

# A NEW FOSSIL KINNARIDAE FROM DOMINICAN AMBER (HEMIPTERA: FULGOROMORPHA)

THIERRY BOURGOIN and FABRICE LEFČEVRE

Laboratoire d'Entomologie, Museum National d'Histoire Naturelle, 45 rue Buffon, 75 005 Paris, France, e-mail: bourgoin@mnhn.fr

**Abstract.**— *Oeclidius browni* sp. nov., a second fossil kinnarid (Hemiptera, Fulgoromorpha) is described from Oligocene/Miocene Dominican amber. The species is compared with the only other known fossil from Dominican amber *Oeclidius salaco* Emeljanov et Shcherbakov, 2000, and also with the living Cuban species *O. hanabanillae* Myers, 1928, to which it appears closer than to *O. salaco*.



**Key words.**— Hemiptera, Fulgoromorpha, Kinnaridae, *Oeclidius brownii* sp. nov, fossil, Dominican amber.

## INTRODUCTION

Neotropical Kinnarids can be divided in two groups according to the number of subapical cells presents in the tegmina. Two genera retain the plesiomorphic condition with five cells (Bourgoin 1997): *Southia* Kirkaldy, 1904, and *Oeclidius* Van Duzee, 1914. While *Oeclidius* is very probably a paraphyletic genus, these two genera can be easily separated by the following characters.

Neotropical Kinnarid genera with five apical cells

- C4 at least  $\frac{3}{4}$  length of C3, apical segment of rostrum longer than subapical . . . . . *Oeclidius*
- C4 less than  $\frac{1}{2}$  length of C3, apical segment of rostrum shorter than subapical . . . . . *Southia*

According to these characters, a new Dominican amber fossil belonging to *Oeclidius* is described. This is only the second fossil Kinnaridae discovered. Emeljanov and Shcherbakov (2000) recently described the other specimen, also from Oligocene/Miocene Dominican amber, as *Oeclidius salaco* Emeljanov et Shcherbakov, 2000.

*Oeclidius browni* sp. nov.  
(Figs 1–8)

**Material.** Holotype specimen MNHN-LP R. 11196, deposited in Museum National d'Histoire Naturelle's collections. Female specimen. Dominican amber (Oligocene-Miocene) 20–25 MYA, Dominican Republic, La Toca mine. Leg A. Brown in 1998.

Very well preserved specimen, wings of typical kinnarid venation (Bourgoin 1997) clearly visible as well as the

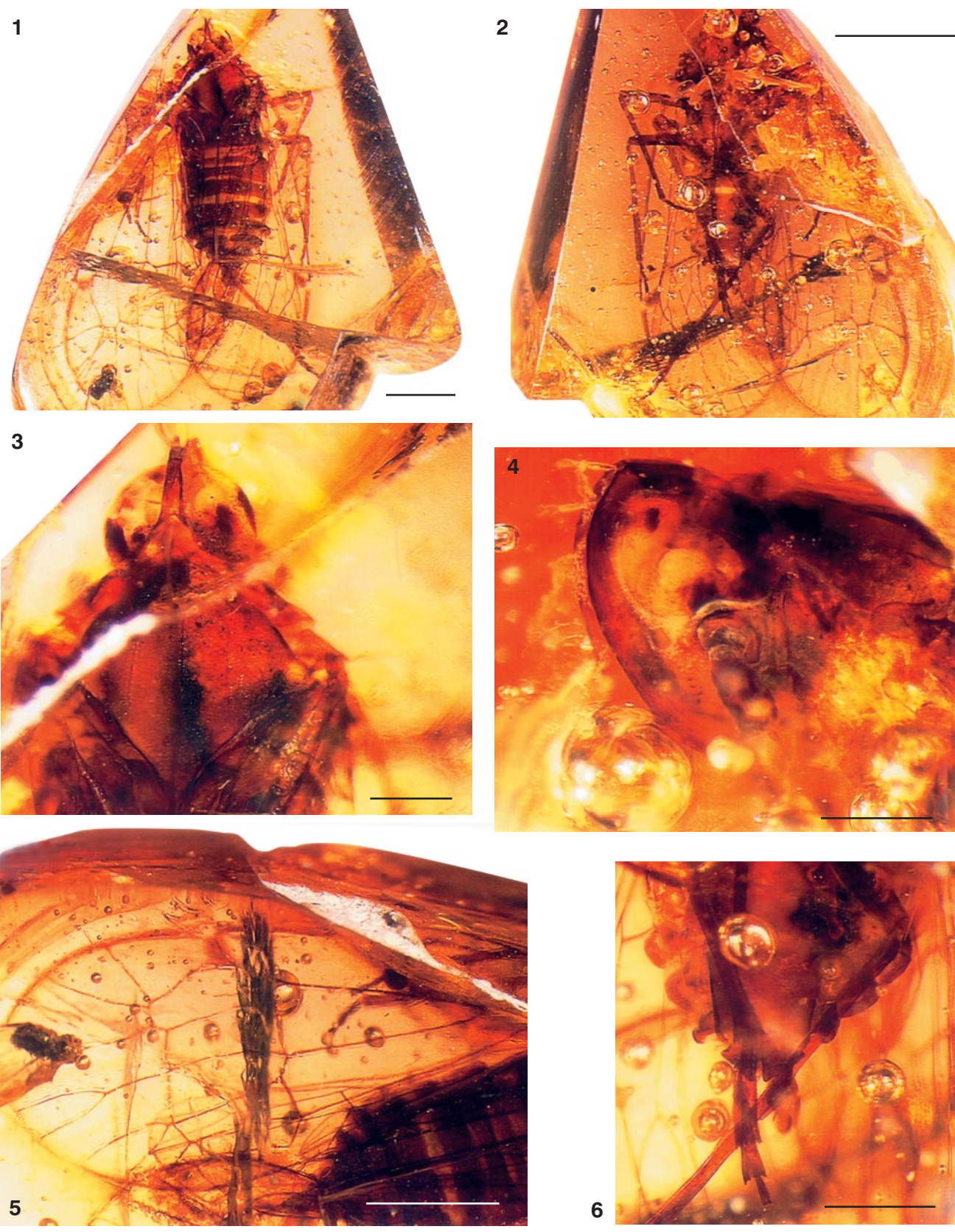
dorsal and the ventral parts in general. Several bubbles hide some details, particularly in frontal view of the head.

**Derivatio nominis.** Dedicated to Alex Brown who kindly offered the specimen to the MNHN.

**Diagnosis.** From the other previously known kinnarid fossil, *Oeclidius salaco* Emeljanov et Shcherbakov, 2000, the new fossil differs by the longer labium, by the CuA vein of the metathoracic wing with only two branches (3-branched in *O. salaco*), and in the tegmina by the two first veins of R branched on C1 (stalked after C1 in *O. salaco*), and the earlier forking of M3 and M4 just after im (M3+4 stalked in *O. salaco*). The tegminae are longer, less rounded apically; the first radial apical cell is two time longer than wide while it is almost quadrate in *O. salaco*. According to Emeljanov and Shcherbakov's drawing (2000, fig.6), the foliated latero-frontal carinae are more developed in this new species.

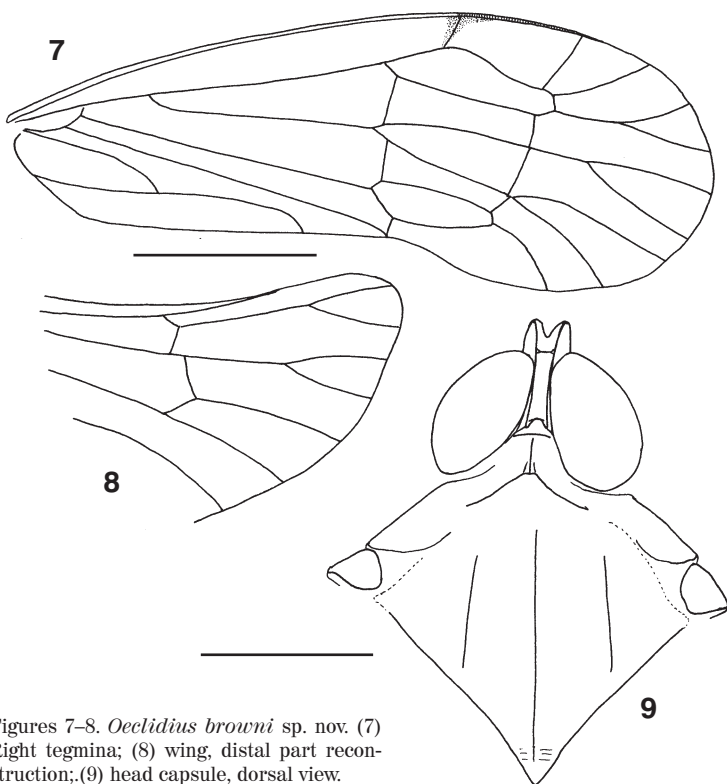
**Description.** In lateral view, lateral margins of the vertex horizontal relatively to the eye; in dorsal view, posterior margin of the vertex at the level of mid line of the compound eyes and anterior margin surpassing the level of the anterior margin of the eyes; vertex three times longer than wide in its posterior margin, surpassing the eyes by a quarter of the length of an eye.

Frons in lateral view convex, meeting vertex abruptly with a distinct junction point; in frontal view, its dorsal part as wide as the quarter of eye diameter, apparently no median carinae; lateral frontal carinae strongly foliated. Median ocellus apparently absent. Postclypeus tricarinated and lateral carinae not foliated. Labium long, extending as far as the seventh sternite posterior margin. Lateral ocelli present. Antennae



Figures 1–6. *Oeclidius browni* sp. nov. (1) Habitus, dorsal side; (2) habitus, ventral side; (3) head capsule and thorax, dorsal view; (4) head capsule, left lateral view; (5) left tegmina; (6) abdomen and right metatibia and tarsae. Scale: white bars = 1mm: figs 1, 2, 5; = 0.5 mm: figs 3, 6; = 0.33 mm: fig. 4.





Figures 7–8. *Oeclidius browni* sp. nov. (7) Right tegmina; (8) wing, distal part reconstruction; (9) head capsule, dorsal view.

with scape as wide as long. Pedicel cylindrical with few sensilla placodea but clearly visible; flagellum as long as scape + pedicel.

Pronotum strongly angulated on its posterior margin which surpass the level of the posterior margin of the eyes. Median carina present.

Mesonotum tricarinate with carinae parallel; mesonotal disc flattened.

All legs long and thin. Metatibiotarsal formula: 7-7-7; metatibia with apical teeth spaced in a single line.

Abdomen with typical female wax plate areas, present on tergites VI, VII and VIII. Female genitalia not clearly visible.

Tegmina with a typical *Oeclidius* venation and with five subapical cells; translucent except a brown macula at the Sc branch level. R with four branches R1 and R2 separately branched on C1, R3+4 branched on C1. M3+4 branching just after im. CuA1 branched on C4 (left tegmina) or on C5 (right tegmina). C5 four times longer than wide, well separated from the tegmen margin to

which it connect by a distinct transverse-like CuA2. C5 almost as long as C4.

Metathoracic wing with R and M two branched, CuA 2-branched.

General color pallid. Carinae of vertex and frons, legs, tergal and sternal plates, and veins darker, brown. Length: 5.5 mm.

## DISCUSSION

According to Fennah's key (1980), this species runs to couplet 10 for *O. hanabanillae* Myers, 1928, a species described from Cuba, and *O. persephone* Fennah, 1980, a species collected in Jamaica. It differs from *O. hanabanillae* by the absence of the median ocellus, the shorter labium not reaching the pygophore, the four branched radial vein in the tegmen, the general colour of the specimen and its smaller size. The tegmina venation allows to easily separate the fossil species from *O. persephone*. However, the strong forward position of the vertex of *O. browni* is only approached by *O. persephone*.

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