Origin and Distribution

*Scirtothrips dorsalis* was first detected in Highlands County, Florida, in 1991. Sampling indicated *S. dorsalis* had not established a population. Subsequently, *S. dorsalis* was detected on roses from Palm Beach County, Florida in 2005. As of January 2007, *S. dorsalis* have been detected in Florida from Alachua County to Monroe County and South Texas. In the Western Hemisphere, *S. dorsalis* have also been detected in Hawaii and the following locations in the Caribbean: Barbados, Jamaica, St. Lucia, St. Vincent, Tobago and Trinidad.

Host Plants

*Scirtothrips dorsalis* is a polyphagous species and has been documented to attack more than 100 recorded hosts from about 40 different families. As this pest expands its geographical range additional plants are added to its host range. A summary, by crop type, of some North American hosts is available (Table 1).

Description of *Scirtothrips dorsalis*

Field identification of *S. dorsalis* is extremely difficult and often times impossible to differentiate from other thrips in the field. Adults have a pale body with dark wings and are less than 2 mm in length. Immature *S. dorsalis* thrips are pale in color as are the immatures of many other thrips species. Some of the distinguishing characteristics of *S. dorsalis* are as follows: antennae are 8-segmented with segments I–II pale, III–VIII dark; head is pale in color with three pairs of ocellar setae; one pair of ocellar setae occurring between the hind ocelli; one pair of long postocular setae behind the hind ocelli; brown antecostal line and brown area behind line in median ½ of abdominal tergites; abdominal sternites with brown antecostal line near anterior margin; forewings brown, paler distally; abdomen with numerous fine microtrichia.

Life Cycle

The life cycle for *S. dorsalis* is similar to that of western flower thrips. Female *S. dorsalis* insert their eggs inside plant tissue. The eggs hatch in 6–8 days. They pass through two larval stages (1st and 2nd), with the duration varying according to environmental conditions. After the larval stage, they pupate and emerge as adults.

Table 1: Host List by Crop Type

<table>
<thead>
<tr>
<th>Ornamentals</th>
<th>Orchard Crops</th>
<th>Field Crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castor Bean</td>
<td>Banana</td>
<td>Asparagus</td>
</tr>
<tr>
<td>Celosia</td>
<td>Cashew</td>
<td>Bean</td>
</tr>
<tr>
<td>Chrysanthemum</td>
<td>Cherry</td>
<td>Buckwheat</td>
</tr>
<tr>
<td>Coleus</td>
<td>Citrus</td>
<td>Cotton</td>
</tr>
<tr>
<td>Crape myrtle</td>
<td>Cocoa</td>
<td>Grape</td>
</tr>
<tr>
<td>Dahlia</td>
<td>Edible fig</td>
<td>Habanero or</td>
</tr>
<tr>
<td>Euonymus</td>
<td>Ginkgo</td>
<td>scotch bonnet</td>
</tr>
<tr>
<td>Geranium</td>
<td>Japanese apricot</td>
<td>pepper</td>
</tr>
<tr>
<td>Gerber daisy</td>
<td>Japanese persimmon</td>
<td>Japanese pepper</td>
</tr>
<tr>
<td>Camellia</td>
<td>Japanese plum</td>
<td>Levant cotton</td>
</tr>
<tr>
<td>Japanese holly</td>
<td>Mango</td>
<td>Peanut</td>
</tr>
<tr>
<td>Ligustrum</td>
<td>Rubber</td>
<td>Soybean</td>
</tr>
<tr>
<td>Lisianthus</td>
<td></td>
<td>Strawberry</td>
</tr>
<tr>
<td>Maple</td>
<td></td>
<td>Tomato</td>
</tr>
<tr>
<td>Mexican heather</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petunia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pittosporum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poinsettia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhododendron</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snapdragon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweet Basil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbena</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbena</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinnia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Thrips damage on basil, ivy, and rose.*
2nd instars) that last for 6–7 days. During this time they actively feed on the host plant. They then pass through a prepupal (~24 h) and pupal stages (2–3 days) during which time they do not feed. They can complete their life cycle in 14–20 days. The thrips female oviposit 60 to 200 eggs in her lifetime.

**Plant Symptom and Monitoring**

*Scirtothrips dorsalis* is mainly a foliage feeder and unlike western flower thrips does not feed on flower pollen. Young leaves, buds and fruits are preferred, but all above ground parts of its host plants may be attacked. Feeding damage turns tender leaves, buds, and fruits bronze in color. Damaged leaves curl upward and appear distorted. Infested plants become stunted or dwarfed, and leaves with petioles detach from the stem, causing defoliation in some plants. Feeding on buds may cause them to become brittle and drop.

Although not yet identified in U.S. peanut fields *S. dorsalis* is known to attack peanuts in other regions of the world. Feeding on peanuts has been reported to cause dull yellowish-green patches on the upper surface and brown necrotic areas and a silvery sheen forms on the lower surface of the leaf. The leaves become thickened and some curling occurs; in severe infestations, plants are stunted and leaves are blighted.

Damage from *S. dorsalis* has been observed on Sea Island cotton (*Gossypium barbadense* L) in Barbados. Mature cotton leaves showed a distinct bronze appearance on both the top and bottom surfaces. Mature leaves showed slight drying at the margins, while some leaves were completely dried prior to detaching at the petiole from the plant. Young tender foliage on the apical patches was attacked heavily by *S. dorsalis*, causing reduction in size and slight deformation. Young apical leaves were often yellow in coloration, slightly cupped upwards, and in some cases drying along the edges or entirely dry prior to defoliation. It is important to note that these symptoms were described from *G. barbadense* and may not be indicative of damage on Upland Cotton (*G. hirsutum*).

*Scirtothrips dorsalis* have been reported to potentially vector a number of important plant viruses. These include peanut necrosis virus (PBNV), peanut chlorotic fan virus (PCFV), and tobacco streak virus (TSV).

Plants with the symptoms described above should be examined for the presence of thrips. Leaves or buds from symptomatic plants should be collected and placed into a Ziploc bag to prevent the thrips from escaping. Label the bag with collection locality information, host plant, date collected and name of collector. Samples should be sent next-day delivery to an expert for identification.

**Control Recommendations**

Not enough is know about this pest to provide control recommendations. Our best recommendation is to use products registered for your crop and known to be effective against thrips.

For more information on *Scirtothrips dorsalis*, please visit [ncipmc.org/action/alerts/chilithrips.php](https://ncipmc.org/action/alerts/chilithrips.php)

For information about the Pest Alert program, please contact Laura Iles, co-director of the North Central IPM Center, at ljesse@iastate.edu.

**Contributing authors:** Scott Ludwig, Texas Cooperative Extension, Department of Entomology; Lance Osborne, Mid-Florida Research & Education Center, University of Florida, Institute of Food and Agricultural Sciences; Matt Ciomperlik, USDA APHIS PPQ CPHST, Pest Detection Diagnostics and Management Laboratory; Greg Hodges, Florida Department of Agriculture and Consumer Services, Division of Plant Industry. **Photo credits:** Lance Osborne, Mid-Florida Research & Education Center, University of Florida.

This publication was produced and distributed by USDA-NIFA Integrated Pest Management Centers in cooperation with the National Plant Diagnostic Network, APHIS and the Land Grant Universities.

**Crop Protection and Pest Management Programs:**
- Auburn University
- University of Alaska
- Arizona State University
- University of Arkansas
- North Carolina State University
- University of California
- Colorado State University
- University of Connecticut
- University of Delaware
- University of the District of Columbia
- University of Florida
- University of Georgia
- University of Guam
- University of Hawaii
- University of Idaho
- University of Illinois
- Purdue University
- Iowa State University
- Kansas State University
- University of Kentucky
- Louisanna State University
- University of Maine
- University of Maryland
- University of Massachusetts
- Michigan State University
- University of Minnesota
- Mississippi State University
- University of Missouri
- Montana State University
- University of Nebraska
- University of Nevada
- University of New Hampshire
- Rutgers New Mexico State University
- Cornell University
- North Carolina State University
- North Dakota State University
- Ohio State University
- Oklahoma State University
- Oregon State University
- Pennsylvania State University
- Puerto Rico University
- Rhode Island
- Clemson University
- South Dakota State University
- University of Tennessee
- Texas A&M University
- Utah State University
- Vermont University
- The Virgin Islands
- Virginia Polytechnic Institute
- & State University
- Washington State University
- West Virginia University
- West Virginia State University
- Wisconsin University
- Wyoming

This work is supported by the Crop Protection and Pest Management Program (2014-70006-22486) from the USDA National Institute of Food and Agriculture.

March 2019