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Accessions to the Afrotropical fauna of Tortricidae (Lepidoptera), 2

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ABSTRACT. Eighteen species of Afrotropical Tortricidae are discussed, eleven of which are described as new: *Plinthograptis iitae* sp. n., *Lobesia hecista* sp. n., *Teiteccopsis davisorum* sp. n., *Anthozela daressalami* sp. n., *Herpystis isolata* sp. n., *Fulcrifera horisma* sp. n., *Cydia zariae* sp. n., *Cydia ergoda* sp. n., *Microsarotis samaruana* sp. n., *Ioditis mokwae* sp. n., *Grapholita hymenosa* sp. n.

KEY WORDS: Lepidoptera, Tortricidae, new taxa, Afrotropical.

INTRODUCTION

The Tortricidae of the Afrotropical region are still the least known of any major biogeographic realm (RAZOWSKI & BROWN 2009, RAZOWSKI & WOJTUSIAK 2012). Although the Nigerian fauna is among the best known in the region owing to recent publications (e.g. RAZOWSKI 1981, RAZOWSKI & WOJTUSIAK 2012), our knowledge of that fauna is far from complete, as in all new Nigerian material that is examined, new species are discovered and new distribution data added. The material studied for this paper includes eighteen species, eleven of which are new. Thus, it seems justifiable to publish even small papers that add to our knowledge of the distribution of African tortricines.

The material studied was collected in Nigeria by Mignon and Don Davis, Washington, DC., with the exception of one species collected in Tanzania by I. Robertsen. All specimens, including the type material, is deposited at the Smithsonian Institution, National Museum of Natural History, Washington, DC.

Acknowledgements

I am grateful to Dr John W. Brown, USDA, Systematic Entomology Laboratory, Washington, D.C., for providing this valuable material for study. I thank Mr W. Zajda for dissecting the moths and arranging the plates.

SYSTEMATICS

Tortricini

Plinthograptis iitae sp. n.

(Figs 5, 13)

Diagnosis

P. iitae is closely related to P. ebogoana RAZOWSKI, 2005 from Cameroon, but P. iitae has dark yellow forewing cilia, a more oblique termen, and a slenderer, more membranous antrum.

Description

Wing span 14 mm. Head and thorax orange yellow. Forewing broadest medially; costa uniformly convex; apex short; termen oblique, slightly convex. Ground colour lead grey; costa orange yellow, terminal area paler; costal spots brown, terminal spots paler. Markings red, consisting of four spots in basal area (two posterior forming a transverse row), median fascia atrophied in dorsal half of wing, and three posterior marks (the subdorsal vertical). Cilia dark yellow. Hindwing pale brownish; cilia slightly paler.

Male unknown.

Female genitalia (Fig. 5). Sterigma membranous except for lateral arms expanding basally; area around ostium comprised of thick membrane; antrum moderately broad, without sclerite; ductus bursae with basal sac; ductus seminalis broad to mid-antrum then slender; blade of signum large, base slender.

Material examined

Holotype female; "Nigeria: Ibaden, Iita Golf Course Lake, 6-10 Feb. 1978, Don & Mignon Davis"; GS 143,015.

Etymology

The specific name refers to the type locality, Iita.

Rutilograptis couteauxi GHESQIERE, 1940

Material examined

One male from Ibaden, Iita (West Bank Lake, 7-9 Feb. 1978, D. & M. Davis).

Remarks

R. couteauxi was described form Eala, Congo (Zaire). The genitalia were described and illustrated by RAZOWSKI (1966) and RAZOWSKI et al. (2010).

Cornesia ormoperla RAZOWSKI, 1981

Material examined

One male from 5 miles NW Mokwa (4-5 Feb 1978, D. & M. Davis).

Remarks

C. ormoperla was described from Oyo State, Nigeria; it is also known from Bendel State (RAZOWSKI & WOJTUSIAK 2012).

Olethreutini

Lobesia oluducha RAZOWSKI, 2012

Material examined

One male from Ibaden (West Bank Lake, 7-9 Feb. 1978, D. & M. Davis).

Remarks

L. oluducha was described from SE State, Nigeria.

Lobesia hecista sp. n.

(Figs 1, 14)

Diagnosis

L. hecista is closely related to *L. scopifera* RAZOWSKI, 2012 (described from Belgian Congo and found in Obudu Plateau, Nigeria) and to *L. oluducha* RAZOWSKI, 2012 (from Nigeria), but *L. hecista* is can be distinguished by its shorter aedeagus, its slenderer neck of the valva, and shorter, rounded sacculus.

Description

Wing span 10.5 mm. Head cream; thorax diffusely spotted brownish. Forewing not expanding terminad; costa and termen straight, the latter oblique. Ground colour cream, slightly mixed with pink in distal part of wing; strigulation and markings brown: median fascia reduced to costal blotch; subterminal fascia forming a rounded median blotch; two strigulae in apex area. Cilia pinkish cream. Hindwing pale brown; cilia paler.

Male genitalia (Fig. 1). Socius subtriangular; gnathos arm well developed; tuba analis with moderate sclerites; neck of valva rather slender; cucullus elongate-triangular with nearly straight caudal edge; sacculus short, convex, with group of long setae and dorsoposterior group of spines, followed by large lobe bearing ventral, caudal and proximal spines; aedeagus fairly short, broad proximally, tapering dorsoterminally.

Female unknown.

Material examined

Holotype male: "Nigeria: Ibaden, IITA, Golf Course Lake, 6-10 Feb. 1978, Don & Mignon Davis"; GS 143,017.

Etymology

The specific name refers to the size of the moth; Greek: hekistos – the smallest.

Teiteccopsis davisorum sp. n.

(Figs 2, 15)

Diagnosis

T. davisorum is related to T. taitana RAZOWSKI, 2012 from Kenya, but T. davisorum can be distinguished by the presence of a distinct terminal thorn from the sacculus and the larger aedeagus.

Description

Wing span 9.5 mm. Head greyish, labial palpus whitish with grey suffusions; thorax brownish grey. Forewing weakly expanding terminad; costa uniformly convex; termen somewhat oblique, weakly convex. Ground colour cream, submedian interfascia tinged pale ferruginous posteriorly, sparsely strigulated with brownish grey; posterior half of wing suffused brownish, sprinkled and strigulated with brown-grey; costal strigulae creamer than ground colour; divisions brownish. Markings brownish grey with blackish strigulae, sprinkled with whitish, developed in form of broad basal blotch, diffuse median fascia and indistinct terminal marks. Cilia brownish. Hindwing brownish, paler basally; cilia pale brown.

Male genitalia (Fig. 2). Uncus large, densely hairy, spined ventroterminally; valva broad with indistinct neck; sacculus convex postbasally, gently concave near middle, with strong apical thorn accompanied by some spines; cucullus short, bristled and spined; aedeagus as long as valva, weakly bent, with ventroterminal thorn; cornutus present.

Female unknown.

Material examined

Holotype male: "Nigeria: Ibaden, IITA, Golf Course Lake, 7-9 Feb. 1978, Don & Mignon Davis"; GS 143,020.

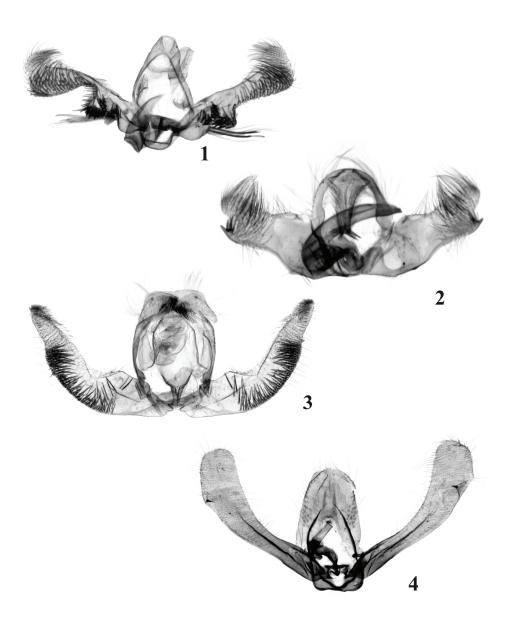
Etymology

The species is named in honour of the collectors, my friends Don and Mignon Davis, Washington, D.C.

Niphadophylax iorrhoa (MEYRICK, 1914)

Material examined

One male from Ibaden (Golf Course Lake, 6-10 Feb. 1978, D. & M. Davis).



Figs 1-4. Male genitalia: 1 - Lobesia hecista sp. n., holotype, 2 - Teiteccopsis davisorum sp. n., holotype, 3 - Anthozela daressalami sp. n., holotype, 4 - Herpystis isolata sp. n., holotype.



Figs 5-8. Female genitalia: 5 - Plinthograptis iitae sp. n., holotype, 6 - Anthozela daressalami sp. n., paratype, 7 - Leguminivora horisma sp. n., holotype, 8 - Grapholita zariae sp. n., holotype.

Remarks

N. iorrhoa was described from Mt. Mlanje, Malawi, and recorded from Nigeria by RAZOWSKI & WOJTUSIAK (2012).

Bactriini

Endothenia cybicopa (MEYRICK, 1933)

Material examined

One male from Ibaden (Golf Course Lake, 6-10 Feb. 1978, Don & Mignon Davis).

Remarks

This species was described from Sierra Leone and is also known from Nigeria (RAZOWSKI & WOJTUSIAK 2012).

Enarmoniini

Anthozela usambarae RAZOWSKI & WOJTUSIAK, 2012

Material examined

One pair from Ibaden (Golf Course Lake, 6-10 Feb. 1978, Don & Mignon Davis).

Remarks

A. usambarae was described from Nigeria.

Anthozela daressalami sp. n.

(Figs 3, 6, 16, 17)

Diagnosis

A. daressalami is closely related and externally similar to A. usambarae, but A. daressalami can be distinguished by the broadly rounded ventral edge of the valva, the specialized papillae anales, and the longer ductus bursae.

Description

Wing span 15 mm. Head cream; thorax olive cream. Forewing broad, slightly expanding terminad; costa weakly convex; apex rounded; termen not oblique, convex. Ground colour in distal half of wing whitish pink, whitish proximally, sparsely spotted and strigulated brown, suffused olive cream in basal part, more olive grey towards concave posterior edge where much darker. Costal strigulae yellowish cream, indistinct to midcosta, whiter in remaining part where divisions browner than in anterior half. Brown oval blotch before middle of termen. Cilia (remn ants) pinkish. Hindwing brownish to middle, probably creamer posteriorly.

Male genitalia (Fig. 3). Terminal edge of tegumen broad, weakly concave apically;

socius broad, subtriangular, densely spined terminally; valva rather slender, convex ventrally, sacculus not angulate, fused with cucullus; cucullus setose beyond densely spined ventral convexity; vertical row of spines along posterior edge of basal cavity of valva fused with ventral row of spines; aedeagus short, broad.

Female genitalia (Fig. 6). Posterior parts of papillae anales blade-shaped, median parts fused; proximal parts typical of family; apophyses small; sterigma forming a slender, sclerotized ring around ostial area accompanied by sublateral membranous folds; antrum sclerite slender; ductus bursae fairly long; corpus bursae elongate, without signa.

Material examined

Holotype male: "Tanganyika [Tanzania], Dar es Salam, Dec. 1965, I. Robertsen"; GS 143,26. Paratype female with identical label; GS 143,27.

Etymology

The specific name refers to the type locality.

Eucosmini

Herpystis isolata sp. n. (Figs 4, 18)

Diagnosis

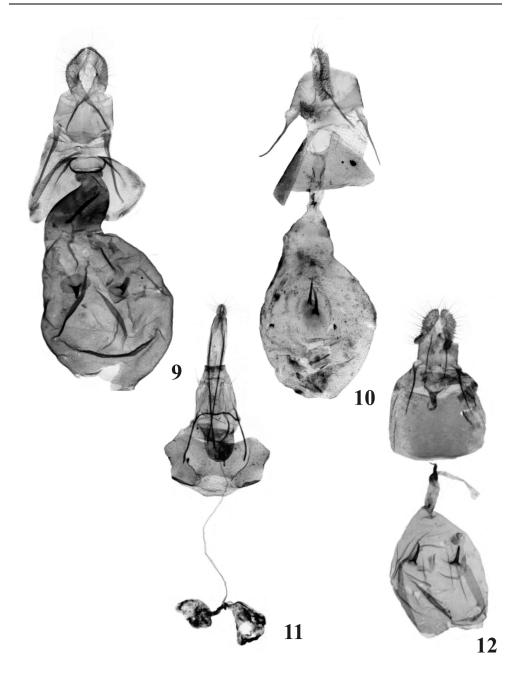
H. isolata is related to *H. rusticula* (MEYRICK, 1911) from the Seychelles (male genitalia illustrated by DIAKONOFF (1969), but *H. isolata* has a distinct triangular uncus, reduced socii, and a shorter aedeagus.

Description

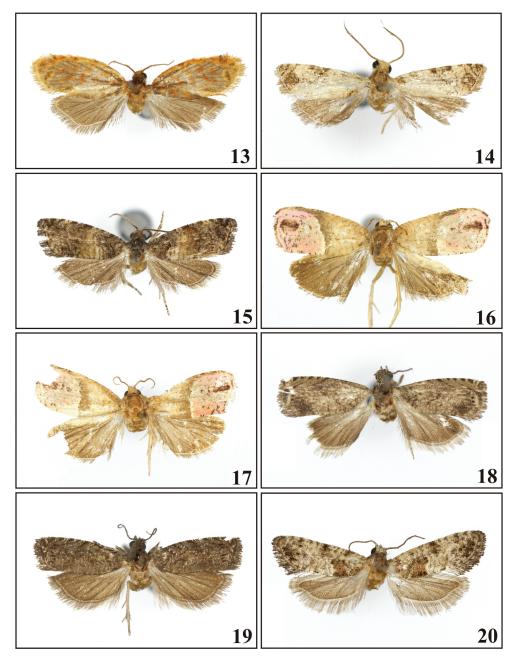
Wing span 11 mm. Head and thorax creamish brown, scaled grey-brown. Forewing weakly expanding posteriorly; costa weakly convex; termen indistinctly concave medially, not oblique. Ground colour pale brownish grey, sprinkled whitish and brown; strigulation and indistinct lines from dorsum greyish brown. Costal strigulae fine brownish cream; divisions broad, short, brown; dorsal part paler than remaining ground colour with a diffuse brown tornal blotch fusing with ocellar area indicated by three brown inner spots. Markings rudimentary, brown, forming indistinct postbasal fascia from 1/3 of dorsum towards 2/3 of costa, terminating subcostally; subterminal fascia indistinct except for terminal part. Cilia brownish grey. Hindwing brownish, pale basally, darker at apex; cilia whitish, browner at apex.

Male genitalia (Fig. 4). Uncus short, subtriangular; socius elongate; ventrolateral parts of tegumen broad; valva slender, not hairy to beyond basal cell, broadening posteriorly; sacculus simple; cucullus rounded apically, provided with pollex; aedeagus small, simple.

Female unknown.



Figs 9-12. Female genitalia: 9 – *Cydia ergoda* sp. n., holotype, 10 – *Microsarotis samaruana* sp. n., holotype, 11 – *Ioditis mokwae* sp. n., holotype, 12 – *Grapholita hymenosa* sp. n., holotype.



Figs 13-20. Adults: 13 – *Plinthograptis iitae* sp. n., holotype, 14 – *Lobesia hecista* sp. n., holotype, 15 – *Teiteccopsis davisorum* sp. n., holotype, 16 – *Anthozela daressalami* sp. n., holotype, 17 – *Anthozela daressalami* sp. n., paratype, female, 18 – *Herpystis isolata* sp. n., holotype, 19 – *Leguminivora horisma* sp. n., holotype, 20 – *Grapholita zariae* sp. n., holotype.

Material examined

Holotype female: "Nigeria: Samaru, Zaria, 1 Feb. 1978, Don & Mignon Davis"; GS 143,03.

Etymology

The specific epithet refers to the systematic position in the genus; Latin: isolata – isolated.

Grapholitini

Fulcrifera horisma sp. n.

(Figs 7, 19)

Diagnosis

In facies, Fulcrifera horisma is similar to Leguminivora ischnodes RAZOWSKI & WOJTUSIAK, 2012 from Bendel State, Nigeria, but F. horisma has a more oblique forewing termen, and a broader proximal edge of the sterigma and median part of the ductus bursae. F. horisma is related to F. halmyris (MEYRICK, 1909) from South Africa, but F. halmyris has a shorter sclerite of the antrum and larger signa.

Description

Wing span 10.5 mm. Head and thorax dark brown, head greyer. Forewing not expanding posteriorly; costa slightly convex; apex rounded; termen weakly oblique, almost straight. Ground colour brownish, sparsely sprinkled with whitish; strigulation and suffusions brown; costal strigulae fine, white; divisions broad, brown; ocellus with three blackish strigulae, posterior line weak, anterior line reduced. Markings brown, rudimentary. Cilia brown. Hindwing brownish paler basally; cilia pale brown.

Male unknown.

Female genitalia (Fig. 7). Ovipositor and apophyses short; sterigma short, ring-shaped sclerite followed by a membrane; antrum short, membranous; ductus bursae slender, broadening near middle; ductus seminalis originating medially; signa two curved, strong blades.

Material examined

Holotype female: "Nigeria: Inst. Agr. Res., 5 miles NW Mokwa (4-5 Feb. 1978, Don & Mignon Davis; GS 143,001.

Etymology

The name refers to the position of the species at the end of the system of the genus; Greek; horismos – a limit.

Cydia ergoda sp. n.

(Figs 9, 21)

Diagnosis

In facies, *C. ergoda* resembles *C. lissa* RAZOWSKI & WOJTUSIAK, 2012 from Nigeria, but *C. ergoda* lacks the concavity of the termen beneath the apex and has a much broader ductus bursae.

Description

Wing span 16 mm. Head and thorax brownish with whitish scaling and cream terminal parts of tegulae. Forewing fairly broad; costa curved to middle, then straight; apex rounded; termen slightly oblique, convex. Ground colour brownish, cream towards base, browner in terminal area where creamer spots and blackish scales present; dorsobasal and postmedian areas dotted white. Markings rudimentary, brownish, represented chiefly by median fascia. Cilia cream brown. Hindwing brown; cilia creamer.

Male unknown.

Female genitalia (Fig. 9). Papillae anales slightly tapering terminally where fused, basal parts strongly reduced; bases of apophyses posteriores broad; sterigma fused with subgenital sternite, with slender anteostial part and plate-shaped, uniformly broad postostial part; antrum short, membranous; ductus bursae broad especially in proximal half where irregular sclerites present; signa two, with broad blades and large basal plates.

Material examined

Holotype female: "Nigeria: Ibaden, IITA, West Bank Lake, 7-9 Feb. 1978, Don & Mignon Davis"; GS 143009.

Etymology

The name refers to the somewhat ambiguous systematic position of the species; Greek: ergodes – difficult.

Grapholita zariae sp. n.

(Figs 8, 20)

Diagnosis

In the female genitalia *C. zariae* is similar to *Eucosma haematospila* MEYRICK, 1921 from Mozambique, but *C. zariae* has a larger, subsquare sterigma similar to that in European *Grapholita lunulana* ([DENIS & SCHIFFERMÜLLER], 1775), and stronger signa.

Description

Wing span 11 mm. Head whitish; thorax brownish white; collar and some marks brown. Forewing slender, uniformly broad; costa almost straight; apex rounded; termen oblique, weakly convex. Ground colour white, suffused and strigulated blackish grey, partially white at mid-dorsum; costal strigulae concolorous with ground colour; divisions dark grey; three

blackish marks on grey ground at mid-termen. Markings reduced to costal spots and dorsal part of postbasal fascia in form of pale ferruginous blotch marked blackish. Cilia greyblack. Hindwing pale whitish brown, transparent basally; cilia whitish.

Male unknown.

Female genitalia (Fig. 8). Ovipositor rather short; sterigma broad; anteostial part short, well sclerotized, with small ventrolateral prominences; postostial part subsquare; antrum sclerites distinct; ductus bursae short, broadening proximally, with a sclerite; blades of signa large, curved, basal plates reduced.

Material examined

Holotype female: "Nigeria: Samaru, Zaria 6. Feb. 1978, Don & Mignon Davis)"; GS 143,018.

Etymology

The name refers to the type locality, Zaria.

Grapholita monogramma RAZOWSKI & WOJTUSIAK, 2012

Material examined

One male from Samaru, Zaria (2 Feb 1978, Don & Mignon Davis).

Remarks

G. monogramma was described from Bendel State, Nigeria.

Grapholitha hymenosa sp. n.

(Figs 12, 24)

Diagnosis

In facies, *G. hymenosa* is similar to *Laspeyresia trigonoptila* MEYRICK, 1921 from Mozambique (the holotype lacks the abdomen, cf. RAZOWSKI & KRÜGER 2007), but *G. hymenosa* has brown posterior parts of the wings and a straight proximal line limiting the dorsal patch of the forewing. In contrast, the forewing of *L. trigonoptila* is brownish yellow and the line is curved.

Description

Wing span 12 mm. Head and thorax pale orange yellow, sprinkled brownish grey. Forewing broad, expanding to middle; costa convex; apex small, extending distad; termen concave beneath apex, broadly convex otherwise. Ground colour orange yellow, sprinkled and strigulated greyish brown; some longitudinal strigulae at middle of wing; costal strigulae cream, slender, subapical strigula broad, paler; divisions brownish. Dorsal patch slightly paler than remaining wing, with brownish lines; tornal area brown; smaller blotch at mid-termen; ocellus orange yellow with three brown strigulae. Cilia brownish, orange yellow at apex. Hindwing brown; cilia white cream with brown basal line.

Male unknown.

Female genitalia (Fig. 12). Ovipositor and apophyses short; sterigma membranous with proximal part forming two lateral portions, comprised of thick membrane, antrum of similar composition; ductus bursae slender, short, except for basal part from end of which extends ductus seminalis; signa two, typical of genus.



Figs 21-24. Adults: 21 – *Cydia ergoda* sp. n., holotype, 22 – *Microsarotis samaruana* sp. n., holotype, 23 – *Ioditis mokwae* sp. n., holotype, 24 – *Grapholita hymenosa* sp. n., holotype.

Material examined

Holotype female: "Nigeria: Ibaden, Golf Course Lake, 6-10 Feb. 1978, Don & Mignon Davis"; GS 143,024.

Etymology

The specific name refers to the sterigma; Greek: hymen – a membrane.

Microsarotis samaruana sp. n.

(Figs 10, 22)

Diagnosis

M. samaruana is closely related to the Indian M. palamedes (MEYRICK, 1916), but M. samaruana has a shorter postbasal sclerite of the ductus bursae and a broader, short

sclerite of the antrum. From the Madagascan *M. pauliani* DIAKONOFF, 1988 (known only from the male), *samaruana* differs in having a white-grey forewing without purplish elements (as described by DIAKONOFF 1988) and a pale terminal area.

Description

Wing span 9 mm. Head and thorax whitish grey. Forewing somewhat expanding terminad; costa almost straight; apex rounded; termen moderately oblique, weakly convex. Wing greyish with brownish suffusions; ground colour represented by two pairs of white dorsal lines divided by and edged with brown; costal strigulae white, divisions brownish; ocellus reduced to proximal refractive line; other refractive markings weak, diffuse. Cilia brownish grey with strong, dark brown basal line. Hindwing brownish, whiter basally; cilia brownish white.

Male unknown.

Female genitalia (Fig. 11). Sterigma mostly membranous; proximal third of ductus bursae broad with posterior sclerite; remaining part of ductus bursae fairly broad; sclerite of antrum short, broad; corpus bursae oval; signa two, distinct.

Material examined

Holotype female: "Nigeria: Samaru, Zaria, 2 Feb. 1978, Don & Mignon Davis"; GS 143,023.

Etymology

The specific epithet is based on the name of the type locality.

Ioditis mokwae sp. n.

(Figs 11, 23)

Diagnosis

Ioditis saccifera is similar to *I. capnobactra* MEYRICK, 1938 from Zaire, but *I. saccifera* can be distinguished by its grey forewing and the large, membranous sac at the sterigma.

Description

Wing span 18 mm. Head and thorax grey, scaled whitish. Forewing rather slender; costa slightly and uniformly convex; apex rounded; termen weakly oblique and convex. Ground colour greyish with white suffusions, brownish dots, and sparse strigulae; costal strigulae whitish, indistinct; divisions grey-brown, indistinct. Markings in form of grey-brown subapical blotch. Cilia paler than wing. Hindwing grey, slightly mixed brownish on peripheries; cilia whiter.

Male unknown.

Female genitalia (Fig. 11). Ovipositor long, telescopic; apophyses anteriores four times length of apophyses posteriores; sterigma with large membranous sac; ductus bursae long, very slender except for basal portion from which extends ductus seminalis; corpus bursae small. Signa absent.

Material examined

Holotype female: "Nigeria: Inst. Agr. Res., 5 miles NW Mokwa (4-5 Feb. 1978, Don & Mignon Davis; GS 143,002.

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