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Contribution to the Knowledge of Carabidae Fauna of Turkey. Part 10: Apotomini, Broscini (Broscinae), Tachyini and Trechini (Trechinae) (Coleoptera, Carabidae)

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A b s t r a c t : This study is based upon material of the tribes Apotomini, Broscini (Broscinae), Tachyini and Trechini (Trechinae) collected from different localities of Turkey between 1994 and 2008. In this study, totally 12 species and subspecies belonged to seven genera in the tribes Apotomini, Broscini (Broscinae), Tachyini and Trechini (Trechinae) have been recorded. In addition, new localities have been found for some species and subspecies which had already been reported in Turkey. Separately, distribution in the world of species and subspecies have been given in this study.

K e y w o r d s : Coleoptera, Carabidae, Broscinae, Trechinae, Apotomini, Broscini, Tachyini, Trechini, Fauna, Turkey.

Introduction

The first part of the Carabidae fauna of Turkey covered the tribe Harpalini (KESDEK & YILDIRIM 2003), the second part of the tribe Platynini (KESDEK & YILDIRIM 2004), the third part of the tribe Bembidiini (KESDEK & YILDIRIM 2007a), the fourth part of the tribes Dryptini, Lebiini and Zuphiini (KESDEK & YILDIRIM 2007b), the fifth part of the tribe Brachinini (KESDEK & YILDIRIM 2007c), the sixth part of the tribes Notiophilini and Platynini (KESDEK & YILDIRIM 2010a), the seventh part of the tribe Pterostichini (KESDEK & YILDIRIM 2008), the eighth part of the tribe Amarini (KESDEK & YILDIRIM 2010b), the ninth part of the tribes Callistini and Licinini (KESDEK 2008), and this tenth part includes the tribes Apotomini, Broscini, Tachyini and Trechini of Turkey. The information related to the material and literature references were given in the first part. Locality provinces and distribution in the world of the collected species and subspecies have been given in alphabetical order in the following list. The material is deposited in the Entomology Museum, Erzurum, Turkey (EMET) and the author's collection.

In this study, totally 12 species and subspecies of seven genera belonged to the tribes Apotomini, Broscini, Tachyini and Trechini of subfamilies Broscinae and Trechinae of the family Carabidae have been recorded from Turkey. Among them, *Broscus punctatus* DEJEAN is new recorded for Turkish Carabidae fauna.

Results

Subfamily *B r o s c i n a e*

Tribe *A p o t o m i n i*

Genus *A p o t o m u s* ILLIGER 1807

Apotomus testaceus DEJEAN 1825

Material examined: Bingöl: Karlhova, Köklü, 1600 m, 5.VI.2003, ♂.

Distribution: Central Asia, Transcaucasia, Afghanistan, Bulgaria, Crimea, Iraq, Russia and Turkey (GUÉORGUEV & GUÉORGUEV 1995; KRYZHANOVSKIJ et al. 1995; CASALE & TAGLIANTI 1999).

Tribe *B r o s c i n i n i*

Genus *B r o s c u s* PANZER 1813

Broscus cephalotes cephalotes (LINNAEUS 1758)

Material examined: Kars: Digor, Halıkışla, 1250 m, 4.VI.2004, ♂; Kağızman, Yukarısultanlı, 1550 m, 17.V.2005, ♂, ♀.

Distribution: Middle Asia, Europe, Caucasia, West Siberia, North America, Czech Republic, Slovakia, Turkey, Turkmenia, Turkestan (GUÉORGUEV & GUÉORGUEV 1995; HURKA 1996; CASALE & TAGLIANTI 1999).

Broscus cephalotes semistriatus (DEJEAN 1828)

Material examined: Erzurum: University field, 1850 m, 19.IV.2006, ♂; Aşkale, Pınakapan, 1750 m, 27.V.2004, ♀. Iğdır: Tuzluca, Çincevat, 870 m, 17.V.2005, ♂; Uçkaya, 970 m, 29.VI.2003, ♂, ♀.

Distribution: Bulgaria, Romania, Turkey and Ukraine (GUÉORGUEV & GUÉORGUEV 1995; CASALE & TAGLIANTI 1999).

Broscus punctatus (DEJEAN 1828)

Material examined: Sanlıurfa: Karacadağ, 680 m, 21.V.2006, ♂.

This species is new for the Turkish fauna.

Distribution: Transcaucasia, Russia, Moldova and Mountains of SE Middle Asia (KRYZHANOVSKIJ et al. 1995; NECULISEANU & MATALIN 2000).

Subfamily *Trechinae*

Tribe *Tachyini*

Genus *Paratachys* CASEY 1918

Paratachys bistriatus (DUFTSCHMID 1812)

Material examined: Erzincan: Mercan, Demirkapı, 1250 m, 12.VI.2004, ♀. Erzurum: Tekederesi, Paladöken Puddle, 2150 m, 12.VI.2005, ♀; Tortum, Yaylacık, 1670 m, 25.V.2005, ♂.

Distribution: West Palearctic Region, Central and South Europe, North Africa, Canary Islands, Caucasasia, Ciscaucasasia, Armenia, Czech Republic, Iran, Madeira, Moldova, Russia, Slovakia, Turkey, Ukraine (GUÉORGUEV & GUÉORGUEV 1995; KRYZHANOVSKIJ et al. 1995; HURKA 1996; CASALE & TAGLIANTI 1999; NECULISEANU & MATALIN 2000).

Paratachys micros (FISCHER von WALDHEIM 1828)

Material examined: Erzurum: Tepeköy, 1950 m, 19.IX.2005, ♀.

Distribution: West Palearctic Region, East and South Europe, Siberia, North Africa, Canary Islands, Caucasasia, Armenia, Azores, Czech Republic, Moldova, Russia, Slovakia, Turkey, Turkmenia, Ukraine (GUÉORGUEV & GUÉORGUEV 1995; KRYZHANOVSKIJ et al. 1995; HURKA 1996; CASALE & TAGLIANTI 1999; NECULISEANU & MATALIN 2000).

Genus *Tachyta* KIRBY 1837

Tachyta nana (GYLLENHAL 1810)

Material examined: Erzurum: Karagöbek Mountains, 1970 m, 11.VIII.2005, ♂, 2 ♀. Kars: Digor, Bastanlı, 1680 m, 13.VII.2005, ♂, ♀.

Distribution: Holarctic Region, Europe, Near East, North Africa, North America, Siberia, Caucasasia, Ciscaucasasia, Armenia, China, Crimea, Czech Republic, Iran, Japan, Korea, Moldova, Russia, Slovakia, Turkey and Ukraine (GUÉORGUEV & GUÉORGUEV 1995; KRYZHANOVSKIJ et al. 1995; HURKA 1996; CASALE & TAGLIANTI 1999; NECULISEANU & MATALIN 2000).

Genus *Tachyura* MOTSCHULSKY 1862

Tachyura (Tachyura) thoracica (KOLENATI 1845)

Material examined: Artvin: Şavşat, 1300 m, 19.VIII.2004, ♂. Erzurum: Karagöbek Mountains, 1950 m, 14.VI.1998, ♂; Palandöken Mountain, 2150 m, 1.IX.2004, ♂, ♀.

Distribution: South Europe and Turkey (CASALE & TAGLIANTI 1999).

Tachyura (Tachyura) diabrachys (KOLENATI 1845)

Material examined: Erzurum: Haydarlı, 1900 m, 4.VII.2005, ♀; Karagöbek Mountains, 1950 m, 14.VI.1998, ♂; Konaklı, 2150 m, 2.VII.2004, ♂, 2 ♀; Köprüköy, Ilıcasu, 2340 m,

5.VII.2004, ♂; Yağan, 1600 m, 17.V.2006, 2♂♂, ♀; 28.VI.2005, 3♂♂, 4♀♀; Uzundere, Yayla Pass, 2350 m, 02.IV.2006, ♂, ♀; 13.VI.2005, ♀; 12.VII.2004, ♂.

Distribution: South and East Asia, Caucasus, Ciscaucasia, Armenia, Crimea, Cyprus, Iran, Israel, Lebanon, Moldova, Russia, Slovakia, Syria, Turkey, Turkmenistan, Ukraine (KRYZHANOVSKIY et al. 1995; HURKA 1996; CASALE & TAGLIANTI 1999).

Tribe *Trechini*

Genus *Perileptus* SCHAUM 1860

Perileptus areolatus (CREUTZER 1799)

Material examined: Erzurum: Karagöbek Mountains, 1950 m, 14.VI.1998, ♂.

Distribution: Europe, North Africa, Mediterranean Countries, West Siberia, Caucasus, Ciscaucasia, Armenia, Crimea, Kazakhstan, Moldova, Russia, Slovakia, Turkey, Ukraine (GUÉORGUEV & GUÉORGUEV 1995; KRYZHANOVSKIY et al. 1995; HURKA 1996; CASALE & TAGLIANTI 1999; NECULISEANU & MATALIN 2000).

Genus *Trechus* CLAIRVILLE 1806

Trechus melanocephalus KOLENATI 1845

Material examined: Ardahan: Çamlıçatak, 3 km East, 1890 m, 15.X.2005, ♂. İstanbul: 7.V.2001, ♀. Erzurum: Dadaşköy, 1800 m, 16.VII.2003, 2♂♂, 2♀♀; Çat, Yavi, 1850 m, 21.V.2004, ♀; Olur, Yeşilbağlar, 1750 m, 24.X.2002, ♂, ♀; Uzundere, Yayla Pass, 2450 m, 8.IX.2004, 3♂♂, ♀. Kars: 3 km North, 1840 m, 3.VIII.2005, ♀; Digor, Değirmendere, 1800 m, 17.VII.2005, ♀; Susuz, Taşlıdere, 1890 m, 25.VII.2005, 2♂♂, ♀; Sarıkamış, Karakurt, 1775 m, 7.X.2005, 2♂♂, 2♀♀; Mescidli, 1910 m, 7.X.2005, ♀. Muğla: Köyceğiz, 120 m, 17.III.2008, 4♂♂, 3♀♀; Beyobası, 220 m, 4.IV.2007, 2♂♂, ♀; Kavakarası, 150 m, IX.X.2006, ♀; Toparlar, 320 m, 14.V.2007, ♂, ♀; 10.X.2008, 2♂♂; Zeytinaları, 250 m, 11.IV.2007, ♂; 7.VIII.2006, 2♀♀.

Distribution: West and Central Asia, Caucasus, Armenia, Russia, Turkey (KRYZHANOVSKIY et al. 1995; CASALE & TAGLIANTI 1999).

Trechus quadristriatus (SCHRANK 1781)

Material examined: Ardahan: Göle, 1695 m, 17.VIII.2004, ♀; Posof, Aşıkzülali, 1960 m, 26.VII.2005, ♂. Artvin: Genya Mountain, 1575 m, 12.VII.2005, ♂, ♀; Şavşat, Yavuzköy, 1680 m, 11.VI.2005, ♀. Burdur: Gölhisar, 2 km East, 540 m, 18.IX.2007, ♀; Tefenni, 4 km North, 670 m, 16.XI.2008, ♂, 2♀♀. Bursa: İnegöl, 24.VII.1994, 7♂♂, 6♀♀; 10.VIII.1994, 8♂♂, 4♀♀. Erzincan: Tercan, 10 km East, 24.V.2004, ♀; Demirkapı, 1330 m, 25.V.2005, ♀. Erzurum: Dadaşköy, 1800 m, 7.VI.2005, 2♂♂, ♀; 8.VI.2005, ♂; 17.VI.2004, 2♂♂, 2♀♀; 30.VI.2005, ♂, ♀; 15.VII.2002, ♂; 27.VII.2005, 13♂♂, 9♀♀; 18.VIII.2004, ♂, 2♀♀; University field, 1850 m, 14.IV.1998, ♂, ♀; Aşkale, 3 km West, 1800 m, 14.X.2004, ♀; Pınarkapan, 1920 m, 25.VI.2004, 12♂♂, 14♀♀; 14.X.2004, ♂; Ilıca, Yoncalık, 1730 m, 21.X.2004, ♂, ♀; Şenkaya, Çakırbaba Pass, 2450 m, 12.X.2005, ♀; Uzundere, Yayla Pass, 2350 m, 13.VI.2005, ♀. Gümüşhane: 2.IV.2002, ♂. Iğdır: Tuzluca, Gaziler, 1020 m, 16.V.2005, ♂. Isparta: Çünür, 950 m, 28.VIII.2007, ♂, ♀. Kars: 3 km North, 1810 m, 3.VIII.2005, ♂; Digor, Bostanlı, 1730 m, 17.VII.2005, ♀; Değirmendere, 1800 m, 17.VII.2005, 2♂♂; Sarıkamış, Yenigazi, 1920 m, 16.VIII.2005, ♀. Konya: Güneysınır, Gurağaç, 1100 m, 21.XI.2008, 2♀♀; Örenboyalı, 1050 m, 28.II.2002, ♂, ♀; 21.IX.2007, ♀. Muğla: Köyceğiz, Döğüşbelen, 170 m, 13.V.2007, ♂, ♀; Pınarköy, 180 m, X.XI.2006, ♀; Toparlar, 8.IX.2007, ♂; 16.X.2008, 2♂♂, ♀; Yangı, 280 m, 6.IV.2007, ♀; Zeytinaları, 210 m, 12.IX.2008, ♂, 2♀♀.

D i s t r i b u t i o n : Europe, North Africa, Near East, West and Central Asia, Siberia, Caucasia, Ciscaucasia, Armenia, Czech Republic, Kazakhstan, Moldova, Russia, Slovakia, Tadjikistan, Turkey, Ukraine, Uzbekistan (GUÉORGUEV & GUÉORGUEV 1995; KRYZHANOVSKIJ et al. 1995; HURKA 1996; CASALE & TAGLIANTI 1999).

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Zusammenfassung

Vorliegende Arbeit behandelt Carabidae der Triben Apotomini, Broscini (Broscinae), Tachyini und Trechini (Trechinae), welches an verschiedenen Orten der Türkei im Zeitraum 1994 bis 2008 aufgesammelt wurde. 12 Arten/Unterarten in sieben Gattungen der oben genannten Gruppen wurden nachgewiesen. Zusätzlich wurden neue Funddaten schon bekannter Arten aufgeführt und Angaben zur Gesamtverbreitung gegeben.

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