

THE GENUS *ALEKHOSARA* ARISTOV, 2008 FROM THE UPPER PERMIAN OF RUSSIA IS A POSSIBLE MOST ANCIENT REPRESENTATIVE OF THE SUBORDER CAELIFERA (ORTHOPTERA)

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Summary. The monotypic genus *Alekhosara* Aristov, 2008 from the locality Novo-Alexandrovka (Russia, Orenburg Region; Upper Permian, Severodvinian Stage) is briefly redescribed and transferred from the family Liomopteridae (order Reculida) to the family Locustavidae (order Orthoptera). Thus, this genus is possibly a most ancient representative of the orthopteran suborder Caelifera, previously known since the Early Mesozoic only.

Key words: insects, Orthoptera, Locustavidae, Reculida, Liomopteridae, *Alekhosara*, taxonomy, Upper Permian.

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Резюме. Кратко переописан монотипический род *Alekhosara* Aristov, 2008 из местонахождения Ново-Александровка (Россия, Оренбургская обл.; верхняя пермь, северодвинский ярус). Кроме того, этот род перенесен из семейства Liomopteridae отряда Reculida в семейство Locustavidae отряда Orthoptera. Вероятно род *Alekhosara* является древнейшим представителем подотряда Caelifera, ранее известного лишь с начала мезозоя.

INTRODUCTION

The monotypic genus *Alekhosara* was originally described from the locality Novo-Alexandrovka (Russia, Orenburg Region; Upper Permian, Severodvinian Stage) as a representative of the family Megakhosaridae Sharov, 1961 of the order Grylloblattida (Aristov, 2008). Later this genus was transferred to the family Liomopteridae Sellards, 1909 (Aristov, 2013) now treated by the first author as belonging to the order Reculida (Aristov, 2015). However, reexamination of the holotype of *A. reticulata* shows that it has the tegminal venation distinctly more similar to that of the Triassic family Locustavidae Sharov, 1968, the most ancient and primitive family of the suborder Caelifera (Orthoptera), and probably belongs to the latter family. Moreover, this venation is somewhat intermediate between those of Locustavidae and some Lower and Middle Permian representatives of the family Pruvostitidae

M. Zalessky, 1929 from the suborder Ensifera (Orthoptera), and at present the Pruvostitidae is considered as a possible ancestral group for the both Caelifera and all recent taxa of Ensifera (Gorochov, 2005). Thus, *Alekhosara* may be a most ancient representative of Locustavidae as well as of the suborder Caelifera.

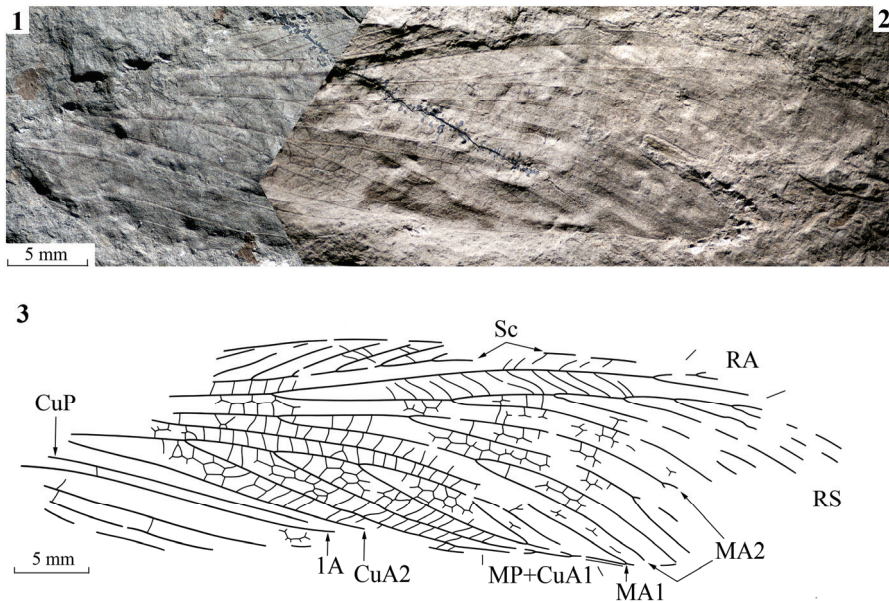
TAXONOMY
Order Orthoptera
Suborder Caelifera
Infraorder Acrididea
Superfamily Locustopsoidea
Family Locustavidae
Subfamily Locustavinae

Genus *Alekhosara* Aristov, 2008

Alekhosara Aristov, 2008: 272; Aristov, 2013: 648.

Type species: *Alekhosara reticulata* Aristov, 2008, by original designation.

DIFFERENTIAL DIAGNOSIS. Tegmen (Figs 1–3) about 50 mm in length and very similar in shape and venation to that of *Mesacridites* Riek, 1954 (Middle Triassic of Australia) from the family Pruvostitidae, but following differences are distinct: subcostal area slightly



Figs 1–3. Tegmen of *Alekhosara reticulata* Aristov, 2008, holotype PIN, No 3700/51; Russia, Orenburg Region, Novo-Aleksandrovka locality; Upper Permian, Severodvinian Stage: 1, 2 – combined photography of part (1) and counterpart (2), 3 – reconstruction.

wider and with longer branches (these characters intermediate between Locustavidae and Pruvostitidae); Sc-R area before RS base (but near it) almost twice narrower than R-M area in this place (vs. these areas almost equal to each other in this place). From *Locustavus* Sharov, 1968 (Middle or Upper Triassic of Kyrgystan) of the family Locustavidae this genus distinguished by tegmen with base of RS and place of MA2 bifurcation located very near each other (vs. RS base located in middle or near middle of distance between base of MA1 and place of bifurcation of MA2) and with more numerous MA branches (6 or 7 instead 3 or 4). From both genera of Pruvostitidae, *Miolocustavus* Gorochoy, 2005 and *Brevilocustavus* Gorochoy, 2005 (Middle or Upper Triassic of Kyrgystan), *Alekhosara* distinguished by same character of RS base, more numerous branches of tegminal MP+CuA1 (5 instead 2), and less straight proximal branches of tegminal RS.

INCLUDED SPECIES. Only type species.

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