

Pest Profile



Photo credit: By Jim Kalisch, University of Nebraska-Lincoln

Common Name: Red Flour Beetle

Scientific Name: *Tribolium castaneum* (Herbst)

Order and Family: Coleoptera: Tenebrionidae

Size and Appearance: Adults are about 3-4 mm in length with a distinct reddish brown coloration. It features club-like antennae that is 3-segmented and the sides of the beetle's thorax are curved or rounded. The number of antennal segments and rounded rather than straight thorax are helpful in distinguishing it from the confused flour beetle, found in similar locations. Adults do have wings but are seldom seen in flight. Larvae are white, 4-5mm in length and have a "hard bodied" appearance.

	Length (mm)	Appearance
Egg	0.1 mm in length	Clear, sticky eggs are deposited directly on food particles. Females generally lay a few a day but can produce 300-500 in her lifetime.
Larva/Nymph	4-5 mm in length depending on instar	White, wiry, and not soft. Usually 7-8 instars but can have as many as 18.
Adult	3-4 mm long	Red/brown in color, 3-segmented club antennae, curved thorax. 4-5 generations
Pupa (if applicable)	3 mm long	Pupae is similar in color to the larvae, with a yellowish sheen. Distributed among grain the larvae are currently feeding on.

Type of feeder (Chewing, sucking, etc.): Chewing

Host food product/s: *Tribolium castaneum* feeds on whole kernels of grain and has a strong preference for undamaged product such as peas, beans, nuts, and fruits. Occasionally will feed on museum specimens, pharmaceuticals, chocolate, and pepper.

Description of Damage (larvae and adults): Red flour beetles leave a noticeable scent behind as they feed, particularly if population is high. This can also impact the taste, making it unfit for human consumption. Consuming infested food product causes no identifiable harm.

References:

Smith, E.H. and Whitman, R.C. (2007). Stored Product Pests- Red Flour Beetle. In *NPMA Field Guide of Structural Pests*. (9.9.2). National Pest Management Association International.

Baldwin, R., Fasulo, T. (2003). Confused and Red Flour Beetle. University of Florida, Department of Entomology and Nematology. Retrieved July 16th, 2016 from http://entnemdept.ufl.edu/creatures/urban/beetles/red_flour_beetle.htm