

Gladiolus Thrips, *Thrips simplex* (Morison) (Insecta: Thysanoptera: Thripidae)¹

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The Featured Creatures collection provides in-depth profiles of insects, nematodes, arachnids and other organisms relevant to Florida. These profiles are intended for the use of interested laypersons with some knowledge of biology as well as academic audiences.

Introduction

The gladiolus thrips (Figure 1) causes deformities and discoloration of gladiolus flowers, and corms (bulbs) become soft and are prone to decay.



Figure 1. Adult female gladiolus thrips, *Thrips simplex* (Morison).

Credit: Division of Plant Industry

Synonymy

The gladiolus thrips was first described by Morison (1930) as *Physothrips simplex* from five female specimens collected on carnation flowers, *Dianthus caryophyllus*, from Urrbrae, South Australia. The holotype and one paratype are deposited in the British Museum.

Moulton and Steinweden (1931) described this thrips under the name *Taeniothrips gladioli* from Ontario, Canada, and it was synonymized by Steele (1935). Bhatti (1969) placed *Taeniothrips gladioli* in the genus *Thrips*. Kellie O'Neill of the US National Museum (retired) has suggested that this thrips probably originated in Africa as did its preferred host, gladiolus, *Gladiolus x hortulanus*.

Distribution

Gladiolus thrips is widespread and is found almost everywhere gladiolus are grown in Africa, southern Asia and Japan, Australia, several Pacific Islands, Europe, and North and South America.

In the United States, it is found in almost all states. It was first found in Florida in 1932 (Watson 1941).

Although it cannot overwinter out-of-doors in northern Europe and northern North America, the annual spread of this thrips probably results from its infested corms being shipped to all parts of the country.

Description

Adults emerge milky-white but soon turn brown and begin feeding. The female (Figure 2) is approximately 1.65 mm (0.065 in) long and slightly larger than the male. The antennae are dark brown except for the third segment, which is light brown (Figure 4). The wings have a light transverse band near the base. The first vein of the forewing has seven setae on the distal half (Figure 5).



Figure 2. Ventral view of an adult female gladiolus thrips, *Thrips simplex* (Morison).

Credit: Laurence Mound, Australian National Insect Collection, Commonwealth Scientific and Industrial Research Organisation. Courtesy of <https://www.padil.gov.au/>. Used with permission.

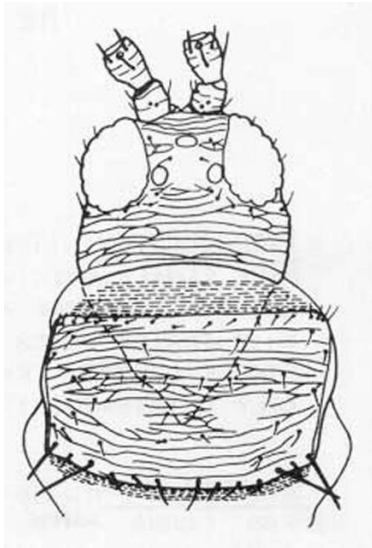


Figure 3. Head and prothorax of the gladiolus thrips, *Thrips simplex* (Morison), showing setae.
Credit: Division of Plant Industry



Figure 4. Antenna of the gladiolus thrips, *Thrips simplex* (Morison), showing the light brown segment.
Credit: Laurence Mound, Australian National Insect Collection, Commonwealth Scientific and Industrial Research Organisation. Courtesy of <https://www.padil.gov.au/>. Used with permission.



Figure 5. Forewing of an adult gladiolus thrips, *Thrips simplex* (Morison). Note the first vein with about seven setae on the distal half.
Credit: Laurence Mound, Australian National Insect Collection, Commonwealth Scientific and Industrial Research Organisation. Courtesy of <https://www.padil.gov.au/>. Used with permission.

The egg is about 0.3 mm (0.12 in) long, opaque white, smooth, and bean shaped. Eggs are deposited in the leaf tissue and corms. The two larval stages are light yellow and are usually found beneath the leaves or bracts. The fully developed second-instar larva is about the size of the adult. The first pupal stage is distinguished from the second pupal stage by having forward projecting antennae and short wing pads. The second pupal stage, which is a quiescent period, has the antennae folded over the back and much longer wing pads (Figure 6).

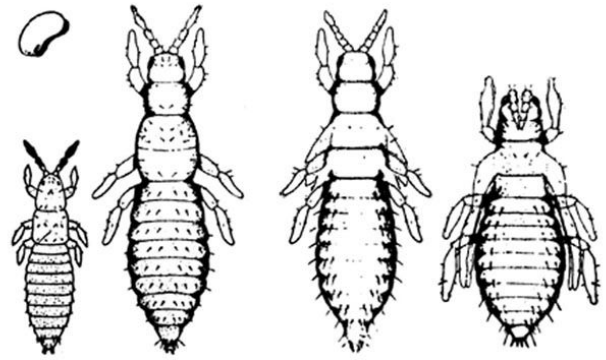


Figure 6. From left to right: egg and first larval stage, second larval stage, first pupal stage, second pupal stage.
Credit: Division of Plant Industry

Host Plants

The thrips feed and reproduce primarily on gladiolus flower spikes and corms; however, it has been recorded from *Philodendron selloum*, *Clitoria* sp., *Rhododendron indicum*, *Calendula* spp., and crow-foot grass, *Eleusine indica*. This thrips has never been reared from these plants, and they cannot be considered valid hosts. It was reported to reproduce on *Tritonia* sp., *Tigridia* sp., and *Kniphofia* sp.



Figure 7. Flower damage caused by feeding of the gladiolus thrips, *Thrips simplex* (Morison).
Credit: Whitney Cranshaw, Colorado State University, <https://www.ipmimages.org/>



Figure 8. Gladiolus bloom damage (on right), produced by gladiolus thrips, *Thrips simplex* (Morison), feeding.
Credit: Division of Plant Industry

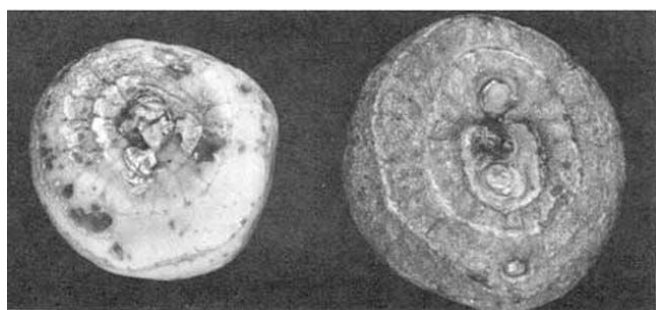


Figure 9. Gladiolus corm (right) showing advanced stage of injury by gladiolus thrips, *Thrips simplex* (Morison).
Credit: Division of Plant Industry

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