

## AFRONISIA, A NEW AFRICAN GENUS OF MEENOPLIDAE (HOMOPTERA: FULGOROIDEA)

Michael R. Wilson<sup>1</sup>

ABSTRACT.—The new genus *Afronisia* is founded with *Eponisia albovittata* Fennah as the type-species. *Eponisia brunnescens* Synave, *E. flavescens* Synave, *E. pallida* Linnavuori, and *Nisia muiri* Metcalf are transferred to this genus, and *E. albinervosa* Muir is placed in synonymy with *Kermesia albinervosa* Muir. Two new species are described: *Afronisia bredoi*, from Zaire, and *A. gembuensis*, from Nigeria. Keys are provided for separation of the African genera of Kermesiinae and for the seven species of *Afronisia* that are described and figured.

The Old World planthopper family Meenoplidae is one of the smaller fulgoroid families, consisting of slightly more than 100 described species. Until recently all species were placed in eight genera in two subfamilies, the Meenoplinae and the Kermesiinae (=Nisiinae). However, Emeljanov (1984) and Tsaour et al. (1986) described new genera for existing species in the Oriental region and named several new species. Over 50 species are known from Africa through the work of Muir (1927, 1934) and other early workers and, more recently, by Fennah (1955, 1957, 1958), Linnavuori (1973), and Synave (1957a, 1957b, 1971). It is now apparent that only a small proportion of the species has been described so far, as has been found for other African fulgoroid groups (e.g., Derbidae, Wilson 1987).

Meenopliids are small fulgoroids with tentiform forewings and one or both claval veins with sensory pits ("granulations" in older literature) on either side of the vein. Females possess wax-producing plates on abdominal segments 6–8. The family belongs to a group that includes Achilixiidae, Kinnaridae, and Achilidae. Meenoplidae are divided into two subfamilies, the Meenoplinae and the Kermesiinae. In the Meenoplinae the first claval vein has a single row of sensory pits, and the second claval vein is more or less covered with them. In the Kermesiinae the claval veins are fused near the apex of the clavus (e.g., Fig. 4). The first claval vein has a row of sensory pits on either side of the vein. Three African genera are placed in this subfamily: *Kermesia*, *Nisia*, and *Afronisia*.

Kermesiinae was first used by Kirkaldy (1906:427) as a subfamily of Derbidae to include *Nisia*, *Phaconeura*, *Suva*, and several derbid genera. Although the subfamily was named Kermesiinae, the genus *Kermesia* was not treated at that time but was included by implication in comments on *Nisia* by Kirkaldy (1906:427), who stated that "[*Nisia*] seems hardly differentiated from *Kermesia*." However, in the following year Kirkaldy (1907:163) stated that two subfamilies of the Derbidae may be recognized, including the Nisiinae represented by *Nisia*. The name Nisiinae was accepted by most subsequent workers, including Metcalf (1945). Recently, Emeljanov (1984) and Tsaour et al. (1987) used Kermesiinae as the subfamily name in preference to Nisiinae; this name has been followed here.

The African meenoplid species have been placed in the genera *Nisia*, *Kermesia*, *Eponisia* (Kermesiinae), *Anigrus*, and *Meenoplus* (Meenoplinae). Because these genera are all poorly defined, it is necessary for several new genera to be erected to accommodate some existing species and some undescribed ones. The five African species currently placed in *Eponisia* have little in common with the remaining Asiatic species, which include the type-species, *E. guttula* Matsumura, described from Taiwan (Tsaour et al. 1986). This has also been noted by Emeljanov (1984). The present paper transfers four of them to *Afronisia* and the fifth to synonymy in *Kermesia*.

### Abbreviations of Depositories

BMNH British Museum (Natural History), London, UK  
IRSNB Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium

<sup>1</sup>CAB International Institute of Entomology, c/o Department of Entomology, British Museum (Natural History), Cromwell Road, London, SW7 5BD, UK.

- MNHN Museum National d'Histoire Naturelle, Paris, France  
 MRAC Musée Royal de l'Afrique Centrale, Tervuren, Belgium  
 NCI National Insect Collection, Pretoria, South Africa  
 RL R. Linnavuori Collection, Raisio, Finland

Key to African Genera of Kermesiinae

1. Clypeus rounded, without lateral carinae. Forewing with only one branch to M apically . . . . . *Nisia*  
 — Clypeus with lateral carinae. Forewing with two branches of M at apex (Fig. 4) . . . . . 2  
 2(1). Eyes large, twice as long as wide. Forewing with clavus more than half total length. Hind tarsal segments with segment 1 approximately equaling in length segments 2 + 3 . . . *Afronisia* gen. n.  
 — Eyes smaller, only slightly longer than wide. Forewing with clavus one-third total length. Hind tarsal segment 1 longer than 2 + 3 . . . . . *Kermesia*

*Afronisia*, gen. n.

TYPE-SPECIES.—*Eponisia albovittata* Fennah.

DESCRIPTION.—Small, slender meenoplids, length overall 3.5–5.9 mm. Head with vertex longer than wide, merging smoothly into frons with profile strongly rounded, posterolateral areolets widely spaced. Frons over twice as long as broad; lateral carinae parallel for most of their length, diverging slightly on clypeus, interrupted at frontoclypeal suture. Clypeus with lateral carinae extending from lateral carinae of frons; median carinae weakly developed but present toward rostrum. Rostrum long, extending beyond hind trochanters. Pronotum with well-defined anterior carina parallel to the anterior margin, carina also present on shoulder of pronotum. Mesonotum with median carina present but not sharply defined, lateral carinae obscure.

Forewing: Relatively long and narrow, 2.5–3.0 times longer than maximum width, clavus longer than half total length. Sc + R united for almost half wing length, R bifurcate at apex, M bifurcate at apex. Claval veins appear to join inner margin before apex of clavus but actually enter the apex.

Hindwing: r-m crossvein at approximately half length of wing, R and M bifurcate at apex.

Hindlegs: Hind tibiae with lateral spines. Posttibia with 8 spines grouped as 3 + 5. Apex of segment 1 with approximately 8 spines, median ones less sclerotized than other ones.

Apex of segment 2 with similar arrangement of spines. Tarsal segment 1 approximately equal in length to segments 2 + 3.

MALE GENITALIA.—Pygofer dorsoventrally elongated, in lateral view with dorsolateral angle slightly or strongly produced, either rounded or pointed. Anal segment with lateral margins diverging apically, posterolateral angles produced or rounded. Aedeagus (phallus) tubular, enlarged at apex, more or less trumpet-shaped. Periandrium (phallobase) with several pairs of appendages arising from base, inner pairs more slender than outer pairs. Parameres long and narrow, apical portion upcurved.

FEMALE GENITALIA.—Of the “reduced” meenoplid form.

DISTRIBUTION.—Africa south of Sahara.

DIAGNOSIS.—The genus may be distinguished from *Nisia* and *Kermesia* by the following characters. In *Nisia* the lateral carinae of the clypeus are absent; they are present in *Afronisia* and *Kermesia*. In *Kermesia* the carinae extend smoothly from the frons; in *Afronisia* they are disjunct. The eyes of *Afronisia* species are large, twice as long as wide, while in *Kermesia* and *Nisia* they are more globular. The forewing venation in *Afronisia* differs, with the clavus more than half the length of the forewing and M bifurcate at its apex. In *Kermesia* M is also bifurcate, but the clavus is short, only one-third the length of the forewing. In *Nisia* M is single at its apex, with the clavus more or less half the length of the forewing. The hind tarsal segment 1 is longer than 2 + 3 in both *Nisia* and *Kermesia* and is more or less equal to the length of 2 + 3 in *Afronisia*. All of these features are at present only diagnostic. However, the appendages of the aedeagus are characteristic and are not present in other meenoplid genera but are here regarded as apomorphic for the genus. Oriental species of *Eponisia* resemble *Kermesia* in some respects and differ markedly from *Afronisia* in the form of the male genitalia (Tsaour et al. 1987).

The biology and host plants are little known. Linnavuori (1973) records *A. albovittata* (Fennah) and *A. brunnescens* (Synave) as being collected “in a swamp.”

Key to Species (Males) of *Afronisia*

1. Forewing almost entirely dark brown, contrasting strongly with yellow, dorsal stripe from vertex to pronotum and mesonotum. Aedeagus

- with 3 pairs of processes (Fig. 7) ..... *albovittata* (Fennah)
- Forewing variable in color but never entirely dark brown. Aedeagus with between 2 and 4 pairs of processes ..... 2
- 2(1). Aedeagus with 2 pairs of large, sclerotized processes ..... 3
- Aedeagus with 3 or 4 pairs of processes (Figs. 22, 35, 45) ..... 4
- 3(2). Forewings overall pale whitish gray. Aedeagus with outer processes very large, curved, extending beyond phallus (Fig. 56), short, central process present ..... *breddoi*, n. sp.
- Forewing with white veins, membranes pale brown (Fig. 15). Aedeagus with outer processes shorter than phallus, short, central process absent ..... *muiiri* (Metcalf)
- 4(2). Aedeagus with 4 pairs of processes (Fig. 22) ..... *flavescens* (Synave)
- Aedeagus with 3 pairs of processes ..... 5
- 5(3). Aedeagus with outer pair of processes longer than inner pairs, curved inward and dorsal (Figs. 33–35). Pygofer with laterodorsal angles pointed (Fig. 31) ..... *brunnescens* (Synave)
- Aedeagus with outer pair of processes shorter than inner pairs, pygofer with laterodorsal angles rounded ..... 6
- 6(5). Outer pair of aedeagal processes short and bifurcate (Fig. 50) ..... *gembuensis*, n. sp.
- Outer pair longer, about two-thirds length of inner pairs (Fig. 45) ..... *pallida* (Linnavuori)

*Afronisia albovittata* (Fennah), comb. n.  
Figs. 1–12

*Eponisia albovittata* Fennah 1955. Ann. Mus. Congo Tervuren in ser. 8. Zool. 40: 434.

LENGTH.—Male 4.2–4.4 mm, female 4.5–4.8 mm.

DESCRIPTION.—Coloration: Overall dark brown species. Vertex and face with lateral edges of carinae dark brown, face between carinae brown or light yellow in some specimens, becoming yellow at junction of face and vertex. Antennae dark brown, eyes dark. Vertex pale yellow. Pronotum and mesonotum with central, yellow stripe (Fig. 1) with orange pigmentation following median carina. Forewing dark brown, inner margin of clavus and subapical line of transverse veins between R and Cu and between apex of clavus and Cu<sub>1</sub> white (Fig. 4). Legs brown. Abdomen and genital capsule dark brown.

MALE GENITALIA (Figs. 7–12).—Pygofer longer than broad, laterodorsal angles acute (Fig. 10). Anal segment with apical (posterior) margin concave between rounded posterolat-

eral margins (Fig. 11), slightly deflexed in lateral view (Fig. 10). Aedeagus with perianthrium bearing three pairs of sclerotized processes from ventral portion (Fig. 7), the outer pair broader and slightly shorter than the inner pair and central pair very short. Long, trumpet-shaped central portion (phallus) extending beyond processes. Parameres long, with upcurved, subspinose, apical process (Fig. 9), slightly widened before apical portion in dorsal view (Fig. 12).

DISTRIBUTION.—East Africa: Rwanda (type locality), Sudan (Equatoria Prov.) (Linnavuori 1973), Uganda, Kenya, Zaire.

MATERIAL EXAMINED.—Males and females from Kenya, Uganda, Sudan (Equatoria Prov.) (BMMH).

REMARKS.—Fennah's original description (1955) states that the phallobase (perianthrium) possesses two pairs of sinuate spines, not three as actually present. However, Fennah's drawing was made from a lateral view, and the short, central (ventral) pair may not have been visible. The male genitalia were figured correctly by Synave (1957b) from material from the type locality, and for this reason the type-specimen was not reexamined.

DIAGNOSIS.—The dark coloration of the species and the pale yellow, dorsal stripe distinguish it from all others in the genus.

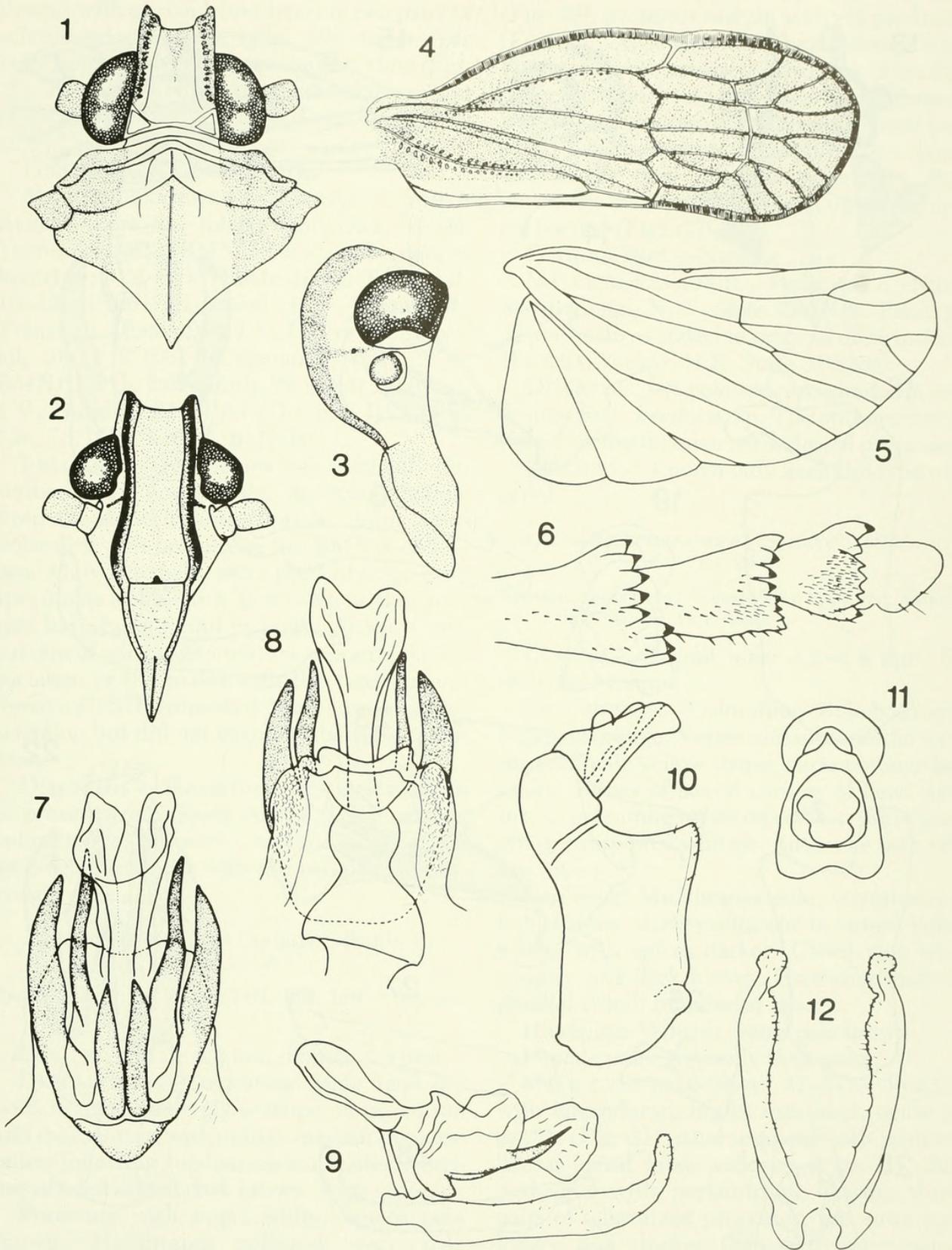
*Afronisia muiiri* (Metcalf), comb. n.  
Figs. 13–21

*Nisia albovenosa* Muir 1927. Ann. Mag. Nat. Hist. (9)19: 200. [Preoccupied by *Nisia albovenosa* Distant, 1906] *Nisia muiiri* Metcalf 1945: 228 replacement name for *Nisia albovenosa* Muir.

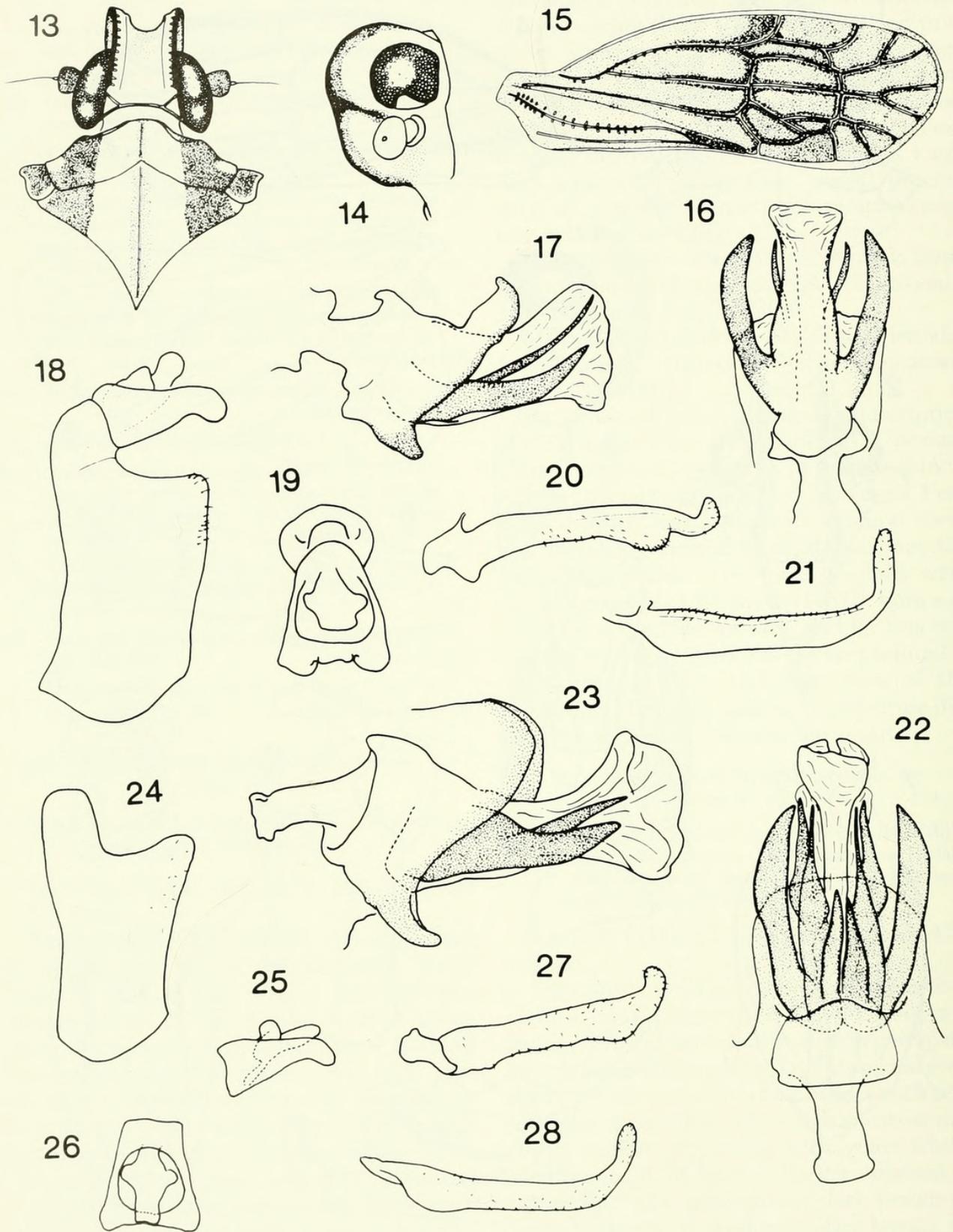
LENGTH.—Male 3.5–3.8 mm, female 4.5–4.6 mm.

DESCRIPTION.—Coloration: Lateral carinae of head and vertex dark brown. Face and clypeus brown, lateral carinae of clypeus pale. Vertex pale yellow-white. Pronotum and mesonotum with lateral margins brown with central, pale stripe (Fig. 13), median carina narrowly orange. Forewing with veins white, membranes light brown, darker adjacent to veins (Fig. 15), granulations dark brown on white background. Abdomen dark brown, intersegmental membranes white. Legs light brown.

MALE GENITALIA (Figs. 16–21).—Pygofer longer than broad, laterodorsal angles almost rectangular (Fig. 18). Anal segment posteriorly deflexed in lateral view (Fig. 18), slightly



Figs. 1-12. *Afronisia albovittata* (Fennah): 1, head and thorax, dorsal view; 2, head, face; 3, head, lateral view; 4, forewing; 5, hindwing; 6, hindleg; 7, aedeagus, ventral view; 8, aedeagus, dorsal view; 9, aedeagus and parameres, lateral view; 10, pygofer and anal segment, lateral view; 11, anal segment, dorsal view; 12, parameres, ventral view.



Figs. 13-28. Figs. 13-21, *Afronisia muiri* (Metcalf): 13, head and thorax, dorsal view; 14, head, lateral view; 15, forewing; 16, aedeagus, ventral view; 17, aedeagus, lateral view; 18, pygofer and anal segment, lateral view; 19, anal segment, dorsal view; 20, paramere, ventral view; 21, paramere, lateral view. Figs. 22-28, *Afronisia flavescens* (Synave): 22, aedeagus, ventral view; 23, aedeagus, lateral view; 24, pygofer, lateral view; 25, anal segment, lateral view; 26, anal segment, dorsal view; 27, paramere, ventral view; 28, paramere, lateral view.

produced posterior processes (Fig. 19). Aedeagus with periandrium bearing two pairs of sclerotized processes (Fig. 16), outer pair large, curved, inner pair longer, thin (Fig. 17). Parameres with upturned apical portion (Fig. 21), subapical lobe in dorsal view (Fig. 20).

DISTRIBUTION.—South Africa.

MATERIAL EXAMINED.—Holotype ♀, SOUTH AFRICA, Port St. John, Pondoland, R. E. Turner, iv.1923 (BMNH); 1 ♀, same data as holotype; 1 ♂ 6 ♀, Rustenburg, Transvaal, 10–13.xii.1961 (Capener); 1 ♀, Trazaneen, Transvaal, 10.xii.1918; 1 ♀, Umtentweni, Natal, 9–14.iii.1961 (Capener) (NCI, 2 ♀ BMNH); 1 ♂, Ladysmith, 29.i.1981 (Theron); 1 ♀, Dundee, 21.i.1981 (Theron); 1 ♀, Durban, 7.i.1971 (Kluge) (BMNH).

REMARKS.—The species was originally described from one female. A second female from the same locality (Port St. John, Pondoland) is also present in the BMNH collection. Only two males were present among the specimens from South Africa. No further species have been found in South Africa. Comparison of wing pigmentation supports the association of the males with the type female. Synave (1957b) repeated Muir's original description but did not examine the type-specimen.

DIAGNOSIS.—This is the only species known at present from South Africa. The forewing coloration is distinctive, and the male aedeagus is characteristic with the two pairs of processes.

*Afronisia flavescens* (Synave), comb. n.  
Figs. 22–28

*Eponisia flavescens* Synave 1971. Bull. Inst. r. Sci. nat. Belg. 47(39): 10.

LENGTH.—Male 4.2 mm, female 4.8 mm.

DESCRIPTION.—Coloration: Male head and body orange, pale yellow stripe on pronotum and mesonotum with orange median pigmentation following median carina. Lateral carinae of head edged dark brown. Legs orange.

Forewing with veins white, apices pale brown. Membranes suffused, very pale brown. Granulations with black points on white background.

Female much paler than male. Overall stramineous.

MALE GENITALIA (Figs. 22–28).—Pygofer with laterodorsal angles acute (Fig. 24). Anal

segment deflexed posteriorly in lateral view (Fig. 25), posterior margin scarcely produced (Fig. 26). Aedeagus with periandrium with four pairs of sclerotized processes (Fig. 22), outer pair thickest, two inner pairs thinner but more or less equal in length, central pair about half the length. Central portion (phallus) longer than processes (Fig. 22). Parameres as in other species with upturned apical portion (Figs. 27, 28).

DISTRIBUTION.—Nigeria.

MATERIAL EXAMINED.—Holotype ♂, NIGERIA, Badeggi, N.W. State (IRSNB). Paratype ♀ (not male as stated in original description), NIGERIA, Yankar, N.E. State (IRSNB).

DIAGNOSIS.—A pale species, similar in coloration to *A. bredoi* n. sp. The only species to have four distinct pairs of aedeagal processes.

REMARKS.—Known only from the type material.

*Afronisia brunnescens* (Synave), comb. n.  
Figs. 29–37

*Eponisia brunnescens* Synave 1957a. Expl. Parc National de l'Upemba. Fasc. 43(2): 7.

LENGTH.—Overall male 4.2–4.4 mm, female 4.6–4.9 mm.

DESCRIPTION.—Coloration: Male body and legs pale orange. Vertex and mesonotum with distinct, pale yellow stripe, darker orange laterally. Edges of lateral carinae of head dark brown extending to lateral ocellus, inner margin (sensory pits) whitish. Antennae pale yellow brown.

Forewing: Membranes pale, stramineous, light brown, darker adjacent to veins. Veins white, with apices darker. Claval vein with sensory pits dark brown. Forewing narrow, parallel-sided, rounded at apex.

Hindwing: Whitish, veins pale brown.

Female paler generally than male.

MALE GENITALIA (Figs. 31–37).—Pygofer with laterodorsal angles extended, acute in profile (Fig. 31). Anal segment with posterolateral apical lobes reflexed (Figs. 31, 32). Aedeagus with periandrium bearing three pairs of sclerotized processes, the outer pair longer and thicker than two inner pairs, curved inward and dorsad apically (Figs. 33–35), inner pair diverging apically (Figs. 33, 35), central pair short, about half the length of outer pairs. Phallus longer than processes, trumpet-shaped. Parameres slender, apical quarter directed dorsad (Fig. 36). Some

variation appears in length of processes (Fig. 33 illustrates the paratype, Fig. 35 is a specimen from Cameroon).

DISTRIBUTION.—Central and west Africa: Cameroon, Sudan (Equatoria Prov.) (Linnavuori 1973), Zaire (Katanga Prov., type locality, Orientale Prov.), Central African Republic (Bossangoa).

MATERIAL EXAMINED.—Holotype ♂, ZAIRE, Kaziba (MRAC). Paratype ♂, ZAIRE, Kabwe (MRAC). ZAIRE, numerous specimens from Parc National de la Garamba (northeast Zaire) (IRSNB, MRAC); 1 ♂, CAMEROON (Banyo) (BMNH); 1 ♂, CENTRAL AFRICAN REPUBLIC (Bossangoa) (RL).

DIAGNOSIS.—The male genitalia are very characteristic with the curved outer pair of processes. The species was found mixed in series with *A. pallida* and may be separated by the narrow, parallel-sided forewings as well as by the male genitalia.

*Afronisia pallida* (Linnavuori), comb. n.  
Figs. 38–45

*Eponisia pallida* Linnavuori 1973. Notul. ent. 53: 111.

LENGTH.—Overall male 4.5–5.0 mm, female 5.2–5.8 mm.

DESCRIPTION.—Coloration: Male/female, lateral carinae of head with edges dark brown, body and head pale yellow, mesonotum orange laterally, pale, median stripe interrupted by orange, median carina. Legs pale yellow. Abdomen and genital capsule stramineous. Forewing with pale yellow membrane, white veins, apices of veins marked with brown (Fig. 38), apical cells darkened adjacent to veins, black tips to white sensory pits on claval veins. Forewing becoming broader toward apex.

MALE GENITALIA (Figs. 40–45).—Pygofer with laterodorsal angles broadly rounded in profile (Fig. 41), anal segment with posterolateral lobes (Fig. 40) reflexed (Fig. 41). Aedeagus (Figs. 45, 46) with periandrium bearing three pairs of sclerotized processes and one central (ventral) process, outer pair shorter than inner pairs (Fig. 45), the more dorsal of the inner pairs converging apically (Fig. 45), the inner pair parallel for half their length before diverging (Fig. 45), single, central spine short. Two small spines on dorsal surface of phallus. Parameres with distinct ventral lobe one-third distance from apex with

apical third curved upward and twisted (Figs. 42, 43).

DISTRIBUTION.—Central Africa: Sudan (Equatoria Prov., type locality) (Linnavuori 1973), Central African Republic, Zaire.

MATERIAL EXAMINED.—Holotype ♂, SUDAN, Equatoria, Yambio (RL). Paratype ♀, SUDAN, Equatoria, Yambio (BMNH). CENTRAL AFRICAN REPUBLIC (Bossangoa) (IRSNB). ZAIRE, numerous specimens from Parc National de la Garamba (northeast Zaire) (IRSNB, MRAC).

REMARKS.—Found in same localities as *A. brunnescens* since it is mixed in collections from Zaire.

DIAGNOSIS.—A pale species, externally similar to *A. brunnescens* but slightly larger and with forewings broadened rather than parallel-sided. Male genitalia very distinct with three pairs of long processes.

*Afronisia gembuensis*, n. sp.  
Figs. 46–51

LENGTH.—Male 4.7 mm, female 5.2 mm.

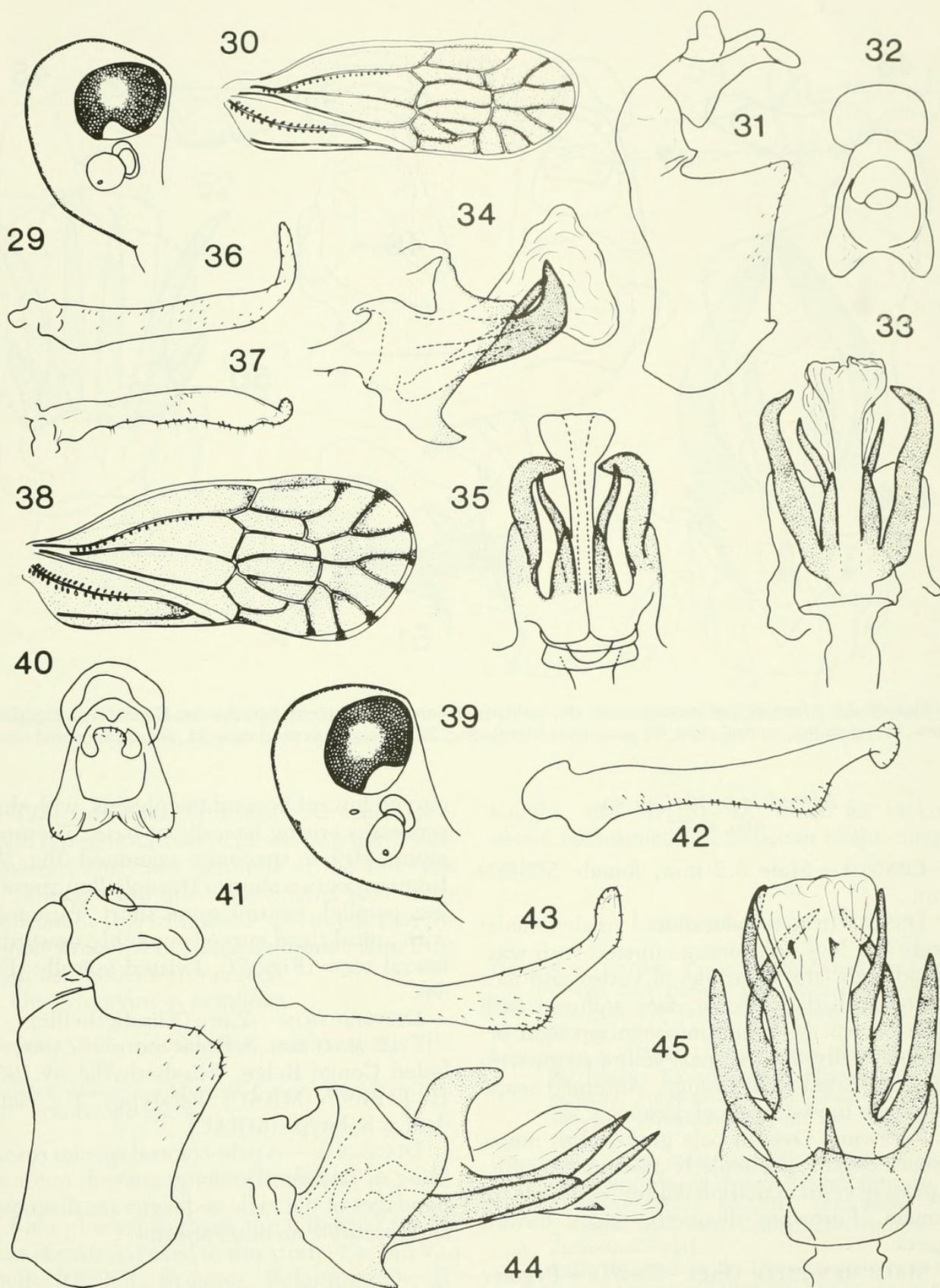
DESCRIPTION.—Body color pale orange, resembling *A. muiri*, especially in darker pigmentation of forewings.

MALE GENITALIA (Figs. 46–51).—Pygofer with laterodorsal angles rounded (Fig. 46). Anal segment with lateral margins diverging apically, posterolateral angles acute (Fig. 47), with apical margin concave. Aedeagus with periandrium with three pairs of sclerotized processes and one short, central process, outer pair short and bifurcate (Fig. 50), inner pairs long, with outer of these diverging, inner one almost parallel (Fig. 50), central process short. Parameres with pronounced ventral lobe two-thirds as long as its length, apical third thinner and directed dorsad, slightly twisted (Figs. 48, 49).

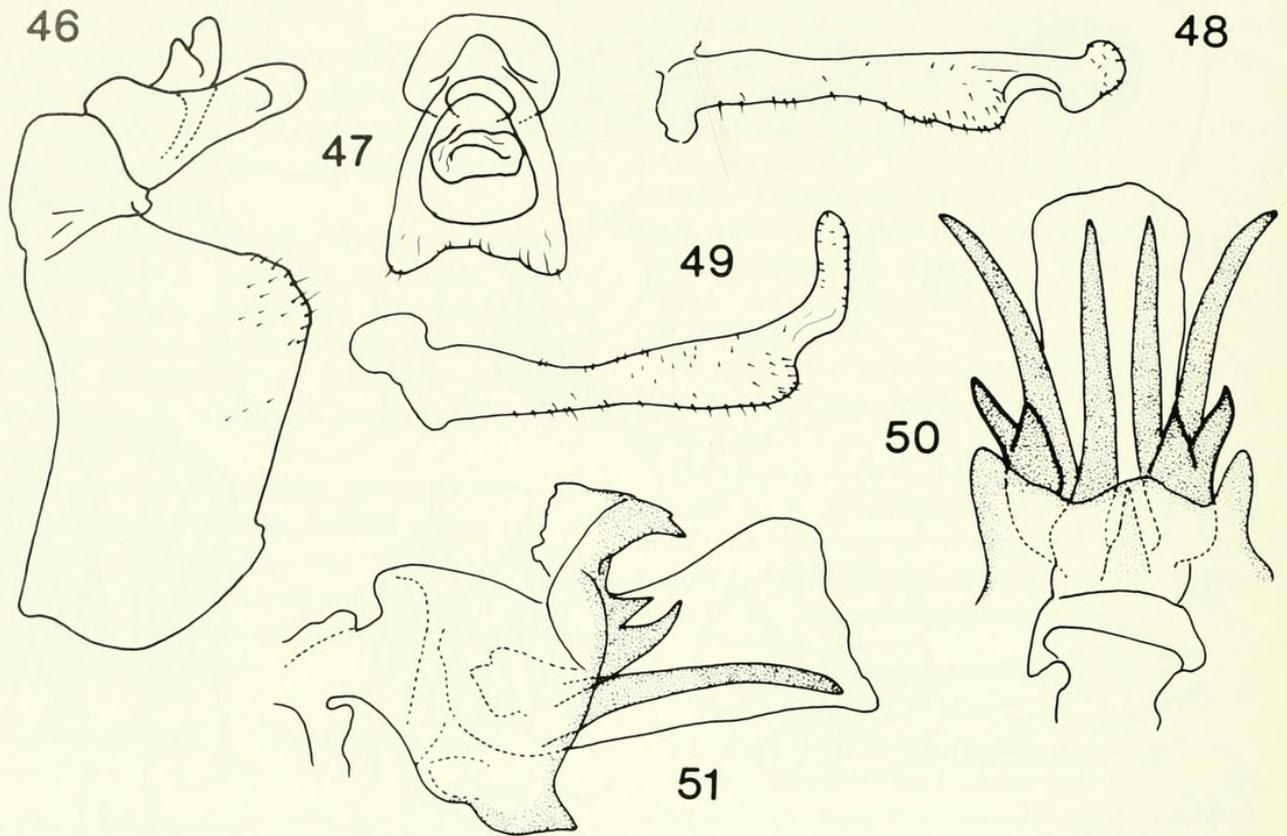
DISTRIBUTION.—Nigeria.

TYPE MATERIAL.—Holotype ♂, NIGERIA, N.E. State, Gembu-Yelwa, 22.viii.1973, Linnavuori (RL). Paratypes, 3 ♂ 6 ♀, NIGERIA, N.E. State, Gembu, 21–22.viii.1973, Linnavuori (RL, 1 ♂ 1 ♀ deposited in each BMNH, MRAC).

DIAGNOSIS.—Somewhat similar to *A. pallida* in aspects of the male genitalia and particularly in the shape of the laterodorsal angles of the pygofer and the shape of parameres. The aedeagal (periandrium) processes are, however, diagnostic, particularly the bifurcated outer pair.



Figs. 29–45. Figs. 29–37, *Afronisia brunnescens* (Synave): 29, head, lateral view; 30, forewing; 31, male pygofer and anal segment, lateral view; 32, anal segment, dorsal view; 33, aedeagus, ventral view, paratype; 34, aedeagus, lateral view; 35, aedeagus, ventral view; 36, paramere, lateral view; 37, paramere, ventral view. Figs. 38–45, *Afronisia pallida* (Linnavuori): 38, forewing; 39, head, lateral view; 40, male anal segment, dorsal view; 41, pygofer and anal segment, lateral view; 42, paramere, ventral view; 43, paramere, lateral view; 44, aedeagus, lateral view; 45, aedeagus, ventral view.



Figs. 46–51. *Afronisia gembuensis*, n. sp.: 46, male pygofer and anal segment, lateral view; 47, anal segment, dorsal view; 48, paramere, ventral view; 49, paramere, lateral view; 50, aedeagus, ventral view; 51, aedeagus, lateral view.

*Afronisia bredoi*, n. sp.

Figs. 52–57

LENGTH.—Male 5.2 mm, female 5.7–5.9 mm.

DESCRIPTION.—Coloration male/female: body and legs light orange dusted with wax. Head with lateral carinae of vertex and face edged with dark brown, face suffused with light brown. Mesonotum/pronotum light orange laterally, central, pale yellow stripe with median carina light orange. Antennal scape very pale brown, pedicel darker.

Forewing: Overall pale grey-white, membranes darker, particularly adjacent to veins. Apices of veins at margin darker, especially in female. Forewing distinctly wider toward apex.

MALE GENITALIA (Figs. 52–57).—Pygofer with laterodorsal angles rounded (Fig. 52). Anal segment with lateral margins diverging apically, posterolateral angles produced (Fig. 53). Aedeagus with periandrium bearing two pairs of sclerotized processes, and a single, central one, outer processes very large,

curved inward beyond the phallus, with short processes arising laterally at base. These are asymmetric in specimen examined (Fig. 56). Inner processes shorter than phallus, more or less parallel, central spine short. Parameres with apical third curved smoothly upward in lateral view (Fig. 57), twisted apically (Fig. 54).

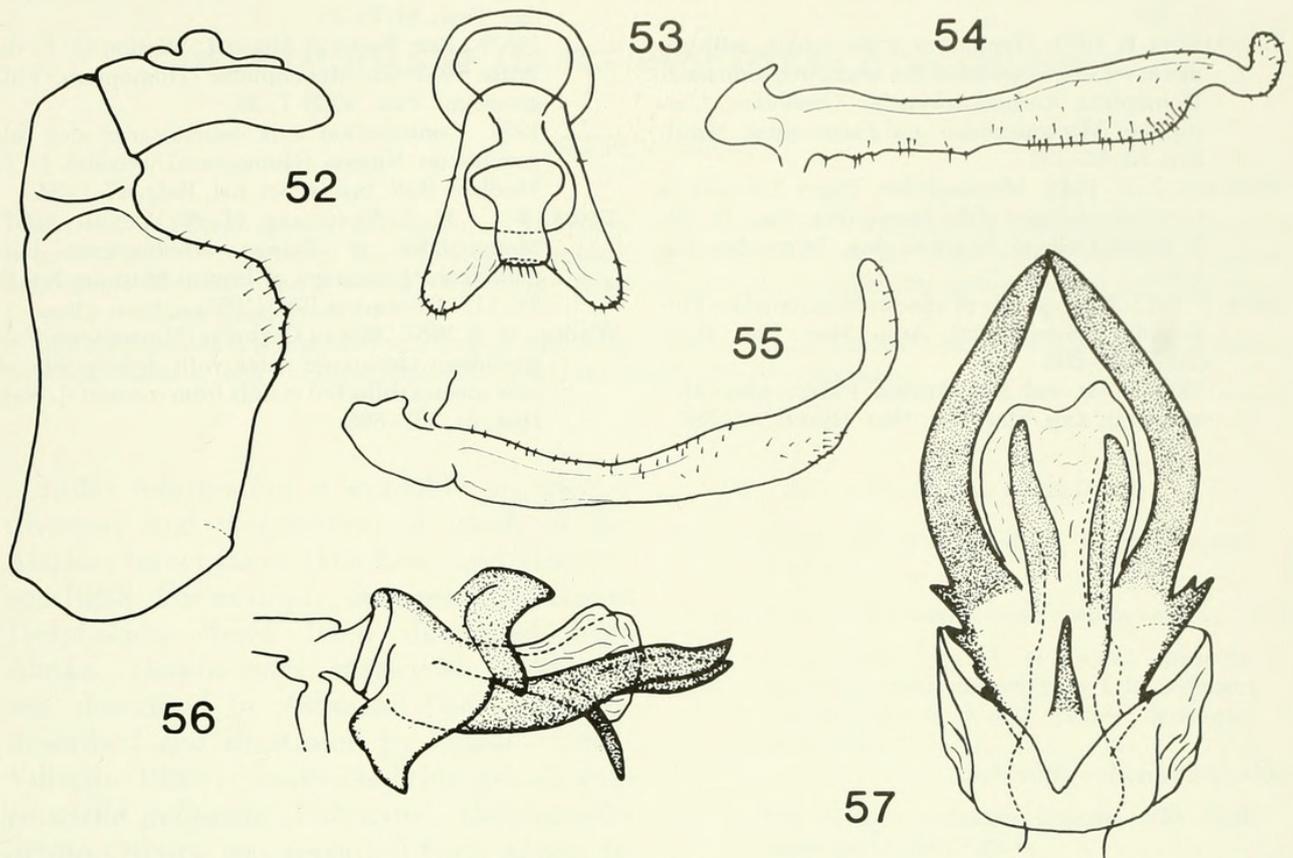
DISTRIBUTION.—Zaire (Elisabethville).

TYPE MATERIAL.—Holotype ♂, ZAIRE, labeled Congo Belge, Elisabethville, iv.1939, H. J. Bredo (MRAC). Paratypes: 2 ♀, same data as holotype (MRAC).

DIAGNOSIS.—A pale-colored species resembling *A. pallida*. The long, curved, outer appendages of the male aedeagus are diagnostic and resemble no other species.

Remarks on *Eponisia albinervosa* Muir 1934

This species is considered the junior synonym of *Kermesia albinervosa* Muir 1927 (type locality, Sierra Leone). The male holotype and female allotype were very badly damaged in transit from Honolulu to London



Figs. 52–57. *Afronisia bredoi*, n. sp.: 52, male pygofer and segment, lateral view; 53, anal segment, dorsal view; 54, paramere, ventral view; 55, paramere, lateral view; 56, aedeagus, lateral view; 57, aedeagus, ventral view.

in 1927 (together with other African meenoplid types described in the same paper). Fortunately, the male genitalia of the holotype were intact and other specimens have been associated. It is with these specimens that the female holotype of *Eponisia albinervosa* from Uganda has been compared.

The synonymy is as follows:

*Kermesia albinervosa* Muir 1927. Ann. Mag. Nat. Hist. (9)19: 203.

*Eponisia albinervosa* Muir 1934. Ann. Mag. Nat. Hist. (10)14: 564. *syn. n.*

#### ACKNOWLEDGMENTS

I am pleased to thank the following for the loan of material used in this study: Dr. Jan Van Stalle (IRSNB, Brussels, Belgium), Dr. H. Andre (MRAC, Tervuren, Belgium), Dr. R. Linnavuori (Raisio, Finland), the late Dr. J. Theron, deceased January 1988 (Stellenbosch University, South Africa), and Dr. I. M. Millar (NCI, Pretoria, South Africa). I am very grateful to Mr. W. R. Dolling, Dr. W. J.

Knight, and Mr. M. D. Webb for making useful comments and criticism of the manuscript.

#### LITERATURE CITED

- DISTANT, W. L. 1906. Fauna of British India including Ceylon and Burma. Rhynchota. Heteroptera–Homoptera 3. Taylor and Francis, London, UK. 503 pp.
- EMELJANOV, A. F. 1984. [A contribution of knowledge of the families Kinnaridae and Meenoplidae (Homoptera, Fulgoroidea).] Ent. Obozreniye 63(3): 468–483. [Translated in Ent. Rev. 64: 49–65, 1985.]
- FENNAH, R. G. 1955. Contributions a l'étude de la faune entomologique du Ruanda-Urundi (Mission P. Basilewsky 1953). LXXVIII. Homoptera, Fulgoroidea. Ann. Mus. Congo Tervuren in ser. 8 Zool. 40: 427–446.
- . 1957. Results from the Danish expedition to the French Cameroons 1949–50. XXIV Fulgoroidea. Bull. de l'I.F.A.N. ser. A. 19: 1274–1311.
- . 1958. Fulgoroidea (Homoptera) from West Africa. Bull. de l'I.F.A.N. ser. A. 20: 460–538.
- KIRKALDY, G. W. 1906. Leaf-hoppers and their natural enemies, Pt. IX. Leafhoppers–Hemiptera. Bull. Hawaiian Sugar Planters Assoc., Div. Ent. 1: 271–479.

- . 1907. Leaf-hoppers—supplement (Hemiptera). Bull. Hawaiian Sugar Planters Assoc., Div. Ent. 3: 1–186.
- LINNAVUORI, R. 1973. Hemiptera of the Sudan, with remarks on some species of the adjacent countries 2. Homoptera Auchenorrhyncha: Cicadidae, Cercopidae, Machaerotidae, and Fulgoroidea. Notul. Ent. 53: 65–137.
- METCALF, Z. P. 1945. Meenoplidae. Pages 219–238 in General catalogue of the Hemiptera. Fasc. IV. Pt. 6. Smith College, Northampton, Massachusetts, USA.
- MUIR, F. 1927. New species of African Meenoplidae (Fulgoroidea, Homoptera). Ann. Mag. Nat. Hist. (9)19: 197–208.
- . 1934. New and little-known Fulgoroidea (Homoptera). Ann. Mag. Nat. Hist. (10)14: 561–586.
- SYNAVE, H. 1957a. Exploration de Parc National de l'Upemba. Mission G. F. de Witte. 2 Meenoplidae. Fasc. 43: 79–81.
- . 1957b. Parc National Albert I. Mission G. F. de Witte 1933–35, Meenoplidae (Homoptera, Fulgoroidea). Fasc. 90(2): 7–30.
- . 1971. Contribution à la connaissance des fulgorides du Nigeria (Homoptera) (recoltes J. T. Medler). Bull. Inst. r. Sci. nat. Belg. 47: 1–34.
- TSAUR, S. C., C. T. YANG, AND M. R. WILSON. 1987. Meenoplidae of Taiwan (Homoptera: Fulgoroidea). Monograph of Taiwan Museum No. 6: 81–117. December 1986 (1987).
- WILSON, M. R. 1987. African Derbidae (Homoptera, Fulgoroidea): taxonomic notes with descriptions of new species collected mainly from coconut. J. Nat. Hist. 21: 567–595.



# BHL

## Biodiversity Heritage Library

Wilson, Michael R. 1988. "Afronisia, a new African genus of Meenoplidae (Homoptera: Fulgoroidea)." *Great Basin naturalist memoirs* 12, 324–334.  
<https://doi.org/10.5962/bhl.part.10988>.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/33368>

**DOI:** <https://doi.org/10.5962/bhl.part.10988>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/10988>

### **Holding Institution**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

### **Sponsored by**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

### **Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Brigham Young University

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.