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## Fossil Neuroptera of the Lower Cretaceous of Baisa, East Siberia. Part 4: Psychopsidae

With 2 figures

VLADIMIR N. MAKARKIN

### Summary

*Baisopsychops lambkini* gen. et sp. n. from the Lower Cretaceous of Baisa in East Siberia is described.

### Zusammenfassung

*Baisopsychops lambkini* gen. et sp. n. aus der Unteren Kreide von Baisa in Ostsibirien wird beschrieben.

### Introduction

The Psychopsidae are one of smaller families of Neuroptera comprising about 25 extant species distributed in southern Africa, Australia, and southern Asia (KIMMINS 1939; TJEDER 1960; NEW 1989; OSWALD 1993).

OSWALD (1993) stated that the Recent genera form two subfamilies, Zygophlebiinae NAVÁS, 1910 (Africa) and Psychopsinae HANDLIRSCH, 1906 (Southern Asia and Australia), based mainly on genitalic characters.

These subfamilies, however, cannot be distinguished on venational characters. Twenty fossil species have been assigned to this family from the Upper Triassic through the Early Miocene (TILLYARD 1922; KRÜGER 1923; MARTYNOVA 1949; BODE 1953; ZALESSKY 1953, MARTYNOVA 1954; MARTYNOVA 1962; MACLEOD 1970; PANFILOV 1980; HONG 1983; MAKARKIN 1991; 1994). There has, however, been no revision of fossil psychopsids, and many of the fossil species currently referred to the Psychopsidae probably belong to other families. Only two fossil genera *Baisopsychops* gen. et sp. n. and *Propsychopsis* KRÜGER, 1922 (with 3 species from Eocene Baltic amber) are considered undoubtedly among the Psychopsidae.

The Triassopsychopsinae TILLYARD, 1922, described from a single species from the Upper Triassic of Queensland, Australia, also apparently belongs to the this family, but other described Mesozoic and Cenozoic species should for the present be considered *Neuroptera incertae sedis*.

The present paper describes a new genus and species attributable to the Psychopsidae, and forms the forth part of a series dealing with Neuroptera from the Lower Cretaceous of Baisa in East Siberia (MAKARKIN 1990a, b; 1997).

## Family Psychopsidae HANDLIRSCH, 1906

Genus *Baisopsychops* gen. n.

Type species: *Baisopsychops lambkini* sp. n.

**Etymology:** From the locality Baisa and the genus *Psychops*.

**Description:** Forewing. A basal nygma between *R* and *M* not visible. Costal space with two series of gradate veins, the distal row is continuous (with 22 crossveins), the proximal row is interrupted (with 7 crossveins). The veins of "vena triplica" (*Sc*, *R* and *Rs*) are spaced very close together. Crossveins between them present along the length of the "vena triplica", but poorly preserved. *Rs* arising very close to the wing base, with at least 24 branches, mostly unforked before marginal twiggings. There are two complete gradate series in the radial space, the proximal series nearly parallel to "vena triplica". *M* deeply branched. *M* and *Cu* not anastomosing. *CuA* with a number of pectinate branches. *CuP* with a few dichotomous branches. *A1* long, dichotomously branched. *A2* relatively long, pectinately branched.

**Discussion:** *Baisopsychops* gen. n. superficially resemble the Recent *Megapsychops* TILLYARD, 1919 in possessing very dense venation, but it differs considerably from the Eocene species of *Propsychosis* KRÜGER, 1922 and all other Recent genera. In these latter taxa, the veins of the "vena triplica" are either connected by two strong crossveins or merge. In *Baisopsychops* the distal ends of *Sc*, *R* and *Rs* are not connected. *Baisopsychops* also has a suboval forewing, whereas in the other genera the forewing is subtriangular. It also differs from all other psychopsid genera in having two gradate series in the costal space [not one] (except probably for *Triassopsychops* TILLYARD, 1922), and by having the internal gradate series of the radial space parallel to the "vena triplica".

*Baisopsychops lambkini* sp. n.

Figs 1-2

**Holotype:** specimen no. 3064/969 (part and counterpart) collected in 1969 by the expedition of the Palaeontological Institute, Moscow and preserved in that place; a very well-preserved incomplete forewing; left bank of the River Vitim (9 km below mouth of the River Baisa), Buryatia, East Siberia, Russia. Lower Cretaceous (Neocomian), layer 18.

**Paratype:** specimen no. 3064/960 (part and counterpart) collected at the same place and time, and preserved in the Palaeontological Institute, Moscow; a poorly-preserved incomplete forewing. Lower Cretaceous (Neocomian), layer 15.

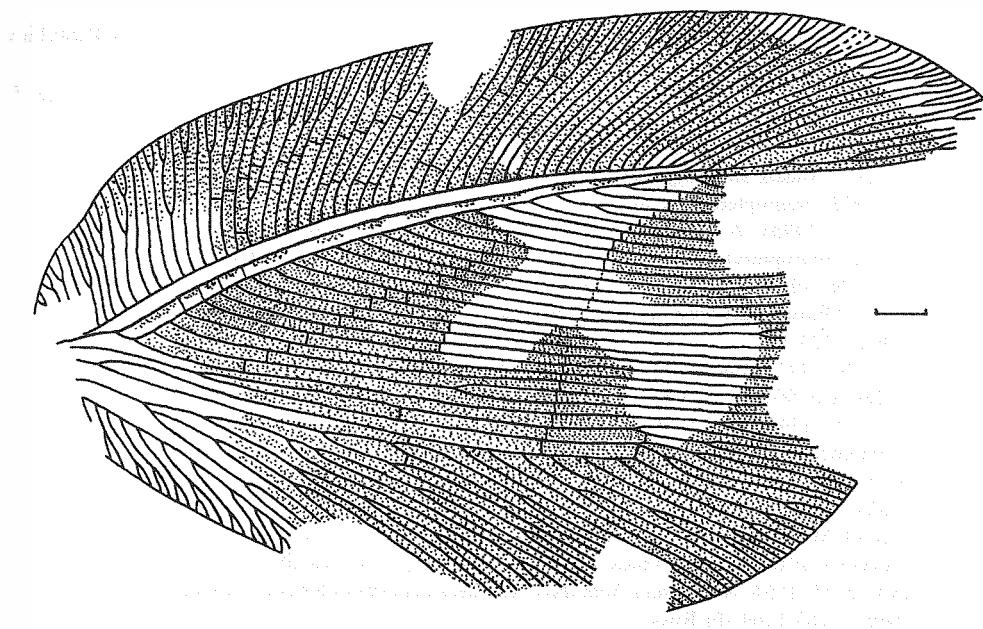
**Etymology:** The species is named in honour of the Australian entomologist KEVIN LAMBKIN.

**Description:** Forewing. Length of the holotype about 19 mm, width 11.5 mm. Wing venation as in generic description and Fig. 1. Wing markings is shown in Fig. 2.

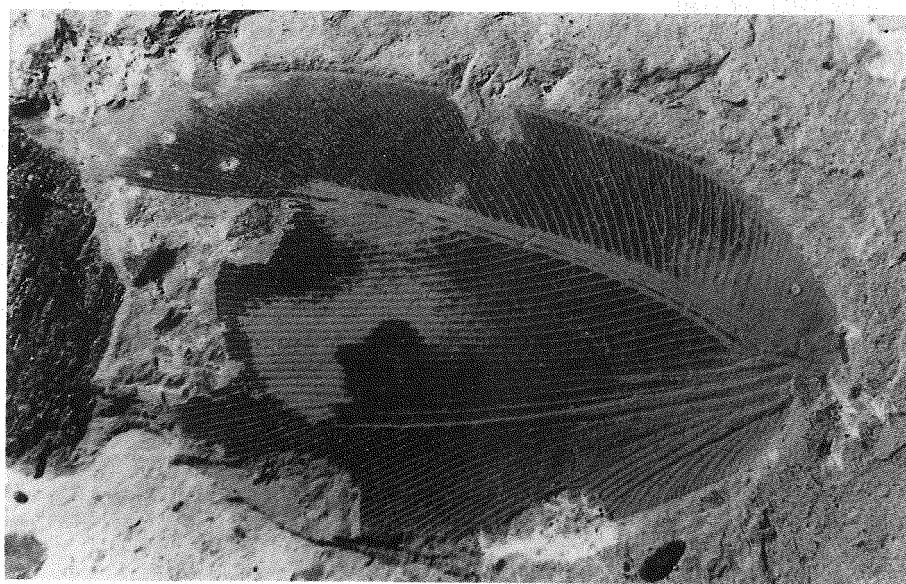
**Remarks:** The paratype is associated with the holotype on the basis of identical wing markings.

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**Fig. 1.** *Baisopsychops lambkini* gen. et sp. n. Holotype. Scale is 1 mm. The wing is illustrated with the apex to the right.



**Fig. 2.** *Baisopsychops lambkini* gen. et sp. n. Holotype.

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## Author's address:

Dr. VLADIMIR N. MAKARKIN  
 Institute of Biology and Pedology  
 Far East Branch of the Russian  
 Academy of Sciences  
 Vladivostok-22, Russia

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