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On two African Cixiidae
(Homoptera, Fulgoroidea)
described by L. Melichar*

by J. VAN STALLE** and P. LAUTERER***

Summary

Two African Cixiidae (Homoptera, Fulgoroidea), namely *Achaemenes niger* MELICHAR and *Mnemosyne birta* (MELICHAR) are redescribed and illustrated, with emphasis on the male terminalia. A lectotype is selected for the first species and *Mnemosyne maculipennis* MUIR is relegated to synonymy with the second species.

The Czechoslovakian entomologist Dr. L. Melichar described several African Cixiidae. Most of these belong to the genus *Oliarus*, while three species are referred to other genera, namely *Achaemenes niger*, *Myndus beduinus* and *Cixius stigmatalis*; the types of these species are deposited in the collections of the Moravské Museum (Brno).

Melichar and many of his contemporaries were not yet aware of the species richness of the African fauna and of the taxonomic importance of the male terminalia for the identification of Auchenorrhyncha. Many of the « older » species were described only on female material, thereby creating a number of taxonomic problems for later workers. During the course of some revisional studies on Cixiidae, we were able to give a more suitable description of several taxa by means of the male terminalia of the types or by the discovery of further (male) topotypic material. The redescription of the *Oliarus* species of Melichar's collection will

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be published later; this paper deals with two other Cixiidae, namely *Achaemenes niger* and *Mnemosyne birta* (= *Oliarus birtus*). The species of the genus *Myndus* and *Cixius* will be treated when more topotypic specimens become available.

In order to provide a better redescription and to include some distributional notes, several museum-collections were examined; their abbreviations are listed below:

KBIN	Koninklijk Belgisch Instituut voor Natuurwetenschappen (Brussels, Belgium)
MM	Moravské Museum (Brno, Czechoslovakia)
BMNH	British Museum (Natural History) (London, U.K.)
MCSN-Verona	Museo Civico di Storia Naturale (Verona, Italy)
NMB	The National Museums and Monuments (Bulawayo, Zimbabwe)
TM	Transvaal Museum (Pretoria, South Africa)

***Achaemenes niger* MELICHAR (fig. 1 to 8)**

Achaemenes niger MELICHAR, L., 1905 : 283.

Material examined. — Lectotype ♂, labelled: « D.O. Afrika/Usambara » and « *niger* Mel./Melichar » (both handwritten by Melichar), « type. Exempl./Dr. L. Melichar (printed), « *Achaemenes/Stål* » (handwr. Melichar), « typus » (printed, small red label), coll. MM and « Transcriptio/*Achaemenes* ♂/*niger*/sp.n./Melichar det. 1905, coll. MM.

Paralectotype: 1 ♂, originally on the same *Sambucus*-pith, now alone, with identical rewritten data, coll. MM. 1 ♀, « Amani, XII.903, *binotatus*/M./det. Melichar » (sic! unpublished manuscript name) « ♀ » « Transcriptio/*Achaemenes* ♀/*niger*/sp.n./L. Melichar det. 1905 »; 1 ♀, « Amani/23.III.904 », « *binotatus*/M./det. Melichar » (sic! manuscript name) and « Typ. Exempl./Dr. L. Melichar » and « Transcriptio/*Achaemenes* ♀/*niger* sp.n./L. Melichar det. 1905 », coll. MM.

Additional material: 1 ♀, D.O. Afrika, Mkulumuru b. Amani, XII-1925 (Dr. Schröder S.G.), coll. KBIN, determination tentative.

Description. — Frons and postclypeus (fig. 3) red brown to dark brown, provided with a median carina and broadening ven-

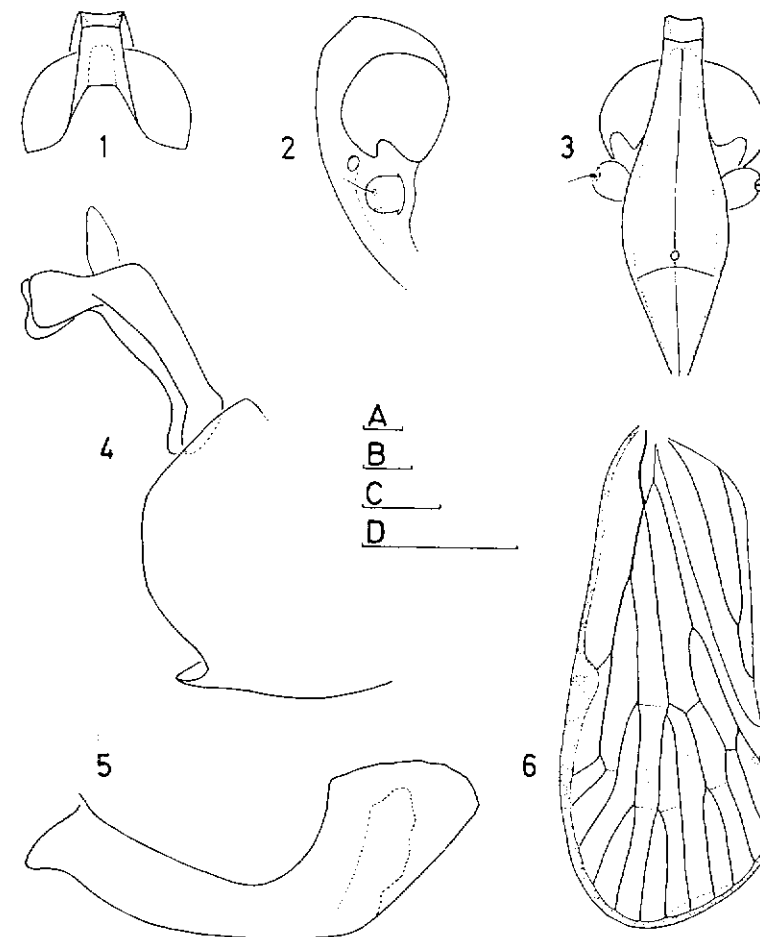


FIG. 1 to 6. — *Achaemenes niger* MELICHAR

1: head, dorsal view; 2: head, lateral view; 3: head, frontal view; 4: pygofer and anal segment, right lateral view; 5: left genital style; 6: left tegmen. Scale A (0.2 mm): 1-3; B (0.5 mm): 6; C (0.2 mm): 4; D (0.2 mm): 5. Lectotype: fig. 1-5; specimen Mkulumuru (♀): fig. 6.

trally; lateral carinae very prominent, ochreous brown. Vertex (fig. 1) small, dark brown, extending before the eyes, with very prominent and transverse (both apical and subapical) carinae, its length 0.29 mm, width 0.27 mm. Pronotum, mesonotum and tegulae dark brown, keels on the mesonotum slightly diverging

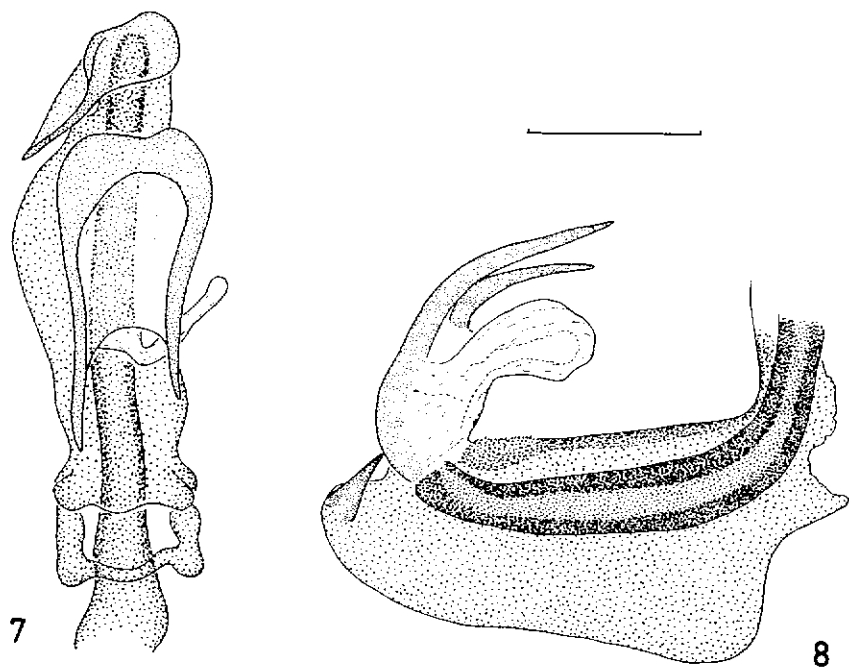


FIG. 7 and 8. — *Achaemenes niger* MELICHAR
7: aedeagus, dorsal view; 8: aedeagus, lateral view. Both figures made from lectotype; scale: 0.2 mm.

caudad. Tegmina (fig. 6) densely covered with small hollows all over its surface, except on the veins, brown throughout, with two small hyaline spots at the level of the stigma in the apical part of the radial and cubital cell; furthermore, one spot just behind the tip of the clavus, and one along the apex of the tegmina. Costal margin bent at base and then \pm straight to stigma, the latter extending over nearly 1/3 of the length of the tegmina. Legs yellowish-brown, first tarsal segment of hind-legs with seven teeth arranged in an irregular row, second segment with five teeth,

and just before (proximally of) this row a group of three smaller teeth.

Body length: 5.9 mm; fore wing length: 4.7 mm, width: 1.9 - 2.0 mm.

Male terminalia: anal segment (fig. 4) slightly asymmetrical, each side apically deflexed into a quadrate lobe; pygofer (fig. 4) symmetrical, gently rounded in profile; genital styles (fig. 5) symmetrical, with an additional ridge along inner surface. Aedeagus (fig. 7 and 8) with two apical spines running inwards along the flagellum and a third spinose process apically on the periandrium.

Diagnosis. — The structure of the head, tegmina, as well as the form of the male terminalia prove that this species is not an *Achaemenes*. It cannot be fitted into the present classification and its generic position remains uncertain until more revisionary studies on Cixiidae become available.

Remarks. — The two original female syntypes are probably not conspecific with the lectotype; one belongs evidently to another related more robust species, the second one agrees in size, habitus and colour with the lectotype. However, in the additional material, identified by Melichar and deposited in the same row of the collection, there is one male from the locality Bumbale with the same size and habitus of the lectotype, but differing only in the shape of the aedeagus, and thus (probably) representing another species. We wish to await further topotypic material to distinguish the females and the related species mentioned above.

Mnemosyne hirta (MELICHAR) **comb. nov.** (fig. 9 to 14)

Oliarus hirtus MELICHAR, L., 1904: 31

Mnemosyne maculipennis MUIR, F., 1923: 557 syn. nov.

Material examined. — Holotype of *Oliarus hirtus* MELICHAR, 1904, ♀, labelled « Orahio/Afr. or./19.III.1901 D^h E. » (Melichar's handwriting orange label), and « typus » (printed small red label) and « hirtus » Mel. / det. Melichar (Melichar's handwriting) and holo-/typus (printed red label and « HOLOTYPUS/*Oliarus* ♀ / *hirtus* sp.n./L. Melichar det. 1904 (rewritten label), coll. MM.; Holotype ♂ of *Mnemosyne maculipennis* MUIR, 1923, British East Africa (S.L. Hinde, 1913), coll. BMNH.

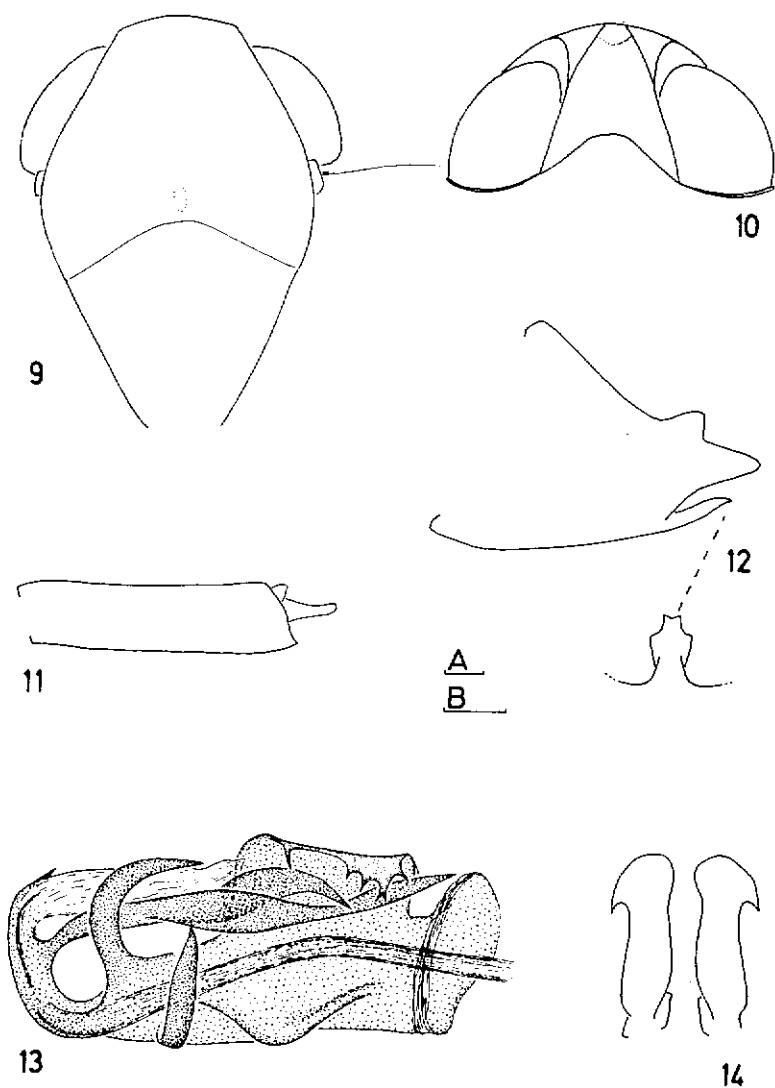


FIG. 9 to 14. — *Mnemosyne birta* (MELICHAR)
 9: head, frontal view; 10: head, dorsal view; 11: anal segment, left lateral view; 12: pygofer, left lateral view, with a ventral view of the medioventral process; 13: aedeagus, dorsal view; 14: genital styles.
 Scale A (0.2 mm): 9-12, 14; B (0.2 mm): 13. Holotype ♀: fig. 9 & 10;
 ♂ « Arushagebiet, 1928 »: fig. 11-14.

Additional material: 1 ♂, Ost-Afrika, Arushagebiet, 1928, coll. KBIN; 1 ♂, Btwn Francetown, Lake Mkami Kati, Mopami forest, coll. KBIN; 1 ♀, Port. Ost Afrika, Nangororo b. Porto, Amelia, coll. KBIN; 1 ♂, Mtito Andei, Kenya col., XII-1950 (Mc Arthur), coll. KBIN; 2 ♂, South Africa, Shingwedzi, K.N.P. Survey, 19/20-XI-1961 (Vari and Rorke), coll. KBIN and TM; 1 ♂, East Africa (Tanzania), Tendaguru, 12-XI-1924 (C.W. Cutler), coll. BMNH; 1 ♂, Somalia, Morka (?), coll. MCSN-Verona; 1 ♂ 2 ♀, S. Rhodesia (Zimbabwe), Delawe Ranch, Matetsi, 28-XI-1973, coll. NMB.; 5 ♀, Ruanda, Rwankwi, 31-V-1951 (J.V. Leroy), coll. KBIN.

Description. — Frons dark brown to black, shiny, slightly convex in lateral view; postclypeus and rostrum usually paler, brown to ochreous, the first one straight in profile and transversely wrinkled. Median keel on frons and postclypeus absent (fig. 9) or only faintly indicated; ocellus present but obscure, represented by a paler spot near the frontoclypeal suture. Vertex (fig. 10) brown to light brown, as long as broad, transverse keel divided into two straight parts joining the anterior border. The latter very obtuse and obsolete. Pronotum yellowish brown in the middle and dark brown laterally, relatively large, provided with a median keel and two lateral keels, one on each side along the « shoulders », and continuing on the tegulae. Whole pronotum and tegulae densely covered by fine short hairs. Mesonotum with five longitudinal carinae, uniformly dark brown. Tegmina densely covered with dark granules along the veins and cells, usually two rows in each cell, but sometimes three and scarcely four. Base of the clavus, a spot along the junction of the claval veins and apex dark brown; furthermore, three small spots along the costal margin between base and stigma and one spot in the apical half of the latter, a spot along M and Cu, and a series of diffuse markings in the apical half of the tegmina. Legs yellowish-brown, hind-tibiae and two lateral spines, first segment of the hind-tarsi with six teeth, second with seven, exceptionally with eight teeth.

Total length: 10 - 12.5 mm.

Male terminalia: anal segment, pygofer and genital styles symmetrical. Anal segment (fig. 11) devoid of ventral processes, with a straight ventral margin. Pygofer (fig. 12) with a triangular lobe laterally, provided with a small dorsal processus near the top,

and characteristic medioventral process as illustrated with a ventral view in figure 12. Genital styles as figured, with a relatively small apex (fig. 14). Aedeagus (fig. 13) provided with four spinose processes, all of them visible in dorsal orientation: two implanted subapically on the periandrium; the third and fourth one fused together at their base, inserted apically along the base of the flagellum and forked more distally. Furthermore, the periandrium bears a lamelliform process along the left margin, provided with a variable number of small teeth along its dorsal border.

Female terminalia: ovipositor short, anal tube very short and shiny.

Diagnosis. — *Mnemosyne hirta* is distinguished from other African species by the presence of granules all over the surface of the tegmina and by the very characteristic shape of the male terminalia, more particularly the aedeagus and medioventral process of the pygofer. The type of *Oliarus hirtus* was compared with specimens of the KBIN. These specimens were compared with the holotype of *Mnemosyne maculipennis* by M.R. Wilson. All specimens proved to be conspecific and thus, *Mnemosyne maculipennis* is a new, younger synonym of *Mnemosyne (Oliarus) hirta* (MELICHAR).

Distribution. — The species has hitherto been recorded from Somalia, Kenya, Ruanda, Malawi, Mozambique and South Africa (Transvaal).

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New and noteworthy Chloropidae (Diptera) to the Belgian fauna

by L. DE BRUYN** and M. DE MEYER**

Summary

In 1982, Chloropidae were caught in emergence traps and Malaise traps in two overgrown meadows, one marshy woodland and one garden, situated at two different localities in Belgium, and with a sweepnet and pooter during several excursions to different geographical regions in Belgium. In all, 41 species of Chloropidae were collected, of which 8 species were new to the Belgian fauna. A short discussion of these species is given.

Samenvatting

In 1982 werden Chloropidae verzameld door middel van uitsluitvallen en Malaisevallen in twee verwilderde weilanden, een broekbos en een tuin, gesitueerd in twee verschillende lokaliteiten in België. Tevens werden vliegen gevangen met een sleepnet en een pooter tijdens excursies naar verschillende geografische streken in België. In totaal werden 41 Chloropidae soorten gevangen, waarvan 8 nieuw voor de Belgische fauna. Een korte bespreking van deze soorten wordt gegeven.

The family Chloropidae represents a rather common but usually overlooked group of minute acalypterate flies. The larvae of most species develop in the stems, leafsheets or panicles of Poaceae, while some also attack cereals. Other species develop in monocotyl families which are close allied to the Poaceae like Liliaceae, Juncaceae, Juncaginaceae or Cyperaceae. Furthermore, some species develop on organic detritus, or are predaceous.

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