

New record of the Vespiform Thrips as a predator of the Red Spider Mite on tea

A survey on the natural enemies of tea pests, conducted in the tea gardens of Vandiperiyar (Idukki District, Kerala, India), revealed an intriguing new tri-trophic interaction within the tea ecosystem. A predatory insect, the Vespiform Thrips *Franklinothrips vespiformis* Crawford, 1909, (Thysanoptera: Aeolothripidae) collected during the survey was observed preying on the Red Spider Mite, *Oligonychus coffeae* Nietner, 1861, (Acari: Tetranychidae) both in the laboratory and in the field. *O. coffeae* is a major pest of tea that causes considerable crop losses (Muraleedharan et al. 2005). *F. vespiformis* was reared and studied in the laboratory of the UPASI Tea Research Institute,

Valparai, Coimbatore, India, as part of a study on the development of integrated pest and disease management strategies for tea pests, with a special focus on non-chemical control methods. The larvae and adults of *F. vespiformis* rapidly consumed all life stages of the *O. coffeae*.

Numerous surveys conducted in tea ecosystems have documented various predatory thrips preying on a range of tea pests. These natural enemies play a significant role in regulating pest populations and contribute to sustainable pest management in tea plantations.

Being a generalist predator, as demonstrated by the studies of Radhakrishnan & Mahendran



The larva of *Franklinothrips vespiformis* feeding on *Oligonychus coffeae*.
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Table. Earlier record of predatory thrips in tea plantation.

	Predatory thrips	Family	Prey	Reference
1.	<i>Franklinothrips vespiformis</i> Crawford, 1909	Aeolothripidae	<i>Scirtothrips bispinosus</i> Bagnall, 1924	Radhakrishnan & Mahendran 2012; Mahendran & Radhakrishnan 2019.
2.	<i>Franklinothrips vespiformis</i> Crawford, 1909	Aeolothripidae	<i>Scirtothrips dorsalis</i> Hood, 1919	Varatharajan et al 2018.
3.	<i>Aeolothrips collaris</i> Priesner, 1919	Aeolothripidae	<i>Scirtothrips bispinosus</i> Bagnall, 1924 <i>S. dorsalis</i> Hood, 1919 and <i>Thrips hawaiiensis</i> Morgan, 1913	Varatharajan et al. 2018.
4.	<i>Scolothrips asura</i> Ramakrishna & Margabandhu, 1931	Thripidae	<i>Oligonychus coffeae</i> Nietner, 1861	Babu et al.2010.
5.	<i>Scolothrips rhagebianus</i> Priesner, 1950	Thripidae	<i>O. coffeae</i> Nietner, 1861	Babu et al. 2010.

(2012), Mahendran & Radhakrishnan (2019), Varatharajan et al. (2018), and the present investigation, *F. vespiformis* is likely to thrive in the tea ecosystem by preying on various tea pests across different seasons. This predatory thrips deserves further investigation, and detailed data on its biology and predatory potential against *O. coffeae* need to be generated, with the aim of harnessing it for use in biological control programmes in tea plantations.

References

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