

New species of the Genus *Afrikanetz* Yakovlev, 2009 from Republic of Côte d'Ivoire (Lepidoptera: Cossidae, Cossinae)

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Abstract

The article describes *Afrikanetz schouteni* Yakovlev, sp. n., distributed in the Republic of Côte d'Ivoire. The article has two illustrations.

KEY WORDS: Lepidoptera, Cossidae, Cossinae, biodiversity, species richness, taxonomy, new species, Côte d'Ivoire.

**Nueva especie del género *Afrikanetz* Yakovlev, 2009 de la República de Costa de Marfil
(Lepidoptera: Cossidae, Cossinae)**

Resumen

El artículo describe *Afrikanetz schouteni* Yakovlev, sp. n., distribuido en la República de Costa de Marfil. El artículo tiene dos ilustraciones.

PALABRAS CLAVE: Lepidoptera, Cossidae, Cossinae, biodiversidad, riqueza de especies, taxonomía, nueva especie, Costa de Marfil.

Introduction

The genus *Afrikanetz* was established by YAKOVLEV (2009: 358) for *Afrikanetz inkubu* Yakovlev, 2009 (by original designation). That article described two more species of this genus (YAKOVLEV, 2009). Later MEY (2017), YAKOVLEV & WITT (2019), and YAKOVLEV (2021) described seven species from different parts of Africa (from Côte d'Ivoire to the Republic of South Africa). One species (*A. makumazan* Yakovlev, 2009) was found in the south-west of Saudi Arabia (Jedda). Thus, the genus *Afrikanetz* is one of the few Cossidae genera, distributed in the south and south-west of the Arabian Peninsula and also widely spread in the Afro-tropics (YAKOVLEV & DUBATOLOV, 2013a, b; YAKOVLEV, 2015). These genera include *Camellocossus* Yakovlev, 2009 (type species - *Cossus abyssinica* Hampson, 1910), *Aethalopteryx* Schoorl, 1990 (type species - *Phragmatoecia atrireta* Hampson, 1910), *Afroarabiella* Yakovlev, 2008 (type species - *Cossus tahamae* Wiltshire, 1949), and *Meharia* Chrétien, 1915 (type species - *Meharia incurvariella* Chrétien, 1915). Their distribution is described in detail in a series of publications (WILTSHIRE 1980a, b, 1982, 1983, 1986, 1990; BORTH *et al.*, 2011; YAKOVLEV *et al.*, 2013; YAKOVLEV, 2014; HACKER, 2016). The representatives of *Meharia* penetrate even deeper into Eurasia (through the Middle East and Central Asia, their habitat reaches the South Volga region) (KOMAROV & ZOLOTUHIN, 2005; ALIPANAH *et al.*, 2021).

Examining the materials in Natural History Museum, London (NHMUK) I found a new species of the genus *Afrikanetz* Yakovlev, 2009 from the Republic of Côte d'Ivoire, its description is given in this article.

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 NHMUK. The images were processed using Corel Photo-Paint 2017 software.

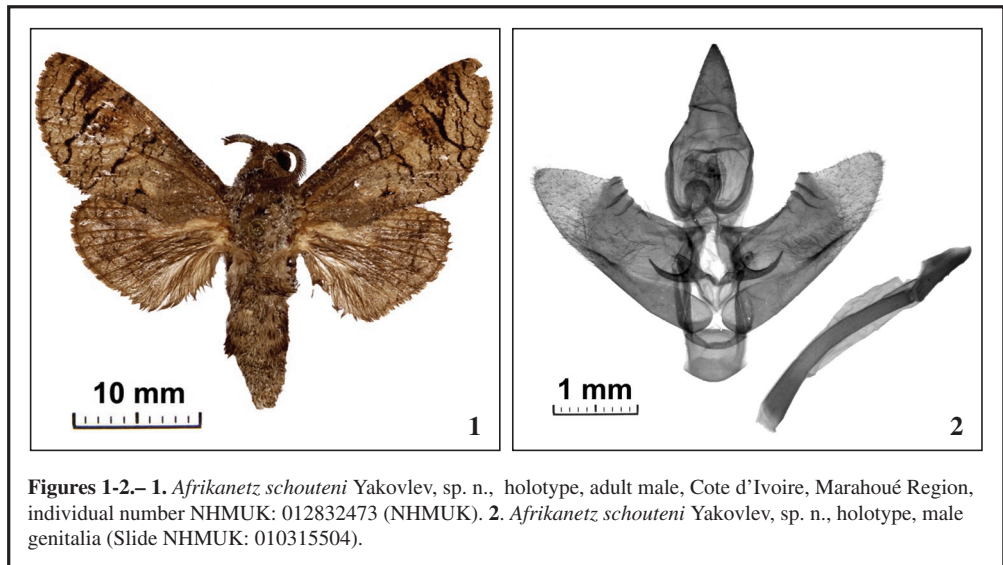
Taxonomical part

Afrikanetz schouteni Yakovlev sp. n. (Figs 1-2)

Material: Holotype 1 ♂ (Fig. 1), “Cote d’Ivoire [Marahoué Region, 230 km northwest of Abidjan], Bouaflé, R.T.A. Schouten & J. R. M. Buijsen”; “Bouïtha [6°40’N, 5°42’W], near Degbézéré, 15 km E Bouaflé, 7-II-1984, at light”, individual number NHMUK: 012832473, slide NHMUK: 010315504 (NHMUK).

Description Male: Wingspan 34 mm, length of fore wing 16 mm. Antennae bipectinate, setae long, setae processes 2.5 times longer than antenna rod diameter. Fore wing grey-brown, dark, with thin transverse black wavy bands discally and postdiscally, light-brown portion with blurred margins postdiscally, tiny transverse black strokes throughout all wing area except for root area. Fringe brown unicolorous. Hind wing grey-brown with hardly noticeable black pattern of strokes, fringe brown.

Male genitalia (Fig. 2): Uncus of medium length, shaped as acute triangle; gnathos arms thick, long; gnathos robust, covered with tiny spikes; valve lanceolate, of medium length, membranous in apical third, apex narrow, lanceolate, crest-like process with three transverse strongly sclerotized ribs on costal margin of valve; transtilla process hook-like, acute, of medium length; juxta saddle-like, robust, with two lateral processes, diverged at an angle of 100°; saccus robust, trapezoidal; phallus equal to valve in length, thin, poorly curved along all length, with several small prongs on abdominal surface (in distal third), vesica aperture in dorso-apical position, about 1/3 of phallus in length, vesica without cornuti.



Female unknown.

Diagnosis: The new species clearly differs in the relatively dark color and in the male genital structure details - the relatively short transtilla processes (Fig. 2). In this feature, the new species is similar to *A. dargei* Yakovlev, 2019 and *A. hoppei* Yakovlev, 2019, from which it differs in a series of characters:

- the lanceolate apex of the valve (in *A. dargei* Yakovlev, 2019 and *A. hoppei* Yakovlev, 2019, the apex of the valve is semicircular).
- the long triangular uncus (in *A. dargei* Yakovlev, 2019 and *A. hoppei* Yakovlev, 2019, the uncus is shorter and has a semicircular apex).
- the series of small prongs on the abdominal margin of the phallus (preapically) (in *A. dargei* Yakovlev, 2019 and *A. hoppei* Yakovlev, 2019 there are one or two prongs).
- the strongly diverged lateral processes of the juxta, at about 100° (in *A. dargei* Yakovlev, 2019 and *A. hoppei* Yakovlev, 2019, the lateral processes of the juxta are diverged at an acute angle).

Distribution: Côte d'Ivoire, Marahoué Region.

Habitat: The information about the habitat conditions of the new species is described in such detail in the excellent article of LEHMANN (2011) that it would be better to quote this paragraph verbatim. "Habitat of type locality: Bouïtha (ca. 6°40'N, 5°42'W; altitude 250 m, average annual rainfall 1350 mm) is a village located ca. 15 km south of Bouaflé, ca. 3 km from the village Degbézéré (south-central Côte d'Ivoire), and ca. 230 km northwest of Abidjan. The area is at a border line between the "Guineo-Congolian regional centre of endemism" and the "Guinea-Congolia/Sudania regional transition zone" sensu WHITE (1983). Bouïtha belongs also to an area where Guinean savanna penetrates the Upper Guinea rain forest zone in a region called "V-Baoulé." Despite this, Bouïtha is surrounded by semi-deciduous forests located in a forest-agricultural land mosaic. Characteristic species of those semi-deciduous forests that represent the northern limit of the forest zone in Côte d'Ivoire are *Aubrevillea kerstingii* (Harms) Pellegr. (Fabaceae) and *Khaya grandifoliola* C. DC. (Meliaceae). The former genus is endemic to the Guineo-Congolian Region, the latter species is an Upper Guinea endemic that represents a link from these semi-deciduous forests to the rain forest block of Upper Guinea. Additional species around Bouïtha include *Diospyros abyssinica* (Hiern) F. White (Ebenaceae), *Ricinodendron heudelotii* (Baill.) Pierre (Euphorbiaceae), *Chrysophyllum giganteum* A. Chev. (Sapotaceae), *Celtis mildbraedii* Engl. (Cannabaceae), *Triplochiton scleroxylon* K. Schum. and *Nesogordonia papaverifera* (A. Chev.) Capuron (Malvaceae) (KOUAMÉ *et al.*, 2004)".

Etymology: The new species is named after Rob Schouten, a well-known Dutch entomologist.

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BIBLIOGRAPHY

- ALIPANAH, H., YAKOVLEV, R., FALSAFI, H., WITT, Th. & SALDAITIS, A., 2021.– Cossidae (Lepidoptera) of Iran: a review with description of two new species.– *Zootaxa*, **5062**: 1-100. Doi: 10.11646/zootaxa.5062.1.1.
- BORTH, R., IVINSKIS, P., SALDAITIS, A. & YAKOVLEV, R., 2011.– Cossidae of the Socotra Archipelago (Yemen).– *ZooKeys*, **122**: 45-69.
- HACKER, H. H., 2016.– Systematic and illustrated catalogue of the Macroheterocera and Superfamilies Cossoidea Leach, [1815], Zygaenoidea Latreille, 1809, Thyridoidea Herrich-Schäffer, 1846 and Hyblaeoidea Hampson, 1903 of the Arabian Peninsula, with a survey of their distribution (Lepidoptera).– *Esperiana*, **20**: 7-742.

- KOMAROV, D. & ZOLOTUHIN, V., 2005.– A new species of *Meharia* Chrétien, 1915 (Cossidae) from the Lower Volga Region.– *Nota lepidopterologica*, **28**(1): 49-54.
- KOUAMÉ, F. N'., KOUADIO, K. E., KOUASSI, K. & POORTER, L., 2004.– Floristic diversity of closed forests in Côte d'Ivoire: 53-59.– In L. POORTER, F. BONGERS, F. N'. KOUAMÉ & W. D. HAWTHORNE (Eds.). *Biodiversity of West African forests: an ecological atlas of woody plant species*: 528 pp. Oxford University Press, Oxford.
- 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.
- LEHMANN, I., 2011.– *The description of a new genus and twenty-three new species of Metarbelidae (Lepidoptera: Cossioidea) from the lowland tropical rain forests of the Guineo-Congolian Region with notes on habitats and biogeography*: 1-67 + 10 b/w pls., 6 colour pls., 1 coloured map. Published by the author, Hamburg.
- MEY, W., 2017.– Corrections and additions to the Cossidae of southern Africa (Lepidoptera: Cossioidea).– *Entomologische Zeitschrift*, **127**(4): 218-222.
- WHITE, F., 1983.– *The Vegetation of Africa: a Descriptive Memoir to Accompany the Unesco/ AETFAT/UNSO Vegetation Map of Africa*: 356 pp. Natural Resources Research XX. Unesco, Paris.
- WILTSHIRE, E. P., 1980a.– Insects of Saudi Arabia. Lepidoptera: Fam. Cossidae, Limacodidae, Sesiidae, Lasiocampidae, Sphingidae, Notodontidae, Geometridae, Lymantriidae, Nolidae, Arctiidae, Agaristidae, Noctuidae, Ctenuchidae.– *Fauna of Saudi Arabia*, **2**: 179-240.
- WILTSHIRE, E. P., 1980b.– The larger Moths of Dhofar and their Zoogeographic Composition. In The Scientific Results of the Oman Flora and Fauna Survey 1977 (Dhofar).– *The Journal of Oman Studies*, (Special report 2): 187-216.
- WILTSHIRE, E. P., 1982.– Insects of Saudi Arabia. Lepidoptera: Fam. Cossidae, Zygaenidae, Sesiidae, Lasiocampidae, Bombycidae, Sphingidae, Thaumetopoeidae, Thyretidae, Notodontidae, Geometridae, Lymantriidae, Noctuidae, Ctenuchidae (Part 2).– *Fauna of Saudi Arabia*, **4**: 271-331.
- WILTSHIRE, E. P., 1983.– Insects of Saudi Arabia. Lepidoptera: Fam. Cossidae, Sphingidae, Thyretidae, Geometridae, Lymantriidae, Arctiidae, Agaristidae, Noctuidae, Ctenuchidae (Part 3).– *Fauna of Saudi Arabia*, **5**: 293-332.
- WILTSHIRE, E. P., 1986.– Lepidoptera of Saudi Arabia: Fam. Cossidae, Sesiidae, Metarbelidae, Lasiocampidae, Sphingidae, Geometridae, Lymantriidae, Arctiidae, Nolidae, Noctuidae (Heterocera); Fam. Satyridae (Rhopalocera) (Part 5).– *Fauna of Saudi Arabia*, **8**: 262-323.
- WILTSHIRE, E. P., 1990.– An illustrated annotated catalogue of the Macro-Heterocera of Saudi Arabia.– *Fauna of Saudi Arabia*, **11**: 91-250.
- YAKOVLEV, R. V., 2014.– A new species of *Meharia* Chrétien, 1915 (Lepidoptera, Cossidae) from the United Arab Emirates, with a world catalogue of the genus.– *Zootaxa*, **3895**(3): 401-410. Doi: 10.11646/zootaxa.3895.3.4.
- 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. Doi: 10.1134/S1995425515010151.
- YAKOVLEV, R. V., 2021.– *Afrikanetz kruegeri* - New species of Cossinae (Lepidoptera, Cossidae) from Namibia.– *Ecologica Montenegrina*, **40**: 125-127. Doi: 10.37828/em.2021.40.10.
- YAKOVLEV, R. V. & DUBATOLOV, V. V., 2013a.– Distribution of Carpenter-Moths (Lepidoptera, Cossidae) in the Palaearctic Deserts.– *Zoologicheskii Zhurnal*, **92**(6): 682-694. Doi: 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.
- YAKOVLEV, R., IVINSKIS, P., RIMSAITĖ, J. & SALDAITIS, A., 2013.– Description of two new species of *Meharia* Chrétien, 1915 (Lepidoptera: Cossidae) from East Africa.– *Zootaxa*, **3635**(5): 587-590.
- YAKOVLEV, R. V. & WITT, Th., 2019.– Review of genus *Afrikanetz* Yakovlev, 2009 (Lepidoptera: Cossidae) with descriptions of four new species and establishment of new combination for *Coryphodema zimbabwensis* Mey, 2017 and *Camellocossus austrorum* Mey, 2017.– *Russian Entomological Journal*, **28**(3): 317-322. Doi: 10.15298/rusentj.28.3.11.

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