

Clavate Tortoise Beetle, *Plagiometriona clavata* (Fabricius) (Insecta: Coleoptera: Chrysomelidae)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

Plagiometriona clavata (Fabricius) is common and can be recognized easily by its general form and appearance.



Figure 1. Adult clavate tortoise beetle, *Plagiometriona clavata* (Fabricius).

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The Integrated Taxonomic Information System lists two subspecies:

- *Plagiometriona clavata clavata* (Fabricius, 1798)
- *Plagiometriona clavata testudinaria* (Boheman, 1855) (ITIS 2010)

Synonymy

Unfortunately, this relatively common beetle has gone under several names, which created some confusion. The formal synonymy follows:

Plagiometriona clavata (Fabricius), Fattig (1948)

Coptocycla clavata (Fabricius), Boheman (1855)

Deloyala clavata (Fabricius), Dejean (1837)

Cassida clavata Fabricius (1798)

Some of the taxonomic confusion was discussed by Barber (1918; 1946) and Hincks (1952). Although there is no specific synonym listed, Barber (1918) suggested the possibility that *Deloyala testudinaria* from Central America may intergrade with *clavata* in Texas, New Mexico, and Arizona.

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Distribution

The most extensive distribution records were provided by Barber (1918): Arizona, Florida, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Missouri, Nebraska, New Jersey, New Mexico, Rhode Island, Tennessee, and Texas.

Blatchley recorded it from Lake, Wells, Putnam, and Posey Counties, Indiana (1918) and from Lake Worth, Enterprise, Eustis, and Gainesville, Florida (1924), suggesting that it is apparently confined to the northern half of the state.

Fattig (1948) recorded it from Atlanta, Georgia; Balsbaugh and Hays (1972) listed it from Lee, Madison, and Mobile Counties, Alabama; and Wilcox (1954) reported it as common in Ohio.

Arnett (2000) lists this species as found in all major regions of North America (north of Mexico), except for the Pacific Northwest. However, this does not mean it is found in all the states or provinces in those regions.

Description

Adult

The adult is an oval, convex, tortoise-shaped beetle with translucent carapace, except at the dark humeral areas. The length is 6.5 to 7.5 mm (~0.3 in), while the width is 5.5 to 6.3 mm (~0.2 in). Color varies from brilliant brassy green, golden and brown in life, to a dull yellow brown to tan with dark markings in dead specimens. In side view, it is dome-shaped with a conical peak near the middle, behind the scutellum.

The dorsal surface is rugose and tuberculate (no other species of United States tortoise beetle, subfamily Cassidinae, has such a surface). The antenna is variable in color, but at least some of the terminal segments are black; the segments are free when at rest, and there is no antennal groove on the underside of the prothorax; the third segment is slightly longer than the second segment. The head is covered by the arcuate front margin of the pronotum. The tarsal claws are angularly dilated at their base. [The illustration of this species by Dillon and Dillon (1961) has the legend reversed with that of *Metriona bivittata* (Say); *Plagiometriona clavata* is actually figure 9 on plate 74.]

Larva

The larva is a typical tortoise beetle type, but very unlike most other beetle larvae. The last abdominal segment has a special “fecal fork” which permits the attachment of dried

fecal matter. This fecal mass is carried over the dorsum in the same form as trash bugs (Neuroptera), and presumably offers a degree of protection through camouflage. The body is green, flattened, and almost entirely fringed with whitish multispiculate projections.

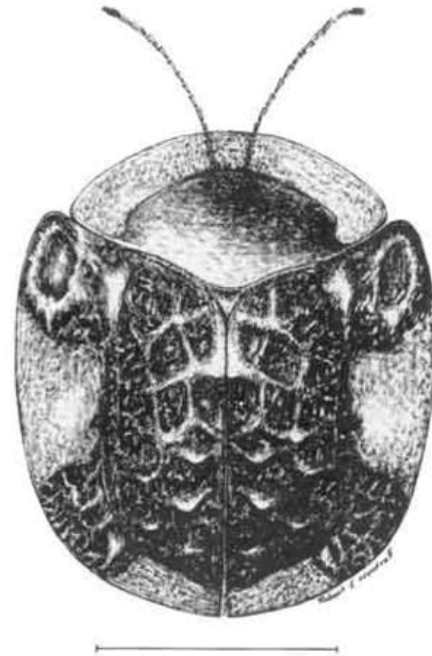


Figure 2. Adult clavate tortoise beetle, *Plagiometriona clavata* (Fabricius). Line represents 3 mm (~0.1 in).

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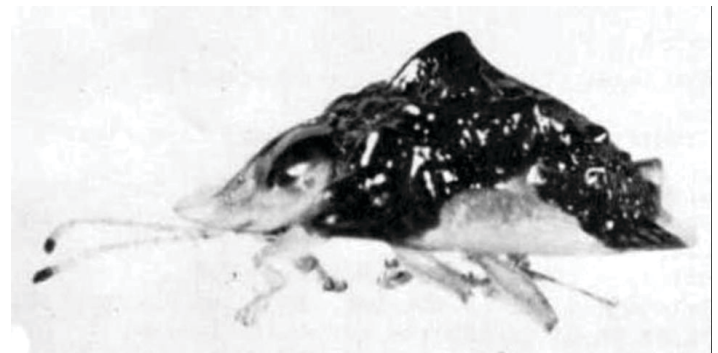


Figure 3. Lateral view of an adult clavate tortoise beetle, *Plagiometriona clavata* (Fabricius), showing conical peak.

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Hosts and Biology

Like many other members of the subfamily Cassidinae, this species appears to prefer plants of the family Solanaceae. Host records in the literature are mostly for adults and may not represent actual feeding: linden and oak (Blatchley 1910); sycamore, oak, linden, and Japanese lantern (Wilcox 1954); morning glory (Dillon and Dillon 1961); oak and various species of Solanaceae (Blatchley 1924).



Figure 4. Lateral view of the larva of a clavate tortoise beetle, *Plagiometriona clavata* (Fabricius). Head of larva is to the right. Anal fork with feces is held above larva.
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Figure 5. Posterior view of the larva of a clavate tortoise beetle, *Plagiometriona clavata* (Fabricius), showing last segment bearing the anal fork.

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