AN OVERVIEW ON THE PALAEARCTIC SUBGENUS *PHYTOECIA* (*PILEMIA*) FAIRMAIRE, 1864 WITH A NEW SPECIES *PHYTOECIA* (*PILEMIA*) *SAMII* SP. N. FROM TURKEY (COLEOPTERA: CERAMBYCIDAE: LAMIINAE)

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ABSTRACT: All taxa of the subgenus *Pilemia* Fairmaire, 1864 in Turkey and the world fauna are evaluated and summarized. A new species *Phytoecia* (*Pilemia*) *samii* n. sp. is described from Turkey. Some new faunistical data are also given for Turkey in the text. Short descriptions and a short identification key are also given for Turkish species in the text.

KEY WORDS: *Pilemia, Phytoecia,* Saperdini, Lamiinae, Cerambycidae, Coleoptera.

The main aim of this work is to clarify current status of the subgenus *Phytoecia* (*Pilemia*) Fairmaire, 1864 in Turkey and world fauna.

Subfamily LAMIINAE Latreille, 1825

Tribe SAPERDINI Mulsant, 1839

= Phytoeciaires Mulsant, 1839
= Saperdina Thomson, 1859
= Saperditae Thomson, 1860
= Saperdites Fairmaire, 1864
= Phytoecites Fairmaire, 1864
= Obereini Thomson, 1864
= Obereitae Thomson, 1864
= Phytoeciini Pascoe, 1864
= Saperdides Lacordaire, 1872
= Glénéides Lacordaire, 1872
= Gleneini Lacordaire, 1872
= Obereini Sama, 2008

Type genus: *Saperda* Fabricius, 1775

Vitali (2009) stated that "Saperdini, Phytoecini, Obereini and Gleneini are characterised by mutual characters that do not allow considering them as separated tribes. Breuning's systematics, the only world-wide revision, is adopted here". We agree with Vitali's approach now. In fact that Ohbayashi & Niisato (2007) accepted Saperdini = Gleneini = Phytoeciini. We agree with these approaches and prefer now to return to Breuning's position.

Genus *PHYTOECIA* Dejean, 1835

= *Cardoria* Mulsant, 1863
= *Opsilia* Mulsant, 1863
= *Pilemia* Fairmaire, 1864
= *Helladia* Fairmaire, 1864
= *Musaria* Thomson, 1864
= *Blepisanis* Pascoe, 1866
= *Hoplotoma* Perez, 1874

= *Semiangusta* Pic, 1892
= *Pygoptosia* Reitter, 1895
= *Pseudomusaria* Pic, 1900
= *Fulgophytoecia* Pic, 1900
= *Neomusaria* Plavilstshikov, 1928
= *Cinctophytoecia* Breuning, 1947
= *Pseudoblepisanis* Breuning, 1950
= *Mimocoptosia* Breuning & Villiers, 1972

Type species: *Saperda cylindrica* Fabricius, 1775 = *Cerambyx cylindricus* Linnaeus, 1758

Now, we think that the presence of mixed characters in the whole genus does not allow us to consider the subgenera as valid genera as stated by some authors. Therefore, Breuning's (1951) systematics is adopted here chiefly.

In this case, the genus includes at least 15 subgenera as *Blepisanis* Pascoe, 1866; *Cardoria* Mulsant, 1863; *Cinctophytoecia* Breuning, 1947; *Fulgophytoecia* Pic, 1900; *Helladia* Fairmaire, 1864; *Mimocoptosia* Breuning & Villiers, 1972; *Musaria* Thomson, 1864; *Neomusaria* Plavilstshikov, 1928; *Opsilia* Mulsant, 1863; *Phytoecia* Dejean, 1835; *Pilemia* Fairmaire, 1864; *Pseudoblepisanis* Breuning, 1950; *Pseudomusaria* Pic, 1900; *Pygoptosia* Reitter, 1895 and *Semiangusta* Pic, 1892.

Subgenus *PILEMIA* Fairmaire, 1864

Type species: *Phytoecia tigrina* Mulsant, 1851

Reitter (1905) accepted it as a genus and stated 4 species for Palaearctic fauna as *Pilemia hirsutula* (Frölich, 1793) [for Mediterranean area, Hungary, S Russia, Caucasus, Turkestan]; *Pilemia tigrina* (Mulsant, 1851) [for S France, Hungary, Transylvania]; *Pilemia annulata* (Hampe, 1852) [for Iran] and *Pilemia wawerkana* Reitter, 1905 [for Akbez in S Turkey].

After the revision of Daniel (1906) who regarded *Pilemia* as a subgenus, Aurivillius (1921) and Winkler (1924-1932) who regarded *Pilemia* as a separate genus, gave 4 species for world fauna as *Pilemia annulata* (Hampe, 1852) [for Transcaucasia, Kudistan, S Turkey (Akbez)], *Pilemia griseomaculata* (Pic, 1891) [for S Turkey (Akbez)], *Pilemia hirsutula* (Frölich, 1793) [for S Germany, Austria, Hungary, Transylvania, Serbia, Greece, Turkey, S Russia, Caucasus, Transcaucasia and Transcaspia], *Pilemia tigrina* (Mulsant, 1851) [for S France, Hungary, Transylvania, Balkans, Turkey].

Breuning (1951 and 1966) regarded it as a subgenus and gave 5 species in the subgenus *Pilemia* for whole world fauna as *Phytoecia* (*Pilemia*) *tigrina* Mulsant, 1851 [for S Europe, Turkey], *Phytoecia* (*Pilemia*) *vagecarinata* Pic, 1952 [for Syria], *Phytoecia* (*Pilemia*) *griseomaculata* (Pic, 1891) [for Syria, S Turkey], *Phytoecia* (*Pilemia*) *annulata* Hampe, 1852 [for Iran, Turkey] and *Phytoecia* (*Pilemia*) *hirsutula* (Frölich, 1793) [for Turkmenia, Transcaspia, Iran].

Then, 3 new species for this subgenus were described by Holzschuh (1984) as *Phytoecia* (*Pilemia*) *inarmata* [from Greece], *Phytoecia* (*Pilemia*) *maculifera* [from S Turkey: Cilicien Taurus: İçel and Adana provinces] and *Phytoecia* (*Pilemia*) *serriventris* [from Bulgaria]. These species were separated by Holzschuh (1984) from *Phytoecia* (*Pilemia*) *tigrina* Mulsant, 1851 by using penis and secondary sex characters chiefly. He mentioned that *Phytoecia* (*Pilemia*) *tigrina* Mulsant, 1851 described from S France (Grasse) and known from Hungary, Yugoslavia, Romania, Bulgaria, Greece and Turkey. However, Villiers

(1974) leaded that information of the type locality based on a mistake. So Villiers (1978) and Brustel et al. (2003) did not mention the subgenus for France.

Danilevsky & Miroshnikov (1985) accepted it as a subgenus and gave 2 species in this subgenus for Caucasus as *Phytoecia* (*Pilemia*) *hirsutula* (Frölich, 1793) [for European Russia, Caucasus, Transcaucasia, Kopetdagh, E Europe, Near East, Turkey, N Iran] and *P.* (*Pilemia*) *annulata* Hampe, 1852 [for Caucasus, Near East, N Iran, Turkey]. Then, *P.* (*Pilemia*) *tigrina* Mulsant, 1851 was recorded by Miroshnikov (1990) as 3rd species for Caucasian fauna.

Bense (1995) regarded it as a subgenus and gave 4 species in this subgenus for Europe as *Phytoecia hirsutula* (Frölich, 1793) [for E Europe], *P. tigrina* Mulsant, 1851 [for E Europe], *P. serriventris* Holzschuh, 1984 [for Bulgaria] and *P. inarmata* Holzschuh, 1984 [for Greece].

Althoff & Danilevsky (1997) regarded it as a separate genus and also gave 4 species in this genus for Europe as *Pilemia hirsutula* (Frölich, 1793) [for Italy, Croatia, Bosnia & Herzegovina, Serbia, Macedonia, Albania, Greece, Bulgaria, Romania, Hungary, Slovakia, Ukraine, Crimea, European Russia and European Kazakhstan], *Pilemia tigrina* (Mulsant, 1851) [for ?France, Serbia, Bulgaria, Romania, Hungary, Ukraine], *Pilemia serriventris* (Holzschuh, 1984) [for Bulgaria] and *Pilemia inarmata* (Holzschuh, 1984) [for Greece].

Sama (2002) accepted it as a separate genus and mentioned 2 species in this genus for Europe as *Pilemia tigrina* (Mulsant, 1851) [for C Europe, Hungary, Turkey, Middle East] and *Pilemia hirsutula* (Frölich, 1793) [for C Europe, S Slovakia, Hungary, Turkey, Caucasus, Transcaucasus, N Iran].

Recently, 2 new species were described by Holzschuh (2003 and 2006). *Phytoecia* (*Pilemia*) *smatanai* was described by Holzschuh (2003) from Turkey and *Phytoecia* (*Pilemia*) *hladilorum* was described by Holzschuh (2006) from Greece.

So the number of known species of this subgenus in the world fauna rose to 11.

According to Danilevsky (2009a, b), *Pilemia* Fairmaire, 1864 is a subgenus of *Phytoecia* Mulsant, 1839. Danilevsky (2009a) gave 5 species in this subgenus for Europe as *Phytoecia* (*Pilemia*) *hirsutula* (Frölich, 1793) [for Italy, Croatia, Bosnia & Herzegovina, Serbia, Macedonia, Albania, Greece, Bulgaria, Romania, Hungary, Slovakia, Moldova, Ukraine, Crimea, European Russia and European Kazakhstan], *Phytoecia* (*Pilemia*) *tigrina* Mulsant, 1851 [for ?France, Serbia, Bulgaria, Romania, Hungary, Moldova, Ukraine], *Phytoecia* (*Pilemia*) *serriventris* Holzschuh, 1984 [for Bulgaria], *Phytoecia* (*Pilemia*) *inarmata* Holzschuh, 1984 [for Greece] and *Phytoecia* (*Pilemia*) *hladilorum* Holzschuh, 2006 [for Greece]. Also Danilevsky (2009b) gave 3 species in this subgenus for the territory of former USSR as *Phytoecia* (*Pilemia*) *hirsutula* (Frölich, 1793) [for European Russia, Crimea, Caucasus, C Asia, Kazakhstan, W Siberia, Europe, Near East (Turkey), Iran], *Phytoecia* (*Pilemia*) *annulata* Hampe, 1852 [for Caucasus, Near East (Turkey), Iran] and *Phytoecia* (*Pilemia*) *tigrina* Mulsant, 1851 [for European Russia, Caucasus, Europe, Near East (Turkey)].

The subgenus has 11 species in the world fauna (only in Palaearctic region). It is distributed from Europe to Central Asia (Italy to Kazakhstan, Iran and Turkmenia) [**Europe**: Italy, Croatia, Bosnia & Herzegovina, Serbia, Macedonia, Albania, Greece, Romania, Bulgaria, Hungary, Slovakia, Moldova, Ukraine, Crimea, European Russia, European Kazakhstan, **Caucasus**: Armenia, Daghestan, **Central Asia**: Turkmenia, **Other Countries:** Iran, Turkey, Syria, Israel]. So, the subgenus has Centralasiatic-Europeo-Mediterranean chorotype mainly.

In Europe, this subgenus includes 5 species as *Phytoecia* (*Pilemia*) *hirsutula* (Frölich, 1793); *P.* (*P.*) *tigrina* Mulsant, 1851; *P.* (*P.*) *angusterufonotata* (Pic, 1952) [= *P.* (*P.*) *inarmata* Holzschuh, 1984]; *P.* (*P.*) *serriventris* Holzschuh, 1984 and *P.* (*P.*) *hladilorum* Holzschuh, 2006.

The subgenus has been represented by 6 species in Turkey as *Phytoecia* (*Pilemia*) *hirsutula* (Frölich, 1793); *P.* (*P.*) *tigrina* Mulsant, 1851; *P.* (*P.*) *annulata* Hampe, 1852; *P.* (*P.*) *griseomaculata* (Pic, 1891); *P.* (*P.*) *maculifera* Holzschuh, 1984; *P.* (*P.*) *smatanai* Holzschuh, 2003.

Finally, with the present work, the number of known species of this subgenus in Turkish fauna rose to 7 and in the world fauna rose to 12 with new species *P.* (*P.*) *samii* **n. sp.**

The most wide spread species is *Phytoecia* (*Pilemia*) *hirsutula* (Frölich, 1793). *P.* (*P.*) *tigrina* Mulsant, 1851 and *P.* (*P.*) *annulata* Hampe, 1852 follow it. The remaining 8 species are endemic for 5 different countries [*P.* (*P.*) *serriventris* Holzschuh, 1984 to Bulgaria; *P.* (*P.*) *angusterufonotata* (Pic, 1952) [= *P.* (*P.*) *inarmata* Holzschuh, 1984] and *P.* (*P.*) *hladilorum* Holzschuh, 2006 to Greece; *P.* (*P.*) *griseomaculata* (Pic, 1891), *P.* (*P.*) *maculifera* Holzschuh, 1984 and *P.* (*P.*) *smatanai* Holzschuh, 2003 to Turkey; *P.* (*P.*) *vagecarinata* Pic, 1952 to Syria and *P.* (*P.*) *halperini* Holzschuh, 1999 to Israel].

Phytoecia (*Pilemia*) *angusterufonotata* (Pic, 1952) stat. rest. (Fig. 1)

Orig. comb.: *Pilemia angusterufonotata* Pic, 1952
Type loc.: Greece: Morea.
Other names: *inarmata* Holzschuh, 1984 **syn. n.**

It is endemic to Greece. This species is in –*tigrina* species group. In 1984, Holzschuh described a new species *Phytoecia* (*Pilemia*) *inarmata* though separated from *P. tigrina* by using penis form and secondary sex characters (coloration of body, form of red spot on pronotum, elytral pubescence, form of 1st and 2nd sternites, form of upper margin of pygidium) from Greece (Pelopennese: S Tripolis and Morea: Kerpini) on the base of 3 males and 8 females specimens. Firstly, Danilevsky (2009a) mentioned it can be a synonym of *P. angusterufonotata* (Pic, 1952). So, as a result of our work, *P.* (*P.*) *inarmata* Holzschuh, 1984 is a synonym of *P.* (*P.*) *angusterufonotata* (Pic, 1952).

Distribution: Greece.
Chorotype: Greek.

Phytoecia (*Pilemia*) *annulata* Hampe, 1852

Orig. comb.: *Phytoecia annulata* Hampe, 1852
Type loc.: Iran.
Other names: *angorensis* Pic, 1952 (Fig. 2).
ssp.: *Phytoecia annulata annulata* Hampe, 1852; *Phytoecia annulata wawerkana* (Reitter, 1905)

Pilemia wawerkana was described by Reitter (1905) from Akbez (S Turkey: Hatay prov., not Syria). He separated this species from *P. annulata* (Hampe, 1852). Then following authors (e.g. Aurivillius, 1921; Winkler, 1924-1932; Breuning, 1966) regarded it as a variety or morpha of *P. annulata* (Hampe, 1852).

It was given by Rejzek & Hoskovec (1999) as a subspecies of *Phytoecia annulata* Hampe, 1852. So this species has 2 subspecies as *P. annulata annulata* Hampe, 1852 that occurs in Iran, Caucasus and NE Turkey and *P. annulata wawerkana* (Reitter, 1905) which occurs in S and SE Turkey. Breuning (1966) mentioned *P. annulata* v. *angorensis* Pic, 1952 that was described from Turkey (Ankara province) is a morpha of *P. annulata wawerkana* (Reitter, 1905). This species is reported for the first time for Osmaniye province with the present materials.

Short description: Body is small size, approximately between 8-13 mm. General body color black with white and rusty-spotted gray pelage. Antennae curled. Pronotum with a wide, median cross longitudinal light hair band that has yellowish hairs in posterior half and rusty colored hairs in anterior half in both sexes. Elytral apex rounded in both sexes. Pygidium tapering to the top, in the middle of apex with a small wide insertion.
Material examined: Osmaniye prov.: Bahçe, Kızlaç village, Aslanlı Beli, N 37 10 E 36 38, 768 m, 21.04.2007, 3 specimens [as *P.* (*Pilemia*) *annulata wawerkana* (Reitter, 1905)].
Records in Turkey: S Turkey: Hatay prov.: Akbez (not Syria) as the type locality of *Pilemia wawerkana* (Reitter, 1905); Kurdistan, S Turkey (not Syria) (Winkler, 1924-1932); Turkey (Danilevsky & Miroshnikov, 1985; Lodos, 1998); Adıyaman prov.: Nemrut Mt. as *P. annulata* ssp. *wawerkana* (Rejzek & Hoskovec, 1999); Kars prov.: Sarıkamış, Sivas prov.: Kurbağalıbeli pass (Rejzek et al., 2001).
Distribution: Caucasus, Turkey, Iran.
Chorotype: SW-Asiatic (Irano-Caucasian + Anatolo-Caucasian + Irano-Anatolian).

Phytoecia (*Pilemia*) *griseomaculata* (Pic, 1891)

Orig. comb.: *Pilemia tigrina* var. *griseomaculata* Pic, 1891 (Fig. 3)
Type loc.: Turkey (not Syria).
Other names: *laterufonotata* Pic, 1952 (Fig. 4).

Reitter (1905) gave it as a synonym of *P. tigrina* in accordance with the description of Pic (1891). He stated that "when variety described, but the differences permitted no sharp one separation. These are identical taxa with less clearly curled antennae. Other given more or less distinct differences also came of the typical form. Then, the following authors regarded it as a separate species. It was recorded by Rejzek et al. (2001) from Syria (Bludan). Breuning (1966) mentioned v. *laterufonotata* Pic, 1952 that was described from Turkey (Hatay prov.: Akbez, not Syria) is a morpha of *P.* (*Pilemia*) *griseomaculata* (Pic, 1952).

Short description: Body is small size, approximately between 8-12 mm. General body color black with white-spotted pelage. Upper side griseous. Antennae curled. Pronotum with a narrow, median cross longitudinal light hair band and with a transverse red spot in anterior half in female and with a median, more or less circular red spot in male. Elytral apex obtuse in both sexes. Pygidium a little tapering to the top, upper margin obtuse in the male and in the middle of apex with a distinct wide insertion in the female.
Records in Turkey: S Turkey: Hatay prov.: Akbez (not Syria) as the type locality of *Pilemia tigrina* var. *griseomaculata* (Pic, 1891); Erzurum prov. And near (Özbek, 1978); Turkey (Lodos, 1998).

Distribution: Turkey, Syria.
Chorotype: SW-Asiatic (Syro-Anatolian).

Phytoecia (*Pilemia*) *halperini* Holzschuh, 1999

Orig. comb.: *Phytoecia* (*Pilemia*) *halperini* Holzschuh, 1999
Type loc.: Israel.

This species is endemic to Israel. It was described by Holzschuh (1999) though separated from *P. griseomaculata* from Israel (Qusbiye) on the base of 1 female specimen.

Distribution: Israel.
Chorotype: Israelian.

Phytoecia (*Pilemia*) *hladilorum* Holzschuh, 2006

Orig. comb.: *Phytoecia hladilorum* Holzschuh, 2006
Type loc.: Greece.

Phytoecia hladilorum Holzschuh, 2006 is described from Greece (Pelopones, Taygetos Mt.) on the base of 1 male and 1 female. He did not mention subgenus, but he compared the species with *P.* (*Pilemia*) *hirsutula hirsutula* and *P.* (*Pilemia*) *hirsutula homoiesthes*. So it is in the subgenus *Pilemia*. It is endemic to Greece.

Distribution: Greece.
Chorotype: Greek.

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

Orig. comb.: *Saperda hirsutula* Frölich, 1793
Type loc.: Austria (to be regarded as "Austro-Hungarian Empire", likely in Hungary).
Other names: *atomaria* Towsend, 1797; *holosericea* Faldermann, 1837; *holosericea* Ganglbauer, 1884; *obsoleta* Ganglbauer (in Mars, 1888); *moreana* Breuning, 1943; *ciliciae* Breuning, 1951; *tournieri* Pic, 1952 (Fig. 5); *holtzi* Pic, 1952 (Fig. 6); *androsensis* Breuning, 1963.
ssp.: *Phytoecia hirsutula hirsutula* (Frölich, 1793); *Phytoecia hirsutula homoiesthes* Ganglbauer, 1888.

As commonly accepted that this species which is the most wide spread species among the species in the subgenus *Pilemia,* has 2 subspecies as *P. hirsutula hirsutula* (Frölich, 1793) and the eastern subspecies *P. hirsutula homoiesthes* Ganglbauer, 1888 which occurs only in Iran and C Asia (Turkmenia). So it is represented by the nominotypical subspecies in Turkey and distributes rather widely. On the other hand, *Pilemia obsoleta* Ganglbauer, 1888 was regarded as a form of this species, but Vitali (2009) regarded as a subspecies. According to Sudre (2000), *Oxylia androsensis* Breuning, 1963; *Phytoecia* (*Blepisanis*) *ciliciae* Breuning, 1951 and *Phytoecia* (*Rubrophytoecia*) *moreana* Breuning, 1943 are synonyms of *Phytoecia* (*Pilemia*) *hirsutula* (Frölich, 1793). This species is reported for the first time for Osmaniye province with the present materials.

Short description: Body is small size, approximately between 5-14 mm. General body color black with dense yellow-spotted pelage. Antennae not curled. Pronotum with 3 cross longitudinal light hair band (1 median and 2 lateral) in both sexes. Elytral apex obtuse in both sexes. Pygidium distinctly tapering to the top.
Material examined:Osmaniye prov.: Boğaz plateau, N 37 04 E 36 22, 713 m, 18.05.2006, 1 specimen; Zorkun road, Çiftmazı, N 37 01 E 36 17, 223 m, 20.05.2006, 1 specimen; **Antalya prov.:** Alanya, Keşbelen plateau, N 36 37 E 32 22, 1750 m, 14.06.2007, 1 speimen; Akseki, Mahmutlu village env., N 36 55 E 31 47, 1054 m, 19.05.2008, 15 specimens; Akseki, between Çukurköy-Mahmutlu, N 36 54 E 31 48, 830 m, 19.05.2008, 2 specimens; İbradı-Akseki road, N 37 05 E 31 36, 984 m, 20.05.2008, 1 specimen; **Konya prov.:** Between Gencek-Derebucak, N 37 25 E 31 29, 1212 m, 20.05.2008, 1 specimen.
Records in Turkey: Konya prov.: Meram (Bodemeyer, 1900); Bilecik prov. (Bodemeyer, 1906); Turkey (Winkler, 1924-1932; Lodos, 1998; Sama & Rapuzzi, 2000; Sama, 2002); İzmir prov.: Bergama (Demelt & Alkan, 1962); İzmir prov.: Pergamon, İçel prov.: Namrun (Demelt, 1963); Erzurum prov. (Breuning & Villiers, 1967); Erzurum prov. and near (Özbek, 1978); Antalya prov. – Demelt, 1961 (Ex. Öymen, 1987); İçel prov.: Erdemli (Adlbauer, 1988); Adıyaman prov.: Nemrut Mt. (Rejzek & Hoskovec, 1999); Hakkari prov. (Rejzek et al., 2001); Bayburt prov.: Maden, Erzurum prov.: Akdağ / Çat / Ilıca (Atlıkonak) / İspir (Madenköprübaşı) / Oltu / Pasinler (Çalıyazı) / Şenkaya (Hoşköy) / Turnalı / Tortum (Söğütlü), Kars prov.: Sarıkamış (Karakurt, Şeytangeçmez) (Tozlu et al., 2003); Isparta prov.: Yalvaç (Özdikmen & Hasbenli, 2004); Afyon prov.**:** Erkmen valley (Özdikmen, 2007).
Distribution: Europe (Italy, Croatia, Bosnia-Herzegovina, Serbia, Macedonia, Albania, Greece, Bulgaria, Romania, Hungary, Slovakia, Moldova, Ukraine, Crimea, European Russia, European Kazakhstan), W Siberia, Turkmenia, Caucasus, Transcaucasia, Turkey, Iran, Syria, Israel.
Chorotype: Turano-Mediterranean (Turano-E-Mediterranean).

Phytoecia (*Pilemia*) *maculifera* Holzschuh, 1984

Orig. comb.: *Phytoecia* (*Pilemia*) *maculifera* Holzschuh, 1984
Type loc.: Turkey.

This species is in –*tigrina* species group. It was described by Holzschuh (1984) though separated from *P. tigrina* by using penis form and secondary sex characters (coloration of antennae and legs, form of eyes, form of red spot on pronotum, coloration and pubescence of elytra, form of 1st and 2nd sternites, form of upper margin of pygidium) from Turkey (İçel: Namrun and Adana: Tekir and Nurdağı pass) on the base of 5 males and 6 females specimens. It is endemic to Turkey.

Short description: Body is small size, approximately between 6-13 mm. General body color black with rather dense yellowish-white-spotted pelage. The elytra barely brillant. Antennae curled. Pronotum with a narrow, median cross longitudinal light hair band and with a red spot in anterior half in both sexes. Sometimes pronotum without red spot. Elytral apex obtuse in male. Pygidium tapering to the top, in the middle of apex with a distinct wide insertion in male.
Material examined:Osmaniye prov.: Bahçe, Kızlaç village, Aslanlı Beli, N 37 10 E 36 38, 768 m, 21.04.2007, 2 specimens.

Records in Turkey: İçel prov.: Namrun and Adana prov.: Tekir and Nurdağı pass as the type loc. (Holzschuh, 1984); Osmaniye prov.: Nurdağı pass (Adlbauer, 1988); İçel prov.: Arslanköy (Rejzek et al., 2001).
Distribution: Turkey.
Chorotype: Anatolian.

***Phytoecia (Pilemia) samii* sp. n.** (Fig. 7)

Description: Body length: 9.00 mm., Length of pronotum: 1.38 mm., Width of pronotum: 2.00 mm., Length of elytra: 6.75 mm., Width of elytra: 2.75 mm.

General coloration of the body black, with a small reddish spot before the middle of pronotal disc (Fig. 7, 8A).

Except the whitish-grey hairs, on the elytra irregularly blotchy-distributed hairs are present such as *P. smatanai* and *P. serriventris*. The frons, the sides of pronotum with erect hairs and the sides of elytra semi-recumbent hairs.

Head with similarly large eyes like with *P. smatanai* and *P. maculifera*. Pronotum on the sides like *P. maculifera*, more bulbous than *P. smatanai*. Elytra like *P. smatanai* and *P. maculifera*, relatively short and hardly brilliant, however, punctations like *P. smatanai*, less close than *P. maculifera*. Elytral apex oblique truncate (pointed at outer angle) in male like *P. serriventris*.

Penis at the apex not long, tapering to the top, almost triangular (Fig. 9B).

Underside with tooth-like process in the middle on posterior margin of 1-3rd sternites. The process on 1st sternite is large, the process on 2nd and 3rd sternites are in decreasing size. 3rd is as a granule (Fig. 10A). This character is similar to *P. serriventris*.

The pygidium is formed similarly to that of *P. maculifera* and *P. serriventris* (Fig. 11A).

Discussion: This species is in *–tigrina* species group undoubtedly. This new species is close to *P. smatanai*, *P. maculifera* and *P. serriventris*. It can easily distinguish from them by using the main diagnostic characters in the following short key.

1 Upper side with sienna-colored hairs.....***serriventris* Holzschuh, 1984**
1" Upper side without sienna-colored hairs.....**2**

2 Underside without tooth-like process or tubercle on the sternites in male.....
.....***smatanai* Holzschuh, 2003**
2" Underside with tooth-like process or tubercle on the sternites in male.....**3**

3 Elytral apex obtuse in male.....***maculifera* Holzschuh, 1984**
3" Elytral apex oblique truncate (pointed at outer angle) in male.....***samii* sp. n.**

Materials: Holotype ô: Turkey: Konya province: Derebucak, N 37 22 E 31 29, 1217 m, 20.05.2008. Paratypes: 1 ô from the same locality of holotype and 1 ô from

Konya prov.: İbradı-Derebucak road, 12 km to Derebucak, N 37 28 E 31 37, 1388 m, 12.06.2007.

Some measurements of the body for paratypes: Body length: 9.38 mm., Length of pronotum: 1.57-1.63 mm., Width of pronotum: 2.20 mm., Length of elytra: 6.88-7.20 mm., Width of elytra: 2.82 mm.

Etymology: The species name "*samii*" is dedicated to Sami Turgut (Turkey) who is the father of second author.

Phytoecia (*Pilemia*) *serriventris* Holzschuh, 1984

Orig. comb.: *Phytoecia* (*Pilemia*) *serriventris* Holzschuh, 1984
Type loc.: Bulgaria.

This species is in –*tigrina* species group. It was described by Holzschuh (1984) though separated from *P. tigrina* by using penis form and secondary sex characters (coloration of antennae, coloration and pubescence of head, pronotum and elytra, form of 1-4th sternites, form of upper margin of pygidium) from Bulgaria (Harmanlı) on the base of 7 males and 7 females specimens. It is endemic to Bulgaria.

Distribution: Bulgaria.
Chorotype: Bulgarian.

Phytoecia (*Pilemia*) *smatanai* Holzschuh, 2003

Orig. comb.: *Phytoecia* (*Pilemia*) *smatanai* Holzschuh, 2003
Type loc.: Turkey.

This species is endemic to Turkey. It is in –*tigrina* species group. It was described by Holzschuh (1984) though separated from *P. maculifera* and *P. serriventris* by using penis form and secondary sex characters from Turkey (Konya: Seydişehir) on the base of 1 male specimen.

According to original description of Holzschuh (2003), it is 8 mm. Coloration black, with a small reddish spot before the middle of pronotal disc. Except the whitish-grey hairs, on the elytra irregularly blotchy -distributed hairs are present such as *P. serriventris*. The frons, the sides of pronotum with erect hairs and the sides of elytra semi-recumbent hairs and the suture with sienna-coloured longitidunal band. Dorsal band exists indistincly. At an angle of elytra have very short, erect hairs, more distictive than comparative species. Head with similarly large eyes like with *P. maculifera*. Pronotum on the sides less bulbous and more rounded than *P. maculifera*. Elytra like *P. maculifera,* relatively short and hardly brilliant, however, punctations less close. Underside without tooth-like process or tubercle on the sternites. Pygidium at the apex almost obtuse. Penis like *P. maculifera*, but a little longer and before the apex recognizably curved.

Records in Turkey: Konya prov.: Seydişehir as the type loc. (Holzschuh, 2003).
Distribution: Turkey.
Chorotype: Anatolian.

Phytoecia (*Pilemia*) *tigrina* Mulsant, 1851

Orig. comb.: *Phytoecia tigrina* Mulsant, 1851
Type loc.: S France ("Grasse, Var" – obviously incorrect locality).
Other names: *anchusae* Fuss, 1852; *breverufonotata* Pic, 1952 (Fig 12).

Villiers (1974) leaded that information of the type locality based on a mistake. So Villiers (1978) did not mention Pilemia tigrina (Mulsant, 1851) for France. However, this species was described from France according to cryptic captures from Grasse (Alps Maritime) and Esterel (Var). Bense (1995) excludes the likelihood of its presence in France. Sama (2002) stated that the type locality "Grasse and Var" in S France are obviously an incorrect locality. Brustel et al. (2003) did not also mention it for France for the same reason.

Short description: Body is small size, approximately between 10-13 mm. General body color black with white-spotted gray pelage. Antennae curled. Pronotum with a narrow, median cross longitudinal light hair band and with a transverse red spot in anterior half in female. Elytral apex obtuse in male, rounded in female. Pygidium tapering to the top, in the middle of apex with a narrow distinct insertion.
Records in Turkey: Malatya prov. (Heyden, 1888); Bilecik prov. (Bodemeyer, 1906); Asia Minor and European Turkey as *P. tigrina anchusae* Fuss, 1852 (Winkler, 1924-1932); İzmir prov.: Bergama (Demelt & Alkan, 1962; Demelt, 1963); Manisa prov.: Keçiliköy (Gül-Zümreoğlu, 1975); Turkey (Lodos, 1998; Sama, 2002); Isparta prov.: Yalvaç (Sultan Mts.) (Özdikmen & Hasbenli, 2004).
Distribution: Europe (?France, Serbia, Bulgaria, Romania, Hungary, Moldova, Ukraine), Caucasus (Armenia), Turkey.
Chorotype: Turano-European (Turano-Sarmato-Pannonian).

Phytoecia (*Pilemia*) *vagecarinata* (Pic, 1952)

Orig. comb.: *Pilemia vagecarinata* Pic, 1952
Type loc.: Syria.

This species was described by Pic (1952) from ?Syria. Rahmé et al. (2005) collected the rare species from Kasab (NW Syria). Kasab a Syrian border town located in Latakia Governorate (Muhafazat al Ladhiqiyah) NW of the country. It is 65 km from Latakia, 3 km from the Turkish border, and 17 km from the Mediterranean Sea. So this species is very likely present in Turkey (at least in Hatay province). Type could not be found by Tavakilian in MNHN.

Short description: Body is small size. General body color black with uniformly dense and regular yellowish hairs. Antennae not curled. Pronotum with 3 longitudinal light hair band (1 median and 2 lateral) in both sexes. Lateral bands not reach anterior margin. Elytral apex rounded in male, almost obtuse in female. Pygidium tapering to the top.
Distribution: Syria,?Turkey.
Chorotype: Syrian or SW-Asiatic (Syro-Anatolian).

A short identification key for Turkish *Phytoecia* (*Pilemia*) species

1 Antennae not curled.....**2**
1" Antennae curled.....**3**

2 General body color black with dense yellow-spotted pelage. Pronotum with 3 cross longitudinal light hair band (1 median and 2 lateral) in both sexes. Elytral apex obtuse in both sexes.....***hirsutula* (Frölich, 1793)**
2" General body color black with uniformly dense and regular yellowish or yellowish-white hairs. Pronotum with 3 longitudinal light hair band (1 median and 2 lateral) in both sexes. Lateral bands not reach anterior margin of pronotum. Elytral apex rounded in male, almost obtuse in female.....
.....***vagecarinata* (Pic, 1952)**

3 Pronotum without a reddish spot and with a median wide, cross longitudinal light hair band; the upper side of the body with partly rusty colored (with sienna colored pubescence).....***annulata* Hampe, 1852**
3" Pronotum with a reddish spot and with a median narrow, longitudinal light hair band; the upper side of the body without rusty coloration.....**4**

4 Upper side griseous.....***griseomaculata* (Pic, 1891)**
4" Upper side not griseous, without metallic shine but sometimes barely brilliant.
.....**5**

5 Pronotum with a small, circular median reddish spot in anterior half; the 1st and 2nd sternite in male with or without tooth-like process or tubercle in the middle before the posterior margin.....**6**
5" Pronotum with a larger reddish spot in anterior half; the 1st and 2nd sternite in male with tooth-like process or tubercle in the middle before the posterior margin.....**7**

6 The 1st and 2nd sternite in male without tooth-like process in the middle before the posterior margin; elytral apex obtuse in male..***smatanai* Holzschuh, 2003**
6" The 1st and 2nd sternite in male with tooth-like process in the middle before the posterior margin; elytral apex oblique truncate in male.....***samii* sp. n.**

7 Pygidium strongly narrowed, the upper side at the apex arched, in female the upper edge of the apex of pygidium not roof-shaped; Pronotum in female with more or less wide red transverse band before the middle of disc; at least antennal segment 3 and (or) legs a little bit reddish mostly, nevertheless, in bigger expansion reddish colored; the 1st and 2nd sternite in male with distinct small tubercle (or hump) in the middle before the posterior margin; Elytra without clear metallic shine and without significantly erect hairs.....***tigrina* (Frölich, 1793)**
7" Pygidium a little narrowed, upper side at the apex flattened, in female the upper edge of the apex of pygidium roof-shaped above the lower edge; Pronotum in both sexes with plump red spot before the middle; antennae and legs completely black, 1st sternite in male with a tooth-like process in the middle before the posterior margin;, the process on the 2nd sternite weakly such as a granule; Elytra uniformly white-gray mottled, barely brilliant, without metallic shine.....***maculifera* Holzschuh, 1984**

* The present zoogeographical characterization is based on the chorotype classification of Anatolian fauna, recently proposed by Taglianti et al. (1999). As far as possible as one chorotype description can be determined for each taxon in the text. This work supported by the projects of TÜBİTAK (project number TBAG-105T329) and GAZİ UNIVERSITY (project number BAP-06/32).

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Figure 1. *P. angusterufonotata* Pic, 1952.

Figure 2. *P. angorensis* Pic, 1952.

Figure 3. *P. griseomaculata* Pic, 1891.

Figure 4. *P. laterufonotata* Pic, 1952.

Figure 5. *P. tournieri* Pic, 1952.

Figure 6. *P. holtzi* Pic, 1952.

Figure 7. *P. samii* sp. n. (Holotype)

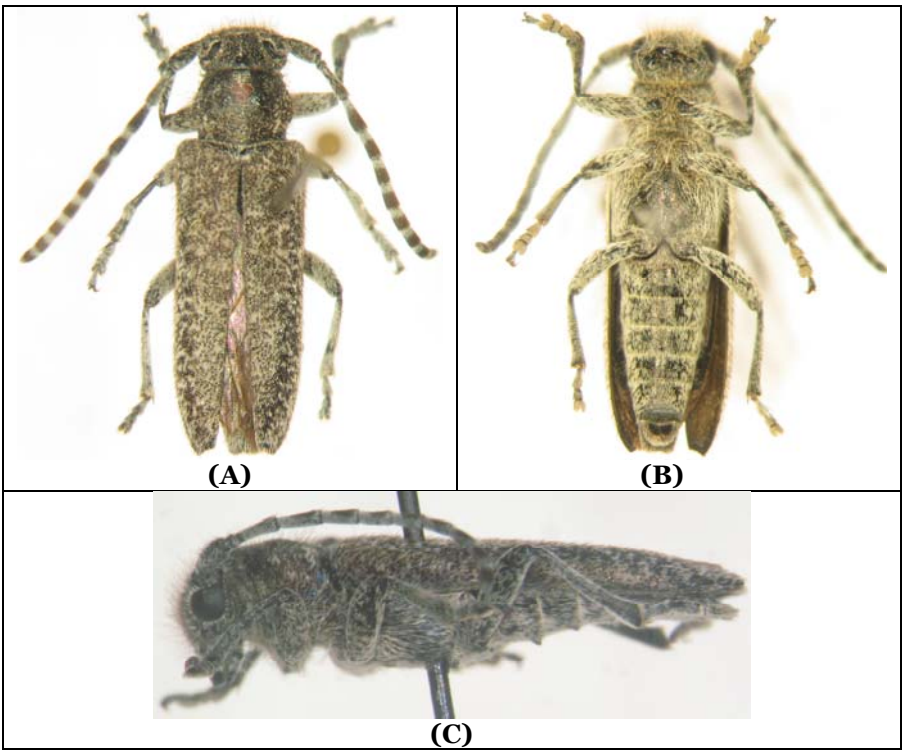

Figure 8. *P.* (*Pilemia*) *samii* sp. n. (Paratype) (A) Dorsal view (B) Ventral view (C) Lateral view.

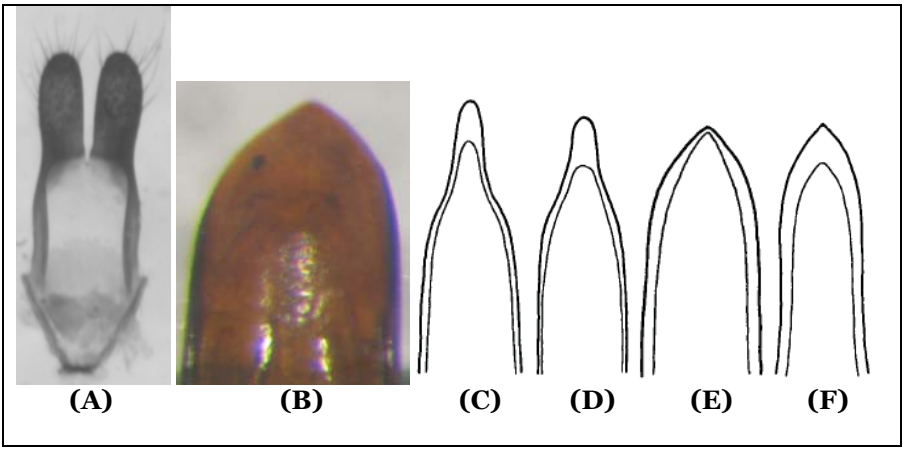

Figure 9. (A) Paramers of *P. samii* sp. n. (Holotype); Apex of penis (B) *P. samii* sp. n. (Paratype) (C) *P. tigrina* Mulsant, 1851 (D) *P. inarmata* Holzschuh, 1984 (E) *P. serriventris* Holzschuh, 1984 (F) *P. maculifera* Holzschuh, 1984 [C, D, E, F from Holzschuh (1984)].

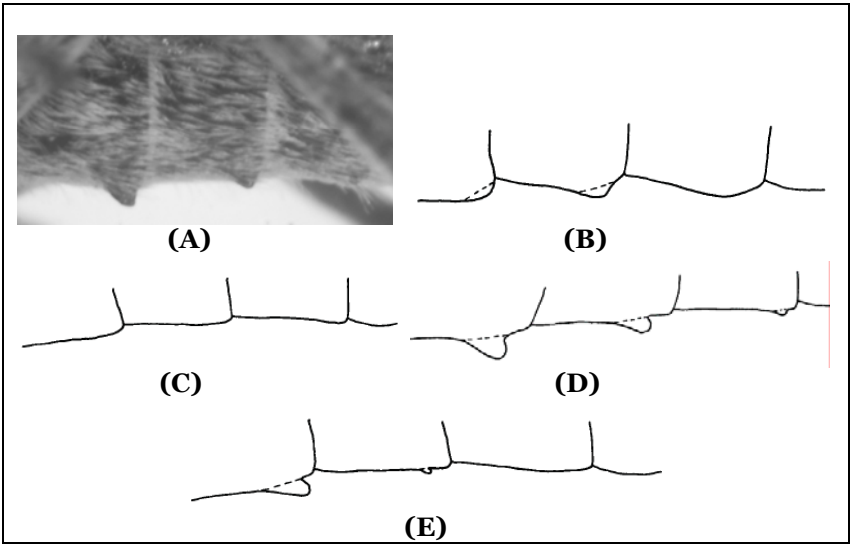

Figure 10. 1-3rd sternites (lateral view) (A) *P. samii* sp. n. (Paratype) (B) *P. tigrina* Mulsant, 1851 (C) *P. inarmata* Holzschuh, 1984 and *P. smatanai* Holzschuh, 2003 (D) *P. serriventris* Holzschuh, 1984 (E) *P. maculifera* Holzschuh, 1984 [B C, D, E from Holzschuh (1984)].

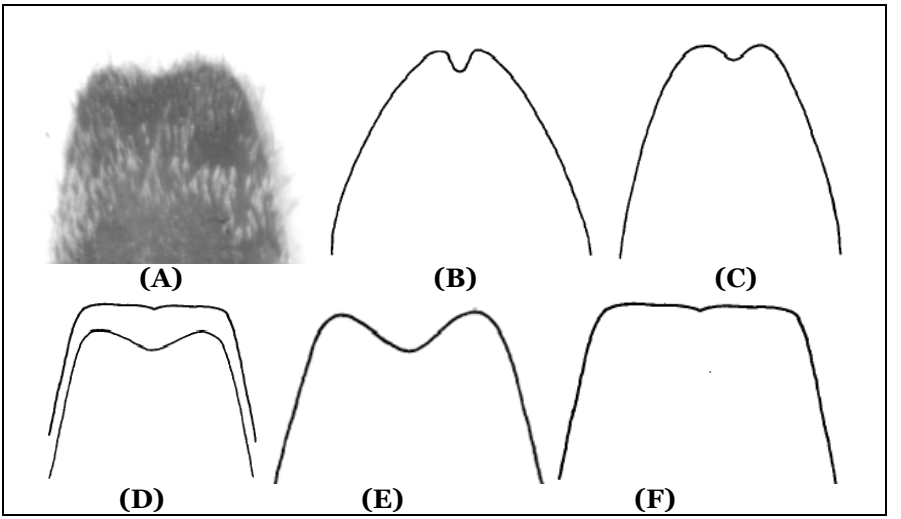

Figure 11. Pygidium (dorsal view) (A) *P. samii* sp. n. (Paratype) (B) *P. tigrina* Mulsant, 1851 (C) *P. inarmata* Holzschuh, 1984 (D) *P. serriventris* Holzschuh, 1984 (E) *P. maculifera* Holzschuh, 1984 (F) *P. smatanai* Holzschuh, 2003 [B C, D, E from Holzschuh (1984)].

Figure 12. *P. breverufonotata* Pic, 1952.