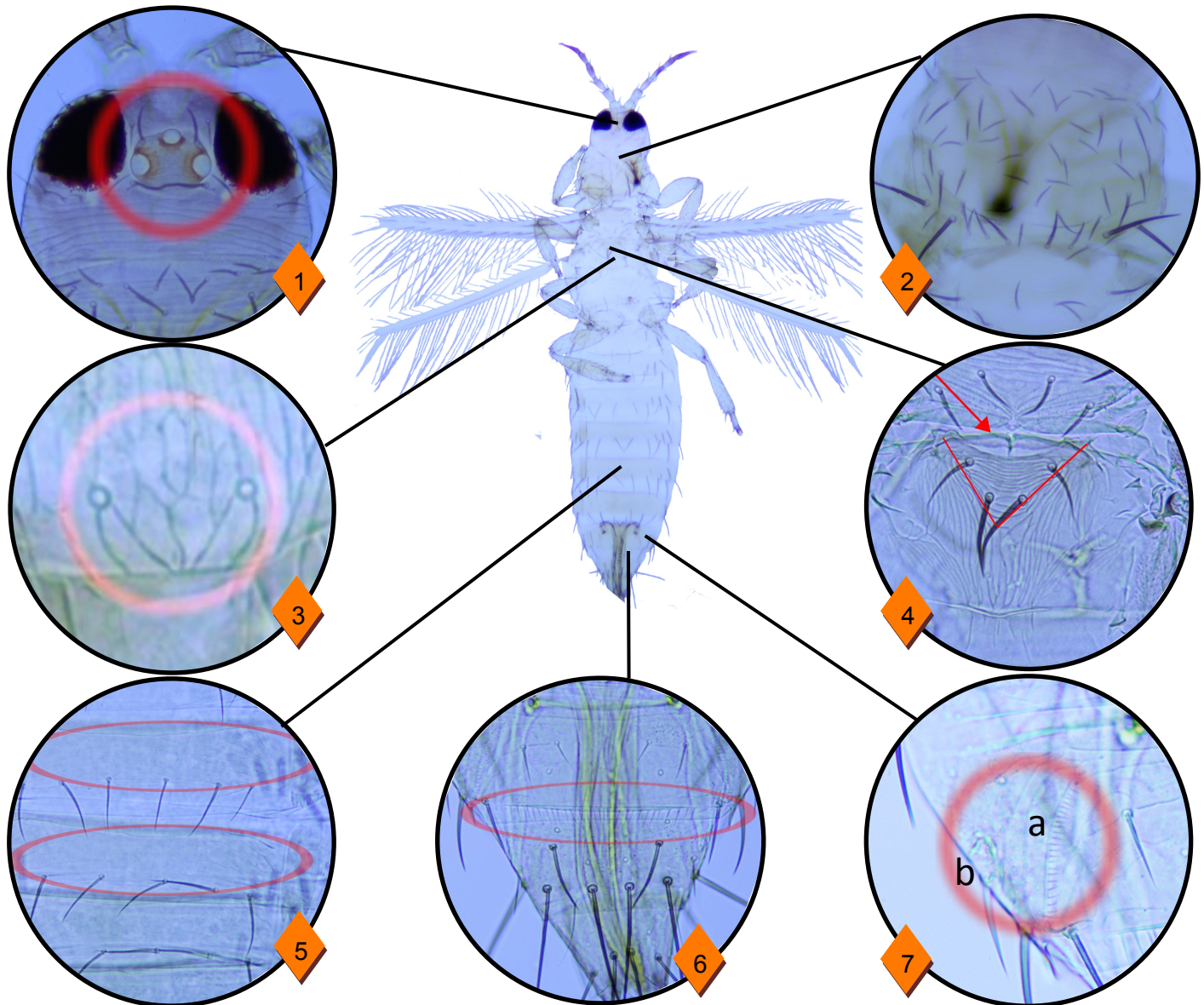


Melon Thrips, *Thrips palmi* Karny

UF | **IFAS Extension**
UNIVERSITY of FLORIDA

Jeffrey D. Cluever and Hugh
A. Smith¹

Morphology



1. Ocellar III setae not arising between posterior ocelli.
2. No major setae on anterior margin of pronotum; four major setae on posterior margin of pronotum.
3. Metanotal campaniform sensilla present.
4. Metanotal setae arising behind anterior margin.
5. Discal setae on sternites absent.
6. Comb on tergite VIII uninterrupted.
7. Ctenidium (a, fringed line) on tergite VIII posterior to spiracle (b).
8. Line of setae with gaps on wing.

Thrips palmi

Appearance

Egg: Eggs are tiny, embedded in the foliage, and unlikely to be seen.

Larvae: Small and pale in color. These are not usually identified.

Pupal Stages: The prepupa is characterized by the presence of wing buds and antennae that are straight out. The pupae also have wing buds but the antennae are pulled back over the head. These are not usually identified.

Adult: Unlike *Frankliniella* spp., no major setae are found on the anterior margin of the pronotum. Also unlike *Frankliniella* spp., the ctenidia (rows of oblique microtrichia) are posterior to the spiracles on tergite VIII. **Other features include:** Ocellar III setae (major pair of setae found near the ocelli) that do not arise between the posterior ocelli. Presence of metanotal campaniform sensilla (sensory structures appearing as two small dots). Major setae on metanotum arise behind the anterior margin. Absence discal setae (setae arising in the middle of a sternite). Microtrichial comb on tergite VIII (row of hairs arising from posterior margin) complete.

Biology: Life Cycle

T. palmi exhibits all the life stages common to terebrantian thrips: the egg, larva I, larva II, prepupa, pupa, and the adult. The length of each life stage and number of eggs laid per female varies with temperature and host plant. On eggplant leaves at 25° C (77 °F) it takes 14.13 days to develop from egg to adult. The individual stages are as follows:

1. The egg hatches 5.0 days after the female inserts it into the foliage.
2. The larva I and larva II last 1.7 and 3.5 days respectively.
3. At the end of the larval II stage the thrips drops to the ground. The quiescent prepupal and pupal stages last 4.1 days.

At this temperature a female can lay 64.2 eggs in her lifetime.

Range

Host: Wide host range. This includes bean, cabbage, cucumber, eggplant, lettuce, pepper, potato, pumpkin, squash, tomato, and watermelon. Rarely seen on watermelon. **Note:** *T. palmi* is named for Dr. B.T. Palm. This species does not infest palms.

Origin: Southeast Asia

Widespread globally in warmer regions. **United States:** Hawaii, Florida, and Wisconsin. **Florida:** More prevalent in the central and southern portions.

Signs and Symptoms: Types of Injury

Melon thrips transmits *Calla lily chlorotic spot virus* (CCSV), *Groundnut bud necrosis virus* (GBNV), *Melon yellow spot virus* (MYSV), *Tomato spotted wilt virus* (TSWV), and *Watermelon silver mottle virus* (WSMoV).

This species is primarily a foliage feeder (except in pepper and eggplant where flowers are more preferred). Feeding on the leaves results in yellowing followed by death of leaf. Feeding can cause terminal growth to be discolored, stunted, and malformed. Feeding on fruit may cause scarring. Feeding may also cause the fruit to be malformed.