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**Description of a new subspecies of *Phytoecia (Neomusaria) balcanica*
(Frivaldszky von Frivald, 1835) (Coleoptera, Cerambycidae,
Lamiinae, Phytoeciini) from Iran**

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Key words: Coleoptera, Cerambycidae, taxonomy, new subspecies, Kurdistan, Turkey.

Abstract: *Phytoecia (Neomusaria) balcanica skoupyi* **ssp. n.** is described from Iranian Kurdistan. The nominative subspecies *Ph. (N.) b. balcanica* (Frivaldszky von Frivald, 1835) distributed from Greece to Anatolia differs by more pubescent pronotum and much lighter abdomen.

Introduction

Phytoecia (Neomusaria) balcanica (Frivaldszky von Frivald, 1835) was described (as *Saperda*) from the environs of Slivno in Bulgaria (Bálint, Abadjiev, 2006), though Slivno in Bosnia and Herzegovina was sometimes wrongly accepted as a type locality of the species. *Ph. (N.) balcanica* is rather rare in Balkans and widely distributed in Anatolia. It was not known from Iran up to 2019, when it was recorded for Kurdistan by Danilevsky (2020). Iranian populations are described below as a new subspecies.

***Phytoecia (Neomusaria) balcanica* (Frivaldszky von Frivald, 1835)**

Saperda balcanica Frivaldszky, 1835: 268 - "Találatott egy példányban Szlivnó vidékén." - [One specimen found in the Slivno region]; 1837: 90 - "Habitat in Balcani montosis" [Inhabits Stara Planina] (redescription); 1845: 165 - "Szlivno (Selimno)... a Haemus déli s északi vidékei" [Southern and northern side of Stara Planina, Sliven] (type locality restriction), 172, "Constantinápoly kies vidéke" [Surroundings of Istanbul]; Bálint, Abadjiev, 2006: 260 - "the type locality was restricted to the southern and northern sides of Stara Planina, near Sliven".

Oberea balcanica, Küster, 1848: 87- "In der Türkei und im Gebiet des Balkangebirges".

Phytoecia balcanica, Ganglbauer, 1884: 560 - "Türkei"; Mulsant, 1863b: 417; Kantardjiewa-Minkova, 1934: 140 - "България"; Bense, 1995: 418-419 - Bulgarien; Georgiev, Stojanova, 2003: 106-107 - Bulgaria; Tsarevo, Izgrev.

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- Helladia balcanica*, Pic, 1903: 18 - "Turquie".
- Phytoecia (Musaria) balcanica*, Pic, 1905: 38 - "Turquie, Tokat, Caucase"; 1915: 112 - "Turq., Anat., Cauc., Tokat"; Aurivillius, 1923: 554 - "Türkei"; Winkler, 1929: 1223 - "T. Asm."
- Phytoecia (Neomusaria) balcanica*, Plavilstshikov, 1930: 382, 383 - "partie orientale de la Méditerranée; elle est connue des Balcons, de l'Asie Mineure, de la Syrie", Crete (as "Candia"); Breuning, 1951: 90 - "Bulgarie: Slivno. Monts Balkan, environs de Constantinople, Anatolie occidentale et septentrionale, Crète"; Sama, Löbl, 2010: 305 - "E: BU GR TR A: IQ TR"; H. Özdikmen, G. Özdikmen, 2016: 495 (type locality: "Bosnia-Herzegovina" [wrong data]), 498 - "Bulgaria: Slivno; Greece: Crete: Kandia; N Iraq; Turkey: Amasya, Ankara, Hakkari, Istanbul, Karabük, Kastamonu, Mardin, Tunceli provinces"; Georgiev et al., 2018: 111 - "Bulgaria: Tsarevo, Izgrev"; Tezcan et al., 2020: 152 - Turkey (Şırnak province); Danilevsky, 2020: 12 (Iran, Kurdistan, Sarvabad), 438 (= *subvitticollis* Breuning, 1951)- "E: BU GR TR A: IN IQ TR".
- Phytoecia balcanica* m. *subvitticollis* Breuning, 1951: 92 [unavailable name] - "Amasia".
- Phytoecia balcanica subvitticollis* Breuning, Villiers, 1967: 62 - Turquie, "Amasya" [see Art. 45.6.4.1.].
- Neomusaria balcanica*, Sama, 1993: 296; Özdikmen, 2006: 84 - "more or less widely distributed in Turkey"; Pesarini, Sabbadini, 1994: 62 - "Bulgaria, Tracia, Creta", 110 - "mediterranea orientale, rara in Europa, dove si incontra in Bulgaria, Turchia europea y Creta"; 2009: 28-29 - Turchia, "18 Km N Pülümür (Turchia, vil. Tunceli); Georgiev, Hubenov, 2006: 328- Bulgaria; Migliaccio et al., 2007: 52 - South Bulgaria (Sliven, Tzarevo, Izgrev), Greece, Turkey.

Type locality. Slivno in Bulgaria, according to the original description.

Diagnosis. The species is one of the most characteristic representatives of the subgenus, as it has wide and dense yellow stripe along pronotum and vertex, a pair of shining black pronotal callosities; besides black antennae often with partly reddish middle joints; elytra densely covered with orange-yellow pubescence excluding wide elytral apex covered with black pubescence, black apical elytral area can be from 4 to 7 times shorter than elytral length; sometimes black elytral apex can be reduced to a very narrow band in about 20 times or more shorter than elytral length; legs always partly red: anterior legs nearly totally orange-yellow with black femoral bases; middle femora with black bases and apices; hind femora black or bicolored; tarsi often totally reddish, or more or less darkened; male antennae a little longer than body, female antennae can sometimes reach elytral apex; three last abdominal

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segments in males can be partly reddish including hind border of 2nd abdominal segment (last segment can be darkened apically); in females only last segment can be reddish including hind margin of 4th segment; body length in Bulgarian and Turkey specimens: 9-15 mm, width at humeri: 2.4-6.2 mm.

Distribution. The species is very rare in Balkans (Bulgaria, Greece including Crete, European Turkey); it is known from several provinces in Anatolia (eastwards to Hakkari) and recorded for Syria and Iraq. The records for Caucasus were incorrect. The species was not recorded for Iran before 2020.

***Phytoecia (Neomusaria) balcanica skoupyi* ssp. n.**

Figs 4-9, 14, 16

Phytoecia (Neomusaria) balcanica, Danilevsky, 2020: 12 - "Iranian Kurdistan (Sarvabad)".

Description. The new subspecies is generally characterized by darker pronotum, legs and abdomen, but dorsal view of the body can be sometimes about same as in the nominative subspecies.

Central pronotal orange-yellow stripe between shining callosities usually very contrasting with sharp margins; lateral black pronotal areas usually shining, without yellow pubescence from anterior to posterior thoracic margins; only 3-4 specimens of all 147 known items have pronotal black lines interrupted anteriorly by yellow pubescence (Fig. 4).

Black apical elytral area 4 to 6 times shorter than elytral length, never strongly reduced.

Anterior legs red with shortly black femoral bases and tarsi, middle femora black in basal half or more, hind femora with very narrow reddish apical band, sometimes indistinct; middle and hind tibiae black with narrow reddish basal areas, or hind tibiae totally black; all tarsi usually black or bases of 2nd tarsal joints reddish.

Abdomen in males can be totally black, though last tergite with dense orange pubescence and last ventrite with dense lateral pubescence; or last ventrite reddish apically, or last ventrite totally reddish, or posterior margin of 4th ventrite also reddish; in females abdomen always black, with narrow goldish pubescence along posterior margins of all ventrites, last ventrite with wider apical and

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lateral goldish pubescence, last tergite totally covered with dense goldish pubescence; body length in males: 6.5-11.0 mm, width at humeri: 1.7-3.1 mm; body length in females: 7.0-13.0 mm, width at humeri: 1.9-3.5 mm.

Differential diagnosis. The new taxon differs from the nominative subspecies (Figs 1-3, 10-13, 15) first of all by the total domination of forms with wide and long pronotal black areas reaching anterior pronotal margin (in the nominative subspecies only a pair of black spots situated at posterior pronotal margin); by rather dark abdomen, which is totally black in females, or with red last segment in males (abdomen of the nominative subspecies in females with red last segment, in males up to 3 apical segments red); besides legs are much darker, posterior tibiae largely black (in the nominative subspecies posterior tibiae totally orange-red).

Type materials. Holotype, male with a label: "IN Kordistan. 26.4.18 / 10 km NE Baneh / Skoupý leg." [between Baneh and Saqqes, 36°03'21"N, 45°58'02"E] - author's collection (Moscow); 1 paratype, female with same label - author's collection (Moscow); 141 paratypes in Czech Republic: 14 males, 14 females with same label - collection of V. Skoupý (Zilina, Czech Republic); 12 males, 11 females from same locality with same date, but P. Stepanek leg. - collection of P. Stepanek (Kladno, Czech Republic); 18 males, 18 females, from same locality with same date, but S. Hofmeister leg. - collection of S. Hofmeister - (Praha, Czech Republic); 26 males, 28 females, from same locality with same date, but J. Kadlec leg. - collection of J. Kadlec - (Varnsdorf, Czech Republic); 4 paratypes in the Department of Plant Protection, Faculty of Agriculture, College of Agriculture and Natural Resources, University of Tehran, Karaj, Iran and in collection of M.L. Danilevsky (Moscow): 1 male, with a label: "Iran, Kurdistan, 01.05.2017 / Marivan city, / Baghan, Oak Forest / 35°31'8.67"N, 46°24'28.62"E / Fardin Faizi leg.; 1 female with the label: "Iran, Kurdistan / Marivan, 1.5.2017 / Kureh Darreh / Fardin Faizi leg.; 1 male and 1 female with the label: "Iran, Kurdistan / Sarvabad city, 15.5.2017 / Darake, rangeland / 35°20'39.73"N, 46°10'15.11"E / Fardin Faizi leg."

Additional materials. *Phytoecia (Neomusaria) balcanica balcanica* (Frivaldszky von Frivald, 1835): 1 male, Asia Minor, Kizilcahamam,

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6.1965, I. Dr. Schurmann leg. - author's collection; 1 male, TR Gümüşhane, Kale, 1400 m, 25.6.1986, S. Kadlec, J. Voříšek leg. - author's collection; 1 male and 1 female, Turkey, Erzincan, 20 km N Pülümür, Pelitly, 1200-1600m, 39°35'N, 39°55'E, 15-17.6.2005, E. and P. Hajdaj leg. - author's collection.

Besides I have got photos of several specimens: holotype female with labels from Hungarian Natural History Museum, photos by A. Grabant and O. Merkl; male "Balkán" with the labels from Hungarian Natural History Museum, photos by A. Grabant and O. Merkl; 1 female, Bulgaria, Strandzha Mountain, Izgrev vill., 150 m, 21.06.2002, A. Stojanova leg - collection of J. Kurzawa, photo by J. Kurzawa; 1 female, Turkey, Tunceli, Pülümür, 19.6.2003, Roman Krolik leg. - collection of J. Kurzawa, photo by J. Kurzawa; 1 male, Turkey, Muş, Buglan Gecidi, 15 km E of Solhan, 6-9.6. 2002, Roman Królik leg. - collection of J. Kurzawa, photo by J. Kurzawa; 1 female, TR prov. Bingöl, 20km S of Genç, 26.5.2011, L. Skořepa leg. - collection of J. Kadlec, photo by J. Kadlec.

Distribution. The subspecies is known from three localities in Iranian Kurdistan: between Baneh and Saqqes, 36°03'21"N, 45°58'02"E - type locality (Fig. 16); Marivan city, Baghan (Kureh Darreh), 35°31'8.67"N, 46°24'28.62"E; Sarvabad city, Darake, 35°20'39.73"N, 46°10'15.11"E.

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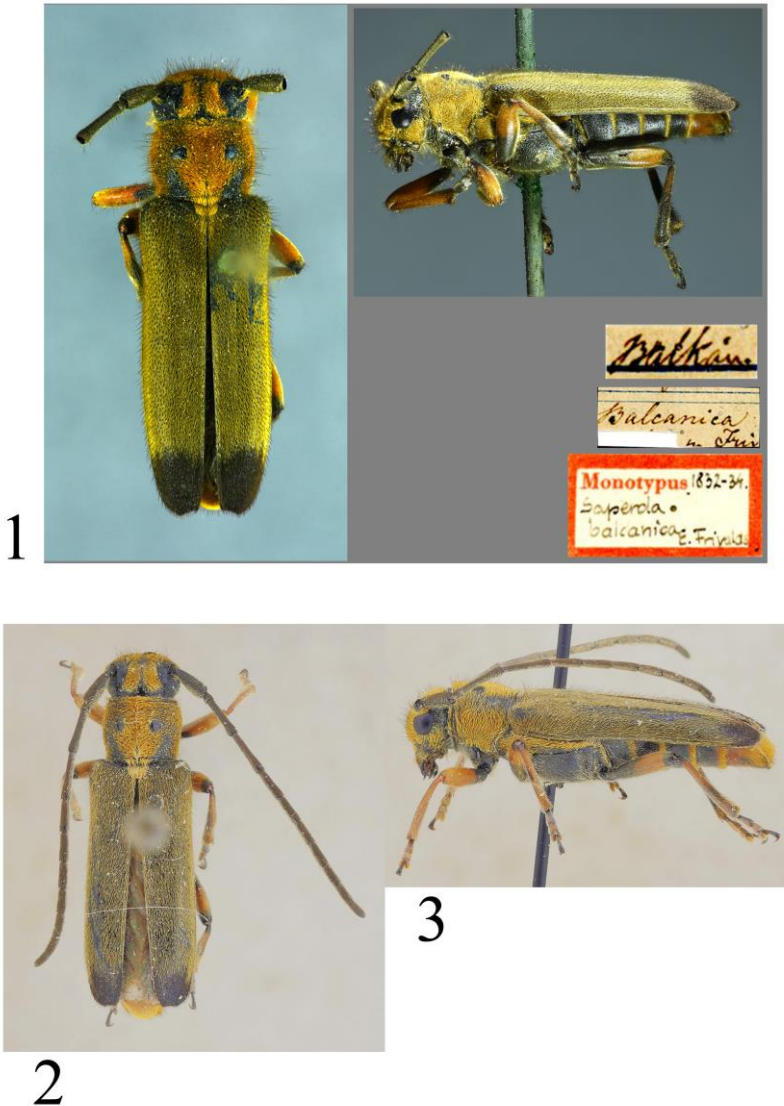
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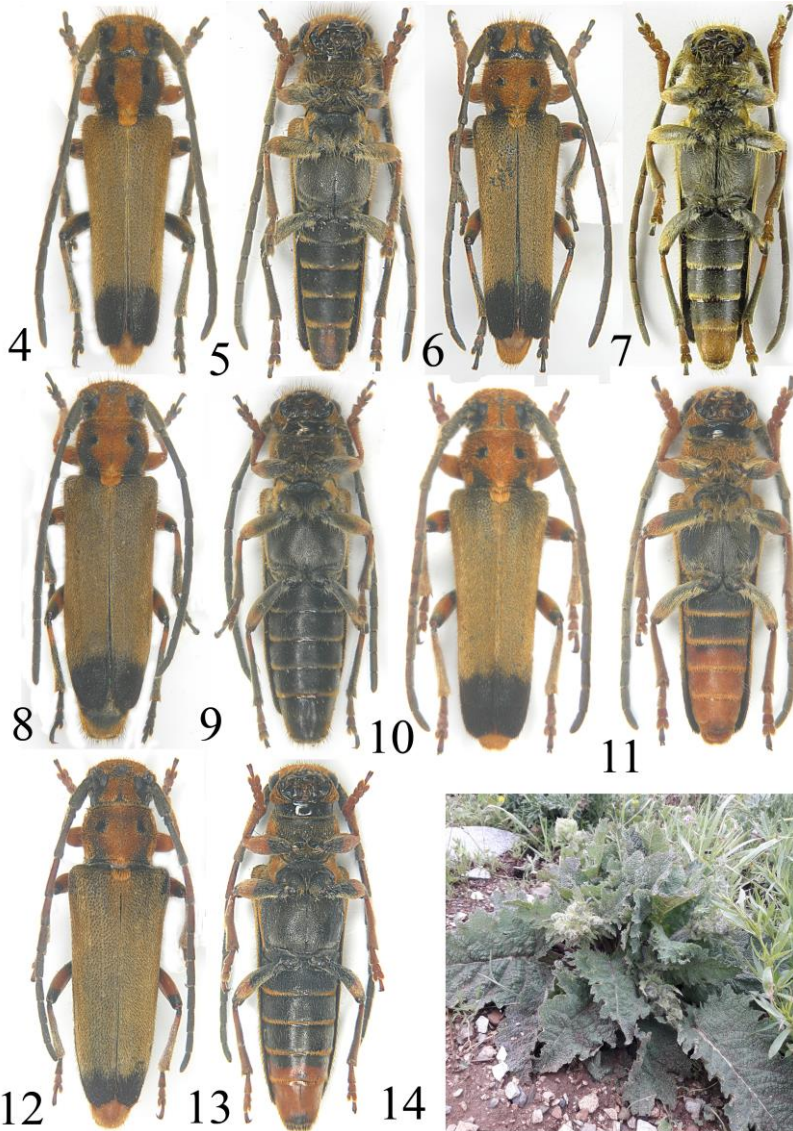
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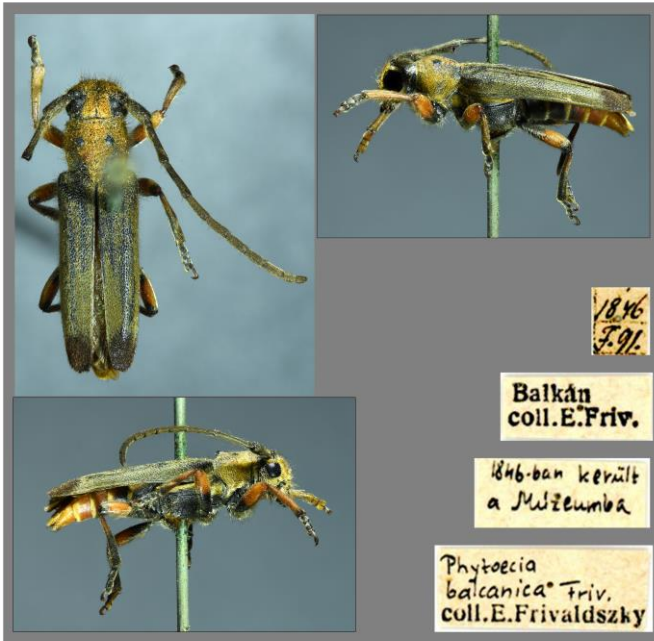


Tab. 1. *Phytoecia (Neomusaria) balcanica balcanica* (Frivaldszky von Frivald, 1835).
Fig. 1 - holotype, female with labels (photos and composition by A. Grabant and O. Merkl); Figs: 2-3 - female, Bulgaria, Strandzha Mountain, Izgrev vill., 150 m, 21.06.2002, A. Stojanova leg - collection of J. Kurzawa (photo by J. Kurzawa) (2 - dorsal view, 3 - lateral view).



Tab. 2. Figs 4-9: *Phytoecia (Neomusaria) balcanica skoupyi* ssp. n. (dorsal and ventral views): 4-5 - male, holotype; 6-7 - male, paratype from same locality; 8-9 - female, paratype from same locality; Figs 10-13 *Phytoecia (Neomusaria) balcanica balcanica*: 10-11 male, Turkey, Erzincan, 20 km N Pülümür, Pelitly, 1200-1600 m, 39°35'N, 39°55'E, 15-17.6.2005, E. and P. Hajdaj leg.; 12-13 - female from same locality; Fig. 14 - *Salvia* sp. - food plant of *Ph. (N.) b. skoupyi* ssp. n. (photo by J. Kadlec).

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Tab. 3. Fig. 15 - *Phytoecia (Neomusaria) balcanica balcanica* (Frivaldszky von Frivald, 1835). Male “Balkán” (photos and composition by A. Grabant and O. Merkl); Fig. 16 - Type locality of *Phytoecia (Neomusaria) balcanica skoupyi* **ssp. n.**

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