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MORDELLID BEETLES OF THE GENUS *STENALIA* (COLEOPTERA, MORDELLIDAE) OF CENTRAL AND EASTERN PALAEARCTICS. COMMUNICATION 2

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Mordellid Beetles of the Genus *Stenalia* (Coleoptera, Mordellidae) of Central and Eastern Palaearctics. Communication 2. Odnosum V. K. — *S. vladimiri* **Odnosum,** sp. n. (type locality: Azerbaijan, Naxçivan, Bilav vill.) and *S. dzhulfae* **Odnosum,** sp. n. (type locality: Azerbaijan, Naxçivan, vicinity of Çulfa (=Julfa)) are described. *S. iranica* Horak, *S. ascaniaenovae* Lazorko and *S. bilyi* Horak are redescribed based on study of their type series, with addition of newly discovered characters (e. g., shape of the pygidium and its ratios comparing to the anal sternite, elytra and prothoracal disk). Morphological diagnoses of little-know species, *S. araxicola* Khnzorian, *S. brunneipennis* Mulsant, *S. testacea* (Fabricius), and *S. gracilicornis* Baudi, are improved. The holotype of *S. vladimiri* sp. n., *S. dzhulfae* sp. n., as well as the holotype, the allotype and paratypes of *S. ascaniaenovae* are deposited at the Schmalhausen Institute of Zoology, National Academy of Sciences of Ukraine, Kyiv.

Key words: Mordellidae, *Stenalia*, Palaearctics, diagnostics, new species, females.

Жуки-горбатки рода *Stenalia* (Coleoptera, Mordellidae) Центральной и Восточной Палеарктики. Сообщение 2. Односум В. К. — Описаны *S. vladimiri* **Odnosum,** sp. n. и *S. dzhulfae* **Odnosum,** sp. n. из Азербайджана. С использованием нового видоспецифичного признака наружной морфологии — пигидия самок (его форма и пропорции к анальному стерниту, надкрыльям и диску переднегруди) впервые разработана диагностика самок жуков-горбаток из рода *Stenalia* Mulsant и представлена оригинальная определительная таблица для самок 10 видов. На основе изучения типового материала приведены дополненные морфологические диагнозы *S. iranica* Horak, *S. ascaniaenovae* Lazorko и *S. bilyi* Horak. Для малоизвестных видов — *S. araxicola* Khnzorian, *S. brunneipennis* Mulsant, *S. testacea* (Fabricius) и *S gracilicornis* Baudi — приведены краткие диагнозы. Голотипы *S. vladimiri* sp. n. и *S. dzhulfae* sp. n., голотип, аллотип и паратипы *S. ascaniaenovae* хранятся в Институте зоологии им. И. И. Шмальгаузена НАНУ, Киев.

Ключевые слова: Mordellidae, *Stenalia,* Палеарктика, диагностика, новые признаки, новые виды, самки.

This paper includes the review of female material of the mordelliid genus *Stenalia* Mulsant from the central and eastern Palaearctics. Introduction, material and methods chapters, diagnoses of the genus and males of each species, as well as key to species (males) are given in the Communication 1 of the present paper (Odnosum, 2000).

Up to now, diagnostics of mordellid females was quite a difficult task because of deficiency of diagnostic characters of coloration and some uncertain measurements that also did not took into account intraspecific and interpopulation variation of characters, and keys to females were absent.

Study of material from geographically distant populations shows that, in the *Stenalia*, the most constant female key character is the pygidium shape and ratios of its length to the prothoracal disc, elytra and anal sternite. From theses characters, two new species based on females, *S. vladimiri* sp. n. and *S. dzhulfae* sp. n., are recognised, short diagnoses of females of 8 know species and a key to females of all the 10 species are provided. A brief description of *S. rufohumeralis* Pic, 1926 is translated from Ermisch (1951).

Stenalia vladimiri Odnosum, **sp. n.**

Material. Holotype }, Azerbaijan: «Нахичевань, Ордубадский р-н, п. Билав, 1230 м, 19.06.1977 (Долин)» [Naxçivan, Ordubad distr., Bilav vill. [N 39°05' E 45°50'], 1230 m, Dolin leg.] Schmalhausen Institute of Zoology, Kyiv (SIZK).

Body black, without pubescence. Maxillary palpus and antennomeres dark brown. Elytra dark brown, blackened at bases along suture, sides and at apices.

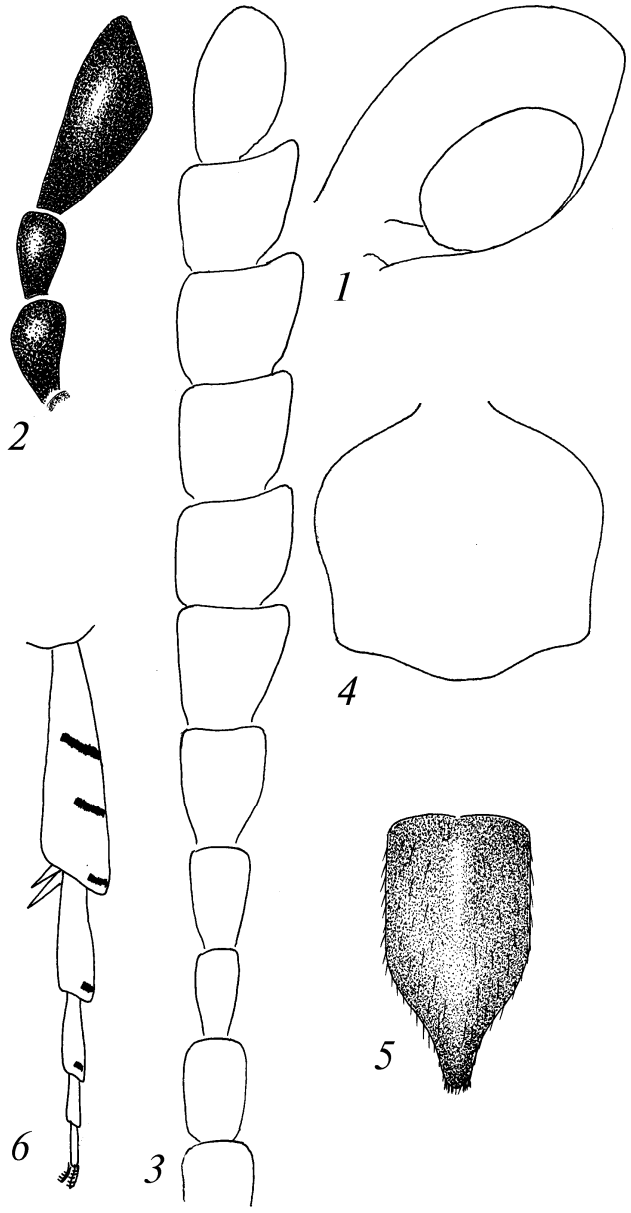

Fig. 1. *Stenalia vladimiri* (holotypus, ♀): *1* — head; *2* — maxillary palpus; *3* — antenna; *4* — prothoracal disc; *5* — pygidium; *6* — hind tibia and tarsomeres.

Рис. 1. *Stenalia vladimiri* (голотип, ♀): *1* — голова; *2* —нижнечелюстные щупики; *3* — усики; *4* — диск переднегруди; *5* — пигидий; *6* — задняя голень и лапки.

Head (fig. 1, *1*) at frons conspicuously flattened, slightly transverse, only 1.15 times wider than long. Temples indistinct, temporal angle widely rounded, arcuate. Eyes rounded oval. Apical joint of maxillary palpus (fig. 1, *2*) narrow triangular, 2.6 times longer than wide. Antennomeres 6–10 (fig. 1, *3*) 1.1 times as long as wide at apex each.

Prothoracal disc (fig. 1, *4*) as long as wide, lateral sides concave from base to middle, widened towards its apex, broadly arcuate, convex; its posterior corners strongly raised, slightly blunt. Prothoracal disc in lateral aspect with conspicuously S-shaped sinuate sides. Elytra 2.75 times longer than combined width at shoulders 2.7 longer than prothoracal disc.

Pygidium (fig. 1, *5*) with medial carina, 2.0 times as long as wide at base, its sides straight in basal two thirds, sharply incurved and narrowed in apical third; 1.8 times longer than anal sternite, 2.5 times shorter than elytra, and as long as prothoracal disc.

Fore tibia curved medially, on medial surface without setae. Hind tibia (fig. 1, *6*) with 2 lateral ridges, parallel to apical margin, 1st ridge at basal third of its length, 2/3 as long as tibia width, 2nd at apical third, reaching only half of its width; hind tarsomeres 1 and 2 each with short ridge parallel to their apical margins. Body length 6.1 mm.

Etymology. The species is named in honour of Prof. Dr. Vladimir G. Dolin, who collected the holotype of this species.

Stenalia dzhulfae Odnosum**, sp. n.**

Material. Holotype }, Azerbaijan: «Нахичевань, окр. пгт Джульфа, 7. 06. 1980 (Ермоленко)» [Naxçivan, vicinity of Çulfa (=Jolfa, N 38°57' E 45°37'), Ermolenko leg.] (SIZK).

Body black. Abdominal sternites with dense long appressed pubescence. Maxillary palpus and antenna and fore legs brown. Elytra light brown, darkened at bases along suture and along sides; apical darkening hardly expressed.

Head (fig. 2, *1*) at frons slightly convex, transverse, 1.25 times wider than long. Temples narrow, temporal angle widely rounded, arcuate. Eyes more or less oval, elongate at anterior margin. Apical joint of maxillary palpus (fig. 2, *2*) lanceolate, 3.5 times longer than wide at apical third. Antennomeres 6–10 (fig. 2, *3*) 1.17–1.2 times as long as wide at apex each.

Prothoracal disc (fig. 2, *4*) as long as wide, its lateral sides divergent from base to apex, widened towards its apex, broadly arcuate, convex; posterior corners rounded. Sides straight in lateral aspect. Elytra 2.45 times longer than combined width at shoulders 2.5 longer than prothoracal disc.

Pygidium (fig. 2, *5*) without medial carina, 1.6 times as long as wide at base, its sides arcuate, convergent towards apex, 3.3 times shorter than elytra, 1.5 times shorter than prothoracal disc and 2.0 times longer than anal sternite.

Fore tibia almost straight, of equal length at every section, on medial surface without setae. Hind tibia (fig. 2, *6*) with 2 lateral ridges, parallel to apical margin: 1st ridge at middle of its length, 2nd at apical quarter, both reaching only half of tibia width; hind tarsomeres 1–3 each with ridge at their apical quarters. Body length 6.3 mm.

Etymology. The species is named for its type locality.

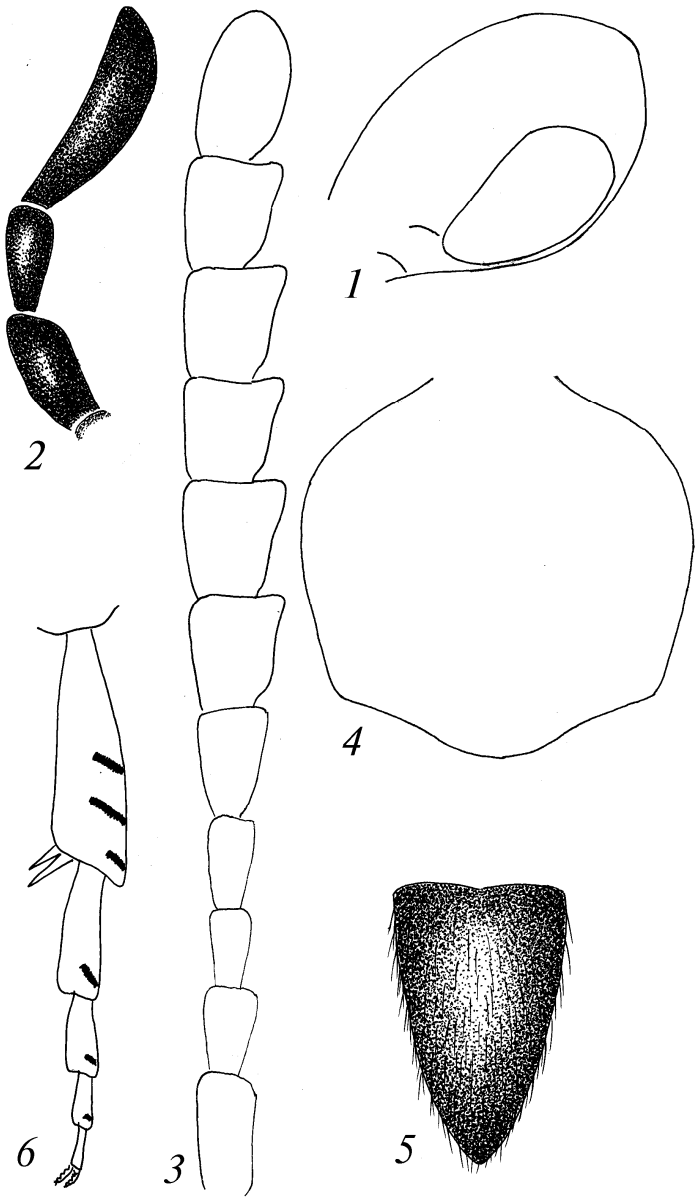

Fig. 2. *Stenalia dzhulfae* (holotypus, ♀): *1* — head; *2* — maxillary palpus; *3* — antenna; *4* — prothoracal disc; *5* — pygidium; *6* — hind tibia and tarsomeres.

Рис. 2. *Stenalia dzhulfae* (голотип, ♀): *1* — голова; *2* — нижнечелюстные щупики; *3* — усики; *4* — диск переднегруди; *5* — пигидий; *6* — задняя голени и лапки.

Stenalia araxicola Khnzorian, 1957

Material. Tunis: }, «10.06. <1>913 (Пастухов)» (ZISP); Greece: 2 }, Creta, Gortys, 13.06.1981 (Bily leg.) (Horak coll.), Russia: }, «Белгородская обл., лес на Ворскле, 07.1955 (Рихтер)» [Belgorod oblast, woods on Vorskla River] (ZISP); Armenia: 3 }, «Армения, Хосровский запов, п. Мегри, 18.06.1977 (Долин, Толканиц)» [Megri, Khosrov Natural Reserve, Dolin & Tolkanitz leg.]; }, 8.06.1980. }, 18.06.1980. 2 }, 10.06.1982. 3 }, «п. Веди, 1.06.1982» [Vedi] (SIZK); Azerbaijan: }, «Нахичевань, Ордубадский р-н, п. Билав, 15.06.1980 (Ермоленко)» [Naxçivan, Ordubad distr., Bilav vill., Ermolenko leg.] (SIZK); Uzbekistan: }, «Бухара, Харманджау, 29. 06. 1910 (Зарудный)» [Bukhara, Kharmanjau, Zarudny leg.]; }, «Kaufmanovskaja, Taschkent, 1.06.1928 (Nikitin)»; «Кашкадарьинск. обл., окр. Бухары, Катташи, 18.05.1931 (Гуссаковский)» [vicinity of Bukhara,

Kattashi, Gussakovski leg.] (ZISP); }, «Узбекистан, Сурхандарьинская обл., 30 км ЮВ г. Денау, 22.05.1982 (Долин)» [Surkhandarya prov., 30 km SE of Denau, Dolin leg.]; Turkmenistan: }, «Туркмения, зап-к Репетек, 19.05.1992 (Нестеров)» (SIZK). }, «Керман, стр. Мекран, 17–18.03.1901 (Зарудный)» [Kerman, formerly Mekhran, Zarudny leg.] (Semenov-Tian-Shansky collection, ZISP).

Body black. Pygidium (fig. 3, *1*) elongate, with conspicuous medial carina, its sides straight, sharply incurved and convergent at apical third, 1.6 times as long as wide at base, twice longer than anal sternite, almost as long as prothoracal disc, and 2.4 times shorter than elytra.

S. ascaniaenovae Lazorko, 1974

Type material: Allotype }: «Укр. <аина>, Херсонщина, Асканія-Нова, 14.06.1972. leg. W. Dolin det. W. Lazorko, 09.1973» [Ukraine, Kherson oblast, Askania-Nova] (white paper handwritten labels), paratypes: 3 } (labels as in the allotype). Non-type material: Ukraine: Luhans'k oblast: 2 }, «Луганский запов., Провальская степь, ур. Королевские склоны, 21.06.1979 (Котенко)» [Luhans'k Natural Reserve, Provalski Step, Korolevskije Sklony, Kotenko leg.]; 2 }, idem, «25.06.1983 (Односум)» [Odnosum leg.]; 2 }, «окр. г. Беловодск, пр. бер. р. Деркул, 23.06.1983» [right bank of Derkul River near Belovodsk] (SIZK); Armenia: 3 }, «Армения, Хосровский запов., п. Веди, 1.06.1980 (Ермоленко)») [Khosrov Natural Reserve, Vedi, Ermolenko leg.]; }, «6.06.1980. п. Мегри. 10.06.1987 (Ермоленко)» [idem, Megri, Ermolenko leg.]; 2 }, «Хосровский запов., уч. Чаек, 15.06.1980 (Казарян)» [idem, Chayek, Kazaryan leg.] (SIZK); Kazakhstan: 3 }, «Актюбинская обл., 15 км С г. Эмба, 11.06.1985 (Ермоленко)» [Aqtube oblast, 15 km N of Emba town, Ermolenko leg.] (SIZK); Uzbekistan: }, «Узбекистан, Аманкутан, 17.06.1996 (Байдак)» [Aman-Kutan pass 30 km S of Samarkand, Baydak leg.] (SIZK).

Body and its appendages black. Temporal angle widely rounded, arcuate. Antennomeres each 6–10 as wide as long. Elytra 2.8 times longer than their combined width at shoulders and 2.8 times longer than prothoracal disc. Hind tibia with 1 short lateral ridge, non-parallel to apical margin reaching 1/3 of tibia width; hind tarsomere 1 without 1 herdly distinguishable ridge. Pygidium (fig. 3, *2*) elongate, narrowly conical, 2.6 times longer than wide at base, 2.2 times longer than anal sternite, 2.4 times shorter than elytra, and 1.2 times longer than prothoracal disc.

S. bilyi Horak, 1978

Type material: Allotype }: "UdSSR, Tadschik. SSR, Hissar-Gebirge, 26.06.1976" (Horak coll., Praha) (white paper printed labels). Non-type material: Uzbekistan: }, «Узбекистан, Аманкутан, 17.06.1996 (Байдак)» [Aman-Kutan pass 30 km S of Samarkand, Baydak leg.] (SIZK); Tajikistan: 11 }, «Таджикистан, Гармский р-н, п. Таджикабад, кишлак Ганишоу, 17.06.1987 (Односум)» [Garm distr. Ganishou village nr. Tadzhikabad, Odnosum leg.] (SIZK).

Body and its appendages black. Temporal angle rounded. Antennomeres 6–10 each slightly longitudinal, no more than 1.1 times longer than wide. Elytra 1.3 times longer than their combined width at shoulders and 2.85 times longer than prothoracal disc. Hind tibia with 1 very short lateral ridge, non-parallel to apical margin, reaching only 1/4 of tibia width; hind tarsomere 1 wзithout ridge. Pygidium (fig. 3, *3*) apically elongate, its lateral sides slightly convex, at apical third sharply incurved and convergent; 2.3–2.5 times longer than wide at base, 1.9–2.0 times longer than anal sternite, 2.4–2.5 times shorter than elytra, and in average 1.1 times longer than prothoracal disc.

S. brunneipennis Mulsant, 1856

Material. Azerbaijan: 2 }, «Нахичевань, Ордубадский р-н, п. Билав, 15.06.1980 (Ермоленко)» [Naxçivan, Ordubad distr., Bilav vill., Ermolenko leg.] (SIZK).

Body black. Pygidium (fig. 3, *4*) slightly elongate, its sides almost straight, in apical quarter gradually convergent, 1.8 times as long as wide at base, twice longer than anal sternite, 1.2 times shorter than prothoracal disc, and 2.7–2.8 times shorter than elytra.

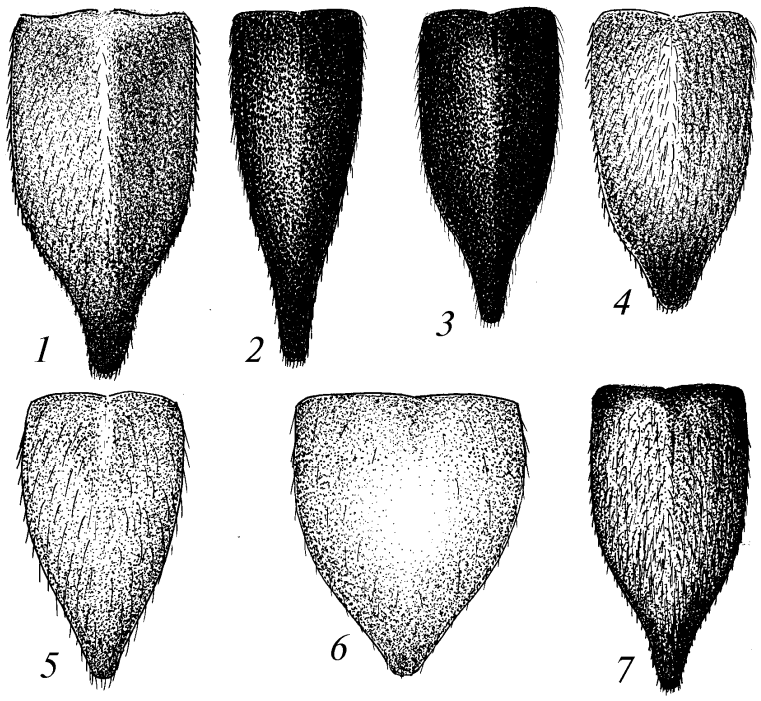

Fig. 3. Pygidium of female: *1 — Stenalia araxicola; 2 — S. ascaniaenovae; 3 — S. bilyi; 4 — S. brunneipennis; 5 — S. gracilicornis; 6 — S. iranica; 7 — S. testacea.*

Рис. 3. Пигидий самки: *1 — Stenalia araxicola; 2 — S. ascaniaenovae; 3 — S. bilyi; 4 — S. brunneipennis; 5 — S. gracilicornis; 6 — S. iranica; 7 — S. testacea.*

S. gracilicornis Baudi, 1878

Material. Cyprus: }, Kyrenia, Karavas, 05.1973 (Pfeffer leg.), 2 }, 11–17.05.1973 (Vesely leg.); 3 }, Pelop. m., Mt. Taigetos, Asafigion, 14–15.06.1974 (Horak & Svihla leg.) (Horak coll.); Armenia: }, «Армения, Хосровский запов, п. Веди, 20.06.1980 (Ермоленко)» [Khosrov Natural Reserve, Vedi, Ermolenko leg] (SIZK); Azerbaijan: 9 }, «Нахичевань, Ордубадский р-н, п. Билав, 15.06.1980 (Ермоленко)» [Naxçivan, Ordubad distr., Bilav vill. [N 39º05' E 45º50'], Ermolenko leg.]; 2 }, idem, 5.04.1997 (Долин)» [Dolin leg.] (SIZK).

Body black. Pygidium (fig. 3, *5*) with lateral sides slightly convex, 1.9 times longer than wide at base, 1.6–1.7 times longer than anal sternite, 1.2 times shorter than prothoracal disc, and 2.5–2.6 times shorter than elytra.

S. iranica Horak, 1981

Material. 2 } (paratypes): "E. Iran, Kahurak, 23–24.04.1973. Loc. no. 176. Exp. Nat. Mus. Praha" (printed labels on white papers).

Body yellowish brown with golden sheen. Abdominal sternites brownish red at their posterior margin. Temporal angle wiedely rounded, arcuate. Elytra brown, slightly darkened at shoulders, 2.5–2.6 times longer than their combined width at shoulders. Hind tibia with 2 lateral ridges, parallel to apical margin. Pygidium (fig. 3, *6*) wide and short, only 1.2–1.4 longer than wide at base, its sides straight, broadly arcuate convex, sharply convergent at apical third.

S. testacea (Fabricius, 1787)

Material. Portugal: 2 }, Alentejo, Grandola, 12.07.1979 (Batten coll.); Algeria: }, "Algeria bor., Bouria, 10.06.1971 (Hoffer & Horak leg.)" (coll. Horak); Ukraine: Kherson oblast: 3 }, «Херсонская обл., коса Арабатская стрелка, 29.06.1979 (Котенко)» [sand-spit Arabatskaya Strelka, Kotenko leg.]; Zaporizhzha oblast: 2 },

«Запорожская обл., коса Обиточная, 27.06.1979 (Котенко)» [sand-spit Obytichna, Kotenko leg.]; Crimea: }, «Крым, мыс Казантип, 2.07.1979 (Петренко)» [Kazantip cape, Petrenko leg.]; 33 }, idem, «с. Мысовое, 10.06.1997» [Mysovoye], 3 }, «Крым, окр. Белогорска, с. Белая Скала, 3.07.1968 (Односум)», [Belaya Skala vill. nr. Belogorsk, Odnosum leg.]; 2 }, «Крым, мыс Айя, долина Ласпи, 20.06.1979 (Котенко)» [Aya cape, Laspi valley, Kotenko leg.] (SIZK); Armenia: 2 }, Армения, Хосровский запов., п. Веди, 6.06.1980 (Ермоленко) [Khosrov Natural Reserve, Vedi, Ermolenko leg.] (SIZK).

Body black. Pygidium (fig. 3, *7*) at apex elongate, narrowly conical, its lateral margins almost straight to middle, 2.0–2.1 times longer than wide at base, 2.6–2.8 times longer than anal sternite, as long as prothoracal disc, 2.4–2.5 times shorter than elytra.

A key to species of the genus *Stenalia* (females)

Определительная таблица видов рода *Stenalia* по самкам

1 (18). Apical joint of maxillary palpus strongly triangular axe-shaped, variously elongate.
2 (13). Elytra tawny-yellow or light brown, blackened or slightly darkened (*S. iranica*) at very bases, with elongate triangular spot behind scutellum and narrow vittae along the suture, the margins and at the apices.
3 (10). Hind tibia each with 2 well-developed lateral ridges.
4 (7). Prothoracal disc longitudinal in dorsal aspect, and with strongly sinuate S-shaped margins in lateral aspect.
5 (6). Body yellowish brown. Only the tarsomere 1 of the hind tarsus with a rudimentary ridge. Elytra elongate, 3.2 times longer than combined width at shoulders. Pygidium (fig. 3, *6*) 1.2–1.4 times longer than wide at base. 7.7–8.0 mm. ..... *S. iranica* Horak
6 (5). Body black. Hind leg tarsomeres 1 and 2 with short subapical ridges. Elytra only 2.85 times longer than their combined width at shoulders. Pygidium (fig. 3, *1*) elongate, 1.6 times as long as wide at base. 7.0–9.7 mm. ..... *S. araxicola* Khnzorian
7 (4). Prothoracal disc square in dorsal aspect.
8 (9). Posterior corners of prothoracal disc strongly raised up. Pygidium (fig. 1, *5*) with medial carina, 2.0 times as long as wide at base, its sides straight in basal two thirds, sharply incurved and narrowed in apical third; 1.8 times longer than anal sternite, 2.5 times shorter than elytra, and as long as prothoracal disc. ..... *S. vladimiri* sp. n.
9 (8). Posterior corners of prothoracal disc not raised up. Pygidium (fig. 3, *4*) slightly elongate, its sides almost straight, in apical quarter gradually convergent, 1.8 times as long as wide at base, twice longer than anal sternite, 1.2 times shorter than prothoracal disc, and 2.7–2.8 times shorter than elytra. 5.5–7.7 mm. ..*S. brunneipennis* Mulsant
10 (3). Hind tibia with 1 lateral ridge.
11 (12). Temples behind eyes narrow. Antennomeres 6–10 each as long as wide. Pygidium (fig. 3, *7*) at apex elongate, narrowly conical, its lateral margins almost straight to middle, 2.0–2.1 times longer than wide at base, 2.6–2.8 times longer than anal sternite, as long as prothoracal disc, 2.4–2.5 times shorter than elytra. 3.9–7.1 mm. ..... *S. testacea* (F.)
12 (11). Temples behind eyes wide, conspicuously elongate laterally.. Antennomeres 6–10 longitudinal, each 1.3–1.4 times longer than wide. Pygidium (fig. 3, *5*) 1.9 times longer than wide at base, 1.6–1.7 times longer than anal sternite, 1.2 times shorter than prothoracal disc, and 2.5–2.6 times shorter than elytra. 4.1–6.2 mm. ..... *S. gracilicornis* Baudi
13 (2). Elytra completely black.
14 (17). Head, maxillary palp, antenna, scutellum, fore tarsus and hind tibia completely black.
15 (16). Temples narrow stripe-like. Lateral sides of prothoracal disc margins very slightly S-shaped sinuate in lateral aspect and with broadly rounded posterior corners in dorsal aspect. Hind tarsomere 1 with 1 ridge. Pygidium (fig. 3, *2*) apically elongate, its lateral sides slightly convex, at apical third sharply incurved and convergent; 2.3–2.5 times longer than wide at base, 1.9–2.0 times longer than anal sternite, 2.4–2.5 times shorter than elytra. 4.3–6.8 mm. ..... *S. ascaniaenovae* Lazorko
16 (15). Temples linear. Lateral sides of prothoracal disc conspicuously S-shaped sinuate in lateral aspect. Hind tarsomere 1 without ridge. Pygidium (fig. 3, *3*) strongly elongate, 3.4–3.7 times longer than wide at base, 1.5–1.6 times as long as anal sternite and 2.3–2.5 times shorter than elytra. 4.2–5.6 mm. .... *S. bilyi* Horak
17 (14). Anterior part of head, maxillary palp, basal antennomeres, scutellum margins, fore tarsus and partially hind tibia reddish yellow. Elytra black, each with small reddish spot at shoulder. 5 mm. [Russia: Kamchatka]. ..... *S. rufohumeralis* Pic
18 (1). Apical joint of maxillary palpus lanceolate (fig. 2, *5*). ..... *S. dzhulfae* sp. n.

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