Two new species of *Meyoarabiella* Yakovlev, 2008 (Lepidoptera, Cossidae) from Namibia with World Catalogue of the Genus

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**Abstract**  
The article describes two new species *Meyoarabiella naumanni* Yakovlev, **sp. nov.** (Type locality: Namibia, Region Iikaras, Klein Ausvista, Umg. Aus Region, S 26°40′19″ / E 16°14′53″) and *M. vansoni* Yakovlev, **sp. nov.** (Type locality: Namibia, Region Hardap, Umg. Mariental Hardap Damm, S 24°28.869 / E 17°50.364). The article is illustrated with 6 images (photos of the adults, male genitalia of the new species and the map of the genus distribution).

**Key words:** Biodiversity, Africa, taxonomy, new species, fauna, Cossinae, Carpenter-Moths.

**Introduction**

*Meyoarabiella* Yakovlev, 2008 (Lepidoptera, Cossidae) was described as a subgenus for *Afroarabiella (Meyoarabiella) meyi* Yakovlev, 2008 (by original designation) (Yakovlev 2008). W. Mey (2015: 42) attributed the generic status to the taxon *Meyoarabiella* Yakovlev, 2008, indicating its basically different structure of the transtilla processes “In the male genitalia the basal processes of the valvae and their mode of insertion is structurally different”. Mey (2016: 155) described a new species, *M. karooensis* Mey, 2016 (type locality: South Africa: Western Cape, 20 km SW of Oudtshoorn, Min Water Eco Trail, 33°42′32.28″S 22°01′58.7″E). Examining the materials stored in Museum Witt (Munich, Germany) we found two new species, their description is provided below.

**Material and methods**

Specimens were collected by light-traps. Images of imago were taken by the digital camera of Apple iPhone 7, illuminated in Lightbox. The images were processed using CorelDraw software.

Slide-mounted genitalia were photographed with a Canon EOS 600D digital camera mounted on an Olympus U-CTR30-2 trinocular head combined with a Carl Zeiss microscope body. Sets of about 10 images were taken for each specimen and assembled to deep-focused images using Helicon Focus 6 and edited in Adobe Photoshop CS5.
Taxonomical part

Descriptions of new species

**Meyoaarabiella naumanni** Yakovlev, sp. nov.
Figs 1–2, 4, 6–7

**Material.** Holotype (male): Namibia, Region Iikaras, Klein Ausvista, Umg. Aus Region, 1471 m, S 26º40′19″ / E 16º14′53″, 01.ii.2016, leg. H. Sulak, S. Naumann & Elk Ott (Museum Witt, Genital Präparat Heterocera No. 32.731). Paratype (1 male), same locality (Museum Witt, Genital Präparat Heterocera No. 37.160).

**Description.** Antenna bipectinate, crest processes long, 3−3.5 times longer than antenna rod diameter. Male fore wing 10−13 mm in length (holotype – 10 mm). Fore wing brown, with sputtering of silver-grey scales at root and discally, series of big blurred dark-brown spots postdiscally (partially fused into wide transverse band), thin dark-brown transverse line submarginally, very thin light stripe on border of wing, fringe brown, unicolorous. Hind wing brown, without pattern, very thin light stripe on border of wing, fringe brown, unicolorous.

Male genitalia. Uncus long, thin, gnathos arms relatively robust, short; gnathos compact, covered with fine spikes; valve narrow, long, outer edge semicircular, costal and abdominal edge almost smooth; transtilla processes short, laminated, apically strongly curved and tapered, apical end strongly serrated (dorsally and abdominally); juxta tiny, with wide leaf-like lateral processes, saccus almost reduced; phallus short, robust, strongly curved in medium third, with needle-like cornutus in vesica.

**Diagnosis.** The new species is characterized by the bright dark coloring, and the transtilla processes apically strongly serrated (dorsally and abdominally).

**Etymology.** The new species is named after the well-known German entomologist Stephan Naumann – specialist in Saturniidae, one of the collectors of both new species.

**Meyoaarabiella vansoni** Yakovlev, sp. nov.
Figs 3, 5, 6, 8

**Material.** Holotype (male): Namibia, Region Hardap, Umg. Mariental Hardap Damm, 1190 m, S 24º28.869 / E 17º50.364, 31.i.2016, leg. H. Sulak, S. Naumann & Elk Ott (Museum Witt, Genital Präparat Heterocera No. 32.730).

**Description.** Antenna bipectinate, crest processes long 3−3.5 times longer than antenna rod diameter, Antenna 1.5 times shorter than fore wing in length. Length of fore wing 9 mm. Fore wing grey with brown portions basally and discally, thin dark-brown transverse line submarginally, very thin brown stripe on border of wing, fringe brown, unicolorous. Hind wing brown, without pattern, very thin brown stripe on border of wing, fringe brown, unicolorous.

Male genitalia. Uncus relatively short, robust; gnathos arms relatively short, robust; gnathos small, narrow, densely covered with fine spikes; valve short, wide, outer edge rounded, costal edge smooth, abdominal edge oblique, gradually narrowing from base to apex; transtilla processes short, laminated, apices slightly curved, dorsal surface preapically serrated; juxta tiny, with wide leaf-like lateral processes; saccus almost reduced; phallus robust, short, straight, caudal end oblique, vesica without cornutus.

**Diagnosis.** The new species is characterized by the small size and the absence of cornutus in the vesica.

**Etymology.** The new species is named after the well-known South-African entomologist, Dr. Georg Van Son (1898–1967). Dr. Georg Van Son (1898–1967) was a son of the Dutch diplomat Stefan Van Son (1861-
1918) and the Russian countess Natalia Evgrafovna Komarovskaya. After the death of his father in the Civil War, the family emigrated to the Netherlands. George became a zoologist and after a 2-year internship in London received an invitation to Pretoria, where he worked without fail in the entomological department of the Transvaal Museum for 42 years. He is the author of many publications on entomology and of the 4-volume Atlas of South African Butterflies. In his free time he was occupied with his hobby - orchids (Shergalin 2013).

Figures 1–5. Adult males and male genitalia of Meyoarabiella Yakovlev, 2008 (Museum Witt, Munich, Germany): 1. *M. naumanni* Yakovlev, sp. nov., holotype; 2. *M. naumanni* Yakovlev, sp. nov., paratype; 3. *M. vansoni* Yakovlev, sp. nov., holotype; 4. Genitalia of holotype *M. naumanni* Yakovlev, sp. nov. (Genital Präparat Heterocera No. 32.731); 5. Genitalia of holotype *M. vansoni* Yakovlev, sp. nov. (Genital Präparat Heterocera No. 32.730).
Figure 6. Distributional map of Meyoarabiella Yakovlev, 2008.

Catalogue of the Genus Meyoarabiella Yakovlev, 2008

Meyoarabiella Yakovlev, 2008
Yakovlev, 2008, *Atalanta*, 39 (1−4): 391

Type species (by original designation) *Afroarabiella (Meyoarabiella) meyi* Yakovlev, 2008
Composition. Four species: *M. karooensis* Mey, 2016, *M. meyi* (Yakovlev, 2008), *M. naumanni* Yakovlev, sp. nov., and *M. vansoni* Yakovlev, sp. nov.

Distribution (Fig. 6). Deserts Regions of South-Western Africa: South Africa (Northern and Western Cape Provinces), Southern Namibia (Iikaras and Hardap Regions).

*Meyoarabiella karooensis* Mey, 2016
Mey, 2016, *Annals of the Ditsong National Museum of Natural History*, 6: 155.

Type locality: South Africa: Western Cape, 20 km SW of Oudtshoorn, Min Water Eco Trail, 33°42′32.28″S 22°01′58.7″E.

Type material: holotype (male) in Ditsong National Museum of Natural History, Pretoria, South Africa (formerly Transvaal Museum).

Distribution. South Africa: Western Cape Province.

Flight period. December.

*Meyoarabiella meyi* (Yakovlev, 2008)
*Afroarabiella (Meyoarabiella) meyi* Yakovlev, 2008, *Atalanta*, 39 (1−4): 392.

Type locality: RSA [Republic of South Africa], [Northern Cape], Richtersveld Numees, Helskloof Gate.

Type material: holotype (male) in Museum für Naturkunde, Berlin, Germany, examined.

Distribution. South Africa: Northern Cape Province.

Flight period. October.
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Figures 7–8. Photo of type locality of new species: 7. *M. naumanni* Yakovlev, sp. nov., (from https://www.namibweb.com/kav.htm); 8. *M. vansoni* Yakovlev, sp. nov. (photo by Elk Ott).
Meyoarabiella naumannii Yakovlev, sp. nov.
Type locality: Namibia, Region Iikaras, Klein Ausvista, Umg. Aus Region, S 26°40′19″ / E 16°14′53″.
Type material: holotype (male) in Museum Witt, Munich, Germany, examined.
Distribution. Namibia, Region Iikaras.
Flight period. February.

Meyoarabiella vansoni Yakovlev, sp. nov.
Type locality: Namibia, Region Hardap, Umg. Mariental Hardap Damm, S 24°28.869 / E 17°50.364.
Type material: holotype (male) in Museum Witt, Munich, Germany, examined.
Distribution. Namibia, Region Hardap.
Flight period. January.

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