

A NEW SPECIES OF *CTENOPECTRELLA* IN BALTIC AMBER
(HYMENOPTERA: MEGACHILIDAE)

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A new species of the extinct bee genus *Ctenoplectrella* COCKERELL (Megachilinae: Ctenoplectrellini) is described and figured from two females preserved in a single piece of middle Eocene (Lutetian) Baltic amber. *Ctenoplectrella gorskii* ENGEL, sp. n. is distinguished from other species of the genus most notably in the venation of the forewing.

Key words: Apoidea, *Anthophila*, Megachilinae, Ctenoplectrellini, Tertiary

INTRODUCTION

The Eocene bee fauna of Europe is comparatively rich and well studied, particularly those preserved in fossiliferous resins (*e.g.*, ENGEL 1998, 2001, 2004, ENGEL & PERKOVSKY 2006, MICHEZ *et al.* 2007, OHL & ENGEL 2007, PATINY *et al.* 2007). The most diverse and commonly represented species are those of the families Apidae and Megachilidae, and of the genera *Succinapis* ENGEL, *Electrapis* COCKERELL, *Protobombus* COCKERELL, *Melikertes* ENGEL, *Boreallodape* ENGEL, and *Ctenoplectrella* COCKERELL. Some of these genera are also documented from contemporaneous deposits as compressions (*e.g.*, WAPPLER & ENGEL 2003). While new material of these genera continues to come to light (*e.g. vide* appendix in ENGEL 2004), new species are actually quite rare. It was therefore surprising to discover among the Baltic amber collection of Mr. ANDRZEJ GÓRSKI two specimens of a new species of the megachiline genus *Ctenoplectrella* (Fig. 1). The genus was previously understood to comprise three species – *Ctenoplectrella viridiceps* COCKERELL, *C. grimaldii* ENGEL, and *C. cockerelli* ENGEL – in middle Eocene (Lutetian) Baltic amber, and a single species, *C. zherikhini* ENGEL & PERKOVSKY, in the roughly contemporaneous Rovno amber of the Ukraine. Herein I provide a description of this new species to make it known to melittologists and palaeoentomologists. The format and terminology for the description follows that of ENGEL (2001).

SYSTEMATIC PALAEOONTOLOGY

Tribe Ctenoplectrellini ENGEL
Genus *Ctenoplectrella* COCKERELL
***Ctenoplectrella gorskii* sp. n.**
(Figs 1–5)

Holotype: female (Figs 1–3), in piece of middle Eocene (Lutetian) amber from the Baltic region; in the collection of Mr. ANDRZEJ GÓRSKI (Bielsko-Biała, Poland) and to eventually be deposited in the Muzeum Przyrodnicze, Instytut Systematyki i Ewolucji Zwierząt, Polska Akademia Nauk [Museum of Natural History, Institute of Systematics and Evolution of Animals, Polish Academy of Sciences], Kraków. Paratype female, in same piece of amber as holotype.

Etymology: The specific epithet is a patronymic honoring ANDRZEJ GÓRSKI of Bielsko-Biała, Poland in recognition of his support of amber and palaeontomological research.

Diagnosis – The new species can be recognized by the slightly apical position of the basal vein relative to cu-a (confluent in other *Ctenoplectrella*), the significantly longer first submarginal cell relative to the second submarginal cell (second submarginal cell longer than first in other *Ctenoplectrella* and in *Glaesosmia* ENGEL), the elongate pterostigma (short in *C. viridiceps*, closer to although slightly longer than pterostigma in *C. cockerelli*), the straight clypeal margin (slightly modified in *C. viridiceps*: *vide* ENGEL 2001), and punctured mesoscutal and metasomal integument (similar to *C. cockerelli* and *C. viridiceps*; impunctate in *C. grimaldii*).

Description – Female. Total body length *ca.* 4.15 mm; forewing length 2.83 mm, hind wing length 2.14 mm. Head wider than long, length 1.03 mm, width 1.35 mm. Labrum wider than long, apical margin gently convex. Apical margin of clypeus relatively straight. Gena much narrower than compound eye in lateral aspect. Intertegular distance 0.90 mm. Forewing with basal vein slightly distal of cu-a; second abscissa Rs orthogonal with Rs+M (in contrast to the angled position observed in *Glaesosmia*), slightly basal to 1m-cu; first submarginal cell distinctly longer than second submarginal cell; pterostigma distinctly longer than wide (Fig. 4); hind wing with six distal hamuli, arranged in a single, evenly spaced series (Fig. 5). Sting extruded, elongate and simple (Fig. 3).

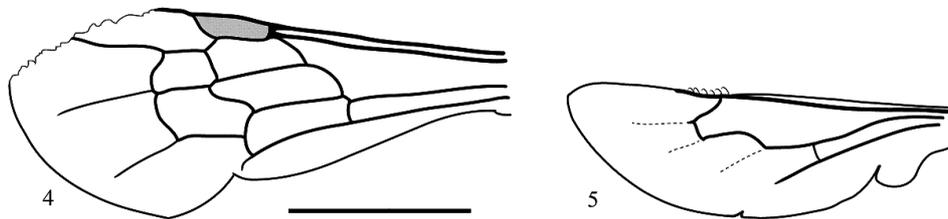
Outer surface of mandible impunctate and smooth. Clypeus and supraclypeal area with small punctures separated by a puncture width or less, integument between punctures smooth. Integument of face, vertex, gena, and postgena sculptured as on clypeus although punctures slightly smaller. Mesoscutum and mesoscutellum with small punctures separated by a puncture width or less, integument between punctures smooth. Pleura sculptured as on mesoscutum except punctures separated by less than a puncture width, nearly contiguous in many areas, integument between punctures smooth. Lateral and posterior surfaces of propodeum weakly imbricate and apparently impunctate. Metasomal terga with small punctures separated by 1–2 times a puncture width, integument between punctures smooth; sterna faintly imbricate, with shallow punctures separated by 1–4 times a puncture width.



Fig. 1. Photomicrograph of entire amber piece containing holotype (uppermost specimen) and paratype (lower specimen largely covered by fractures and some Schimmel, seen end on) of *Ctenoplectrella gorskii* sp. n. Entire piece has a length of ca. 8.9 mm.



Figs 2–3. Photomicrographs of holotype female of *Ctenoplectrella gorskii* sp. n.: 2 = Right lateral aspect of holotype (note that head is twisted such that the vertex is seen in this view), 3 = left lateral aspect of holotype (owing to the twisted position of the head, the hypostomal fossa and postgena is visible in this view).



Figs 4–5. Wing venation of *Ctenoplectrella gorskii* sp. n. as preserved; based on right forewing and hind wing of holotype female: 4 = forewing venation, with apex torn at amber surface. 5 = hind wing. Scale bar = 1 mm

Integument dark brown, without maculations. Wing membrane hyaline; veins strong and black. Pubescence generally pale except setae on vertex, mesoscutum, mesoscutellum, inner surfaces of tarsi, and comprising scopa slightly fuscous.

Mandible with sparse, minute, simple setae. Labrum and clypeus with scattered, minute, appressed, simple setae not obscuring integument; similar setae on face below level of antennal sockets, intermixed with scattered, longer, erect setae on face, clypeus, supraclypeal area, vertex, gena, and postgena. Mesosomal nota with scattered, erect, short, simple setae. Pleura with scattered, short, simple setae, setae becoming gradually longer ventrally. Lateral surface of propodeum with abundant moderate length to long, branched setae. Pubescence of legs generally simple and of moderate length although becoming long on outer surfaces of tibiae and tarsi; inner surface of metafemur with dense, minute, simple setae, outer, anterior, and posterior surfaces with moderate-length, branched setae; metatibia with abundant, moderate-length to long setae, setae with short branches. Metasomal terga with sparse, short, simple, appressed or suberect setae, setae longer and suberect to erect laterally, some setae laterally with a few, minute branches; sternal scopa composed of numerous, greatly elongate, setae with a few branches.

Male. Unknown.

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