

California Pest Rating Proposal
***Thrips maculicollis* (Hood): a thrips**
Thysanoptera: Thripidae
Current Rating: Q
Proposed Rating: A

Comment Period: 02/18/2022 – 04/04/2022

Initiating Event:

Thrips maculicollis is occasionally intercepted on cut flowers and foliage from Hawaii. It has not been rated. A pest rating proposal is needed.

History & Status:

Background: Hosts are reported to include plants in three families: **Apocynaceae:** unidentified (in flowers); **Cunoniaceae:** unidentified (in flowers); **Loganiaceae:** *Fagraea berteriana* (in flowers), *Fagraea schechteri* (in flowers) (Mound et al., 2017; Mound and Masumoto, 2005). It was also found on French bean and zucchini in Australia but at low numbers; these occurrences were considered transient and no crop damage was noted (Healey, 2016). It has been intercepted on *Leucospermum cordifolium* and *Protea* sp. (both Proteaceae), but it is not known if these are actual hosts (California Department of Food and Agriculture). No reports were found of *T. maculicollis* causing impacts to any plants.

Worldwide Distribution: **Oceania:** Australia, Hawaii, New Caledonia (Bournier and Mound, 2000; Mound et al., 2017; Mound and Masumoto, 2005).

Official Control: *Thrips maculicollis* is considered reportable by the USDA.

California Distribution: *Thrips maculicollis* is not known to be established in California.

California Interceptions: *Thrips maculicollis* is occasionally intercepted on cut flowers and foliage from Hawaii (California Department of Food and Agriculture).

The risk *Thrips maculicollis* poses to California is evaluated below.

Consequences of Introduction:

- 1) **Climate/Host Interaction:** *Thrips maculicollis* is only reported from areas with a tropical climate. There is a significant amount of uncertainty regarding hosts. However, there are native Apocynaceae present in California, and if the crop plants listed above are in fact hosts, there may be suitable hosts present over much of California. Climate, however, would likely limit the distribution of this species to southern and coastal areas. Therefore, it receives a **Medium (2)** in this category.
 - Low (1) Not likely to establish in California; or likely to establish in very limited areas.
 - **Medium (2) may be able to establish in a larger but limited part of California.**
 - High (3) likely to establish a widespread distribution in California.

- 2) **Known Pest Host Range:** Literature suggests that *T. maculicollis* feeds on plants in three families, although plants in other families may also be hosts (not necessarily reproductive hosts). Therefore, it receives a **Medium (2)** in this category.
 - Low (1) has a very limited host range.
 - **Medium (2) has a moderate host range.**
 - High (3) has a wide host range.

- 3) **Pest Reproductive and Dispersal Potential:** *Thrips maculicollis* can be moved with infested plant material. Therefore, it receives a **Medium (2)** in this category.
- Low (1) does not have high reproductive or dispersal potential.
 - **Medium (2) has either high reproductive or dispersal potential.**
 - High (3) has both high reproduction and dispersal potential.
- 4) **Economic Impact.** *Thrips maculicollis* is not reported to cause damage to plants or to have any economic impacts. It is considered reportable by the United States Department of Agriculture, and its presence in California could trigger loss of domestic markets. Therefore, *T. maculicollis* receives a **Low (1)** in this category.

Economic Impact: C

- A. The pest could lower crop yield.
- B. The pest could lower crop value (includes increasing crop production costs).
- C. The pest could trigger the loss of markets (includes quarantines).**
- D. The pest could negatively change normal cultural practices.
- E. The pest can vector, or is vectored, by another pestiferous organism.
- F. The organism is injurious or poisonous to agriculturally important animals.
- G. The organism can interfere with the delivery or supply of water for agricultural uses.

Economic Impact Score: Low

- **Low (1) causes 0 or 1 of these impacts.**
- Medium (2) causes 2 of these impacts.
- High (3) causes 3 or more of these impacts.

- 5) **Environmental Impact.** *Thrips maculicollis* is not reported to damage plants. Infestations of ornamental plants in California could be considered undesirable and may trigger treatments. Therefore, *T. maculipennis* receives a **Medium (2)** in this category.

Environmental Impact: D

- A. The pest could have a significant environmental impact such as lowering biodiversity, disrupting natural communities, or changing ecosystem processes.
- B. The pest could directly affect threatened or endangered species.
- C. The pest could impact threatened or endangered species by disrupting critical habitats.
- D. The pest could trigger additional official or private treatment programs.**
- E. The pest significantly impacts cultural practices, home/urban gardening or ornamental plantings.

Environmental Impact Score: Medium (2)

- Low (1) causes none of the above to occur.
- **Medium (2) causes one of the above to occur.**
- High (3) causes two or more of the above to occur.

Consequences of Introduction to California for *Thrips maculicollis*: Medium (9)

Add up the total score and include it here.

–Low = 5-8 points

–**Medium = 9-12 points**

–High = 13-15 points

- 6) **Post Entry Distribution and Survey Information:** *Thrips maculicollis* is not known to be established in California. It receives a **Not established (0)** in this category.

–**Not established (0) Pest never detected in California, or known only from incursions.**

–Low (-1) Pest has a localized distribution in California, or is established in one suitable climate/host area (region).

–Medium (-2) Pest is widespread in California but not fully established in the endangered area, or pest established in two contiguous suitable climate/host areas.

–High (-3) Pest has fully established in the endangered area, or pest is reported in more than two contiguous or non-contiguous suitable climate/host areas.

Final Score:

7) The final score is the consequences of introduction score minus the post entry distribution and survey information score: Medium (9)

Uncertainty:

There are no ongoing surveys for *T. maculicollis*, so it is possible that this thrips is already established in California. There is significant uncertainty regarding the potential for this thrips to feed on native California plants.

Conclusion and Rating Justification:

Although it appears to be relatively low-risk compared to many other potential pests that have been assessed for California (for example, impacts on plants have not been reported), *Thrips maculicollis* is a thrips that could threaten native California plants and may threaten domestic trade between this and other states. It is not known to be established in California. For these reasons, an “A” rating is justified.

References:

Bournier, J. -P. and Mound, L. 2000. Inventaire commenté des thysanoptères de Nouvelle-Calédonie. Bulletin de la Société Entomologique de France 105:231-240.

California Department of Food and Agriculture. Pest and damage record database. Accessed January 25, 2021:

<https://pdr.cdfa.ca.gov/PDR/pdrmainmenu.aspx>

Healey, M. 2016. The population dynamics of the thrips species assemblages in French bean, lettuce, tomato and zucchini agro-ecosystems. Ph.D. thesis, Central Queensland University, Bundaberg, Australia.

Mound, L. A. and Masumoto, M. 2005. The genus *Thrips* (Thysanoptera, Thripidae) in Australia, New Caledonia and New Zealand. *Zootaxa* 1020:1-64.

Mound, L. A., Matsunaga, J. N., Bushe, B., Hoddle, M. S., and Wells, A. 2017. Adventive Thysanoptera species in the Hawaiian Islands: New records and putative host associations. *Proceedings of the Hawaiian Entomological Society* 49:17-28.

Responsible Party:

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***Comment Period: 02/18/2022 – 04/04/2022**

*NOTE:

You must be registered and logged in to post a comment. If you have registered and have not received the registration confirmation, please contact us at [permits\[@\]cdfa.ca.gov](mailto:permits[@]cdfa.ca.gov).

Comment Format:

- ❖ Comments should refer to the appropriate California Pest Rating Proposal Form subsection(s) being commented on, as shown below.

Example Comment:

Consequences of Introduction: 1. Climate/Host Interaction: [Your comment that relates to “Climate/Host Interaction” here.]

- ❖ Posted comments will not be able to be viewed immediately.
- ❖ Comments may not be posted if they:

Contain inappropriate language which is not germane to the pest rating proposal;

Contains defamatory, false, inaccurate, abusive, obscene, pornographic, sexually oriented, threatening, racially offensive, discriminatory or illegal material;

Violates agency regulations prohibiting sexual harassment or other forms of discrimination;

Violates agency regulations prohibiting workplace violence, including threats.

- ❖ Comments may be edited prior to posting to ensure they are entirely germane.
- ❖ Posted comments shall be those which have been approved in content and posted to the website to be viewed, not just submitted.

Proposed Pest Rating: A