

## AN EARLY CRETACEOUS ICHNEUMON OF THE FAMILY PELECIDAE

(HYMENOPTERA, PELECIDOIDEA)

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Down to the present time two genera of the Pelecinidae have been known: the recent *Pelecinus* Latreille, 1801 with two species (Schletterer, 1889; Patton, 1894; Ashmead, 1902; Schulz, 1903, Roman, 1910; Brues, 1928) and the monotypic extinct *Pelecinopteron* Brues, 1933 from Eocene Baltic amber, which was placed in a special family (Brues, 1933). However, these two genera are so similar in the main morphological characters (venation of the fore wings and abdominal structure) that the genus *Pelecinopteron* should be placed in the family Pelecinidae (= *Pelecinopteri*-dae, n. syn.).

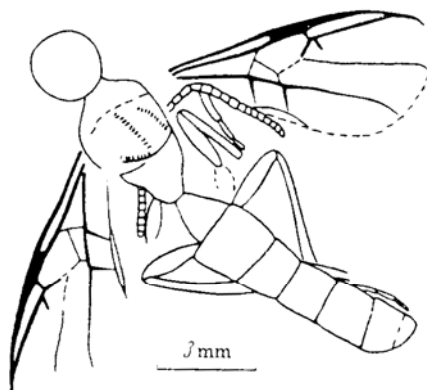
The pelecinid type of fore venation (figs. 1-3) is a unique phenomenon among the parasitic hymenopterans and is the only character by which the limits and content of the family Pelecinidae may be defined. This type of venation is possessed by *Pelecinus* and *Pelecinopteron* and by an extinct ichneumon from the Lower Cretaceous of Transbaykal. We describe it below as the new genus and species *Iscopinus baissicus* in the family Pelecinidae.

Ross (1936), as slightly modified by Lanham (1951), has been followed in the homologization of wing veins.

The author is deeply indebted to B. B. Rodendorf and A. P. Rasnitsyn for the supply of material.



a



b

FIGURE 1. *Iscopinus baissicus* n. sp.;  
Holotype 1989/2596; Lower Cretaceous;  
Transbaykal.

a - general appearance (x 10), b - diagram.

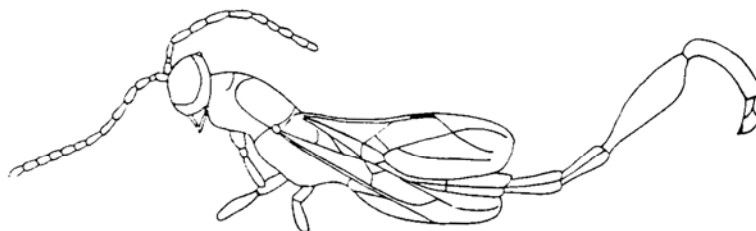


FIGURE 2. *Pelecinopteron tubuliforme* Brues; general appearance; Baltic region amber; Eocene (Brues, 1933).

# Family PELECINIDAE Haliday, 1840

Identification key to genera and species of the family Pelecinidae

- 1(2). Antennae with more than 15 segments. 1r-m transverse. Cell  $2R_1 + 3R_1$  closed. Abdominal segments, except for petiole, transverse. 14 mm. Lower Cretaceous of Transbaykal . . . . . *Iscopinus* n. gen. (1 species *I. baissicus* n. sp.) (fig. 1)
- 2(1). Antennae 13- or 14-segmented. 1r-m longitudinal. Cell  $2R_1 + 3R_1$  open. Abdominal segments elongate, oblong.
- 3(4). Antennae 13-segmented. Cells 1M and 2Cu closed. Hind tibiae normal, gradually thickening. First segment of hind tarsi shortest. 11-15 mm. Eocene of Europe (Baltic amber)<sup>1</sup> . . . . . *Pelecinopteron* Brues, 1933 (1 species, *P. tubuliforme* Brues, 1933) (fig. 2)
- 4(3). Antennae 14-segmented. Cells 1M and 2Cu open. Hind tibiae (especially in females) clavate in apical two-thirds. First segment of hind tarsi shortest. 27-60 mm. Recent genus. North and South America . . . . . *Pelecinus* Latreille, 1801 (2 species - larval parasites of lamellicorn beetles of the genus *Lachnosterna*: *P. polyturator* Drury, 1773, 50-60 mm and *P. brunneipes* Patton, 1894, 27-31 mm) (fig. 3)

## *Iscopinus* Kozlov, n. gen.

Generic name formed by a random combination of letters.

Type species. *I. baissicus* n. sp.; Lower Cretaceous; Transbaykal.

Diagnosis. Antennae with more than 15 segments. Fore wings with all veins and cells characteristic for primitive proctotrupoid ichneumonids (*Protohelorus* Kozlov, 1968, *Mesoserphus* Kozlov, 1968). In addition, the upper half of the crossvein 1r-m has been preserved, its lower half is reduced, but were it to be restored it would intersect the veins M and  $Cu_{1a}$  (fig. 1). Mesonotum with parapsidal furrows made up of rows of transverse pits. Hind legs elegant: femur appreciably shorter than tibia, tibiae not thickened. Abdomen consisting of 7 apparent segments.

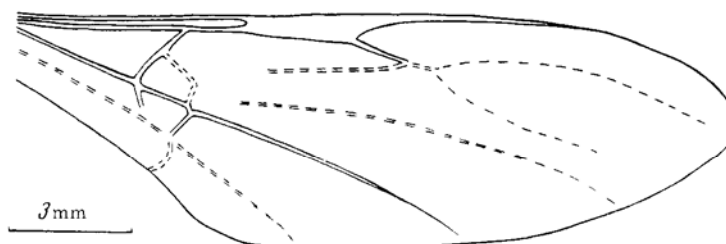
Specific composition. Monotypic genus.

Comparison. In the venation of the fore wings the genus described may be converged with two genera - *Pelecinopteron* and *Pelecinus*. These three genera characteristically have more or less monotypic venation, especially the presence of the vein 1r-m in the fore wings, which has been retained only as a trace in *Pelecinus*. It should be noted that 1r-m becomes longitudinal in the genera *Pelecinopteron* and *Pelecinus*, whereas in the genus *Iscopinus* it retains the original transverse position. In addition, *Iscopinus* is distinguished from these two genera by the proportions of the antennal segments, the abdominal segment and details of the venation of the fore wing.

## *Iscopinus baissicus* Kozlov, n. sp.

Holotype. PIN 1989/2956, practically complete impression of the ichneumon; Buryat ASSR, Yervinskiy district, left bank of Vitim River below mouth of Baysa River; Lower Cretaceous, Neocomian, Zaza suite.

<sup>1</sup>A member of the genus *Pelecinopteron* indistinguishable in description from *P. tubuliforme* Brues has been found in Paleogene amber collected in 1972 by an expedition of the Paleontological Institute, USSR Academy of Sciences, in material washed ashore at the settlement of Starodubskoye (Dolinsk district, Sakhalin province).

FIGURE 3. *Pelecinus polyturator* Drury, 1773; fore wing; Recent.

Description (fig. 1). Apical 8 antennal segments transverse; 9th square, like 10th (segments numbered from distal end, since basal antennal segments not preserved), remaining segments slightly oblong. Pronotum half length of mesonotum, same length as scutellum and propodeum combined. Distal width of R in fore wing three times greatest width of the cell C and equal to distal width of 1Cu. Basal width of cell 1M half basal width of 2Cu. Cell  $2R_1 + 3R_1$  closed. 1r-m approximately one-sixth length of the branch of the radius closing the cell  $2R_1 + 3R_1$  below; this vein extends in the immediate vicinity of  $RS_2$ .

7-segmented abdomen twice length of thorax. First 5 abdominal segments of approximately same length; 5th equal in length to two following segments combined. Length of petiole equal to its greatest width, all following segments transverse.

Body length 14 mm. Length of fore wing 8.5 mm.

Material. Holotype.

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