

# New *Phytoecia* (*Pseudopilemia*) species from North Iran (Coleoptera: Cerambycidae: Lamiinae)

LUKÁŠ SKOŘEPA

Peč 13, 38001 Dačice, Czech Republic, email: panjericho@centrum.cz

SKOŘEPA, L.: *New Phytoecia (Pseudopilemia) species from North Iran (Coleoptera: Cerambycidae: Lamiinae).*

**Abstract:** *Phytoecia (Pseudopilemia) kostali* sp. nov. from North Iran is described. The habitus and male genitalia are illustrated.

**Keywords:** taxonomy, *Pseudopilemia*, *P. kostali* sp. nov., Iran,

## Introduction

The subgenus *Pseudopilemia* Kasatkinem, 2018 was established as a new taxon of the genus *Phytoecia* Dejan, 1835 with the type species *Saperda hirsutula* Frölich, 1793. *Phytoecia (Pseudopilemia) evae* D. Marklund et S. Marklund, 2014, *Phytoecia (Pseudopilemia) kruszelnickii* Szczepański et Karpinski, 2017 and *Phytoecia (Pseudopilemia) konyaensis* Danilevsky, 2010 were determined as typical species of the subgenus *Pseudopilemia* Kasatkin, 2018. Additionally, *Phytoecia (Pseudopilemia) hirsutula* Frölich, 1793 with the subspecies *Ph. (P.) h. homoiesthes* Ganglbauer, 1888 are considered as members of this subgenus. According to SZCZEPAŃSKI & KARPIŃSKI (2017) *Ph. (P.) moreana* Breuning, 1943 was set as a separate species and *Ph. (P.) buglanica* D. Marklund & S. Marklund, 2014 was synonymized with *Ph. (P.) hirsutula* (Frölich, 1793).

According to DANILEVSKY (2019) the subgenus *Pseudopilemia* comprises eight taxa including one subspecies. *Phytoecia (Pseudopilemia) hirsutula* Frölich, 1793, *Phytoecia (Pseudopilemia) hirsutula homoiesthes* Ganglbauer, 1888 and *Phytoecia (Pseudopilemia) ghobarii* Danilevsky, 2018 are the three taxa of the subgenus known in Iran. In the present paper, the new species of the subgenus is described as clearly morphologically distinct from the aforementioned taxa, and it is directly compared with the closest congeners *Phytoecia (Pseudopilemia) hirsutula* Frölich, 1793 and *Phytoecia (Pseudopilemia) kruszelnickii* Szczepański & Karpinski, 2017.

## Material and Methods

The habitus of all specimens was taken by the Canon EOS 350D digital camera with the Sigma 105 mm macro lens. Composite images were created using the software Image Stacking Software Combine ZP. Microstructures of dissected parts were observed

under the DNT DigiMicro Profi USB microscope. The genitalia photographs were taken with a Canon MP-E 65mm/2.8 1–5× Macro lens on bellows attached to a Canon EOS 550D camera. Each photograph was taken as several partially focused images and afterward composed in the Helicon Focus 3.20.2 Pro software. The photographs were modified using Adobe Photoshop CC.

Specimens examined including type materials are deposited in the following collection:

LS – collection of Lukáš Skořepa (Peč, Czech Republic)

TP – collection of Tomáš Peterka (Veselí nad Lužnicí, Czech Republic)

DS – collection of David Šanc (Plzeň, Czech Republic)

The new species is compared with closely related taxa that were represented by the following material.

*Phytoecia (Pseudopilemia) hirsutula* Frölich, 1793

*Type locality:* Austria.

*Examined material:* 1♂, Makedonia centr., Trojaci env., Kozjak hill, 23.v.2010, leg. V.Křivan (LS); 2♂, Turkey, prov Malatya, 35km NE Gelbasi, Resadiye Gec., 23.v.2011, leg. L.Skořepa, (LS); 3♂♂, 3♀♀, Turkey, prov Mus, 10km E Solhan, Buglan Gec., 1600 m, 30.v.2011, leg. L.Skořepa, (LS); 1♂, Georgia, east, NP Vaschlovani, 15.v.2017, leg. T.Peterka (LS); 2♂♂, 1♀, Georgia, centr., 7km S Kvemo Nichbisi, 16. - 17. vi.2019, leg. L.Skořepa (LS); 1♂, Slovakia, Štúrovo env., Hegyfarok, 7.v.1995, leg. P.Viktora (DS).

*Phytoecia (Pseudopilemia) kruszelnickii* Szczepański et Karpiński, 2017

*Type locality:* Greece

*Examined material:* 8♂♂, 6♀♀, Greece, Meteora, 2km NE Kalapaka – Kastraki, 8.v.2013, leg. L.Skořepa (LS)

## Taxonomy

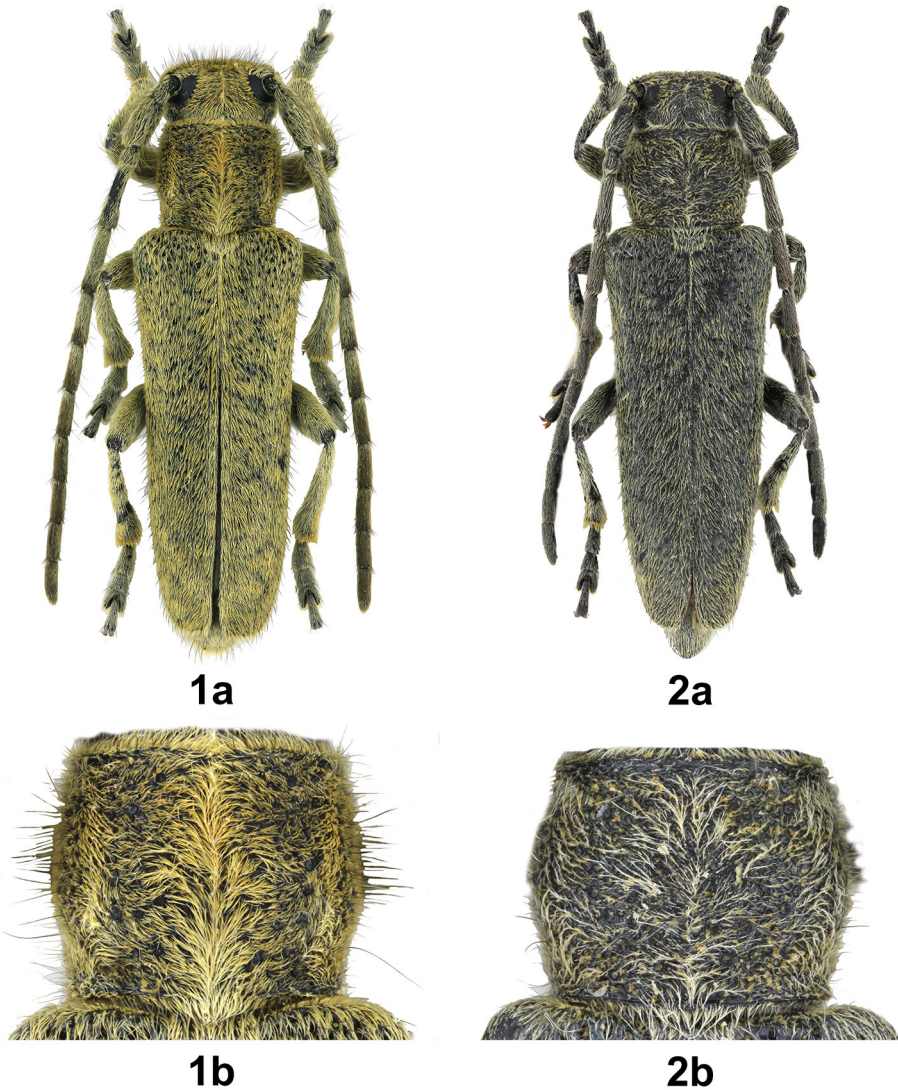
### Tribe Lamiinae

#### Genus *Phytoecia* Dejean, 1835

#### *Phytoecia (Pseudopilemia) kostali* sp. nov.

*Type material:* *Holotype* (♂) (Fig. 2a): Iran, prov. Mazandaran, 20km E Marzanabad, Kinj env., 3. – 4.vi.2016, L.Skořepa lgt. (deposited in LS collection); *Paratypes*: (3♂♂, 2♀♀) (deposited in LS collection); (5♂♂, 4♀♀) (deposited in TP collection); (2♂♂, 1♀) (deposited in DS collection), same data as holotype.

*Description.* Habitus of the male holotype is presented in Fig. 2a. Body length ranges from 3.1 to 5 mm, body width is from 2.5 to 3 mm, females are more robust. The integument of the whole body is black. The whole body is covered by two types of pubescence. Basal pubescence is sparse and short, yellowish-white, uniform without fragmentation. Sides of pronotum and elytra bear scattered individual longer brownish setae. Pronotum is heavily punctuated. Head and elytra are with sparse punctuation. In both males and females pronotum is oblong, markedly wider than long (Fig. 2b). Pubescence of pronotum is more distinctive on sides (like in other taxa of the subgenus) and the longitudinal line of pubescence in the middle of pronotum is rather indistinctive. In both males and females antennae are markedly shorter than the body length, reaching approximately 8/10 of elytra length. Antennae are evenly and rather densely covered by short white procumbent pubescence. Scutellum and elytra are covered with similar



**Figs 1–2:** Habitus and pronotum of species *Phytoecia*, of the subgenus *Pseudopilemia*: 1a habitus *Ph.(P.) kruszelnickii* Szczepański et Karpiński, 2017; 1b pronotum *Ph.(P.) kruszelnickii* Szczepański et Karpiński, 2017; 2a habitus *Ph.(P.) kostali* sp.nov.; 2b pronotum *Ph.(P.) kostali* sp.nov.

sparse and short pubescence as the rest of the body, only margins of scutellum are rimmed with noticeably denser pubescence of yellowish-white colour. Elytra are elongated in males, they taper rearwards from humeri, while in females elytra are more parallel-sided. Elytra are convex, in males slightly flattened. Male genitals are very characteristic and well distinguishable. Parameres are pale, narrow, and long, with many setae at the apex (Fig. 3). The apex of the aedeagus is gradually narrowing apically (Fig. 4).



**Fig. 3-4: 3 Tegmen *Ph.(P.) kostali* sp.nov.; 4 Apex of the median lobe *Ph.(P.) kostali* sp.nov.**

*Differential diagnosis.* The newly described taxon must be compared to previously known valid taxa of the subgenus *Pseudopilemia* occurring in the West Palearctic region. Those are namely: *Ph.(P.) kruszelnickii* Szczepański et Karpiński, 2017 and *Ph.(P.) hirsutula* Frölich, 1793. Habitus of *Ph.(P.) kruszelnickii* and *Ph.(P.) kostali* sp. nov. are compared in Fig. 1a and 2a. Body of *Ph.(P.) kostali* sp. nov. is virtual without any long erect pubescence with this trait is the most marked on the head. Pubescence of the whole body is continuous and even, but sparse. Therefore, body integument is well visible. However, the newly described species seemingly appears as worn-down, it is a native appearance. The other species have denser pubescence, usually with distinct patches forming a marble pattern. Pronotum of the new species is markedly wider than long. Pronotum of *Ph.(P.) kruszelnickii* and *Ph.(P.) kostali* sp. nov. is shown in Fig. 1b and 2b, respectively. In male antennae are noticeably shorter than the elytra length, which is not the case for other species of the subgenus. The differences can be found also in parameres that are narrower and more elongated in the case of *Ph.(P.) kostali* sp. nov.

*Biology.* All the specimens were collected at the same locality, an intensive pasture (Fig. 5) with the growth of *Stachys byzantina* K.Koch, 1849 (Fig. 6) that might be a host plant of the newly described beetle species.

*Etymology.* The newly described species was named after my lifelong friend Zdeněk Košťál (Pardubice, Czech Republic), who has noticed this species at the type locality.

*Discussion.* The newly described species was recorded in North Iran, from where it was reported by Zdeněk Košťál for the first time. As the species is small and rather unimpressive it has been neglected up to now. There are three taxa from subgenus *Pseudopilemia* known from Iran (DANILEVSKY 2019). All these taxa markedly differ from *Ph.(P.) kostali* sp. nov. Certain levels of similarity can be found in populations of *Ph.(P.) hirsutula* from the Caucasus and eastern Turkey, where extraordinary small and dark specimens occur. Nevertheless, the aforementioned differential traits are valid even in this case. Regarding these differential traits, Iranian populations of *Ph.(P.) hirsutula*





Fig. 5: Habitat of *Ph.(P.) kostali* sp.nov.



Fig. 6: Host plant of *Ph.(P.) kostali* sp.nov.

are constant, varying only in coloration or marble pattern of elytra pubescence. In some aspects inclusion of *Ph.(P.) kostali* sp. nov. to the subgenus *Pseudopilemia* seems to be doubtful. It might even belong to a new subgenus, which should be examined in extensive future studies.

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