



Ornamentals and Turf

Department of Entomology Insect Note

NC STATE UNIVERSITY North Carolina Cooperative Extension Service

Insects Found on Yellow Sticky Traps in the Greenhouse

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CAUTION: This information was developed for North Carolina and may not apply to other areas.

As the value of insect scouting is better realized, more growers are using yellow sticky traps in greenhouses to monitor pest populations. It seems worthwhile to discuss the identity of insects which are attracted to the traps. Being able to recognize the most common insects found on sticky traps allows the grower to select an appropriate pest control strategy. For example, were traps to show a sudden increase in numbers of dark flies, the proper control measures could be a) do nothing (shore flies), b) drench the media with an insecticide (fungus gnats) or c) spray the foliage thoroughly (leafminers). Additionally confusing the matter, aphids also have winged forms which are attracted to yellow sticky traps. Were the greenhouse to have an established population of leafminers, then there is a good chance that beneficial tiny parasitic wasps will show up on the traps. Whiteflies are also attracted to these traps. As whiteflies are entangled in the adhesive, they change from snowy white to orange. In this orange condition, whiteflies could be confused with thrips, which also appear orange on the sticky traps.

When insects alight on a yellow sticky trap, they immediately struggle and become ensnared in the adhesive, often in awkward positions. The wings may be free of the adhesive or glued down securely. This is relevant because the wings are very important for identification. Antennae (feelers) on the heads of insects are also useful for identification. Unfortunately, they are very fragile and often break off. The antennae and microscopic hairs of thrips almost always break off in the adhesive. For this reason, it is extremely difficult to remove thrips from sticky traps intact enough for species determination. However, the yellow traps can be used to monitor whether thrips populations are rising or falling.

To be serious about differentiating small insects that are gummed up in adhesive, some sort of magnification is necessary. Any lens from 5X to 10X should suffice. Less or more magnification will hold one disadvantage or another. Keep a hand lens handy. Lenses can be obtained from hobby shops, science stores, book stores, and large retail stores. As you examine the sticky trap, you will do well to have some waterless hand cleanser nearby. The adhesive used on the cards is a polybutene-naphtha inert rubber polymer which remains viscous for long periods. It is difficult to keep the adhesive off your hands and hair as the traps are examined closely.

Aphids

The wings of aphids often settle symmetrically into the adhesive on each side of the body. Sometimes these trapped aphids give birth to several nymphs before they die and their bodies shrivel up. After a few days, aphids look like a tiny version of "road kill", that is, only parts of them can be recognized. Fortunately, the front wings of aphids usually have two parallel veins close to the front edge. The legs and antennae of aphids seem to be long and skinny as well.



Fungus Gnats

Fungus gnats are small, dark, mosquito-like insects with gray wings. The wing has a distinct, Y-shaped vein at the tip. Fungus gnats have relatively long, skinny legs and antennae.

Leafminer Flies

Leafminer flies are shaped like eye gnats. Unless the specimen is completely mired in the adhesive, it is possible to see a conspicuous yellow spot on each side. Leafminer flies have a short antennae and legs which are of moderate length.

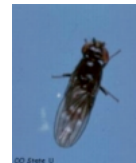


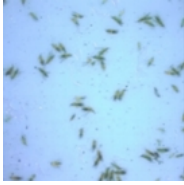
Parasitic Wasps

Parasitic wasps usually have antennae with an elbow like ant antennae, and the forewings have only one vein which zigs toward the front margin and zags away. Typically, there may be a few on each trap. Usually parasitic wasps are more pointed at the rear than flies. If you have lots of tiny parasitic wasps on the traps, something peculiar is happening.

Shore Flies

Shore flies are the largest flies commonly found on sticky traps. (Occasionally a house fly or horse fly may become trapped.) Shore flies are about the size of the fruit flies (vinegar flies) that are attracted to sliced tomatoes or melons in the summer, but shore flies are dark with dark eyes, legs, and wings. The antennae are short and the legs are moderately long.



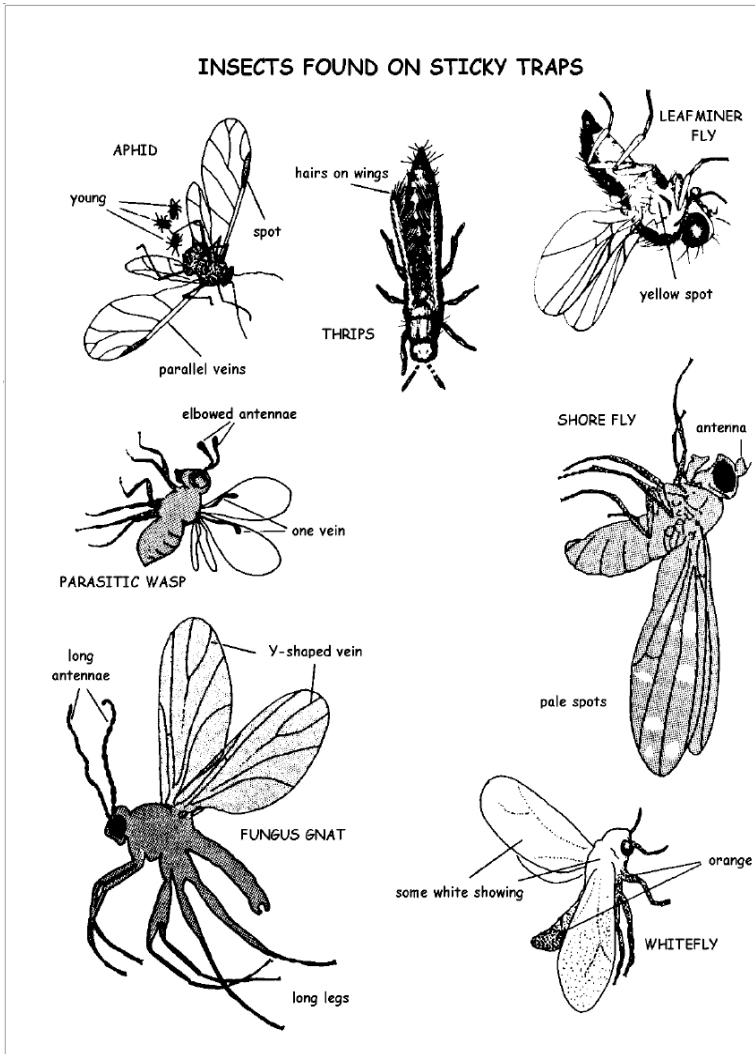


Thrips

Thrips are the tiniest insects you will find in any abundance on sticky traps. Thrips seem to fold their wings over their abdomens before sinking into the adhesive. They seem to accept their fate without struggle. Consequently, most specimens appear spindle-shaped with the wings protruding neatly at the rear. Wings are coated with hairs, but you may have to look closely at several specimens to detect the fringed edges. Often, stocky antennae protrude in a V-shape at the front. These antennae are more fragile than they may appear.

Whiteflies

Whiteflies lose their white, waxy bloom as they are entrapped by the adhesive. The insect shows its true orange color and its fragile nature on the traps. Whiteflies are only a little larger than thrips. Usually enough of a wing or leg or other part protrudes about the adhesive so that the white bloom there reveals the identity of the whitefly.



Miscellaneous

There are many different kinds of insects that may show up on a trap. Entomologists may not be able to identify them either after being smeared with sticky polymers. Species identification of some of the insects may not be possible. Hopefully, this will allow you to keep a watchful eye on any problem before it arises.

References

Baker, James. Insects Found on Yellow Sticky Traps. NC Flower Growers Bull. Vol.30, No. 1, Feb 1986

Other Resources

- [Back to Insect Notes](#)
- [Horticulture Information Leaflets\(HILs\)Plant Disease Notes](#)
- [North Carolina Agricultural Chemicals Manual](#)

For assistance with a specific problem, contact your local [North Carolina Cooperative Extension Service](#).

ENT/ort-131 July, 2003
Revised by Stephen Bambara & Christine Casey from an article by James R. Baker; NC Flower Growers Bull. Vol.30, No. 1, Feb 1986

Web page placed on the web July, 2003 by the [webperson](#).

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