

DESCRIPTIONS OF NEW AFRICAN SPECIES
OF THE GENERA **BRIXIA** Stal
AND **BRIXIDIA** Haglund (Homoptea, Cixiidae)*

by Jan VAN STALLE**

About fifteen *Brixia* and eight *Brixidia* species have been recorded from the African continent. Ten more species are described in this paper, for the greater part collected in Nigeria by Prof. J.T. Medler. Although the collected number of *Brixia* and *Brixidia* specimens was rather low, a relative high amount of new species was recorded. This indicates that still many species are left undescribed for the moment.

The types of all the species described below are deposited in the collections of the Koninklijk Belgisch Instituut voor Natuurwetenschappen.

Brixia STAL

Brixia semistriata n. sp. (fig. 1 to 4)

Material examined: Holotype ♂: Nigeria, EC St., Umuahia, 11.IV.1973 (J.T. Medler). Paratypes: 1 ♂, same locality; 1 ♂, MW. St., Benin; 1 ♂ 2 ♀, W. St., Agbabu, 3.III.1973 (J.T. Medler).

Description: Colour pale stramineous. Tegmina hyaline with brown marks and streaks as illustrated in fig. 2. Veins whitish, except for the transverse veinlets which are dark brown.

Male genitalia: anal segment (fig. 4) moderately long; pygofer simple. Genital styles (fig. 3) with a dorsal spine apically. Aedeagus (fig. 1) with three apical spines: a short one and a long one inserted on left side and a short one inserted on right side, the latter slightly upcurved distally.

Total length: 4.5-5 mm.

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Diagnosis: This species is closely related to *Brixia lamelliceps* FENNAH, 1957 by the general structure of the male genitalia. It is distinguished from this species by the different shape of the small spine on the left side of the aedeagus, and the different form of the apex of the anal segment and the genital styles.

Brixia propinqua n. sp. (fig. 5 to 8)

Material examined: Holotype ♂: Nigeria, MW St., Benin, 1.IV.1975 (J.T. Medler). Paratype: 1 ♀, same locality, 8.IV.1973 (J.T. Medler).

Description: Frons and clypeus brown, genae yellowish with three brown spots, the middle one enclosing the ocellus. Vertex yellowish, hind edges brown. Pronotum pale yellowish, posterior margins fumated with brown. Mesonotum brown, tibiae and tarsi yellowish. Tegmina milky hyaline, coloured with brown as illustrated in fig. 6. The holotype, which is generally darker than the paratype, bears an additional transverse band at the level of the first costal spot.

Male genitalia: anal segment (fig. 8) large, apex long and tapering. Pygofer with posterior lateral margins gently rounded. Genital styles (fig. 7) with three small lobes apically. Aedeagus (fig. 5) with a long flagellum and a spine along each side, left one longer than right one.

Total length: 5 mm.

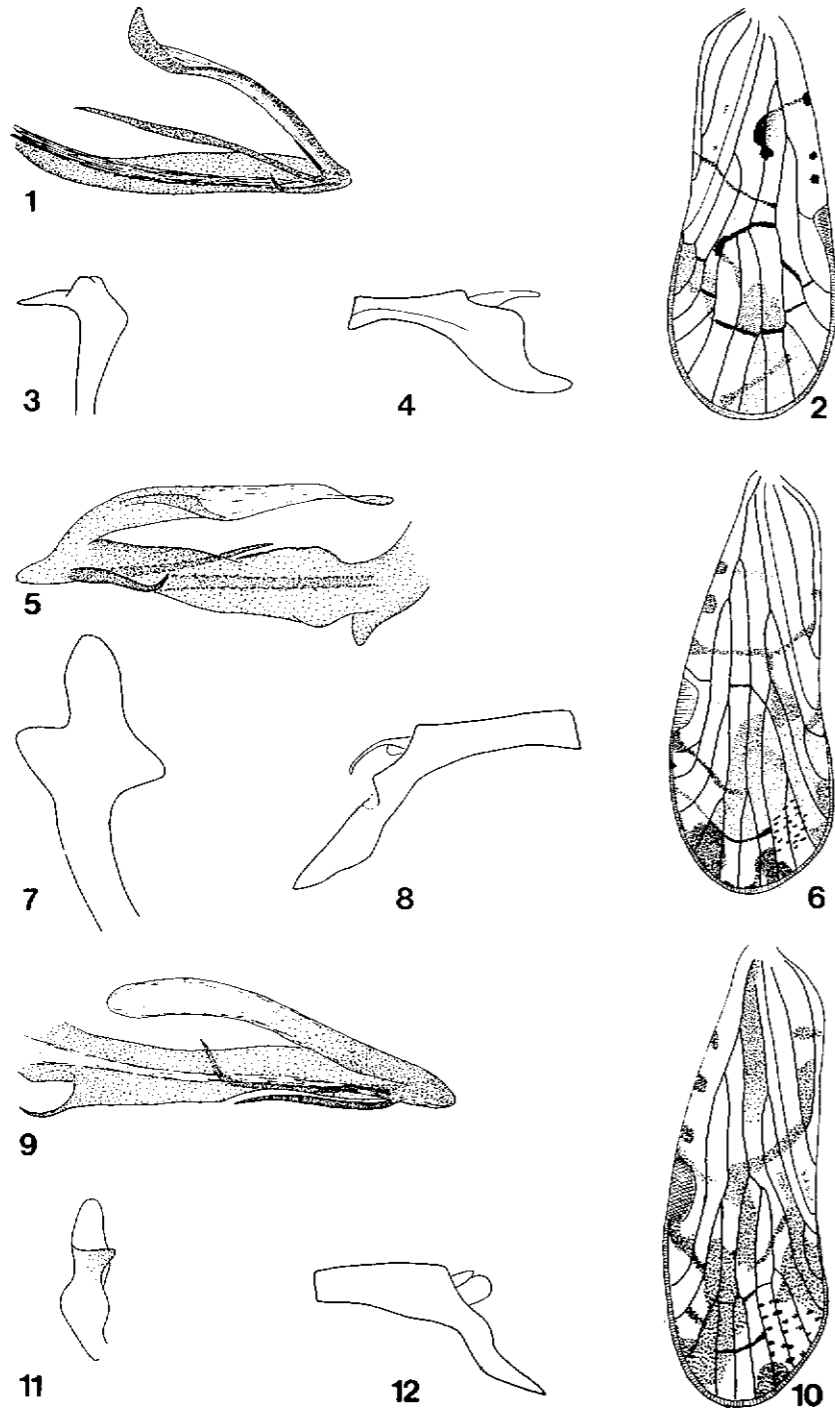
Diagnosis: This species is probably the nearest to *Brixia nigeriana* SYNAVE 1971. It is readily distinguished from this species by the lack of the ventral process on the aedeagus and by the different colour pattern on the tegmina.

Brixia modesta n. sp. (fig. 9 to 12)

Material examined: Holotype ♂: Nigeria, SE St., Onya, 1.IV.1975 (J.T. Medler).

Description: General colour stramineous, three streaks on the genae before the eyes. Mesonotum yellowish brown. Tegmina milky hyaline, with brown colour traces as illustrated in fig. 10; veins whitish.

Male genitalia: anal segment (fig. 12) tapering distally; pygofer simple. Genital styles (fig. 11) short, with two blunt lobes apically. Aedeagus (fig. 9) provided with a long flagellum and two



long spines, one on each side, the right one upcurved distally; further, a short spine ventrally near base.

Total length: 5 mm.

Diagnosis: This species resembles to *Bixia nigeriana* SYNAVE 1971 and *Bixia saegeri* SYNAVE 1960, by the general structure of the aedeagus. It is distinguished from the first species by the different colour pattern of the tegmina and by the absence of the ventral process on the aedeagus. *Bixia modesta* n. sp. differs from the second species in the different shape of the aedeagal spines, the anal segment and the genital styles.

***Bixia personata* n. sp.** (fig. 13 to 16)

Material examined: Holotype ♂: Zaïre, Lubumbashi, 15.XII.1938 (H.J. Brédo). Paratypes: 15 ♂, 17 ♀, same locality.

Description: Face, vertex, pronotum and legs yellowish white. Genae with three brown spots, the middle one enclosing the ocellus. Mesonotum stramineous. Tegmina milky hyaline, with brown spots as illustrated in fig. 14. Females usually darker, the spots and bands often fused together.

Male genitalia: pygofer broad, posterior margin rounded. Anal segment (fig. 16) rather short. Genital styles (fig. 15) abruptly broadening apically. Aedeagus (fig. 13) provided with a long flagellum, recurved apically; two spines along left side, a long one and a short one, inserted near apex of aedeagus.

Total length: ♂: 6 mm; ♀: 7 mm.

Diagnosis: The species is well-defined by the colour pattern of the tegmina and the shape of the aedeagus, genital styles and anal segment.

***Bixia coronata* n. sp.** (fig. 17 to 19)

Material examined: Holotype ♂: Zaïre, Rwanki, 31.V.1951 (J.V. Leroy).

FIG. 1 to 4. — *Bixia semistriata* n. sp.
1: aedeagus; 2: right tegmen; 3: genital style; 4: anal segment.

FIG. 5 to 8. — *Bixia propinqua* n. sp.
5: aedeagus; 6: left tegmen, paratype; 7: genital style; 8: anal segment.

FIG. 9 to 12. — *Bixia modesta* n. sp.
9: aedeagus; 10: left tegmen; 11: genital style; 12: anal segment.

Description : General colour stramineous, two brown streaks on genae. Tegmina hyaline, somewhat yellowish, with a brown stigma

Male genitalia : anal segment (fig. 19) rather short, truncate distally. Pygofer simple ; genital styles (fig. 18) with two unequal lobes apically. Aedeagus (fig. 17) with a long flagellum provided with two short teeth dorsally near apex of aedeagus, and a crown-like series of teeth more apically of flagellum. Further three spinose processes inserted along apex of aedeagus : a short one on left side, a short and a long one on right side.

Total length : 6.5 mm.

Diagnosis : *Brixia coronata* n. sp. somewhat remembers to *Brixia dedegwana* SYNAVE 1960 and *Brixia lamelliceps* FENNAH 1957. From the first species it is set apart by the different proportions of the aedeagal spines, and by the different shape of the anal segment and genital styles. It is distinguished from *Brixia lamelliceps* by the hyaline tegmina and by the different shape of the male terminalia.

***Brixia neglecta* n. sp.** (fig. 20 to 23)

Material examined : Holotype ♂ : Nigeria, NE St., Nqel Nyaki, 31.III.1970 (J.T. Medler). Paratype : 1 ♂, W. St., Erin-Odo, 20.II.1970 (J.T. Medler).

Description : Head and pronotum stramineous, genae with a brown spot beyond the ocellus and two dark streaks above it. Mesonotum yellowish brown. Legs stramineous, profemora with a dark spot basally and a brown band in the distal half. Pro- and mesotibiae with a dark ring distally. Tegmina (fig. 21) with a black well-defined spot behind clavus along inner apical border and a brown transverse band extending from stigma to junction of claval veins ; further, an indistinct short transverse band basally and some indistinct suffusions in the apical half of the tegmina ; base of tegmina yellowish, a large area in the apical half trans-

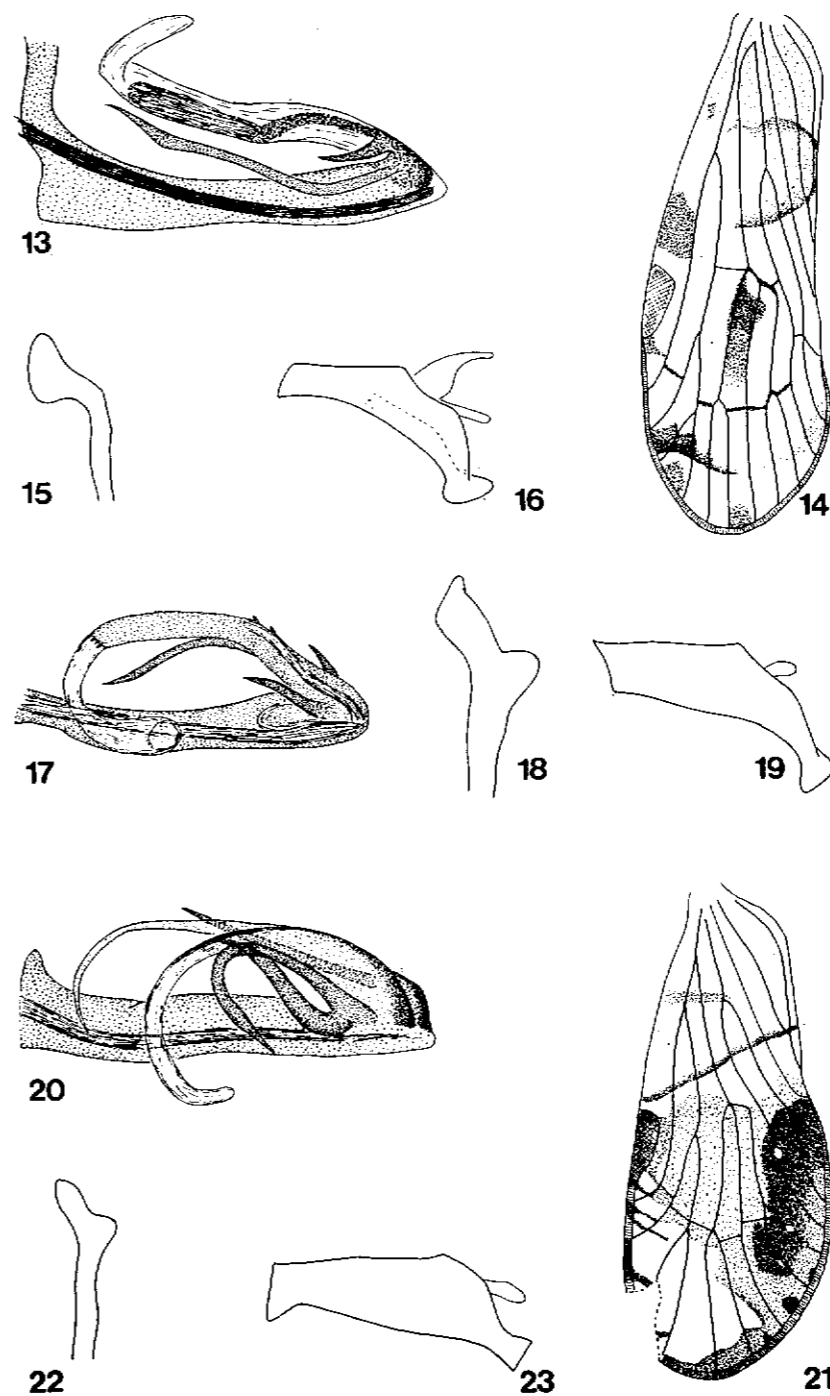


FIG. 13 to 16. — *Brixia personata* n. sp.

13 : aedeagus ; 14 : left tegmen ; 15 : genital style ; 16 : anal segment.

FIG. 17 to 19. — *Brixia coronata* n. sp.

17 : aedeagus ; 18 : genital style ; 19 : anal segment.

FIG. 20 to 23. — *Brixia neglecta* n. sp.

20 : aedeagus ; 21 : left tegmen ; 22 : genital style ; 23 : anal segment.

lucent. Veins yellowish, except at the level of the black apical spot.

Male genitalia : anal segment (fig. 23) moderately long, truncate apically. Pygofer simple. Genital styles as illustrated (fig. 22). Aedeagus (fig. 20) provided with a long curved flagellum, a thin curved spine arising from its dorsal margin. Next, two spines arising apically along left side, one of them strongly recurved caudally. Finally, a long spine arising apically along right side and running straight inwards.

Total length : 5 mm.

Diagnosis : This species is closely related to *Brixia electa* SYNAVE 1971, also described from Nigeria. *Brixia neglecta* n. sp. differs from the latter in the colour pattern of the tegmina, more particularly the paler base and the presence of a colourless translucent area in the apical half. The anal segment, pygofer and genital styles of both species are the same. The aedeagus differs in the number and shape of the spines.

***Brixia strigosa* n. sp.** (fig. 24 and 25)

Material examined : Holotype ♂ : Zaïre, Musosa, XI.1939 (H.J. Brédo).

Description : Colour stramineous. Genae with three dark spots above and beneath the ocellus, mesonotum yellowish brown. Tegmina milky hyaline, densely covered with pale brown spots.

Male genitalia : pygofer and anal segment simple. Genital styles (fig. 25) with two unequal lobes. Aedeagus (fig. 24) provided with a large ventral process halfway along its length and a small process basally ; further, a long curved flagellum and a long spine laterally along each side (right spine not visible on fig. 24).

Total length : 6 mm.

Diagnosis : This species is characterized by the shape of the aedeagus, especially by the large ventral process.

***Brixia denticulata* n. sp.** (fig. 26 to 18)

Material examined : Holotype ♂ : Nigeria, W. St., Ile-Ife, IX.1971 (J.T. Medler). Paratype : 1 ♂, E.C. St., Umuahia, 11.IV.1973 (J.T. Medler).

Descripton : General colour yellowish white, mesonotum stramineous. Genae with two black streaks : a thin one at the level of the ocellus and a broader one above it. Tegmina milky hyaline,

veins white, transverse veinlets brown ; three brown spots along the costal margin between base and stigma and an indistinct brown spot in the apical part of the tegmina.

Male genitalia : anal segment (fig. 28) apically produced into a long median process ; lateral margins of pygofer angulately produced ; genital styles abruptly broadening apically into a rounded lobe (caudal view - lateral view in fig. 26). Aedeagus (fig. 27) with a denticulated process on left side and a long spine inserted on right side, both directed cephalically. Further, a hook-like process ventrally near base and a small spine just above it.

Total length : 7 mm.

Diagnosis : *Brixia denticulata* n. sp. is characterized by the denticulated process on the aedeagus, which separates this species from all other *Brixia* species.

***Brixia fumata* n. sp.** (fig. 29 to 32)

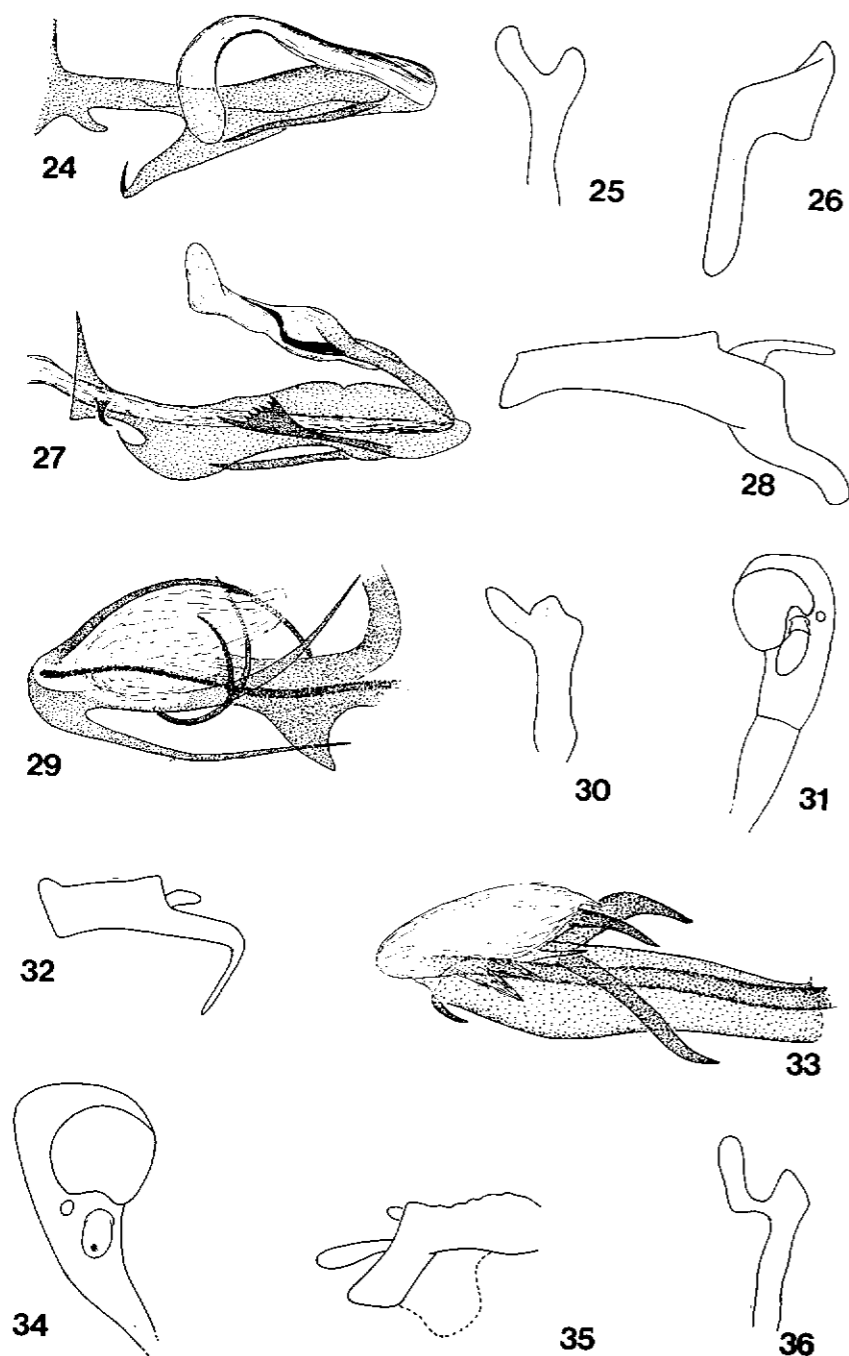
Material examined : Holotype ♂ : Nigeria, W. St., Ile-Ife, 7.VIII.1973 (J.T. Medler).

Description : Colour yellowish brown, antennae darker. Vertex (fig. 31) gently rounded in profile, not protruding. Tegmina narrow basally, strongly broadening to apex, the latter rounded. Colour milky hyaline in the apical half, with some indistinct brown fumations ; veins, costal margin and a band extending from costal to commisural margin just behind level of bifurcation of Sc+R brown. A second brown band extending from stigma to apex of clavus. Further, apical cells brown, connected with the second band by a common stalk along the median vein, dividing two unequal hyaline areas in the apical half of the tegmina. M. arising from Sc+R at level of basal cell, as is the case with *Brixidia* species.

Male genitalia : anal segment (fig. 32) short, provided apically with a thin deflexed spinose process. Genital styles as illustrated (fig. 30). Aedeagus (fig. 29) with five slender spines, four of which visible from right side, the fifth circularly curved dorsally and inserted on right side. Further, a stout triangular process basally along ventral margin.

Total length : 5 mm.

Diagnosis : At first sight one might refer this species to the genus *Brixidia* HAGLUND, because of the almost non-existent common stalk of M and Sc+R, so that M seems to arise from the



basal cell near the base of Sc+R. However, the shape of the head (gently rounded and parallel to the eyes), the implantation of the antennae very close to the eye, which is therefore excavated, and the general form and venation of the tegmina allow us to place this species in the genus *Brixia*. This also means that one has to be careful with the use of characters such as venation for the purpose of separating the genera *Brixia* and *Brixidia*.

Brixidia HAGLUND

Brixidia pilosella n.sp. (fig. 33 to 36)

Material examined : Holotype ♂ : Nigeria, Obudu Cattle Ranch, 21.III.1971 (J.T. Medler). Paratype : same locality.

Description : General colour stramineous, mesonotum yellowish-brown, vertex brown. Head slightly protruding before eyes. Tegmina hyaline, densely covered with small setae ; stigma and some small spots along the apical margin brown ; sides almost parallel and not broadening distally ; apex rounded.

Male genitalia : anal segment asymmetrical (fig. 35), left ventral margin strongly deflexed ventrally into a large subapical lobe, right margin straight, apically terminating into a blunt lobe. Lateral margins of pygofer convex in profile. Genital styles (fig. 36) as illustrated, strongly broadening to apex, the latter with a deep U-shaped incision, dividing it in two unequal parts. Aedeagus (fig. 33) with three long spines, two along right side and one along left side. Further, a broad membraneous flagellum covering the apical part of the aedeagus, with three membraneous spinose processes. Finally, a short spine ventrally near apex of aedeagus.

Total length : 5 mm.

FIG. 24 and 25. — *Brixia strigosa* n. sp.
24 : aedeagus ; 25 : genital style.

FIG. 26 to 28. — *Brixia denticulata* n. sp.
26 : genital style ; 27 : aedeagus ; 28 : anal segment.

FIG. 29 to 32. — *Brixia fumata* n. sp.
29 : aedeagus ; 30 : genital style ; 31 : head, lateral view ; 32 : anal segment.

FIG. 33 to 36. — *Brixidia pilosella* n. sp.
33 : aedeagus ; 34 : head, lateral view ; 35 : anal segment ; 36 : genital style.

Diagnosis : The species is well-defined by the shape of the male genitalia.

Summary

Ten African species are described as new to science : *Brixia semistriata* n. sp., *B. propinqua* n. sp., *B. modesta* n. sp., *B. personata* n. sp., *B. coronata* n. sp., *B. neglecta* n. sp., *B. strigosa* n. sp., *B. denticulata* n. sp., *B. fumata* n. sp. and *Brixidia pilosella* n. sp.

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