Identification guide for the short-spined thrips *Thrips parvispinus* in Florida

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Thrips parvispinus
General Distribution

1.Tropical species first described from Thailand

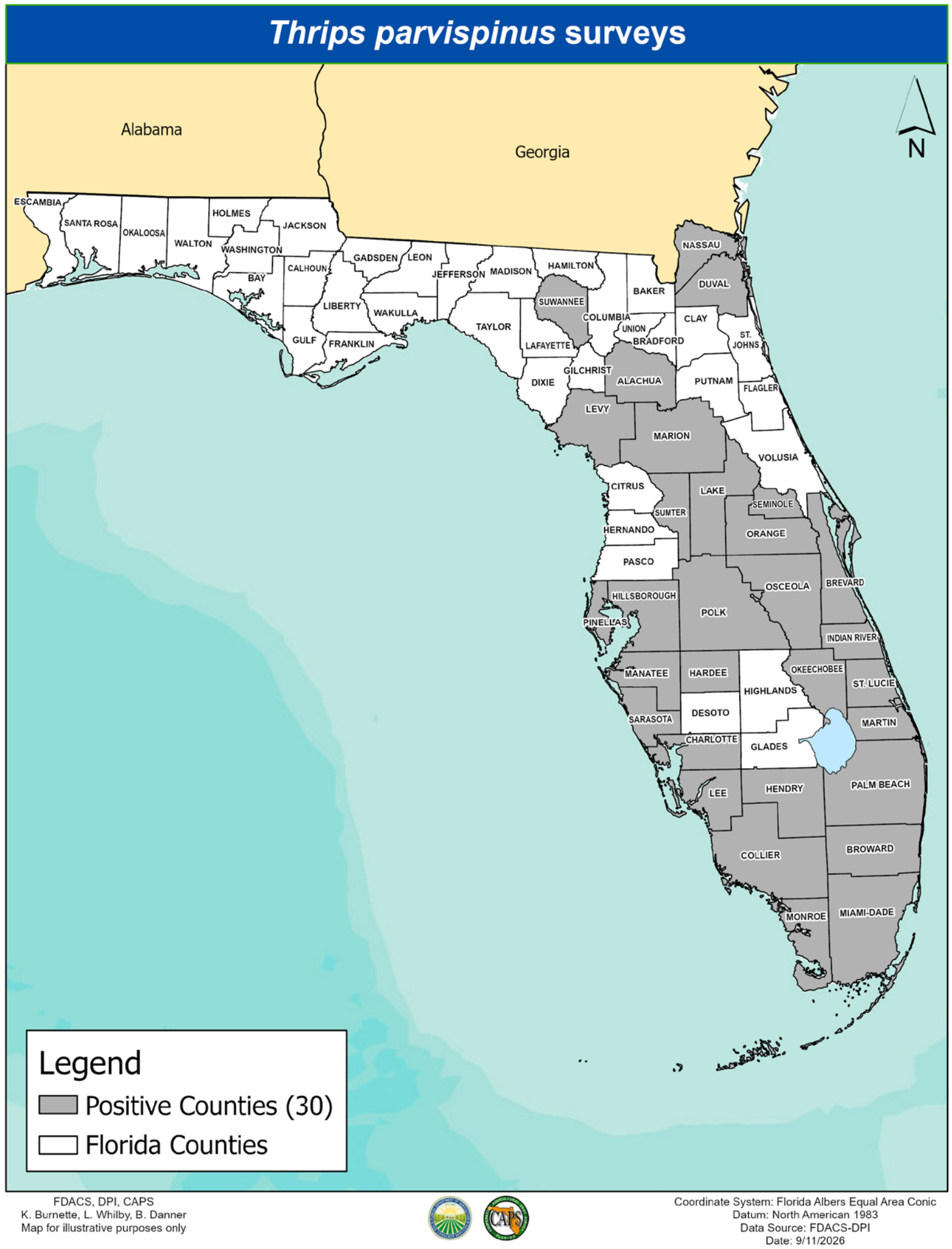
2. Now recorded from more than 30 countries in Asia, Europe, Africa, Australia, Hawaii, and the Americas

3. In the **Americas**, first reported in 2020 in Barbados and Florida, but now it is also known from Costa Rica, Puerto Rico, Mexico and Canada.

Current Florida Host and County Distribution (August 2026)

Host Plants in Florida

1. Adenium sp.
2. Allamanda sp.
3. Anthurium
4. Asclepias curassavica
5. Callinadra
6. Caspicum annuum
7. Citrus
8. Codiaeum
9. Ficus benjamina
10. Gardenia
11. Hibiscus
12. Hoya
13. Impatiens
14. Ipomoea
15. Ixora
16. Jasminum
17. Laportea
18. Lobularia
19. Mandevilla
20. Passiflora
21. Phaseolus
22. Phlox
23. Portulaca
24. Rosa
25. Ruellia
16. Schefflera
27. Solanum
28. Tabernaemontana
29. Tagetes
30. Vigna
31. Wrightia



FDACS, DPI, CAPS
K. Burnette, L. Whilby, B. Danner
Map for illustrative purposes only

Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: FDACS-DPI
Date: 9/11/2026

Identification Issues

1. Species is well characterized but characters used to confirm identification are minute

2. Identification problems are really problems about access to appropriate magnification power

3. This talk is about the identification confidence we can expect at three levels of magnification:
    - In the field with naked eye, phone or hand lens

    - In the office/lab with a dissecting (stereo) microscope

    - In the office/lab with a compound microscope

Female

Male

Field Identification

1. Identification in the field with naked eye, phone or hand lens

    - Naked eye— No certainty at all! unless you have eagle eyes, it is very difficult or impossible to make out the color pattern

Field Identification

1. Identification in the field with naked eye, phone or hand lens

    - Hand lens— No certainty but it may be possible to identify female suspects

Identification with Dissecting Microscope

2. Identification in office or lab with dissecting microscope

- Fine detail characters increase certainty of recognizing target

- *Thrips parvispinus* is the only *Thrips* species in Florida with:
  a. Prothorax with macrosetae only on posterior margin

  b. Forewings black, with clear base

  c. Fifth antennal segment with basal half light and distal half dark

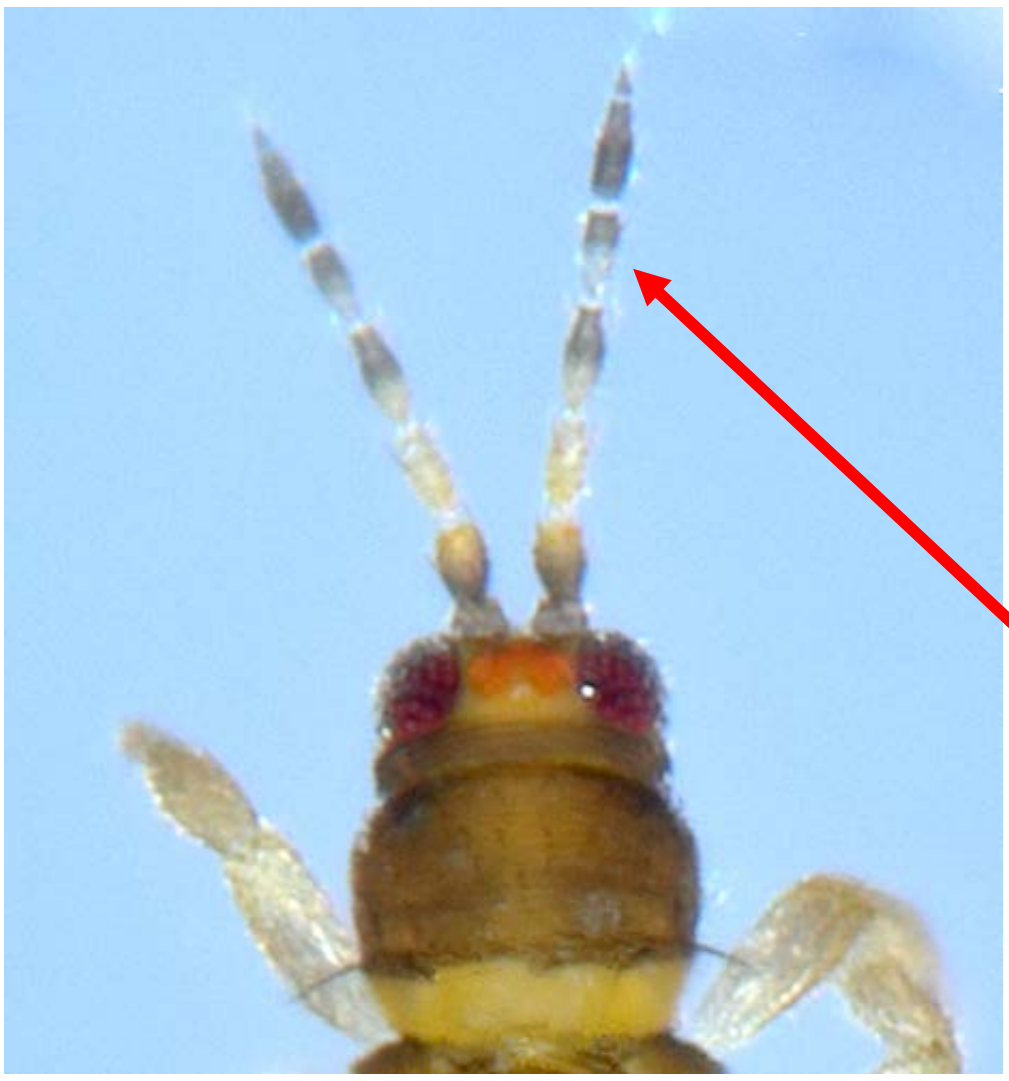
  d. Females with dark abdomen and yellowish or light brown thorax

  e. Anterior vein of forewing with uninterrupted row of setae

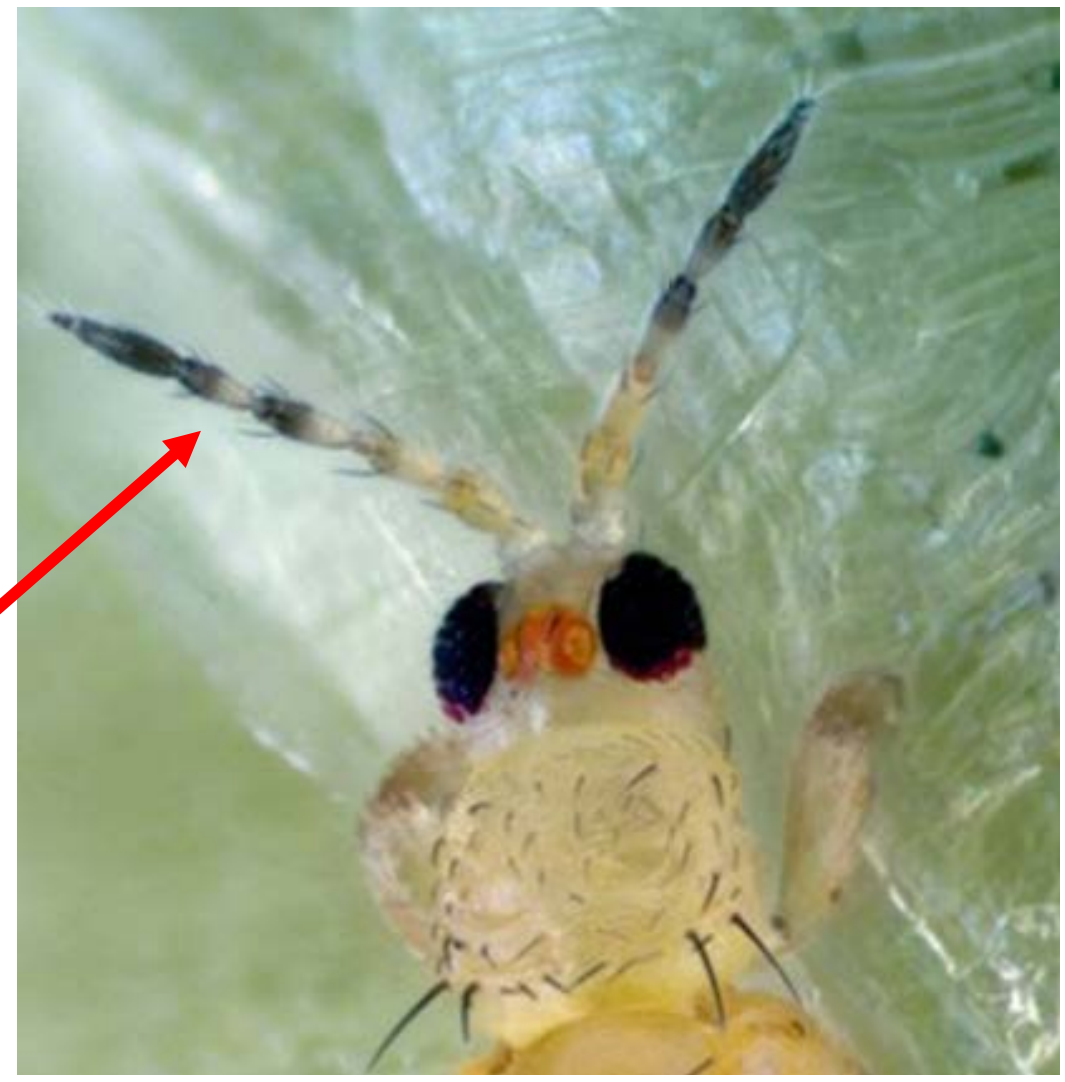
Identification with Dissecting Microscope

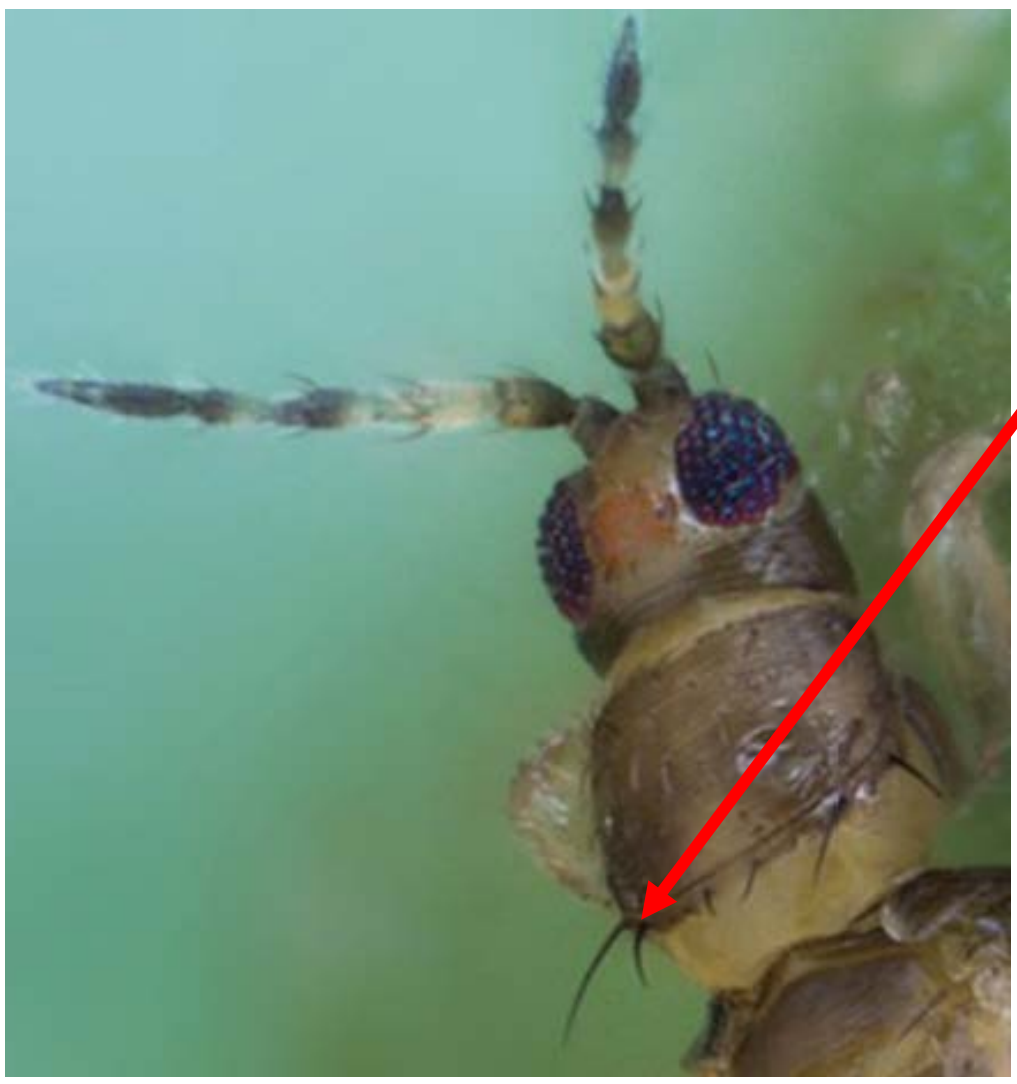
2. Identification in office or lab with dissecting microscope

- Fifth antennal segment color
- Number macrosetae on prothorax

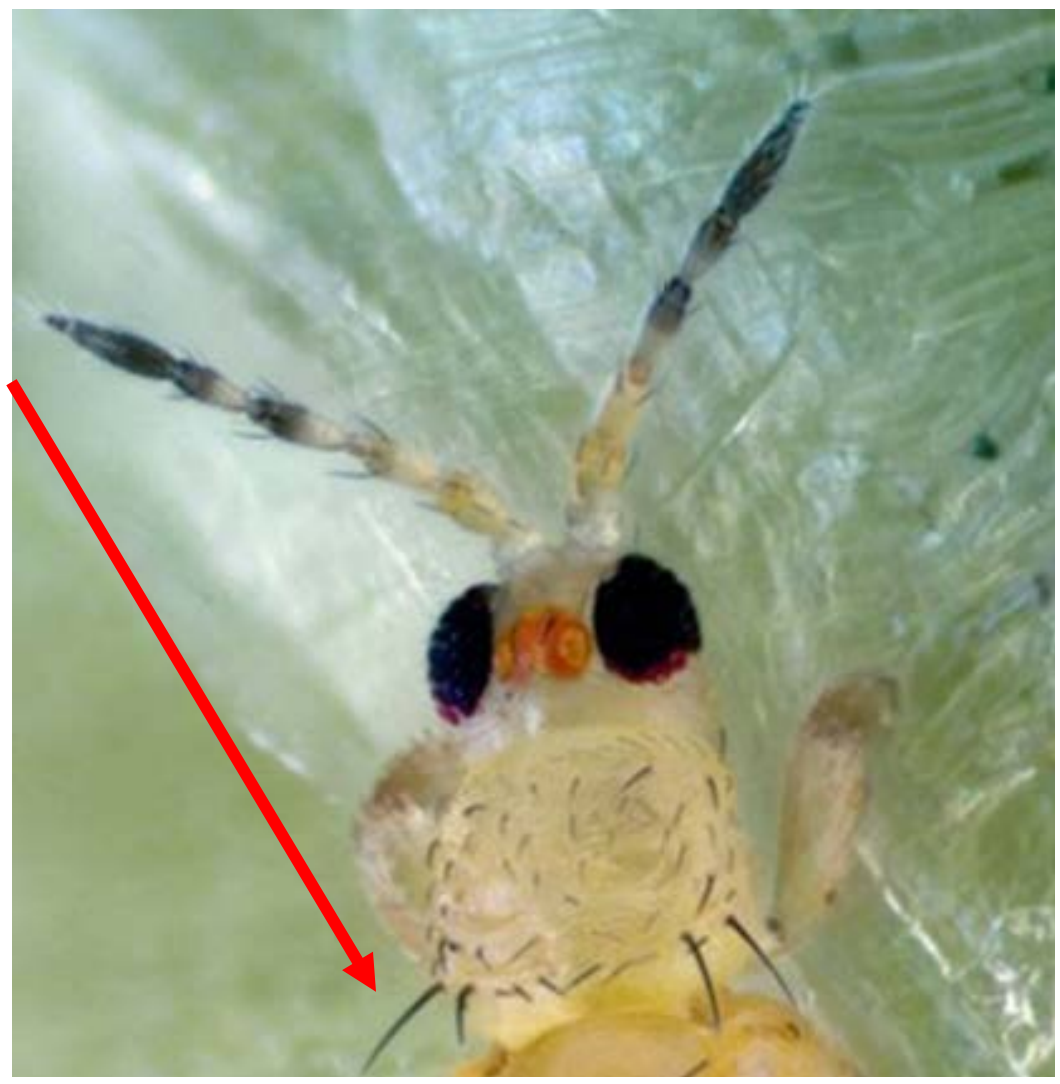


Ant. 5 distal half dark & base light colored





Prothorax with 2 posterior macrosetae on each side



Identification with Dissecting Microscope

2. Identification in office or lab with dissecting microscope

- Color contrast between thorax and abdomen

Thorax yellowish or light brown

Abdomen black or dark brown

Identification with Dissecting Microscope

2. Identification in office or lab with dissecting microscope

- Forewing color

wing base light colored, dark distally

Identification with Dissecting Microscope

2. Identification in office or lab with dissecting microscope

- An uninterrupted row of setae on anterior vein

Identification with Dissecting Microscope

2. Identification in office or lab with dissecting microscope

- If your specimens displays the 4 characters marked blue you have a positive identification

a. Prothorax with macrosetae only on posterior margin

b. Forewings black, with clear base

c. Fifth antennal segment with basal half light and distal half dark

d. Females with dark abdomen and yellowish or light brown thorax

e. Anterior vein of forewing with uninterrupted row of setae

Identification with Dissecting Microscope

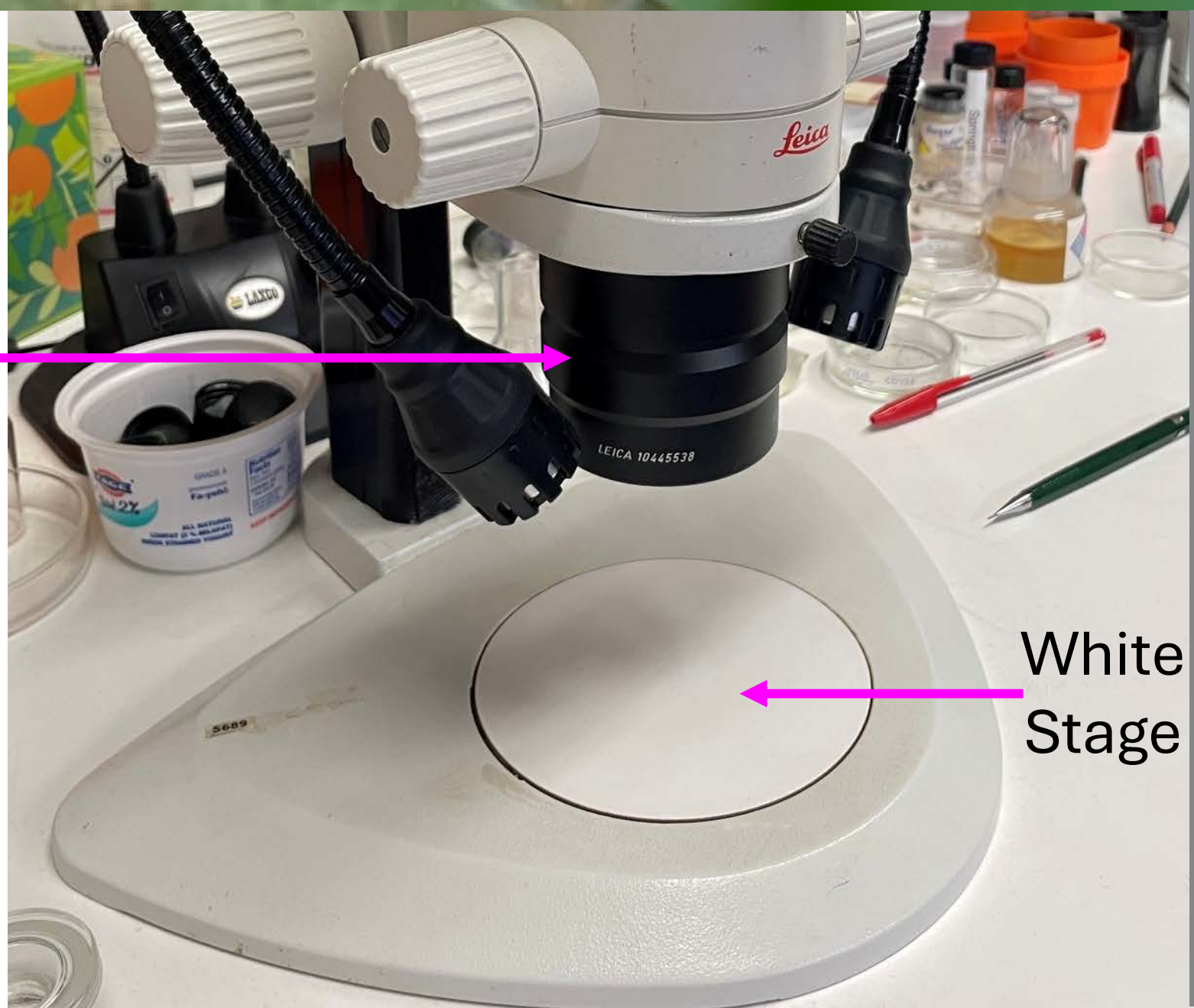
2. Identification in office or lab with dissecting microscope

- An uninterrupted row of setae on anterior vein

Identification with Dissecting Microscope

2. Identification in office or lab with dissecting microscope

- An uninterrupted row of setae on anterior vein



40x lens

White Stage

Confusing Species

- Several species collected on ornamentals may be confused with FEMALE parvispinus.

- Two yellow species may be confused with MALE *parvispinus*

Thrips orientalis

Thrips hawaiiens/ florum

Echinothrips americanus

Pictorial Key to Rapid Preliminary Identification of *Thrips parvispinus*

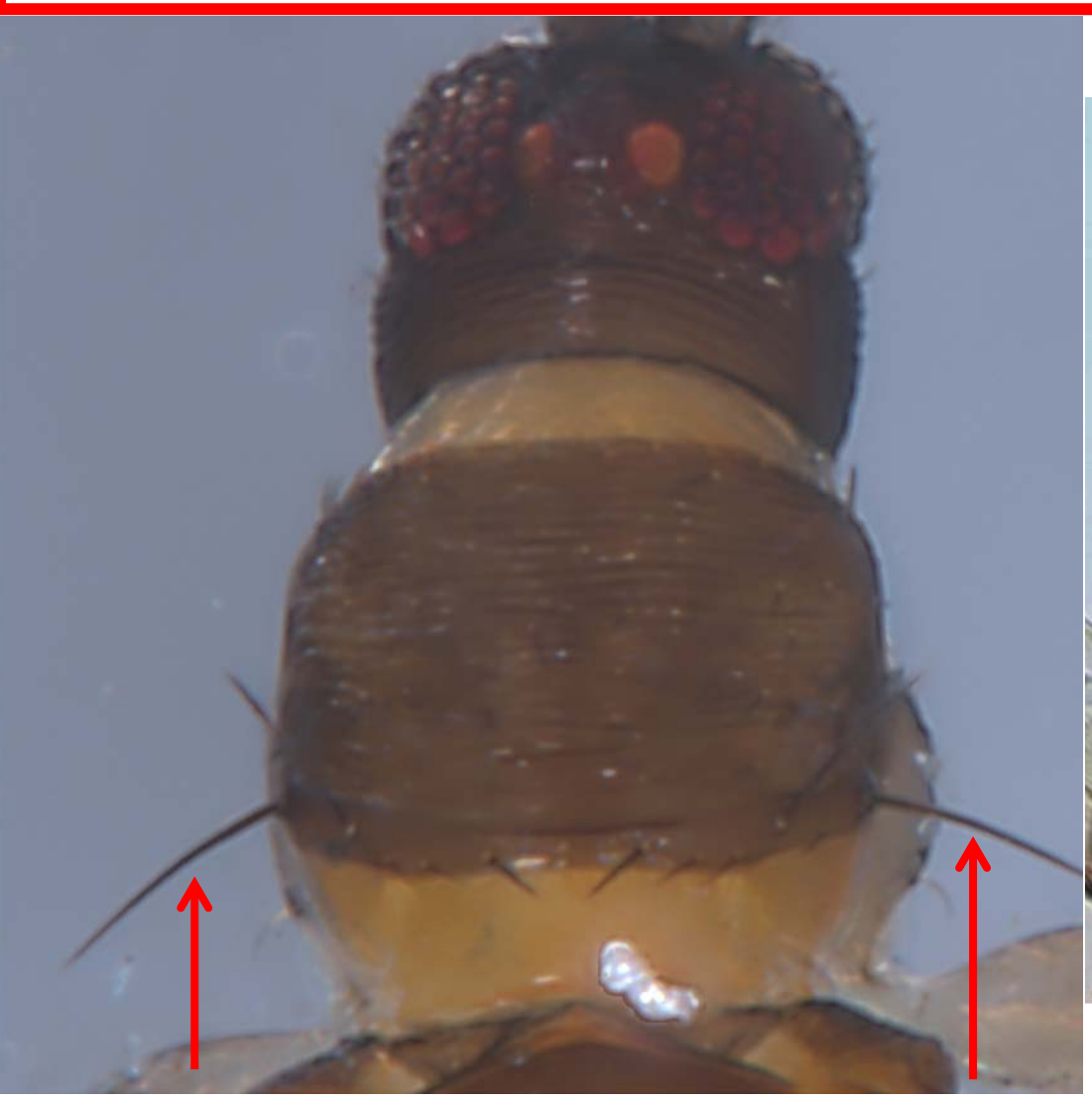
Abdomen Dorsally Brown/Black or Mostly Yellow

Antennal Segments 2-3 dark → **None Target Species**

Prothoracic Macrosetae

Only On Posterior Margin

On Anterior and Posterior Margins



Genus *THRIPS*

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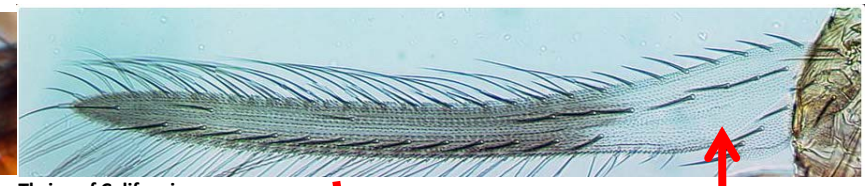
Genus *FRANKLINIELLA* → **None Target Species**

Pictorial Key to Rapid Preliminary Identification of *Thrips parvispinus*

Forewing Color

Evenly Dusky	Basally Light, Distally Dusky

Thrips of California

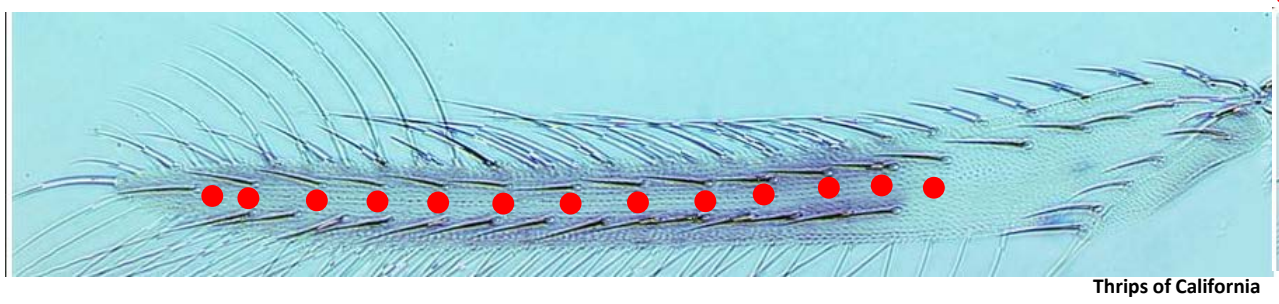


Thrips of California

Thrips orientalis

Forewing, Number Distal Setae on Anterior Vein

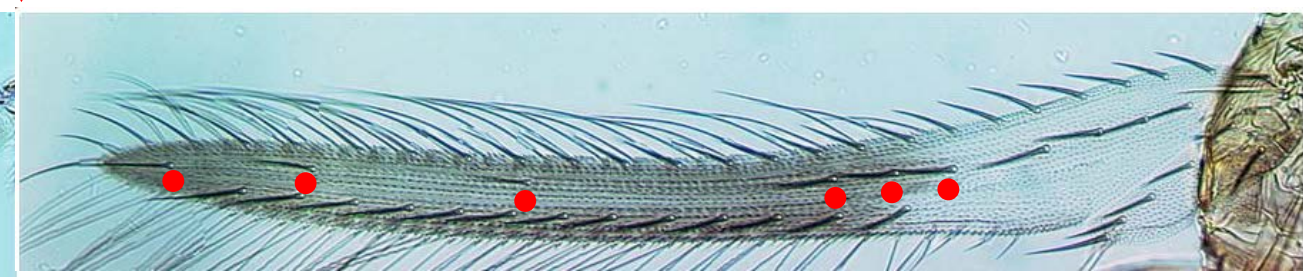
12 or more setae



Thrips of California

Thrips parvispinus

7 setae or fewer



Thrips of California

Thrips hawaiiensis/florum

Confusing Species

- Two yellow species that may be confused with MALE *parvispinus*

Frankliniella bispinosa

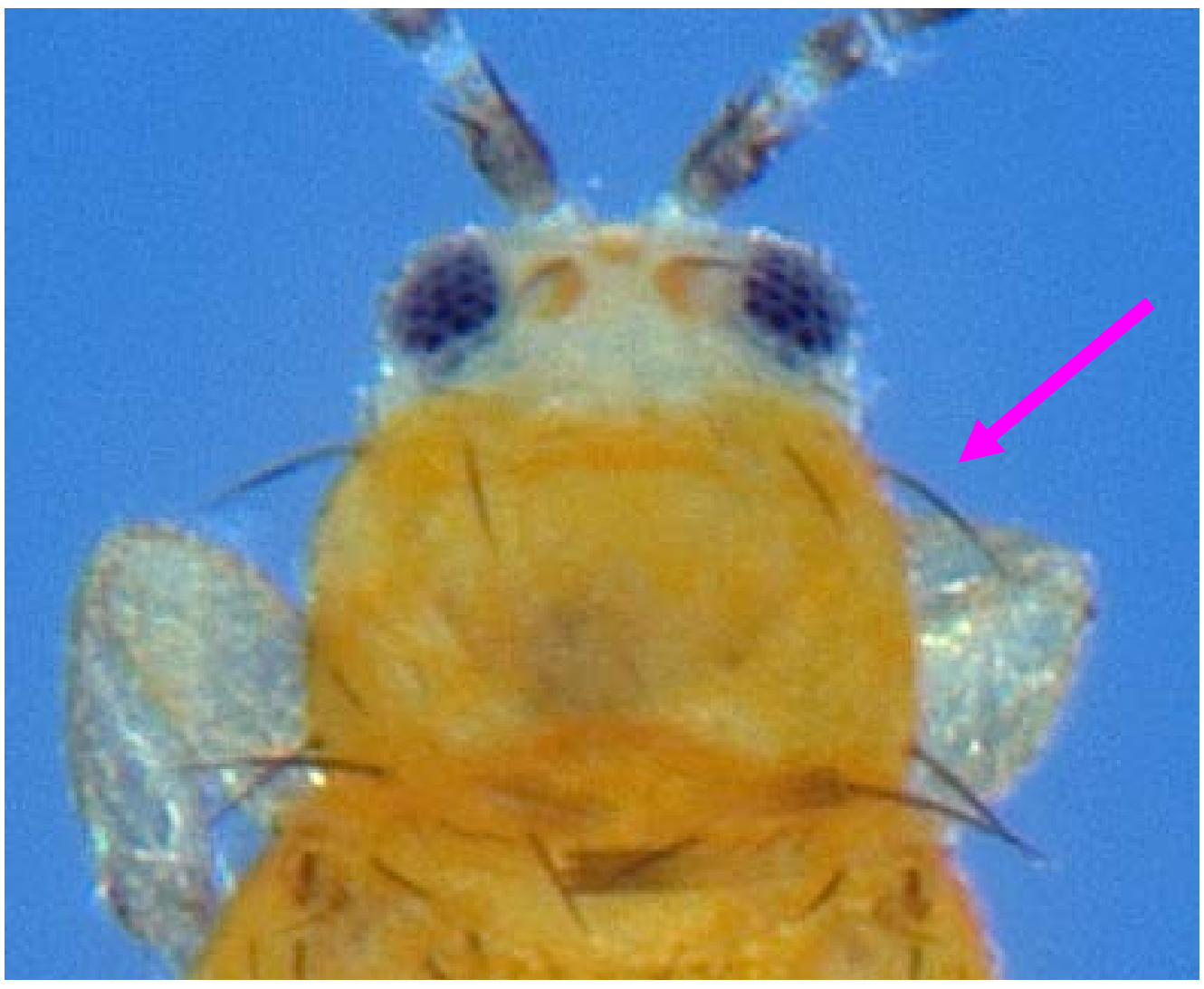
Thrips palmi

Confusing Species

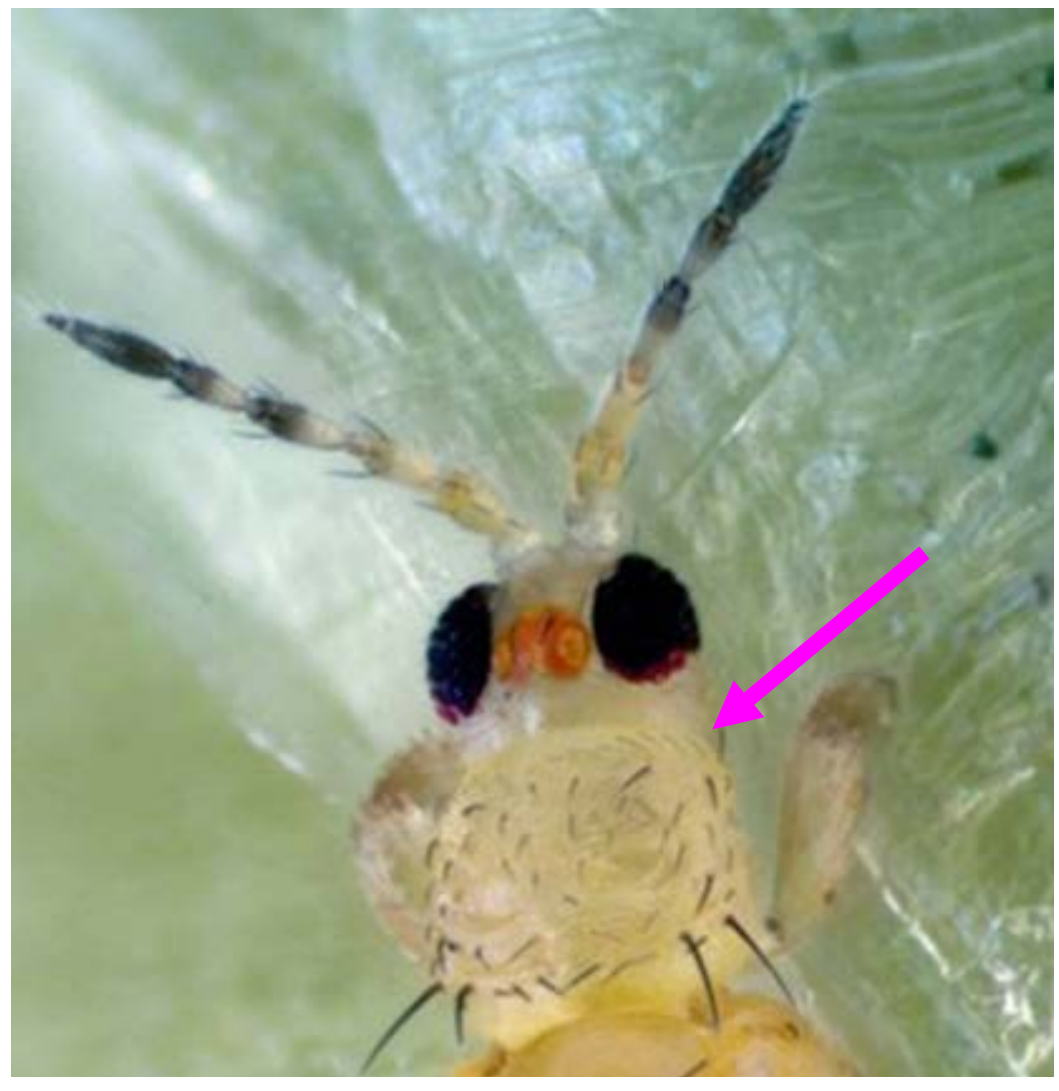
- Differences between Florida flower thrips and MALE *T. parvispinus*

a. FFT has anterior macrosetae on the prothorax; in T. parvispinus these setae are not present

b. If the individual has an ovipositor, it is female……



Florida Flower Thrips
Frankliniella bispinosa



Thrips parvispinus

Confusing Species

- Two yellow species that may be confused with MALE *parvispinus*

Melon thrips

Thrips palmi

Thrips parvispinus

Identification with Compound Microscope

3. Identification in office or lab with compound microscope

- Only confusing species at this level of magnification power are *Thrips hawaiiensis* and *Thrips florum*

- Unique combination of characters in *T. parvispinus* are:

a. Metathorax sculpturing reticulated

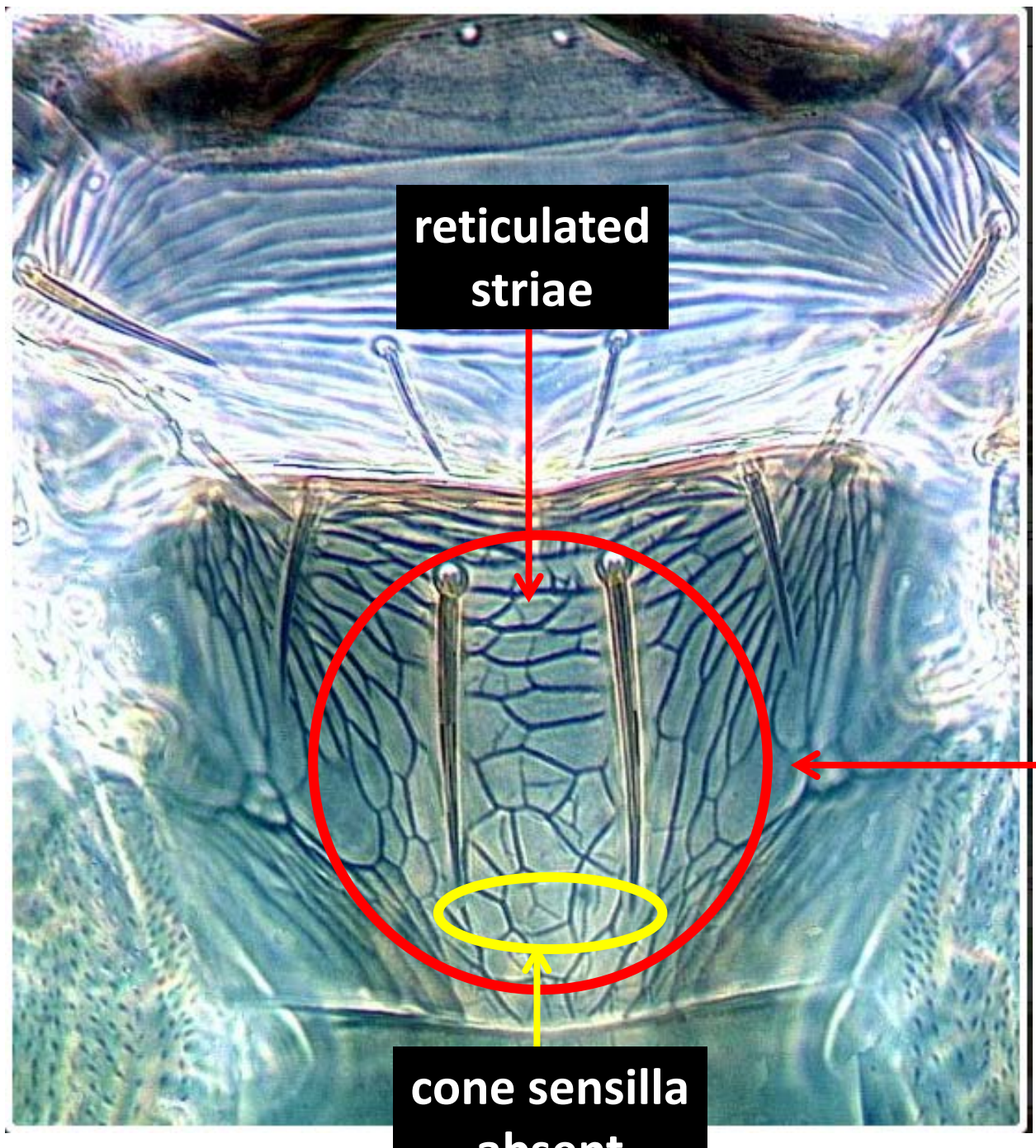
c. Metathorax without campaniform sensilla

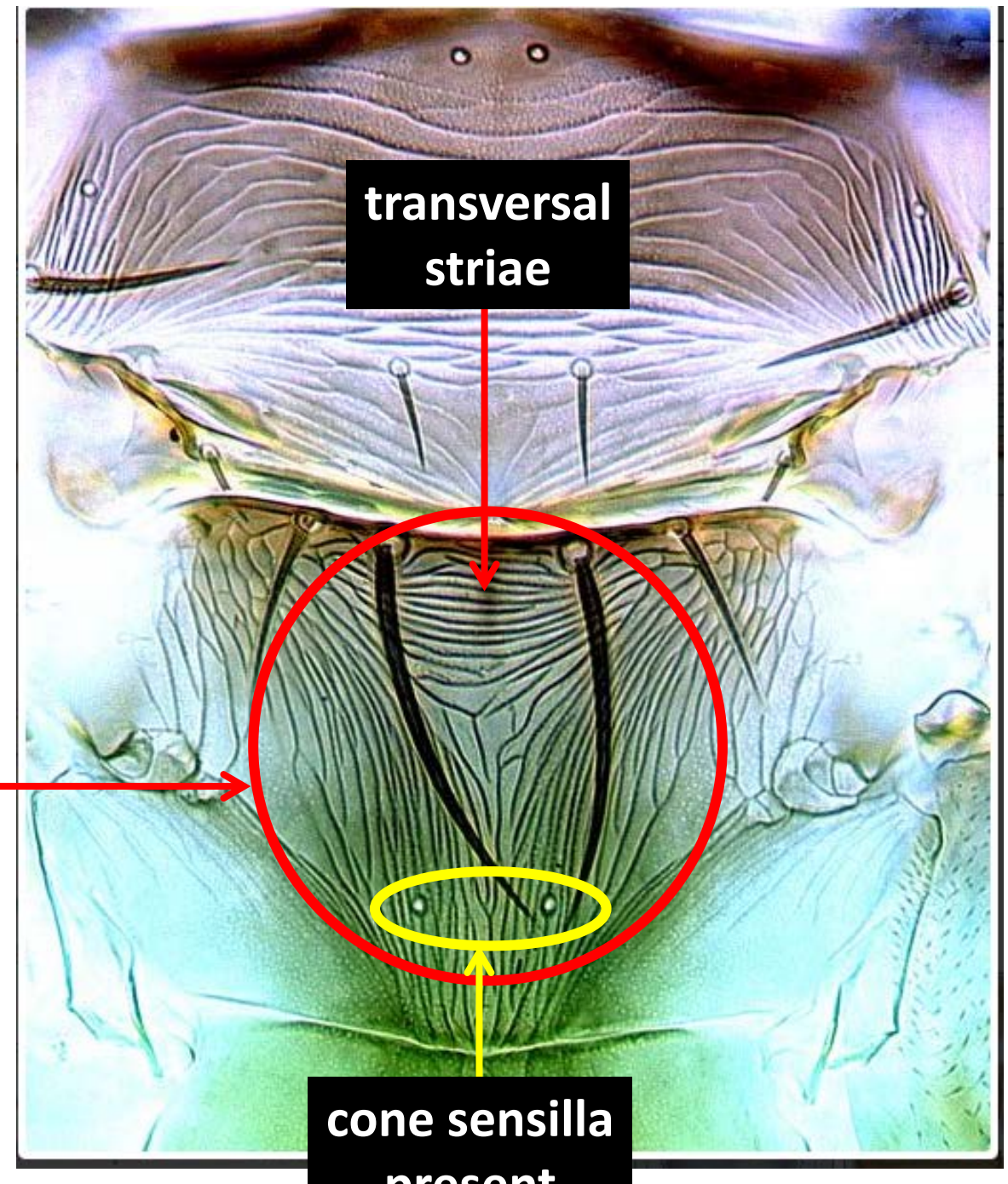
b. Anterior vein of forewing with uninterrupted row of setae

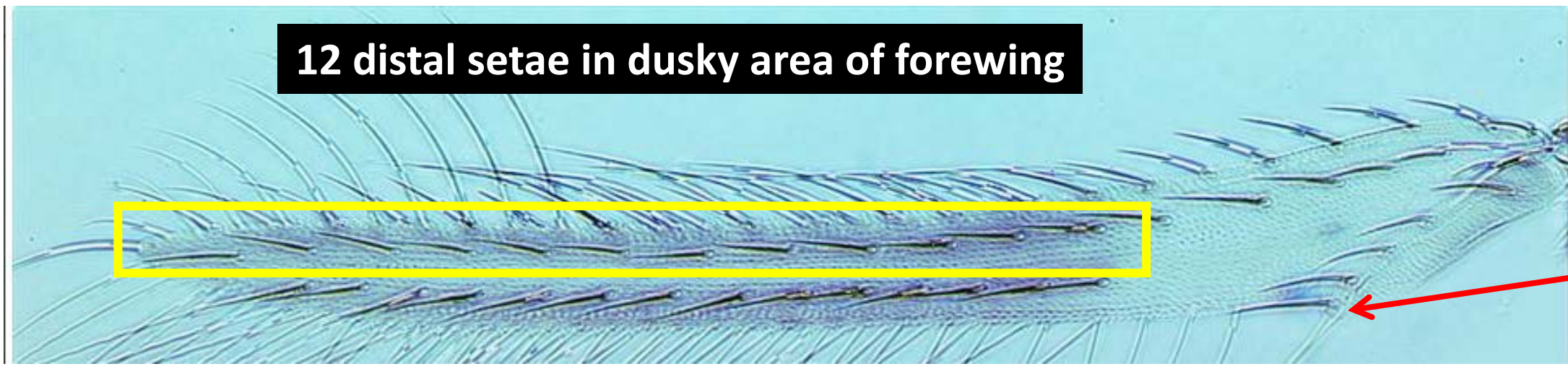
d. Forewing scale with apical seta longest subapical

parvispinus

hawaiiensis/florum

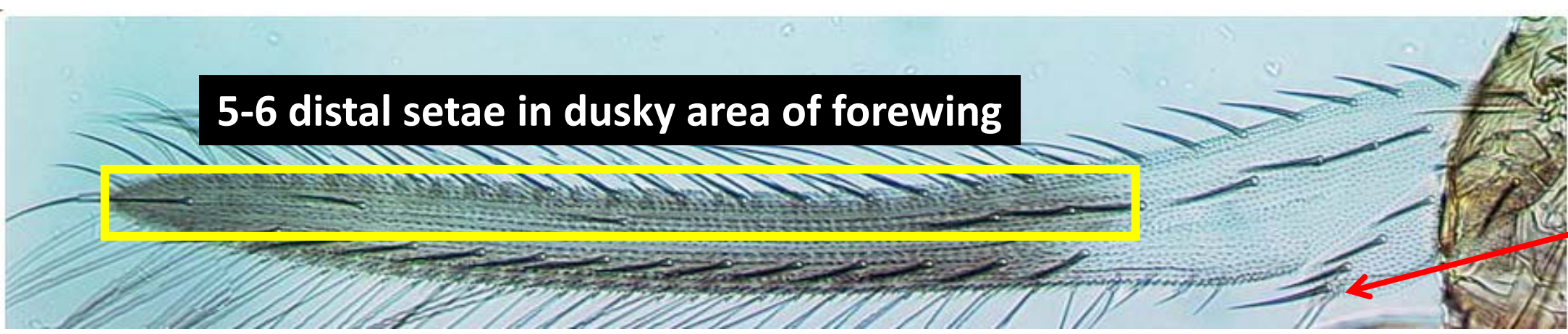






parvispinus

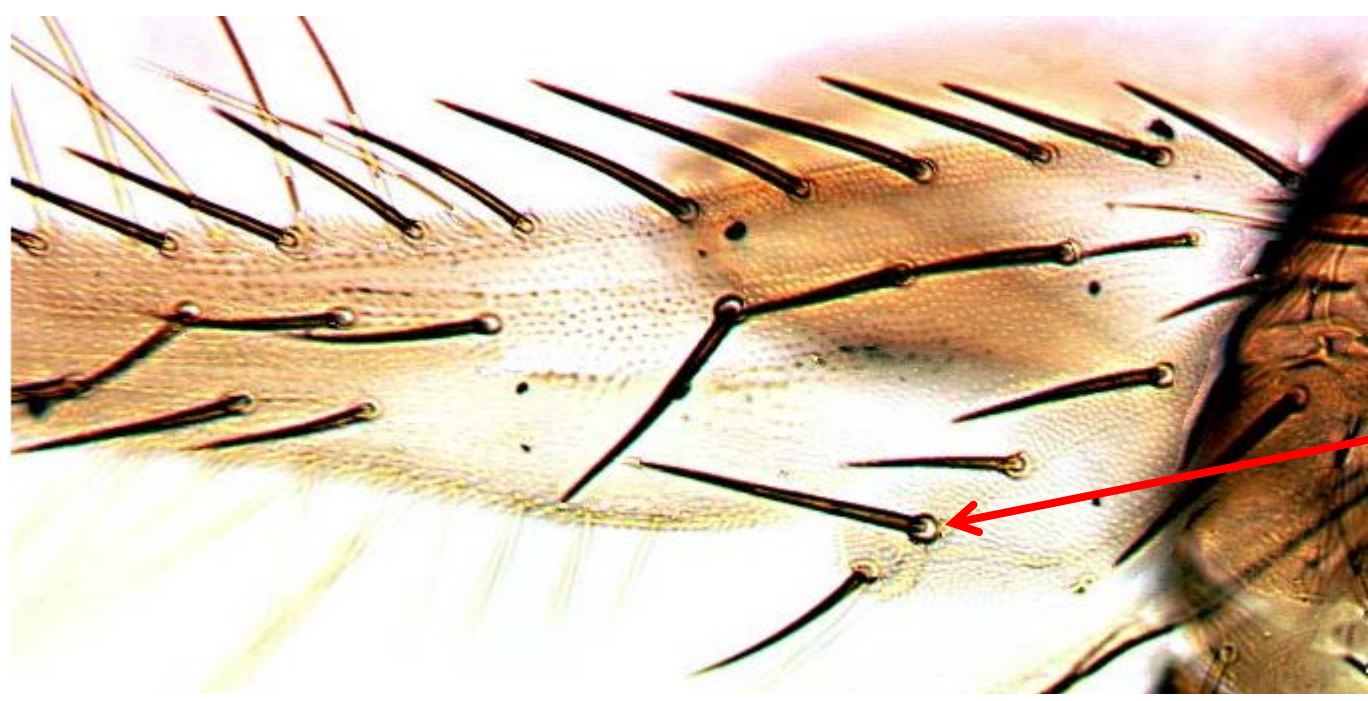
apical seta forewing scale longest



hawaiiensis

apical seta forewing scale longest

All Photographs taken from Thrips of California



florum

subapical seta forewing scale longest

Conclusion

1. Identification problems are really problems about access to appropriate magnification power

   - **In the field with naked eye, phone or hand lens**
     *NO certainty; Identify suspects with phone, or better hand lens

- **In the office/lab with a dissecting (stereo) microscope**
  *Positive identification possible if appropriate combination of characters is visible

- **In the office/lab with a compound microscope**
  *Positive identification easy on properly cleared and mounted individuals

2. On ornamentals the species most easily confused with *T. parvispinus* are:

Females	**Males**
•Thrips florum	**•Frankliniella bispinosa**
•Thrips hawaiiensis	**•Thrips palmi**
•Thrips orientalis	