

***Herpetobotys* gen. n. with three new species
from the Afrotropical region
(Lepidoptera Pyraloidea Crambidae Pyraustinae)**

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Summary

A new genus *Herpetobotys* is described for three new species from Africa :
H. camerounensis sp. n., *H. ugandae* sp. n., *H. kenyensis* sp. n. The genitalia and
tympanal organs are illustrated and a key is given.

Keywords : *Herpetobotys* gen. n., *H. camerounensis* sp. n., *H. ugandae* sp. n., *H.
kenyensis* sp. n., Pyraustinae, Afrotropical region.

Samenvatting

Herpetobotys gen.n. wordt beschreven. Het bevat drie nieuwe soorten van Africa :
H. camerounensis sp. n., *H. ugandae* sp. n., *H. kenyensis* sp. n. De genitalia en de
tympanaal organen worden geïllustreerd.

Introduction

Herpetobotys gen.n. is described from the afrotropical region. Members of
the genus have a complicated sella in the male genitalia. In the female
genitalia the appendix bursae originates from the ductus bursae near the base
of the corpus bursae. Three externally very similar species are described here :
H. ugandae, *H. camerounensis* and *H. kenyensis*.

Abbreviations used : ABSRC : AgroBioSys Int.Reference Collection,
Belgium, Wetteren; GPKM : Genitalia preparation by K. MAES; NMK :
National Museums of Kenya, Nairobi.

List of Species

H. ugandae sp. n.
H. camerounensis sp. n.
H. kenyensis sp. n.

Herpetobotys gen. n.

Type species : *Herpetobotys camerounensis* sp. n.

Gender : male

Diagnosis

Male genitalia with a complicated sella consisting of several strongly sclerotized hooks; editum absent; female genitalia with the appendix bursae originating from the ductus bursae close near the base of the corpus bursae; tympanal organs with the fornix tympani broad, above the venula prima.

External characters :

Head : frons rounded; maxillary palps obvious; labial palps well developed, thickly scaled, porrect to upturned, third segment small concealed in scaling of second segment; legs normal, mid-tibia not enlarged, spurs : 0,2,4; antenna filiform.

Wings : broad triangular, fore wings : R1 short before angle of cell, R2 and R3+4 from angle of cell, very close and parallel for a large part but not fused, R2 and R3 before apex, R4 in apex, R5 parallel at base with R3+4 then diverging and parallel with M1; M2, M3 and Cu1 all separated at the base but very close, Cu1 from angle of cell; 1 A vein present. Hindwings : Sc+R1 connected with Rs beyond the cell by a short vein; M1 from upper cell-angle, M2, M3 and Cu1a from lower cell-angle, parallel at their base then diverging. 3 A veins present. Retinaculum identical in both sexes, consisting of a series of scales/bristles near the Cu stem; frenulum simple in ♂, double in ♀.

Internal characters :

Tympanal organs : Praecinctorium strongly bilobed; tympanal organs invaginated but fornix tympani above the venula prima; fornix tympani broad; saccus tympani shallow; spinula absent.

Male genitalia : typical pyraustine genitalia with a well defined uncus covered with flattened, modified setae; tegumen and saccus all well developed; valva "ear shaped" with a complex sella consisting of different strongly sclerotized hooks with specific characters, editum absent; aedeagus with cornuti.

Female genitalia : Ostium bursae broad, with specific sclerotizations; basal part of ductus bursae enlarged, half turned just beneath the antrum; ductus bursae of medium length; appendix bursae originating from ductus bursae near base of corpus bursae, large ovoid signum present on corpus bursae.

Systematic position : The genus belongs to the Crambidae, Pyraustinae because of the typical sella, the spicula in the aedeagus (male genitalia), the appendix bursae and the rhomboid signum (female genitalia). The sella shows some resemblance with the sella in *Nascia* CURTIS, 1835 but the female genitalia are completely different : *Herpetobotys* species have the appendix bursae originating from the ductus bursae instead of the corpus bursae.

Etymology : The name was derived from *Herpeto[gramma]*, a genus in the Spilomelinae (Crambidae) for its external resemblance with the species here described and *Botys*, a name commonly used in the older literature on pyraloids.

Distribution : Afrotropical : Cameroun, Uganda, Kenya.

Key based on the male genitalia

- 1 Uncus broad, rounded at its apex 2
 Uncus narrow, pointed *H. kenyensis*
- 2 Proximal part of sella (near juxta) curved, with a series of saw-like spines.
 Valva broad *H. camerounensis*
 Proximal part of sella (near juxta) shield-shaped with few short spines. Valva more narrow *H. ugandae*

Species descriptions

Herpetobotys camerounensis sp. n.

Diagnosis : male genitalia with the sella consisting of three larger spines, the middle spine with some smaller spines. Proximal part of sella (near juxta) curved, with a series of saw-like spines.

Description : Ground colour dark brown. Antemedial and postmedial line clear but not sharp delimited, reniform stigma dark, almost black, well developed.

Tympanal organs : as for the genus

Male genitalia : Uncus rounded, dorsally with modified, flattened setae; sella consisting of three larger spines, the middle spine with some smaller spines. Proximal part of sella (near juxta) curved, with a series of saw-like spines. Aedeagus with numerous well developed needle-shaped cornuti.

Female genitalia : Sinus vaginalis broad, strongly sclerotized, consisting of two plates medially separated and basally with a broad calyx-shaped plate around the ostium bursae. The whole structure bears specific sclerotizations. Proximal part of the ductus bursae enlarged, with minor sclerotizations present. Appendix bursae present, originating from ductus bursae near base of corpus bursae. Large ovoid signum.

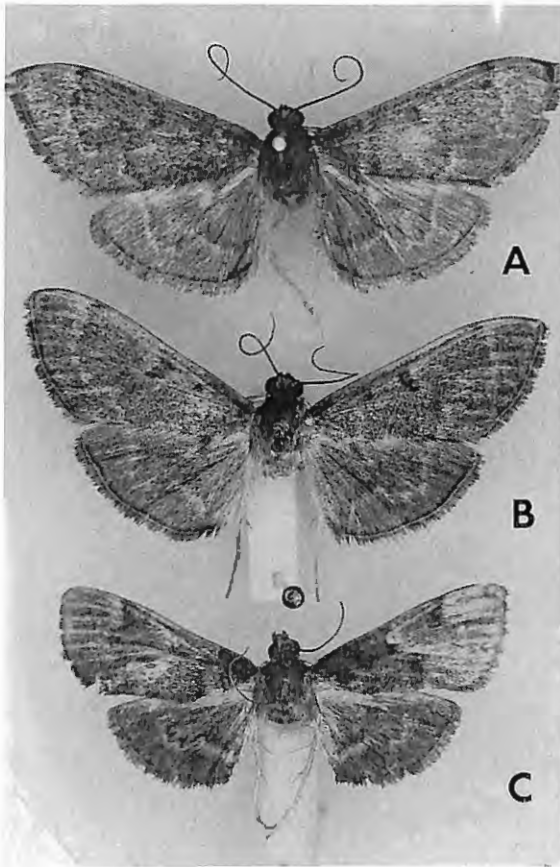


Plate 1. Adults. A : *Herpetobotys ugandae* Holotype. B : *Herpetobotys camerounensis* Holotype.
C : *Herpetobotys kenyensis* Holotype.

Wing span : 29-31mm

Distribution : Cameroon.

Life cycle : unknown

Material examined : Holotype : 1♂ Cameroon, Center, Yaoundé, Mt.Phébé 1070m VII.1993; GPKM ♂593 (ABSRC); Paratype 1♀ Cameroon, Center, Yaoundé, Mt.Phébé 1070m VII.1993; GPKM ♀594 (ABSRC); Paratype 1♂ : Cameroon, Center, Yaoundé, Mt.Phébé 1070m VII.1993 (ABSRC); Paratype 1♂ : Cameroon, Center, Yaoundé, Mt.Phébé 1070m VII.1993; GPKM ♂566 (ABSRC).

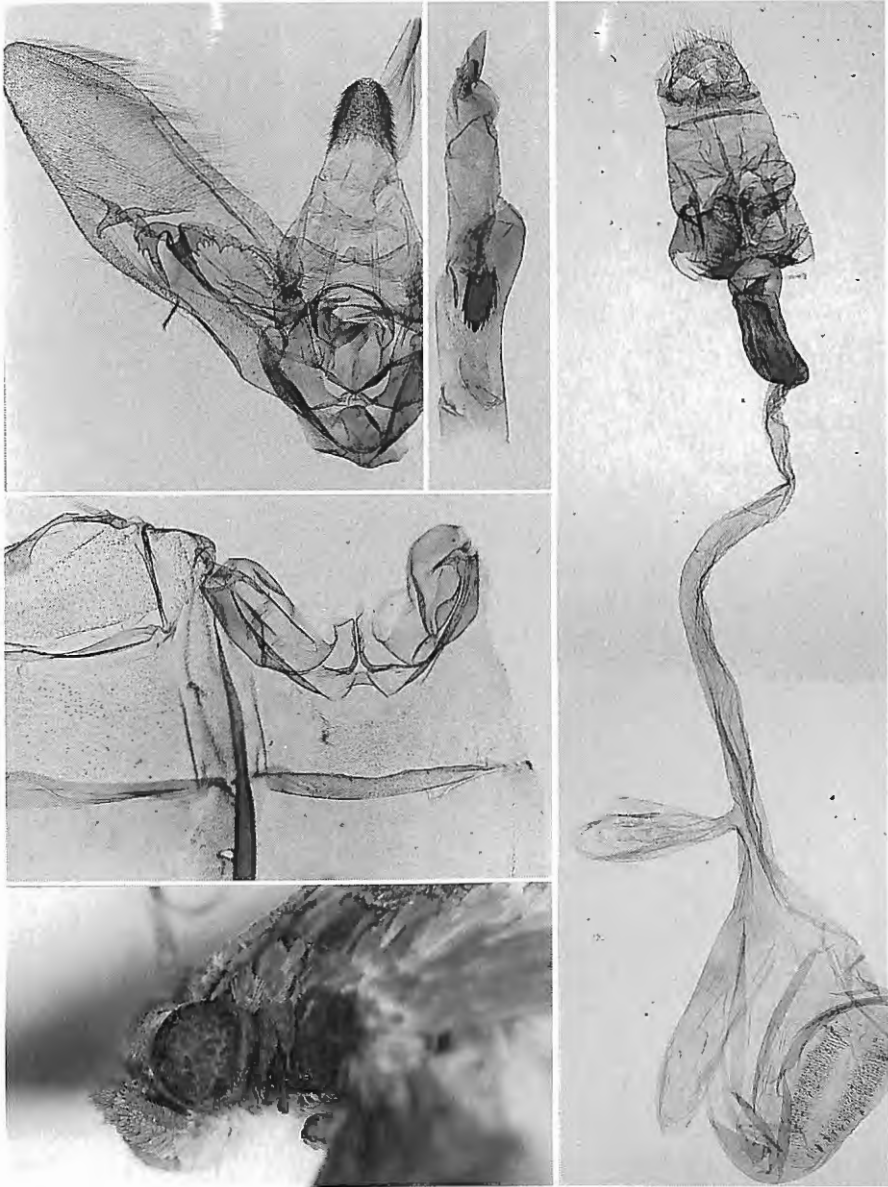


Plate 2. A : Male genitalia : *H. camerounensis* Holotype GPKM ♂593; aedeagus : idem. B : Female genitalia : *H. camerounensis* Paratype GPKM ♀594. C : Tympanal organs : *H. kenyensis* Holotype. GPKM ♂769. D : Lateral view head : *H. kenyensis* Holotype.

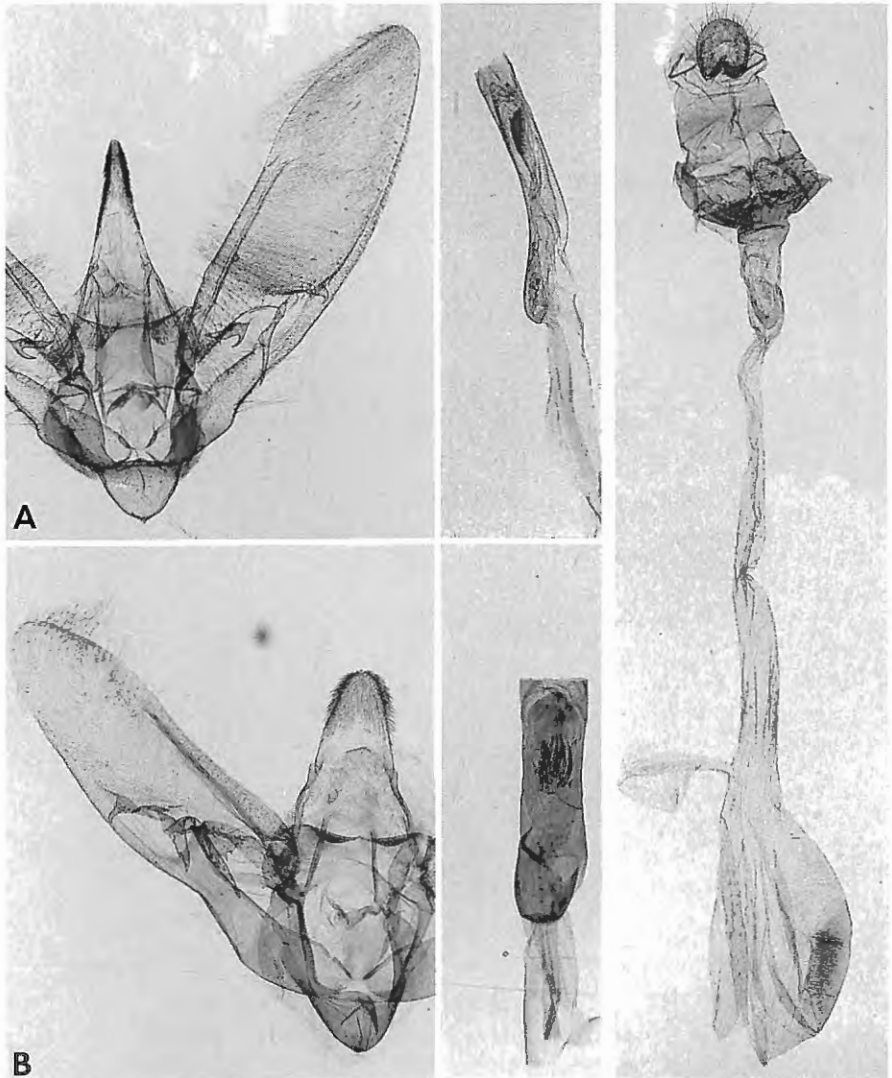


Plate 3. Male genitalia. A : *H. kenyensis* Holotype. GPKM♂769. Plate 4. Female genitalia *H. kenyensis* GPKM♀20424.
 B : *H. ugandae* Holotype. GPKM♂20425.

Herpetobotys ugandae sp. n.

Diagnosis : strongly resembling *H. camerounensis* but postmedial line in hind wing better delimited, the sella in the male genitalia is less developed :

middle spine lacks the smaller spines and proximal part of sella shield-shaped with a few saw-like spines.

Description : externally difficult to distinguish from *H. camerounensis* but differs in the postmedial line in the hind wings more clearly delimited and slightly dentate near the cell.

Tympanal organs : as for the genus.

Male genitalia : uncus rounded as in *H. camerounensis* but the sella is less complex. Two larger spines with fewer smaller spines near their base; valva more slender; aedeagus with less cornuti.

Female genitalia : not known

Wing span : 26-31mm

Distribution : Uganda

Life cycle : unknown

Material examined : Holotype 1♂ : Uganda Kigezi Kayonza Mar.1967 R.C. Otieno, GPKM nr.♂20425 (NMK); Paratype 1♂ : Uganda Kigezi Kayonza Mar.1967 R.C. Otieno (ABSRC); Paratype 1♂ : Uganda Bwamba Toro Sept.1961 N. Mitton (NMK).

Herpetobotys kenyensis sp. n.

Diagnosis : differs from the two other species by the pointed uncus and a poorly developed sella consisting of three spines without any additional spines. Postmedial line in hind wing clearly delimited, dentated near the cell.

Description : Externally difficult to distinguish from the other species, except postmedial line in hind wing dentate near the cell.

Tympanal organs : as for the genus.

Male genitalia : Uncus pointed, valva long with a much less sclerotized sella consisting of three isolated slender spines without any additional spines near their base; aedeagus much more slender as in the other species, with some short needle-shaped cornuti.

Female genitalia : largely as for *H. camerounensis* but different sclerotizations near the ostium bursae, proximal part of ductus bursae less sclerotized and signum smaller.

Wing span : 25-34mm

Distribution : Western Kenya

Life cycle : unknown.

Material examined : Holotype : 1♂ Kenya, Western, Kakamega Forest Reserve 00.16N 34.53E 1650m Mercury Vapor Light 4 to 8.V.1997 K.Maes, GPKM nr.♂769 (ABSRC); Paratype 1♀ : Kenya, Kakamega III.1966 R.H.Carcasson, GPKM nr.♀20424 (NMK).

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References

- MAES K.V.N., 1995. - A comparative study of the adult Crambidae (Lepidoptera, Pyraloidea) *Bulletin et Annales de la Société royale belge d'Entomologie* 131 : 383-434.