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Article

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New species of the genus *Afrikanetz* Yakovlev, 2009 (Lepidoptera: Cossidae, Cossinae) from the Hoggar Mountains (Southern Algeria)

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Abstract
The article describes a new species, *Afrikanetz foucauldi* sp. nov. (type locality: South Algeria, Hoggar Mts.) (Lepidoptera, Cossidae: Cossinae). The descriptions are provided with a detailed diagnosis and illustrations.

Key words: taxonomy, carpenter-moths, biodiversity, Algeria, Sahara.

Introduction

The Hoggar Mountains is an isolated mountain range in Southern Algeria with a height up to 3,003 m (Tahat Mt.). It covers an area of approximately 550,000 km^2. The Mountains are located in the eco-zone of the tropical / subtropical arid areas with a pronounced continental climate due to the large distance to the coast. This results in an arid desert climate with hot summers and cold winters. Climate extremes are exacerbated by the altitude. Crossed by the tropic of cancer (22° 33'N), the Hoggar is influenced by two climatic regimes: the moderate Mediterranean regime and the Sudanese tropical regime. With its unique geographical positioning, Hoggar rests in an ecological shelter of strong floristic and faunistic diversity. Several types of floras are differentiated according to their biogeographic origins: Mediterranean, Saharo-Sindian, Sudano-Decanian, cosmopolitan and endemic elements. Floristic diversity is presently estimated at about more than 290 species with high levels of endemism (about 10%) (Ozenda 1983; Sahki & Sahki-Boutamine 2004; Chenoune 2005; Ramdane et al. 2015).

The Lepidoptera of the Hoggar Mountains are still studied fragmentarily. Several publications provided the primary data on the fauna (Rothschild 1915, 1916; Riley 1934; Speidel & Hassler 1989; Speidel et al. 1991), which later turned to be incomplete. Long-term field research was conducted from late May to

December 2010 and from January to November 2011 by G. Müller. He organized teams of local nomads to collect the entomological materials with automatic traps powered by solar panels. The project was sponsored by him, J. Mooser and U. Eitschberger. Based on these rich materials, so far only an article on the Sphingidae fauna has been published (Eitschberger et al. 2014). The authors published the faunal list where the fauna of hawk-moths was enlarged from 2 to 17 species. Similar results are expected for other groups of Lepidoptera. In the material collected in the Hoggar mountains (Southern Algeria) we have found a new species of the genus *Afrikanetz.* Its description is provided below.

The genus *Afrikanetz* Yakovlev, 2009 (Lepidoptera: Cossidae, Cossinae) includes ten species widely spread in tropical Africa (from Côte d'Ivoire to South Africa) and one species in the southern portion of Saudi Arabia (Yakovlev 2009, 2021, 2022; Mey 2017; Yakovlev & Witt 2019). The genus representatives from the wide belt of Sahel and Sahara Desert remained unknown. The genus *Afrikanetz* is one of the smallest genus group of Cossidae distributed in tropical Africa and widely spread in Eurasia, like *Camellocossus* Yakovlev, 2009; *Afroarabiella* Yakovlev, 2008; *Aethalopteryx* Schoorl, 1990; and *Meharia* Chrétien, 1915 (Wiltshire 1990; Yakovlev & Dubatolov 2013; Yakovlev 2015; Hacker 2016).

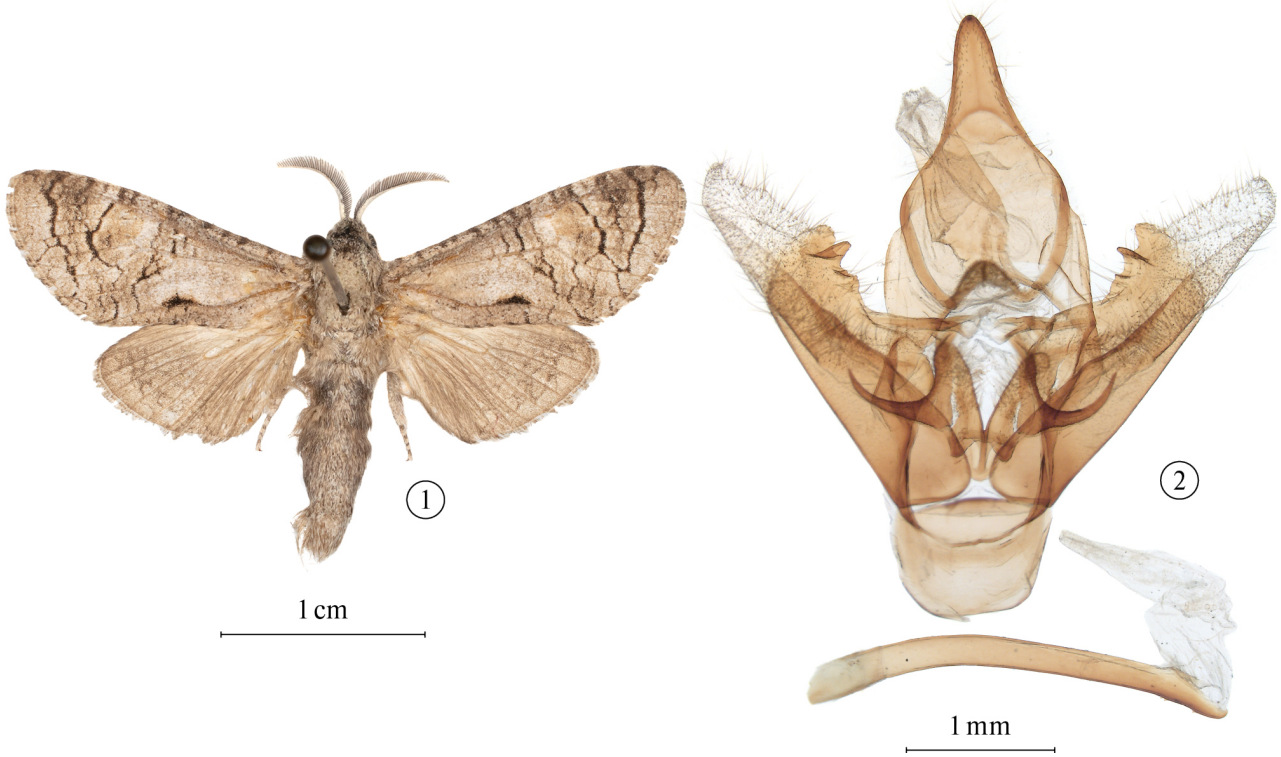
Material and methods

The male genitalia were mounted in Euparal on slides following Lafontaine and Mikkola (1987). Adults were photographed with an Olympus C750UZ, a Nikon D3300 and a Nikon 40 mm f/2.8G. Morphologic preparations were photographed using a Leica MC170 HD. All images were processed in Photoshop CS6 (Adobe, 2012).

Taxonomical part

Description of new species

***Afrikanetz foucauldi* sp. nov.**
https://zoobank.org/urn:lsid:zoobank.org:act:4E1EC9CC-8AAF-4765-B0B0-01DE3CD57535
Figs 1–2



Figures 1–2. *Afrikanetz foucauldi* **sp. nov.**, holotype male and its genitalia (slide Prozorov 2022/0450; private collection of G. Müller, Freising, Germany / Bamako, Mali).

Material. Holotype, male, South Algeria, Hoggar Mts., 1600–2400 m, Febr. 2011, leg. Müller & Mooser; slide Prozorov 2022/0451). Paratype: 1 male, same locality and data (both specimens deposited in research collection of G. Müller, Freising, Germany / Bamako, Mali).

Description. Male. Length of fore wing 15–16 mm. Antenna equal to 1/3 of fore wing in length, bipectinate, setae three times longer than antenna stem in diameter. Thorax and abdomen densely covered with light-brown scales. Fore wing light-brown with fine black strokes along costal margin, thin black wavy lines from discal portion to submarginal area (most bright discally and submarginally), small black elongated stroke in medium portion of vein Cu_1, poorly expressed light-brown portion postdiscally (in area of radial trunk veins), fringe mottled, darker at veins, lighter between veins. Hind wing light-brown, with hardly visible grey reticulated pattern, fringe mottled, darker at veins, lighter between veins.

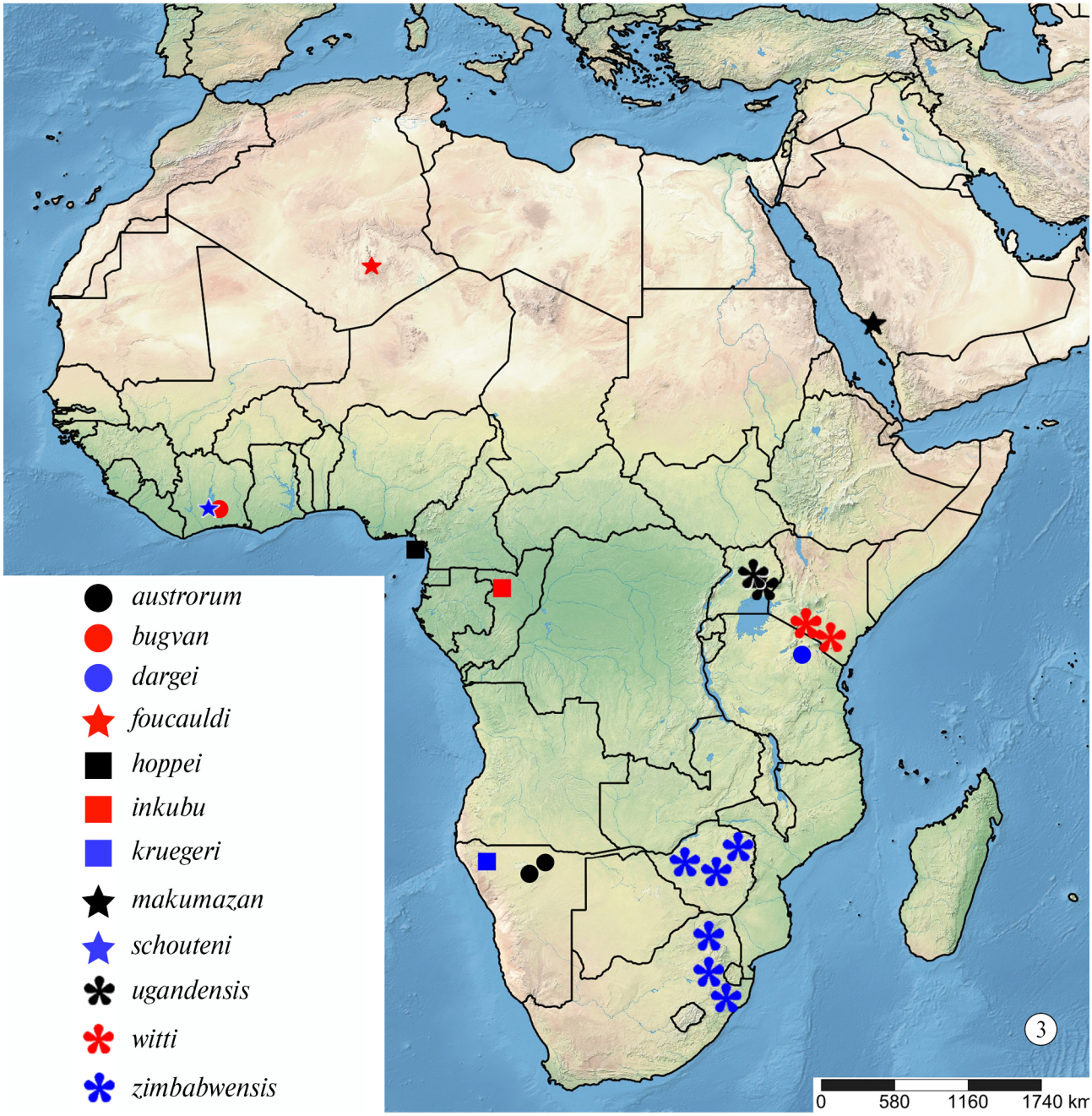


Figure 3. Distribution map of *Afrikanetz* spp.

Male genitalia. Uncus tapered, of medium length, apically poorly acute; gnathos arms of medium thickness and length; gnathos roll-shaped, densely covered with tiny spikes; valve with clearly expressed sacculus, apical third of valve membranous, apex of valve lanceolate; costal margin of valve (in medium third) with robust strongly sclerotized crest of three expressed peaks (the most pronounced peak is the middle one); transtilla process long, relatively thin, poorly curved throughout all length, distally gradually narrowing, apically acute; juxta tapered with two long lateral processes diverged at acute angle; saccus robust, cylindrical; phallus relatively thin, slightly shorter than valve, poorly curved throughout all length, abdominal surface of phallus (preapically) with three small spikes – two paired proximally, third one – apically, vesica aperture in dorso-apical position, vesica without cornuti.

Female unknown.

Diagnosis. The species is characterized by the relatively small size and the poorly modified fore wing pattern. It clearly differs from the other species of the genus in the distinctive three-pronged crest on the costal margin of the valve.

Etymology. New species named after Charles Eugène de Foucauld de Pontbriand, Viscount of Foucauld (1858–1916) – a French officer, explorer, geographer, ethnographer, Catholic priest and hermit who lived among the Tuareg people in the Hoggar Mountains. He was assassinated in 1916; canonized by Pope Francis in 2022.

Discussion. The finding of the genus *Afrikanetz* specimen in South Sahara is of interest, since it significantly expands the range of the genus to the north, and is also the first record of the genus in the desert belt of Africa (Fig. 3).

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