

**A NEW SUBSPECIES OF *CHRYSOLINA SANGUINEOCINCTA*
(CROTCH, 1871) FROM TURKEY (COLEOPTERA:
CHRYSOMELIDAE: CHRYSOMELINAE)**

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ABSTRACT: A new leaf-beetle subspecies of *Chrysolina (Chalcoidea) sanguineocincta* (Crotch, 1871) is described: *Chrysolina (Chalcoidea) sanguineocincta pinarbasiense* subsp. nov. from Kayseri province in SE Central Anatolian region of Turkey. The habitus and aedeagus of the subspecies is given in the text. Its aedeagus is compared to the related taxa in the subgenus.

KEY WORDS: *Chrysolina (Chalcoidea) sanguineocincta*, new subspecies, first record, Chrysomelidae, Chrysomelinae, Turkey

According to Özdikmen et al. (2014) and Özdikmen (2014), Turkish Chrysomelinae comprises of 102 species group taxa (50 species + 52 subspecies) of 15 genera including *Chrysolina* Motschulsky, 1860.

Chrysolina Motschulsky, 1860 is a very large and diverse genus of leaf-beetles. Most species are distributed in Europe, Asia and Africa. A small number of species inhabits N. America (including introduced European ones). Some species were introduced into Australia (Bienkowski, 2001). The genus is represented with 47 species of 23 subgenera including *Chalcoidea* Motschulsky, 1860 in Turkey. Also Turkish *Chrysolina (Chalcoidea)* Motschulsky, 1860 includes 5 species (as following list) (Ekiz et al., 2013; Özdikmen et al., 2014; Özdikmen, 2014).

Genus *Chrysolina* Motschulsky, 1860

Subgenus *Chalcoidea* Motschulsky, 1860

Species *Chrysolina analis* (Linnaeus, 1767)

lomata (Herbst, 1783)

prasina (Suffrian, 1851)

schach (Fabricius, 1792)

Species *Chrysolina marginata* (Linnaeus, 1758)

Subspecies *Chrysolina marginata marginata* (Linnaeus, 1758)

cinctella (Gyllenhal, 1827)

marginicollis (Derenne, 1949)

portai Bechyné, 1948

purini (Jakobson, 1896)

roubali Bechyné, 1946

rugosopunctata (Roubal, 1917)

solitaria (Weise, 1884)

trebinjensis (Roubal, 1917)

Subspecies *Chrysolina marginata unificans* Bechyné, 1950

Species *Chrysolina sellata* Weise, 1894

bruneli (Demaison, 1896)

cilissa (Jakobson, 1924)

nebulosa (Demaison, 1896)

Species *Chrysolina songarica* Gebler, 1843

amasiensis (Weise, 1894)

circumducta (Menétriés, 1839)

chalybea (Brancsik, 1899)

cyaneascens (Jakobson, 1894)

hyrcana (Weise, 1884)

Species *Chrysolina tesari* Roubal, 1936

Subspecies *Chrysolina tesari tesari* Roubal, 1936

kulzeri Bechyně, 1950

As seen in the list above, the species *Chrysolina (Chalcoidea) sanguineocincta* (Crotch, 1871) has not been known from Turkey up to now. This species and included two subspecies was formerly considered as subspecies of *Chrysolina (Chalcoidea) marginata* (Linnaeus, 1758) (Bienkowski, 2001, 2007). According to Kippenberg (2010), this species has two subspecies as *Chrysolina sanguineocincta sanguineocincta* (Crotch, 1871) and *Chrysolina sanguineocincta bodemeyeri* (Weise, 1910). The E-Mediterranean nominotypical subspecies is distributed in Iran, Iraq, Syria, Egypt (Bienkowski, 2001), Jordan, Egypt (Bienkowski, 2007), Israel and Jordan (Kippenberg, 2010). The other Turano-Mediterranean subspecies *C. sanguineocincta bodemeyeri* (Weise, 1910) is distributed in Iran, Iraq, Syria (Bienkowski, 2001), Iran, Kazakhstan, Syria, Turkmenistan, Uzbekistan (Kippenberg, 2010).

Examination of an interesting material from Kayseri and Aksaray provinces in Central Anatolian region of Turkey has revealed a new subspecies of the leaf-beetle species *Chrysolina sanguineocincta* (Crotch, 1871). So that this species is recorded from Turkey for the first time.

The holotype and paratypes of the new subspecies are deposited at Nazife Tutay Plant Protection Museum (NTM) (Ankara, Turkey).

***Chrysolina (Chalcoidea) sanguineocincta pinarbasiense* subsp. nov.**

(Figs. 1-6)

Material. Holotype: ♂, Turkey: Kayseri prov.: Pınarbaşı, Kılıçkışla, 38°39'48" N 36°12'37" E, 05.VI.2018, 1433 m (leg. D. Coral Şahin and N. Bal). Paratype: ♂, Turkey: Kayseri prov.: Pınarbaşı, Kılıçkışla, 38°39'48" N 36°12'37" E, 05.VI.2018, 1433 m (leg. D. Coral Şahin and N. Bal). Paratype: ♂, Turkey: Aksaray prov.: Kocaş, 11.V.2007, (leg. E. Koçak). Paratype: ♂, Turkey: Afyonkarahisar prov.: Emirdağ, 10.VI.1998, (leg. M. Özdemir).

Male (holotype). Length of body 5.75 mm, width 3.25 mm.

Male (paratype). Length of body 6.50 mm, width 3.75 mm.

This new subspecies differs from the nominotypical one and the other one body length and aedeagal characters chiefly (Figs. 3-6).

The new subspecies is relatively small one than the others. According to Warchalowski (2010), body length is about 7.0 mm in the subspecies *Chrysolina sanguineocincta sanguineocincta* (Crotch, 1871) and *Chrysolina sanguineocincta bodemeyeri* (Weise, 1910). Body length is 5.75-6.50 mm in the new subspecies.

In dorsal and ventral view, apex of aedeagus is suddenly narrowed. Narrowed apical part of aedeagus is relatively elongated in *Chrysolina marginata*

(Linnaeus, 1758) while narrowed apical part of aedeagus is moderately long and relatively shorter in *Chrysolina sanguineocincta* (Crotch, 1871).

In the new subspecies, aedeagus is stouter than the other two subspecies of *Chrysolina sanguineocincta* (Crotch, 1871) in general view. Sudden narrowing before the apical part is the most sharp, so that a prominent shoulder-like structure is formed on both sides in the new subspecies. This character is much weaker in *Chrysolina sanguineocincta sanguineocincta* (Crotch, 1871) and it is rounded in *Chrysolina sanguineocincta bodemeyeri* (Weise, 1910), so does not exist (Fig. 5).

Female: Unknown.

Distribution: The new subspecies is known only from Kayseri province (Pınarbaşı: Kılıçkışla), Aksaray province (Kocaş) in Central Anatolian region of Turkey and Afyonkarahisar province (Emirdağ) in Aegean region of Turkey. For the time being, the subspecies is endemic to the Turkey.

Etymology: Named after locus typicus, Pınarbaşı county in Kayseri province.

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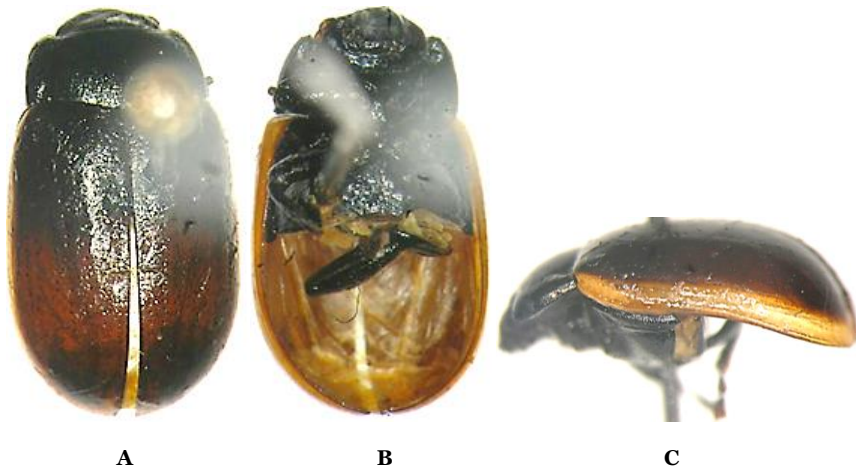


Figure 1. Habitus of holotype of *Chrysolina sanguineocincta pinarbasienae* subsp. nov., A. Dorsal view, B. Ventral view, C. Lateral view.

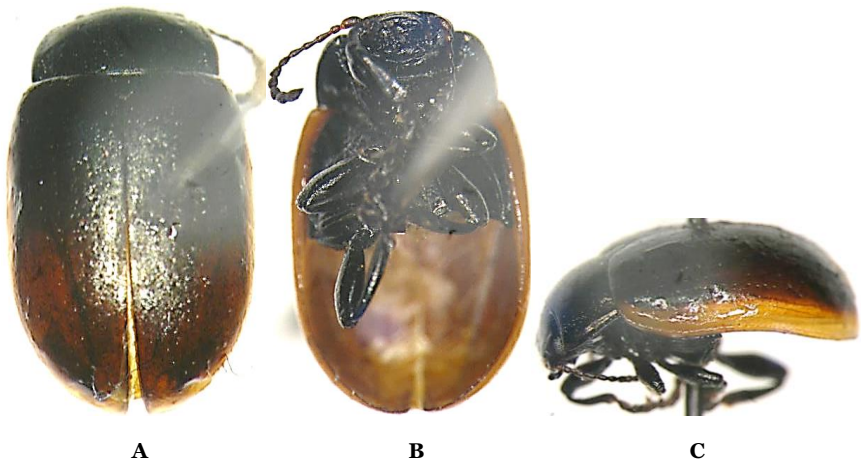


Figure 2. Habitus of paratype of *Chrysolina sanguineocincta pinarbasiense* subsp. nov., A. Dorsal view, B. Ventral view, C. Lateral view.

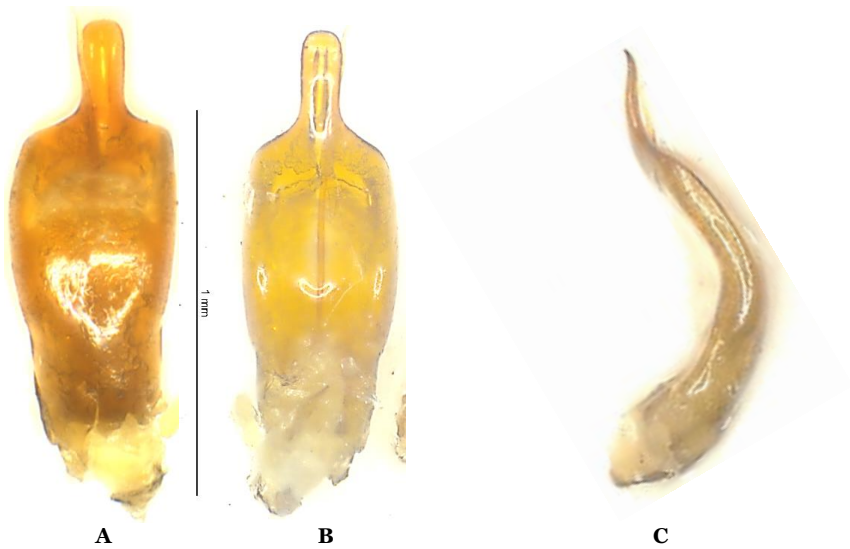


Figure 3. Aedeagus of holotype of *Chrysolina sanguineocincta pinarbasiense* subsp. nov., A. Dorsal view, B. Ventral view, C. Lateral view.



Figure 4. Aedeagus of paratype of *Chrysolina sanguineocincta pinarbasiense* subsp. nov., A. Ventral view, B. Lateral view.

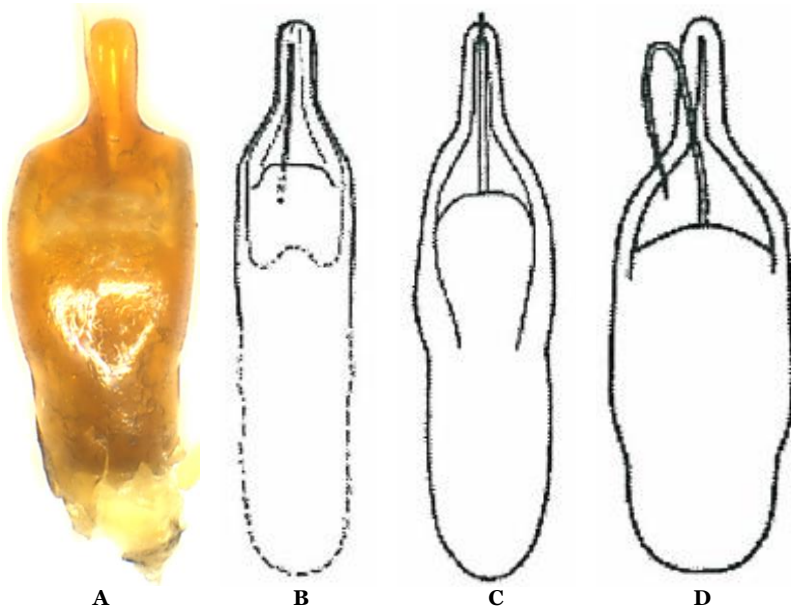


Figure 5. Aedeagus in dorsal view, A. *Chrysolina sanguineocincta pinarbasiense* subsp. nov., B. *Chrysolina sanguineocincta sanguineocincta* (Crotch, 1871), C. *Chrysolina sanguineocincta bodemeyeri* (Weise, 1910), D. *Chrysolina marginata* (Linnaeus, 1758).

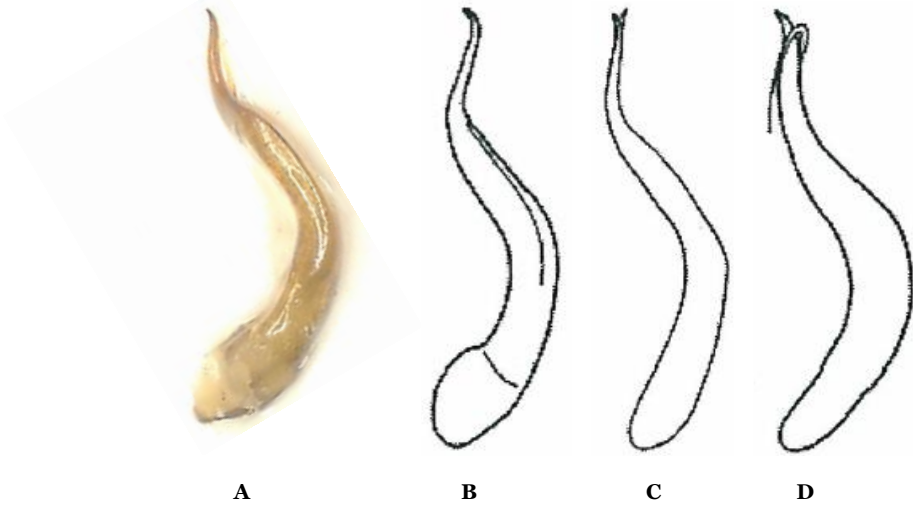


Figure 6. Aedeagus in lateral view, A. *Chrysolina sanguineocincta pinarbasiense* subsp. nov., B. *Chrysolina sanguineocincta sanguineocincta* (Crotch, 1871), C. *Chrysolina sanguineocincta bodemeyeri* (Weise, 1910), D. *Chrysolina marginata* (Linnaeus, 1758).