



Bumble Flower Beetle

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DO YOU KNOW?

- Bumble flower beetles are common throughout the growing season on flowers, oozing sap, and other sweet, overripe, or fermenting matter.
- Bumble flower beetles seldom warrant the use of chemicals for control.
- Control methods include removing organic material from near affected plants, and hand removal of the adult beetles from plants.

INTRODUCTION

The bumble flower beetle (BFB) is a common member of the Scarabaeidae (scarab) beetle family. Its common name originated because adult BFB's often fly close to the ground and emit a loud buzzing sound similar to that of a bumble bee. Larvae (grubs) and adults are often found in or near fermenting and/or decomposing organic matter. Because BFB's feed on and further break down organic matter they are beneficial in many situations. Economic damage caused by BFB in Utah is rare and they seldom require control, though larvae (Fig. 1) may be mistaken for other damaging pests such as Japanese beetle and various lawn feeding white grubs.



Fig. 1. Immature bumble flower beetle (*Euphoria* sp.)¹.



Fig. 2. Adult bumble flower beetle (*Euphoria inda*)².

GENERAL BIOLOGY

Bumble Flower Beetle

Scientific Name: *Euphoria inda* (Scarabaeidae)

Range: Widely distributed in the United States from Connecticut to Florida and westward to Oregon and Arizona.

Hosts: Identification Adult: Adult BFB's (Fig. 2) are 12-16 mm (7/16 - 5/8 inch) in length and 8-10 mm (5/16 - 3/8 inch) wide. They have yellowish-brown or cinnamon-colored outer wings with irregular rows of small black spots, many of which may be rectangular. The head and thorax (section behind head) are densely hairy, as is the underside of the body, the latter being clothed with numerous white hairs. Legs are a reddish-brown color. When captured, adults may emit a defensive chemical with a pungent chlorine-like odor.

Identification Immature: cream-colored grub with a dark brown head capsule and dark gray terminal body segment (Fig. 1). Larvae have six legs and are easily mistaken for other scarab beetle larvae, or white grubs.

Life History: Overwintering adult beetles become active during the first warm days of spring and lay eggs. In Utah, BFB's have been observed from early May through late September. After hatching, larvae develop in soil or other substrates containing a large amount of organic matter. Such areas include the edges of old hay or straw stacks, soil containing decaying vegetation or



Fig. 3. Adult bumble flower beetles feeding on sap from a wounded plant².

BIOLOGY CONT'D

manure, rotten wood, humus, or even potting soil. They may be abundant in areas where spoiled vegetables are dumped. The new generation matures and pupates in July. Pupae may be found in soil at a depth of 2 to 5 inches inside oval earthen cells constructed by the larvae. In Utah, adults of the new generation emerge and become active in mid-August through about the end of September, and then they seek a place to overwinter. There is one generation per year.

Key Habits/Damage Description: Adult BFB's are reported to injure corn in the silk stage, although this problem is seldom reported. Such damage can be severe but is usually limited to local areas. Adult beetles are attracted to fermenting sugar and may be found feeding on injured fruit or vegetables. Adults also feed on flowers and ripe or overly ripe fruits such as apples, pears, peaches, and grapes.

Adult beetles can also be found in association with bacterial slime fluxes (infections with white or cream colored foamy discharge coming out of the tree) on willows, poplars, and other trees (Figs. 3 & 4) due to the fermentation that occurs with these infections. Because of their, and other insects' presence, it is falsely assumed that these insects caused the infection.



Fig. 4. Adult bumble flower beetle (*Euphoria* sp.) feeding on corn³.

In Utah, BFB's are secondary pests of minor importance. Since they primarily feed on fermenting sugars, decomposing organic matter, and sap flows from plants, specific control is usually not required or recommended. Instead, when control measures are needed they should be directed at eliminating food sources and breeding grounds. Adult BFB's rarely injure crops and do not injure trees with slime or bacterial fluxes; it is questionable whether BFB's should even be considered pests.

CONTROL

Cultural and Physical Control Methods:

If bumble flower beetles are damaging corn or fruit, try using cultural/physical control methods first.

Sanitation: Remove decaying organic matter from the vicinity of the affected crop.

Handpick: Adult beetle can be manually removed from affected plants and put in a bucket with soapy water.

Chemical Control Methods:

In Utah, there are no insecticides that include "bumble flower beetle" on the label, but a few do include "flower beetles," which loosely includes BFB and other related beetles. These chemicals are primarily labeled for use on turfgrass and ornamental plants, and include the active ingredients: bifenthrin (3A), carbaryl (1A), chlorantraniliprole (28), halofenozide (18), imidacloprid (4A), thiamethoxam (4A), and trichlorfon (1B). For control of bumble flower beetles on corn or fruit, insecticides labeled for the control of other chewing beetle pests on the host crop would probably be effective.

BFB larvae may also be a nuisance when they disturb soil near the roots of trees or plants. Given the habits of the insect, control measures are best directed at reducing or eliminating suitable habitats by minimizing or eliminating organic matter present and not attempting chemical control. If control is needed in this situation, systemic insecticides such as imidacloprid (4A) and thiamethoxam (4A) can be effective.



Fig. 5. Larval bumble flower beetle (*Euphoria* sp.) and pupal cases⁴.

LOOK-ALIKES

Bumble flower beetle larvae are easily confused with larvae of other related scarab beetles. Other common white grubs easily confused with BFB are discussed in the white grub fact sheet in the link below (Figs. 6-13).

May/June beetle grubs commonly feed on turf grass roots and crowns and can be rather difficult to control. Additional details pertaining to white grubs can be found at: <http://extension.usu.edu/files/publications/factsheet/white-grub07.pdf>. Other common white grubs that may be mistakenly confused that are discussed in the white grub publication include black turf ataenius and masked chafer.

Japanese beetle, a related scarab beetle with similar looking larvae to BFB, is not native to Utah but is a potentially serious pest that feeds on over 200 plant species. One infestation of Japanese beetle occurred in 2006 in Utah County. The Utah Department of Agriculture and Food actively monitors for Japanese beetle throughout the state, and it is believed that the infestation has been controlled; future trapping will confirm the success of the program. If it is suspected that Japanese beetles are found, samples should be submitted to the USU Plant Pest Diagnostic Laboratory. Information concerning sample submission can be found at: <http://utahpests.usu.edu/upddl/htm/forms/>. More information concerning Japanese beetle can be found at: <http://extension.usu.edu/files/publications/factsheet/ENT-100-06PR.pdf>.



Figs. 6-9. Adult bumble flower beetle look-alikes: masked chafer (top left)¹, tenlined June beetle (top right)⁵, Japanese beetle (bottom left)⁶, and June beetle (bottom right)⁷.



Figs. 10-13. Larval bumble flower beetle look-alikes: Japanese beetle (top left)⁶, black turfgrass ataenius (top right)⁴, June beetle (bottom left)⁸, and masked chafer (bottom right)¹.

PHOTO CREDITS

1. Mike Reding and Betsy Anderson, USDA Agricultural Research Service, Bugwood.org.
2. Joseph Burger, Bugwood.org.
3. Ryan Davis, Utah State University Extension.
4. Whitney Cranshaw, Colorado State University, Bugwood.org.
5. Eugene E. Nelson, Bugwood.org.
6. David Cappaert, Michigan State University, Bugwood.org.
7. Steven Katovich, USDA Forest Service, Bugwood.org.
8. Clemson University, USDA Cooperative Extension Slide Series, Bugwood.org.

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