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Mahomedella hoggarensis sp. n. (Lepidoptera, Cossidae, Cossinae) from Southern Algeria

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Abstract

The article describes *Mahomedella hoggarensis* sp. nov. distributed in the Hoggar Mountains (Southern Algeria). For the first time, the female genitalia of genus *Mahomedella* Yakovlev, 2011 (Lepidoptera, Cossidae: Cossinae) are described. The map of the genus distribution is given. The article has seven illustrations.

Key words: biodiversity, species richness, Cossidae, Sahara, Palearctica, taxonomy.

Introduction

The genus *Mahomedella* was established by Yakovlev (2011) for *Catopta rungsi* Daniel & Witt, 1974 (by original designation). Until present, the genus has been considered monotypic and distributed only in Southern Morocco (Yakovlev & Dubatolov 2013a, b; Yakovlev 2015). Examining the unique specimens from Hoggar Mountains (Southern Algeria), kept in the private collection of G. Müller (Munich) we have revealed a new species of this little studied genus, its description is provided below.

Material and methods

The male genitalia were mounted in Euparal on slides following Lafontaine & Mikkola (1987). The slides were photographed using an Olympus DP74 camera attached to an Olympus SZX16 stereomicroscope at the Altai State University. The type of material is deposited in the MNHN - Muséum National d'Histoire

Naturelle (Paris, France) and private collection of G. Müller (Freising, Germany). The images were processed using Corel Photo-Paint 2017 software.

Taxonomical part

Description of new species

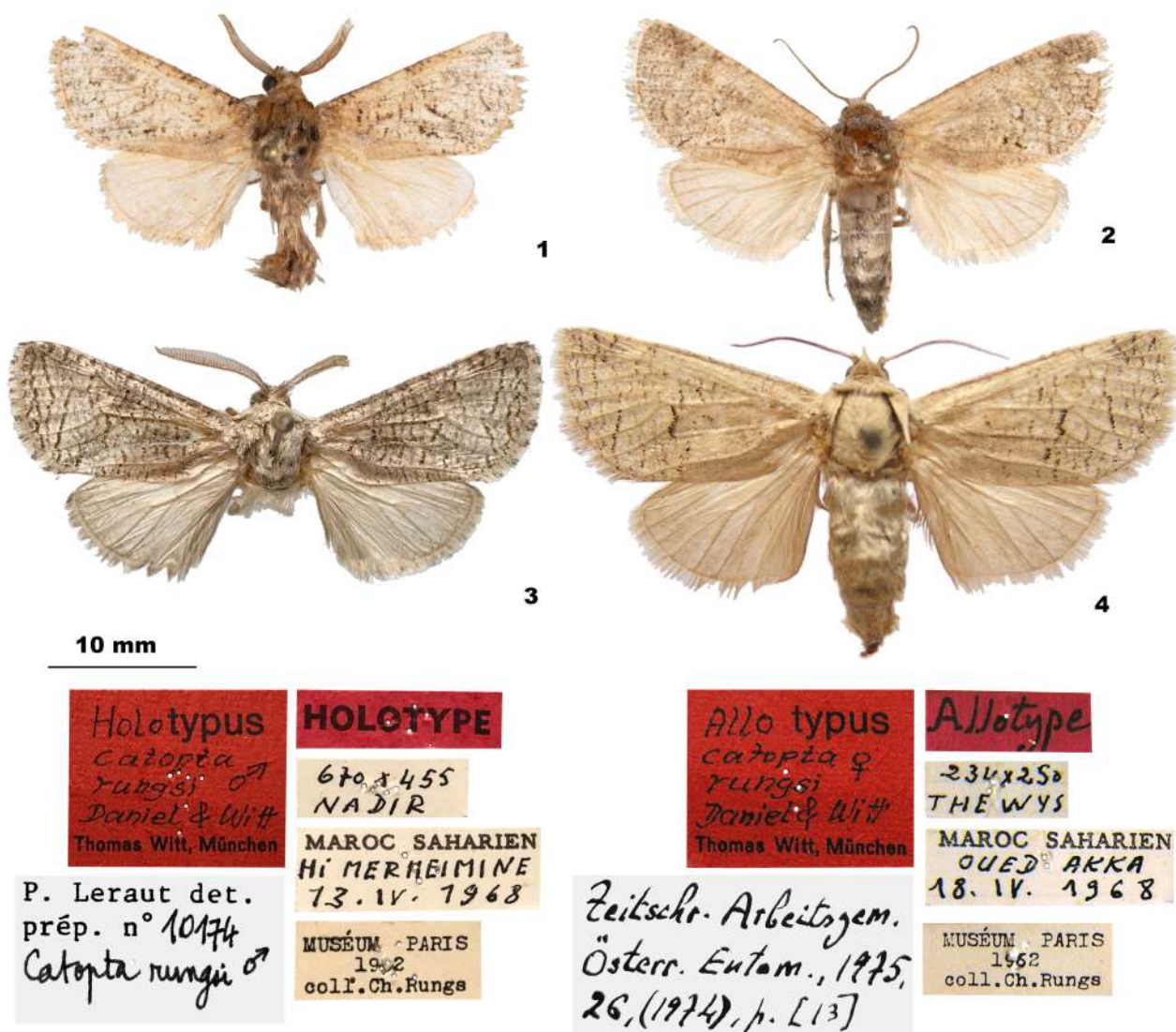
Mahomedella hoggarensis sp. n.

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Figs 1–2, 5–7

Material. Holotype, male, South Algeria, Hoggar Mts., 1600–2400 m, Aug. 2010, leg. Müller & Mooser (private collection of G. Müller, Freising). Paratypes: 3 males, 1 female, same locality and data (private collection of G. Müller, Freising).

Description. Male. Length of fore wing 13 mm. Thorax and abdomen densely covered with light-brown scales. Antenna in length about half of fore wing, bipectinate, setae 3.5–4 times longer than antenna stem in diameter. Fore wing light-yellow, poorly modified pattern of thin wavy brown strokes, big brown strokes only in cubital area, fringe light-yellow, unicolorous. Hind wing light-yellow without pattern.



Figures 1–4. Adult specimens of *Mahomedella*: 1. *M. hoggarensis* sp. n., male, holotype; 2. *M. hoggarensis* sp. n., male, paratype; 3. *M. rungsi*, male, holotype and labels (MNHN); 4. *M. rungsi*, female, allotype and labels (MNHN).

Male genitalia. Uncus robust, apically semicircular; gnathos arms thick, gnathos poorly sclerotized, covered with fine spikes; valve wide, cup-like, distally membranous (by one fourth of valve length), costal margin (on border between medium and distal thirds) with small sclerotized crest; transtilla process very thick basally, uncinately curved, apically acute; juxta tapered with pair of long lateral processes, diverged at an angle of 90°; saccus semicircular, of medium size; phallus shorter than valve by one third, strongly curved, vesica aperture in dorso-apical position, 1/3 of phallus in length, vesica without cornuti.

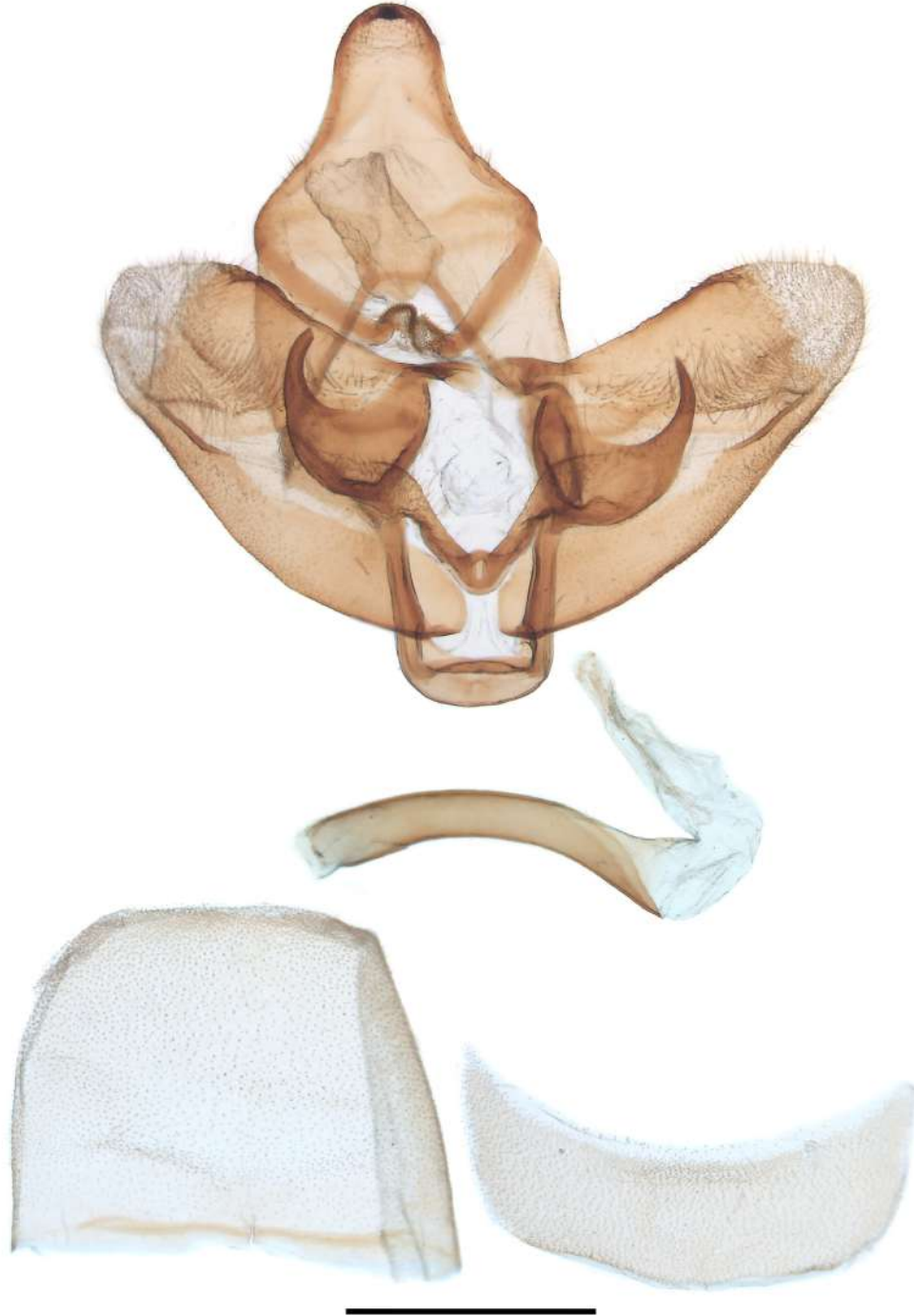


Figure 5. Genitalia of *M. hoggarensis* sp. n., male, holotype (slide Prozorov 2022/0455).

Female. Length of fore wing 15 mm. Thorax and abdomen densely covered with light-brown scales. Antenna in length about half of fore wing, with tiny denticles (processes about half of antenna stem in diameter). Pattern on wings the same as that of male.

Female genitalia. Papillae anales tapered; apophyses posteriores twice longer than apophyses anteriores, poorly expressed oblique notch on lateral surfaces of ovipositor; ostium slit-like; antrum short, sclerotized; ductus bursae copulatrix long, membranous; ductus seminalis thin, passing from basal wall of bursa copulatrix; bursa copulatrix shaped as elongated bag, without signa.

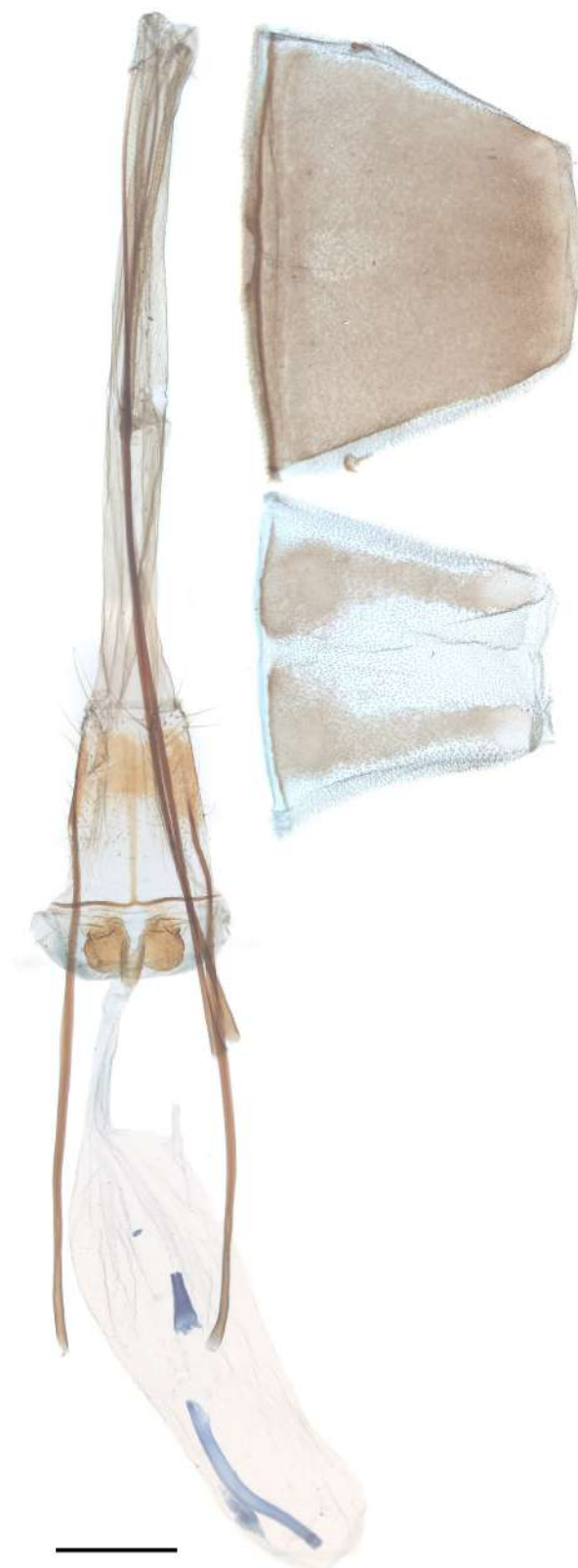


Figure 6. Genitalia of *M. hoggarensis* sp. n., female, paratype (slide Prozorov 2022/0454).

Diagnosis. The new species clearly differs from the previously known species *M. rungsi* in a series of characters:

- in the males of *M. hoggarensis*, the fore wing pattern is very poorly developed (in *M. rungsi* the reticulated pattern on the fore wing is well expressed);
- The transtilla process in *M. hoggarensis* is very thick basally (in *M. rungsi* the transtilla process base is significantly thinner);
- in *M. hoggarensis* the crest on the costal margin of valve is more developed than in *M. rungsi*.

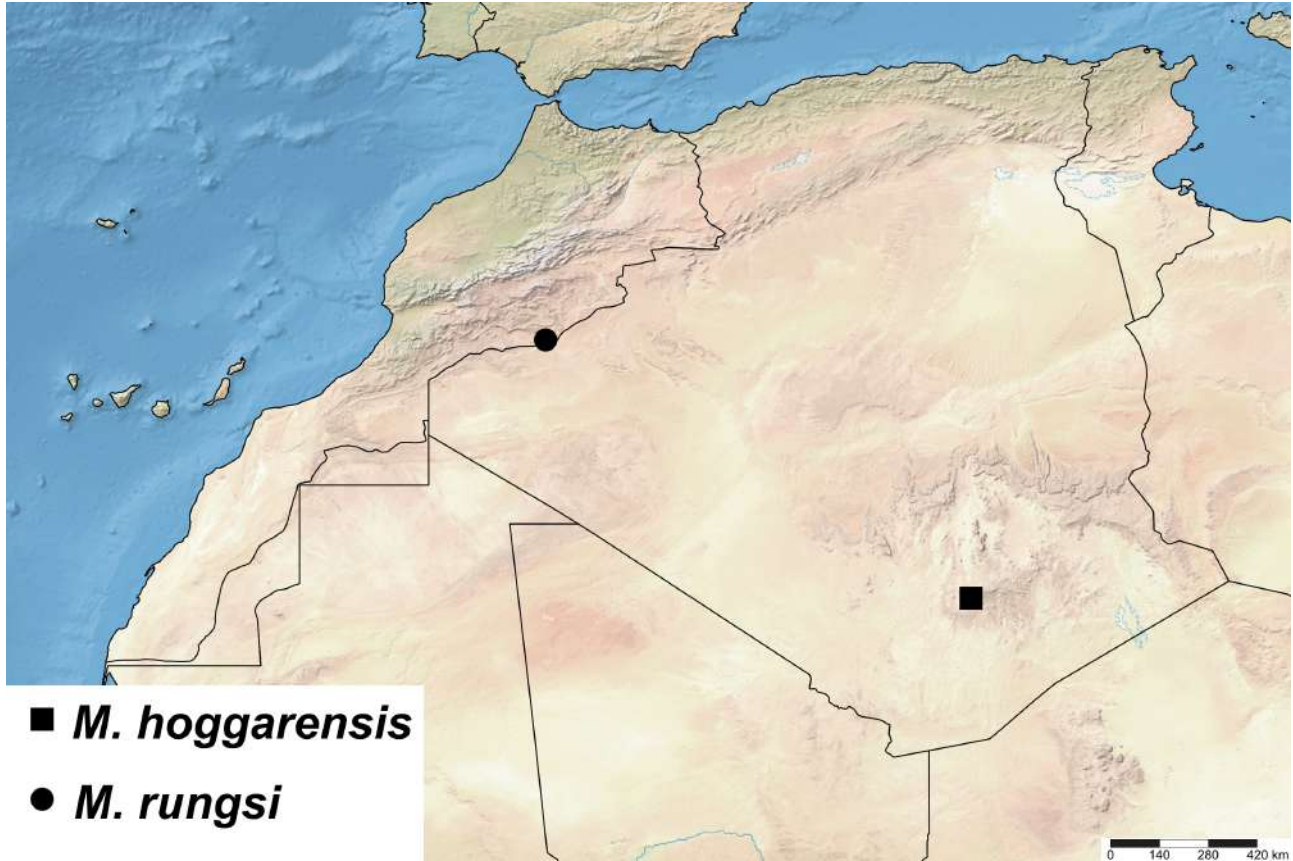


Figure 7. Distributional map of *Mahomedella*.

Catalogue of Genus

Mahomedella Yakovlev, 2011

Yakovlev, 2011: 11.

Type species: *Catopta rungsi* Daniel & Witt, 1974, by original designation.

Distribution: South-Western part of Sahara desert.

Composition: two species.

Mahomedella hoggarensis sp. n.

Type locality: South Algeria, Hoggar Mts.

Type material (holotype, male) in the private collection of G. Müller, Freising.

Distribution: Southern Algeria.

***Mahomedella rungsi* (Daniel & Witt, 1974)**

Figs 3–4, 7

Catopta rungsi Daniel & Witt, 1974, Z. Arb. österr. Ent. 26 (1): 13–14, g. 9–10.

Type locality: Maroc Saharien, Hi Merheimine [Morocco, Drâa-Tafilalet Region, Errachidia Province, 31.19955723393285, -3.5949628263155886].

Type material (holotype, male) in MNHN.

Distribution: Morocco (Rungs 1979).

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References

- Daniel, F. & Witt, T. (1974) Beiträge zur Lepidopterenfauna Marokkos - Bombyces et Sphinges. *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen*, 26 (1), 1–15.
- Lafontaine, J.D. & Mikkola, K. (1987) Lock-and-key system in the inner genitalia of Noctuidae (Lepidoptera) as taxonomic character. *Entomologiske Meddelelser*, 55, 161–167.
- Rungs, Ch.E.E. (1979) Catalogue raisonné des Lépidoptères du Maroc, Inventaire Faunistique et observations écologiques. Tome 1. *Travaux de l'Institut Scientifique, Rabat, Série Zoologie*, 39, 1–222.
- Yakovlev, R.V. (2011) Catalogue of the family Cossidae of the Old World (Lepidoptera). *Neue Entomologische Nachrichten*, 66, 1–129.
- Yakovlev, R.V. (2015) Patterns of Geographical Distribution of Carpenter Moths (Lepidoptera: Cossidae) in the Old World. *Contemporary Problems of Ecology*, 8 (1), 36–50.
<https://doi.org/10.1134/S1995425515010151>
- Yakovlev, R. V., & Dubatolov, V. V. (2013a) Distribution of Carpenter-Moths (Lepidoptera, Cossidae) in Palaearctic Deserts. *Zoologicheskyy Zhurnal*, 92(6), 682–694. [in Russian]
<https://doi.org/10.7868/S0044513413040193>
- Yakovlev, R.V. & Dubatolov, V.V. (2013b) Distribution of Carpenter-Moths (Lepidoptera, Cossidae) in the Palaearctic Deserts. *Entomological Review*, 93 (8), 991–1004.