

Chilli Thrips (*Scirtothrips dorsalis*): A Landscaper's Guide

Chilli thrips* (*Scirtothrips dorsalis*) are extremely small insects that often go undetected by gardeners and landscapers. However, the damage they cause is apparent and prolonged. Chilli thrips is native to southern Asia. It was first detected on landscape plants in 2005 and 2007 in Florida and Houston, Texas, respectively.

Biology: Adults are less than 2 mm (0.08 inches), pale with dark wings. Immature are also pale in color but without wings. The chilli thrips resembles many other thrips species.



Photos from University of Florida files

Hosts: Chilli thrips feed on more than 100 plants from about 40 different families which include vegetable, fruit and ornamentals.

Table 1: Some Host Plants of Chilli Thrips

Common Name	Species	Family
Acacia	<i>Acacia nilotica</i>	Fabaceae
Asoka Tree	<i>Saraca indica</i>	Fabaceae
Awabuki	<i>Viburnum odoratissimum</i> var <i>Awabuki</i>	Adoxaceae
Banana	<i>Musa sp.</i>	Musaceae
Bay Laurel; Bayleaf	<i>Laurus nobilis</i>	Lauraceae
Castor Bean	<i>Ricinus communis</i>	Euphorbiaceae
Citrus	<i>Citrus sp.</i>	Rutaceae
Dahlia	<i>Dahlia sp.</i>	Asteraceae
Dwarf Schefflera; Arboricola	<i>Schefflera arboricola</i>	Araliaceae
Eggplant	<i>Solanum melongena</i>	Solanaceae
Fig (Edible)	<i>Ficus carica</i>	Moraceae
Firethorn	<i>Pyracantha angustifolia</i>	Rosaceae
Levant cotton	<i>Gossypium herbaceum</i>	Malvaceae
Malay Apple	<i>Syzygium malaccense</i>	Myrtaceae
Mango	<i>Mangifera indica</i>	Anacardiaceae
Maple	<i>Acer sp.</i>	Sapindaceae
Peanut	<i>Arachis hypogaea</i>	Fabaceae

*Chilli thrips is both singular and plural

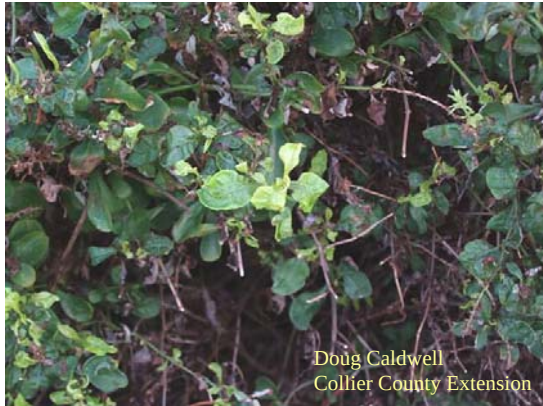
Table 1, cont. Some Host Plants of Chilli Thrips

Common Name	Species	Family
Purple Amaranth	<i>Amaranthus blitum</i>	Amaranthaceae
Pittosporum	<i>Pittosporum tobira</i>	Pittosporaceae
Plumbago	<i>Plumbago auriculata</i>	Plumbaginaceae
Podocarpus	<i>Podocarpus macrophyllus</i>	Podocarpaceae
Rhododendrom	<i>Rhododendron sp.</i>	Ericaceae
Sensitive Plant; Touch-me-not	<i>Mimosa pudica</i>	Fabaceae
Star Jasmine	<i>Jasminum multiflorum</i>	Oleaceae
Strawberry	<i>Fragaria x ananassa</i>	Rosaceae
Tamarind	<i>Tamarindus indica</i>	Fabaceae

Damage: Chilli thrips attacks all the above ground parts of its host plants. It prefers young leaves, buds and fruits. Thrips feed by roughly rubbing (rasping) emerging and new plant parts. The rasping breaks plant tissue that oozes sap on which the insect feeds. Feeding may cause leaves to curl upward and become distorted appearing much like herbicide damage. Feeding also causes leaf, bud, and fruit tissue to turn bronze in color. Newer leaves are often shiny and older ones are frequently scarred from rasping. Infested plants become stunted and severe infestations can result in total defoliation of the host. The symptoms may be confused for a fungal disease. This was particularly true with plumbago before chilli thrips was identified as the culprit responsible for blackened leaves and leafless stems. Despite severe damage on its many hosts, it can be a challenge to collect more than a handful of chilli thrips even from many infested plants.



The bottom row of plants is *Plumbago auriculata* many of which were completely defoliated by chilli thrips and removed shortly thereafter.



Chilli thrips damage to plumbago causes distorted, curled leaves and defoliation.



New damage on Indian Hawthorn



Damage to variegated dwarf schefflera



Old damage on Indian Hawthorn



Damage to dwarf schefflera



Defoliated Indian Hawthorn



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Chilli Thrips affected *Viburnum odoratissimum* var. Awabuki on Captiva Island

Chemical Control: Without a good control strategy, chilli thrips can be a difficult pest to manage. There are a number of insecticides available to control this pest. Foliar applications of systemic insecticides have proven more effective in controlling this pest than soil drenches. Since chilli thrips feed on new growth, it is important to spray when the plant is actively growing. The thrips are generally not present on older damaged leaves. Thus, pruning of infected plant to stimulate new growth may be warranted. Systemic insecticides should be applied as a foliar spray. Resistance management strategies must be used. Such strategies may include, but are not limited to, rotation of products with different modes of action, avoid treatment of successive generations with the same products. On severely infested plants, an initial spray program may include a treatment with Spinosad, followed 7 to 10 days later by a neonicotinoid, and 7 to 10 days afterwards by the application of an organophosphate. Non-chemical alternatives such as beneficial arthropods and various cultural practices are recommended. For the latest on chili thrips go to <http://www.doacs.state.fl.us/pi/enpp/ento/chillithrips.html>

Table 2. Suggested Insecticides for the Control of Chilli Thrips

Active Ingredient	Chemical Family	Brand Names	Use	Application for chilli thrips control
Acephate	Organophosphate	Orthene	Contact and systemic. Six to 9 days residual activity.	Foliar
Acetamiprid	Neonicotinoid	Tristar	Contact and systemic. Long lasting and fast acting.	Foliar
Dinotefuran	Neonicotinoid	Safari	Contact and systemic. Systemic activity is through the roots.	Foliar
Imidacloprid	Neonicotinoid	Merit, Discuss	Contact and stomach poison systemic. Good root systemic activity. Shorter systemic activity when foliar applied.	Foliar
Spinosad	Spinosyn. Derived from soil bacterium	Conserve, Precise	Translaminar**. Stomach poison. Not absorbed from the soil. Quick knock-down.	Foliar
Abamectin	Avermectins. Derived from soil bacterium	Avid	Translaminar. Stomach poison. Not absorbed from the soil. Seven to 10 days residual activity.	Foliar

** Local, systemic activity. Does not move into and through the vascular system.

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