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## **A new genus and a new species of archaic Chrysopolomidae (Lepidoptera) from Angola**

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### **Abstract**

A new genus *Diquishia* nov.gen. is established for *Diquishia morion* nov.sp.; the genus is placed in Achroceridini and closed with *Strigivenifera* HERING, 1937. A new species, *Diquishia morion* nov.sp. is described from the type locality: "Angola, Huila province, N slopes Mt. Hole, ca. 5 km SSW Bonga, 14°14.983'S / 13°58.097"E, 1053 m". The species *Chrysopoloma ansorgei* BETHUNE-BAKER, 1911, is tentatively attributed to this genus and therefore a new combination is established as *Diquishia ansorgei* (BETHUNE-BAKER, 1911), nov.comb. The lectotype of *Chrysopoloma ansorgei* BETHUNE-BAKER, 1911 is designated (male in the BMNH coll.).

Key words: Lepidoptera, Chrysopolomidae, new genus, new species, *Diquishia*, Afro-tropics, Angola.

## Zusammenfassung

Eine neue Gattung *Diquishia* nov.gen. wird für *Diquishia morion* nov.sp. errichtet. Die Gattung gehört in Achroceridini und steht *Strigivenifera* HERING, 1937 nahe. Eine neue Art, *Diquishia morion* nov.sp., wird vom locus typicus: "Angola, Huila province, N slopes Mt. Hole, ca. 5 km SSW Bonga, 14°14.983'S / 13°58.097"E, 1053 m" beschrieben. *Chrysopoloma ansorgei* BETHUNE-BAKER, 1911, wird in die neue Gattung gestellt: *Diquishia ansorgei* (BETHUNE-BAKER, 1911), nov.comb. Der männliche Lectotypus von *Chrysopoloma ansorgei* BETHUNE-BAKER, 1911 (coll. BMNH) wird designiert.

## Introduction

During a work with this small afrotropical family 2 members were found which could not been attributed to any known genus of the family. One of them was small Angolan species described as *Chrysopoloma ansorgei* by BETHUNE-BAKER in 1911. The specimen could not been dissected so far because new rules of BMNH strongly retarded a taxonomic work; no one similar example was found in any other collections. Very unusual appearance such as protruded veins, absence of prominent discal spot and spread black scales on the wings just doubted its belonging to the family.

It was a fate gift that in 2015 a related specimen was collected also in Angola. Its dissection shown surprisingly that it is a member of archaic lineage of the Achroceridini. It can't be placed in any known genus therefore a new genus is erected here and a new species is described.

## Material and methods

Material studied are from the museums abbreviated here as:

BMNH ..... The Natural History Museum, London, UK;

MWM ..... Entomological Museum Thomas Witt, Munich, Germany.

Other abbreviations used are:

TL = type locality;

TS = type species;

GU = genitalic preparation.

The genitalic preparations for the figures were made using standard dissecting techniques and were mounted in Euparal on glass slides. Photographs of adult, abdomen and male genitalia were taken by an Olympus Camedia C-750 camera with a Soligor Adapter Tube and Slide Duplicator for Digital 10 diopters modified for object glasses.

## ***Diquishia* nov.gen.**

Type species: *Diquishia morion* nov.sp., here designated.

Rather medial sized moths (fore wing length 13-16.6 mm) with rounded short wings without any excavations. Antennae are bipectinate in males, not shorter than ½ length of the fore wing. Spur formula 0-2-2.

Wing pattern strongly reduced, and discal spot absent to a hardly visible one. Veins are characteristically black and therefore protruded on the ground colour.

Venation (in *Diquishia morion* nov.sp., Abb 1, Fig. 1): Forewing Sc and R1 free but R2-R5 stalked beyond the discal cell as R5+R2+(R3+R4). M1 arises from the discal cell, and foundations of M2 and M3 are closed together. Medial veins in the forewing discal cell well developed, and a weak radial vein (chorda) presents in the discal cell forming an areole or accessory cell. Forewing anal veins A1 and A2 are fused from near the base and A3 free.

As in other members of the family, the frenulum is lost. Hindwing Sc+R, anastomoses with Rs for a half of length of the discal cell forming a humeral cell (h). Hindwing Rs and M, are separated by a short perpendicular cross vein at the end of the discal cell; 3 anal veins are present.

Abdomen without visible rings.

Sexual dimorphism is seemingly not prominent and sexes are differing mostly in size and being darker in (*Diquishia ansorgei*), with reddish tint, postmedian band more prominent and discal spot undistinguished.

Male genitalia: Generally resembles those of *Strigivenifera* HERING, 1937, but with quite different aedeagus (Abb 1, Fig. 1).

Tergal processes well developed; uncus of a bird's head, strong and massive; gnatos-like transtilla is boat-shaped, generally of a lance-form, a bit shorter than uncus; its base bears elongated apophyses; valvae flattened, sclerotized, with apex not protrude and saccular margin widely rounded; saccus not visible. Juxta short, shield-shaped, with dorso-lateral lobes as long as juxta height; these lobes support the aedeagus from the sides. Aedeagus quite unusual; it is slender, tubular, heavy sclerotized, slightly arc-shaped. Its base flattened and weakly bifurcate; in medial part, on the curvation a dorsal callus is distinctly visible; apex short rounded; vesica opening dorsal slit-like; vesica small; no cornuti present.

Systematic position. HERING (1937) established two subfamilies within the Chrysopolomidae, the Ectropinae and prope Chrysopolominae (the latter with two tribes adding by Achroceridini). ZOLOTUHN et al. (2013) transferred Achroceridini to Ectropinae based on male genitalia constructions and spur formula. Male genitalia characters of the new genus prove their belonging to the Ectropinae: Achroceridini; here it can be closed to *Strigivenifera* HERING, 1937. At the same time, the shape of the aedeagus (as well as lacking the cornuti) is diagnostic and may be an autapomorphy of the genus.

The genus has Angolan distribution.

Only two species are included.

Etymology: Diquishi (recte: dikvishi): two- or many-headed angry monster of the Angolan and Central African folklore.

***Diquishia morion* nov.sp.: Fig. 1: 1**

**H o l o t y p e :** ♂, Angola, Huila province, N slopes Mt. Hole, ca. 5 km SSW Bonga, 14°14.983'S / 13°58.097"E, 1053 m, 01. Dec. 2013, leg. Naumann, Ott & Sulak (in coll. MWM, GU Nr 26.144).

Smaller species (fore wing length 13 mm in a male). Antennae as long as ½ length of the fore wing. Wings covered with raised up narrow and sparse scale cover looking therefore semitransparent, denser on a costal margin. Scales dark grey; general color of the moth is dark smoky grey with a weak greenish tint. Discal spot absent. Veins are black and well visible on the ground color. Hind wings darker and scale cover is not so raised there; anal field is covered with dark yellow hair-like scales. Abdomen also dark yellow but in living specimens it can be paler.

Under side as well as legs is sandy yellow with singular grey scales.

Spur formula is 0-2-2 (Abb 2, Fig. 2). Spurs on the mid tibia almost 2 times longer than on the hind one; on both legs inner spur is distinctly shorter.

**D i a g n o s i s :** From *Diquishia ansorgei* can be distinguish being dark not yellowish, and lacking any pattern (vague transversal postmedial band and a weak whitish discal spot are visible in *ansorgei*); scale cover distinctly raised by dense and adpressed in *ansorgei*.

**B i o n o m i c s :** The only known male was collected at light in early December at the altitude of 1053 m in a tropical forest.

**E t y m o l o g y :** Morion (in Roman languages): a very dark brown to black opaque translucent variety of smoky quartz, a silicon dioxide crystal results from free silicon, formed by natural irradiation; because of the smoky wing coloration.

***Diquishia ansorgei* (BETHUNE-BAKER, 1911), nov.comb.: Fig. 1: 3, 4**

*Chrysopoloma ansorgei* BETHUNE-BAKER, 1911, Ann. Mag. Nat. Hist. **8** (7): 566. TL: "N. Angola: N'Dalla Tando, 2.700 ft". ST: male & female (BMNH).

Larger species (fore wing length 16.5 mm in a male). Antennae longer than ½ length of the fore wing. Wings covered with adpressed sandy colored scales; scale cover looking therefore dense and smooth. Wing pattern weak and indistinct; discal spot round, yellowish, hardly visible; "?"-shaped postmedian fascia grey, vague. Veins are black and well visible on the pale ground color. Hind wings of the same ground color but more reddish in anal corner therefore whole wings are more reddish. Head, thorax, abdomen and legs are dark yellow. Cilia yellowish grey in both wings.

**D i a g n o s i s :** See by *Diquishia morio* nov.sp. in spite the generic belonging of the species is not still proves with dissection, it could not be attributed to any of known genus of the Chrysopolomidae. An originally given belonging to *Chrysopoloma* is surely wrong; but in that time all species of the family were traditionally described within this genus. Under the same reason the species is not selected as a type species for the new genus established in this paper. Analysis of genitalia is strongly necessary to define the status of *Diquishia ansorgei* more exactly but venation scheme of both species is rather the same. From other hand, it is quite clear that both species considered in this paper are distinct.

**B i o n o m i c s :** The only known couple was collected at light in early November at the altitude of 2700 feet (ca. 820 m) in a tropical forest.

**N o m e n c l a t o r i a l n o t e :** To stabilize a nomenclature, a lectotype is designated here for *Chrysopoloma ansorgei* BETHUNE-BAKER, 1911. It is a finely preserved male from the collection of the BMNH bearing the following labels: a rectangular printed whitish "N'Dalla Tande, N. Angola, 2.700 feet, 3-xi-1908, Dr W. J. Ansorge" and inscription on its back side "*Chrysopoloma ansorgei* B-B Type ♂", a white narrow rectangular printed "G. T. B.-Baker Coll. Brit. Mus. 1927 – 360" and a green circle with white central band and green printing "Type.". Female becomes a paralectotype of the species.

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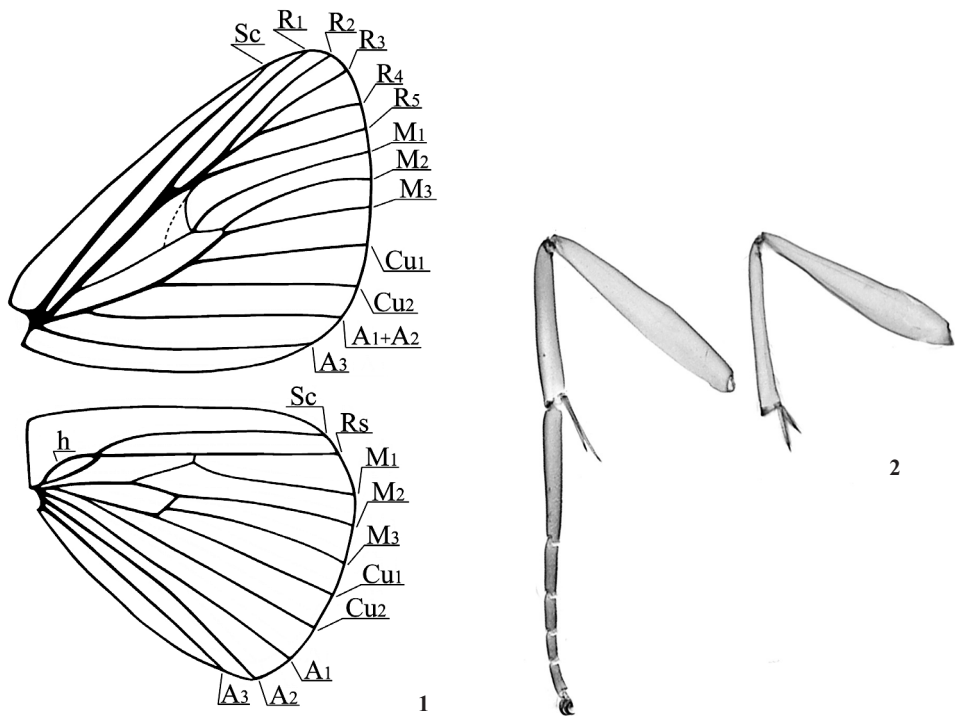
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**Fig. 1: 1-4:** (1) *Diquishia morion* nov.sp., male holotype; (2) *Diquishia morion* nov.sp., genitalia of the male holotype; (3) *Diquishia ansorgei* (BETHUNE-BAKER, 1911), female paralectotype of *Chrysopoloma ansorgei* BETHUNE-BAKER, 1911; (4) *Diquishia ansorgei* (BETHUNE-BAKER, 1911), male lectotype of *Chrysopoloma ansorgei* BETHUNE-BAKER, 1911.



**Fig. 2: 1-2:** (1) *Diquishia morion* nov.sp., male holotype: (1) wing venation; (2) legs (mid one left, hind right).

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