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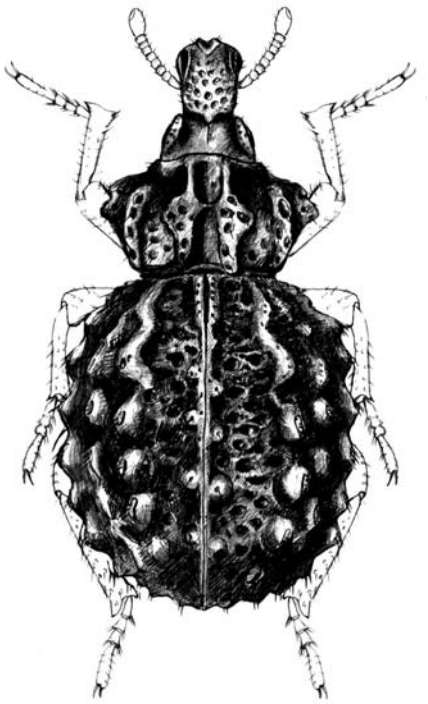

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Description of larva of *Acmaeoderella circassica* (Reitter, 1890) (Coleoptera: Buprestidae)

Описание личинки *Acmaeoderella circassica* (Reitter, 1890) (Coleoptera: Buprestidae)

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Ключевые слова: Coleoptera, Buprestidae, *Acmaeoderella*, морфология личинки, кормовые растения.

Absrtract. The last instar larva of *Acmaeoderella circassica* (Reitter, 1890) reared from two host plants (Syrenia cana and Linum sp.) is described and illustrated in detail for the first time. The plant of the genus Linum is indicated as a host plant for Buprestidae for the first time.

Резюме. Впервые описана личинка последнего возраста златки *Acmaeoderella circassica* (Reitter, 1890), найденная в двух кормовых растениях (Syrenia cana and Linum sp.), детали строения проиллюстрированы. Растение рода *Linum* впервые указано в качестве кормового для жуков-златок.

This paper complements the descriptions of larvae of the genus *Acmaeoderella* Cobos, 1955 that have been published by Volkovitsh [1979], Volkovitsh and Danilevsky [1987] and some other authors. Morphological terminology used in the present work follows that in the papers of Volkovitsh [1979], Volkovitsh and Hawkeswood [1999], Bilý and Volkovitsh [2007]. All studied specimens are deposited in Schmalhausen Institute of Zoology, National Academy of Sciences of Ukraine, Kyiv.

Material. Three last instar larvae found in roots of Syrenia cana (Pill. et Mitt.) Neilr. (Brassicaceae) and in roots and stems of Linum sp. (Linaceae): Ukraine, Kherson Region, Gola Prystan district, Black Sea Biosphere Reserve, "Solenoozerny", 46°27'N / 31°58'E, 16–20.09.2008, A. Prokhorov leg.

Description. Measurements. Length of larvae from Syrenia cana: 10 mm and 12.5 mm, width of prothorax: 1.7 mm and 2.1 mm. Length of larvae from Linum sp.: 10.5 mm, width of prothorax: 1.9 mm.

Larva corresponds to 2nd morpho-ecological subtype of *Acmaeoderella* larva [Volkovitsh, 1979]. Body cream-white, feebly flattened (fig. 1).

Head. Epicranium completely retracted into prothorax, tentorium feebly sclerotized.

Mouth parts. Epistome (fig. 2, 12) transverse, 4.8 times as wide as long; anterior margin emarginate between suboval mandibular condyles, posterior margin bisinuous; lateral margins slightly rounded, latero-basal angles nearly acute with rounded apices (on slide under cover glass it seems obtuse). Two pair of epistomal sensillae located along central axis trapezoidly, usually closer to anterior margin. Distance between basal pair of sensillae usually slightly longer than between apical pair. Frequently sensillae disposed asymmetrically.

Anteclypeus (fig. 3) membranous, transverse, about 4 times as wide as long. Labrum (fig. 3) membranous, transverse, 2.5 times as wide as long with slightly emarginated anterior margin, antero-lateral corners widely arcuated, lateral margins slightly rounded; palatine sclerites diverging anteriorly, medial branches stronger sclerotized than lateral ones; medial sensillae of labrum arranged as follows: 1c-2t-3c (t – trichosensilla, c – campaniform sensilla), apical seta long (1.2 times as long as labrum), protruding far beyond anterior margin of labrum, distance between all sensillae approximately equal; antero-lateral sensillae arranged as follows: external sensillae 1c-2t-3t, sensilla 1c located in distinct rounded fold, 2t as long as apical setae of medial branches of palatine sclerites, 3t two times shorter than 2t, distance between all sensillae approximately equal; internal sensillae 1t-2t, both sensillae large and flattened, curved at base and quite close to each other. Ventral side of labrum (epipharynx) glabrous, without microsetae or microspinulae.

Antennae (fig. 4, 14) typical for *Acmaeoderella*, basal segment 1.14 times as long as wide and 3 times as long as terminal one; terminal segment 1.3 times as wide as long. Long trichosensilla located on lateral side of terminal segment, 5.5–6 times as long as terminal segment. Sensory appendage 1.4 times as long as terminal segment. One palmate sensilla located between trichosensilla and sensory appendage.

Mandibles (fig. 5) triangular, slightly longer than wide, strongly sclerotized, with brown basal and black apical part, cutting edge composed of slightly rounded apical tooth, two rather obtuse internal teeth and two sharp external teeth (extreme tooth most acute); internal and external teeth are sitting on common base. All five teeth are distinct. Two setae and two campaniform sensillae are situated above condyle externally.

Maxillae (fig. 6, 7, 13). Cardo membranous, 1.2 times as long as wide, with two lateral sensillae and campaniform sensilla at base. Stipes 1.2 times as long as wide, with two sclerites; apical seta (at central axis) longer than maxillary palpus; lateral seta short, situated on apex of internal sclerite of stipes. One campaniform sensilla situated on internal sclerite externally below lateral seta. Maxillary palpus (fig. 7) rather short, terminal segment 2.5 times as long as basal segment; basal segment 3 times as wide as long, with long seta on lateral side and one campaniform sensilla in central part; terminal segment 2 times as long as wide, with sensory cones on apex. Inner side of internal lobe of stipes with microspinulae, apical margin with rather long curved cilia.

Labium (fig. 6) membranous, glabrous, without microsetal areal along anterior margin. Prementum arcuately rounded with deep fold in the middle part; corner sclerites of prementum with long apical seta protruding beyond anterior margin of prementum; 4 campaniform sensillae situated outside of the base of each apical seta nearly at the same distance from each other.

Thorax (fig. 1) moderately expanded, 2 times as wide as abdominal segments.

Prothorax (fig. 1) nearly 1.5 times as wide as long and slightly wider than mesothorax, anteriorly and laterally covered with small

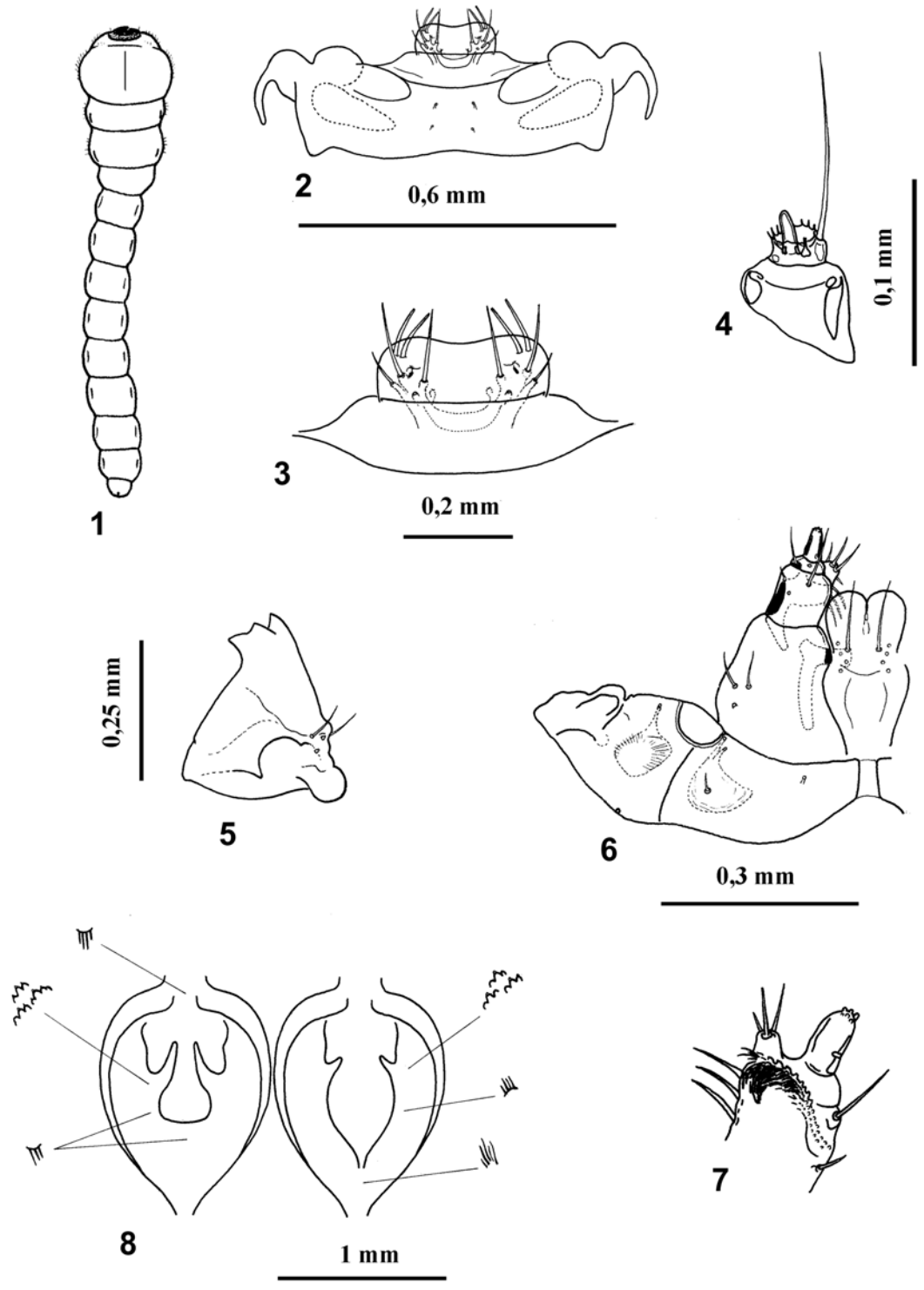


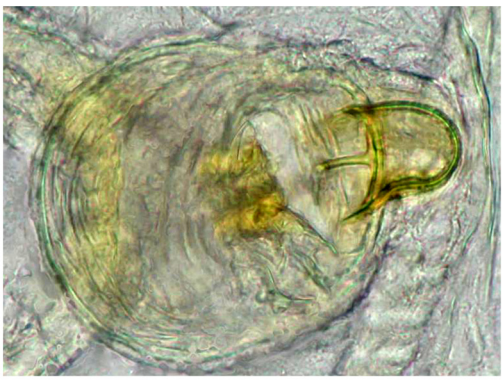
Fig. 1–8. Larva of *Acmaeoderella circassica* (Reitter, 1890).

1 – last instar larva, dorsal view; 2 – epistome, anteclypeus and labrum; 3 – anteclypeus and labrum; 4 – left antenna; 5 – right mandible; 6 – labiomaxillary complex (right side is not shown); 7 – stipes and maxillary palpus (inside view); 8 – inner armament of proventriculus (left – dorsal side, right – ventral side).

Рис. 1–8. Личинка *Acmaeoderella circassica* (Reitter, 1890).

1 – личинка последнего возраста, вид сверху; 2 – эпистом, антеклипеус и лабрум; 3 – антеклипеус и лабрум; 4 – левая антенна; 5 – правая мандибула; 6 – лабио-максиллярный комплекс (правая часть не показана); 7 – стипес и максиллярный щупик (вид изнутри); 8 – внутреннее вооружение провентрикулуса (слева – спинная сторона, справа – брюшная).

9



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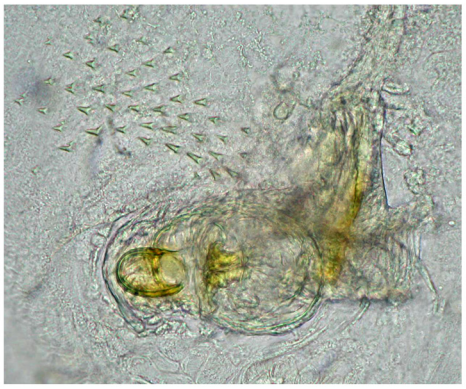

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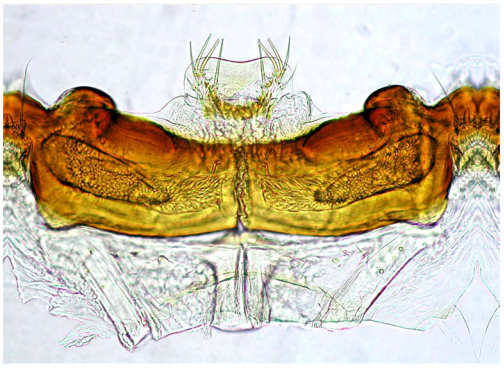

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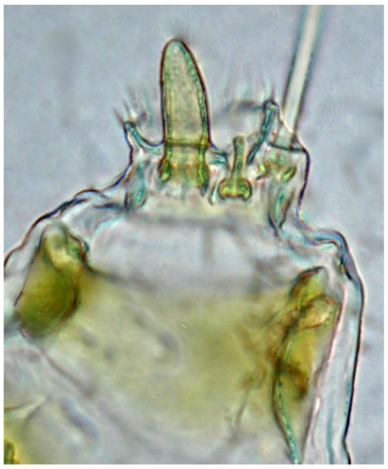

14

Fig. 9–14. Larva of *Acmaeoderella circassica* (Reitter, 1890).

9 – mesothoracic spiracle (normal); 10 – mesothoracic spiracle (reduced); 11 – abdominal spiracle (1st segment); 12 – epistome; 13 – labiomaxillary complex; 14 – left antenna (trichosensilla shown not completely).

Рис. 9–14. Личинка *Acmaeoderella circassica* (Reitter, 1890).

9 – дыхальце мезоторакса (нормальное); 10 – дыхальце мезоторакса (редуцированное); 11 – брюшное дыхальце (1-го сегмента); 12 – эпистом; 13 – лабио-максиллярный комплекс; 14 – левая антенна (трихоидная сенсилла показана не полностью).

and dense pubescence. Pronotal and prosternal grooves similar, feebly sclerotized, pale yellowish-brown.

Mesothorax (fig. 1) strongly transverse, 3 times as wide as long, slightly wider than metathorax.

Metathorax (fig. 1) 2 times as wide as long.

Abdomen (fig. 1) weakly flattened, with sparse fine setae on lateral sides of each segment; first abdominal segment transverse, 1.8 times as wide as long; abdominal segments 2–8 about 1.3 times as wide as long; 9th segment trapezoidal, slightly narrower than preceding segments; 10th segment rounded, 1.25 times as wide as long, with weakly defined unsclerotized anal cleft.

Spiracles (fig. 9–11). Mesothoracic spiracles (fig. 9, 10) of multiforous buprestoid type (cribriform type), about 1.6 times as wide as long with poorly branched trabeculae; perithrema reniform, closing apparatus poorly sclerotized; one of the spiracles is frequently reduced (fig. 10). Abdominal spiracles of uniforous buprestoid type, without trabeculae, 1.5 times as wide as long; spiracles on 1st segment are surrounded with zone of microspinulae (fig. 11).

Proventriculus (fig. 8) ovoid; main fields of inner armament with two type of microteeth: anterior part with sclerotized tubercles bearing 2–3 outgrowths with or without microteeth, posterior part with tubercles bearing long microspinulae.

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