

The Faunistic Studies on the Subfamily Alticinae (Coleoptera : Chrysomelidae) Species in Tokat Province

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Abstract

In this study, totally 34 species belonging to Alticinae subfamily of Chrysomelidae were collected from Tokat and the surrounding towns during the years of 2003 - 2004. Among the species, *Altica graeca* Kral, 1966 is newly recorded from Turkey. Their distributions, host plants, collecting dates and localities were also given for each species.

Key words: Alticinae, Chrysomelidae, fauna, Tokat, Turkey

INTRODUCTION

The subfamily Alticinae (flea beetles), with over 8000 described species is distributed throughout the world [1]. However, the Palearctic flea beetle fauna consists of more than 1000 species [2]. Many of the species are economically important pests. Some of them is considered highly beneficial for their role in suppressing noxious weeds [3, 4, 5, 6]. The Alticinae adults feed on foliage of herbaceous plants, bushes and trees in a wide range of angiosperm and some gymnosperm families. Their larvae live in soil, plant tissue and leaves.

Alticinae is characterized by their usually small in size (0.5 – 18 mm), ovoid, elongated-oval or cylindrical, rarely with short hairs, and by extremely variable in color; many are shining and metallic, and by ability to jump. Their antennae are filiform or gradually broaden to apex and 11- segmented. Head extends into pronotum up to posterior optic region, sometimes totally hidden under it [2, 7].

Some important studies on the Turkish Alticinae fauna has been carried out by Medvedev [8, 9], Kısmalı [10], Tomov and Gruev [11], Gruev and Tomov [12], Gruev and Kasap [13], Gruev and Aslan [14]. Aslan [7] reported 234 species and subspecies in 21 genera of the subfamily Alticinae determined in Turkey. In recent studies, some new contributions is made by Aslan and Warchalowski [15, 16, 17], Aslan et al. [18, 19], Gök and Gürbüz [20], Gök et al. [21, 22, 23], Aslan [24]. The recent studies have shown that the Turkish leaf beetles would likely have more species if other regions of the nation to be studied. Being under a transition climate, the Tokat province with diverse conditions of climate and vegetation has a considerable potential for Alticinae species. Therefore, this study aimed to determine the species existing in Tokat province to contribute the national scaled list of Alticinae subfamily, which causes economical damage in many cultivated and wild plants in Tokat and other regions of Turkey.

MATERIAL AND METHODS

The insect specimens were collected from the cultured plants and various herbaceous plants with hand, using sweeping net and aspirator. Aedeagus of each species was examined. The specimens were diagnosed using the identification key given by Lopatin [2], Wilcox [25], and Aslan [26]. The describer, description date, distributions, collecting dates, locality, number of specimens (♂, ♀) and host plants were given for each species.

The specimens are stored in the Plant Protection Department of Gaziosmanpaşa University, Tokat, Turkey.

RESULTS AND DISCUSSION

In this study, totally 34 species of 9 genera belonging to Alticinae subfamily of Chrysomelidae were determined in Tokat and the surrounding towns between the years of 2003 and 2004.

Subfamily: Alticinae Latreille, 1802

Altica Fabricius, 1775

Altica ancycrensis (Weise, 1897)

General distribution: Asian Turkey [7], Armenia, Israel [27].

Distribution in Turkey: Ankara, Erzurum [7].

Material examined: Tokat (Zile-Merkez), 30. VI. 2003, 1♂, 2♀♀; (Turhal-Merkez), 05. VI. 2003, 2♀♀; (Reşadiye-Merkez), 06. VI. 2004, 2♂♂. Swept from grasses.

Altica graeca Kral, 1966

General distribution: Greece [27].

Distribution in Turkey: New record for Turkish fauna.

Material examined: Tokat (Turhal-Caylı), 03. VIII. 2004, 1♂. Swept from grasses.

Altica oleracea (Linnaeus, 1758)

General distribution: Albania, Austria, Belgium, Byelorussia, Bosnia, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Iran, Israel, Italy, Japan, Kazakhstan, Kirghizistan, Korea, Latvia, Liechtenstein, Lithuania, Luksembourg, Macedonia, Mongolia, Netherlands, Norway, Poland, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Turkey, Ukraine [27].

Distribution in Turkey: Bayburt, Erzurum, Kars, Rize [7], Ankara, Kayseri, Nevşehir, Sivas, Konya [11].

Material examined: Tokat (Yeşilyurt-Merkez), 23. VIII. 2003, 1♂, 2♀; (Sulusaray-Merkez), 26. VIII. 2003, 3♂♂, 2♀♀; (Turhal-Merkez), 05. VII. 2004, 3♂♂, 2♀♀; (Reşadiye-Merkez), 18. VII. 2004, 2♀♀.

The specimens were collected from *Sanguisorba minor* Scop. (Rosaceae) and *Geranium dissectum* L. (Geraniaceae).

Chaetocnema Stephens, 1831

Chaetocnema breviscula (Faldermann, 1884)

General distribution: Afghanistan, Azerbaijan, Caucasus, Central Asia, China, Eastern Europe, Hungary, Iraq, Iran, Israel, Kazakhstan, Korea, Latvia, Near East, Russia, Syria, Siberia, Tajikistan, Turkey, Ukraine [7, 27].

Distribution in Turkey: Erzurum, Sivas [7, 13], Adana, Eskişehir, Istanbul [28].

Material examined: Tokat (Niksar-Merkez), 18. VII. 2003, 2♂♂; (Pazar-Merkez), 06. VI. 2004, 1♂, 1♀.

The specimens were collected from *Beta vulgaris* L. (Chenopodiaceae).

Chaetocnema chlorophana (Duftschmid, 1825)

General distribution: Algeria, Austria, Balkan Peninsula, Caucasus, Czech Republic, East Alps, France, Hungary, Iraq, Israel, Italy, Morocco, North Africa, Poland, Romania, Slovakia, Syria, Tunisia, Turkey, Ukraine [27].

Distribution in Turkey: Erzurum, Konya, Tekirdağ [7], Adana [8], Istanbul [11], Asia Minor [28].

Material examined: Tokat (Turhal-Merkez), 02. VIII. 2003, 2♂♂; (Zile-Merkez), 13. VI. 2004, 3♀♀. Swept from grasses.

Chaetocnema coyeyi (Allard, 1863)

General distribution: Armenia, Azerbaijan, Caucasus, Cyprus, Iraq, Iran, Israel, Jordan, Romania, Russia, Turkey, Syria [27].

Distribution in Turkey: Adıyaman, Southeastern Turkey [8], Samsun [11], Ankara, Kayseri, Kırşehir, Konya, Sivas, Yozgat [13], Adana, Eskişehir, Kırklareli, Erzurum [7].

Material examined: Tokat (Turhal-Merkez), 25. VII. 2003, 1♂, 1♀; (Artova-Merkez), 27. VIII. 2003, 2♂♂; (Yeşilyurt-Merkez), 27. VIII. 2003, (Sulusaray-Merkez), 20. VII. 2004, 1♂.

The specimens were collected from *Lamium amplexicaule* L. (Lamiaceae).

Chaetocnema hortensis (Geoffroy, 1785)

General distribution: Afghanistan, Africa southward to Sudan, Albania, Armenia, Austria, Azerbaijan, Azores, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, China, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iran, Iraq, Ireland, Israel,

Italy, Kazakhstan, Korea, Latvia, Liechtenstein, Lithuania, Luksembourg, Macedonia, Mongolia, Morocco, Netherlands, Norway, Poland, Romania, Russia, Serbia, Slovakia, Spain, Sweden, Switzerland, Tajikistan, Ukraine, Turkey, Uzbekistan [7, 27].

Distribution in Turkey: Adana, Bayburt, Erzurum, Konya [7], Ankara, Kayseri, Sivas [13], Asia Minor [28], Izmir [29].

Material examined: Tokat (Almus-Merkez), 12. VII. 2003, 4♂♂; (Turhal-Kuzualan), 10. VIII. 2004, 1♂.

The specimens were collected from *Amaranthus retroflexus* L. (Amaranthaceae)

Chaetocnema obesa (Boieldieu, 1859)

General distribution: Albania, Austria, Belgium, Bosnia, Bulgaria, China, Croatia, Czech Republic, France, Germany, Hungary, Iraq, Italy, Kazakhstan, Macedonia, Mongolia, Netherlands, Northwest Africa, Poland, Romania, Russia, Serbia, Slovakia, Spain, Tibet, Turkey, Ukraine [7, 27].

Distribution in Turkey: Edirne, Erzincan, Eskişehir, Erzurum, Kırklareli [7], Ankara, Konya, Niğde, Çorum, Sivas [13], Anatolia [28].

Material examined: Tokat (Sulusaray-Merkez), 04. VIII. 2003, 3♂♂; (Turhal-Kuzualan), 10. VIII. 2004, 3♂♂, 2♀♀. Swept from grasses.

Chaetocnema tibialis (Illiger, 1807)

General distribution: Afghanistan, Albania, Austria, Bosnia, Bulgaria, Caucasus, Croatia, Cyprus, Czech Republic, Finland, France, Germany, Greece, Hungary, Iraq, Iran, Israel, Italy, Jordan, Kazakhstan, Kirghizistan, Latvia, Macedonia, Mongolia, North Africa, Poland, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Syria, Tajikistan, Turkey, Ukraine, Uzbekistan [7, 27, 30].

Distribution in Turkey: Erzincan, Erzurum, Kars [7, 31], Samsun [8], Izmir, Kocaeli [10], Aksaray, Ankara, Balıkesir, Eskişehir, Konya [13].

Material examined: Tokat (Pazar-Balıca), 06. VIII. 2003, 1♂, 1♀; (Turhal-Caylı), 12. VIII. 2003, 2♂♂, 2♀♀; (Zile-Bağlarpınarı), 25. VIII. 2003, 3♀♀; (Erbaa-Merkez), 14. VII. 2004, 3♂♂.

The specimens were collected from *Chenopodium album* L., (Chenopodiaceae), *Amaranthus retroflexus* L. (Amaranthaceae) and *Sinapis arvensis* L. (Brassicaceae).

Crepidodera Chevrolat, 1837

Crepidodera aurata Marsham, 1802

General distribution: Albania, Armenia, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, China, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iran, Ireland, Italy, Kazakhstan, Korea, Latvia, Liechtenstein, Lithuania, Luksembourg, Macedonia, Mongolia, Morocco, Netherlands, Norway, Poland, Romania, Russia, Serbia, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine [7, 27].

Distribution in Turkey: Erzincan, Erzurum [7], Gümüşhane [11], Ankara, Antalya, Balıkesir, Çankırı, Çorum, Eskişehir, Kayseri, Kırşehir, Konya, Nevşehir, Sivas, Yozgat [24], Bilecik, Kocaeli [32], Amasya [33].

Material examined: Tokat (Zile-Merkez), 29. VI. 2003, 2♂, 1♀; (Reşadiye-Merkez), 12. VII. 2003, 1♂, 1♀; (Erbaa-Merkez), 29. V. 2004, 3♀♀. Swept from grasses.

Crepidodera lamina (Bedel, 1901)

General distribution: Austria, Belgium, Bosnia, Bulgaria, Caucasus, Croatia, Czech Republic, France, Germany, Italy, Netherlands, Spain, Switzerland, Turkey, Ukraine [7, 27, 34].

Distribution in Turkey: Bayburt [7], Ankara [13].

Material examined: Tokat (Pazar-Balıca), 06. VIII. 2003, 4♂♂, 3♀♀; (Zile-Baglarpınarı), 25. VIII. 2003, 3♀♀; (Erbaa-Merkez), 14. VII. 2004, 3♂♂, 2♀♀; (Niksar-Merkez), 14. VII. 2004, 2♂♂. Swept from grasses.

Epitrix Foudras, 1860

Epitrix pubescens (Koch, 1803)

General distribution: Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Finland, Germany, Iran, Kazakhstan, Kirgizhistan, Netherlands, Portugal, Spain, Sweden, Turkey, Ukraine [7, 27].

Distribution in Turkey: Erzurum [7], Balıkesir [13], Bilecik, Istanbul [29], Kırklareli [34].

Material examined: Tokat (Pazar-Balıca), 6. VIII. 2003, 2♂♂; (Yeşilyurt-Merkez), 06. VIII. 2003, 2♂♂; (Turhal-Caylı), 03. VIII. 2004, 2♂♂, 2♀♀.

The specimens were collected from *Cirsium arvense* (L.) (Asteraceae).

Longitarsus Latreille in Berthold, 1827

Longitarsus aeneicollis (Faldermann, 1837)

General distribution: Afghanistan, Algeria, Austria, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, Croatia, Czech Republic, England, France, Germany, Greece, Hungary, Iraq, Iran, Israel, Italy, Kazakhstan, Kirgizhistan, Latvia, Lithuania, Lebanon, Macedonia, Moldova, Morocco, Netherlands, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Sweden, Switzerland, Syria, Tajikistan, Turkey, Turkmenistan, Uzbekistan [7, 27].

Distribution in Turkey: Antalya, Erzincan, Erzurum [7], Adana, Sivas [13], Iğdır, Kars [35].

Material examined: Tokat (Turhal-Caylı), 18. IV. 2004, 1♂; (Erbaa-Merkez) 29. V. 2004, 1♂, 1♀. Swept from grasses.

Longitarsus anchusae (Paykull, 1799)

General distribution: Afghanistan, Algeria, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, Croatia, Czech Republic, Denmark, England, Estonia, France, Germany, Greece, Hungary, Iraq, Iran, Israel, Italy, Jordan, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Morocco, Netherlands, Portugal, Poland, Romania, Russia, Serbia, Slovakia, Spain, Sweden, Switzerland, Syria, Tajikistan, Turkey [7, 27].

Distribution in Turkey: Erzurum, İçel [7], Adana [8].

Material examined: Tokat (Reşadiye-Merkez), 6. VII. 2004, 2♀♀; (Turhal-Kuzualan), 10. VIII. 2004, 2♂♂. Swept from grasses.

Longitarsus kopdagiensis Gruev et Aslan, 1998

General distribution: Turkey [14].

Distribution in Turkey: Bayburt, Erzurum [14].

Material examined: Tokat (Turhal-Merkez), 08. VII. 2004, 2♂♂. Swept from grasses.

Longitarsus linnaei (Duftschmid, 1825)

General distribution: Armenia, Austria, Bosnia, Caucasus, Croatia, Czech Republic, Greece, Hungary, Iran, Israel, Italy, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Syria, Turkey, Ukraine [7, 27].

Distribution in Turkey: Artvin, Diyarbakır, Erzurum [7], Adana [8].

Material examined: Tokat (Taşlıçiftlik), 23. III. 2004, 2♀♀; (Niksar-Merkez), 05. V. 2004, 1♂. Swept from grasses.

Longitarsus lycopi (Foudras, 1860)

General distribution: Afghanistan, Albania, Algeria, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Iraq, Iran, Israel, Italy, Jordan, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Saudi Arabia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Tajikistan, Turkey, Yemen [7, 27].

Distribution in Turkey: Artvin, Aydın, Erzincan, Erzurum, Giresun, İçel [7], Ankara, Balıkesir, Bursa [13], Kırklareli [34].

Material examined: Tokat (Zile-Hacılar), 03. VI. 2003, 3♂♂; (Almus-Merkez), 07. VI. 2003, 2♀♀; (Taşlıçiftlik), 05. IV. 2004, 1♂, 2♀♀; (Turhal-Kuzualan), 10. VIII. 2004, 1♂. Swept from grasses.

Longitarsus nigrofasciatus (Goeze, 1777)

General distribution: Afghanistan, Albania, Algeria, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, Croatia, Cyprus, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Iran, Ireland, Israel, Italy, Jordan, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Morocco, Netherlands, Northwest Africa, Poland, Portugal, Romania, Russia, Saudi Arabia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Tajikistan, Turkey, Uzbekistan [7, 27].

Distribution in Turkey: Erzurum, İçel [7], Ankara, Bursa [13].

Material examined: Tokat (Taşlıçiftlik), 03. VIII. 2003, 2♂♂; (Yeşilyurt-Merkez), 27. VIII. 2003, 1♀; (Artova-Merkez), 07. VI. 2004, 1♂.

The specimens were collected from *Sonchus oleraceus* L. (Asteraceae).

Longitarsus pellucidus (Foudras, 1860)

General distribution: Afghanistan, Albania, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Algeria, Caucasus, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Iraq, Iran, Israel, Italy, Jordan, Kazakhstan, Latvia, Lithuania, Moldova, Mongolia, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Turkey [7, 27].

Distribution in Turkey: Bayburt, Gümüşhane, Erzurum [7], Amasya, Tokat [8], Ankara, Sivas [13], Artvin, Erzincan, Kars, Iğdır [35].

Material examined: Tokat (Taşlıçiftlik), 13. VII. 2003, 3♂♂; (Artova-Merkez), 13. VII. 2003, 1♀; (Yeşilyurt-Merkez), 07. VII. 2004, 2♀♀; (Turhal-Kuzualan), 10. VIII. 2004, 1♂. Swept from grasses.

Longitarsus picicollis Weise, 1900

General distribution: Afghanistan, Azerbaijan, Bulgaria, Caucasus, Georgia, Iran, Kazakhstan, Romania, Tajikistan, Turkey, Uzbekistan [7, 27].

Distribution in Turkey: Erzurum [7], Ankara [13].

Material examined: Tokat (Erbaa-Merkez), 29. V. 2004, 1♂. Swept from grasses.

Longitarsus rectilineatus (Foudras, 1860)

General distribution: Afghanistan, Austria, Bosnia, Bulgaria, Algeria, Caucasus, Croatia, Cyprus, Czech Republic, France, Georgia, Germany, Hungary, Iran, Israel, Italy, Kazakhstan, Kirgizistan, Northwest Africa, Spain, Switzerland, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan [7, 27].

Distribution in Turkey: Erzurum, Istanbul [7], Ankara [36].

Material examined: Tokat (Pazar-Merkez), 17. VI. 2003, 3♂♂, 3♀♀; (Reşadiye-Merkez), 18. VII. 2003, 3♂♂; (Taşlıçiftlik), 06. IV. 2004, 1♂; (Turhal-Kuzualan), 10. VIII. 2004, 2♂♂, 2♀♀. Swept from grasses.

Longitarsus reichei (Allard, 1860)

General distribution: Albania, Armenia, Austria, Bosnia, Bulgaria, Caucasus, Croatia, Czech Republic, Denmark, England, France, Germany, Greece, Hungary, Iran, Italy, Netherlands, Norway, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Turkey, Ukraine [7, 27].

Distribution in Turkey: Erzurum [7].

Material examined: Tokat (Pazar-Merkez), 17. VI. 2003, 1♂, 1♀; (Zile-Merkez), 25. VI. 2004, 1♂♂. Swept from grasses.

Longitarsus succineus (Foudras, 1860)

General distribution: Afghanistan, Albania, Algeria, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, China, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Himalayas, Hungary, Iran, Israel, Italy, Japan, Kazakhstan, Kirgizistan, Korea, Latvia, Lithuania, Mongolia, Morocco, Norway, Portugal, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkey, Ukraine, Uzbekistan [7, 27].

Distribution in Turkey: Erzurum, İçel [7], Istanbul [34].

Material examined: Tokat (Yeşilyurt-Merkez), 27. VIII. 2003, 2♂♂, 1♀. Swept from pastures.

Longitarsus tabidus (Fabricius, 1775)

General distribution: Afghanistan, Albania, Algeria, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Kirgizistan, Latvia, Lithuania, Mongolia, Morocco, Norway, Poland, Portugal, Romania, Russia, Serbia,

Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine [7, 27].

Distribution in Turkey: Antalya, Erzurum [7], Kars [35].

Material examined: Tokat (Zile-Baglarpınarı), 25. VIII. 2003, 2♀♀; (Almus-Merkez), 14. VII. 2004, 2♂♂. Swept from grasses.

Neocrepidodera Heikertinger, 1911

Neocrepidodera motschulskyi Konstantinov, 1991

General distribution: Austria, Belgium, Bulgaria, Byelorussia, Caucasus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Lithuania, Netherlands, Norway, Poland, Slovakia, Sweden, Turkey, Ukraine [7, 27].

Distribution in Turkey: Erzurum [7, 27].

Material examined: Tokat (Zile-Hacılar), 28. VII. 2003, 3♂♂, 2♀♀. Swept from grasses.

Neocrepidodera transversa (Marsham, 1802)

General distribution: Albania, Austria, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, Croatia, Cyprus, Czech Republic, Denmark, England, Estonia, France, Germany, Greece, Hungary, Iran, Italy, Lithuania, Macedonia, Netherlands, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine [7, 27].

Distribution in Turkey: Erzurum [7], Ankara, Samsun [11], Sivas [13].

Material examined: Tokat (Turhal-Kuzualan), 10. VIII. 2004, 1♂. Swept from grasses.

Phyllotreta Chevrolat, 1837

Phyllotreta atra (Fabricius, 1775)

General distribution: Albania, Austria, Azerbaijan, Belgium, Byelorussia, Bosnia, Bulgaria, Caucasus, Croatia, Cyprus, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Iran, Italy, Jordan, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Morocco, Netherlands, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkey [7, 27].

Distribution in Turkey: Bayburt, Erzurum, Trabzon [7], Bolu [8], Ankara, Aksaray, Kayseri, Sivas [13], Kocaeli [29].

Material examined: Totally 432 samples were collected from Tokat and surrounding towns.

All specimens were collected from *Chenopodium album* L. (Chenopodiaceae).

Phyllotreta corrugata Reiche, 1858

General distribution: Afghanistan, Algeria, Azerbaijan, Bulgaria, Caucasus, Cyprus, Egypt, France, Greece, Iran, Israel, Italy, Jordan, Kazakhstan, Libya, Spain, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan [7, 27].

Distribution in Turkey: Adana, Hatay [8], Izmir [10], Ankara, Kayseri, Sivas, Yozgat [13], Konya [29].

Material examined: Tokat (Turhal-Merkez), 02. VIII. 2003, 3♂♂, 2♀♀; (Zile-Baglarpınarı), 25. VIII. 2003, 2♂♂, 4♀♀; (Pazar-Ballica), 06. VIII. 2003, 4♂♂, 4♀♀. Swept from grasses.

Phyllotreta nemorum (Linnaeus, 1758)

General distribution: Afghanistan, Albania, Australia, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Byelorussia, Caucasus, Croatia, Cyprus, Czech Republic, Denmark, England,

Estonia, Finland, France, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Korea, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Sweden, Switzerland, Tajikistan, Turkey, Ukraine, Uzbekistan [7, 27].

Distribution in Turkey: Bayburt, Erzincan, Erzurum [7], Sivas [13], Corum, Bilecik [32].

Material examined: Tokat (Taşlıçiftlik), 01. VIII. 2003, 4♂♂, 3♀♀; (Turhal-Merkez), 02. VIII. 2003, 5♂♂, 4♀♀; (Zile-Baglarpinarı), 25. VIII. 2003, 3♂♂, 3♀♀; (Almus-Merkez), 14. VII. 2004, 2♂♂, 3♀♀. Swept from grasses.

Phyllotreta nigripes (Fabricius, 1775)

General distribution: Afghanistan, Albania, Australia, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Caucasus, Croatia, Cyprus, Czech Republic, Denmark, England, Estonia, Egypt, Finland, France, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Kirghizistan, Korea, Lithuania, Macedonia, Morocco, Netherlands, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Sweden, Switzerland, Tajikistan, Tunisia, Turkey, Ukraine, Uzbekistan [7, 27].

Distribution in Turkey: Antalya, Bayburt, Erzincan, Erzurum, Iğdır, Kars [7], Hatay [11], Adana, Ankara, Kayseri, Manisa, Sivas, Yozgat [13], Bilecik [32].

Material examined: Tokat (Turhal-Merkez), 02. VIII. 2003, 2♂♂, 2♀♀; (Artova-Merkez), 27. VIII. 2003, 5♂♂; (Taşlıçiftlik), 07. IV. 2004, 2♂♂, 2♀♀; (Almus-Merkez), 14. VII. 2004, 4♂♂, 3♀♀. Swept from grasses.

Podagrica Chevrolat, 1837

Podagrica malvae (Illiger, 1807)

General distribution: Albania, Austria, Azerbaijan, Belgium, Bosnia, Bulgaria, Caucasus, Croatia, Cyprus, Czech Republic, France, Georgia, Germany, Greece, Hungary, Iraq, Iran, Israel, Italy, Macedonia, Netherlands, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Switzerland, Syria, Turkey, Ukraine [7, 27].

Distribution in Turkey: Artvin, Erzurum, Giresun, Iğdır [7], İçel [8], Ankara, İzmir, Sivas [13], Kırklareli [34], Kayseri, Konya, Manisa [37].

Material examined: Tokat (Turhal-Merkez), 02. VIII. 2003, 1♂, 2♀♀; (Taşlıçiftlik), 07. VI. 2004, 1♂; (Niksar-Merkez), 25. VI. 2004, 2♂♂. Swept from grasses.

Psylliodes Latreille in Berthold, 1827

Psylliodes isatidis Heikertinger, 1912

General distribution: Austria, Belgium, Bulgaria, Caucasus, Croatia, Czech Republic, France, Georgia, Germany, Hungary, Iran, Iraq, Italy, Kazakhstan, Macedonia, Mongolia, Netherlands, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Switzerland, Turkey, Ukraine [7, 27].

Distribution in Turkey: Erzincan, Erzurum [7].

Material examined: Tokat (Zile-Hacılar), 03. VI. 2003, 5♂♂, 2♀♀; (Sulusaray-Merkez), 26. VIII. 2003, 2♂♂; (Taşlıçiftlik), 15. IV. 2004, 1♂.

The specimens were collected from *Sinapis arvensis* L. (Brassicaceae).

Psylliodes luteolus (Müller, 1776)

General distribution: Austria, Belgium, Bosnia, Bulgaria, Caucasus, Croatia, Czech Republic, Eastern Mediterranean, France, Georgia, Germany, Hungary, Iran, Iraq, Italy, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Switzerland, Turkey, Ukraine [7, 27].

Distribution in Turkey: Antalya, Erzurum [7], Ankara, Bilecik, Kayseri [32].

Material examined: Tokat (Zile-Hacılar), 27. VI. 2004, 2♂♂, 1♀.

The specimens were collected from *Quercus* spp. (Fagaceae).

Psylliodes validus Weise, 1889

General distribution: Daghestan, Georgia, South Russia, Turkey [7].

Distribution in Turkey: Erzurum [7].

Material examined: Tokat (Turhal-Caylı), 15. IV. 2004, 1♂; (Almus-Merkez), 14. VII. 2004, 2♂♂, 2♀♀. Swept from grasses.

As a result of the study was carried out from 2003 to 2004, 34 species of 9 genera belonging to Alticinae subfamily of Chrysomelidae were determined in the study area. One of these species is new record for the fauna of Turkey. Tokat has very rich flora and fauna, moreover considerable amount of agricultural crops are produced in this area. The present preliminary work gives limited information about the flea beetle fauna in the study area. It may be that the number of Alticinae species are much higher than this number. Therefore, in the future more detailed studies in the area would reveal interesting results dealing with these taxa.

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