Russian Entomol. J. 31(1): 67–70

Gentiliocossus — new genus of Hypoptinae (Lepidoptera: Cossidae)

Gentiliocossus — новый род Hypoptinae (Lepidoptera: Cossidae)

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KEY WORDS: Biodiversity, Southern America, fauna, Carpenter-Moths.
КЛЮЧЕВЫЕ СЛОВА: биоразнообразие, Южная Америка, фауна, древоточцы.

ABSTRACT. The article describes *Gentiliocossus* Yakovlev, Naydenov et Penco, **gen. n.** (type species — *Gentiliocossus alexi* **sp.n.**) which includes three species: *G. alexi* Yakovlev, Naydenov et Penco, **sp.n.** and *G. caimancito* Yakovlev, Naydenov et Penco, **sp.n.** (Type locality — NW Argentina, Jujuy Prov., 10 km SEE Caimancito), and *G. vogli* Yakovlev, Naydenov et Penco, **sp.n.** (Type locality — Venezuela, Maracay). The images of the male adults and their genitals are provided, the genus distribution map is given.

РЕЗЮМЕ. В статье описан *Gentiliocossus* Yakovlev, Naydenov et Penco, **gen. n.** (типовой вид — *Gentiliocossus alexi* **sp.n.**), включающий три вида: *G. alexi* Yakovlev, Naydenov et Penco, **sp.n.** и *G. caimancito* Yakovlev, Naydenov et Penco, **sp.n.** (типовой локалитет — СЗ Аргентина, пров. Жужуй, 10 км ЮВВ Каймансито), and *G. vogli* Yakovlev, Naydenov et Penco, **sp.n.** (типовой локалитет — Венесуэла, Маракай). Приводятся изображения имаго самцов, гениталии самцов, карта распространения рода.

Introduction

The Hypoptinae subfamily is a group of Cossidae (Lepidoptera) endemic for the New World. The subfamily taxonomy is being actively developed in the recent years [Schoorl, 1990; Penco et al., 2019, 2020; Penco et al., 2019; Yakovlev et al., 2019, 2020a, b; Naydenov et al., 2020; Yakovlev et al., 2020].

The examination of new materials deposited in the Republic of Argentina and our study of the collections of the Zoologische Staatssammlung der Bayerischen Staaten (Munich, Germany) (later ZSM) allowed us to describe a Hypoptinae genus new to science, the specimens of which inhabit Venezuela and Argentina.

Material and methods

The moths were collected in the nighttime on light traps. Male genitalia were mounted in euparal on slides following Lafontaine and Mikkola [1987]. The adults were photographed using digital camera of iPhone 7. The genitalia preparations were photographed using an Olympus DP74 camera attached to an Olympus SZX16 stereomicroscope.

The holotypes of *G. alexi* **sp.n.** and *G. caimancito* **sp.n.** are deposited in the collection of the Zoological Institute St. Petersburg, Russia (ZIN); the paratype of *G. alexi* **sp.n.** — in the collection of Roman Yakovlev, Barnaul, Russia (RYB), whie the holotype of *G. vogli* **sp.n.** — in the collection of the Zoologische Staatssammlung der Bayerischen Staaten (ZSM).

Taxonomical part

Gentiliocossus Yakovlev, Naydenov et Penco, **gen. n.**

Type species (designated here) — *Gentiliocossus alexi* Yakovlev, Naydenov et Penco, **sp.n.**

DESCRIPTION. Male. Moths of medium size. Antenna bipectinate, short (1/3 of fore wing in length). Fore wing wide, apically rounded, brown, with pattern of wide rounded brown and ocher portions and bands. Hind wing grey, without pattern.

Male genitalia. Uncus of medium length, gradually narrowing from base to apex; gnathos arms short; gnathos absent; valve wide, apically semicircular, directed ventrally;

How to cite this article: Naydenov A.E., Yakovlev R.V., Penco F.C. 2022. *Gentiliocossus* — new genus of Hypoptinae (Lepidoptera: Cossidae) // Russian Entomol. J. Vol.31. No.1. P.67–70. doi: 10.15298/rusentj.31.1.13

Fig. 1. Map of distribution of *Gentilicossus*, **gen.n.**
Рис. 1. Распространение видов рода *Gentilicossus*, **gen.n.**

saccular edge with more or less expressed notch; small harpe in proximal part of valve; juxta very robust, with wide leaf-like lateral processes; saccus elongated; phallus slightly narrowing from base to apex, of various shapes.

Female unknown.

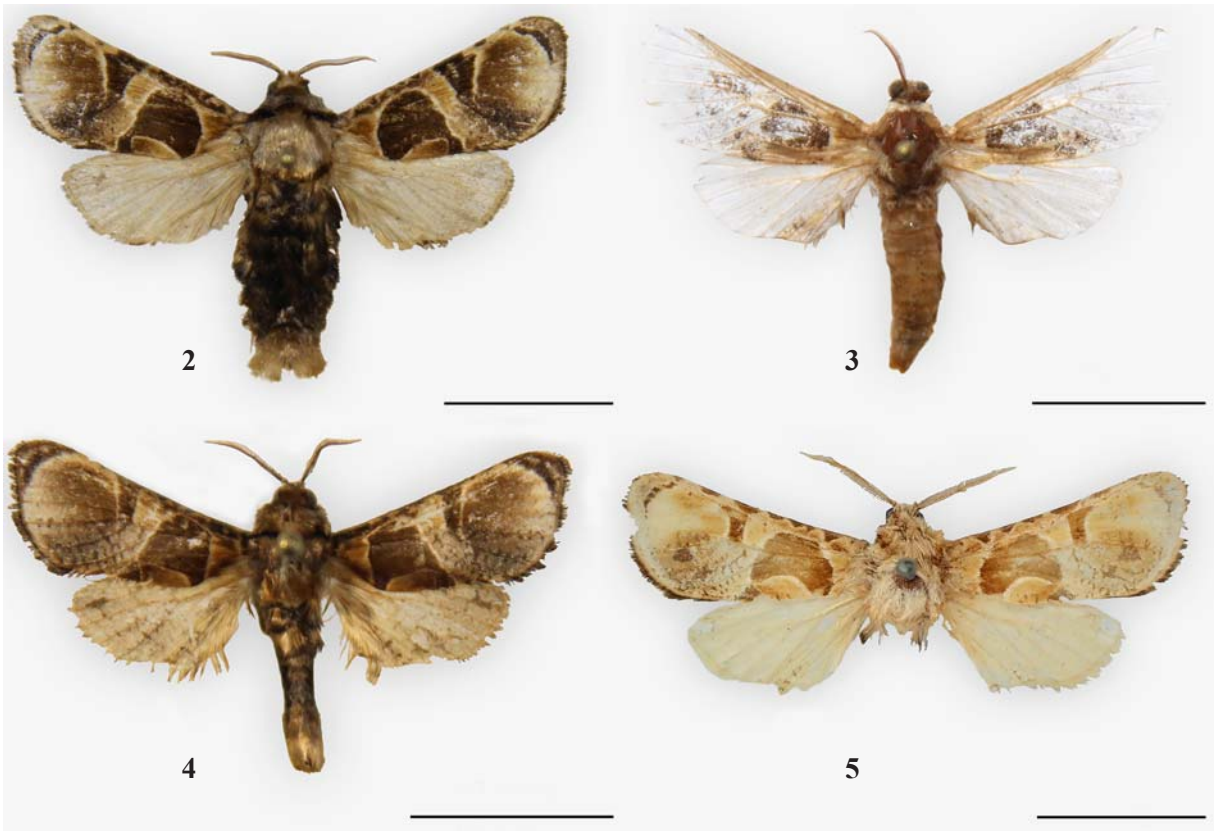
DIAGNOSIS. The new genus clearly differs from the other Hypoptinae representatives, its main external characteristic feature is the wide rounded brown portions and bands. In the male genital structure, the genus is most close to the genera *Philanglaus* Butler, 1882 and *Philiodoron* Clench, 1957. From the specimens of the genus *Philanglaus* the new genus differs in the absence of the long smooth harpes at the base of the valve. From the genus *Philiodoron* it differs in the laterally diverged valves (in *Gentiliocossus* the valves are directed ventrally).

COMPOSITION. The genus includes three species: *G. alexi* Yakovlev, Naydenov et Penco, **sp.n.**, *G. caimancito* Yakovlev, Naydenov et Penco, **sp.n.** and *G. vogli* Yakovlev, Naydenov et Penco, **sp.n.**

DISTRIBUTION. Argentina (Jujuy Province), Venezuela (Aragua State).

Gentilicossus alexi Yakovlev, Naydenov et Penco, **sp.n.**
Figs 2–3, 6–7.

MATERIAL. **Argentina**: holotype, male, NW Argentina, Jujuy Prov., 10 km SEE Caimancito, 23°44′38.6′′S 064°31′09.2′′W, H=405m, 25–26.10.2019, leg. R. V. Yakovlev (ZISP, Genital preparation № 234, A. E. Naydenov); paratype, male, same data (RYB, Genital preparation № 271, A. E. Naydenov).



Figs 2–5. *Gentilicossus*, adults: 2 — *G. alexi*, **sp.n.**, male, holotype; 3 — *G. alexi*, **sp.n.**, male, paratype; 4 — *G. caimancito*, male, holotype; 5 — *G. vogli*, male, holotype. Scale bars: 10 mm.

Рис. 2–5. *Gentilicossus*, имаго: 2 — *G. alexi*, **sp.n.**, самец, голотип; 3 — *G. alexi*, **sp.n.**, самец, паратип; 4 — *G. caimancito*, **sp.n.**, самец, голотип; 5 — *G. vogli*, **sp.n.**, самец, голотип. Масштаб: 10 мм.

DESCRIPTION. Length of forewing 14—15 mm. Light-brown portion at root area of fore wing, discally semicircular brown spot framed in ribbon-like light-coffee color band, postdiscally wedge-shaped brown portion, submarginally extensive round brown portion, submarginally crescent brown stroke and light-brown portion at apex. Fringe brown. Hind wing light-brown coffee color, without pattern.

Male genitalia. Uncus spindle-like, long, smoothly narrowing from base to apex; gnathos arms very short; gnathos absent; valve directed ventrally, long, basally swollen, distally slightly extending, with very expressed notch on saccular edge, basally with small spiky harpe on inner surface; on border of 3/4 of valve length at distal end of outer edge — a long cylindrical process directed laterally; juxta with long process directed abdominally, with two long leaf-like lateral processes; saccus short, clavately extended apically; phallus shorter than valve, slightly curved throughout all length, apically obliquely cut; small wedge-like process on dorsal surface of phallus, at apex, vesica without cornuti.

Female unknown.

DIAGNOSIS. The species is morphologically close to *G. vogli* **sp.n.**, from which it clearly differs in the thicker and shorter saccus (in *G. vogli* **sp.n.**, the saccus is very long and thin) and in the robust long process on the outer edge of the valve (in *G. vogli* **sp.n.** the process is thin, apically acute).

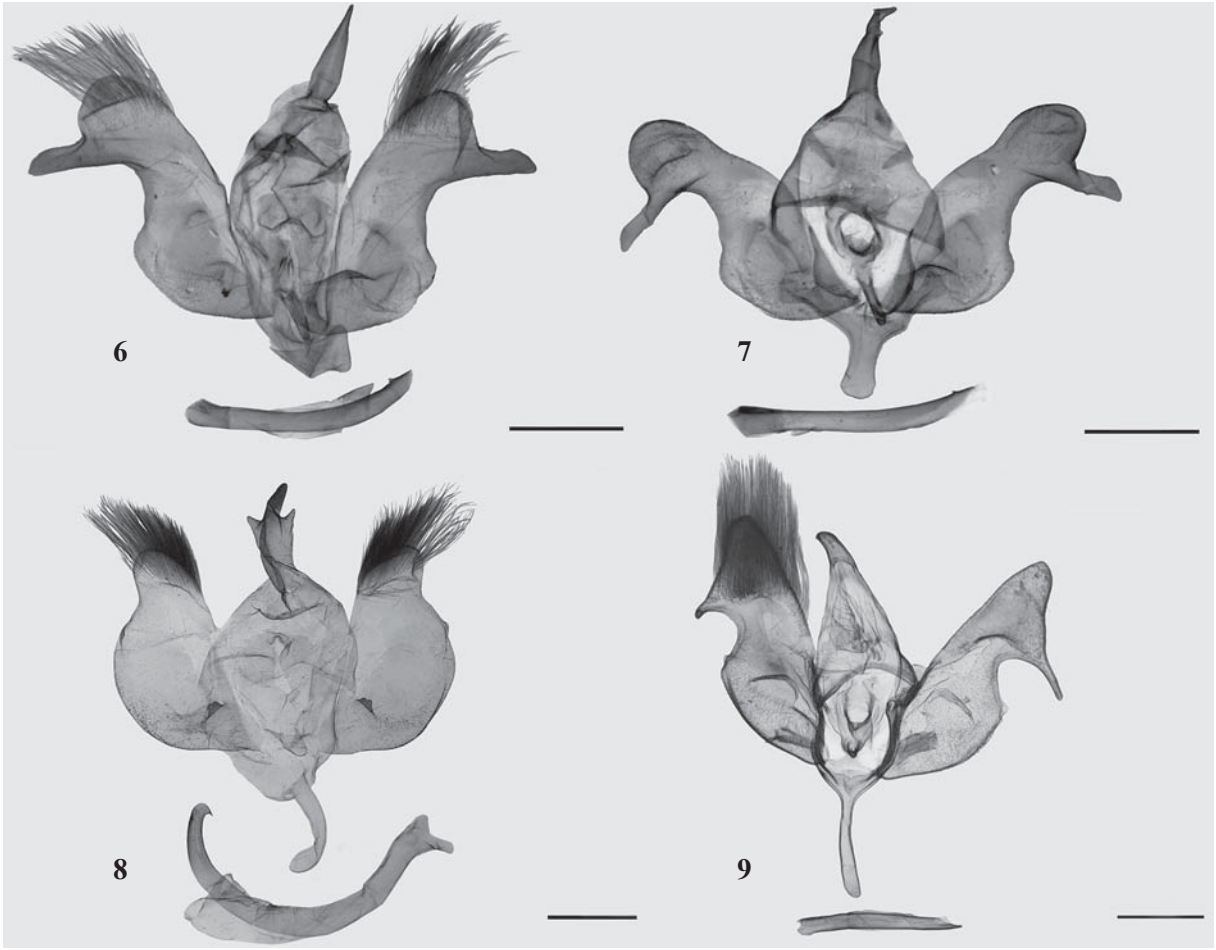
DISTRIBUTION. NW Argentina, Jujuy Province.

ETYMOLOGY. The species is named after Alex-Vadim Strelkov — the remarkable owner of our camp, who provided all the conditions (including excellent craft beer) for collecting material, which altogether helped in our work, despite the abundance of caimans and very hot weather.

Gentilicossus caimancito Yakovlev, Naydenov et Penco, **sp.n.** Figs 4, 8.

MATERIAL. **Argentina**: holotype, male, NW Argentina, Jujuy Prov., 10 km SEE Caimancito, 23°44′38.6′′S 064°31′09.2′′W, H=405m, 25–26.10.2019, leg. R. V. Yakovlev (ZISP, Genital preparation № 369, A. E. Naydenov).

DESCRIPTION. Length of forewing 13 mm. Root area of the fore wing light-brown, discally semicircular brown spot framed in ribbon-like light-coffee color band, postdiscally wedge-like brown portion, submarginally broad round portion, crescent brown stroke and light-brown portion submarginally at apex, from submarginal area to wing angle light-brown band with transverse pattern of thin transverse undulated strokes, cubitally an expressed reticulated pattern of thin brown strokes. Fringe brown. Hind wing light-coffee



Figs 6–9. *Gentilicossus*, male, genitalia: 6 — *G. alexi*, **sp.n.**, male, holotype (ZISP, Genital preparation № 234, A.E. Naydenov); 7 — *G. alexi*, **sp.n.**, male, paratype (RYB, Genital preparation № 271, A. E. Naydenov); 8 — *G. caimancito*, **sp.n.**, male, holotype (ZISP, Genital preparation № 369, A.E. Naydenov); 9 — *G. vogli*, **sp.n.**, male, holotype (ZSM, Genital preparation № 1335). Scale bars: 1 mm.

Рис. 6–9. *Gentilicossus*, гениталии самцов: 6 — *G. alexi*, **sp.n.**, самец, голотип (ZISP, Genital preparation № 234, A.E. Naydenov); 7 — *G. alexi*, **sp.n.**, самец, парати, (RYB, Genital preparation № 271, A.E. Naydenov); 8 — *G. caimancito*, **sp.n.**, самец, голотип (ZISP, Genital preparation № 369, A.E. Naydenov); 9 — *G. vogli*, **sp.n.**, самец, голотип (ZSM, Genital preparation № 1335). Масштаб: 1 мм..

color, with poorly expressed undulated brown pattern.

Male genitalia. Uncus of medium length, apically acute, with sharp lateral processes; gnathos arms very short; gnathos absent; valve directed ventrally, basally swollen, extended, apically slightly narrowing, valve basally with small semicircular two-humped harpe; juxta very robust, with wide process directed abdominally, and two long leaf-like lateral processes; saccus long, of equal thickness throughout all length; phallus equal to valve in length, strongly curved, with hooky process apically, vesica without cornuti.

Female unknown.

DIAGNOSIS. The new species differs sharply from *G. alexi* **sp.n.** and *G. vogli* **sp.n.** in the absence of the process on the outer edge of the valve and in the semicircular two-humped harpe.

DISTRIBUTION. NW Argentina, Jujuy Province.

ETYMOLOGY. The name is toponymic, after the city of Caimancito — a type locality of the new species.

Gentilicossus vogli Yakovlev, Naydenov et Penco, **sp.n.**
Figs 5, 9.

MATERIAL. **Venezuela**: holotype, male, Maracay, 10–15.04.36, leg. P[ater Cornelius]. Vogl (ZSM, Genital preparation № 1335; Prep. N 947 P. Gentili)

DESCRIPTION. Length of fore wing 15 mm. Root area of the fore wing light-brown, discally semicircular brown spot framed in ribbon-like light-coffee color band, postdiscally wedge-like brown portion, submarginally broad round portion, crescent brown stroke and light-brown portion submarginally at apex, cubital area with expressed reticulated pattern of thin brown strokes. Fringe brown. Hind wing light-yellow, without pattern.

Male genitalia. Uncus relatively short, cylindrical, apically semicircular; gnathos arms very short; gnathos absent; valve basally swollen and extended, elongated, apically lanceolate, directed ventrally, with deep cut on outer edge closer to apex, with small slightly acute process on outer edge of valve, small crescent harpe in basal third of valve; juxta robust with pair of long lateral processes; saccus very long, thin, with parallel edges; phallus shorter than valve, almost straight, with obliquely cut apex, vesica without cornuti.

Female unknown.

DIAGNOSIS. The species clearly differs in the male genital structure: the absence of the phallus armaments, the straight phallus and very long saccus. Morphologically, the new species is closer to *G. alexi* **sp.n.**, from which it differs in the thin, acute process on the outer edge of the valve, the deeper cut on the outer edge of the valve and the crescent harpe in the valve basally.

DISTRIBUTION. Venezuela, Aragua State.

ETYMOLOGY. The new species is named after the well-known collector of insects and plants, Cornelius Vogl (1884–1959), the German priest from Lichtenegg bei Regensburg, who was ordained to the Order of Saint Benedict. He carried out missionary work in Dar-es-Salam (1910–1919) and from 1925 in Venezuela. He was based in South American mainly at Maracay and Caracas and later died at Maiquetia in Venezuela.

Acknowledgments. The authors express their gratitude to the Strelkovs, a remarkable family who provided a great assistance in our work in the north of Argentina in 2019, and to Dr. Axel Hausmann (Munich) for the holotype photo (the adult and genitals) of *G. vogli* **sp.n**.

Competing interests. The authors declare no competing interests.

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