

Taxonomy notes on *Pilemia* (*Pseudopilemia* Kasatkin, 2018) with descriptions of a new species and two new subspecies (Coleoptera: Cerambycidae)

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Abstract. Three new taxa are described: *Pilemia* (*Pseudopilemia*) *arida* sp. nov. from Jordan, *P. (P.) hirsutula karadutensis* ssp. nov. from Turkey, *P. (P.) hirsutula richardi* ssp. nov. from Iran (Lorestan), *P. (P.) homoiesthes* (Ganglbauer, 1888), stat. nov. upgraded to the species rank. *P. (P.) hirsutula holosericea* (Faldermann, 1837), stat. nov. is regarded as a valid name for a taxon from Transcaucasia and Turkey.

INTRODUCTION

Eight taxa were listed in *Pilemia* (*Pseudopilemia* Kasatkin, 2018) by Danilevsky (2020a): *P. (P.) buglanica* D. Marklund & S. Marklund, 2015, *P. (P.) evae* D. Marklund & S. Marklund, 2015, *P. (P.) ghoarii* (Danilevsky, 2018), *P. (P.) hirsutula hirsutula* (Frölich, 1793), *P. (P.) hirsutula homoiesthes* Ganglbauer, 1888, *P. (P.) konyaensis* Danilevsky, 2010, *P. (P.) kruszelnickii* Szczepański & Karpiński, 2017 and *P. (P.) moreana* (Breuning, 1943).

Previously, one name was adequately published (Kasatkin, 2018) as a synonym, *P. (P.) hirsutula hirsutula* (Frölich, 1793) = *P. (P.) buglanica* D. Marklund & S. Marklund, 2015. New synonyms were proposed by Danilevsky & Tavakilian (2022): *Phytoecia* (*Pseudopilemia*) *hirsutula* (Frölich, 1793) = *Ph. (P.) evae* D. Marklund & S. Marklund, 2014. One new taxon *P. (P.) h. kostali* (Skořepa, 2022) was recently described from North Iran (Mazandaran province).

Now a big series of new species *P. (P.) arida* sp. nov., was collected in Jordan by a group of Ukrainian entomologists, who collected many good local Cerambycidae in March-April, 2021: Yuriy Skrylnyk, Natalya Skrylnyk, Oleg Pak and Elena Ivanova.

Pilemia (*P.*) *hirsutula holosericea* (Faldermann, 1837) stat. nov. is regarded here as a valid name for a taxon from Transcaucasia, Iran and Turkey.

In recent times the subgenus *Pilemia* (*Pseudopilemia* Kasatkin, 2018) is represented by 7 species and 11 taxa, namely:

P. (P.) homoiesthes Ganglbauer, 1888 stat. nov.

P. (P.) ghoarii (Danilevsky, 2018)

P. (P.) konyaensis Danilevsky, 2010

P. (P.) arida sp. nov.

P. (P.) hirsutula hirsutula (Frölich, 1793)

P. (P.) hirsutula holosericea (Faldermann, 1837) stat. nov.

- P. (P.) hirsutula karadutensis* ssp. nov.
P. (P.) hirsutula richardi ssp. nov.
P. (P.) hirsutula kostali (Skořepa, 2022)
P. (P.) moreana (Breuning, 1943)
P. (P.) kruszelnickii (Szczepański & Karpiński, 2017)

MATERIAL AND METHODS

Material was collected manually. Specimens used in morphological studies were killed by ethyl acetate. All photographs were taken with Canon PowerShot G10 digital camera equipped with Cannon Zoom lens 5X IS 6.1-30.5 mm 1:2.8-4.5 and microscope AmScope SM745NTP. The illustrations were edited with Adobe Photoshop 7.0 and Helicon Focus 3.20.

Acronyms of collections:

- MD collection of M. L. Danilevsky (Moscow, Russia);
ML collection of M. A. Lazarev (Moscow, Russia);
OP collection of O. V. Pak (Donetsk, Ukraine);
RA collection of R. Ambrus (Praha, Czech Republic);
SM collection of S. V. Murzin (Moscow, Russia);
VG collection of V. Yu. Gazanchidis (Moscow, Russia);
YS collection of Yu. E. Skrylnyk (Kharkov, Ukraine);
ZMM collection of Zoological Museum of Moscow University.

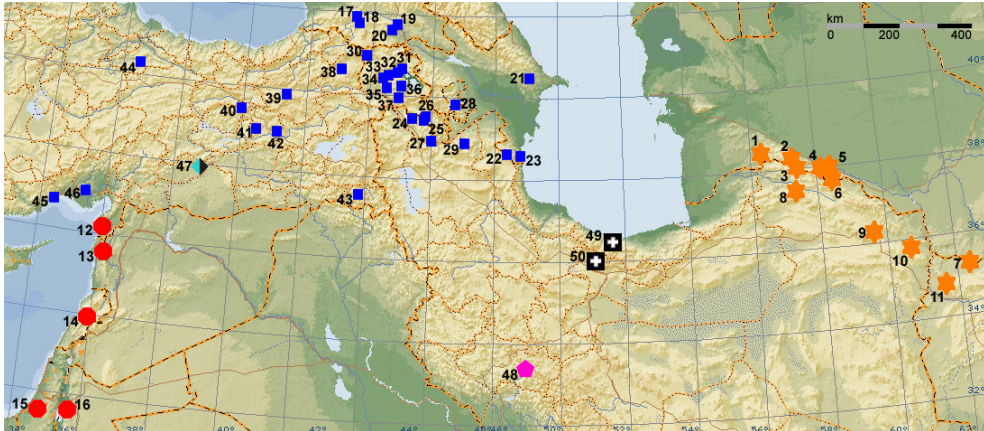
RESULTS

Pilemia Fairmaire, 1868 *Pilemia (Pseudopilemia)* Kasatkin, 2018)

Phytoecia (Pseudopilemia) Kasatkin, 2018): 157.

Pilemia (Pseudopilemia) Kasatkin, 2018), Danilevsky, 2020b: 445.

Diagnosis. Elytra with long erect setae at least anteriorly; pronotum densely pubescent, without red spot; ventral eye lobes about as long as gena; denticles of claws long and narrow; male pygidium never emarginated; endophallus structures rather different.



Map 1. Area of *Pilemia* (*Pseudopilemia*) species in Caucasus and Near East.

- 1-11. *P. (P.) homoiesthes* (Ganglbauer, 1888), stat. nov.: 1-7- **Turkmenia**: 1- Kara-Kala (= Magtymguly); 2- Arvaz (= Arwas) [about 38°16'41"N, 57°10'22"E]; 3- Kopetdag, Solyukli; 4- Firyuza [about 37°54'44"N, 58°05'20"E]; 5- Ashgabat; 6- Gaudan [about 37°39'N, 58°24'E]; 7- Badkhyz, Morgunovka (= Serkhetli); 8-10- **Iran**: 8- North Khorasan, Bojnord, 1000 m; 9- Razavi Khorasan province, Mashhad environs.; 10- Razavi Khorasan province, 150 km SE Mashhad environs, Chor-Mazar, 35°48'N, 60°40'E, 1030 m; 11- **Afghanistan**.
- 12-16. *P. (P.) arida* sp. nov.: 12- **Turkey**, Hatay province; 13- **Syria**, Slinfah; 14- **Lebanon**; 15- **Israel**; 16- **Jordan**, 13 km WSW Mādabā, Qullat Umm Rusūm Mts, 31°39'47.13"N, 35°39'33.82"E, 662 m.
- 17-46. *P. (P.) h. holosericea* (Faldermann, 1837), stat. nov.: 17-20- **Georgia**: 17- Borjomi; 18- Tsagveri; 19- Tbilisi; 20- Asureti; 21-28- **Azerbaijan**: 21- 10 km SE Maraza, Dzheyrankechmez, 40°30'N, 49°03'E, 22 - Gosmalyan; 23- Azerbaijan, Avrora (= Hirkan); 24-27- Nakhichevan: 24- Buzgov; 25- Bichenek, 2 - Bichenek Pass, 27- Ordubad, Mt. Kapudzhikh; 28- Nagorno-Karabakh; 29- **Iran**, Āzarbāijān-e Sharqi, Kalisbar environs, 1600-1700 m; 30-37- **Armenia**: 30- Toros village [Torosgyukh]; 31- Tsovagyuh, Ashotsk (= Gukasyan), 32- Darachichag [Tsahkadzor]; 33- Arzakan; 34- Arailer; 35- Erivan; 36- Gegham Ridge [about 40°12'N, 44°57'E]; 37- Khosrov; 38-46- **Turkey**: 38- Kars province, Kars environs; 39- Erzurum province, Erzurum; 40- Tunceli province, Polumur environs (Pülümür), 39°29'35.52"N, 39°54'48.60"E, 1500-1875 m; 41- Bingöl province, Kartal, 38°59'12.91"N, 40°24'47.25"E, 1745 m; 42- Bingöl province, Solhan distr., Buglan pass, 38°56'29.70"N 41°08'18.78"E, 1695 m; 43- Hakkāri province, Hakkāri; 44- Tokat province, Tokat; 45- Mersin province, NE Erdemli W Mersin; 46- Adaba province, Adana.
47. *P. (P.) h. karadutensis* ssp. nov.: 47- **Turkey**, Adiyaman province, 45 km NEE Adiyaman, Karadut environs, 37°55'6.46"N, 38°48'39.73"E.
48. *P. (P.) h. richardi* ssp. nov.: 48- **Iran**, Lorestan province, 17 km SW Dorud, Tut environs [about 33°24'N 48°55'E], 1995 m.
- 49-50. *P. (P.) h. kostali* (Skořepa, 2022): 49-50- **Iran**: 49- Mazandaran province, 20 km E Marzanabad, Kinj environs [about 36°24'N 51°32'E]; 50- Alborz Province, 70 km SW Chalus, 36°05'24"N, 51°10'12"E, 2870 m.

***Pilemia (Pseudopilemia) homoiesthes* (Ganglbauer, 1888) stat. nov.**

(Figs. 1-2, map. 1)

Phytoecia (Pilemia) hirsutula var. *homoiesthes* Ganglbauer, 1888a: 193, 197 - "Turkmenien".

Pilemia hirsutula var. *homoiesthes*, Ganglbauer, 1889c: 487; Reitter, 1905b: 239 - "Transkaukasien, Transkaspien"; Pic, 1914e: 107 - "?Arménie, Turkest."; Aurivillius, 1923: 549 - "Transkaspien".

Pilemia hirsutula homoiesthes, Winkler, 1929: 1221; Plavilstshikov, 1932: 195 - "Zakasp." (in Russian); Pic, 1952a: 3 - "de Sultanabad, ou de l'Alai"; Villiers, 1967: 373, part. - "Turcomanie, Transcaspienne, et Nord de l'Iran"; Löbl & Smetana, 2010: 309 - Iran, Turkmenia; Pesarini & Sabbadini, 2011: 51 - Kurdistan Turco orientale (Yüksekova), Iran (Kaleibaro) E Kazakhstan (Aleksevka).

Phytoecia (Pilemia) hirsutula homoiesthes, Breuning, 1951: 6, 41 - "Turcomannie, Transcaspie, Perse boréale"; Breuning, 1966c: 743; Lobanov et al., 1982: 272; Bartenev, 2009: 362 - Kazakhstan, Iran, Afghanistan, Central Asia; Özdikmen & Turgut, 2010a: 95; Shapovalov, 2012: 175 - Turkmenistan and northeastern Iran.

Pilemia (Pseudopilemia) hirsutula homoiesthes, Danilevsky, 2020b: 446 - Turkmenistan. Iran.

Type locality. Turkmenia, or more exact - Kopetdag Ridge.

Material examined: 1 ♀, Frans-Caspi [sic] G., Turemenien, E. König, (ZMM); 1 ♀, Transcaspien, Gaudan [about 37°39'N, 58°24'E], 5000 ft., (ZMM); 1 ♀, Transcasp., Ashgabat, Staudinger, (ZMM); 1 ♀, Transcasp., Arwas [about 38°16'41"N, 57°10'22"E], (MD); 1 ♂, Transcasp., Firyuza, 15.5.1913, (ZMM); 1 ♂, Transcasp., Kopetdag, Firyuza, 15.5., (ZMM); 1 ♂, 1 ♀, Turkmenia, Firyuza, 20.4.1984, O. Gorbunov leg., (MD); 1 ♂, Turkmenia, Eastern Kopetdag, Solyukli, 2.3.1988, S. Murzin leg., (ML); 1 ♀, Turkmenia, Badkhyz, Morgunovka (= Serkhetli),



Figs. 1-2. *Pilemia (Pseudopilemia) homoiesthes* (Ganglbauer, 1888), stat. nov.: 1- male, Turkmenia, Kara-Kala, 26.4.1991, O. Gorbunov leg.; 2- female, Turkmenia, Morgunovka (= Serkhetli), 23.3.1991, S. Sazonov leg.

19.4.1975, S. Murzin leg., (ML); 1 ♀, Turkmenia, Badkhyz, Morgunovka (= Serkhetli), 23.4.1975, S. Murzin leg., (MD); 1 ♀, Turkmenia, Morgunovka (= Serkhetli), 23.3.1991, S. Sazonov leg., (MD); 1 ♀, Turkmenia, Kara-Kala (= Magtymguly), 19.4.1991, O. Gorbunov leg., (MD); 1 ♂, Turkmenia, Kara-Kala (= Magtymguly), 26.4.1991, O. Gorbunov leg., (MD); 1 ♂, Turkmenia, Kara-Kala (= Magtymguly), 24.4.1992, A. Antipin leg., (VG); 1 ♂, Iran, Mashhad env., 24.3., (ZMM); 1 ♀, Iran, Khorasan, 150 km SE Mashhad env., Chor-Mazar, 35°48'N, 60°40'E, 1030 m, 24.4.2005, A. Polilov leg., (ZMM); 1 ♀, Iran, North Khorasan, Bojnord, 1000 m, 3.4.1996, W. Heinz leg., (MD).

Differential diagnosis. *P. homoiesthes* stat. nov. strongly differs from all taxa of the genus by evenly pubescent elytra with uniform grey dense pubescence; elytral pubescence of other *Pilemia* species is spotted or striated. Males antennae nearly reaching elytral apex; antennal joints often lightened basally; body length of available males: 10.1-10.3 mm; body width (at elytral bases) 3.0-3.1 mm; body length of available females: 8.5-12.3 mm; body width (at elytral bases): 2.8-4.0 mm.

Distribution. Turkmenia: Kopetdag Ridge, Badkhyz; North Iran (Khorasan). The species was recorded for Afghanistan by Bartenev (2009), though without any comments. The records for Kazakhstan (Pesarini & Sabbadini, 2011 - "Aleksievka") and for Turkish Kurdistan (Pesarini & Sabbadini, 2011 - "Yüksekova") were unbelievable.

Pilemia (Pseudopilemia) arida sp. nov.

(Figs. 3-13, map. 1)

Pilemia hirsutula, Sama & Rapuzzi, 2000: 20 - "Liban"; Rejzek et al., 2001: 274, part. - "Israel", "N. Iran: prov. Mazandarān, 70 km SW. Čalūs (pass - 2870 m), 36.09N 51.17E", "N. Iran: prov. Āzarbāygan-e, Kalisbar env. (1600-1700 m)", "NW. Syria: Šlinfah E. Latakia (1500 m)", "E. Turkey: Hakkāri"; Özdikmen, 2007: 330, 392, part. - Europe, Siberia, Turkmenistan, Caucasus, Transcaucasia, Turkey, Iran, Syria.

Phytoecia (Pilemia) hirsutula, Breuning, 1951: 6, 40, part - "la Slovaquie, la Russie méridionale, les Balkans, l'Asie mineure et la Syrie"; Özdikmen & Turgut, 2010: 95, part. - Europe, W Siberia, Turkmenia, Caucasus, Transcaucasia, Turkey, Iran, Syria, Israel.

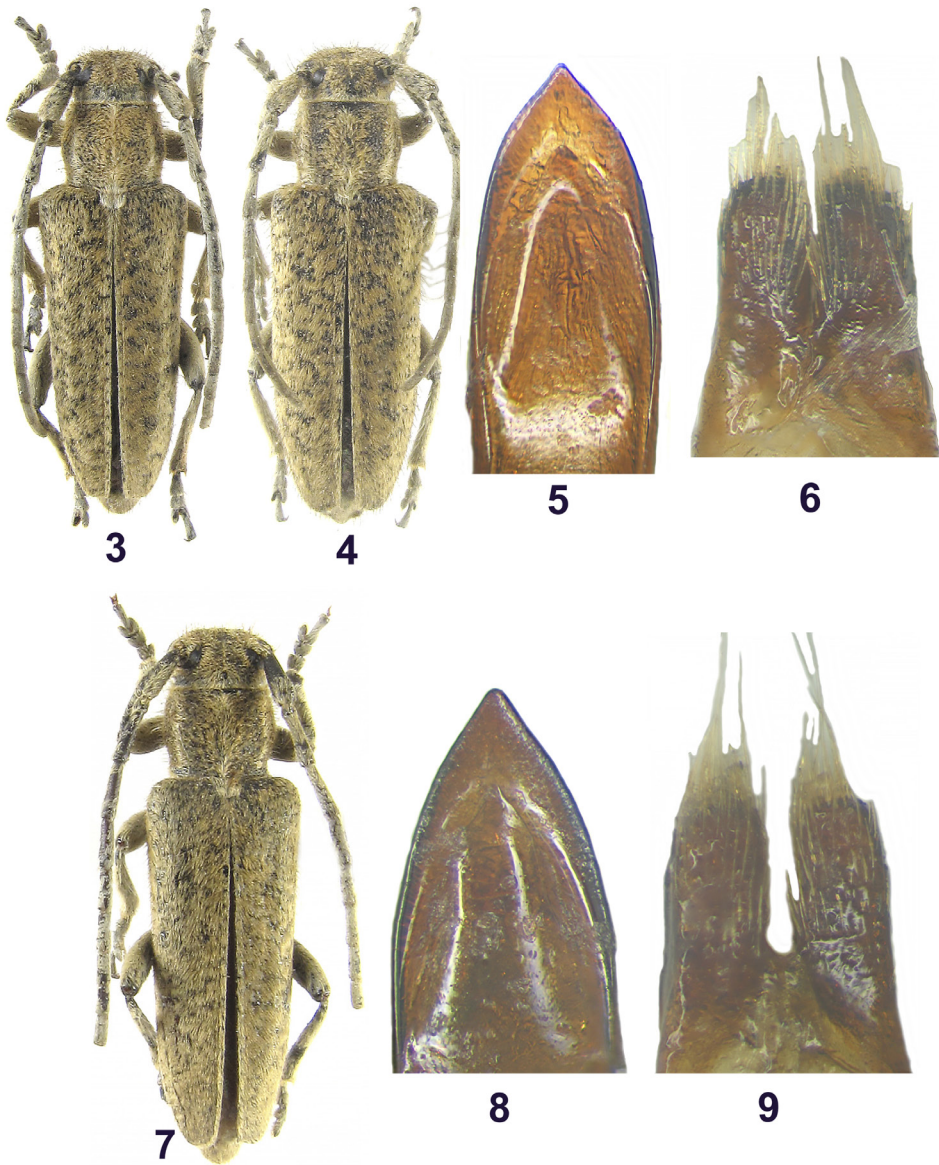
Phytoecia (Pilemia) hirsutula hirsutula, Shapovalov, 2012: 174, part. - including Near East.

Pilemia (Pseudopilemia) hirsutula hirsutula, Özdikmen & Tezcan, 2020: 466, part. - Turkey: Hatay, İzmir provinces.

Type locality. Jordan, 14 km WSW Mādabā, Qullat Umm Rusūm Mts, 31°39'47"N, 35°39'34"E, 660 m.

Type material. Holotype (♂): Jordan, 14 km WSW Mādabā, Qullat Umm Rusūm Mts, 31°39'47"N, 35°39'34"E, 660 m, 29.3.2021, O. Pak leg., (ML). Paratypes: (12 ♂♂, 12 ♀♀): idem, (MD, ML); (101 ♂♂, 58 ♀♀): ibidem, 29.3.2021, 2.4.2021, O. Pak & E. Ivanova leg., (OP); (60 ♂♂, 45 ♀♀): ibidem, 29.3.2021, 2.IV.2021, Yu. & N. Skrylnik leg., (YS). (1 ♂): "Syria, Sédillot" (ZMM); 1♂, "Syria, Staudinger", (ZMM); (1 ♀): "Syrien, ex coll. Menshikov", (ZMM).

Description. Body large and wide, completely black with dense brown-yellow pubescence and numerous erect setae; frons trapezoidal with numerous long oblique setae and dense recumbent pubescence; vertex and occiput with numerous erect setae; genae about as long as lower eye lobes; dorsal and ventral eye lobes connected by moderately wide crossbar; mandibulae bicuspid; antennae short, thick, not thickened distally, in males reaching apical elytral third, in females - surpassing elytral middle; apical swelling of 3rd antennal joint very small; 1st, 3rd and 4th joints about equal in length; antennal joints without pale



Figs. 3-9. *Pilemia (Pseudopilemia) arida* sp. nov.: 3- holotype, male; 4- paratype, female from Jordan; 5- apex of penis (paratype male from Jordan); 6- parameres (paratype male from Jordan); 7- male, paratype ("Syria" / "Sédillot"); 8- apex of penis (same paratype); 9- parameres (same paratype).

Figs. 10-13. *Pilemia (Pseudopilemia) arida* sp. nov.: 10- beetle copulation in type locality (Photo by Elena Ivanova); 11- host plant *Eremostachys laciniata* (Photo by Elena Ivanova), 12-13- type locality.



basal rings; prothorax transverse, about 1.1 times shorter than basal width; lateral sides regularly rounded; pronotum convex, with numerous black erect setae and dense brownish pubescence, central pale setae stripe and lateral stripes diffused; central stripe widened at middle with two small black spots; scutellum transverse with very dense pale pubescence; elytra about 2.3 times longer than humeral width in males, or about 2 times in females; strongly tapering posteriorly in males, or just a little in females; with very long black setae all along elytral length and dense spotted recumbent pubescence; glabrous areas indistinct; pale sutural lines absent; pale humeral stripes strongly diffused; elytral apices truncated; all legs also strongly pubescent with numerous erect setae; denticles of tarsal claws narrow, strongly elongated; ventral body side with very dense recumbent pubescence and numerous oblique setae; last abdominal tergites in males rounded, last abdominal sternites deeply depressed apically; last abdominal tergites in females triangularly elongated, acute; last abdominal sternites truncated; genitals (Figs. 5-6, 8-9); body length in males: 11.5-14.8 mm, body width at humeri: 3.5-4.6 mm; body length in females: 13.5-16.1 mm, body width at humeri: 4.1-4.9 mm.

Differential diagnosis. *P. arida* sp. nov. is very close to *P. hirsutula* (Frölich, 1793). The new species differs by big size; males are up to 14.8 mm, females up to 16.1 mm. *P. hirsutula* is usually smaller; according to own materials, maximal length in males is 12 mm, in females - 15 mm; antennae are relatively shorter (in males of *P. hirsutula* antennae nearly reaching elytral apices); elytra with long erect setae up to apices (in *P. hirsutula* erect setae are distributed to about elytral middle).

Distribution. Jordan, Syria (Slinfah); most probably all records of *P. hirsutula* for Lebanon and Israel are connected with *P. arida* sp. nov., as well as the record of *P. (P.) h. hirsutula* by Özdikmen & Tezcan (2020) for Turkish (Hatay province).

Biology. Imagoes were observed in mountain semidesert (Figs. 9-11) on *Eremostachys laciniata* at the end of March and beginning of April.

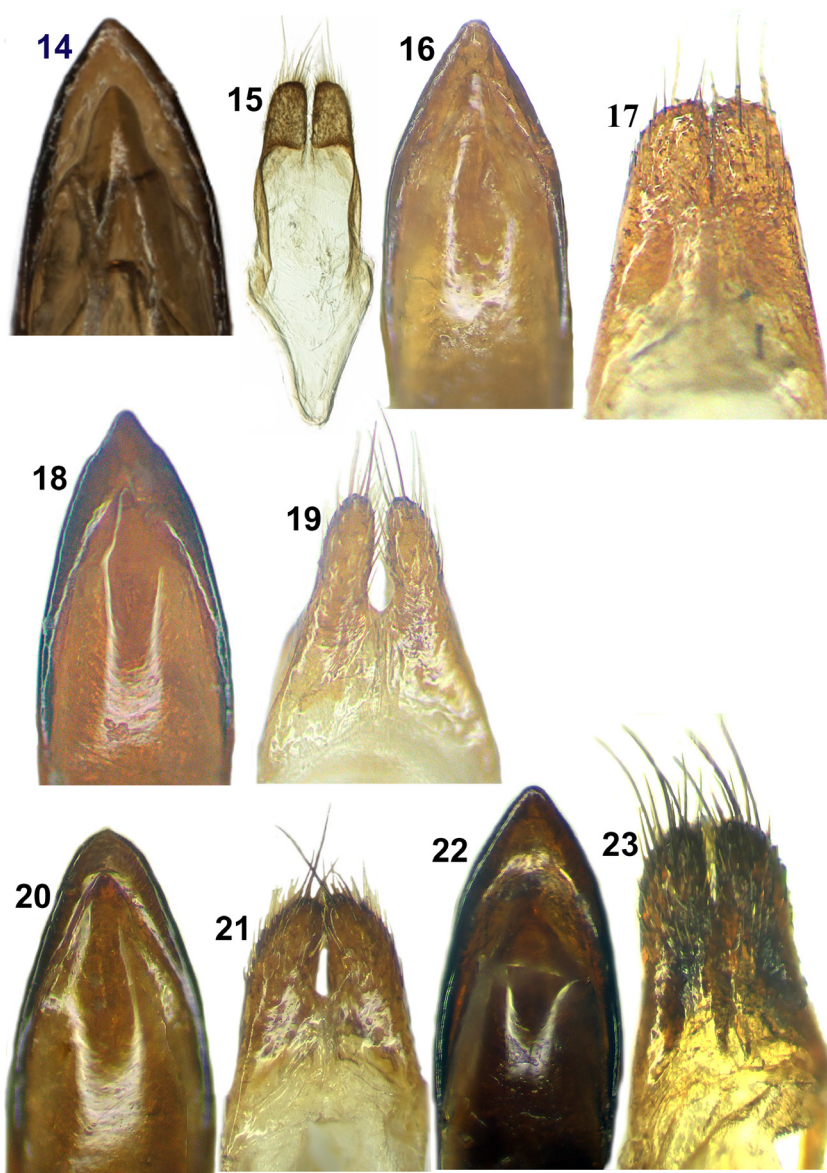
Etymology. The name comes from the Latin “*arida*” - dry, as an essential character of the native landscape.

***Pilemia (Pseudopilemia) hirsutula* (Frölich, 1793)**

(Figs. 14-36)

Saperda hirsutula G. F. Frölich, 1793: 141 - “Oesterreich”.

Pilemia hirsutula, Ganglbauer, 1889: 487 (= *atomaria* Towns. = *holosericea* Fald.; including var. *homoiesthes* Gang.); Reitter, 1905: 239 (= *atomaria* Towns. = *holosericea* Fald.), (“Mittelmeergebiet, Ungarn, Südrussland, Kaukasus, Turkestan”); Heyden, Reitter & Weise, 1906: 530 (including *atomaria* Towns., *holosericea*, *obsoleta* Gang., *homoiesthes* Gang.); Pic, 1912: 106 - Europe, Transcaucasia, Russia, Asia Minor, Turkestan; Aurivillius, 1923: 549 (including var. *homoiesthes* Gang. and ab. *obsoleta* Gang.); Winkler, 1929: 1221; Plavilstshikov, 1930: 54 - “Ukraina: Krasnograd, Gouv. Poltava”; Plavilstshikov, 1932: 195 - south of the Europe, Crimea, Caucasus; 1965: 417 - Steppe, Crimea, Caucasus; Medvedev & Shapiro, 1957: 198 - Moldova; Kostin, 1973: 227 - In the extreme west, center and south of Kazakhstan;



Figs. 14-23. Male genitalia of *Pilemia (Pseudopilemia) hirsutula hirsutula* (Frölich, 1793): 14- apex of penis of a male from Slovakia (Szczepański & Karpiński, 2017); 15- parameres of a male from Slovakia (Szczepański & Karpiński, 2017); 16- apex of penis of a male from Russia, Svyatogorsk, 15.6.1939, Arnoldi leg.; 17- parameres of the same male; 18- apex of penis of a male from Novorossiysk env., Andreevsky Pass, 44°43'N, 37°51'E, 500 m, 3-4.6.2010, M. Danilevsky leg.; 19- parameres of the same male; 20- apex of penis of a male from Crimea, Belaya Skala, 45°5'59"N, 34°37'39"E, 156 m, 20.5.2021, M. Danilevsky & G. Danilevskaya leg.; 21- parameres of the same male; 22- apex of penis of a male from Crimea, Karadag Mt., Kurortnoe, 44°54'55"N, 35°12'12"E, 30 m, 26.V.2019, M. Danilevsky leg.; 23- parameres of the same male.

Sama, 1988: 180 - "Balcani, Cecoslovacchia, Rossia meridionale, Asia Minore, Siria", "isole del Carnaro"; 2002: 112 - "In Europe occurring only in southern Slovakia and Hungary"; Althoff & Danilevsky, 1997: 38; Švácha, 2001: 283 (larva); Dascălu, 2002: 79 - Nord-Est de la Roumanie (Moldavie); Ilić, 2005: 144 - Serbia; Migliaccio et al., 2007: 56 - Bulgaria, "Common from 100 to 950 m a.s."; Özdikmen, 2007: 330, 392, part. - Europe, Siberia, Turkmenistan, Caucasus, Transcaucasia, Turkey, Iran, Syria; Löbl & Smetana, 2010: 308-309; Pavičević et al., 2015: 36 - Serbia; Crişan et al., 2017: 11 - Romania.

Phytoecia (Pilemia) hirsutula, Ganglbauer, 1884: 554, (= *atomaria* Townson) - "Süd-Frankreich, Süd-Deutschland, Ungarn, Türkei, Kleinasien, Caucasus"; Seidlitz, 1891: 755; 1891b: 853; K. Daniel, 1906: 56, 59 - "Von Ungarn durch ganz Südost-Europa (Balkanhalbinsel, Südrussland), Kleinasien und Transkaukasien bis Turkmenien"; Reitter, 1913: 68 - "Bayern"; Breuning, 1951: 6, 40 - "la Slovaquie, la Russie méridionale, les Balkans, l'Asie mineure et la Syrie"; 1966: 743; Pic, 1952: 1, 3 - "Phaléron près d'Athènes", "Corfu: Peleka"; Heyrovský, 1955: 302; Lobanov et al., 1982: 272; Danilevsky & Miroshnikov, 1985: 369, 377, 379 - South of the European part of the USSR, Caucasus, Transcaucasia, Kopetdag; Western Europe, Middle East, Turkey, Northern Iran; Sudre, 2000: 200, (= *moreana* Breun. = *ciliciae* Breun. = *androsensis* Breun.); Jeniš, 2001: 292; Dauber, 2004: 85 - Insel Samos, Griechenland; Bartenev, 2009: 362 - Ukraine; Özdikmen & Turgut, 2010: 95 - Europe, W Siberia, Turkmenia, Caucasus, Transcaucasia, Turkey, Iran, Syria, Israel; Abdurakhmanov, 2012: 31 - Dagestan; Shapovalov, 2012: 174, part., (including ssp. *moreana* Breuning, 1943) - Orenburg region, including Poduralie, Kurgan region; Kasatkin, 2018: 157.

Phytoecia (Pilemia) hirsutula var. *tournieri* Pic, 1952: 2, part. - "Sicile".

Oxytia androsensis Breuning, 1963: 10 - "Grèce: Ile d'Andros"; Morati, 2003: 176 - Holotype, "Grèce, Ile Andros".

Phytoecia (Pseudopilemia) hirsutula, Kasatkin, 2018: 158-160 (= *buglanica* D. Marklund & S. Marklund, 2015).

Pilemia (Pseudopilemia) hirsutula, Danilevsky, 2020b: 446 - south of European Russia, Western Siberia, Ukraine, Moldova, Transcaucasia, Kazakhstan, Turkmenistan, Iran, Western Europe, Turkey, Syria, Jordan, Lebanon, Israel.

Phytoecia (Pseudopilemia) buglanica, Özdikmen, 2021: 1378 - Turkey.

Type locality. "Oesterreich" - according to the original description; according to Sama (2002), most probably it was the territory of modern Hungary.

Differential diagnosis. Elytra without contrast longitudinal lines, antennal joints without pale basal rings, but sometimes with diffused basal light areas, elytra with long erect setae near bases; body length in males: 6.0-12.3 mm, body width at humeri: 2.3-3.5 mm; body length in females: 7.2-15.0 mm, body width at humeri: 1.9-4.2 mm. Body size of *P. hirsutula* published (and used as a species character) by Szczepański & Karpiński (2017) - "not exceed 9 mm" was not correct.

Distribution. South-East of West Europe, Moldova, Ukraine, South and Central Russia, West Siberia (up to Kurgan Region), Ukraine, Moldova, North Kazakhstan, all countries of Transcaucasia; Turkmenistan; many localities are known in Anatolia, so here the species could be distributed everywhere; Near East, North Iran.

Biology. Larvae develop in roots and bases of stems of a number of herbaceous plants: usually in *Phlomis tuberosa* and *Stachis*, also *Ballota* and *Marrubium* were recorded (Bense 1995); *Salvia* was published as a host plant for North Iran (Rejzek et al. 2001); the record of *Eremostachys laciniata* as a host plant for Israel (Rejzek et al. 2001) was most probably connected with *Pilemia arida* sp. nov. Imago are active from April to June. The species consists of five subspecies.

1. *Pilemia (Pseudopilemia) hirsutula hirsutula* (Frölich, 1793) (Figs. 14-23)

Saperda hirsutula G. F. Frölich, 1793: 141 - "Oesterreich".

Saperda atomaria Townson, 1797: 470, Pl. XII, fig. 3 - Hungary.

Phytoecia hirsutula, Küster, 1846: 86 - "In Oesterreich, Ungarn, auch bei Erlangen und Nürnberg in Bayern"; L. Redtenbacher, 1874: 425; Sahlberg, 1913: 63; Heyrovský, 1967: 581 - Dalmatien, Bosnia-Herzegovina, Serbien, Mazedonien, Albanien, Bulgarien; Bense, 1995: 430, 431, part - southeast of Western Europe from Slovakia to Greece; Kasatkin & Arzanov, 1997: 66 - Rostov region; Kaliuzhnaja et al., 2000: 190 - Volgograd and Astrakhan region; Isaev et al., 2004: 41 - Ulyanovsk region.

Pilemia hirsutula, Fairmaire, 1864: 175, 176; Lacordaire, 1872: 861 - "Allemagne".

Phytoecia (Pilemia) hirsutula hirsutula, Lobanov et al., 1982: 272; Bartenev, 2009: 362 - Ukraine: Transcarpathia, Odessa, Dnepropetrovsk, Kherson, Kharkov, Donetsk, Lugansk regions, Crimea; Özdikmen & Turgut, 2010: 95; Abdurakhmanov, 2012: 31 - Dagestan; Shapovalov, 2012: 175 - Orenburg region; Ambrus & Grosser, 2013: 475 - Iran; Ilić & Čurčić, 2015: 85 - Serbia; Georgiev et al., 2015: 85 - Strandzha Mountain (Turkey: Vize); Cocquempot et al., 2016: 101 - Liban; Szczepański & Karpiński, 2017: 142 - Slovakia, Nitriansky kraj: Štúrovo; Gradinarov & Petrova, 2020: 179 - Bulgaria: Sarnena Sredna Gora Mountains.

Phytoecia hirsutula hirsutula, Sláma, 1998: 329 - south of Slovakia.

Pilemia hirsutula, Löbl & Smetana, 2010: 308; Sama et al., 2010: 188 - Europe de l'Est et du Sud-Est, Balkans, Asie Mineure, Caucase, Iran, Syrie, Liban, Israël; Rapuzzi & Sama, 2012: 230 - "Balcani, Asia Minore Siria, Israele. Albania"; Ali & Rapuzzi, 2016: 268 - Syrian Coastal Region.

Phytoecia (Pseudopilemia) hirsutula hirsutula, Gradinarov et al., 2020: 110 - Bulgaria: Tracian Plane: Bessarian Hills near Ognyanovo Vill.; Pirin Mt.: Sveti Ilia Hill near Kalimantsi Vill., 450-510 m; Kalimanska River, east of Kalimantsi Vill.

Pilemia (Pseudopilemia) hirsutula hirsutula, Danilevsky, 2020b: 446 - south of European Russia, Western Siberia, Ukraine, Moldova, Transcaucasia, Kazakhstan, Iran, Western Europe, Turkey, Syria, Jordan, Lebanon, Israel; Özdikmen & Tezcan, 2020: 466, part. - Turkey: Hatay, Izmir provinces; Tezcan et al., 2020: 150 - Turkey: Samsun and Uşak provinces; Cocquempot et al.: 2020: 221 - Syrie: Bilyoun; Özdikmen, 2021: 1378.

Material examined: 1 ♀, "Hungaria, centr." (ZMM); 2 ♀♀, "ČSSR - Slovakia, Balans, kopce, 4.6.1965, M. Kadera" (SM); 1 ♀, Slovakia, Štúrovo, V. Vesely, 1963 (SM); 1 ♀, Bulgaria, Struma Valley, W Kressnesko, Hantche inn., 41°47'N, 23°9'E, 290 m, 1.VI.2009, T. Ljubomirov leg. (MD); 1 ♂, Moldova, Dubossary, 26.5.2009, A. Zubov leg. (ML); 2 ♂♂, 2 ♀♀, Ukraine, Poltava env., Krasnograd, 25.5.1926, F. Lukianovich leg. (ZMM); 2 ♂♂, 1 ♀, Ukraine, Odessa, Tiligul liman, Gulyaevka, 28.5.1980, M. Nesterov leg. (MD); 4 ♀♀, Ukraine, Odessa, 6.6.1934 (MD); 1 ♀, Dnestr liman, Ovidiopol, 17.6.1984, M. Nesterov leg. (MD); 1 ♂, Ukraine, Elesavetgrad (Krapivnitsky), 3.5.1905 (MD); 2 ♂♂, SE Ukraine, Donetsk region, Veliko-Anadol Forest, 12.6.1987 (without collector name) (OP); 1 ♀, SE Ukraine, Lugansk region, Provalskaya Steppe, 15.6.2004, V. Moroz leg. (OP); 1 ♂, SE Ukraine, Donetsk region, Starobeshevo env., 7.6.2009, A. Gubin leg. (OP); 2 ♂♂, Crimea, Simferopol, 20.V.2017, K. Efetov leg. (ML); 3 ♂♂, 1 ♀, Crimea, Karadag Mt., Kurortnoe, 44°54'55"N, 35°12'12"E, 30 m, 26.V.2019, M. Danilevsky leg. (MD); 1 ♂, Crimea, Kurortnoe, Chokrak Lake, 44°28'34"N, 36°17'34"E, 60 m, 15.5.2019, M. Danilevsky leg. (MD); 1 ♂, Crimea, Belogorsk, Belaya Skala, 12.5.1982, I. Plyushch leg. (MD); 2 ♂♂, 1 ♀, Crimea, Belaya Skala, 45°5'59"N, 34°37'39"E, 156 m, 20.V.2021, M. Danilevsky & G. Danilevskaya leg. (ML); 1 ♂, Crimea, Alupka, 15.5.1934 (MD); 1 ♂, Crimea, Viktorovka, 44°47'49"N, 33°47'43"E, 200 m, 11.VI.2021, A. Rubenyan (MD); 1 ♀, Crimea, Koktebel, Uzun-Sirt, 12.V.2021, K. Efetov leg. (MD); 1 ♂, Russia, Svyatogorsk, 15.6.1939, Arnoldi leg. (MD); 1 ♀, Russia, Sarepta, 28.V.1999, M. Danilevsky leg. (MD); 1 ♀, Dagestan, Kizlyar distr., Bryansk, 20.V.1934, ex. coll. P. Reznik (ZMM); 1 ♂, N Caucasus, Maykop (ZMM); 1 ♂, Zheleznovodsk, 22.4.1909 (ZMM); 1 ♂, Caucasus, Karaso, 8.5.1909, Parfentiev leg. (ZMM); 2 ♀♀, Russia, Rostov region, Orlovsky district, Manyh vill. env., Gruzskoye lake, 19-26.5.2010, V. Perepechaenko leg. (OP); 27 ♂♂, 28 ♀♀, Russia, Novorossiysk env., Andreevsky Pass, 44°43'N, 37°51'E, 500 m, 3-4.VI.2010, M. Danilevsky (ML); 2 ♀♀, Russia, Anapa, Sukko, 44°47'17"N, 37°22'43"E, 42 m, 21.5.2015, M. Danilevsky (ML); 1 ♂, Russia, Orenburg (ML); 1 ♂, Russia, Kuvandyk, Maloe Churaevo, 14-15.VI.2009, A. Shapovalov leg. (MD); 1 ♂, 1 ♀, Russia, Orenburg Reg., Akbulak Distr., Shkunovka, 13.5.2012, E.Yu. Zakhatova (ML); 1 ♂, 1 ♀, Uralsk (Kazakhstan), 3. V.1908, Zhuravlev leg. (ZMM);

1 ♂, Kazakhstan, 20 km NW Emba, 48°55'29.2"N, 58°18'49.1"E, 275 m, 20.5.2012, A.V. Ivanov leg. (MD); 1 ♀, Russia, N Rostov Region, Tikhaya Zhuravka, 30.5.2010, M. Danilevsky (ML).

Differential diagnosis. Body pubescence from grey to brownish; antennae long, male antennae nearly reaching elytral apices; pronotum with more or less distinct pale lateral and central stripes; elytra with spotted pubescence; bright pale pubescent areas along humeral elytral margin indistinct; basal light areas of antennal joints indistinct; last abdominal sternite in males without apical depression; male genitals (Figs. 14-23); genital morphology is rather different in different populations, peculiar genitals of males from Andreevsky Pass above Novorossiysk (Figs. 18-19) are based on 4 specimens; though no external differences were observed; body length in males: 6.0-12.0 mm, body width at humeri: 2.3-3.0 mm; body length in females: 7.2-15.0 mm, body width at humeri: 1.9-3.3 mm.

Distribution. The subspecies is generally accepted as being distributed in South-East of West Europe (Slovakia, Hungary, Romania, Moldova, Slovenia, Croatia, Serbia, Bosnia & Herzegovina, Montenegro, Macedonia, Albania, Greece and Bulgaria), but according to Sama (2002), the species in Europe is known from South Slovakia and Hungary only; Center and South of European Russia, northwards to Ulyanovsk Region, and so it must be in Samara Region; Caucasus from Kuban to Dagestan; West Siberia to Kurgan Region; Kazakhstan, according to Kostin (1973), from north to south, but I know corresponding specimens southwards to Mugodzhary Mountains only (Emba environs); it was not mentioned by R. Kadyrbekov in his numerous Kazakhstan publications; according to R. Filimonov (personal message), several specimens were collected by him in Central Kazakhstan near Pokrovskoe (Temir River valley); the taxon is widely distributed all around Ukraine (Transcarpathia as well as regions: Odessa, Dnepropetrovsk, Kirovograd, Kherson, Kharkov, Donetsk, Lugansk).

2. *Pilemia (Pseudopilemia) hirsutula holosericea* (Faldermann, 1837) stat. nov.

(Figs. 24-27, map. 1)

Saperda holosericea Faldermann, 1837: 287, Pl. IX, fig. 7 - "Transcaucasia".

Phytoecia (Pilemia) holosericea, Ganglbauer, 1884: 568 - "Transcaucasien, Pontus".

Pilemia obsoleta Ganglbauer, 1889: 487, (= *holosericea* sensu Ganglbauer, 1884).

Pilemia hirsutula var. *obsoleta*, Reitter, 1905: 239, part. - "Anatolien".

Phytoecia (Pilemia) hirsutula obsoleta, Breuning, 1951: 6, 41, part. - "Cilicie"; Pic, 1952: 3, part. - "Missis" Armenia; D. Marklund & S. Marklund, 2015: 277 - Turkey.

Phytoecia (Blepisanis) ciliciae Breuning, 1951: 406 - "Ciliciae Adana"; 1966: 756.

Phytoecia hirsutula, Adlbauer, 1988: 291 - "NE Erdemli W Mersin"; Kalashian, 2017: 44 - Armenia; Kalashian & Khalatyan, 2018: 312 - Jermuk hydrological State Sanctuary, Armenia.

Phytoecia (Pilemia) evae D. Marklund & S. Marklund, 2015: 274, 277 - "Turkey, Bingöl prov., Bingöl distr., Kartal village, 38°59'12.91"N 40°24'47.25"E, 1745 mas".

Phytoecia (Pilemia) buglanica D. Marklund & S. Marklund, 2015: 276, 277 - "Turkey, Bingöl prov., Solhan distr., Buglan pass, 38°56'29.70"N 41°08'18.78"E, 1695 mas".

Phytoecia (Pseudopilemia) evae, Kasatkin, 2018:160; Özdikmen, 2021: 1378 - Turkey; Danilevsky & Tavakilian, 2022: 109, 158.

Pilemia hirsutula, Ganglbauer, 1889: 487, (= *atomaria* Towns. = *holosericea* Fald.; including var. *homoiesthes* Gang.); Reitter, 1905: 239, part., (= *atomaria* Towns. = *holosericea* Fald.) - "Mittelmeergebiet, Ungarn,

Südrussland, Kaukasus, Turkestan”; Aurivillius, 1923: 549, part., (including var. *homoiesthes* Gang. and ab. *obsoleta* Gang.); Winkler, 1929: 1221, part.; Plavilstshikov, 1932: 195, part. - south of the EU, Crimea, Caucasus; 1948: 186, part. - Armenia, Europe, Caucasus, Turkmenia; 1965: 417, part. - Steppe, Crimea, Caucasus; Zaitsev, 1954: 20 - Georgia: Borjomi, Tana, Tbilisi, Tsagveri, Asureti; Breuning & Villiers, 1967: 62 - “Turquie: Erzurum”; Sama, 1988: 180, part. - “Balcani, Cecoslovacchia, Rossia meridionale, Asia Minore, Siria”, “isole del Carnaro”; 2002: 112, part. - Europe, Caucasus, Turkey, Iran, Turkmenia; Rejzek et al., 2001: 274, part. - “Israel”, “N. Iran: prov. Mazandarân, 70 km SW. Çalûs (pass - 2870 m), 36.09N 51.17E”, “N. Iran: prov. Āzarbāygan-e, Kalisbar env. (1600-1700 m)”, “NW. Syria: Şlînfah E. Latakia (1500 m)”, “E. Turkey: Hakkâri”; Tozlu et al., 2003: 102 - Bayburt, Erzurum, Kars; Özdikmen, 2007: 330, 392, part. - Europe, Siberia, Turkmenistan, Caucasus, Transcaucasia, Turkey, Iran, Syria; Löbl & Smetana, 2010: 308-309, part.

Phytoecia (Pilemia) hirsutula, Ganglbauer, 1884: 554, part., (= *atomaria* Townson) - “Süd-Frankreich, Süd-Deutschland, Ungarn, Türkei, Kleinasien, Caucasus”; K. Daniel, 1906: 56, 59, part. - “Von Ungarn durch ganz Südost-Europa (Balkanhalbinsel, Südrussland), Kleinasien und Transkaukasien bis Turkmenien”; Breuning, 1951: 6, 40, part. - “la Slovaquie, la Russie méridionale, les Balkans, l’Asie mineure et la Syrie”; 1966: 743, part.; Lobanov et al., 1982: 272, part.; Danilevsky & Miroshnikov, 1985: 369, 377, 379, part. - South of the European part of the USSR, Caucasus, Transcaucasia, Kopetdag; Western Europe, Middle East, Turkey, Northern Iran; Sudre, 2000: 200, part., (= *moreana* Breun. = *ciliciae* Breun. = *androsensis* Breun.); Bartenev, 2009: 362, part.; Özdikmen & Turgut, 2010: 95, part. - Europe, W Siberia, Turkmenia, Caucasus, Transcaucasia, Turkey, Iran, Syria, Israel; Shapovalov, 2012: 174, part.; Kasatkin, 2018: 157, part.

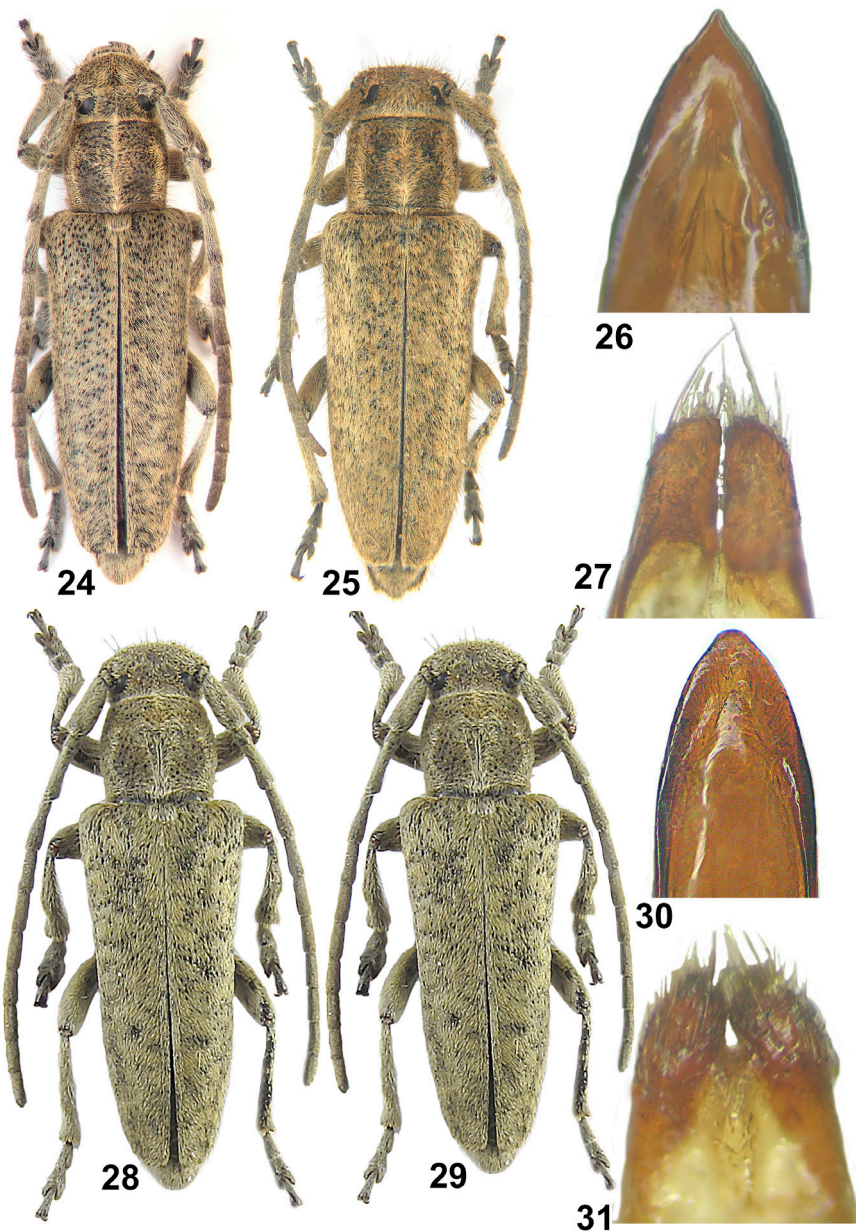
Pilemia (Pseudopilemia) hirsutula hirsutula, Rapuzzi et al., 2021: 557 - Turkey: “Mardin. Sultan meadow, Mardin centre, 1080 m.”.

Pilemia (Pseudopilemia) buglanica, Özdikmen, 2022: 1098 - “From Buğlan pass (Muş province, Turkey)”.

Type locality. Most names introduced by Faldermann (1837) were connected with specimens from the territories of modern Iran and Azerbaijan, so such area could be preliminary regarded as the type locality. According to Daniel (1906), the type (male) of *Saperda holosericea* Faldermann, 1837 from “Karabach” was preserved “im Petersburger Zoologischen Museum”.

Differential diagnosis. The taxon is very close to the nominative subspecies, but easily differs by distinct bright pale pubescent areas along humeral elytral margin; antennae long, male antennae nearly reaching elytral apices; diffused basal light areas of antennal joints indistinct; pronotum with distinct pale lateral and central stripes; last abdominal sternite in males with deep apical depression; body pubescence is generally yellowish or just brown (usually greyish in the nominative subspecies); genitals (Figs. 26-27); body size is usually bigger; body length in males: 7.8-12.3 mm, body width at humeri: 2.3-3.5 mm; body length in females: 9.2-12.5 mm, body width at humeri: 2.8-3.9 mm.

Material examined: 1 ♀, Transcaucasus, Erivan, 2.6.1909. Parfentiev leg. (ZMM); 2 ♂♂, 1 ♀, Transcaucasus, Darachichag [Tsahkadzor], 17-19.6.1911, V. Dobrovlyansky leg. (ZMM); 2 ♂♂, 1 ♀, Armenia, Ashotsk [Gukasyan], Toros village [Torosgyukh], 20.6.1997, P. Kazaryan leg. (OP); 1 ♂, 1 ♀, Armenia, Arzakan, 26.5.1983, M. Danilevsky (SM); 1 ♂, 1 ♀, Armenia, Tsovagyuh, 1.7.1987, S. Khvylya (SM); 1 ♂, Armenia, Khosrov, 24.VI.1992, M. Kalashian (ML); 1 ♀, Armenia, Khosrov, 1300-1600 m, 17.6.1986, A. Danchenko (ML); 1 ♀, Armenia, Khosrov, 22.6.1984, M. Kuznetsov (ML); 1 ♀, Armenia, Arailer, 6.6.1990, M. Kalashian (MD); 1 ♀, Armenia, 30 km N Yerevan, Arailer Mt., 25.5.1996, P. Kazaryan leg. (OP); 1 ♀, Armenia, Gegham Ridge, 8.7.1987, Davydyan leg. (ML); 2 ♂♂, 3 ♀♀, Nakhichevan, Buzgov, 13-14, 18.5.1982, M. Danilevsky leg. (MD); 1 ♂, 3 ♀♀, same locality, 16.7.1986, M. Danilevsky leg. (ML); 1 ♂, 1 ♀, same locality, 30.6.1986, A. Danchenko leg. (ML); 1 ♂, Transcaucasia, Bichenek Pass, 2000 m, 30.5.1982, M. Danilevsky leg. (ML); 1 ♂, 4 ♀♀, Nakhichevan, Bichenek, 9.6.1982, M. Danilevsky leg. (MD); 1 ♀, Nakhichevan, Ordubad, Mt. Kapudzhikh, 23.5.1967, R. Mamedov (SM); 3 ♂♂, 1 ♀, Azerbaijan, 10 km SE Maraza, Dzheyrankechmez, 40°30'N, 49°03'E, 10.5.1987, 13.5.1987, M. Danilevsky leg. (ML); 1 ♂, 1 ♀, Azerbaijan, Avrora (= Hirkan), 3.7.1980, A. Danilevsky (VG); 1 ♀,



Figs. 24-27. *Pilemia (Pseudopilemia) hirsutula holosericea* (Faldermann, 1837), stat. nov. (habitus of imagoes, male genitalis): 24- male, Armenia, Dilizhan distr., Agartsin, 22.5.2001 (Photo by M. Smirnov); 25- female, Nakhichevan, Bichenek, 9.6.1982, M. Danilevsky leg.; 26- apex of penis of a male from Armenia, Tsovagyuh, 1.7.1987, S. Khvylya leg.; 27- parameres of the same males.

Figs. 28-31. *Pilemia (Pseudopilemia) hirsutula karadutensis* ssp. nov. (habitus of imagoes, male genitalis): 28- male, holotype; 29- female, paratype; 30- apex of penis; 31- parameres.

Azerbaijan, Gosmalyan, 18.6.1984, A. Danchenko (ML); 1 ♂, Asia Minor, Taurus Kilic., A. Kricheldorff (ZMM); 1 ♂, Turkey, Tokat, 1903 (ZMM); 1 ♀, prop. Sarykamysh, prov. Kars, 22.6.1910, M. Poltaratsky (ZMM); 1 ♀, Turkey, Kars env., 18.5.1998, S. Baydak leg. (OP); 2 ♀♀, Turkey, Adana, 1903 (ZMM); 1 ♂, Turkey, Tunceli province, Polumur environs [Pülümür], 39.4932°N, 39.9135°E, 1500-1875 m, 16-23.5.2011, J. Hron & S. Murzin (SM); 1 ♀, Turkey, Taurus 14.4.1935 (MD).

Distribution. Transcaucasia (Armenia, Azerbaijan, Georgia), Turkey (about whole Anatolia excluding south-east areas), North Iran (Āzarbāijān-e Sharqi, Kalisbar environs, 1600-1700 m).

Remark. It was Ganglbauer (1889) who payed attention to the pale humeral stripe as a species character, but Reitter (1905) published his name as *P. hirsutula* var. *obsoleta* (Ganglbauer). Then Breuning (1951) accepted southern *Pilemia hirsutula* as a subspecies. Recently the taxon was once more published in subspecies rank by D. Marklund & S. Marklund (2015) as *Phytoecia (Pilemia) hirsutula obsoleta* (Ganglbauer, 1889). Specimens from Crimea demonstrate a transitional condition to the nominative subspecies.

3. *Pilemia (Pseudopilemia) hirsutula karadutensis* ssp. nov.

(Figs. 28-31, map. 1)

Type locality. Turkey, Adiyaman province., 45 km NEE Adiyaman, Karadut environs, 37°55'6.46"N, 38°48'39.73"E.

Type material. Holotype (♂): Turkey, Adiyaman prov., 45 km NEE Adiyaman, Karadut env., 37°55'6.46"N, 38°48'39.73"E, 16.6.2008, R. Ambrus leg., (ML). Paratypes: (3 ♂♂, 1 ♀): with same label, (RA, ML).

Description. Body relatively small, completely black with dense brown-yellow pubescence and numerous erect setae; frons trapezoidal with numerous long oblique setae and dense recumbent pubescence; vertex and occiput with numerous erect setae; genae about as long as lower eye lobes; dorsal and ventral eye lobes connected by narrow crossbar; mandibulae bicuspid; antennae thick, not thickened distally, in males reaching apical elytral forth or nearly reaching elytral apices; in female - reaching apical elytral third; apical swelling of 3rd antennal joint very small; 1st, 3rd and 4th joints about equal in length; antennal joints without pale basal rings; prothorax about as long as basal width; lateral sides regularly rounded; pronotum convex, with numerous black erect setae and dense brownish pubescence, pale lateral stripes diffused, central stripe hardly pronounced, sometimes totally absent; central stripe widened at middle; two small black spots indistinct; scutellum transverse with very dense pale pubescence; elytra about 2.3 times longer than humeral width in males, or about 2.2 times in female; strongly tapering posteriorly in males, or just a little in females; with very long black setae all along elytral length and dense spotted recumbent pubescence; glabrous areas indistinct; pale sutural lines and pale humeral stripes absent; elytral apices truncated; all legs also strongly pubescent with numerous erect setae; denticles of tarsal claws narrow, strongly elongated; ventral body side with very dense recumbent pubescence and numerous oblique setae; last abdominal tergites in males rounded, last abdominal sternites deeply depressed apically; last abdominal tergite in female triangularly elongated, acute; last abdominal sternite truncated; genitals (Figs. 30-31); body length in males: 9.7-

11.6 mm, body width at humeri: 2.6-3.5 mm; body length in female: 12.0 mm, body width at humeri: 3.8 mm.

Differential diagnosis. The taxon is very close to *P. h. holosericea*, but pale pubescence areas along humeral elytral margin indistinct; antennae long, male antennae nearly reaching elytral apices; antennal joints without pale basal rings; pronotum with diffused pale lateral stripes, central stripe hardly pronounced, sometimes totally absent; last abdominal sternite in males with deep apical depression, body pubescence is generally yellowish or brownish as in *P. h. holosericea*.

Distribution. South-East Turkey, Adiyaman province.

Etymology. The name of the taxon is connected with the name of its type locality.

4. *Pilemia (Pseudopilemia) hirsutula richardi* ssp. nov.

(Figs. 32-36, map. 1)

Pilemia hirsutula, Sama, 2002: 112, part. - Europe, Caucasus, Turkey, Iran, Turkmenia; Özdikmen, 2007: 330, 392, part. - Europe, Siberia, Turkmenistan, Caucasus, Transcaucasia, Turkey, Iran, Syria.

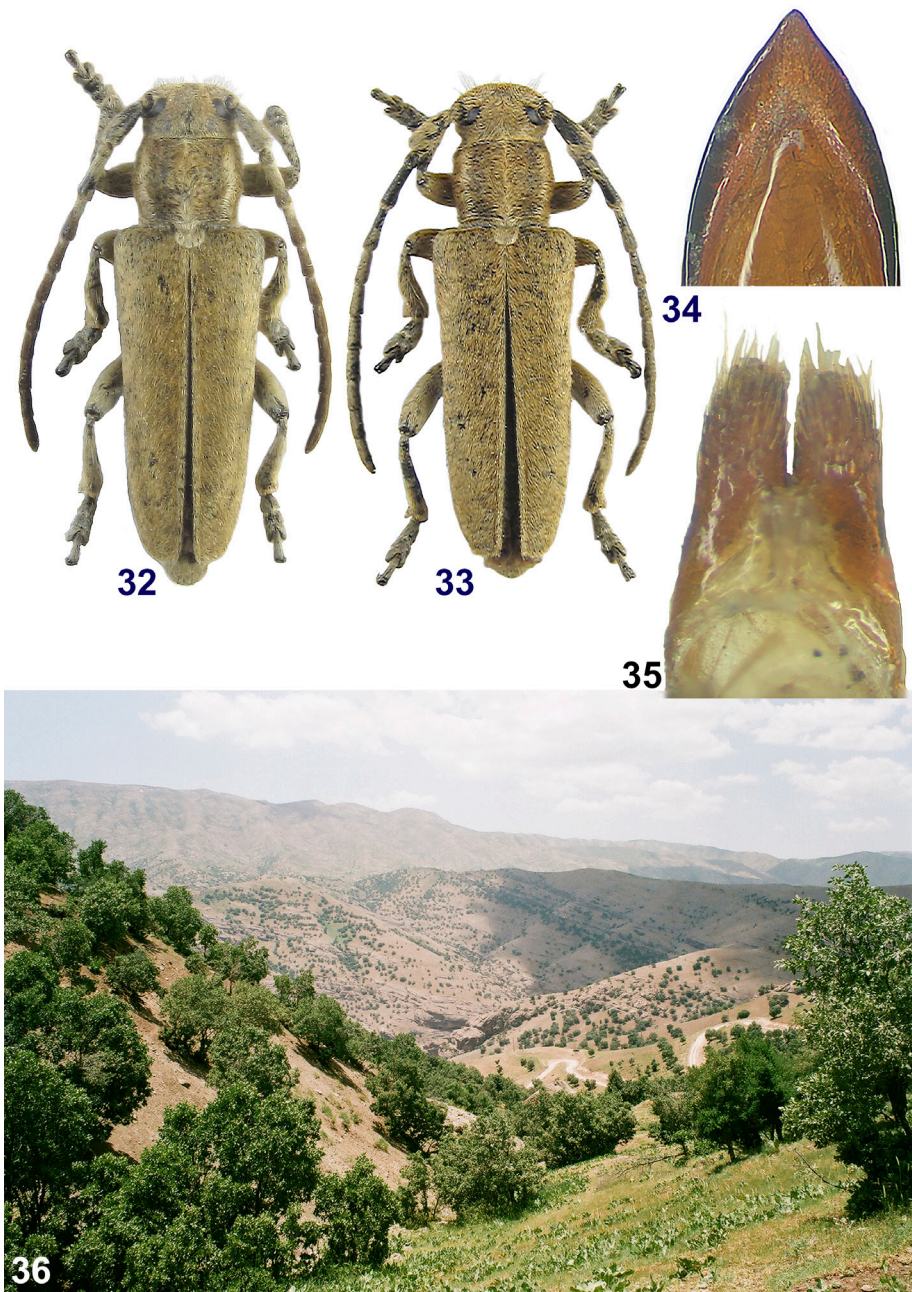
Pilemia hirsutula hirsutula, Sama & Löbl, 2010: 308-309, part. - including Iran.

Pilemia (Pseudopilemia) hirsutula hirsutula, Danilevsky, 2020b: 446, part. - including Iran.

Type locality. Iran, Lorestan province, 17 km SW Dorud, Tut environs, 1995 m.

Type material. Holotype (♂): Iran, Lorestan, 17 km SW Dorud, Tut vill. env., 1995 m, 3.6.2009, R. Ambrus leg., (ML); Paratypes: (5 ♂♂, 6 ♀♀): with same label, (RA); (1 ♀): with same label, (ML); (1 ♂, 1 ♀): with same label, (MD).

Description. Body of moderate size, completely black with dense brown-yellow pubescence and numerous erect setae; frons trapezoidal with numerous long oblique setae and dense recumbent pubescence; vertex and occiput with numerous erect setae; genae about as long as lower eye lobes; dorsal and ventral eye lobes connected by narrow crossbar; mandibulae bicuspid; antennae a little thickened distally in males reaching apical elytral forth, in females - apical elytral third; apical swelling of 3rd antennal joint very small; 1st antennal joint, a little longer than 3rd or 4th joints, which are about equal in length; antennal joints without pale basal rings; prothorax in males about as wide, as basal width, in females transverse, about 1.2 times shorter than basal width; lateral sides regularly rounded; pronotum convex, with numerous black erect setae and dense brownish pubescence, central pale setae stripe and lateral stripes diffused; central stripe widened at middle without black spots; scutellum transverse with very dense pale pubescence; elytra about 2.4 times longer than humeral width in males, or about 2.2 times in females; strongly tapering posteriorly in males, or just a little in females; with very long black setae all along elytral length and dense spotted recumbent pubescence; glabrous areas indistinct; pale sutural lines absent; pale humeral areas present, but diffused; elytral apices truncated; all legs also strongly pubescent with numerous erect setae; denticles of tarsal claws narrow, strongly elongated; ventral body side



Figs. 32-36. *Pilemia (Pseudopilemia) hirsutula richardi* ssp. nov. (habitus of imagoes, male genitals and type locality): 32- male, holotype; 33- paratype, female; 34- apex of penis; 35- parameres; 36- type locality (Photo by R. Ambrus).

with very dense recumbent pubescence and numerous oblique setae; last abdominal tergites in males rounded, last abdominal sternites deeply depressed apically; last abdominal tergites in females triangularly elongated, acute; last abdominal sternites truncated; genitals (Figs. 34-35); body length in males: 11.2-12.5 mm, body width at humeri: 2.9-3.9 mm; body length in females: 12.0-13.7 mm, body width at humeri: 3.7-4.2 mm.

Differential diagnosis. The taxon is very close to *P. h. holosericea*, but pale areas along humeral elytral margin hardly distinct; antennae shorter, male antennae reaching to about last elytral forth; first antennal joints with diffused pale basal rings; pronotum with more or less diffused pale longitudinal lines; elytra densely pubescent, while in *P. h. kostali* with scattered pubescence; last abdominal sternite in males with deep apical depression, body pubescence is generally yellowish or brownish as in *P. h. holosericea*.

Distribution. Iran, Lorestan province.

Etymology. The new taxon is dedicated to Richard Ambrus (Prague), who collected the type series.

5. *Pilemia (Pseudopilemia) hirsutula kostali* (Skořepa, 2022)

Pilemia hirsutula, Rejzek et al., 2001: 274, part. - "Israel", "N. Iran: prov. Mazandarān, 70 km SW. Čalūs (pass - 2870 m), 36.09N 51.17E", "N. Iran: prov. Āzarbāygan-e, Kalisbar env. (1600-1700 m)", "NW. Syria: Šlinfah E. Latakia (1500 m)", "E. Turkey: Hakkâri".

Phytoecia (Pseudopilemia) hirsutula kostali Skořepa, 2022: 14, photos: 2-4 - "Iran, prov. Mazandaran, 20 km E Marzanabad, Kinj env."

Type locality. Iran (Mazandaran province, 20 km E Marzanabad, Kinj environs; Alborz Province; Alborz Province, 70 km SW Chalus, 36°05'24"N, 51°10'12"E, 2870 m).

Differential diagnosis. The taxon is characterized by short antennae, not reaching elytral apex in male (similar to *P. h. richrdi*) and scattered elytral pubescence, never totally covering elytral surface; body length in males: 3.1-5 mm, body width: 2.5-3 mm.

KEY FOR *PILEMIA (PSEUDOPILEMIA)* SPECIES

- 1 (2) Elytra with uniform grey pubescence. Turkmenia (Kopedag, Badkhyz), North Iran (Khorasan), Afghanistan *P. (P.) homoiesthes* Ganglbauer, 1888 stat. nov.
- 2 (1) Elytra with spotted pubescence
- 3 (6) Elytra with more or less contrast humeral and sutural lines
- 4 (5) Elytra with long erect setae along whole length; longitudinal elytral lines strongly contrast. Iran (Kurdistan) *P. (P.) ghobari* (Danilevsky, 2018)
- 5 (4) Elytra without long erect setae; longitudinal elytral lines slightly diffused. Turkey (Konya)
..... *P. (P.) konyaensis* (Danilevsky, 2010)
- 6 (3) Elytra with diffused humeral and sutural lines
- 7 (8) Elytra with long erect setae along whole length. Jordan, Israel, Libanon, Syria (Šlinfah), Turkey (Hatay province) *P. (P.) arida* sp. nov.

- 8 (7) Elytra without long erect setae along whole length, sometime near scutellum only.
- 9 (10) Antennae long, in males longer than body; pronotum with rather contrast pale lines; elytra uniformly spotted. Greece (Peloponnese) *P. (P.) moreana* (Breuning, 1943)
- 10 (9) Antenna short, in males always shorter than body; pronotum with more or less diffused lines, or longitudinal pronotal lines indistinct; elytra with more or less contrast spots
- 11 (12) According to the original description, parameres longer, with longer setae; lateral margin of parameres rounded; apex of aedeagus more attenuated. Greece (Thessaly)
..... *P. (P.) kruszelnickii* Szczepański & Karpiński, 2017
- 12 (13) Parameres shorter, with shorter setae; lateral margin of parameres about straight; apex of aedeagus less attenuated. West Europe, Ukraine, Moldova, Russia, Kazakhstan, Turkey, Iran
..... *P. (P.) hirsutula* (Frölich, 1793)

Remarks. All external characters of *P. (P.) kruszelnickii* described in the original description were not available. Size data of *P. hirsutula* (“did not exceed 9 mm”) were not correct: “*P. kruszelnickii* has a considerably larger body size (ca. 1.5 times longer)”. My specimens are up to 15 mm, longer than *P. kruszelnickii*. The next wrong statement: “*P. kruszelnickii* has a brighter pubescence compared to the other species”. In fact, *P. (P.) hirsutula* is strongly variable, from pale grey to brownish. Genital differences listed above were also rather faint and hardly real. Still the taxon could merit the rank of small local hardly pronounced subspecies *P. (P.) h. kruszelnickii*, but most probably *P. hirsutula* = *P. kruszelnickii*.

KEY TO *PILEMIA (PSEUDOPILEMIA) HIRSUTULA* (FRÖLICH, 1793) SUBSPECIES

- 1 (2) Elytra with diffused pale humeral area. Armenia, Georgia, Azerbaijan, Turkey (about whole Anatolia excluding south-east areas), North Iran (Āzarbāijān-e Sharqi)
..... *P. (P.) h. holosericea* (Faldermann, 1837) stat. nov.
- 2 (1) Elytra without pale humeral area
- 3 (6) Antennae relatively short, reaching in males posterior elytral forth; basal antennal joints with diffused pale rings
- 4 (5) Elytra pubescence rather dense, totally covering elytral surface. Iran (Lorestan province).....
..... *P. (P.) h. richardi* ssp. nov.
- 5 (4) Elytra with scattered pubescence, elytral surface partly visible. Iran (Mazandaran province, Alborz province) *P. (P.) h. kostali* (Skořepa, 2022)
- 6 (3) Antennae relatively long, in males nearly reaching elytral apices
- 7 (8) Pronotum with distinct diffused pale stripes, last abdominal male sternite without deep apical depression, West Europe, Ukraine, Moldova, Russia, Kazakhstan *P. (P.) h. hirsutula* (Frölich, 1793)
- 8 (7) Pronotum with indistinct central pale stripes, last abdominal male sternite with deep apical depression. Turkey (Adiyaman province) *P. (P.) h. karadutensis* ssp. nov.

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