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Flowering Bulb Insect Pests

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Flowering Bulb Insect Pests

The most common pests of flowering bulbs in general are aphids, bulb mites and slugs and snails. In addition, thrips, bulb flies, borers and leafrollers among others can also cause problems for certain flowering bulbs. While slugs and snails are not insects, they are major pests of flowering bulbs. For more information on these pests and their control, refer to [HGIC 2357, *Snails & Slugs in the Home Garden*](#).

NOTE: As used in this fact sheet, bulb is used to refer to true bulbs, as well as bulb-like structures such as corms, tubers and rhizomes.

Aphids

Various species of aphids are pests of flowering bulbs. Aphids are small, soft-bodied, pear-shaped insects. Different aphid species vary in color from yellow to green to pink to black. Adult aphids may or may not have wings.

Aphids are typically more of a problem during cool weather in the spring. They have piercing-sucking mouthparts, and are usually found in clusters feeding on new growth. They insert their mouthparts and suck plant sap. Their feeding can cause deformed growth of leaves and flowers. In addition, as they feed they excrete a sugary material called honeydew, which covers the leaves making them sticky. Sooty mold fungi can grow on the honeydew, producing unsightly, dark splotches on the plant surfaces.

Control: Many natural enemies, including ladybird beetles (ladybugs), lacewings, syrphid flies, damsel bugs and wasps, feed on or are parasites of aphids, generally keeping them under control. Insecticides are available, but aphids are difficult to control with chemicals because of their ability to multiply

rapidly. Insecticides also kill the aphids' natural enemies often making the problem more severe. Aphids can be removed with a strong stream of water if applied regularly. When population numbers are low, insecticidal soap can effectively control aphids. Thoroughly spray both leaf surfaces when using insecticidal soap. Other insecticides are available at garden centers. As with any pesticide, read and follow all label directions and precautions.

Bulb Mites

Bulb mites (*Rhizoglyphus* species) are not insects but are more closely related to spiders. Adult bulb mites are tiny, yellowish-white, somewhat transparent, and slow moving. They feed on the bulb, causing weakened plants, stunted, off-color leaves and deformed flowers. Infested bulbs often develop soft dying areas and fail to grow.

Control: Most importantly, when purchasing new bulbs check for signs of mite damage or buy only hot-water-treated bulbs. Dipping cured bulbs in 120 °F water for 2 minutes can kill mites.

When digging bulbs to divide, heavily infested bulbs should be discarded. Handle bulbs carefully to avoid injuring them as even slight injuries provide a site for bulb mites to enter. If possible, do not replant in infested soil.

Thrips

Several thrips species, including gladiolus thrips (*Taeniothrips simplex*), onion thrips (*Thrips tabaci*) and flower thrips (*Frankliniella tritici*) are pests of various flowering bulbs. Adult thrips are slender, tan to dark brown in color and about 1/20 to 1/16 inch in length with fringed wings. They tend to be found in protected areas of the plant.

Both adults and nymphs (immature insect stage resembling the adult, but smaller) feed by scraping surface cells to suck plant sap. When they feed on flower buds, the flowers may die without opening. With light infestation, their feeding causes leaves to have brown or silvery speckles or streaks. With severe infestations, leaves and flowers are stunted and distorted and may turn brown and die.

Control: Several naturally occurring enemies feed on thrips, including green lacewings and ladybird beetles. To avoid killing these beneficial insects, which naturally reduce thrips populations, insecticides should be avoided as much as possible. Bright blue or yellow sticky traps will provide some protection from thrips. Paint cardboard or wooden boards and then coat with petroleum jelly. Attach them to stakes and place near the flowering bulbs. The adults are attracted to the yellow or blue and get caught in the petroleum jelly.

Insecticidal soap can be used, but thorough coverage is required. Where absolutely necessary for very valuable plants, spray with acephate (Orthene 9.4%) when damage is first noticed. Be sure that the particular plant species that you want to spray is listed on the label. As with any pesticide, read and follow all label directions and precautions.

Bulb Flies

Lesser Bulb Flies: Lesser bulb flies (*Eumerus* species) range in size from 3/16 to 3/8 inch in length. They are dark blue with a metallic bronze sheen. The larvae (maggots) range in size from 1/16 to 3/8 inch and in color from white to grayish yellow.

The maggots enter and then tunnel through the bulb. The bulbs begin to decay and fill with a semi liquid material. They may be killed outright or damaged so that only very small leaves are produced the following year. The maggots survive the winter in the bulb and the following spring they emerge into the soil where they pupate (transform to a nonfeeding stage where the larva changes to an adult form). The adults emerge, mate and the female crawls down through openings in the soil such as those left by leaves as they die to lay eggs on or near bulbs as well as on the soil surface and on the leaves at the neck of the bulb.

Control: Cultural control of this pest includes mowing leaves as soon as they dry in the spring. Lightly tilling the soil after mowing destroys the soil openings that the adult females use to locate the bulb.

When bulbs are dug for dividing, any soft bulbs should be destroyed. Treating slightly damaged bulbs by placing them in hot water (109.4 °F to 111.2 °F) for 3 hours can control these pests. Be sure to keep an eye on the temperature and not let it go over the recommended temperature range as higher temperatures can damage the bulbs.

Narcissus Bulb Fly: Narcissus bulb flies (*Merodon equestris*) look like small bumble bees with bands of yellow or orange brown on their bodies. The larvae (maggots) are plump, grayish-white to yellow and range in length from 1/16 inch when newly hatched to 3/4 inch when mature.

The adult fly lays eggs on the leaves near the soil surface or on the crowns. When the eggs hatch, the maggots tunnel into the bulbs where they feed on the soft tissue. The bulbs are often hollowed out as a result of the feeding and feel soft and spongy. Once infested, bulbs often rot. Some survive, but generally produce small, weak leaf blades the following year. The maggots overwinter in the bulb and then move into the soil in the spring to complete their life cycle.

Control: Narcissus bulb flies are difficult to control. Cultural control of this pest includes mowing leaves as soon as they dry in the spring. Lightly tilling the soil after mowing destroys the soil openings that the adult females use to locate the bulb for egg laying.

Control strategies used by some gardeners include trying to capture flying adults by using butterfly nets and using floating row covers as a barrier to egg laying. When bulbs are dug for dividing, you can attempt to kill the maggot by trying to stab it with a needle or wire inserted through the entry hole. However, there is always a chance of not hitting the maggot and simply damaging the bulb even more. Treating bulbs in hot water (109.4 °F to 111.2 °F) for 40 minutes is effective for this pest. As mentioned for the lesser bulb flies, do not let the temperature of the hot water go over 111.2 °F.

Overall, the best control strategy is to keep your daffodils healthy by maintaining a shallow mulch layer and fertilizing your bulbs in the fall. When you divide your daffodils, discard any bulbs that show signs of infestation.

Iris Borer

Iris borer (*Macronoctua onusta*) is the most serious pest of iris. It is the larva (caterpillar) of iris borer moths. The mature caterpillar can reach 13/8 inches in length. It is pale yellowish-pink to pink with a brown head and has rows of black spots along its sides.

The adult moths that emerge late in summer, mate and lay eggs on old iris leaves and nearby plants. The borer overwinters (survives the winter) as eggs. In the spring, tiny caterpillars hatch out and feed on new leaves. As a result of the feeding, the leaf margins may appear water-soaked, bleed plant sap and become ragged. The caterpillars then mine (feed in slender tunnels) inside the leaves before moving down to the rhizomes. They may feed on the outside of the rhizome or bore inside and feed until they mature. A single iris borer can ingest the entire contents of a rhizome before moving to another rhizome. It is common for bacterial and fungal root rot to develop in borer damaged rhizomes. At maturity the borer leaves the rhizome and enters the soil to pupate (transform into the nonfeeding stage where the larva changes into an adult form). Iris borer damage is generally first noticed in the fall when the damaged rhizomes are dug for transplanting in late summer.

Control: Old stems and leaves should be removed in the fall or winter to eliminate overwintering eggs. If borer damage is noticed in the spring, hold young leaves up to the sun and if present, the borers will be readily visible. The small caterpillars can be crushed between thumb and finger or by using a pointed stick.

When rhizomes are dug for dividing, cut off and destroy heavily infested rhizomes. With rhizomes that are only minimally damaged, you can attempt to kill the maggot by trying to stab it with a needle

or wire inserted through the entry hole. Again, there is always a chance of not killing the maggot and simply damaging the bulb even more.

Lesser Canna Leafroller

The lesser canna leafroller (*Geshna cannalis*) is the larva (caterpillar) of the lesser canna leafroller moth. The caterpillar ranges in size from 1/16 inch when newly hatched to 7/8 inch when mature. As it matures its body changes from cream to greenish in color, but its head remains yellowish.

The leafrollers survive the winter in rolled, dead leaves of the canna. They mature to adults, which appear in the spring. Adult females lay their eggs on the canna. Initially the tiny, newly hatched caterpillars tunnel inside the leaves between the upper and lower surfaces. When they become too large, they exit to the upper leaf surface where they fasten edges of leaves so that the leaves cannot unfurl or they can roll one edge of an already open leaf. While in this protected area, they generally feed on the leaf's upper surface but will also bore through the rolled leaf. Infested leaves often have several holes through them. Heavily infested leaves may not open at all and the plants may fail to bloom. When fully mature, the caterpillars spin a cocoon where they transform to adults. More than one generation occurs per year.

Control: Since the caterpillars overwinter in the canna leaves, removing and destroying above ground plant parts in the winter will reduce numbers of this pest.

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