

On the taxonomy of *Phyllotreta* Chev. of the Palearctic region

(Coleoptera, Chrysomelidae, Alticinae)

By A. Konstantinov and I. Lopatin

Konstantinov, A. & I. Lopatin (1992): On the taxonomy of *Phyllotreta* Chev. of the Palearctic region. — Spixiana 15/3: 261–267.

Palearctic species of *Phyllotreta* are revised and distribution of some species is specified. Following new taxa of *Phyllotreta* are described: *P. erysimi tekensis*, subsp. nov., *P. pseudoexclamationis*, spec. nov., *P. mollis*, spec. nov., *P. lubischevi*, spec. nov., *P. andreevae*, spec. nov., *P. annae*, spec. nov., *P. lopatini*, spec. nov. The o of *P. araxicola* Khznorian is described. *P. judea* Pic and *P. scheuchi* Heikertinger are new for the USSR. The holotypes of new species are desoposited in the collection of the Zoological Institute (St. Petersburg), paratypes are shared with Zoologische Staatssammlung München.

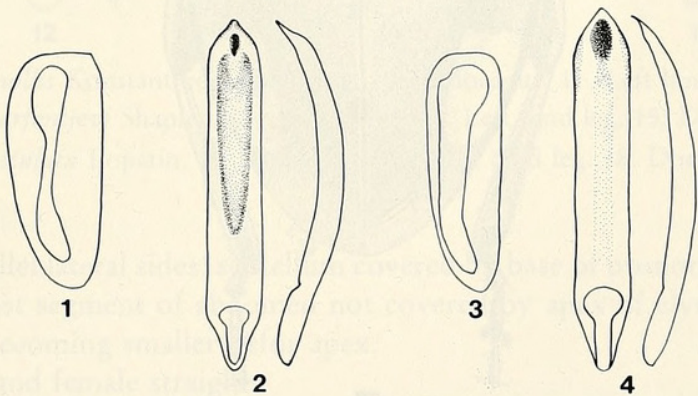
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Phyllotreta erysimi tekensis Lopatin, subsp. nov.

(Figs 1, 2)

Types. Holotype: ♂, USSR, Turkmenia, Kopet-Dagh, Firiusa, 14.IV.1976, leg. V. Dolin. — Paratypes. 2♂♂, 3♀♀; same data as holotype.

Diagnosis. This new subspecies differs from *P. erysimi erysimi* Wse. in the form of the yellow stripe which is strongly narrowed in middle (Fig. 3) and in the form of the aedoeagus. The aedoeagus of *P. e. erysimi* Wse. is triangular at apex, without tooth (Fig. 4).



Figs 1, 2. *Phyllotreta erysimi tekensis* Lopatin, subsp. nov. 1. Elytron. 2. Aedoeagus.
Figs 3, 4. *P. erysimi erysimi* Wse. 3. Elytron. 4. Aedoeagus.

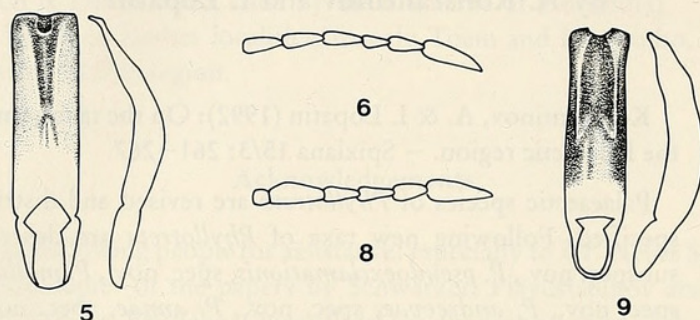
Phyllotreta pseudoexclamationis Konstantinov, spec. nov.

(Figs 5–7)

Holotype. ♂, USSR, Georgia, Akhaldaba, 21.VII.1983, forest, 1800 m, leg. A. Konstantinov.

Description

Black, without metallic lustre, each elytron with 2 yellow spots, humeral calli black; antennal segments 1–3 light yellow, apex of segment 4 barely infusate, rest of segments dark brown; pro- and mesofemora dark brown, their apices infusate, metafemora black, rest of legs yellow.



Figs 5, 6. *P. pseudoexclamationis* Konstantinov, spec. nov. 5. Aedoeagus. 6. Basal segments of antenna. Fig. 8, 9. *P. exclamationis* Thunb. 8. Basal segments of antennae. 9. Aedoeagus.

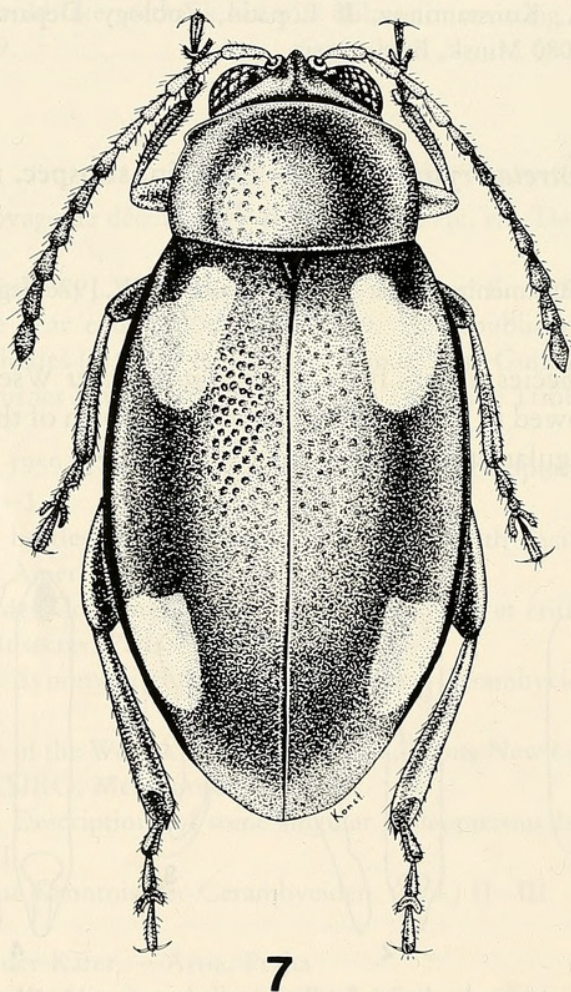


Fig. 7. *P. pseudoexclamationis* Konstantinov, spec. nov., holotype, dorsal view.

Frontal line absent, frons around antennal calli punctate and finely shagreened.

Pronotum convex, with rounded lateral sides, disc covered with large, dense punctures (distances between them nearly equal to their diameter).

Elytra without humeral calli, elytral puncturation large, dense, becoming smaller before apex, distances between punctures less than their diameter; lateral border wide, visible from above.

Aedoeagus — Fig. 5.

Length 2,1 mm.

Discussion

This new species is rather similar to *P. exclamationis* Thunb. It differs from *P. exclamationis* by size ratio of male antennal segments 4–6 (Figs. 6, 8); from *P. hochetlingeri* Fleish. by the presence of elytral spots and yellow coloration of antennal segments 1–4; from *P. djurdjurensis* Doguet by the presence of elytral spots and the form of the aedoeagus (Fig. 9).

Phyllotreta mollis Konstantinov, spec. nov.

(Figs 10–12)

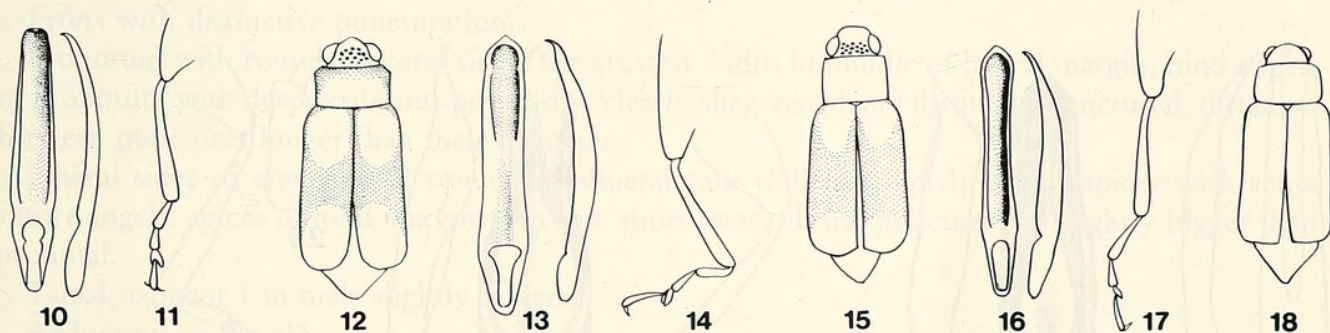
Types. Holotype: ♂. USSR, Usbekistan, 20 km SW Beshkent, 29.VI.1970, leg. Gorbatovski. — Paratypes: 2 ♀♀, same data as holotype.

Description

Light brown, head brown, frons darker; legs 1 and 2, antennal segments 1–5 light yellow, rest of segments and metafemora brown; base of pronotum brown, posterior part of pronotum yellow brown; base of elytra yellow, but humeral calli always brown as the central part of elytra.

Frons finely shagreened with sparse puncturation in middle; antennal calli visible, frontal line absent; frontal keel narrow, acute and short.

Pronotum flat with slightly rounded lateral sides, hind angles acute.



Figs 10–12. *P. mollis* Konstantinov, spec. nov. 10. Aedoeagus. 11. Left hind leg. 12. Dorsum.

Figs 13–15. *P. parfentjevi* Shapiro. 13. Aedoeagus. 14. Left hind leg. 15. Dorsum.

Figs 16–18. *P. ustulata* Lopatin. 16. Aedoeagus. 17. Left hind leg. 18. Dorsum.

Elytra flat with parallel lateral sides; scutellum covered by base of pronotum and almost invisible; lateral border wide; last segment of abdomen not covered by apex of elytra; elytral puncturation as large as pronotal, becoming smaller before apex.

Hind tibia of male and female straight.

Aedoeagus — Fig. 10.

Length 1,5–1,8 mm.

Discussion

This new species is rather similar to *P. parfentjevi* Shapiro (Figs 13–15) and *P. ustulata* Lopatin (Figs 16–18). It differs from the first species by more rounded apices of elytra and the form of the aedoeagus. It differs from *P. ustulata* Lop. by frontal puncturation, acute hind angles of pronotum, equal size of male tarsal segments 1 and 2, and form of aedoeagus.

Phyllotreta andreevae Lopatin, spec. nov.

(Fig. 19)

Types. Holotype: ♂, USSR, Tadjikistan, West Pamir (Badachshan), Bartang river, 12.VIII.1965, leg. E. Andreeva. — Paratypes: 1 ♂, 2 ♀♀, data as holotype.

Description

Black with green metallic lustre, antennal segments 1–3 dark brown.

Frons with sparse puncturation; frontal keel narrow and acute; antennae thin, segments 8–11 clearly widened, segments 4–5 as wide as segments 3 and 6.

Pronotum short, 1,46 times as wide as long, with small, deep puncturation, space between them shiny, with sparse and short lines; lateral suture excavated near setiferous pore.

Elytra long, shiny, 3,4 times as long as pronotum length, with well developed humeral calli and rounded apices; elytral puncturation arranged into dense irregular rows.

Tibia straight, evenly dilated towards apex.

Anal sternite of abdomen with semicircular impression.

Aedoeagus — Fig. 19.

Length 1,8 mm.

Discussion

This species is closely related to *P. bartanga* Lop. and can be distinguished from it by smaller size, weaker metallic lustre, distinct frontal puncturation, thin antennae and form of aedoeagus.

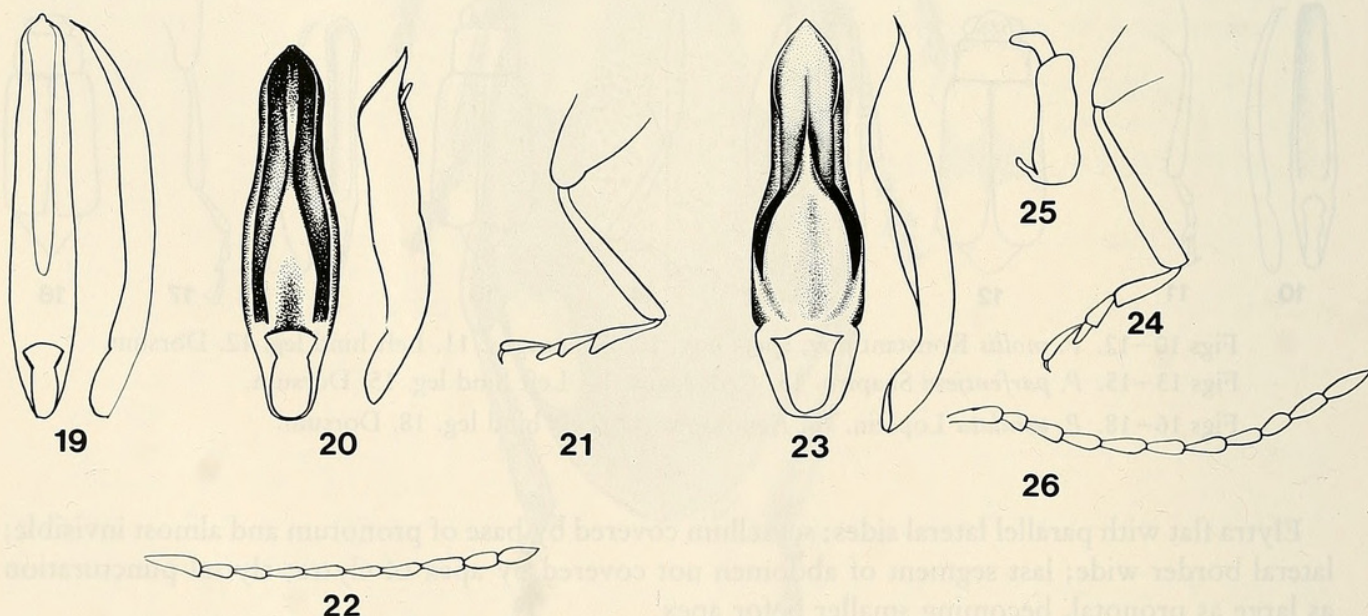


Fig. 19. Aedoeagus of *P. andreevae* Lopatin, spec. nov.

Figs 20–22. *P. lubischevi* Lopatin, spec. nov. 20. Aedoeagus. 21. Left hind leg. 22. Antennae.

Figs 23–26. *P. annae* Konstantinov, spec. nov. 23. Aedoeagus. 24. Left hind leg. 25. Spermateca. 26. Antennae.

Phyllotreta lubischevi Lopatin, spec. nov.

(Figs 20–22)

Types. Holotype: ♂, USSR, Kirgisia, mountain ridge Ferganski, Kara-Alma, 2.VII.1950, leg. A. Lubishev.
– Paratypes: 1 ♂, 2 ♀♀, same data as holotype, leg. K. Arnoldi.

Description

Black without metallic lustre; antennae and legs completely black.

Frons with sparse, deep punctures near eyes, top of the head smooth and shine; frontal keel convex, acute; antennae thin, segment 3 as long as segments 2 and 4.

Pronotum short, 1.5 times as wide as long; disc finely shagreened and covered with distinct punctures, their size increased to the base of pronotum; distances between punctures in 1.5–2 times longer than their diameter.

Elytra 2.2 times as long as pronotum length, with dense distinct puncturation; space between punctures convex; apices wide rounded.

Aedoeagus – Fig. 20.

Length 2.0 mm.

Discussion

This species is closely related to *P. wiseana* Jcbs. and can be distinguished by antennal segment 3 and form of aedoeagus. From *P. praticola* Wse. it is distinguished by narrower frontal keel and form of aedoeagus.

Phyllotreta annae Konstantinov, spec. nov.

(Figs 23–26)

Types. Holotype: ♂, USSR, Kazakhstan, mountain ridge Karatau, Baidjansai, 26.V.1990, 1500 m, leg. A. Konstantinov. – Paratypes: 1 ♂, 1 ♀, same data as holotype.

Description

Black with slight metallic lustre; apices of tibia, tarsi and antennal segments 2 and 3 light brown.

Frons with distinctive puncturation.

Pronotum with rounded lateral sides; the greatest width in middle of lateral margin; hind angles of pronotum with deep setiferous pores; disc clearly shagreened and distinctly punctured, distances between punctures longer than their diameter.

Lateral sides of elytra small rounded; humeral calli well developed; elytral apices with acute suture angles, apices of hind margin with row short setae; elytral puncturation slightly bigger than pronotal.

Tarsal segment 1 in male slightly widened.

Aedoeagus – Fig. 23.

Spermateca – Fig. 25.

Length 2.1 mm.

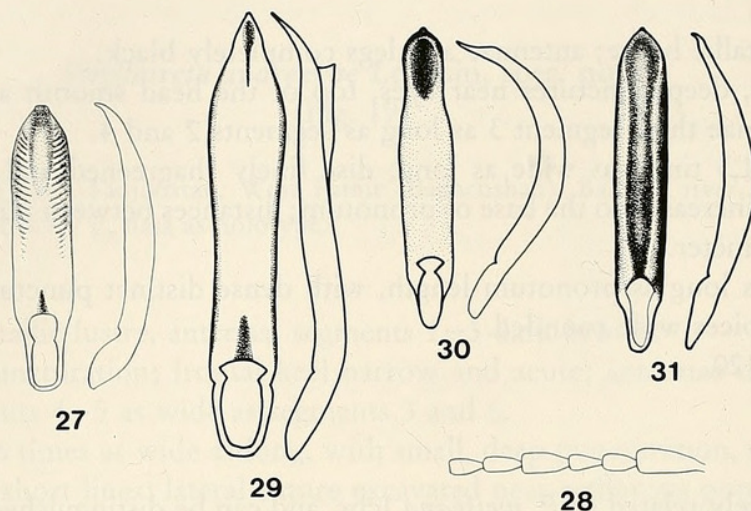
Discussion

This new species is rather similar to *P. lubischevi* Lop. and can be distinguished from it by colour of antennal segments 2 and 3, more distinct elytral puncturation, thin antennae, form of hind tibia and form of aedoeagus.

Phyllotreta lopatini Konstantinov, spec. nov.

(Figs 27, 28)

Types. Holotype: ♂, USSR, Caucasus, Azerbaidjan, Lerik, 10.V.1986, 1200 m, leg. A. Konstantinov. — Paratypes: 3 ♂♂, 4 ♀♀, same data as holotype.



Figs 27–28. *P. lopatini* Konstantinov, spec. nov. 27. Aedeagus. 28. Antennae.

Fig. 29. Aedeagus of *P. araxicola* Khnzorian.

Fig. 30. Aedeagus of *P. scheuchii* Heikertinger.

Fig. 31. Aedeagus of *P. judea* Pic.

Description

Black with small metallic lustre, tarsi, apices of tibia, antennal segments 1–3 and base of segment 4 yellow, rest of segments, all femora dark brown.

Antennal calli lustre, frontal line absent; frons covered with large, dense punctures and shagreened; antennal segment 4 longer than segments 3 and 5, flat and small curved.

Pronotum convex with rounded lateral sides, 1,65 times as wide as long; disc shagreened and covered with deep punctures (distances between them nearly equal their diameter).

Lateral sides of elytra rounded a bit; elytral puncturation deep and dense, diameter of punctures longer than distances between them; space between punctures shagreened and lustre.

Aedeagus – Fig. 27.

Length 1,8 mm.

Discussion

This new species is closely related to *P. balcanica* Heik. and can be distinguished from it by dense puncturation of frons, yellow antennal segment 1–3, and form of aedeagus.

Phyllotreta araxicola Khnzorian

(Fig. 29)

Khnzorian 1968: 259–277. Until now only the ♀ of this species has been described. The description of the ♂ is given below.

Description

Black without metallic lustre; antennal segments 1–3 yellow, segment 4 light brown, rest of segments dark brown; all femora dark brown, first and second tibia yellow with infuscate in middle.

Frons finely shagreened and punctate.

Pronotum wide, with rounded lateral sides and wide lateral margin; disc finely shagreened and covered with large, dense punctures.

Elytra with parallel lateral sides; distances between punctures less than their diameter, space between punctures convex and lustre.

Aedoeagus — fig. 29.

Length 1,9 mm.

Distribution: USSR, Armenia, Erevan, 15.V.1988, leg. A. Konstantinov.

Phyllotreta judea Pic

(Fig. 30)

Pic, 1901: 27.

This species is new for the USSR fauna. Known from Bulgaria, Turkey, Israel and Jordan (Furth 1979). — USSR: Armenia, Chosrov, 19.V.1988, leg. A. Konstantinov.

Phyllotreta scheuchi Heikertinger

(Fig. 31)

Heikertinger 1941: 15–110.

This species is new for the USSR fauna. Known from Hungary, Italy, Bulgaria (Heikertinger 1941). — USSR: Krivoi Rog, 20.V.1987, leg. O. Konstantinov.

References

- Furth, D. G. 1979. — Zoogeography and host plant ecology of the Alticinae of Israel, especially *Phyllotreta*; with description of three new species (Coleoptera: Chrysomelidae) — Isr. J. Zool. **28**: 1–37
- Heikertinger, F. 1941. Bestimmungstabelle der paläarktischen *Phyllotreta*-Arten. — Koleopterol. Rundsch. **27** (1/3): 15–110
- Khnzorian, S. M. 1968. Notes sur les Chrysomelidae de L'Armenie Sovietique. — Ann. Soc. Ent. Fr. (N. S.) **4** (2): 259–277
- Pic, M. 1901. Notes et diagnoses. — L'Echange **17**: 27



Konstantinov, Alexander S and Lopatin, I. 1992. "On the taxonomy of Phyllotreta Chevr. of the Palaearctic region (Coleoptera, Chrysomelidae, Alticinae)." *Spixiana* 15, 261–267.

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