Acmaeoderella (Euacmaeoderella) lobanovi sp. n. – a new species of jewel beetles (Coleoptera: Polycestinae: Acmaeoderini) from Iran

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Abstract. Acmaeoderella (Euacmaeoderella) lobanovi sp. n. from Iran (Fars, Kerman, Kordestan and Lorestan provinces) is described, illustrated and compared with closely related species A. (E.) straudi (Obenberger, 1918). Acmaeoderella lobanovi sp. n. differs from A. straudi by wider and denser scale pubescence and aedeagus structure in the first place. The biometry of the new species is unknown but it belongs to the canescens species-group comprising species associated with Ferula and Dorema spp. (Apiaceae). The new species is named after late Dr A.L. Lobanov, the creator and many-years-webmaster of the world’s largest coleopterological website “Beetles (Coleoptera) and coleopterists”.

Key words: Coleoptera, Buprestidae, Polycestinae, Acmaeoderini, Acmaeoderella, subgenus Euacmaeoderella, new species, Iran.

Acmaeoderella (Euacmaeoderella) lobanovi sp. n. – новый вид жуков-жемчужинок (Coleoptera: Polycestinae: Acmaeoderini) из Ирана

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Резюме. Представлено иллюстрированное описание Acmaeoderella (Euacmaeoderella) lobanovi sp. n. из Ирана (провинции Фарс, Керман, Корестан и Лорестан); приведено его сравнение с близким видом A. (E.) straudi (Obenberger, 1918). Acmaeoderella lobanovi sp. n. отличается от A. straudi в первую очередь более широким и частым чешуйчатым опушением и строением аedeагуса. Биометрия нового вида неизвестна, но он принадлежит к видовой группе canescens, виды которой развиваются на зонтичных из родов Ferula и Dorema (Apiaceae). Новый вид назван в память А.Л. Лобанова, создателя и многолетнего веб-редактора крупнейшего в мире колеоптерологического сайта “Жуки (Coleoptera) и колеоптеристы”.

Ключевые слова: Coleoptera, Buprestidae, Polycestinae, Acmaeoderini, Acmaeoderella, подрод Euacmaeoderella, новый вид, Иран.

Introduction

The subgenus Euacmaeoderella Volkovitsh, 1979 is the most speciose group of the genus Acmaeoderella Cobos, 1955 within Iranian Acmaeoderini [Ghahari et al., 2015; Kubaň et al., 2016]. Recently, I received for study numerous specimens of an unknown species of this subgenus collected by different collectors in several provinces of Iran. This species is very similar and closely related to A. (E.) straudi (Obenberger, 1918) from Kopetdagh Mts. in Southern Turkmenistan and Northern Iran (Golestan, North Khorasan provinces). The latter species is associated with Ferula and Dorema (Apiaceae) [Volkovitsh, Alexeev, 1994]. A description of a new species is presented below.

Material and methods

The following abbreviations for institutional and private collections are used in the text:

DGCC – D. Gianasso collection (Castelnuovo Don Bosco, Italy);
EJCB – E. Jendek collection (Bratislava, Slovakia);
HNHM – Hungarian Natural History Museum (Budapest, Hungary);

MKCY – M. Kalashian collection (Yerevan, Armenia);
PKCP – P. Kabatek collection (Prague, Czech Republic);
RRCP – R. Rejzek collection (Prague, Czech Republic);
VKCB – V. Kubáň collection (Slapanice near Brno, Czech Republic);
ZIN – Zoological Institute of the Russian Academy of Sciences (St Petersburg, Russia).

Data from locality labels are cited verbatim. The following abbreviations are used in the text: (h) for handwritten data, (p) for printed data, (PC) – personal computer, (Ph) – photo-label. Photographs of the habitus and external morphological structures were taken using Leica MZ-9.5 stereomicroscope with mounted Leica DFC-290 camera; photographs of the genitalia were taken using Bresser-Biolux light microscope with integrated imaging system.

Acmaeoderella (Euacmaeoderella) lobanovi sp. n. (Figs 1–4, 9, 11, 13–16, 20–23, 26, 27)

Material. Holotype, ♀ (ZIN): "IRAN, Fars prov., 11 km NW of Tang-e-Sorkh, 2500+150 m 30°29′24″N 51°39′29″E, # 4 L. Dembický leg., 26–28.V.2017" (p, PC). Paratypes: ♀, ♂♀, ♀♂, 1 unsexed specimens (EJCB, ZIN), same label; 4 unsexed specimens (HNHM, ZIN), "IRAN, Prov. Kordestán Mts. Zagros, Askaran N 35°05′08″E 46°54′23″ (1 365 m)" (p, PC), "2008.V.8 singling and sweep netting leg.: T. Hácz, H. Székeli &
Figs 1‒10. *Acmaeoderella (Euacmaeoderella) lobanovi* sp. n. and *A. (E.) strandi*, habitus and details of structure.  
1‒4, 9 – *A. (E.) lobanovi* sp. n.: 1, 2, 4, 9 – male, holotype (body length 6.9 mm): 1 – habitus, dorsal view, 2 – same, lateral view, 4 – body, anterior part, lateral view, 9 – head and pronotum, dorsal view; 3 – female, paratype (ZIN), same label as holotype, ventral view. 5‒8, 10 – *A. (E.) strandi*, female, Kara-Kala, Turkmenistan (body length 7.9 mm): 5 – habitus, dorsal view, 6 – same, lateral view, 7 – same, ventral view, 8 – body, anterior part, lateral view, 10 – head and pronotum, dorsal view.  

Рис. 1‒10. *Acmaeoderella (Euacmaeoderella) lobanovi* sp. n. и *A. (E.) strandi*, габитус и детали строения.  
1‒4, 9 – *A. (E.) lobanovi* sp. n.: 1, 2, 4, 9 – самец, голотип (длина тела 6.9 мм): 1 – габитус, вид сверху, 2 – габитус, вид сбоку, 4 – передняя часть тела, вид сбоку, 9 – голова и переднеспинка, вид сверху; 3 – самка, паратип (ЗИН), с такой же этикеткой, как у голотипа, габитус, вид сверху. 5‒8, 10 – *A. (E.) strandi*, самка, Кара-Кала, Туркменистан (длина тела 7.9 мм): 5 – габитус, вид сверху, 6 – габитус, вид сбоку, 7 – габитус, вид снизу, 8 – передняя часть тела, вид сбоку, 10 – голова и переднеспинка, вид сверху.
K. Vig (p, PC), “Acmaeoderella (Euacmaeoderella) iranica (Obenberger, 1934) Volkovitsh det. 2014” (misidentification) (p, PC); 1♂ (MKCY), “IRAN, Kurdistan province, Marivan-Garan, oak forest Purple sticky trap, 01.09.2010, H. Ghobari leg.” (p, PC); 1 unsexed specimen (PKCP), “W Iran, p. Lorestan, Dorud 80 km E Horramābād, 33°25′ N 49°06′ E 11.6.1999 lg. P. Kabátek” (p, PC), “Acmaeoderella (Euacmaeoderella) [p, Ph] strandi [h] (Obb.) ?ssp. [h] M. Volkovitsh det. 2012” (p, PC); 1♀ (DGCC), “S Iran, Fărs Dint. Dalin “Lost Paradise” 30°19′ N 52°08′ E 17-5-2005 m. 1.780 Leg. D. Gianasso” (p, PC) (temporal microslide No 1872); 3♂, 1♀ (RRCP , ZIN), “SW IRAN, Fars prov. 14 km S Yasuj, 2000 m 30°32′45″ N 51°36′16″ E 4.5.2016 lgt. R. Rejzek” (p, PC) (2 male microslides No 1958, 1959); 1 unsexed specimen (VKCB), “S Iran, Kermān Ferdous 20-4-2007 (70 km O di Jiroff) leg. D. Gianasso m. 1730” (h) (temporal microslide No 1873).

Description. Body (Figs 1–3) of medium size, robust, 2.86 (2.73–3) times as long as pronotum width at base, convex, with strong dorsal inflection; blackish, with slight copper sheen, elytra unicolour, black with feeble copper sheen; body covered with lanceolate and widely lanceolate white scales, nearly concealing background ventrally. Body length 7.1 (6.4–7.8) mm, width at pronotal base 2.5 (2.2–2.8) mm (n = 20: 10.5, 10.2); holotype: body length 6.9 mm, width at pronotal base 2.3 mm, body 3 times as long as pronotum width at base.

Head (Figs 9, 11) slightly depressed or flattened when seen from above; eyes convex, not protruding or slightly protruding beyond head contour; vertex weakly depressed, frons widely depressed medially, frequently with distinct medial groove, sides subparallel or slightly diverging, weakly incurved. Vertex relatively narrow, 1.34 (1.16–1.53) times as wide as transverse diameter of eye and 1.09 (1–1.19) times as wide as frons above antennal sockets. Clypeus very narrow, with anterior margin shallowly emarginate. Frons bearing ocellate sculpture medially, changing to reticular at lower part and vertex, consisting of medium, round, superficial umbilicate punctures with poorly defined central grains and eccentric micropunctures, intervals between them equal to 1–1/4 diameter of punctures; covered with semi-erect lanceolate, brownish or white scales not concealing sculpture at upper part of frons and on vertex, and with large widely lanceolate scales nearly concealing background at lower part of frons. Antennae
Figs 18‒27. *Acmaeoderella* (*Euacmaeoderella*) *lobanovi* sp. n. and *A.* (*E.*) *strandi*, male and female genitalia.

20‒23, 26–27 – *A.* (*E.*) *lobanovi* sp. n.: 20‒23 – males, paratypes (ZIN) (microslides 1958, 1959): 20, 22 – tegmen, dorsal view, 21, 23 – penis; 26–27 – female, paratype (DGCC) (temporal microslide 1872), Dalin, Fars, Iran: 27 – ovipositor, anterior part, dorsal view. 18–19, 24–25 – *A.* (*E.*) *strandi*: 18–19 – male, Kara-Kala, Turkmenistan (microslide 350): 18 ‒ tegmen, dorsal view, 19 ‒ penis; 24–25 – same label (microslide 335): 25 – ovipositor, anterior part, dorsal view.

(Figs 13, 14) relatively short, in male 1.38 (1.29–1.52) times, in female 1.28 (1.21–1.38) times as long as height of eye, expanded from antennomere 5, almost the same in both sexes; antennomere 2 oval, swollen; antennomeres 3 and 4 subequal, 4 slightly, sometimes distinctly expanded toward apex; antennomere 5 triangular, slightly wider than long; antennomeres 6–10 triangular, slightly wider than long; antennomere 11 oval, distinctly longer than wide.

Pronotum (Figs 4, 9) transverse, 1.65 (1.55–1.77) times as wide at base as long, widest at middle, just posteriorly of middle, or before basal third; sides nearly regularly arcuate, diverging toward anterior angles slightly longer then toward basal angles; surface convex with distinct medial and prebasal depressions.

Anterior margin weakly arcuately protruding forward, transversely impressed, basal margin straight. Lateral carina absent or poorly marked. Pronotum moderately convex, with rather deep medial depression or groove merging with large prescutellar depression, extending to basal third of pronotum; lateral fossae well-marked, deep, surrounded by distinct depressions. Pronotal sides and base covered with reticulate, nearly alveolate sculpture, changing toward disk to ocellate puncture with more or less marked central grains and micropunctures; toward anterior half of disk umbilicate punctures partly obliterated forming asperate sculpture and then simple punctate sculpture of micropunctures with intervals 3–5 and more times wider than their diameter.
Pronotal sides covered with large, widely lanceolate, white scales, almost completely concealing background, disk covered with shorter, semi-erect, lanceolate, brownish scales, not concealing pronotal sculpture. Anterior prosternal margin (Fig. 3) arcutely emarginated, finely edged, without transverse sulcus; prosternal process wide and convex, covered with reticulate and ocellate sculpture of small round, umbilicate punctures; prothoracic hypomera with ocellate sculpture of large superficial umbilicate punctures with indistinct inner structures. Meso-, metasternum and metacoxal plates bearing same sculpture as prosternal process and covered with widely lanceolate scales completely concealing background on sides.

Elytra (Figs 1, 2, 4) wide, robust, 2.3 (2.17–2.41) times as long as wide at base; strongly convex, triangularly flattened basally between humeral swellings; sides subparallel or slightly diverging posteriorly of humeral swellings toward posterior third, then long, arcutely converging to narrowly rounded apices. Subhumeral excision deep, arcutate (Fig. 4); epipleural serration formed by very small, blunted, saw-like denticles at posterior third. Strial punctures small, round or elongate, rather shallow, separated in anterior half of elytral length, merging in posterior half, sometimes striae slightly sulcate. Intervals flat, sometimes slightly convex, wide, 2.5–5 times as wide as stria; 9th interval distinctly elevated and covered with dense lanceolate scales concealing sculpture; intervals covered with confused, mainly multisieriate micropunctures on coarsely rugulose and weakly shining background, bearing uniseriate on even and multisieriate on odd intervals, white lanceolate scales. Elytra weakly shining, rarely matt, unicolour, black with feebly copper sheen.

Legs (Figs 1, 3, 15, 16). Black, with copperish or bronze sheen; metacoxal plates nearly subparallel, with shallowly emarginate posterior margin; covered with dense, widely lanceolate scales. Pro- and mesotibiae moderately expanded toward apices; metatibiae in male stronger expanded and paddle-like, with comb of brownish setae externally. Tarsal slender; protarsomere 1 equal 2nd one, meso- and metatarsomere 1 longer than 2nd one, tarsomeres 2–4 subequal on all tarsi, tarsome 5 long, weakly expanded toward apex; tarsal pads well developed on all tarsomeres, smallest on tarsomere 1, become larger toward apex. Tarsal claws with small, rectangular internal tooth near mid-length, almost the same in both sexes (Fig. 15).

Abdomen (Fig. 3) dark bronze, bearing dense, reticulate sculpture of small umbilicate punctures on sides, changing to ocellate sculpture toward disk, covered with large, widely lanceolate white scales, completely concealing background on sides and slightly sparser and smaller on disk. Anal ventrite with narrowly rounded apex in both sexes, widely depressed laterally. Male. Aedeagus (Figs 20–23) slender, parameres (Figs 20, 22) subparallel, or slightly expanded toward anterior third, sides slightly curved in preapical third, weaker sclerotized before moderately sharpened apices. Penis (Figs 21, 23) with subparallel, long and wide lamina, sharp apex and long, slightly curved basal struts.

Female. Ovipositor (Figs 26, 27) of tubular type, long, approximately 3.5 times as long as expanded apical part, with angularly emarginate apex, poorly sclerotized apices of both dorsal and ventral hemisternites, and subparallel-sided styli.

Differential diagnosis. By habitus and genital structures Acmaeoderella lobanovi sp. n. belongs to the caneascens species-group of the subgenus Acmaeoderella; it comes close to A. strandi from the Kopetdag Range (Southern Turkmenistan) and Northern Iran, a single so far known species of this group with blackish-bronzy colouration (other species are predominantly blue). Both species differ from rather similar species of the gibbulosa species-group (A. gibbulosa (Ménétriés, 1832), A. safavi Volkovitsh, 1981, A. brandli Volkovitsh, 1981, A. hamadanica Volkovitsh, 1983) by wider vertex and longer antennae (in the species of the gibbulosa species-group the vertex is very narrow, equal or hardly wider than the diameter of one eye; antennal length is equal or hardly longer then height of one eye), as well as by the longer ovipositor and the aedeagus structure. From very similar A. strandi (Figs 5–8, 10, 12, 17–19, 24, 25) the new species differs by the shiny body, denser and widely lanceolate scales nearly concealing background on the lower part of the head, sides of the pronotum and underside; by much denser punctuation on the frons and the pronotal disk; by more sulcate striae and narrower elytral intervals and by the subparallel lamina of the penis (in A. strandi body is mate, strongly shagreened; the pronotal disc bearing only micropunctures with intervals which 3–5 times larger than the diameter of micropunctures; remnants of umbilicate punctures are poorly visible on sides and the base of the pronotum, elytral striae are formed by very fine superficial punctures, intervals 4–6 times wider than striae, the lamina of the penis is distinctly expanded toward apex (Fig. 19)).

Host plant. Unknown. All other species of the caneascens species-group are associated with Ferula and Dorema (Apiales: Apiaceae).

Distribution. Iran: Kordestan, Lorestan, Fars, Kerman.

Etymology. The new species is dedicated to the blessed memory of Andrei L’vovich Lobanov who was my friend and colleague during 50 years and who has been a creator and many-years web-master of the world’s largest coleopterological website “Beetles (Coleoptera) and coleopterists”, which includes an iconography and numerous materials on Buprestidae.

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