

Colorado Insect of Interest

Punctured Tiger Beetle/Sidewalk Tiger Beetle

Scientific Name: *Cicindela punctulata punctulata*
Olivier

Order: Coleoptera (Beetles)

Family/Subfamily: Carabidae/Cicindelinae (Ground beetles/Tiger beetles)



Figure 1. Punctured tiger beetle.



Figure 2. Larva of a punctured tiger beetle, extracted from burrow.

Identification and Descriptive Features: The punctured tiger beetle is a moderately sized (11-13 mm) tiger beetle with a relatively narrow prothorax. The overall color of the wing covers range from nearly black to greens, blues or purples. Creamy yellow markings (maculation) in the form of irregular spots or blotches may be present on the wing covers (elytra) but these also are variable and may be highly reduced or even completely absent. Rows of small punctures line the inner margin of the wing covers. The underside is blue to green with copper.

Distribution in Colorado: The punctured tiger beetle is the most common tiger beetle found in Colorado. It can be found in range and grasslands, along the edges of cultivated fields, inhabiting cities and may occur at elevations exceeding 3000 m. It is most often observed on pathways and sidewalks; the latter habit has lent it the name “sidewalk tiger beetle”.

Life History and Habits: Punctured tiger beetles begin to emerge in mid-June and populations typically peak by mid-July, although they can be found through September. Adults are general predators of other insects, which they capture with their large pointed jaws.



Figure 3. Punctured tiger beetle



Figure 4. Burrows produced by punctured tiger beetle larvae.

Typical of most tiger beetles they are fast moving and readily take to fly when approached, making short flights. This species is also attracted to lights at night and thus sometimes enters buildings. If handled the insects usually emit a distinctive fruity, somewhat apple odor which is a defensive compound (benzaldehyde). When captured with a net this defensive compound may produce a brown stain.

Larvae develop in soil burrows made in dry, hard-packed soil most often located near sources of water. Their head is peculiarly broad and flat, which can block the burrow entrance, and they have large jaws. Burrows may extend 14-40 cm deep and the larvae remain within the burrow, often laying at wait at the entrance. Passing prey, typically ants or other crawling insects, are grabbed by ambush as they pass by the burrow entrance. The larvae feed throughout the summer, overwintering in the 2nd instar. Development continues the following spring and pupation occurs within the burrow in late spring.

Related Species: *Cicindela punctulata chihuahuanae* Bates is recognized as a valid geographical form by some tiger beetle researchers. These are blue and green and occur at higher elevation areas of the southwest, including southwestern Colorado.

The sidewalk tiger beetle is the most common of the tiger beetles in the genus *Cicindela*. In Colorado, 33 species of this genus are reported to occur (Kippenhan 1994), several of which are found associated with it at some sites (Table 1).



Figure 5. Punctured tiger beetle larva with head blocking burrow entrance.

Table 1. Check list of the tiger beetles of Colorado (adapted from Kippenhan 1994). Species marked with an * are sometimes found in association with the punctured tiger beetle.

Amblycheila cylindriformis (Say)
Amblycheila picolominii Reiche

Cicindela longilabris laurentii Schaupp
Cicindela nebraskana Casey
 **Cicindela repanda repanda* Dejean
Cicindela duodecimguttata Dejean
Cicindela oregona guttifera LeConte
Cicindela hirticollis shelfordi Graves

Cicindela limbata limbata Say
Cicindela theatina Rotger
Cicindela formosa formosa Say
Cicindela formosa gibsoni Brown
Cicindela purpurea audobonii LeConte
Cicindela purpurea cimarrona LeConte
Cicindela denverensis Casey
Cicindela splendida Hentz
Cicindela limbalis Klug
Cicindela decemnotata Say
**Cicindela pulchra pulchra* Say
**Cicindela fulgida fulgida* Say
Cicindela scutellaris scutellaris Say
Cicindela scutellaris yampae Rumpff
Cicindela lengi lengi W Horn
Cicindela tranquebarica tranquebarica Herbst
Cicindela tranquebarica kirbyi LeConte
**Cicindela nigrocoerulea nigrocoerulea* LeConte
Cicindela nigrocoerulea bowditchi Leng
**Cicindela obsoleta obsoleta* Say
Cicindela obsoleta santaclarae Bates
Cicindela punctulata punctulata Olivier
Cicindela punctulata chihuahuae Bates
**Cicindela circumpicta johnsonii* Fitch
**Cicindela togata globicollis* Casey
Cicindela terricola terricola Say
**Cicindela terricola cinctipennis* LeConte
**Cicindela nevadica knausii* Leng
Cicindela cuprascens LeConte
Cicindela macra macra LeConte
Cicindela sperata sperata LeConte
Cicindela marutha Dow
Cicindela lepida Dejean

Key Reference: Kippenhan, M.G. 1994. The Tiger Beetles of Colorado. *Transactions of the American Entomological Society* 120 (1): 1-86.