasitized, turn transparent brown)

Life cycle: ~ 25 days at 21°C (70°F); lays eggs inside 2nd and 3rd instar WF nymphs; also host feeds.

Monitoring: Inspect yellow sticky cards for adults, parasitized WF nymphs on leaf undersides with infestations. Round, adult emergence holes visible at top of parasitized WF nymph.



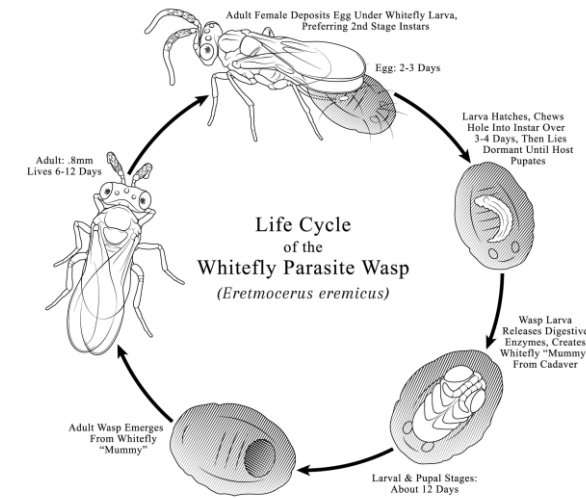
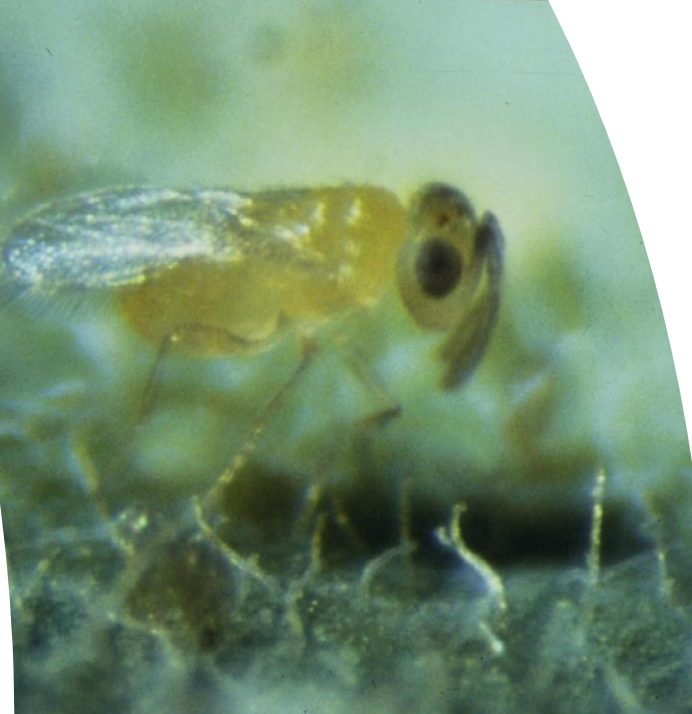
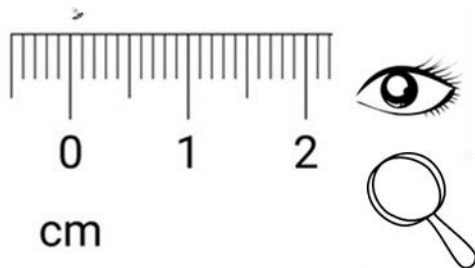
Eretmocerus eremicus

(Hymenoptera: Aphelinidae)

Appearance: Adults < 1 mm, yellow color with green eyes; prefer SLWF, parasitized nymphs turn golden brown/beige color.

Life cycle: Eggs laid between nymph and the leaf surface, larvae burrow into host after hatching; females lay eggs under all WF nymph stages, (prefers 2nd stage), adults also host feed.

Monitoring: Inspect yellow sticky cards for adults, parasitized nymphs on leaf undersides with WF infestations. Round, adult emergence holes visible at top of parasitized WF nymph.



Photos by John Sanderson, Cornell Univ.

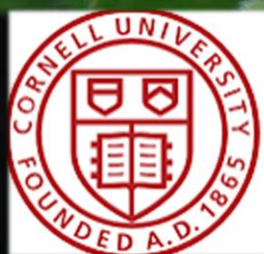


Photos by Cheryl Frank Sullivan, Univ. of VT,
unless specified otherwise.



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Thank You!



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