

**THREE INTERESTING AND UNKNOWN SPECIES
FOR TURKISH *CRYPTOCEPHALUS* GEOFFROY, 1762
(CHRYSOMELIDAE: CRYPTOCEPHALINAE)
WITH ZOOGEOGRAPHICAL REMARKS**

Hüseyin ÖZDİKMEN*, Mesud GÜVEN* and Semra TURGUT*

* Gazi Üniversitesi, Fen-Edebiyat Fakültesi, Biyoloji Bölümü, 06500 Ankara, TURKEY. E-mails: ozdikmen@gazi.edu.tr / mesudguven@gmail.com / semraturgut@maynet.com

Özdikmen, H., Güven, M. & Turgut, S. 2007. Three interesting and unknown species for Turkish *Cryptocephalus* Geoffroy, 1762 (Chrysomelidae: Cryptocephalinae) with zoogeographical remarks. *Munis Entomology & Zoology*, 2 (2): 450-454

ABSTRACT: Three species of the genus *Cryptocephalus*, *Cryptocephalus* (*Cryptocephalus*) *octopunctatus* (Scopoli, 1763), *Cryptocephalus* (*Cryptocephalus*) *rugicollis* Olivier, 1791 and *Cryptocephalus* (*Burlinius*) *labiatus* (Linnaeus, 1761), are recorded for the first time to Turkey. For each taxon, the paper includes zoogeographical remarks and chorotype information.

KEY WORDS: *Cryptocephalus*, *Burlinius*, new record, Chrysomelidae, Turkey.

The leaf beetles (Cerambycidae) are placed in the superfamily Chrysomeloidea, which also covers Cerambycidae (longicorn or capricorn beetles) and Bruchidae (seed or pulse beetles). In the tribe Cryptocephalini there are 20 genera (the majority in the Australia), of which 3 are distributed in the Palearctic Region (Lopatin & Dovgailo, 2002). In Turkey it is only represented by the genus *Cryptocephalus* which is widely distributed in the Palearctic Region. The genus *Cryptocephalus* Müller, 1764 includes many taxa (452 species and subspecies) in Palearctic Region and also in Turkey ((Lopatin & Dovgailo, 2002; Warchalowski, 2003). Sassi & Kismali (2000) stated Turkish Cryptocephalinae fauna has 91 species of 3 genera. Nevertheless, it is impossible to say that the fauna of Turkey completely investigated. Since Turkey appears a continental property changeable in very short distances in terms of climatological features and field structures, besides the number of studies are not enough.

In the present text, three species which are the new records to Turkish fauna are presented. *C. octopunctatus* (Scopoli, 1763) and *C. rugicollis* Olivier, 1791 are the members of the nominate subgenus *Cryptocephalus* Geoffroy, 1762 and the other, *C. labiatus* (Linnaeus, 1761), is in the subgenus *Burlinius* Lopatin, 1965.

Information in the present text is given in following order:

The data, Names, Material examined, Range, Remarks and Chorotype under the title for each species is given.

Names. In these parts, as possible as the whole other names including all infraspecific names are provided.

Material examined. Material examined covers the original records for Turkey. The material is deposited in Nazife Tuatay Plant Protection Museum of Ministry of Agriculture (Ankara).

Range. In these parts, the whole distribution area in the world is provided for each taxon.

Remarks. In these parts, general distribution range is given in Turkey chiefly.

Chorotype. The present zoogeographical characterization is based on the chorotype classification of Anatolian fauna, recently proposed by Vigna Taglianti et al. (1999). In the text, one chorotype description identified for each taxon.

Maps. The maps are given in the plate II. For each taxon, a map showing distribution patterns in the provinces of Turkey is used. The maps were prepared by used ArcView GIS Version 3.1.

Photos. All photos in the plate I were captured by using a Leica type MZ-16 stereomicroscope.

Gen. *Cryptocephalus* Geoffroy, 1762

[Type species: *Chrysomela sericea* Linnaeus, 1758]

Subgen. *Cryptocephalus* Müller, 1764

[Type species: *Chrysomela sericea* Linnaeus, 1758]

***Cryptocephalus octopunctatus* (Scopoli, 1763)**

(Fig. 1, 4)

Names: *octopunctatus* Scopoli, 1763 (*Buprestis*); *variabilis* Schneider, 1791; ab. *apotmetus* Jacobson, 1900; ab. *bicrux* Jacobson, 1900; ab. *viturati* Pic, 1903; ab. *latedeletus* Pic, 1903; ab. *diversenotatus* Pic, 1907; ab. *subhumeralis* Pic, 1918; ab. *colmariensis* Pic, 1918; ab. *multiinterruptur* Pic, 1918; ab. *sanguinarius* Pic, 1918; ab. *cordigeroides* Pic, 1918; ab. *maurittii* Pic, 1927; *potaisiae* Csiki, 1953.

Material examined: Düzce prov.: Yeşilköy, 05.04.1988, 1 specimen, leg. Ö. Ataç (Map 1).

Range: Central and North Europe (Winkler, 1924-1932); European part of Russia, Southern Urals, Eastern Kazakhstan (Lopatin, 1977); Distributed in whole Central Europe, as well as in France, N Italy, basin of Danube, Baltic countries and S Finland (Warchalowski, 2003); Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Finland, French mainland, Germany, Hungary, Italian mainland, Latvia, Lithuania, Luxembourg, Poland, Romania, Russia Central, ?Russia East, Russia North, Russia Northwest, Russia South, Slovakia, Slovenia, Spanish mainland, Sweden, Switzerland, The Netherlands, Ukraine, Yugoslavia (Incl. Serbia, Kosovo, Voivodina, Montenegro), East Palaearctic (Audisio, 2005); N and C Europe west to France, east to Ukraine, south to N Italy (Borowiec, 2006).

Remarks: New to Turkey. The presented record indicates that it may be distributed only in NW Turkey (at least European Turkey to Düzce province in NW Anatolia).

Chorotype: This species has the European chorotype.

***Cryptocephalus rugicollis* Olivier, 1791**

(Fig. 2, 5)

Names: *rugicollis* Olivier, 1791; ab. *sexnotatus* Fabricius, 1792; ab. *humeralis* Fabricius, 1801; ab. *wagneri* Küster, 1845; *virgatus* Suffrian, 1847; ab. *verrucosus* Suffrian, 1847; ab. *mekalisius* Pic, 1900; ab. *perroudi* Pic, 1905; ab. *subverrucosus* Pic, 1908; ab. *invirgatus* Pic, 1908; ab. *vasquezi* Pic, 1911; ab. *x-signatus* Pic, 1911; ab. *octonotatus* Vitale, 1933; ab. *seynei* Burlini, 1955.

Material examined: Aydın prov.: 17.05.1964, 1 specimen, leg. A. Demirtola (Map 2).

Range: South Europe, Sardinia, Sicily (Winkler, 1924-1932); Distributed in Western part of Mediterranean area (from Morocco and Portugal to Northeast Italy) (Warchalowski, 2003); Corsica, Dodecanese Is., French mainland, Italian mainland, North Aegean Is., Portuguese mainland, Sardinia, Sicily, Spanish mainland, North Africa (Not including Sinai Peninsula) (Audisio, 2005); Western part of Mediterranean Subregion east to NE Italy (Borowiec, 2006).

Remarks: New to Turkey. It may be distributed only in a local area in W Turkey. As seen above, the species mainly distributes from Morocco to Italy and also occurs in North Aegean Islands and W Turkey (the new record). This interrupted distributional pattern is very interesting. This status exposes that the occurrence of the species especially from Italy to Turkey should be studied more detailed. The record of Turkey is indicated the most eastest point of known range.

Chorotype: This species has the Mediterranean chorotype.

Subgen. *Burlinius* Lopatin, 1965

[Type species: *Cryptocephalus fulvus* Goeze, 1777]

***Cryptocephalus labiatus* (Linnaeus, 1761)**

(Fig. 3, 6)

Names: *labiatus* Linnaeus, 1761 (*Chrysomela*); ab. *exilis* Stephens, 1834; ab. *digrammus* Suffrian, 1848; ab. *ocularis* Heyden, 1863; *longicornis* Thomson, 1866.

Material examined: Ordu prov.: 20.07.1965, 2 specimens, leg. M. Işık (Map 3).

Range: Europe, East Siberia, Mongolia (Clavareau, 1913, Winkler, 1924-1932); Europe up to North Cape; nevertheless, it is absent in the biggest part of the Mediterranean area (Warchalowski, 1999); Widely distributed European species (Warchalowski, 2003); Albania, Andora, Austria, Belarus, Belgium, Bosnia and Herzegovina, Britain I., Bulgaria, Croatia, Czech Republic, Danish mainland, Estonia, Finland, French mainland, Germany, Greek mainland, Hungary, Iceland, Italian mainland, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldova, Republic of, Norwegian mainland, Poland, Romania, Russia Central, Russia North, Russia Northwest, Russia South, San Marino, Sardinia, Sicily, Slovakia, Slovenia, Spanish mainland, Sweden, Switzerland, The Netherlands, Ukraine, Yugoslavia (Incl. Serbia, Kosovo, Voivodina, Montenegro), East Palaearctic, Near East (Audisio, 2005); Europe except Mediterranean Subregion (Borowiec, 2006).

Remarks: New to Turkey. It may be distributed only in N Turkey.

Remarks: New to Turkey. The presented record indicates that it may be distributed in N Turkey (at least European Turkey to Ordu province in N Anatolia).

Chorotype: This species has the European chorotype.

ACKNOWLEDGEMENTS

The authors wish to thank Prof. Dr. Andrzej Warchalowski (Poland) for reviewing an earlier draft of the manuscript and Dr. Yasemin Özdemir for the permission of studying on specimens in Nazife Tuatay Plant Protection Museum (Ankara, Turkey).

LITERATURE CITED

Audisio, 2005. Fauna Europaea. Last update 7 March 2005. Version 1.2. Available from: http://www.faunaeur.org/full_results.php?id=11097

Borowiec, L. 2006. Chrysomelidae. The Leaf Beetles of Europe and the Mediterranean Subregion (Checklist and Iconography). Last modification: 25 August 2006. Available from: <http://culex.biol.uni.wroc.pl/cassidae/European%20Chrysomelidae/index.htm>

Clavareau, H. 1913. In Junk, W.: Coleopterorum Catalogus 24. Chrysomelidae, pars 53: Clytrinae, Cryptocephalinae. 1913.

Lopatin, I. 1965. K sistematike roda *Cryptocephalus* Geoffr. (Coleoptera, Chrysomelidae). Acta entomologica bohemoslovaca 62: 451 - 457.

Lopatin, I. 1977. Leaf beetles (Chrysomelidae) of Middle Asia and Kazakhstan. Nauka, Leningrad, 268p.

Lopatin, I. and K. Dovgailo. 2002. The Genus *Cryptocephalus* Geoffroy (Chrysomelidae) of Palearctic Region. Minsk.

Sassi, D. and Ş. Kismali. 2000. The Cryptocephalinae of Turkey, with Informations on their Distribution and Ecology. Mem. Soc. Ent. Ital. 78 (1): 71-129.

Taglianti, A. V., Audisio, P. A., Biondi, M., Bologna, M. A., Carpaneto, G. M., De Biase, A., Fattorini, S., Piattella, E., Sindaco, R., Venchi, A. and M. Zapparoli. 1999. A proposal for a chorotype classification of the Near East fauna, in the framework of the Western Palaearctic Region. Biogeographia 20: 31-59.

Warchalowski, A. 1999. Übersicht der westpaläarktischen Arten der Untergattung *Burlinius* Lopatin, 1965 (Coleoptera: Chrysomelidae: *Cryptocephalus*). Genus 10 (4): 529-629.

Warchalowski, A. 2003. Chrysomelidae. The Leaf Beetles of Europe and the Mediterranean area. Warszawa.

Winkler, A. 1924-1932. Catalogus Coleopterorum regionis palaearticae, Verlag von Albert Winkler, Wien, Austria, 1204-1205.

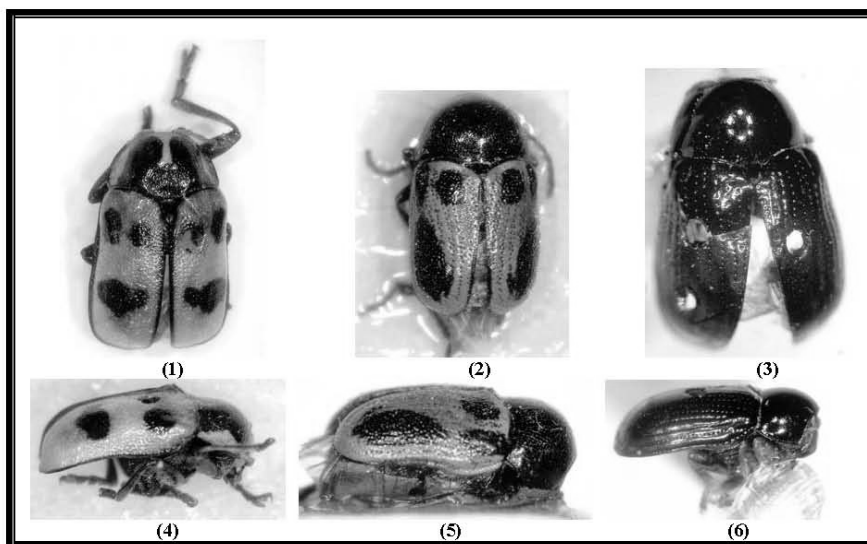


Plate I: Figures 1-6. (1) Dorsal view of *C. octopunctatus*, (2) Dorsal view of *C. rugicollis*, (3) Dorsal view of *C. labiatus*, (4) Lateral view of *C. octopunctatus*, (5) Lateral view of *C. rugicollis*, (6) Lateral view of *C. labiatus*.

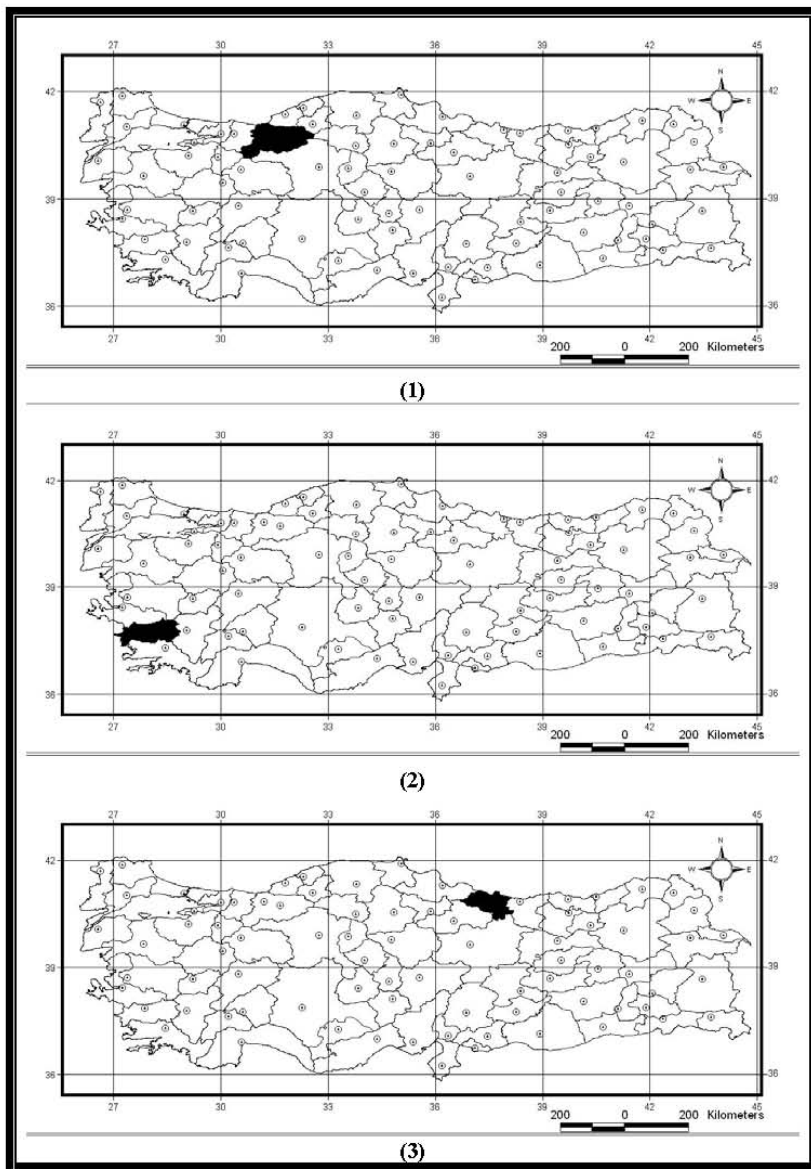


Plate II: Maps 1-3. Distributional patterns in Turkey of (1) *C. octomaculatus*, (2) *C. rugicollis*, (3) *C. labiatus*.