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Four new species of the subfamily Alticinae (Coleoptera, Chrysomelidae) from Turkey

Blagoy GRUEV* İrfan ASLAN**

Summary

Four new species of flea-beetles namely ***Longitarsus artvinus*** sp. n. from Artvin, ***L. kopdagiensis*** sp. n. from Bayburt and Erzurum, ***Phyllotreta oltuensis*** sp. n. from Erzurum and ***Ph. ozbeki*** sp. n. from Bayburt provinces of Turkey are described and their aedeagus illustrated. Host plants of two species were recorded.

Key words: Coleoptera, Chrysomelidae, Alticinae, flea-beetle, new species, Turkey
Anahtar sözcükler: Coleoptera, Chrysomelidae, Alticinae, Toprak pireleri, yeni türler, Türkiye

Introduction

Alticinae is the largest subfamily of the family Chrysomelidae distributed throughout the world, with over 8.000 species, commonly called flea-beetles, because of their usually small size, 0.5-18 mm long, and ability to jump (Booth et al., 1990). There are no less than 1.000 species in the Palaearctic-Region (Lopatin, 1977).

Although the Alticinae is one of the most numerous subfamilies among the Chrysomelidae, it has not been studied in detail in Turkey so far. However,

* Plovdiv University, Bulgaria.
** Atatürk University, Agricultural Faculty, Plant Protection Department, 25240, Erzurum, Turkey
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Medvedev (1970, 1975), Kısmalı (1973), Tomov and Gruev (1975), Gruev and Tomov (1979), Gruev and Kasap (1985), Biondi (1992, 1995) and Gruev et al. (1994) have made some important contributions on Alticinae and some other subfamilies of Chrysomelidae in Turkey.

In the present work, four species of the subfamily Alticinae are newly recorded to the science.

Material and Methods

The material was collected through the vegetation by sweeping net. Aedeagus of each species was examined and illustrated.

In the determination of the material keys to genera ***Longitarsus*** and ***Phyllotreta*** prepared by Mohr (1966), Lopatin (1977), Lopatin and Kulenova (1986) and Gruev and Tomov (1986) were used. The material belonging to genus ***Longitarsus*** was compared with the holotypes and paratypes in the collection of Prof. Dr. Warchalowski (in Poland), the material in the genus ***Phyllotreta*** was compared with the holotypes and paratypes in the Prof. Dr. Gruev's collection (in Bulgaria).

Type material is deposited at the Museum of Plant Protection Department of Agricultural Faculty, Atatürk University, Erzurum, Turkey.

Results

Longitarsus artvinus sp. n.

Holotype: Male, Yusufeli, Artvin, 600 m, 4.VII.1994, Leg. İ. Aslan, (Collection Atatürk University, Agricultural Faculty, Plant Protection Deparment, Erzurum, Turkey).

Diagnosis: Resembles ***Longitarsus albineus*** (Foudras), differing in having tarsal segment 3 blackish-brown and aedeagus otherwise shaped.

Description: Yellow; head darker, reddish; five apical segments of antennae, claws and tarsal segment 3 blackish-brown; head shining, weakly shagreened; frontal tubercles not limited by grooves; antennae a little shorter than body, segments 2 and 3 equal, shortest, 5-11 longer subequal; pronotum transversal, about one and a half times as broad as long, narrower than elytra, moderately convex, with slightly rounded sides, widest at middle, fine punctured an unclearly shagreened; elytra fine punctured and weakly shagreened; shoulder tubercles present; hind wings developed; apical spine of hind tibia short; arterior

tarsal segment 1 slightly extended, not broader than 3; last abdominal sternite shortly depressed; aedeagus with nearly parallel sides, slightly narrowed at middle, apex angle about 60°, ventral side with wide and not deep longitudinal depression from base to apex, limited laterally by fine ridges, profile nearly straight (Figure 1.1a, b).

Lenght 2.25 mm.

Female: Unknown.

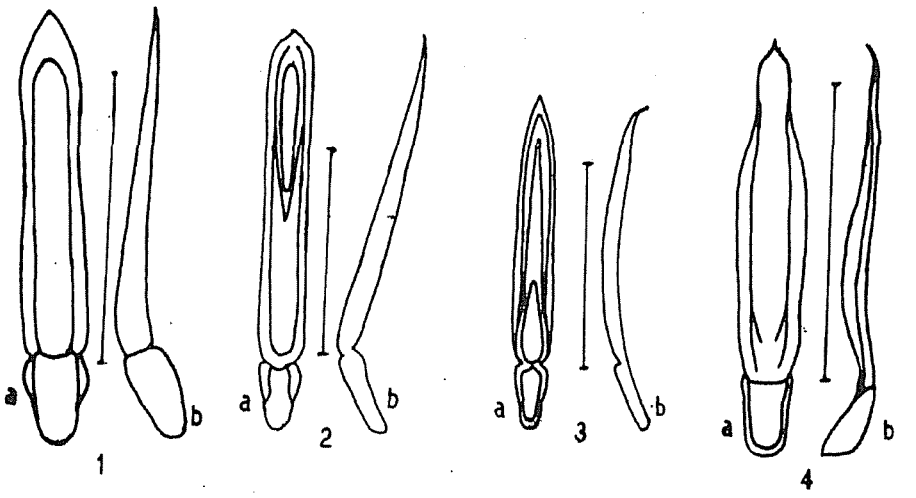

Figure 1. Aedeagus, a) Ventral, b) Lateral **1- *Longitarsus artvinus*** sp. n., **2- *L. kopdagiensis*** sp. n., **3- *Phyllotreta oltuensis*** sp. n., **4- *Ph. ozbeki*** sp. n. (Scale, 0.5 mm).

Longitarsus kopdagiensis sp. n.

Holotype: Male, Kopdağı, Bayburt, 2200-2400 m. 13.VIII.1997, Leg. İ. Aslan, (Collection Atatürk Univesity, Agricultural Faculty, Plant Protection Department, Erzurum, Turkey).

Paratypes: 3 males, Pırnakapan, Aşkale, Erzurum, 1950 m, 13.VIII.1997, Leg. İ. Aslan (Collection Atatürk University, Agricultural Faculty, Plant Protection Department, Erzurum, Turkey).

Diagnosis: Resembles ***Longitarsus pellucidus*** (Foudras), differing in having aedeagus of a quite otherwise type [it looks somewhat like that of the light species of ***Neocrepidodera (Asiorestia)***].

Description: Yellow; labrum dark brown; eyes black; head weekly shagreened, without frontal tubercles; antennae a little shorter than body, segment 2 shortest, segment 3 barely longer than 2, the rest segments longer, nearly equal in lenght; pronotum transversal, about one and a half times as broad as long, with regularly rounded sides, smooth and shining, with very small punctures; elytra with humeral tubercles developed, finely but distinctly punctured, hind wings developed; hind tibia curved and extended apically, with a short spur; first tarsal segment of hind legs uniformly thin, first tarsal segment of anterior legs elongated, widened but not broader than the third segment; last abdominal sternite with a small but clearly triangular depression; aedeagus with parallel sides, ventral side longitudinally depressed in the basal half and with a short and not a sharp keel in the apical part, fenced behind by V-placed fine ridges; apex of aedeagus short triangular with rounded sides; aedeagus profile nearly straight, apex of very slightly curved upwards (Figure 1.2 a,b).

Lenght 3.20 mm.

Female: Unknown.

Phyllotreta oltuensis sp. n.

Holotype: Male, Anzavderesi, Oltu, Erzurum, 900 m, 31.VIII.1996, Leg. İ. Aslan, (Collection Atatürk University, Agricultural Faculty, Plant Protection Department, Erzurum, Turkey),

Paratypes: 8 males, 14 females, the same data as holotype (6 males and 11 females in same collection as holotype; 1 male and 2 females Gruev's and 1 male and 1 female Warchalowski's collections).

Diagnosis: ***Phyllotreta oltuensis*** sp. n. belongs to the group of the black species with greenish or bronze metallic lustre, but it is not closely related to anyone of them. It differs in having a specific structure of ventral side of aedeagus.

Description: Black with clear greenish-bronze lustre; femorae black, shining; tibiae and tarsi in most part reddish-brown; antennal segments 2 and 3 reddish, lighter than the rest ones; body winged, flattened, with slightly rounded sides; head not shining, impunctate; interantennal ridge raised, not sharp; antennae with segments 2 and 3 shortest, clearly longer than wide, nearly equal, segments 4 and 5 longer, equal in lenght, segments 6-10 shorter than 4 or 5 and longer than 2 or 3; pronotum and elytra finely shagreened, with dense and small but deep punctures; pronotum trasversal, about 1.5 times as wide as long, widest about middle, with sides regularly rounded; elytra with humeral tubercles raised and prolonged; widely rounded apically; pygidium uncoverded apically; last

abdominal sternite not clearly depressed; anterior tarsal segment 1 slightly widened; antennae without expanded segments; aedeagus acuminate, with parallel sides, ventral side with chitinized wedge, depressed basally and convex in the apical half (Figure 1.3.a, b).

Female: In general as male, but differs from it as follows; body is bigger than male, last abdominal sternite depressed, anterior tarsal segment one not widened.

Length: 2.25-2.75 mm.

Holotype and paratypes were collected on *Capparis ovata* which has an economic importance; its buds are traditionally used as a pickle product.

Phyllotreta ozbeki sp. n.

Holotype: Male, Kopdağı, Bayburt, 2200-2400 m, 17.VIII.1996, Leg. İ. Aslan, (Collection Atatürk University, Agricultural Faculty, Plant Protection Department, Erzurum).

Paratypes: 15 males, 18 females, Kopdağı, Bayburt, 2200-2400 m, 13.VIII.1997, Leg. İ. Aslan (13 males and 16 females in same collection as holotype; 1 male and 1 female Gruev's, 1 male and 1 female Warchalowski's collections).

Diagnosis: ***Phyllotreta ozbeki*** sp. n. belongs to the species with body moderately convex, with greenish metallic lustre. It has antennae and legs entirely black and frons unpunctured. The shape of the aedeagus is similar to those of ***Ph. lubischevi*** Lopatin, ***Ph. annae*** Konstantinov and ***Ph. egridirensis*** Gruev and Kasap, but ventral side of aedeagus in with sharp and slightly raised lateral boards and with a very slight preapical depression. Furthermore, ventral depression reaches to the base (Figure 1.4a).

Description: Body black with greenish lustre above (a little weaker than that of ***Ph. nigripes***); head shining, unpunctured; antennae with segments 2 and 3 equal in length, shortest, 1.5 times longer than wide, segment 2 swollen, segments 4 to 11 longer than 3, nearly equal in legnth; pronotum transversal, 1.4 times as wide as long, slightly rounded laterally, shagreened, with small, deep and even distributed punctures; elytra long oval, 3.5 times as long as pronotum length, shagreened and punctured nearly like pronotum, with small but clear humeral tubercles, rounded apicaly; first anterior tarsal segments expanded,a little broader than segment 3; last abdominal segment with a round and deep depression in the posterior half; aedeagus wide in middle, strongly narrowed apically; ventral side strongly convex medially, with sharp and slightly raised lateral boards and with a

very slight preapical depression; profile wavy,with apex slightly curved downwards (Figure 1.4a, b).

Female: In general as male, but differs from it as follows; body is bigger and colour is shiner than male, first anterior tarsal segments not expanded, not broader than segment 3, last abdominal sternite without depression in the posterior half.

Length: 1.98-2.20 mm.

Etymology: This new species is dedicated to Dr. Hikmet Özbek, Professor of Entomology in Plant Protection Department, Agricultural Faculty, Atatürk University, Erzurum, Turkey.

Holotype and paratypes were collected on *Lepidium campestre* which grows vicinity of water sources. Particularly in spring this plant is used as food by villagers in Eastern Anatolia.

Özet

Türkiye'den Alticinae (Coleoptera, Chrysomelidae) altfamilyasına ait dört yeni tür

Alticinae altfamilyasından ***Longitarsus artvinus*** sp. n. Artvin'den, ***L. kopdagiensis*** sp. n. Bayburt ve Erzurum'dan, ***Phyllotreta oltuensis*** sp. n. Erzurum'dan ve ***Ph. ozbeki*** sp. n. Bayburt'dan tanımlanmış ve adeagusları çizilmiştir. Ayrıca bu türlerden ikisinin konukçu bitkileri saptanmıştır.

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