

# The First Ctenizoid Mygalomorph Spiders from Eocene Baltic Amber (Araneida: Mygalomorphae: Ctenizidae)

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**Abstract**—Two new monotypic genera of mygalomorph spiders are described from Eocene Baltic amber: *Electrocteniza sadilenkoi* gen. et sp. nov. and *Baltocteniza kulickae* gen. et sp. nov.; both belong to the Ctenizidae Ctenizinae. The forms described are the first non-dipluroid mygalomorphs from Baltic amber.

## INTRODUCTION

The spider infraorder Mygalomorphae is poorly represented in the fossil record, mainly known from the Mesozoic (see review in Eskov and Zonshtein, 1990; Selden and Gall, 1992). To date a single member of the infraorder, *Clostes priscus* Menge, 1869 has been described from Eocene Baltic amber. Only two specimens of this small (3.5–4.5 mm in total length) dipluroid mygalomorph spider exist; they are in the collections of the American Museum of Natural History, New York (Petrunkevitch, 1946) and the Geologische-Paläontologischen Museum der Universität Hamburg (Wunderlich, 1986); both specimens seem to be immature. In addition, an exuvium of the Ctenizidae Ctenizinae from Baltic amber was mentioned by Wunderlich (1986). Bachofen-Echt (1949, fig. 50) figured an isolated leg of some large-sized spider and attributed it to the mygalomorph family Mygalidae (=Aviculariidae), but this placement seems to be quite doubtful.

Some time ago a new mygalomorph spider was discovered in the private collection of Baltic amber inclusions belonging to Mr. K.M. Sadilenko of Moscow. He generously donated this specimen to the collection of the Paleontological Institute of the Russian Academy of Science, Moscow (PIN). Later a new immature mygalomorph was found by one of the authors in the collection of the Museum Ziemi, Warszawa (MZW) under the care of Dr. R. Kulicka.

Both newly discovered mygalomorphs belong to the recent family Ctenizidae, and should be allocated to different genera. This material is remarkable in two respects. First, these are the first non-dipluroid mygalomorphs from the Baltic amber. Second, the first mature male of clear taxonomic position among the Baltic amber mygalomorphs is found. The description of these new fossils is the object of this paper.

## SYSTEMATIC PALEONTOLOGY

### Family Ctenizidae Thorell, 1887

### Subfamily Ctenizinae Thorell, 1887

### Genus *Electrocteniza* Eskov et Zonshtein, gen. nov.

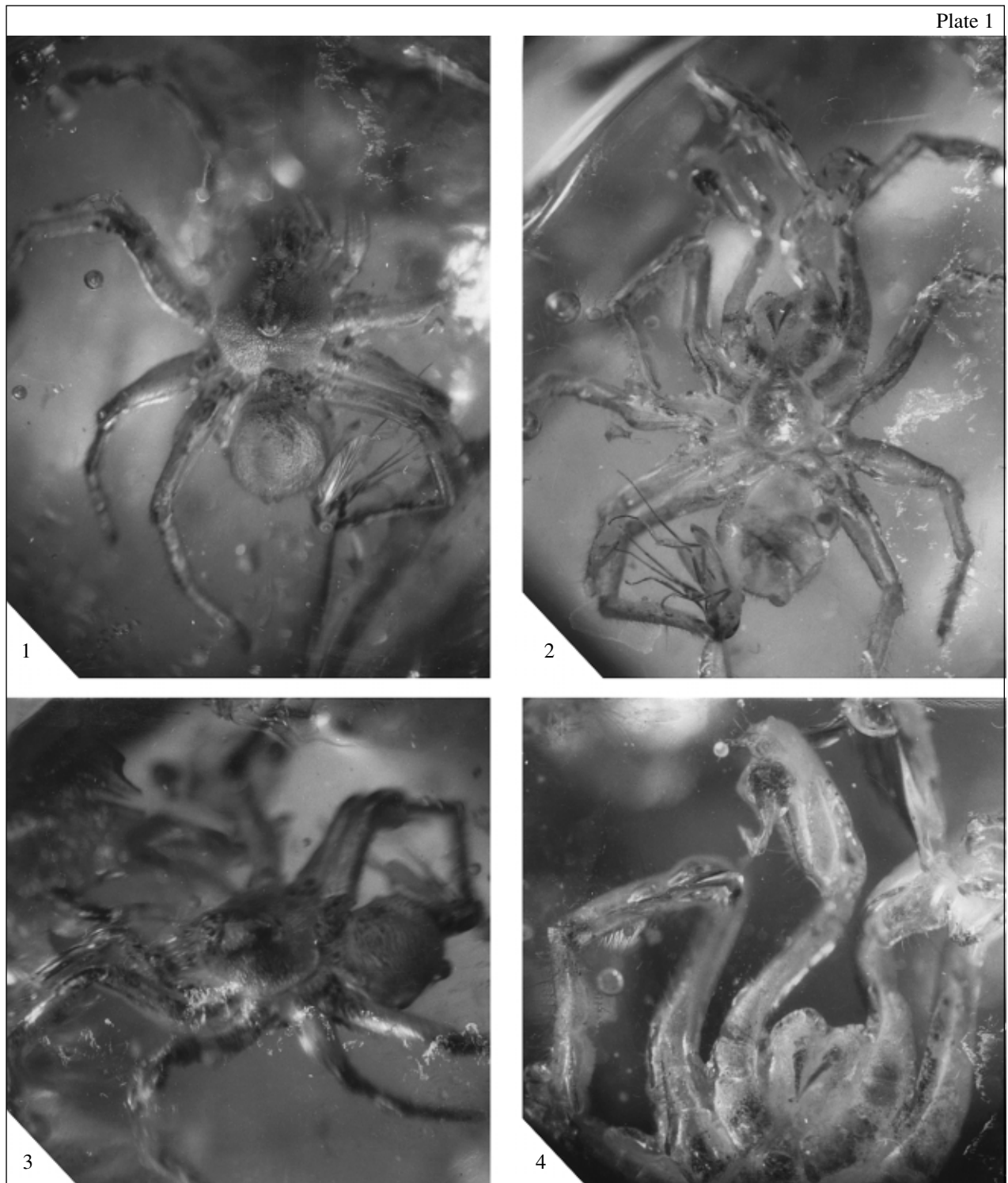
**E t y m o l o g y.** From Greek *electron* (amber) and the genus *Cteniza*.

**Type species.** *E. sadilenkoi* sp. nov.

**Diagnosis.** Small-sized ctenizid spiders. Carapace regularly hexagonal and completely hairless; thoracic fovea deep, U-shaped; clypeus relatively broad and declined; carapace edge bordered. At least in male, carapace is flat, its cephalic portion is not arched and is lower than central part of thorax. Eye tubercle is well developed; 8 eyes are disposed in two subequal rows; frontal row slightly procurved; eye formula: ALE = PLE = AME = PME. Basal joint of chelicera narrow and moderately long, cheliceral furrow with both pro- and retromarginal rows of teeth; cheliceral fang smooth; basal joint provided with a low rastellar mound, but rastellum absent. Maxillae medium-sized, trapeziform, lacking pronounced lobe, several cuspules confined to their probasal corners. Labium wider than long, provided with several cuspules. Sternum with a pair of large posterior sigilla. Two pairs of spinnerets, PMS small and cylindrical, PLS short and broad, apical segment of PLS domed. Legs long, leg formula 1243. Male tibiae I and II have 2–3 ventral spines, metatarsi and tarsi I and II spineless, distal portions of both curved metatarsi and swollen tarsi scopulated; tibiae and metatarsi III and IV with few ventral and dorsal spines, both straight metatarsi and cylindrical tarsi ascopulated. All legs have three tarsal claws, ITC curved and bare, STC I with three teeth, STC II with two teeth, and STC III–IV with single one. Male palp long and slender, with long, cylindrical tibia. Cymbium aspinose, its retrolateral lobe rounded. Bulb pyriform, with long, tapering embolus.

**Composition.** Type species.

**Comparison.** By the shape of the flat male carapace with distinct eye tubercle and particularly by the acute retrolateral lobe of cymbium, *Electrocteniza* gen. nov. seems to be closely related to the recent ctenizine genera *Latouchia* Pocock, 1901 (see Raven, 1985) and *Sterrochrotus* Simon, 1892. However, *Electrocteniza* gen. nov. is clearly distinguished from these genera by the broad clypeus, shape of posterior sternal sigillae, more raised eye tubercle, broader lateral margins of male carapace and aspinose cymbium. Additionally, *Electrocteniza* gen. nov. differs from *Latouchia* and



## Explanation of Plate 1

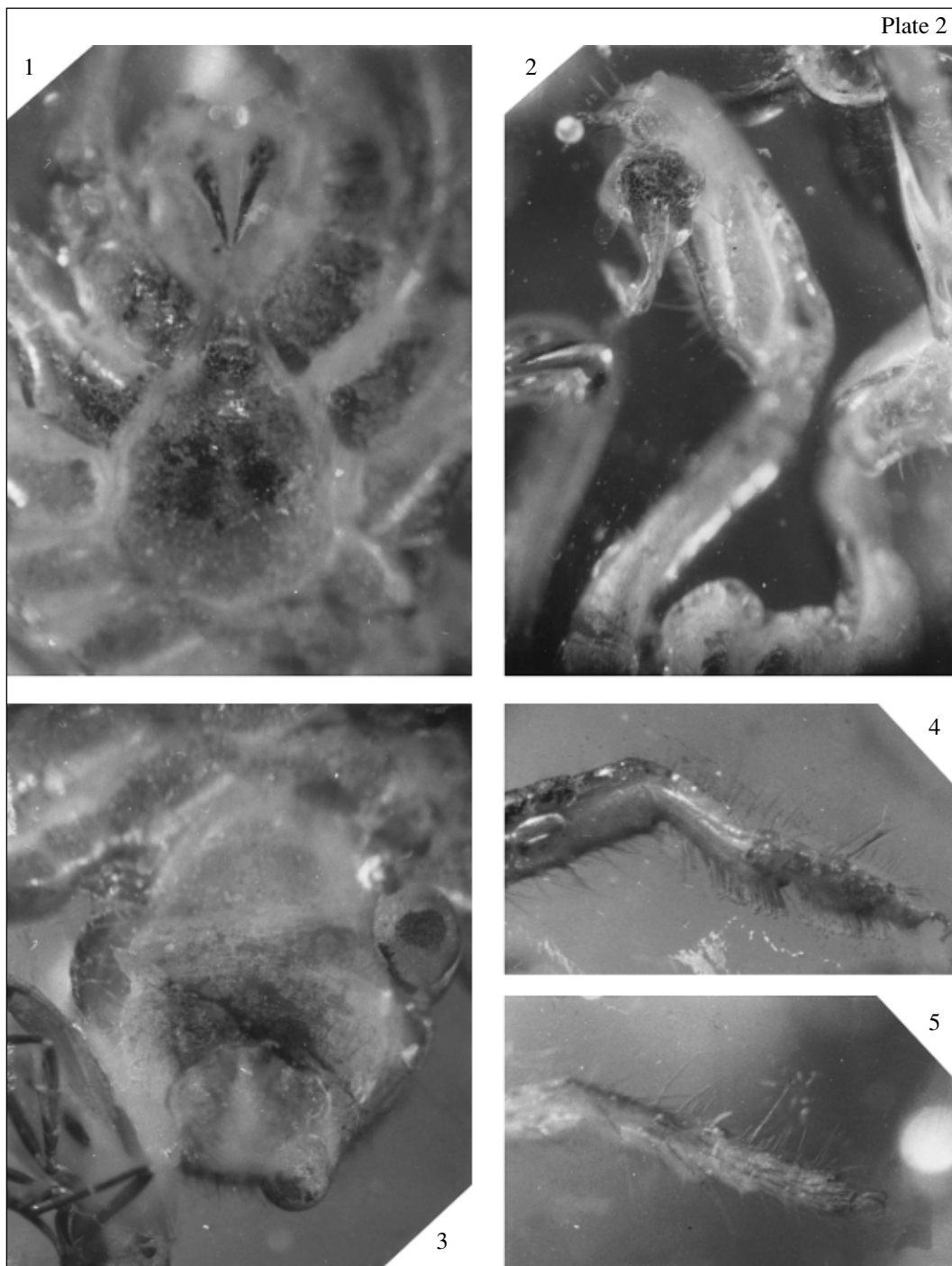
**Figs. 1–4.** *Electrocteniza sadilenkoi* gen. et sp. nov., holotype PIN, no. 363/88: (1) total view, dorsally; (2) total view, ventrally; (3) total view, laterally; (4) anterior portion of the body, ventrally.

*Sterrochrotus*, as well as from all remaining ctenizid genera, by the complete absence of a cheliceral rastellum and the completely aspinose tibiae, metatarsi and tarsi of legs I and II.

*Electrocteniza sadilenkoi* Eskov et Zonshtein, sp. nov.

Plate 1, figs. 1–4, Plate 2, figs. 1–5

**E t y m o l o g y.** The new species is named after the late amber collector Mr. K.M. Sadilenko (Moscow),



Explanation of Plate 2

**Figs. 1–5.** *Electrocteniza sadilenkoi* gen. et sp. nov., holotype PIN, no. 363/88: (1) coxosternal area and chelicera, ventrally; (2) right male palp, ventrally; (3) posterior end of abdomen, ventrally; (4) tibia, metatarsus and tarsus I, laterally; (5) metatarsus and tarsus III, laterally.

who generously donated this specimen to the collection of PIN.

**H o l o t y p e.** PIN, no. 363/88, adult male; inclusion in Baltic amber; Upper Eocene.

**D e s c r i p t i o n** (Figs. 1a–1j, 2a, 2b). Male. The carapace is regularly hexagonal, hairless, and shagreened;

the thoracic fovea is deep, U-shaped (Figs. 1a, 2a, Pl. 1, figs. 1, 3). The chelicerae are devoid of a rastellum, with six retromarginal teeth; the maxillae are medium-sized, trapeziform, with several cusps confined to their probasal corners; the labium is wider than long, provided with several cusps; the sternum has a pair