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A new representative of the Lemmatophoridae (Insecta, Grylloblattida) from the Lower Permian of the Ural (Russia)

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ARISTOV, D. S. (2001): A new representative of the Lemmatophoridae (Insecta, Grylloblattida) from the Lower Permian of the Ural (Russia). – N. Jb. Geol. Paläont. Mh., 2001: 257–264; Stuttgart.

Abstract: The insect *Sylvaprisca gravis* n.g.n.sp. (Grylloblattida, Lemmatophoridae) is described from the Lower Permian of the locality Chekarda in the Middle Ural (Russia).

Zusammenfassung: Die Insektenart *Sylvaprisca gravis* n.g.n.sp. wird aus dem Unteren Perm der Fossilfundstelle Chekarda im mittleren Ural (Russland) beschrieben.

Introduction

The Lemmatophoridae are a wide-spread and numerous family, its remains were found in North America, Europe and Russia. But up today only two species of this family were described from Chekarda (Lower Permian, Kungurian stage). Its representatives are two genera from Elmo (Kansas): *Paraprisca* HANDLIERSCH, 1919 and *Artinska* SELLARDS, 1909. A new genus of lemmatophorids from Chekarda is described in this paper.

Taxonomy

Ordo Grylloblattida
Familia Lemmatophoridae SELLARDS 1909

Genus *Sylvaprisca* n. g.

Derivatio nominis: from the locality Chekarda and the genus *Paraprisca* HANDLIRSCH 1919.

Diagnosis: Length of fore wing approximately 13-14 mm. Wing widens to apical, length about three times larger than width. Structure of wing variable. Variability of forewing is illustrated on figure 1. Anterior margin slightly convex or nearly straight, apically rounded, posterior margin convex or straight. Costal area slightly larger or equal to width of subcostal area.

Sc straight with some simple veins, ending in distal third of wing. R nearly straight, slightly convex after origin of RS. R with S-shaped veins in distal part. Radial area about two times more than costal ones. RS originating before middle of wing, with 2 or 3 branches. M dividing to MA and MP before origin RS. MA with 2-3 branches, MP with 2 or 3 ones. CuA1 with 2-3 branches, CuA2 - simple or with small fork near wing margin. CuP simple slightly curved. Anal area small with 3 branches. All crossveins simple, but area of MP and A1 have H-shaped crossveins. Wings and body covering with minute hairs. Length of hind wings about 9 mm. Anterior margin straight, apex rounded. Sc and R curved in distal part, after this - straight. Distal veins of R with crossveins. RS (or probably RS+MA complex) originating in distal quarter of wing, with 4 branches. RS forked dichotomical or pectinate. CuA simple, anal fan large.

Type species (and only known species): *Sylvaprisca gravis* n. sp.

Sylvaprisca grave n. g. n. sp.

Figs. 1-6

Derivatio nominis: from Latin *gravis* - heavy

Diagnosis: see under *Sylvaprisca* n. g.

Material: Imprints of forewings, spec. PSU N 2/247; 2/248; 2/249, imprint of body spec. PIN N 1700/3855; 1700/3683. Russia; Perm region, left bank of Sylva river near mouth of Chekarda river, Lower Permian, Kungurian stage.

Description: Small insect with moderately large body becoming wider toward abdomen. Length of body about 12-13 mm. Head prognathous, about as wide as long, wider at basal. Antennae filiform, narrowing toward apex. Segments elongated distally, basal segments as long as wide, distal segments

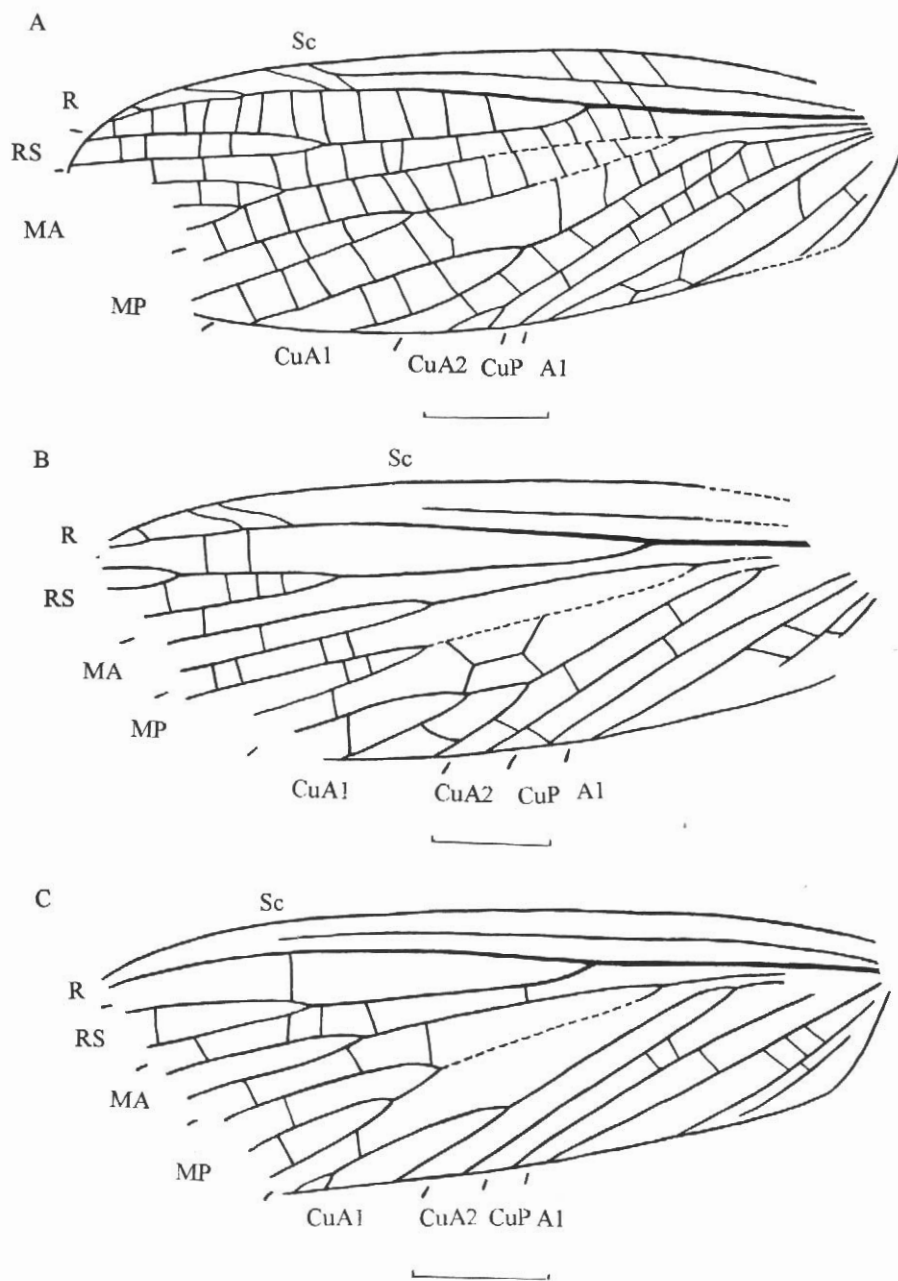


Fig. 1. - *Sylvaprisca gravis* n. g. n. sp. Fore wings, spcc. PSU N 2/249 (A); 2/247 (B); 2/248 (C). Scale bar 2 mm.

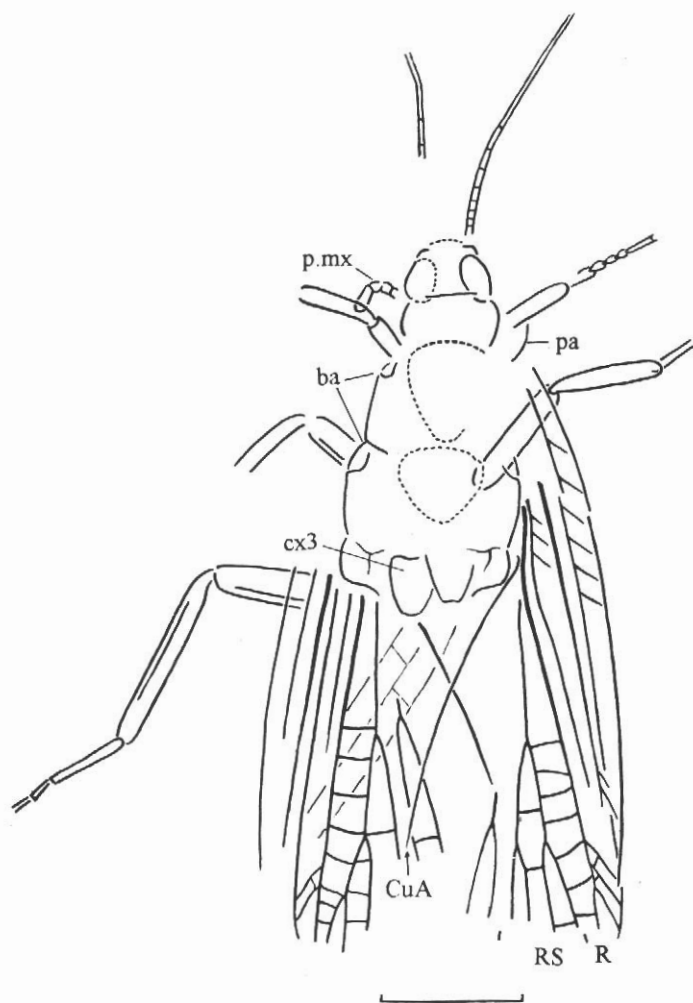


Fig. 2. - *Sylvaprisca gravis* n. g. n. sp. Body and hind wings. Holotype, spec. PIN N 1700/3683. Scale bar see in Fig. 1.

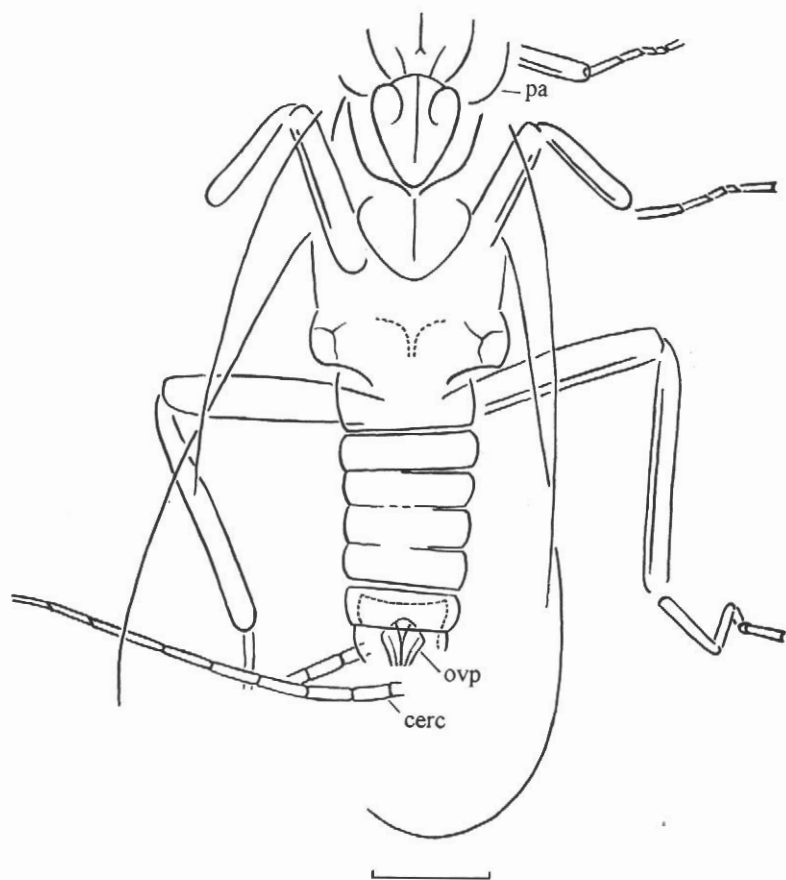


Fig. 3. - *Sylvaprisca gravis* n.g. n. sp. Body, spec. PIN N 1700/3855. Scale bar see in Fig. 1.

about four times as long as wide. Eyes large, palpus maxillare with 4 segments, last segment longer than other. Pronotum as wide as head, paranota large break at the mid-line. Mesonotum elongated, metanotum larger than mesonotum, but shorter. Legs large, fore legs short, middle pair slightly longer, hind pair much longer (about two times longer than fore legs). Coxae large, conusoidal, closed together. Femurs strong, with longitudinal ribs,



Fig. 4. - *Sylvaprisca gravis* n.g.n.sp. - body and hind wings. Holotype, spec. PIN N 1700/3683.

slightly longer than tibia. Tibia slightly curved, also with longitudinal ribs. Tarsus as long as tibia, first and last segment of tarsus larger, fourth - smallest, tarsal claws probably small. Abdomen moderately thin, without lateral gills, not reaching apex of wings. Cerae long, all segments nearly equal, cerae narrowing distally. Genital plate with concave medial margin



Fig. 5. - *Sylvaprisca gravis* n. g. n. sp. - body, spec. PIN N 1700/3855.

and convex lateral ones. Basal part of ovipositor moderately large, but ovipositor probably short.

Remarks: Within the family Lemmatophoridae the new insect is similar in wing venation to the genus *Paraprisca* HANDLIRSCH 1919, but it differs from this genus in the structure of the body (of legs and body wider, larger cercae, longer last segments of tarsus).



Fig. 6. - *Sylvaprisca gravis* n. g. n. sp. - fore wing, spec. PSU N 2/249.

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