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Ascalaphid studies XI. A new owlfly (Neuroptera: Ascalaphidae) from Kenya: *Afroasca doboszi* gen. and sp. nov.

http://zoobank.org/urn:lsid:zoobank.org:pub:C6C17A23-5A37-413E-9E8F-C66F81C37DC6

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Abstract: A new genus, *Afroasca* gen. n. (type species: *Suphalomitus buyssoni* Weele, 1909), and a new species, *Afroasca doboszi* sp. n. are described from Kenya and compared to *Afroasca buyssoni* (Weele, 1909) comb. n. With 13 figures.

Key words: Owlfly, Ascalaphidae, new genus and new species, Africa.

INTRODUCTION

In the 20th century, Bo Tjeder made a significant contribution to reveal the ascalaphid fauna of Africa (Tjeder 1972, 1980, 1986, 1989, 1992, Tjeder & Hansson 1992). Unfortunately, one of his works (Tjeder 1992) weren't fully completed because of his weak eyes in his late life. Based on Tjeder's uncompleted work, Andersson, Hansson, Cederholm (Tjeder 1992 p. 165) reported taxonomic status of some ascalaphid (Ascalaphinae) genera. The name of five undescribed genera (1-5) with type species was substituted with numbers in the tribes of Encyoposini Weele, 1909 and Acmonotini Weele, 1909 while the undescribed genera (6-9) of the tribe Ascalaphini Lefebvre, 1842 were published by Tjeder & Hansson (1992) with Tjeder's early drawings.

Despite the fact that the undescribed genera were correctly substituted with numbers (Tjeder 1992), the following collection names "*Bellulula sjoestedti* (Weele) and *Dorsomitus* sp. on page 26-27; *Apodicolpus* n. gen., *Imparomitus* n. gen., *Macropsites* n. gen. on page 35" were found in this work (Tjeder 1992), which he probably were described later. These taxa are nomen nudum.

The 5th undescribed genus sensu Tjeder (1992), type species: *Suphalomitus buyssoni* Weele, 1909 and a description of the new species in the same genus are completed in this paper.

MATERIAL AND METHODS

The habitus photo was taken by Canon EOS 400 digital camera equipped with flash light system (Sigma EM140 DM). Other photos were taken by using SZX9 Olympus stereomicroscope equipped with a ScopeTek DCM 800 digital camera. The layers of photos were processed with Combine ZP imagine stacking and Adobe Photoshop software.

According to traditional methods, the caudal part of the abdomen was removed, treated with a 10% KOH solution and heated during 15 minutes. After cooling, it rinsed in distilled water. For drawings, the genitalia were placed in glycerine in a Petri dish. Finally, each genitalia was transferred into glycerine in a microvial for preservation.

RESULTS AND DISCUSSION

Afroasca gen. n.
http://zoobank.org/urn:lsid:zoobank.org:act:6D7192B0-33E6-4CEC-A41A-9920C901ADA5

Type species: *Suphalomitus buyssoni* Weele, 1909 (in Weele 1909)

Medium sized species. Sexual dimorphism present.

Head. Twice wider than long, wider than thorax. Eye oval, divided by a furrow. Vertex, frons and scapus with dense hairs. Gena, postorbital sclerite and occiput hairless. Antenna somewhat shorter than distance between base of fore wing and pterostigma. Club large, subglobular with flattened apex.

Thorax. Notum with sparse medium long hairs. Sides with dense hairs.

Legs. Rather short and strong. Femora about as long as tibiae. Femora and tibiae with long dense hairs. Tarsi 1-4 equal, tarsus 5 somewhat shorter than tarsi 1-4 combined.

Wings. Narrow, both margins parallel, apices rounded, anal area obtusely angled with concave depression on anal margin. Venation sparse. Apical area with 2 rows of cells. Pterostigma about as long as wide in both wings. Hind wing considerably shorter than fore wing.

Abdomen. Male abdomen longer than wings, female abdomen shorter than wings. Tergite 1-2 with long dense hairs. Other tergites with short sparse hairs. Sternite 1 short. Male ectoproct with short caudo-lateral processus. Parameres fused to arch-like gonarcus, pelta present, gonosetae moderate long. Female ectroproct oval plate, ventrovalvae long, distivalvae moderate size, interdens not seen.

Diagnosis. The new genus resembles to the African genus of *Stephanolasca* Weele, 1909. The pterostigma of *Afroasca* is about as long as wide while that of *Stephanolasca* is considerably longer than wide. Male mesonotum of *Stephanolasca* has horseshoe-shaped row of thick long upright hairs at the frontal edge while that of the new genus is without such hairs.

Afroasca doboszi sp. n. (Fig. 1)
http://zoobank.org/urn:lsid:zoobank.org:act:7F9D691F-4841-44B9-B65D-D2603B14C41E

Material examined:

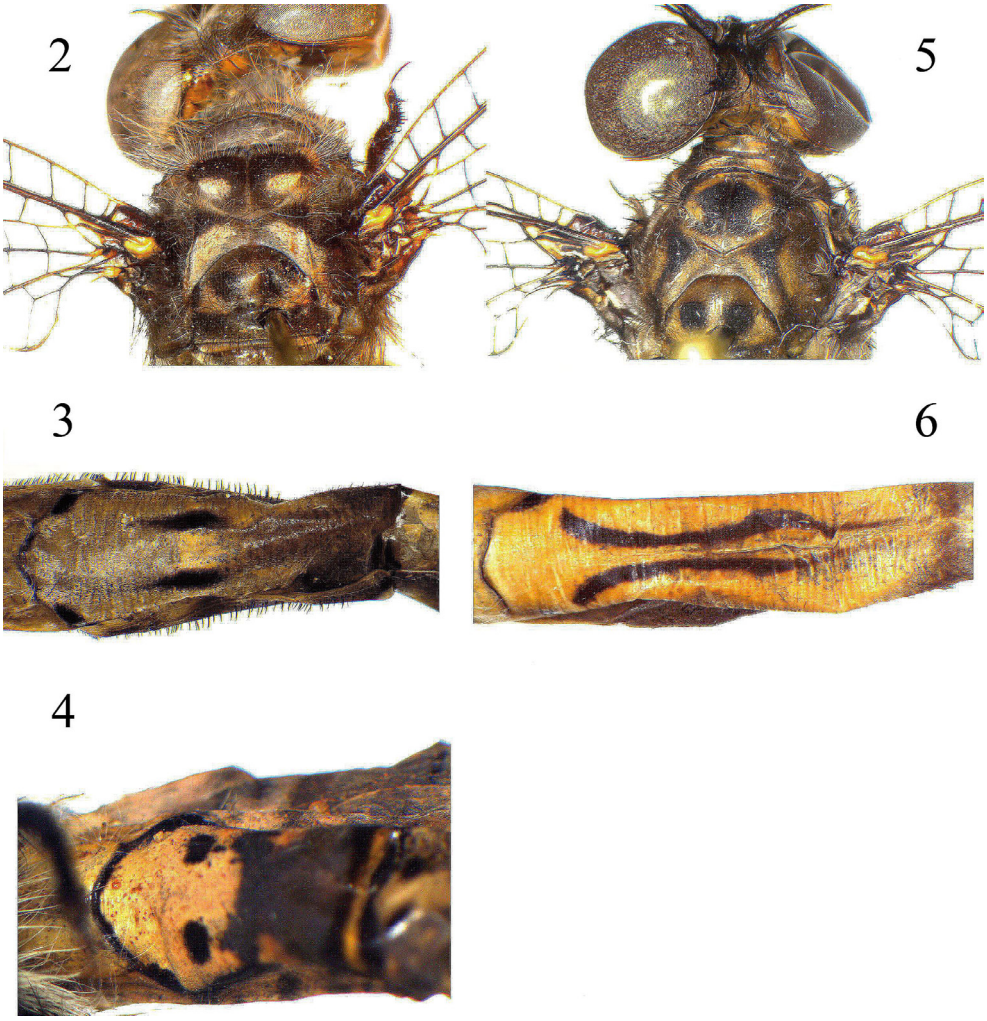
Holotype male: Kenya 6 V 2000, Mpeketoni (Witu), Werner & Lizler leg.

Deposited: Entomological collection of Rippl-Rónai Museum, Kaposvár.

Fig. 1. Holotype male of *Afroasca doboszi* sp. n. (scale in mm) (photo L. Ábrahám).

Head. Vertex black with long dense soft and pale hairs intermingled with black ones. Frons black with long soft and pale hairs. Long dense soft pale tufts of hairs on anterior tentorial pits. Gena shinning black next to frons, shinning yellow next to eye, hairless. Clypeus light brown with short pale hairs on lateral margins. Labrum light brown (maybe yellow but slightly discoloured) with sparse shiny ochreous hairs curved to mouthpart. Mandible yellow to brown with black apex and inner side, hairless. Maxillary and labial palpi yellow with rigid shiny black hairs at joins of last two segments and with sort black setae. Occiput and postorbital sclerite yellow with black longitudinal pattern, hairless. Eye rather large divided with a suture-like inflection transversally. Antennae 25 mm long, shorter than distance between base of fore wing and pterostigma. Scape yellow with long dense soft pale hairs intermingled with brown to black ones. Pedicel brown. Flagellar segments subequal, proximal part dark brown, distal part yellow without verticils. Club subglobular shaped with flattened apex. Brown dorsally, yellow ventrally.

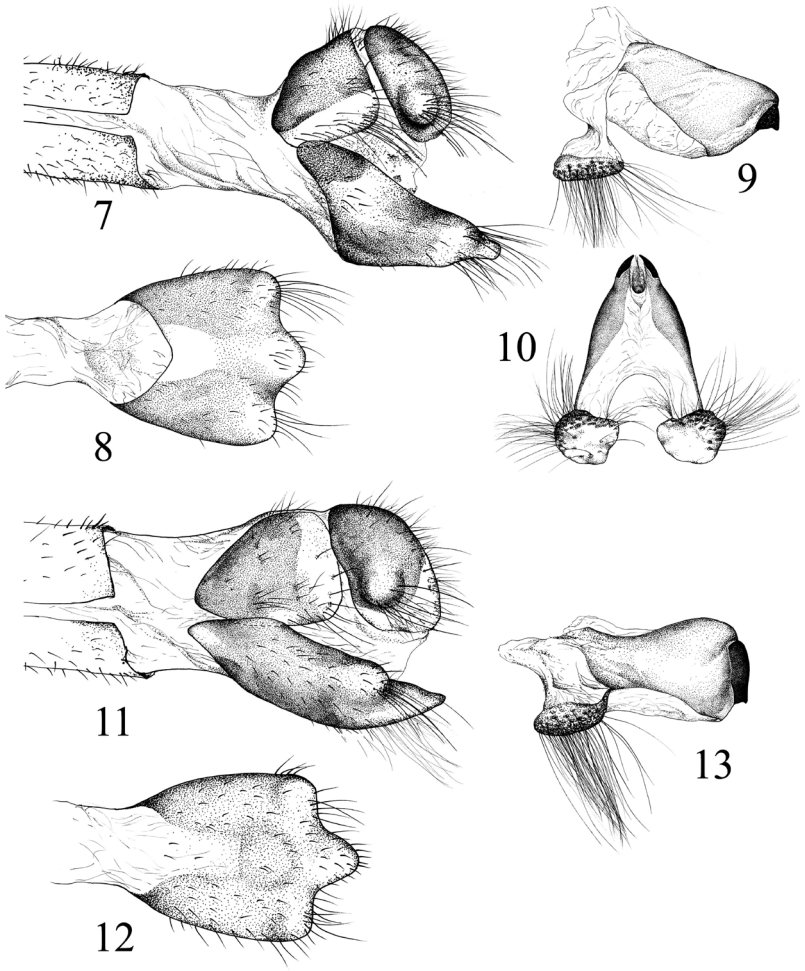
Thorax. Pronotum narrow with flexed upwards margins, dull black with yellow pattern and long soft pale hairs on margins. Lateral projection yellow with dark brown hairs. Mesonotum: prescutum yellow with distinct somewhat large round shaped central spot and two lateral thick lines with short brown hairs. Scutum yellow central brown line curved outwardly. Scutellum yellow with two large anterior brown spots and brown posterior margin. Mesonotum with short brown hairs. Metanotum: Postnotum brown, postscutum yellow with two indistinct reddish brown spots centrally and long soft brownish hairs. Postscutellum brown with long soft brown hairs. Sides yellow with dense soft white hairs.



Figs 2–6. *Afroasca buyssoni* (Weele, 1909) notum pattern (Fig. 2), male sternite 3 pattern (Fig. 3), female sternite 3 pattern (Fig. 4); *Afroasca doboszi* sp. n. notum pattern (Fig. 5), male sternite 3 pattern (Fig. 6) (photos L. Ábrahám).

Legs. Coxae, trochanters yellow with long white hairs. Femora yellow with long rather dense soft white hairs and stiff black bristles formed line in ventral side. Dorso-distal part of femora indistinct brown. Femora as long as tibiae. Tibiae yellow with long white hairs ventrally yellowish brown dorsally with narrow black ring centrally and indistinct black pattern on both ends. Tibial spurs black to dark brown, as long as segment 1 and 2 together on fore and middle legs and as long as segment 1 on hind leg. Tarsi shining black with black setae. Tarsal segments 1-4 equal, segment 5 as long as segment 1-4 together. Claws black to dark brown.

Wing. Fore wing: 33 mm long, 7.5 mm wide. Hind wing: 25 mm long, 6.5 mm wide. Membrane transparent. Longitudinal veins brown to yellow. Cross-veins dominantly brown. Both longitudinal and cross-veins brown in radius sector. Pterostigma rhomboid-shaped narrower than deep, opaque yellow with 4 dark brown cross-veins. Pterostigma dark brown



Figs 7–13. *Afroasca doboszi* sp. n. male genitalia in lateral view (Fig. 7), male sternite 9 in ventral view (Fig. 8), gonarcus and parameres in lateral view (Fig. 9), the same in dorsal view (Fig. 10); *Afroasca buyssoni* (Weele, 1909) male genitalia in lateral view (Fig. 11), male sternite 9 in ventral view (Fig. 12), gonarcus and parameres in lateral view (Fig. 13) (by Á. Nagy).

pigmented next to cross-veins. Apical area rounded beyond vein Sc+R with two rows of cells. 5 radial cross-veins in front of origin of radius sector in fore wing. Anal area rounded slightly concave. Hind wing colourization like fore wing. Costal area right before pterostigma narrower than that of it usually. 4 radial cross-veins in front of origin of radius sector but distal two ones divided with veins.

Abdomen. 45 mm long. Tergite 1 brown, split dorsally with long soft pale hairs. Tergite 2 brown 1.5x longer than wide, brown with distal yellow marks. Tergite 3 elongated brown with shinning black anterior margin and narrow shining black central brand transversally each side, and round yellow and shining black distal mark laterally. Tergite 2 and 3 with short brown to black setae. Other tergites like tergite 3 but only short black pubescence. Sternite

2 yellow about as long as wide, both frontal and caudal margins curved in ventral view. Sternite 3 very long, yellow with lyre-shaped black pattern and short black pubescence. Other sternites with similar shape pattern and bright yellow and black pattern on caudal margins.

Genitalia. Male. Tergite 9, sub-rhomboid-shaped, shining black with yellow distal margin and medium long black hairs ventro-caudally in lateral view (Fig. 7). Ectoproct with small ventro-caudal processus covered with medium long black hairs. Sternite 9 triangular-shaped with three caudal lobes. Central lobe yellowish with shorter black hairs than that of lateral lobes in ventral view (Fig. 8). Gonarcus and parameres as in Fig. 9 in lateral and Fig. 10 dorsal views.

Female and larva unknown.

Diagnosis. The new species is similar to *Afroasca buyssoni* (Weele, 1909) comb. n, the type species of the newly described genus. It can be distinguished from *Afroasca buyssoni* by the pattern of notum (Fig. 2 and Fig. 5), the third sternite (Fig. 3 and Fig. 6) as well as male genital characters. (Fig. 3. E, F, G). The mandible of *Afroasca buyssoni* with black and white rather long hairs outside while that of new species is hairless.

The life-history of the new species is unknown.

Etymology. The new species is dedicated to Roland Dobosz, Polish entomologist (Bytom, Poland) who makes a significant contribution to the neuropteran research.

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