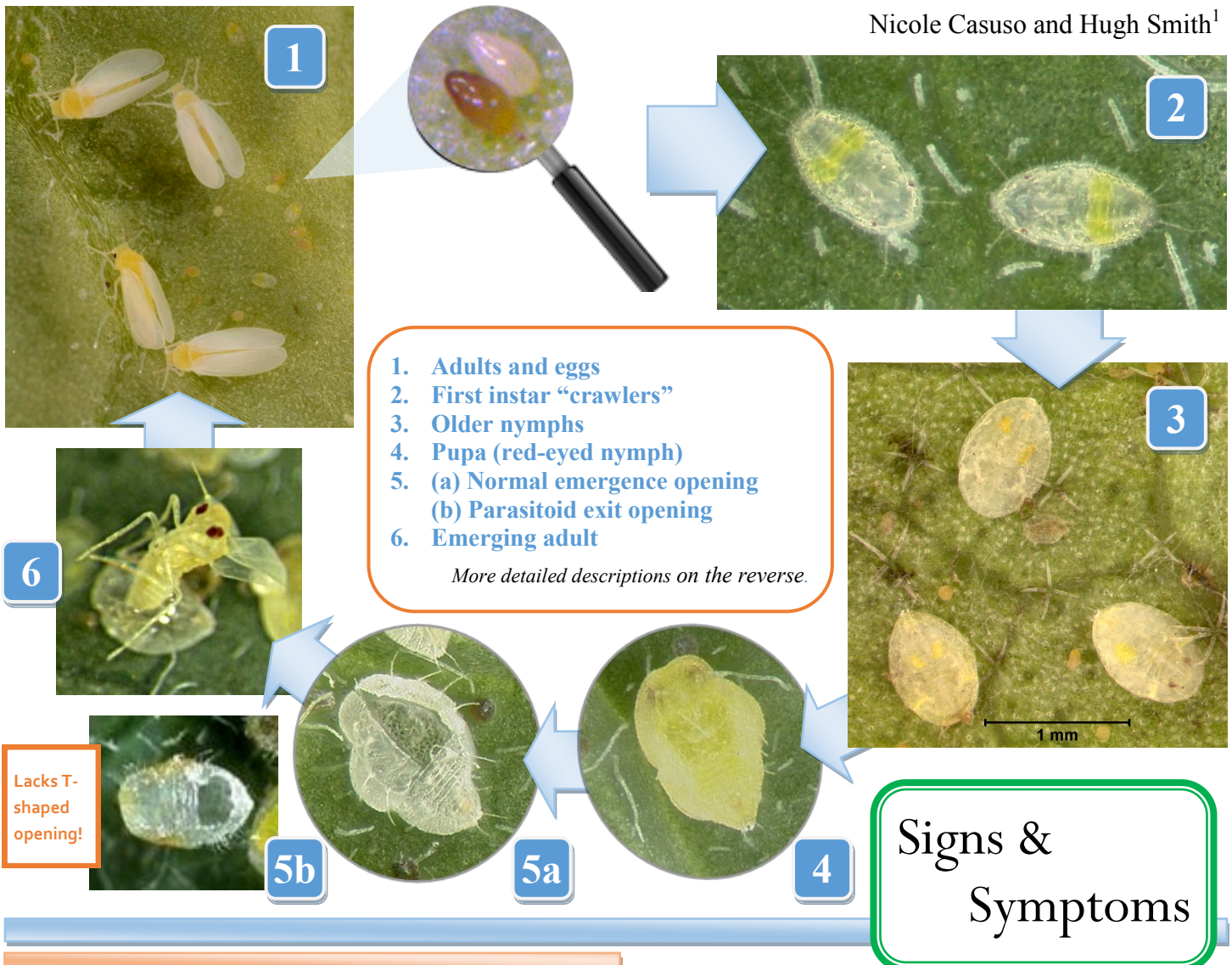


Silverleaf Whitefly - Life Cycle



Whitefly infestation on underside of leaf



Stylet (piercing-sucking mouthpart)



Tomato yellow leaf curl virus



Squash leaf crumple virus



Sooty mold fungal infection

¹Nicole Casuso, Doctor of Plant Medicine Student, University of Florida & Hugh Smith, Assistant Professor, Gulf Coast Research and Education Center, University of Florida

Photo Credits: 1, 2, 3, 4, 5a, 6, and stylet image - Lyle Buss, University of Florida | 5b, infested leaf, and sooty mold images - James Castner | Squash leaf crumple and TYCLV images - Hugh Smith, University of Florida

Silverleaf Whitefly, *Bemisia tabaci*

General Morphology:

What does it look like?

Soft-bodied adults are pale yellow and very minute in size, no more than 1mm long. White wings are held tent-like over their backs and a fine powdery wax gives the whitefly a dusty appearance. Adult females lay pearl white teardrop-shaped eggs that will darken prior to hatching. Juveniles range from a whitish-green to a greenish-yellow color. Nymphs are typically flattened ovals in shape and .25 to .5mm long.

General Biology:

What is its life cycle?

1. Adult females deposit eggs onto a host.
2. Eggs hatch in 6-7 days and 1st instar nymphs crawl around the host and feed.
3. The nymph molts after 2-3 days and undergoes 2 more molts. The legs and antennae are reduced and the nymph becomes sessile.
4. The “red-eyed nymph” or pupal stage is part of the fourth instar that lasts 5-6 days.
5. Winged adults emerge from a T-shaped slit in the exoskeleton of the fourth instar.

Pest Host Range:

Where is it found?

Silverleaf whitefly is a widely distributed pest throughout the tropics and is also popular in greenhouses at more temperate latitudes. This polyphagous species feeds on over 500 species of agricultural and ornamental crops.

Natural Enemies:

Predators & Parasitoids

Predators such as lacewing larvae, lady beetles and larvae, mites, and spiders naturally control silverleaf whitefly populations. Several species of parasitoid wasps have also proven to be effective biological control agents.

Signs & Symptoms:

What type of damage does it cause?

- ❑ Honeydew (a waste product of feeding) collects on the host's surface promoting a sooty mold fungal infection and thus reducing photosynthesis.
- ❑ Direct feeding may also cause seedling death, reduced yields, and decreased product quality (i.e. severe chlorosis, irregular fruit development, etc.).
- ❑ Several viruses and physiological disorders vectored by silverleaf whitefly include: cucurbit yellow stunting disorder virus (CYSDV) tomato yellow leaf curl virus (TYLCV), bean golden mosaic virus (BGMV), and squash silverleaf disorder (SSL).