

## Fossil Neuroptera of the Lower Cretaceous of Baisa, East Siberia. Part 5. Mantispidae

### Ископаемые сетчатокрылые из нижнего мела Байсы, Восточная Сибирь. Часть 5. Mantispidae

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КЛЮЧЕВЫЕ СЛОВА: ископаемые сетчатокрылые, Mantispidae, мел, таксономия.

ABSTRACT. The description is given of the new genus and species *Mesomantispa sibirica* gen. et sp.n. from the Lower Cretaceous of Baisa, East Siberia, for which the monotypic subfamily Mesomantispinae subfam.n. is established.

РЕЗЮМЕ. Из нижнего мела Байсы, Восточная Сибирь, описан новый род и вид *Mesomantispa sibirica* gen. et sp.n., для которого установлено монотипическое подсемейство Mesomantispinae subfam.n.

#### Introduction

The extant fauna of the Mantispidae comprises about 400 species distributed mostly in the subtropical and tropical regions of the World [New, 1986]. The fossil records for this family became known comparatively recently.

The earliest known mantispid, *Promantispa similis* Panfilov, 1980 originates from the Upper Jurassic of Karatau (Kazakhstan) [Panfilov, 1980]. This species is represented by a complete forewing. Its affinity with the Mantispidae, as shown by Lambkin [1986a], is rather clear, although the subfamily status is less obvious. *Paraberotha acra* Whalley, 1980 from the Lower Cretaceous amber of Lebanon and *Retinoberotha stuermeri* Schluter, 1978 from Cenomanian amber of France are both described originally in the family Berothidae [Schluter, 1978; Whalley, 1980]. However, they were transferred recently to the Mantispidae [Willmann, 1994], apparently on the basis of raptorial forelegs. Nevertheless, their wing venations, although poorly preserved, demonstrate rather berothid than mantispid features. *Gerstaeckrella asiatica* Makarkin, 1990, described from Turonian (Upper Cretaceous) of Kzyl-Dzhar, southern Kazakhstan, is known by a hindwing [Makarkin, 1990]. This is a typical representative of the subfa-

mily Drepanicinae. Tertiary species are represented by four mantispids: *Fera venatrix* Whalley, 1983 and *Vectispa relictata* Cockerell from the Upper Eocene of England [Jarzembowski, 1980; Whalley, 1983]; *Pro-sagittalata oligocenica* Nel, 1988 and *Climaciella* (?) *henroyi* Nel, 1988 from Oligocene of France [Nel, 1988]. The subfamily affinity of *Fera venatrix* is still unclear, *Vectispa relictata* was tentatively referred to the Drepanicinae [Lambkin, 1986a], whereas the two species mentioned last belong for certain to the Mantispinae.

One of the wings found in the Lower Cretaceous locality Baisa, East Siberia, is described below as a new subfamily, genus and species belonging to Mantispidae. The new subfamily is remarkable for its comparatively dense venation. In fact, the new genus should be only tentatively placed in the family Mantispidae because of the lack of apical half of a wing. However, it possesses other characters indicating a mantispid: costal space is specific; the subcosta (**Sc**), the radius (**R**) and its sector (**Rs**) widely spaced; **Rs** and the media (**M**) arising far distally from the base of wing.

Family Mantispidae Leach, 1815

Subfamily Mesomantispinae **subfam.n.**

DESCRIPTION. Forewing. Trichosors present. Recurrent humeral vein (**rv**) present. The cubitus (**Cu**) occupying a very large area. The anterior cubitus (**CuA**) parallel to the hind margin of the wing. Crossveins relatively numerous: at least two gradate series in the radial space and irregularly spaced crossveins in the cubital space.

COMPOSITION. The genus *Mesomantispa* gen.n.

DISCUSSION. The recent fauna is represented by five subfamilies: Rachiberothinae Tjeder, 1959, Mantispidae Leach, 1815, Calomantispidae Navas, 1914, Drepanicinae Enderlein, 1910 and Symphrasinae Navas, 1909

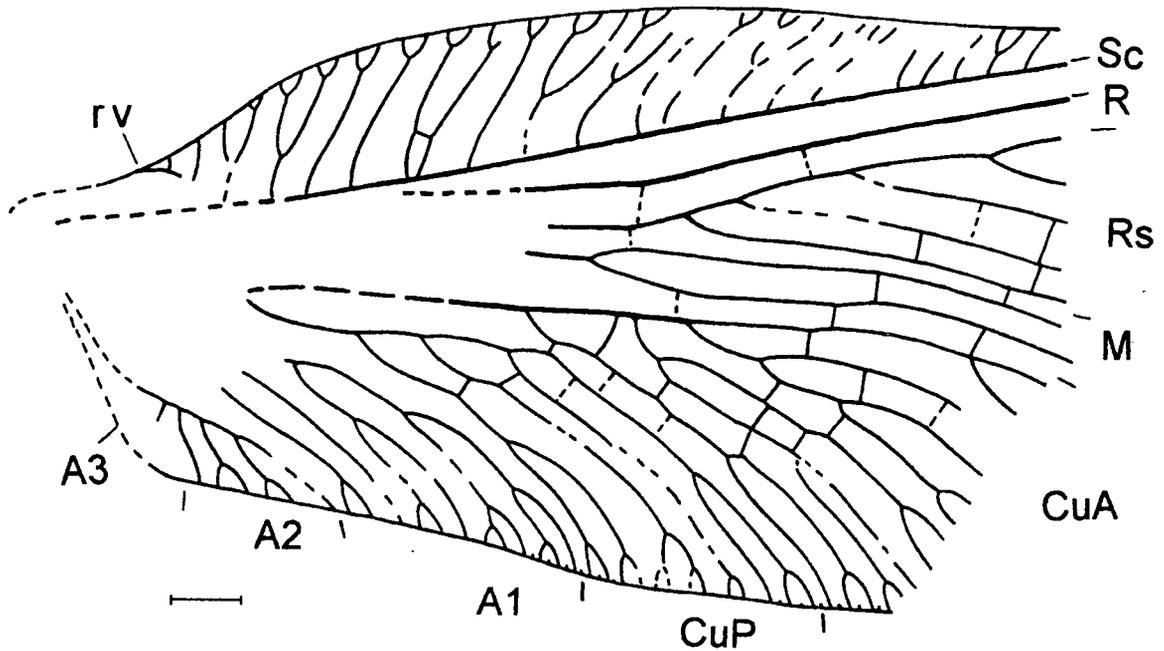


Fig. 1. *Mesomantispa sibirica* gen. et sp.n., holotype, specimen No. 3064/2425. Scale 1 mm.  
 Рис. 1. *Mesomantispa sibirica* gen. et sp.n., голотип, экз. No. 3064/2425. Шкала 1 мм.

[Lambkin, 1986ab]. The former subfamily has long been considered within the Berothidae, however, comparatively recently it was transferred to the Mantispidae [Willmann, 1990]. On the other hand, this group is elevated to family rank [Aspöck & Mansell, 1994].

On the presence of trichosors, recurrent vein, and fairly dense venation, Mesomantispidae subfam.n. can be compared with the most "primitive" representatives of the subfamilies Drepanicinae and Symphrasinae, in particular, with such generalized drepanicines as *Drepanicus* Blanchard, 1851 and *Gerstaeckerella* Enderlein, 1910, distributed in South America [Penny, 1982ab; Poivre, 1978]. Two fossil species have been referred to Drepanicinae: one is *Gerstaeckerella asiatica* Makarkin, unfortunately represented by a hindwing, and the other, *Vectispa relictia* Cockerell which, based on Jarzembowski's [1980] reconstruction, is a small forewing with reduced venation.

Mesomantispidae subfam.n. differ from the other subfamilies by cubitus occupying a very large area, and by numerous crossveins (at least, two gradate series occurring in the radial space).

#### Genus *Mesomantispa* gen.n.

Type species: *Mesomantispa sibirica* gen. et sp.n.

ETYMOLOGY. From Greek mesos, middle, and the genus *Mantispa*.

DESCRIPTION. Forewing. Costal space basally very narrow, then strongly expanded and becoming narrow apically. Branches of the subcosta mostly furcate. No crossveins between **Sc** and the radius (at least in the middle part of the subcostal space). **Rs** arising apparently far distally from the base of wing. The proximal branch of **Rs** originating at the wing mid-point. **M** arising

apparently at a long distance from the base of wing. **M** forked distally to the origin of **Rs**. The branches of **M** nearly parallel to each other, secondary branches of **M** absent. **CuA** looks like a straight line. The distance between the anterior margin of the wing and **CuA** approximately equal to the distance between the posterior margin of the wing and **CuA**. First anal vein (**A1**) is poorly preserved, apparently dichotomously branched. Second anal vein (**A2**) pectinately branched. Third anal vein (**A3**) poorly presented, apparently simple.

COMPOSITION. The type species only.

#### *Mesomantispa sibirica* sp.n.

Fig. 1

MATERIAL. Holotype: Specimen No. 3064/2425 (part and counterpart) in the Paleontological Institute, Moscow; basal half of a forewing; left bank of the Vitim River (9 km below mouth of the River Baisa), Buryat Republic, East Siberia, Russia; Lower Cretaceous (Neocomian), layer 31.

ETYMOLOGY. The name is derived from the Russian Sibir', Siberia.

DESCRIPTION. Forewing venation as in Fig. 1. Length of the fragment is 15 mm; estimated length of forewing is about 27-29 mm.

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