

# Revision of the Afrotropical species of *Curriea* Ashmead (Hymenoptera: Braconidae: Braconinae): a genus with diverse ovipositor morphology

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The braconine wasp genus *Curriea* Ashmead from Africa is revised. Thirty one species of *C. (Curriea)* and three species of *C. (Endovipio)* Turner are recognized. Of these, 19 species of *C. (Curriea)* and one species of *C. (Endovipio)* are described as new, with their associated authors as follows: *C. acutus* Brandt, Democratic Republic of Congo; *C. angulicauda* Falco, Democratic Republic of Congo, Côte d'Ivoire, Gabon, Uganda; *C. antevana* Falco, Cameroon; *C. brunneistigma* Falco, Madagascar; *C. bulbivena* Falco, Democratic Republic of Congo, Kenya; *C. emarginata* Falco, Cameroon; *C. fittoni* Falco, South Africa; *C. fuscus* Falco, Madagascar; *C. interstitialis* Brandt, Côte d'Ivoire; *C. levis* Falco, Democratic Republic of Congo; *C. longicauda* Falco, Democratic Republic of Congo; *C. luteistigma* Falco, Madagascar; *C. philippe* Falco, Ghana, Côte d'Ivoire; *C. platycauda* Falco, Kenya; *C. polaszeki* Falco, South Africa, Kenya; *C. rectivena* Falco, Kenya; *C. sigwalti* Falco, Madagascar; *C. spathicauda* Brandt, Democratic Republic of Congo; *C. transversa* Falco, Democratic Republic of Congo, Uganda, Côte d'Ivoire; *C. (Endovipio) tsavoensis* Falco, Kenya. *Iphiaulax simplex* (Brues), originally described in *Curriea*, is transferred to *Iphiaulax* Foerster comb. n. An identification key is provided.

**Key words:** Hymenoptera, Braconidae, Braconinae, ovipositor, identification key, new species, description.

## INTRODUCTION

*Curriea* Ashmead (Braconidae: Braconinae) belongs to the tribe Iphiaulacini (*sensu* Quicke 1987 = Aphrastobraconini *sensu* Achterberg 1989) that is largely characterized by a ventrally elongate scapus. *Curriea* was previously included in the Aphrastobraconini (*sensu* Authors) because of its ovoid subdiscal cell in the forewing (see Quicke 1987) and has been treated as a junior synonym of *Aphrastobracon* Ashmead (Shenefelt 1978). It differs, however, from *Aphrastobracon* in having a scapus that is distinctly apicomediaally emarginate and strongly apicolaterally emarginate (Quicke 1987). Morphological and molecular phylogenetic studies (Quicke 1988; Belshaw, Quicke & Lopez-Vaamonde, in prep.) have demonstrated that the aphrastobraconine group of genera (*sensu* Quicke 1987) is derived from within a larger grouping, the Iphiaulacini, and they are consequently considered here as a subtribe, the Aphrastobraconina, rather than being afforded tribal status.

Along with a few related genera of Aphrastobraconina, *Curriea* species are medium-sized braconid wasps. Despite being common in the Afrotropical Region and also extending into southern Europe (Falco & Quicke 1997) and Australia (Quicke & Ingram 1993), their hosts are unknown. Many specimens of the tribe have been collected in light traps (Quicke 1992) indicating a nocturnal/crepuscular flight period. In view of the ophionoid facies of most *Curriea* species (large eyes and ocelli, long antennae and pale yellow and/or yellow-brown coloration) it is likely that their hosts may become accessible only or principally in the evening or at night. The closely related genus *Aphrastobracon* Ashmead (mainly from India) has been recorded as a larval ectoparasitoid of the entomophagous noctuid, *Eublemma* Hübner (Lepidoptera: Noctuidae: Eustrotiinae), that attacks cocooids including the lac scale insect, *Kerria lacca* (Kerr) (Hemiptera: Coccoidea: Kerridae) (Glover 1939). *Eublemma* larvae live in webs under the 'domes' of the lac insects and forage for prey at

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night. Of the many tropical Braconinae, only the Aphrastobraconini appear to be nocturnal, suggesting that heat avoidance is unlikely to be a reason for this transition that has occurred in many other groups of parasitic wasp, always in relation to host availability (Quicke 1997). Another closely related genus, *Undabracoon* Quicke, has been caught flying over rotting logs (Quicke & Ingram 1993) suggesting that not all Aphrastobraconina may have such unusual hosts, though *Undabracoon* has also been collected at light.

This revision was prompted in part by the discovery of several *Curriea* species with unusually modified ovipositors. The ovipositors of parasitic wasps are adapted to host substrate/exposure and whether the wasp is ecto- or endoparasitic. Most ichneumonoid wasp ovipositors, however, have one of three basic forms (Quicke 1997; Quicke *et al.*, in press). Ectoparasitoids of deeply concealed hosts have a preapical nodus and well developed ventral serrations developed for substrate penetration (Vincent & King 1996). Ectoparasitoids of weakly concealed and exposed hosts typically have simple tapering ovipositors without a nodus and with few ventral serrations, whereas endoparasitoids of concealed or exposed hosts have a preapical notch with reduced ventral serrations. Most *Curriea* species have the second type, although several species have ovipositor morphologies not known elsewhere in the family. *Curriea fuscus* Falco sp. n., *C. flavomaculata* Cameron, *C. acutus* Brandt sp. n., *C. pulchripennis* Szépligeti and *C. seyrigi* Granger have the apex of the dorsoventrally compressed dorsal valve distinctly upturned (Figs 27, 28, 30). *Curriea spathicauda* Brandt sp. n. has the dorsoventral apex spatulate (Fig. 34) and, perhaps most remarkably, *C. angulicauda* Falco sp. n. has the distal 0.2 of its strongly flattened ovipositor sharply angled ventrally (Fig. 35). Ovipositor modifications are also found in two related genera of Aphrastobraconina. *Undabracoon* Quicke has the ovipositor formed into a series of arches that are probably an ovipositor steering mechanism (Quicke 1986), as manifested by the braconid genus *Zaglyptogastra* Ashmead and in *Pristomerus* Curtis (Quicke 1991) (Ichneumonidae), while *Ligulibracon* Quicke has a single long shallow arch (Quicke 1987). It would thus appear that the various ovipositor modifications in *Curriea* reflect a departure from plesiomorphic wood-boring or sub-cortical hosts exploited by most members of the Iphiaulacini to

hosts in either unusual situations or accessible by non-standard means and possibly only at night. This plasticity in ovipositor form in the Aphrastobraconina might represent an underlying potential to colonize non-standard hosts such as the entomophagous caterpillars attacked by species of the closely related genus *Aphrastobracon*.

## TERMINOLOGY AND MEASUREMENTS

Terminology largely follows that of Achterberg (1979, 1988), although the following points should be noted: inter-tentorial distance is measured between the middle of the tentorial pits; face length is measured from the dorsal margin of the clypeus to the anterior edge of the antennal sockets; horizontal length of the eye is measured as the maximum length perpendicular to the face viewed from above; forewing length is measured from the apex of the tegula parallel to vein C+SC+R; ovipositor length refers to that part exerted beyond the apex of the metasoma; relative lengths of wing veins are measured exclusive of their junctions; and the ratio of vein forewing 1-CU1 is measured as the length between the forking of the veins and the width at the middle of the vein.

Specimens examined are in the following institutions: The Natural History Museum, London (BMNH); Nationaal Natuurhistorisch Museum, Leiden (RMNH); Zoological Institute, Russian Academy of Science, St Petersburg (ZISP); Musée National d'Histoire Naturelle, Paris (MNHN); Museum Royale de l'Afrique Central, Tervuren (MRAC); Institut Royal des Sciences Naturelles de Belgique (IRSNB); Zoologisches Museum der Humboldt-Universität, Berlin (ZMBH); Durban Museum and Art Gallery (DMAG); United States National Museum of Natural History, Washington, DC (USNM); Instytut Zoologii of the Polish Academy of Sciences, Warsaw (ZMPA); Naturhistorisches Museum Wien, Austria (NMW).

All new taxa described below should be attributed to Falco, except for *C. acutus*, *C. interstitialis* and *C. spathicauda*, which is attributed to Brandt.

## Genus *Curriea* Ashmead, 1900

*Curriea* Ashmead, 1900: 137. Type species: *Curriea fasciatipennis* Ashmead, monobasic and original designation.

*Endovipio* Turner, 1922: 273. Type species: *Endovipio ceresensis* Turner, by monotypy. Falco & Quicke (1997) (Synonymy).

**Diagnosis**

*Curriea* belongs to the Aphrastobraconina that can be distinguished from other Braconinae by the following combination of characters: (1) forewing vein CU1b either strongly swollen medially or much wider anteriorly than the posterior part of 3-CU1; (2) forewing with a distinctly weakened zone between the pterostigma and vein R. *Curriea* can be distinguished from the other genera of Aphrastobraconina (*viz.* *Hewittella* Cameron, *Ligulibracon* Quicke, *Aphrastobracon* Ashmead, *Eucurriea* Quicke, *Undabracon* Quicke and *Megalommum* Szépligeti), by the following: (1) scapus apico-medially emarginate; (2) ovipositor not formed into either a single (*cf.* *Ligulibracon*) or multiple (*cf.* *Undabracon*) arches; (3) face coarsely sculptured (*cf.* *Eucurriea*); (4) propodeum without a medial petal-shaped and sculptured depression (*cf.* *Hewittella*). Future phylogenetic studies may lead to some, or all, of the above genera being regarded as derived species groups of others and so generic concepts may subsequently be revised.

*Curriea* species may be identified using the keys of Quicke (1987) or Quicke & Ingram (1993). It is the only genus of Aphrastobraconina currently recorded from Africa.

**Key to African species of *Curriea***

- 1. Plical cell of forewing with the area around vein 1-1A strongly pigmented, often nearly black (subgenus *Endovipio*) . . . 2
- Plical cell of forewing with the area around vein 1-1A not or only weakly pigmented (subgenus *Curriea*) . . . . . 4
- 2(1). Midbasal triangular area of second metasomal tergite striate-rugose; forewing vein 3-CU1 curved, short, 0.4 times the length of vein 2-CU1; hind wing vein 2-SC+R transverse; ovipositor cylindrical . . . . . *C. (Endovipio) tsavoensis* sp. n.
- Midbasal triangular area of second metasomal tergite smooth; forewing vein 3-CU1 straight, long, at least 0.6 times the length of vein 2-CU1; hind wing vein 2-SC+R longitudinal; ovipositor flattened dorsoventrally . . . . . 3
- 3(2). Midbasal triangular area of second metasomal tergite long, reaching three quarters of the way along tergite, sides

- converging posteriorly at an angle of 40–50°; basal cell of hind wing evenly setose apically; pterostigma unicolorous, blackish . . . . . *C. cerezensis* Turner
- Midbasal triangular area of 2nd metasomal tergite short, reaching to or just beyond middle of tergite, sides converging posteriorly at an angle of 70–85°, sometimes produced into a short carina posteriorly; basal cell of hind wing (usually) with a glabrous area at apex; pterostigma bicolorous, blackish with basal 0.2–0.3 yellowish . *C. jacobsoni* Tobias
- 4(1). Forewing vein 1-SR+M straight (Fig. 4); hind wing marginal cell not narrowed medially (Fig. 6) . . . . . *C. rectivena* sp. n.
- Forewing vein 1-SR+M curved (Fig. 5); hind wing marginal cell narrowed medially (Fig. 7) . . . . . 5
- 5(4). Second metasomal tergite without midbasal triangular area (Fig. 17) . . . . . *C. inareata* Granger
- Second metasomal tergite with well-defined midbasal triangular area (Figs 18, 19) . . . . . 6
- 6(5). Midbasal triangular area of second metasomal tergite striate (Fig. 19) . . . . . *C. xanthocephs* Fahringer
- Midbasal triangular area of second metasomal tergite smooth (Fig. 18) . . . . . 7
- 7(6). Lobes of mesoscutum with black or piceous-brown markings . . . . . 8
- Lobes of mesoscutum without markings or with pale-brown markings . . . . . 12
- 8(7). Propleuron and back of head dark brown to black . . . . . *C. sigwalti* sp. n.
- Propleuron and back of head yellow or yellowish-brown . . . . . 9
- 9(8). Pterostigma distinctly bicolorous with apical quarter black or dark-brown in contrast with remainder of pale-yellow; forewing vein CU1b swollen medially but narrowing at junction with 3-CU1 (Figs 14, 16); ovipositor flattened dorsoventrally with dorsal valve distinctly curved upwards at tip (Fig. 30) . . . . . 10
- Pterostigma unicolorous, either entirely yellow or entirely brown; forewing vein CU1b swollen at junction with 3-CU1 (Fig. 15); ovipositor flattened dorsoventrally with dorsal valve not curved

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- upwards at tip (Fig. 31)..... 11
- 10(9). Scutellum yellow; wing membrane uniformly fuscous ..... *C. fuscus* sp. n.
- Scutellum black; wing membrane fuscous but with a transverse central transparent band ..... *C. flavomaculata* (Cameron)
- 11(9). Pterostigma entirely brown; pronotum laterally yellow .... *C. brunneistigma* sp. n.
- Pterostigma entirely yellow; pronotum laterally black ..... *C. luteistigma* sp. n.
- 12(7). Ovipositor strongly flattened, with apical fifth sharply angled ventrally (Fig. 35) ..... *C. angulicauda* sp. n.
- Ovipositor not so flattened and not sharply angled ventrally ..... 13
- 13(12). Ovipositor at least 1.2 times the length of forewing ..... *C. longicauda* sp. n.
- Ovipositor less than 0.9 times the length of forewing ..... 14
- 14(13). Dorsal ovipositor valve distinctly curved upwards at tip (Fig. 30); and forewing vein CU1b swollen at intersection with 3-CU1 (Fig. 15) ..... 15
- Dorsal ovipositor valve not turned up at tip (Figs 31, 32) or forewing vein CU1b swollen medially, but narrowing before intersection with 3-CU1 (Figs 14, 16) ..... 17
- 15(14). Hind legs black, except at apex of trochanter and trochantellus ..... *C. striata* Cameron
- Hind legs (at most) with tibia and tarsus black ..... 16
- 16(15). Hind wing vein 2-SC+R transverse (Fig. 10); hind tibia and tarsus brown ..... *C. fenestrata* Szépligeti
- Hind wing vein 2-SC+R distinctly longitudinal (Fig. 9); hind leg entirely yellow ..... *C. seyrigi* Granger
- 17(14). Dorsal ovipositor valve curved upwards and with distinctly upturned spatulate and expanded tip (Fig. 34) ..... *C. spathicauda* sp. n.
- Dorsal ovipositor valve not as above, without spatulate upturned tip ..... 18
- 18(17). Ovipositor flattened dorsoventrally along most of its length, with the dorsal valve more or less flattened (Fig. 31)..... 19
- Ovipositor more or less cylindrical along all of its length or if slightly flattened distally, then the dorsal valve distinctly rounded in transverse section (Fig. 32)..... 31
- 19(18). Forewing vein cu-a strongly antefurcal (Fig. 13) or if only marginally antefurcal antefurcal then distinctly reclivous .... 20
- Forewing vein cu-a interstitial (Fig. 12) or if marginally antefurcal then vertical ..... 27
- 20(19). Hind wing vein 2-SC+R distinctly transverse (Fig. 10) ..... *C. transvena* sp. n.
- Hind wing vein 2-SC+R longitudinal (Fig. 9) or interstitial (Fig. 8)..... 21
- 21(20). Eyes strongly or sharply emarginate (Figs 1, 2); forewing vein CU1b swollen medially but narrowing at junction with 3-CU1 (Fig. 16); first subdiscal cell with glabrous area (when present) extending as an arc towards base of cell (Fig. 14); scapus blackish-brown ..... 23
- Eyes weakly emarginate (Fig. 3); forewing vein CU1b swollen at junction with 3-CU1 (Fig. 15); first subdiscal cell without glabrous area (Fig. 16) or if with glabrous area not extending as an arc towards base of cell; scapus mainly yellowish ..... 22
- 22(21). Forewing vein cu-a far antefurcal (Fig. 11), 10 times longer than wide; first subdiscal cell 1.6 times longer than the discal cell, and entirely setose ..... *C. antevena* sp. n.
- Forewing vein cu-a antefurcal (Fig. 13), no more than six times longer than wide; first subdiscal cell at most 1.3 times longer than the discal cell, and glabrous distally. .... *C. gratiosus* Enderlein
- 23(21). Forewing vein cu-a vertical, forming right angle with vein 1-1A (Fig. 13); hind tarsus brown ..... *C. philippeii* sp. n.
- Forewing vein cu-a reclivous, forming obtuse angle with vein 1-1A (Fig. 14); hind tarsus yellow ..... 24
- 24(23). Basal part of forewing vein C+SC+R black, contrasting with brownish tegula ..... *C. fittoni* sp. n.
- Basal part of forewing vein C+SC+R brownish as tegula..... 25
- 25(24). Dorsal valve of ovipositor sharply curved upwards at tip (Fig. 28) ..... *C. acutus* sp. n.
- Dorsal valve of ovipositor not curved upwards at tip (Figs 32, 36) ..... 26

- 26(25). Ovipositor widened distally before narrowing to a point (Fig. 33); forewing vein cu-a antefurcal, with vein 1-CU1 at least 4.5 times as long as wide (Fig. 13) ..... *C. platycauda* sp. n.
- Ovipositor not widened distally but narrowing to a tapered point (Fig. 32); forewing vein cu-a interstitial, with vein 1-CU1 at most 2.8 times as long as wide (Fig. 12) ..... *C. grata* Enderlein
- 27(19). Hind wing vein 2-SC+R longitudinal (Fig. 9); forewing vein CU1b swollen medially but narrowing at junction with 3-CU1 (Fig. 16)..... 28
- Hind wing vein 2-SC+R interstitial to transverse (Figs 8, 10); forewing vein CU1b swollen at junction with 3-CU1 (Fig. 15) ..... 30
- 28(27). Dorsal ovipositor valve distinctly curved upwards at tip (Fig. 27); forewing vein CU1b strongly swollen medially and narrowed at junction with 3-CU1, forming a triangle (Fig. 14) ..... *C. pulchripennis* Szépligeti
- Dorsal ovipositor valve not or only slightly curved upwards at tip (Fig. 29); forewing vein CU1b weakly swollen medially before narrowing at junction with 3-CU1, forming a curve (Fig. 16) ..... 29
- 29(28). Midbasal triangular area of second metasomal tergite acute, 1.5 times longer than basally wide (Fig. 21); without yellow markings on mesoscutum and scutellum ..... *C. fasciatiennis* Ashmead
- Midbasal triangular area of second metasomal tergite equilateral, obtuse or weakly acute, no more than 1.2 times longer than basally wide (Fig. 20); with yellow markings on mesoscutum and scutellum ..... *C. polaszeki* sp. n.
- 30(27). Eyes weakly emarginate (Fig. 3); first, second (except midbasal triangular area) and third metasomal tergites longitudinally striate (Fig. 23) ..... *C. testaceipes* Szépligeti
- Eyes sharply emarginate (Fig. 1); first, second and third metasomal tergites smooth (Fig. 22) ..... *C. emarginata* sp. n.
- 31(18). Forewing vein CU1b swollen medially but narrowing at junction with 3-CU1 (Fig. 16); pterostigma yellow and distally black ..... *C. bulbivena* sp. n.
- Forewing vein CU1b swollen at junction with 3-CU1 (Fig. 15); pterostigma entirely yellow ..... 32
- 32(31). First metasomal tergite entirely smooth (Fig. 26); eyes strongly emarginate (Fig. 2) ..... *C. levis* sp. n.
- First metasomal tergite sculptured (Figs 24, 25); eyes weakly emarginate (Fig. 3) ..... 33
- 33(32). Forewing vein cu-a interstitial (Fig. 12); first metasomal tergite with central longitudinal ridge (Fig. 25); scapus blackish-brown ..... *C. interstitialis* sp. n.
- Forewing vein cu-a antefurcal (Fig. 13); first metasomal tergite more uniformly longitudinally striate (Fig. 24); scapus yellowish-brown ..... *C. guttifer* Enderlein

***Curriea acutus* Brandt sp. n., Fig. 28**

*Diagnosis*

This species may be distinguished from all other African species by a combination of: midbasal triangular area of second metasomal tergite smooth, with distinct transverse striations at each distal side; hind tarsus yellow; forewing vein cu-a marginally antefurcal and vertical; ovipositor with sharply upturned tip.

*Description*

*Female.* Length of body 7.3 mm, forewing 8.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 2.8 mm.

*Colour.* Yellow. Pedicellus, scapus, tips of mandible, arolium and ovipositor sheaths black. Claws and telotarsi brown. Pterostigma yellow with brown apex.

*Head.* Antennae with 54 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 2.0:2.0:1.0. Face rugose-striate with longitudinal carina between antennal sockets. Height of eye:width of face:width of head = 1.9:1.0:3.3. Length of face (from dorsal margin of clypeus to anterior edge of antennal socket) 1.9 times width of face. Eyes strongly emarginate. Frons concave, smooth, with longitudinal narrow groove running from between antennal sockets to anterior ocellus. Horizontal width of eye (measured perpendicular to face):horizontal width of

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head behind eye = 2.7:1.0. Post-ocellar length: transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:2.0:2.0.

*Mesosoma.* Twice as long as high. Propodeum smooth medioposteriorly.

*Forewing.* Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.5:2.5:0.1. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.5:2.5:3.8:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.9:1.0. Vein cu-a strongly antefurcal, moderately reclivous. Vein CU1b swollen medially but narrowing before junction with 3-CU1. First subdiscal cell with sclerome and glabrous area.

*Hind wing.* Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with three especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite as long as sub-posteriorly wide; with dorsal carinae; with dorsolateral carinae; raised median area striate. Second metasomal tergite 0.6 times longer medially than wide, striate; mid-basal triangular area as long as basally wide, smooth; area lateral to mid-basal triangular area striate. Third tergite smooth. Ovipositor flattened dorsoventrally, with pointed, sharply upturned tip.

*Male.* Unknown.

*Etymology.* Named because of the sharply upturned and pointed ovipositor.

*Type material examined.* Holotype ♀. DEMOCRATIC REPUBLIC OF CONGO: Elisabethville (11.41S 27.29E), ii-1935, Ch. Seydel (MRAC). Paratype ♀. DEMOCRATIC REPUBLIC OF CONGO: Elisabethville, ii-1935, Ch. Seydel (MRAC).

***Curriea angulicauda* Falco sp. n., Figs 8, 18, 35**

### Diagnosis

This species may be distinguished from all other African species by the ovipositor being 0.5–0.8 times longer than body, strongly flattened and with the apical fifth sharply angled ventrally.

### Description

*Female.* Length of body 7.5–10.0 mm, forewing 7.7–10.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 4.5–6.9 mm.

*Colour.* Yellow; tips of mandibles black; lateral side of scapus and pedicellus blackish, inner side

brownish, flagellum and ovipositor sheaths brown; first and second tarsomeres brown with dorsal band yellowish; wing membrane yellow with first fuscous transverse band cross from parastigma and second fuscous transverse band from apex of pterostigma to distal margin, pterostigma uniformly yellow.

*Head.* Antennae with 60–65 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:1.8–2.4:0.9–1.2. Face: clypeus and triangular central area punctate and distally extending up to area between antennal sockets, laterally rugose with transverse grooves from tentorial area to internal sides of antennal sockets. Height of eye:width of face:width of head = 1.0:0.5:1.5. Length of face 0.9–1.1 times width of face. Eyes moderately emarginate. Frons concave, with mid-longitudinal thin groove raised anteriorly to form a triangular area. Horizontal width of eye:horizontal width of head behind eye = 2.6–3.3:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.3–1.6:1.3–1.5.

*Mesosoma.* 1.4–1.6 times longer than high. Propodeum with some striations medioposteriorly.

*Forewing.* Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.1–4.5:2.0–2.5:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.7–1.9:2.6–3.5:3.8–5.4:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.1–1.2:1.9:1.0. Vein cu-a more or less interstitial or weakly postfurcal (weakly antefurcal in specimens from Côte d'Ivoire and Gabon), moderately reclivous. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell with thin longitudinal sclerome, 0.5 times longer than the glabrous line, with large glabrous area and hyaline distally.

*Hind wing.* Hind wing vein 1-SC+R angled and straight near intersection with vein 1r-m. Vein 2-SC+R distinctly transverse. Marginal cell weakly narrowed medially and parallel-sided distally. Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.2–1.4 times longer than sub-posteriorly wide; with dorsal and dorsolateral carinae; raised median area rugose-striate. Second metasomal tergite 0.6 times longer medially than wide, rugose-striate, with two lateral grooves longitudinally rugose-striate; mid-basal triangular area 1.2–1.4 times longer than

basally wide and smooth; area lateral to mid-basal triangular area crenulate. Third tergite medially smooth, laterally striate. Ovipositor strongly flattened dorsoventrally and with the apical fifth sharply angled ventrally.

*Male.* Unknown.

*Etymology.* Named because the apical fifth of the ovipositor is sharply angled ventrally.

*Type material examined.* Holotype ♀. DEMOCRATIC REPUBLIC OF CONGO: Bambesa (03.25N 25.43E), 15.ix.1933, J.V. Leroy (MRAC). Paratypes: DEMOCRATIC REPUBLIC OF CONGO: 1♀, Eala (00.02N 18.22E), 4.vii.1932, A. Corbisier (MRAC); 1♀, Lukolela (05.23S 24.32E), vii.1923, H. Lebeau (MRAC); 1♀, Uele, Bonguma, 23.ix.1932, J. Vrydagh (MRAC); 1♀, Equateur: Flandria (02.23S 19.05E), 17.iii.1932, 218, R.P. Hulstaert (MRAC). CÔTE D'IVOIRE: 1♀, Bingerville (05.20N 03.53W), 16–30.iv.1964, J. Decelle (MRAC); 1♀, Divo, 28.xi.1963, J. Decelle (MRAC). GABON: 1♀, Ogooue, Lambarene (00.41S 10.13E), 1911, R. Ellenberger (MNHN). UGANDA: 1♀, Kampala (00.19N 32.35E), 3.xi.1929, G.L.R. Hancock (BMNH).

***Curriea antevana* Falco sp. n., Fig. 11**

**Diagnosis**

This species may be distinguished from all other African species by the following combination of characters: ovipositor flattened dorsoventrally, progressively widening and narrowed acutely at tip; forewing vein cu-a far antefurcal, first subdiscal cell 1.6 times longer than the discal cell; vein CU1b swollen at junction with vein 3-CU1; forewing membrane hyaline on distal area of first subdiscal cell and membrane entirely setose; hind wing vein 2-SC+R longitudinal; eyes weakly emergent; scapus mostly yellowish.

**Description**

*Female.* Length of body 4.8 mm, forewing 4.3 mm, ovipositor (part exerted beyond apex of metasomal tergites) 0.7 mm.

*Colour.* Yellowish-brown; tips of mandibles black; outsides of scapus and pedicellus, flagellum, ovipositor sheaths, telotarsi and claws brown; wings fuscous, yellowish basally, and yellowish transverse band running posteriorly from pterostigma; pterostigma yellow with distal tip blackish.

*Head.* Antennae with 38 flagellomeres. Height of

clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.0:1.4. Face: punctate-rugose. Height of eye:width of face:width of head = 1.0:0.7:1.6. Length of face 0.9 times width of face. Eyes weakly emarginate. Frons concave, with a mid-longitudinal groove. Horizontal width of eye:horizontal width of head behind eye = 1.7:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.0:1.7.

*Mesosoma.* 1.6 times longer than high. Propodeum with some striations medio-posteriorly.

*Forewing.* Vein 1-SR+M moderately curved. Lengths of veins SR1:3-SR:r = 5.4:3.4:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.8:3.4:4.7:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.2:2.5:1.0. Vein cu-a strongly antefurcal, first subdiscal cell 1.6 times longer than the discal cell; reclinous, curved basally. Vein CU1b swollen at junction with 3-CU1 rather than being swollen medially and narrowing again at the junction. First subdiscal cell without a distinct sclerome; without glabrous area, cell membrane largely uniformly fuscous, hyaline coloured membrane present on distal area of cell but this area also setose.

*Hind wing.* Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell weakly narrowed medially and parallel-sided distally. Apex of vein C+SC+R with two especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.2 times longer than sub-posteriorly wide; with dorsal carinae; with dorsolateral carinae; raised median area carinated. Second metasomal tergite 0.6 times longer medially than wide, smooth, some rugosity beside the distal part of mid-longitudinal carina of triangular area, anterolateral areas rugulose; mid-basal triangular area 1.2 times longer than basally wide, without striate sculpture; area lateral to mid-basal triangular area with shallow, weakly crenulated furrows. Third tergite smooth, second metasomal suture crenulate, laterally delimiting smooth areas. Ovipositor short, flattened beyond apex of metasomal tergites, progressively widening and narrowed acute at fourth distal part.

*Male.* Unknown.

*Etymology.* Named because the forewing vein cu-a is far antefurcal.

*Type material examined.* Holotype ♀. CAMER-

OON: 'Mont-Kala, iv.1962, I. Carayon Rec.' (MNHN).

***Curriea brunneistigma* Falco sp. n.**

**Diagnosis**

This species may be distinguished from all other African species by the following combination of characters: mesoscutum with three black areas; pronotum yellow; pterostigma uniformly brown; forewing vein CU1b swollen at junction with vein 3-CU1; hind wing vein 2-SC+R longitudinal; ovipositor cylindrical basally, flattened dorsoventrally distally, and becoming progressively narrowed towards apex.

**Description**

*Female.* Length of body 7.4 mm, forewing 7.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 2.3 mm.

*Colour.* Testaceous; tarsal claws and flagellomeres brown; tips of mandibles, scapus and pedicellus, stemmaticum, ovipositor sheaths, anterior area of central lobe and entire lateral lobes of mesoscutum, and anterodorsal corner of mesopleuron black; head, pronotum, posterior area of central lobe of mesoscutum vivid yellow; wings infuscated, pterostigma and veins brown.

*Head.* Antennae (broken) with at least 47 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:3.0:1.5. Face: rugose, clypeus punctated and surrounded by a crenulated furrow, a mid-longitudinal punctated band wider basally from this furrow to area between antennal sockets. Height of eye:width of face:width of head = 1.0:0.6:1.6. Length of face 1.1 times width of face. Eyes moderately emarginate. Frons weakly concave, mid-longitudinal furrow with two lateral carinae reaching the area between the antennal sockets. Horizontal width of eye:horizontal width of head behind eye = 3.0:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.0:1.6.

*Mesosoma.* 1.7 times longer than high. Propodeum with some striations medio-posteriorly.

*Forewing.* Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 6.2:3.7:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.6:3.1:4.3:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.7:1.0.

Vein cu-a strongly antefurcal, strongly reclivous. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell without a distinct sclerome, with uniformly sparse setae, and central areas somewhat more infuscate.

*Hind wing.* Hind wing vein 1-SC+R angled and straight near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell weakly narrowed medially and parallel-sided distally. Apex of vein C+SC+R with 2-3 especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite as long as sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae, raised median area smooth. Second metasomal tergite 0.5 times longer medially than wide, smooth, sparsely punctated, with two crenulated latero-longitudinal grooves; mid-basal triangular area 1.2 times longer than basally wide, smooth; area lateral to mid-basal triangular area crenulated. Third tergite smooth, with scattered punctures, second metasomal suture crenulated. Ovipositor cylindrical basally, flattened dorsoventrally distally, and becoming progressively narrowed towards apex.

*Male.* Unknown.

*Etymology.* Named because of the brown pterostigma in the forewing.

*Type material examined.* Holotype ♀. MADAGASCAR: 'Ampijoroa 120 m, Ankarafantsika, viii.56, P. Griv.' (MNHMP).

***Curriea bulbivena* Falco sp. n.**

**Diagnosis**

This species may be distinguished from all other African species by the following combination of characters: ovipositor cylindrical; forewing vein CU1b swollen medially but narrowing at junction with vein 3-CU1; scapus mostly blackish; pterostigma bicolorous, yellow basally and black distally.

**Description**

*Female.* Length of body 8.2 mm, forewing 9.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 3.6 mm.

*Colour.* Yellow; hindleg tarsus brownish, metatarsus with dorsal longitudinal yellow band; tips of mandibles and ovipositor sheaths black; antennae brown; wing membrane yellow, with fuscous area below parastigma in first sub-marginal cell and along vein 1-M in basal cell;



fuscous transverse band from apex of pterostigma connected by a fuscous streak along the front and hind margins of the wing to a fuscous transverse band at the apical margin; pterostigma bicolorous yellow with black apex, veins yellow except parastigma, 1-SR, 1-M, veins surrounding first subdiscal cell and distal veins brown; distal margin of hind wing fuscous.

*Head.* Antennae (broken) with at least 41 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.0:0.8. Face: rugose-punctated, clypeus punctated laterally surrounded by crenulated furrow, central area of face punctated with a carina up to the central area between antennal sockets, two lateral transversely crenulated grooves from tentorial areas up to antennal sockets. Height of eye:width of face:width of head = 1.0:0.4:1.5. Length of face 1.1 times width of face. Eyes strongly emarginate. Frons concave, with mid-longitudinal furrow raised anteriorly in a triangular area. Horizontal width of eye:horizontal width of head behind eye = 4.6:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.5:1.5.

*Mesosoma.* 1.8 times longer than high. Propodeum smooth medioposteriorly.

*Forewing.* Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.9:2.9:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.5:2.3:3.6:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.8:1.0. Vein cu-a moderately antefurcal, moderately reclivous. Vein CU1b swollen medially, narrowing before junction with 3-CU1. Vein 2-CU1 distinctly wider basally than distally. First subdiscal cell with sclerome long, 0.5 times the length of glabrous line and distinctly angled posteriorly at distal third, brown coloured; with glabrous area large distally and anteriorly, continuing as a band to the basal area close to vein cu-a surrounding a setose area, membrane not hyaline.

*Hind wing.* Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.2 times longer than sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae; raised median area with some rugulosity. Second metasomal tergite 0.5 times longer medially than wide, smooth with strong crenulation on furrow

of triangular area; mid-basal triangular area 1.1 times longer than basally wide, without striate sculpture. Third tergite smooth. Ovipositor cylindrical.

*Male.* Similar to female, the most significant differences are: length of body 8.2 mm, of forewing 7.0 mm; length of face 1.3 times width of face; horizontal width of eye:horizontal width of head behind eye = 3.3:1.0; mesosoma 2.1 times longer than high; propodeum with some striations medioposteriorly; first metasomal tergite 1.5 times longer than sub-posteriorly wide, raised median area striate, with strong dorsal carinae; second metasomal tergite 0.7 times longer medially than wide, striate; third metasomal tergite and lateral areas rugulose-striate; fourth metasomal tergite with lateral rugose areas.

*Etymology.* Name refers to forewing vein CU1b that is swollen medially but narrows at junction with vein 3-CU1.

*Type material examined.* Holotype ♀. DEMOCRATIC REPUBLIC OF CONGO: Eala (00.02N 18.22E), 7.viii.1930, J. Vrydagh (MRAC). Paratypes. DEMOCRATIC REPUBLIC OF CONGO: 16, Eala, x-1935, J. Ghesquiere (MRAC); 1♀, Tshuana (sic), Bokuma, ii/iii.1954, R. P. Lootens (MRAC). KENYA: 1♀, Tsavo East N.P., nr. Voi Gate, Kenya, vi.1977, D. Quicke (BMNH).

### *Curriea emarginata* Falco sp. n., Figs 1, 22

#### *Diagnosis*

This species may be distinguished from all other African species by the following combination of characters: ovipositor flattened dorsoventrally; forewing vein cu-a interstitial; forewing vein CU1b swollen at junction with vein 3-CU1; hind wing vein 2-SC+R transverse; eyes sharply emarginate.

#### *Description*

*Female.* Length of body 9.2 mm, forewing 9.2 mm, ovipositor (part exerted beyond apex of metasomal tergites) 3.0 mm.

*Colour.* Pale-yellow; tips to mandibles and ovipositor sheaths black; flagellomeres blackish-brown; scapus and pedicellus pale-yellow with outsides spotted with brown; medial and hind coxae brownish yellow; tarsal claws yellowish; wings yellow except parastigma, veins 1-SR, 2-CU1, 2-1A, area under scleroma in first subdiscal cell brownish, wing membrane distally

infumated, pterostigma uniformly pale yellow.

**Head.** Antennae with 60 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.0:0.7. Face: central area of face punctated, lengthened and continued distally as a carina up to area between antennal sockets, lateral areas rugose, clypeus pentagonal punctated. Height of eye:width of face:width of head = 1.0:0.4:1.4. Length of face 1.2 times width of face. Eyes strongly emarginate. Frons concave with a mid-longitudinal groove anteriorly bifurcated. Horizontal width of eye:horizontal width of head behind eye = 3.3:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.0:1.7.

**Mesosoma.** 1.8 times longer than high. Propodeum smooth medioposteriorly.

**Forewing.** Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 5.8:3.0:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.7:3.2:4.6:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.2:2.0:1.0. Vein cu-a interstitial, vertical. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell with long sclerome present along anterior margin of flexion line; sclerome bent posteriorly at distal third; cell membrane with large hyaline, glabrous area distally extending anterobasally up to middle of cell, remainder of membrane yellowish and setose, except membrane around sclerome which is brownish.

**Hind wing.** Hind wing vein 1-SC+R straight near intersection with vein 1r-m. Vein 2-SC+R interstitial-transverse. Marginal cell weakly narrowed medially and parallel-sided distally. Apex of vein C+SC+R with three especially thickened setae (catch bristles).

**Metasoma.** First metasomal tergite 1.5 times longer than sub-posteriorly wide; with weak dorsal and dorsolateral carinae; raised median area smooth with some rugulosity anteriorly. Second metasomal tergite 0.6 times longer medially than wide, smooth, two lateral furrows smooth; mid-basal triangular area 1.2 times longer than basally wide, open posteriorly, smooth; area lateral to mid-basal triangular area with some weak crenulation. Third tergite smooth. Ovipositor flattened dorsoventrally from middle, parallel-sided but gradually acute at apex.

**Male.** Unknown.

**Etymology.** Named because of the sharply emarginate eyes.

**Type material examined.** Holotype ♀. CAMEROON: 'Nkoemvon, 13.vii-24.viii.1980, D. Jackson' (BMNH).

### ***Curriea fittoni* Falco sp. n., Fig. 2**

#### **Diagnosis**

This species may be distinguished from all other African species by the following combination of characters: ovipositor flattened dorsoventrally, widened at middle and progressively acute distally; forewing vein cu-a antefurcal and reclivous; vein CU1b swollen medially but narrowing at junction with vein 3-CU1; hind wing vein 1-SC+R curved before intersection with 1r-m; hind wing vein 2-SC+R longitudinal; eyes strongly emarginate; scapus mostly blackish; pale marks on mesoscutum; forewing vein C+SC+R basally black contrasting with yellowish-brown tegula.

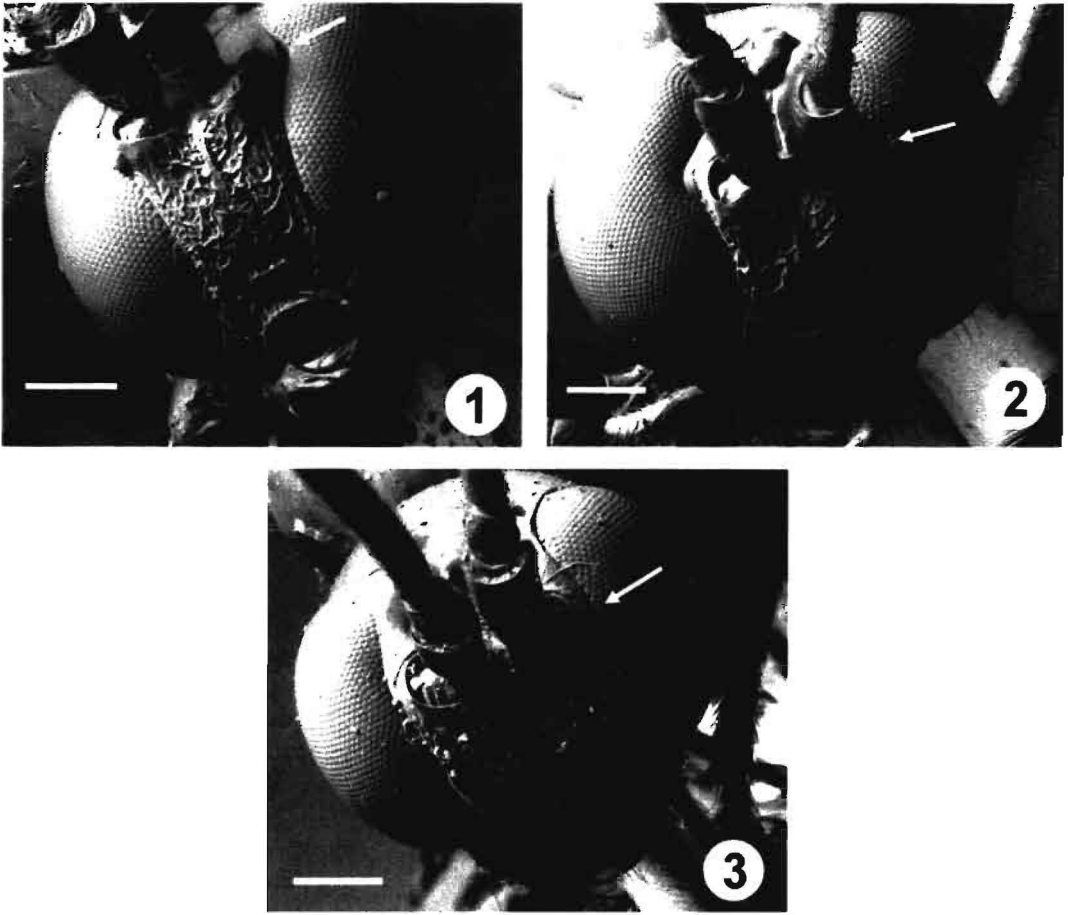
#### **Description**

**Female.** Length of body 5.0–7.0 mm, forewing 5.5–7.2 mm, ovipositor (part exerted beyond apex of metasomal tergites) 1.5–1.7 mm.

**Colour.** Yellowish-brown; posterior area of central lobe of mesoscutum and anterodorsal corner of mesopleuron yellow; tip of mandibles, ovipositor sheaths and antennae piceous or black; last tarsomere of legs brownish; wings fuscous, basally and spot under the basal area of pterostigma transparent; veins yellowish or brownish, vein C+SC+R blackish; pterostigma yellow with apical 0.2 brownish.

**Head.** Antennae with 43–48 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.6–3.0:1.0–1.5. Face: clypeus punctated, surrounded by a crenulated furrow; central area of face punctate, dorsally narrowing and extending by a carina up to area between antennal sockets; lateral furrows transversally rugose. Height of eye:width of face:width of head = 1.0:0.4–0.5:1.4–1.5. Length of face 1.0–1.2 times width of face. Eyes strongly emarginate. Frons concave, mid-longitudinal groove widening anteriorly in a triangular area. Horizontal width of eye:horizontal width of head behind eye = 3.3–3.6:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.0:1.0–1.2.

**Mesosoma.** 1.8–1.9 times longer than high. Propodeum with some striations medio-



**Figs 1–3.** Head, frontodorsal view. 1, *Curriea emarginata*, eyes sharply emarginate; 2, *C. fittoni*, eyes strongly emarginate; 3, *C. gratiosus*, eyes weakly emarginate. Scale bars = 150  $\mu$ m.

posteriorly.

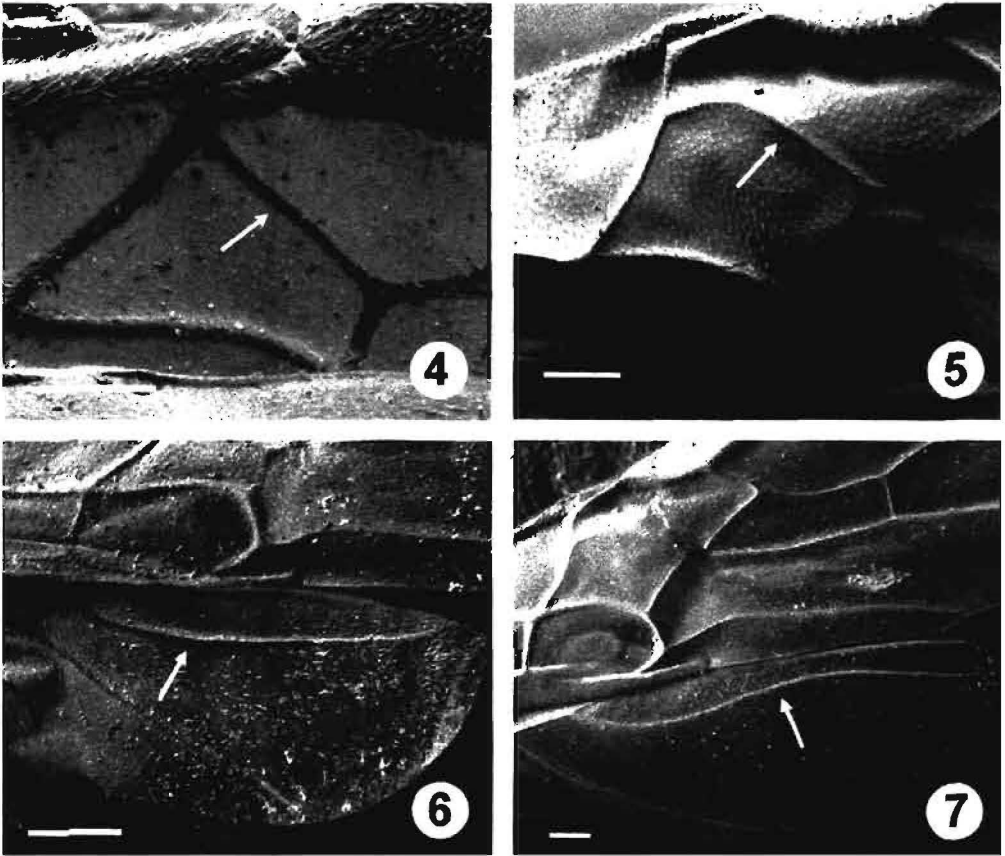
**Forewing.** Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.8–5.7:2.5–3.3:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.3–1.6:2.3–3.0:3.4–4.1:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.5–1.7:1.0. Vein cu-a antefurcal, reclivous. Vein CU1b weakly swollen medially but narrowing before junction with 3-CU1. First subdiscal cell with short and thin sclerome at distal part of horizontal glabrous line; with glabrous area hyaline, large distally, and anteriorly extends up to base of vein cu-a, glabrous line surrounding the central setose area darker than the area below the glabrous line.

**Hind wing.** Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with two especially

thickened setae (catch bristles).

**Metasoma.** First metasomal tergite 1.3–1.5 times longer than sub-posteriorly wide, with dorsal and dorsolateral carinae; raised median area rugulose medially and smooth posteriorly. Second metasomal tergite 0.6 times longer medially than wide, smooth, lateral areas rugulose; mid-basal triangular area 1.1–1.2 times longer than basally wide, smooth; area lateral to mid-basal triangular area with shallow and somewhat rugulose furrows, without distal carina. Third tergite smooth, second metasomal suture crenulated, lateral areas smooth. Ovipositor cylindrical basally, flattened from middle, parallel-sided and acute at apex.

**Male.** Similar to female, the most significant differences are: length of body 6.2–8.3 mm, of forewing 5.4–7.6 mm; height of clypeus:



**Figs 4–7.** 4, 5, Forewing vein 1-SR+M. 4, *Curriea rectivena*, straight; 5, *C. luteistigma*, curved. Scale bars = 200  $\mu$ m. 6, 7, Hind wing marginal cell. 6, *Curriea rectivena*, not narrowed medially; 7, *C. flavomaculata*, narrowed medially. Scale bars = 300  $\mu$ m.

inter-tentorial distance:tentorio-ocular distance = 1.0:2.0–2.2:0.7–0.8; Horizontal width of eye:horizontal width of head behind eye = 3.4–3.9:1.0; post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.0–1.2:0.7–0.8; metasoma sculptured, first tergite carinated, remain rugose-punctated, sixth tergite smooth; mid-basal triangular area 1.3 times longer than basally wide with distal carina; area lateral to mid-basal triangular area with crenulated furrows; sometimes piceous marks on stemmaticum, lobes of mesoscutum, mesopleuron and propodeum.

*Etymology.* Named in recognition of the contribution to parasitoid wasp taxonomy made by Dr M.G. Fitton of the BMNH.

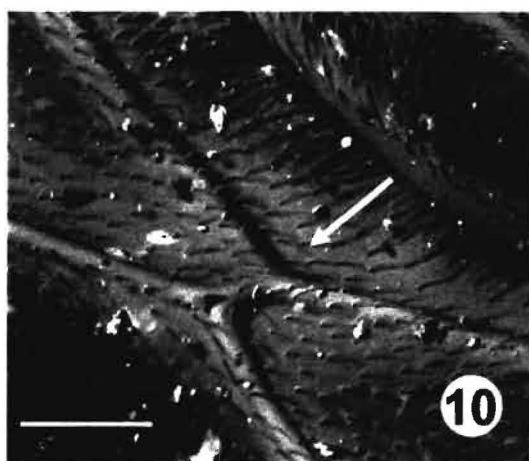
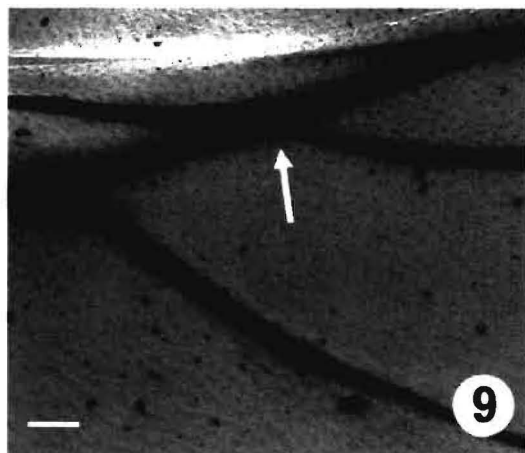
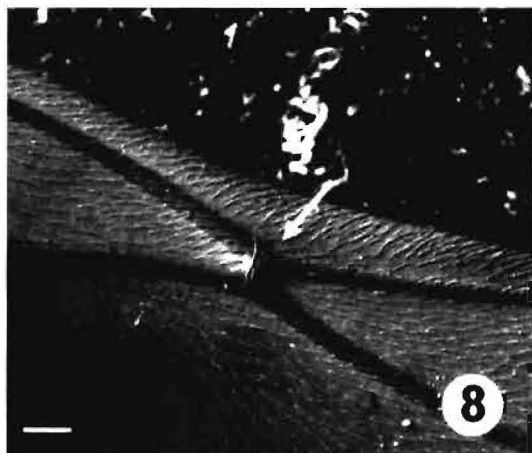
*Type material examined.* Holotype ♀. SOUTH AFRICA: Cape Province, Ceres (33.23S 19.19E), iv.1925, 1925–210 (BMNH). Paratypes. SOUTH

AFRICA: 1♀, 1♂, Western Cape Province, Ceres, xi.1920, R.E. Turner, Brit. Mus., 1920–497 (BMNH); 1♂, same data except 1,500 ft., i.1921, 1921–78 (BMNH); 1♀, 2♂, same data except ii.1921, 1921–115 (BMNH); 1♂, same data except 2–21.iii.1921, 1921–150 (BMNH); 1♂, same data except v.1921, 1921–248 (BMNH); 2♀, 1♂, same data except iv.1923, 1925–210 (BMNH); 1♀, 4♂, same data except iii.1925, 1925–161 (BMNH); 2♀, 11♂, same data except iv.1925, 1925–210 (BMNH).

#### *Curriea fuscus* Falco sp. n.

#### *Diagnosis*

This species may be distinguished from all other African species by the following combination of characters: lobes of mesoscutum with three black marks; scutellum and propleuron yellow; pterostigma bicolorous, yellow and distally



**Figs 8–10.** Hind wing vein 2-SCR+R. **8**, *Curriea angulicauda*, interstitial; **9**, *C. seyrigi*, longitudinal; **10**, *C. fenestrata*, transverse. Scale bars = 150  $\mu$ m.

brown; wing membrane uniformly fuscous; forewing vein cu-a antefurcal and reclivous; forewing vein CU1b swollen medially but narrowed at junction with 3-CU1; ovipositor flattened dorsoventrally with dorsal valve distinctly curved upwards at tip.

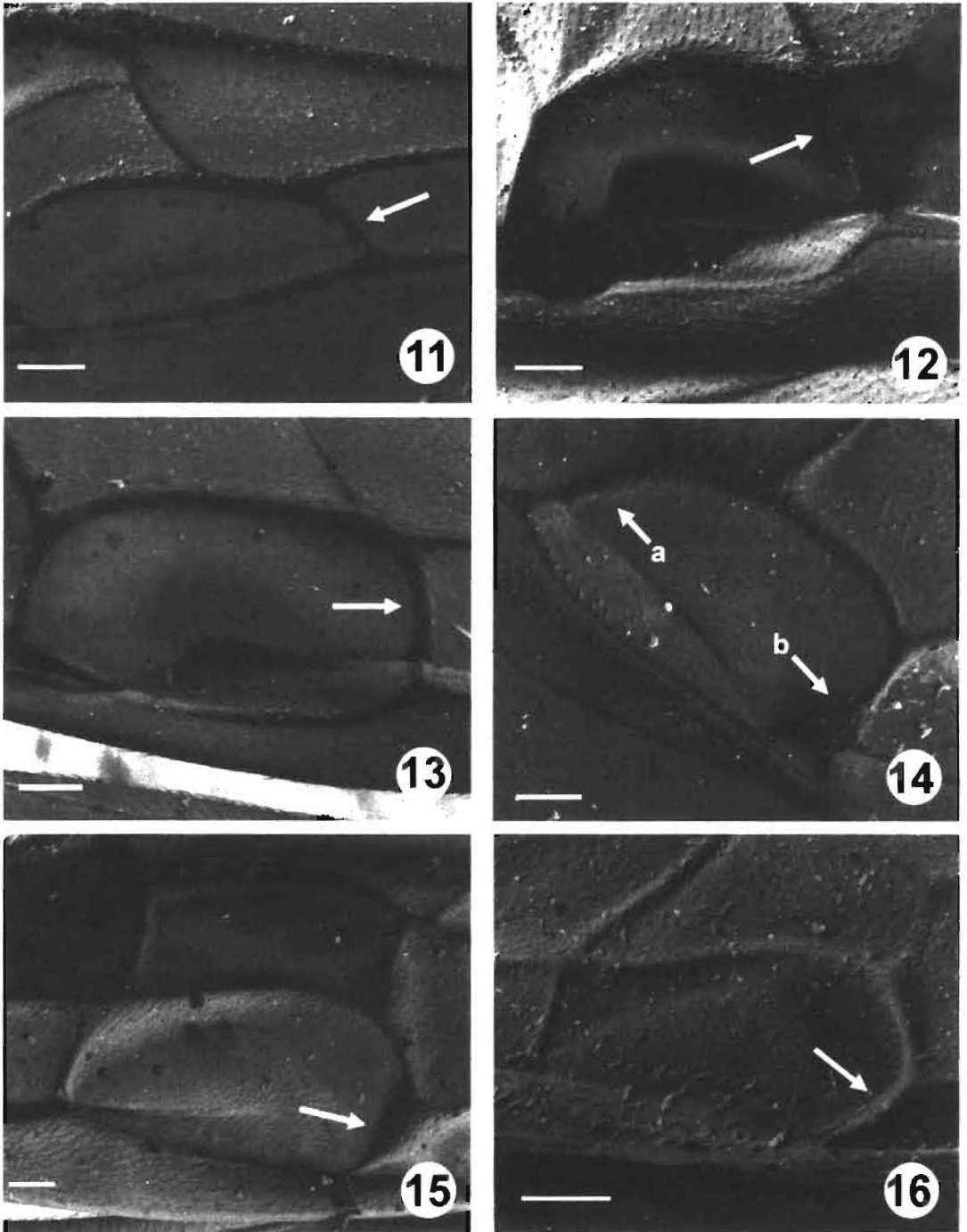
**Description**

*Female.* Length of body 7.0–8.7 mm, forewing 7.2–8.8 mm, ovipositor (part exerted beyond apex of metasomal tergites) 2.2–2.5 mm.

*Colour.* Brownish-yellow; tips of mandibles, scapus and pedicellus, stemmaticum, ovipositor sheaths, lateral lobes and anterior area of central lobe of mesoscutum black; mesopleuron except central area and mesosternaulus piceous to black; posterior area of central lobe and notauli and

latero-ventral sides of lateral lobes, scutellum, and anterodorsal corner and central mark of mesopleuron yellow; head and proscutum yellowish to yellow; flagellum and tarsal claws brown; wings uniformly fuscous except hyaline band running from base of pterostigma to vein 2-SR+M, pterostigma yellow with distal 0.2 blackish.

*Head.* Antennae with 55–57 flagellomeres. Height of clypeus:inter-tentorial distance: tentorio-ocular distance = 1.0:2.3–2.5:1.0. Face: rugose, clypeus punctated surrounded by a crenulated furrow, central area of face punctated, triangular in shape and extending in a carina close to area between antennal sockets. Height of eye:width of face:width of head = 1.0:0.4:1.4–1.5. Length of face 1.2–1.3 times width of face. Eyes strongly emarginate. Frons concave, with



**Figs 11–16.** 11–13, Forewing vein cu-a. 11, *Curriea antevana*, far antefurcal; 12, *C. pulchripennis*, interstitial; 13, *C. philippeii*, strongly antefurcal and vertical, forming right angle with vein 1-1A. 14–16, Forewing vein CU1b. 14, *C. xanthocephs*, (b) strongly swollen medially and narrowed at junction with 3-CU1, (a) vein cu-a reclinous forming obtuse angle with vein 1-1A; first subdiscal cell with glabrous area extending as an arc towards base of cell; 15, *C. seyrigi*, swollen at junction with 3-CU1; 16, *C. rectivena*, swollen medially but narrowing at junction with 3-CU1; first subdiscal cell without glabrous area. Scale bars = 200  $\mu$ m.

mid-longitudinal furrow. Horizontal width of eye:horizontal width of head behind eye = 3.2–3.3:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.0–1.2:1.0.

*Mesosoma*. 1.8–2.0 times longer than high. Propodeum smooth medioposteriorly.

*Forewing*. Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 5.3–5.6:2.8–3.0:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.4–1.6:2.3–2.6:3.3–3.7:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.6:1.0. Vein cu-a antefurcal, reclivous. Vein CU1b swollen medially but narrowing before junction with 3-CU1. First subdiscal cell with a short enlarged sclerome at apex of glabrous line; with hyaline glabrous area large anteriorly, remainder of cell fuscous and setose.

*Hind wing*. Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma*. First metasomal tergite 1.2 times longer than sub-posteriorly wide, with dorsal and dorsolateral carinae; raised median area longitudinally rugulose and distally smooth. Second metasomal tergite 0.6 times longer medially than wide, smooth, two lateral areas delimited by smooth depressions, second metasomal suture crenulated; mid-basal triangular area 1.1 times longer than basally wide, smooth; area lateral to mid-basal triangular area crenulated. Third tergite smooth. Ovipositor basally cylindrical, flattened from middle and with dorsal valve distinctly curved upwards at tip.

*Male*. Similar to female, the most significant differences are; length of body 6.2–6.5 mm, of forewing 5.6–6.2 mm; first metasomal tergite roughly rugose; second metasomal tergite rugose basally, smooth apically.

*Etymology*. Named because of the uniformly fuscous wing membrane.

*Type material examined*. Holotype ♀. MADAGASCAR: Region du sud-est, Fort-Dauphin (25.01S 47.00E), i.1901, Ch. Alluaud (MNHN). Paratypes: MADAGASCAR: 1♀, Region du sud-est, Fort-Dauphin, i.1901, Ch. Alluaud (MNHN); 1♀, Behara (25.57S 46.23E), xi.38, A. Seyrig (MNHN); 1♀, Bekily (24.12S 45.20E), Reg. sud de l'île, xii.36, A. Seyrig (MNHN); 1♂, Bekily, Reg. sud de l'île, i.37, A. Seyrig (MNHN); 1♀, 1♂, Beloha (25.09S 45.04E), iii.56, A.R. (MNHP); 1♀, Fort-Dauphin, Vinany Be,

A.R. (MNHN); 1♀, Tulear Pr, Manombo s.l. (22.56S 43.29E), 31.iii.1968, K.M.G. & P.D. (MNHN).

### *Curriea interstitialis* Brandt *sp. n.*, Fig. 25

#### *Diagnosis*

This species may be distinguished from all other African species by a combination of: forewing vein cu-a interstitial, dorsal valve of ovipositor cylindrical, pterostigma entirely yellow, first metasomal tergite with central longitudinal carina.

#### *Description*

*Female*. Length of body 10.8 mm, forewing 9.8 mm, ovipositor (part exerted beyond apex of metasomal tergites) 4.7 mm.

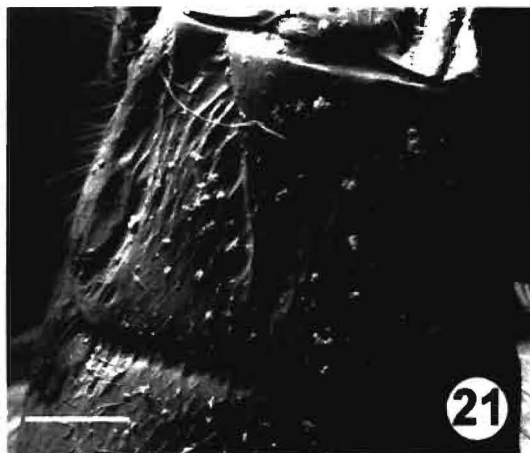
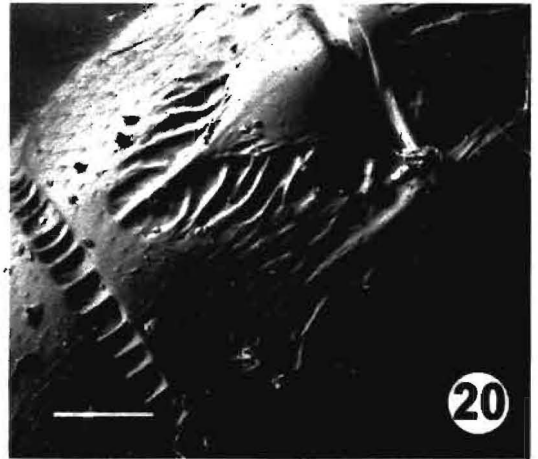
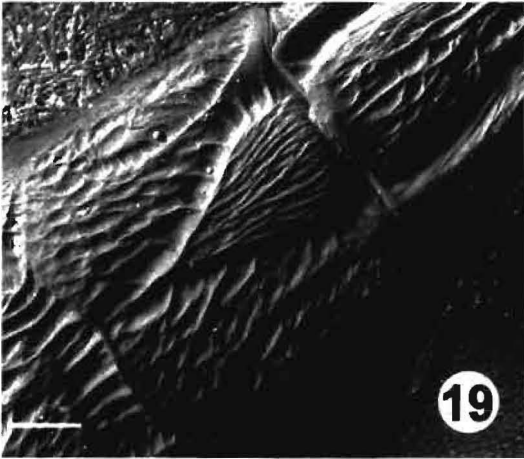
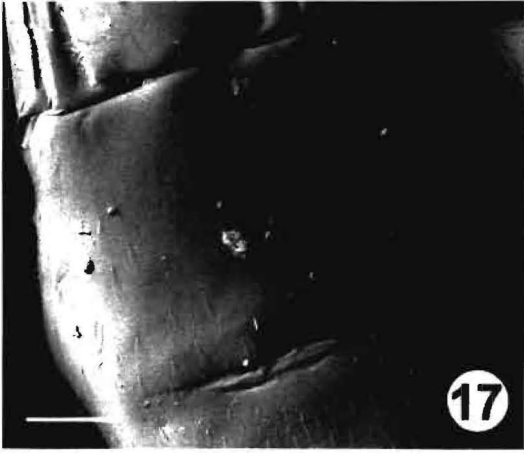
*Colour*. Rufous, with yellow metasomal tergites. Wings distinctly yellow-fuscous with area distal from pterostigma darker, and dark band running transversely from parastigma. Pterostigma brownish with darker distal tip. Antennae, eyes and ovipositor sheaths black. Anellus brown, mandible tips black.

*Head*. Antennae with 60 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:1.2:0.5. Face uniformly rugose, clypeus smooth, punctations between base of antennal sockets and eye. Height of eye:width of face:width of head = 1.9:1.0:3.2. Length of face (from dorsal margin of clypeus to anterior edge of antennal socket) 1.5 times width of face. Eyes weakly emarginate. Frons notably concave, with mid longitudinal striations; laterally and between antennal sockets punctated. Horizontal width of eye (measured perpendicular to face):horizontal width of head behind eye = 3.4:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.3:2.0.

*Mesosoma*. 2.0 times longer than high. Propodeum smooth medioposteriorly.

*Forewing*. Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 5.0:2.7:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.5:2.5:3.3:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:2.0:1.0. Vein cu-a more or less interstitial, moderately reclivous. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell with longitudinal sclerome; with glabrous area.

*Hind wing*. Hind wing vein 1-SC+R angled near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially.



**Figs 17–21.** Second metasomal tergite. 17, *Curriea inareata*, without midbasal triangular area; 18, *C. angulicauda*, with midbasal triangular area, smooth; 19, *C. xanthiceps*, with midbasal triangular area, striate; 20, *C. polaszeki*, with midbasal triangular area, no more than 1.2 times longer than basally wide; 21, *C. fasciatipennis*, with midbasal triangular area, acute, 1.5 times longer than basally wide. Scale bars = 300  $\mu$ m.



Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.2 times longer than sub-posteriorly wide, with dorsal and dorsolateral carinae; raised median area with central longitudinal carina. Second metasomal tergite 0.6 times longer medially than wide, smooth; mid-basal triangular area 0.7 times longer than basally wide, smooth; area lateral to mid-basal triangular area smooth, with longitudinal lateral carina longitudinally. Third tergite anteriorly mildly striate, posteriorly smooth. Ovipositor cylindrical throughout length.

*Male.* Unknown.

*Etymology.* Named because of the forewing vein cu-a interstitial.

*Type material examined.* Holotype ♀. CÔTE D'IVOIRE: Bingerville (05.20N 03.53W), 1/15.iv.1964, J. Decelle (MRAC). Paratypes. CÔTE D'IVOIRE: 2♀, Bingerville, ix.1962 & xii.1963, J. Decelle (MRAC).

### ***Curriea levis* Falco sp. n., Fig. 26**

#### ***Diagnosis***

This species may be distinguished from all other African species by the following combination of characters: ovipositor cylindrical; forewing vein cu-a interstitial; forewing vein CU1b swollen at junction with vein 3-CU1; first metasomal tergite smooth; pterostigma unicolorous yellow.

#### ***Description***

*Female.* Length of body 9.8 mm, forewing 10.4 mm, ovipositor (part exerted beyond apex of metasomal tergites) 5.0 mm.

*Colour.* Yellow; posterior area of central lobe of mesoscutum and scutellum paler yellow; tips of mandibles, lateral sides of scapus and pedicellus, and ovipositor sheaths black; flagellum and tarsal claws brown; wing membrane yellow, with a fuscous area below the parastigma in the first submarginal cell and along vein 1-M in the basal cell, fuscous transverse band running from apex of pterostigma connected by a fuscous streak along the anterior and posterior margins of the wing to fuscous transverse band at the apical margin, pterostigma unicolorous yellow, veins yellow except parastigma, 1-SR, 1-M, veins surrounding first subdiscal cell and distal veins brown; hind wing with distal margin fuscous.

*Head.* Antennae (broken) with at least 60 flagello-

meres. Width of face:width of head = 1.0:3.7. Eyes strongly emarginate. Frons concave, with mid-longitudinal furrow raised anteriorly in a triangular area. Horizontal width of eye:horizontal width of head behind eye = 4.4:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.5:2.0.

*Mesosoma.* 1.7 times longer than high. Propodeum smooth medioposteriorly.

*Forewing.* Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.0:2.7:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.3:2.5:3.5:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.9:1.0. Vein cu-a interstitial, more or less vertical. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell with sclerome not distinct; with large glabrous area distally, central area of cell with short and sparse setae and anterior area with longer setae.

*Hind wing.* Hind wing vein 1-SC+R angled and straight near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.7 times longer than sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae; raised median area smooth. Second metasomal tergite 0.7 times longer medially than wide, smooth; mid-basal triangular area 1.4 times longer than basally wide, smooth; area lateral to mid-basal triangular area with weak rugulosity on furrows, and two lateral impressions on tergite. Third tergite smooth, second metasomal suture crenulated without lateral areas. Ovipositor cylindrical, 0.5 times length of body.

*Male.* Unknown.

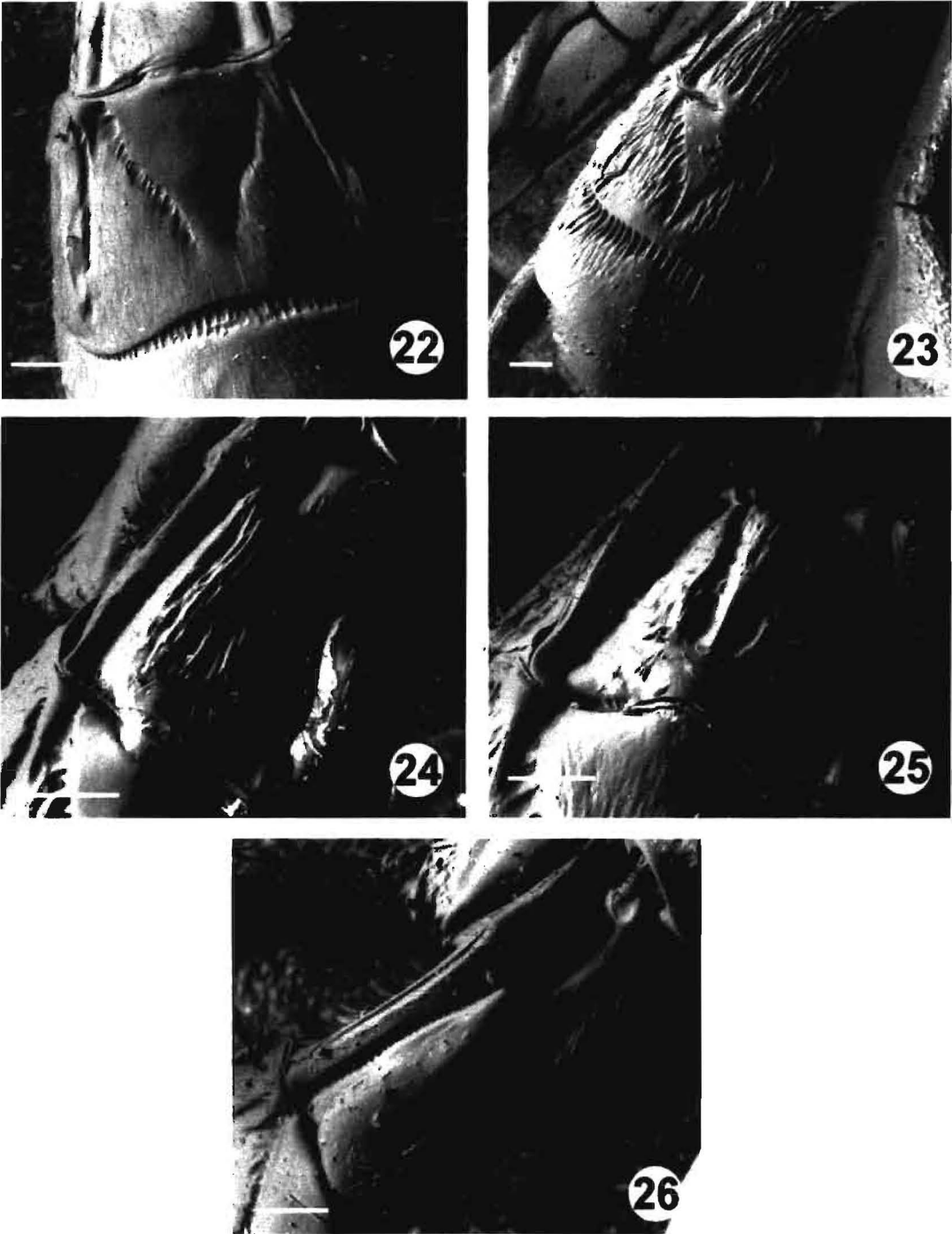
*Etymology:* Named because of the smooth metasomal tergites.

*Type material examined.* Holotype ♀. DEMOCRATIC REPUBLIC OF CONGO: Yangambi (00.47N 24.24E), 25.vi.52, R. Mayne, R.M. 354, Coll. R. Mayne, Com. Et. Bois Congo, R. 2423, R.I.Sc.N.B.I.G. 22.863 (IRSNB).

### ***Curriea longicauda* Falco sp. n.**

#### ***Diagnosis***

This species may be distinguished from all other African species by the long cylindrical ovipositor, 1.3 times longer than body.



**Figs 22–26.** 22, 23, First, second and third metasomal tergites. 22, *Curriea emarginata*, smooth; 23, *C. testaceipes*, longitudinally striate (except midbasal triangular area). Scale bars = 300  $\mu$ m; 24–26, First metasomal tergite. 24, *Curriea guttifer*, sculptured, uniformly longitudinally striate; 25, *C. interstitialis*, sculptured, with central longitudinal ridge; 26, *C. levis*, smooth. Scale bars = 300  $\mu$ m.

### Description

*Female.* Length of body 9.8–10.2 mm, forewing 9.5–9.7 mm, ovipositor (part exerted beyond apex of metasomal tergites) 13.0–13.3 mm.

*Colour.* Yellow; lateral sides of scapus and pedicellus and flagellum brown; tarsus of hind legs brownish with dorsal pale band; wing membrane yellow with first fuscous transverse band running from parastigma and second fuscous transverse band from apex of pterostigma to distal margin, pterostigma unicolorous yellow.

*Head.* Antennae (broken) with at least 25 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.2–2.3:1.1. Face: clypeus punctated, area oval from clypeus to middle face punctated, lateral furrows transversally rugose from tentorial area to antennal sockets. Height of eye:width of face:width of head = 1.0:0.7:1.6. Length of face 0.8–0.9 times width of face. Eyes moderately emarginate. Frons concave, with mid-longitudinal groove anteriorly raised forming a triangular area. Horizontal width of eye:horizontal width of head behind eye = 2.2:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:0.7:1.2.

*Mesosoma.* 1.8–1.9 times longer than high. Propodeum smooth.

*Forewing.* Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.3–4.5:2.7–2.9:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.7–1.9:3.0–3.1:4.5–4.8:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.1–1.2:1.8:1.0. Vein cu-a more or less interstitial, moderately reclivous. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell without distinct sclerome; with glabrous area large distally and mid-anteriorly, remainder with uniform sparse setae.

*Hind wing.* Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R distinctly transverse. Marginal cell weakly narrowed medially and parallel-sided distally. Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.3 times longer than sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae; raised median area smooth. Second metasomal tergite 0.7 times longer medially than wide, smooth, with two lateral grooves longitudinally rugulose; mid-basal triangular area 1.6 times longer than

basally wide, smooth; area lateral to mid-basal triangular area smooth, with few crenulations near base. Third tergite smooth, strong crenulations basally from the second metasoma suture. Ovipositor 1.3 times longer than body, entirely cylindrical.

*Male.* Unknown.

*Etymology.* Named because of the particularly long ovipositor.

*Type material examined.* Holotype ♀. DEMOCRATIC REPUBLIC OF CONGO: Bambesa (03.25N 25.43E), 31.viii.1933, J.V. Leroy (MRAC). Paratype ♀. DEMOCRATIC REPUBLIC OF CONGO: Yangambi (00.47N 24.24E), 1940, I.N.E.A.C. (MRAC).

### *Curriea luteistigma* Falco sp. n., Fig. 5

#### Diagnosis

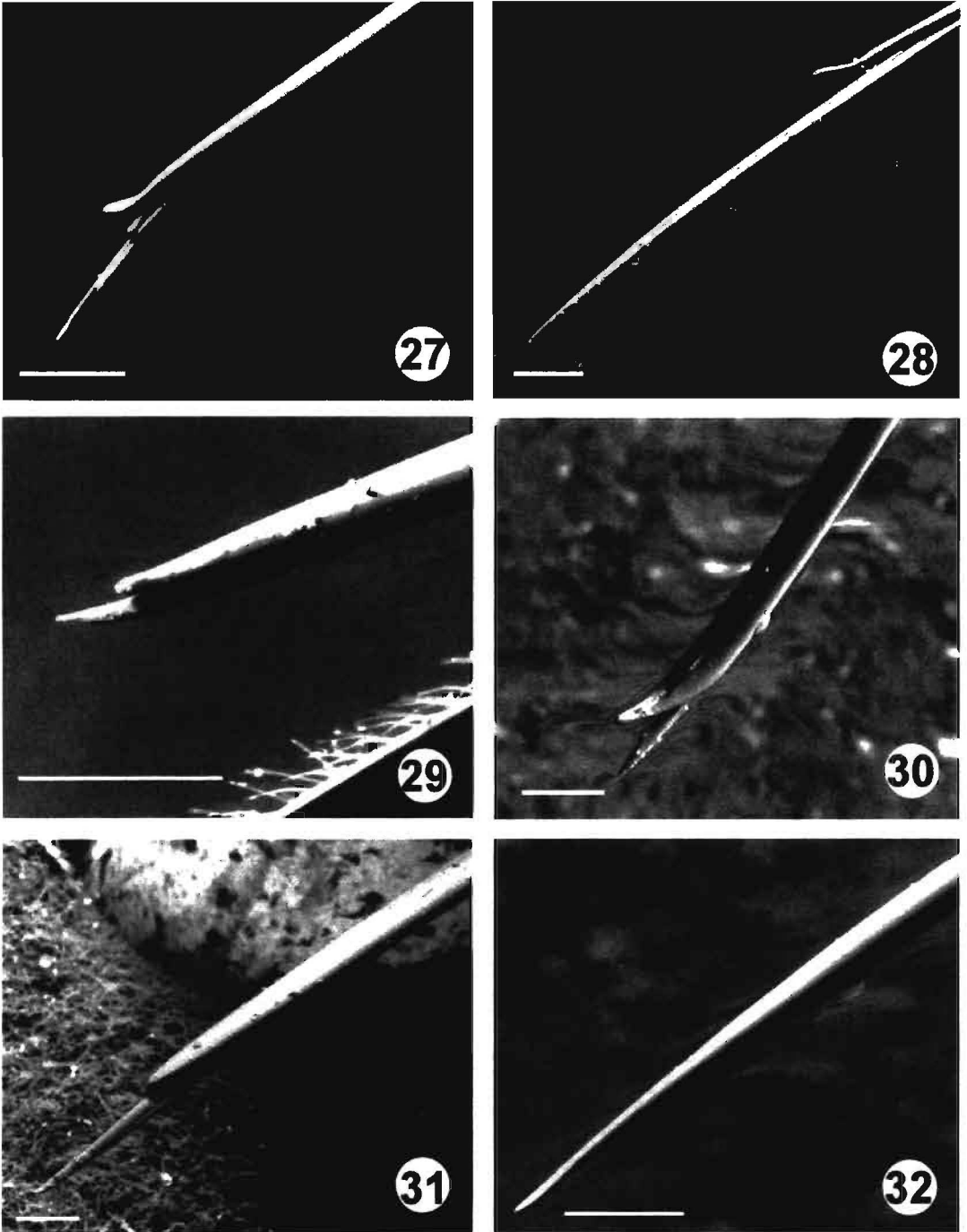
This species may be distinguished from all other African species by the following combination of characters: three black areas on mesoscutum; pronotum yellow and laterally black; pterostigma uniformly yellow; forewing vein CU1b swollen at junction with vein 3-CU1; hind wing vein 2-SC+R interstitial; ovipositor cylindrical basally and flattened distally with the dorsal valve more or less flat.

#### Description

*Female.* Length of body 7.5 mm, forewing 7.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 2.5 mm.

*Colour.* Testaceous; tarsal claws and flagellum brown; tips of mandibles, stemmaticum, scapus and pedicellus, anterior area of central lobe and dorso-longitudinal marks on lateral lobes of mesoscutum, and lateral area of pronotum black; head, metasomal sternites, posterior area of central lobe connecting with anterior and latero-ventral areas of lateral lobes of mesoscutum, and dorsal pronotum vivid yellow; wings infuscated, veins brown, pterostigma uniformly yellow.

*Head.* Antennae (broken) with at least 30 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.0:1.5. Face: rugose, with a central circular punctated area over clypeus, clypeus punctated and not surrounded by a crenulated furrow. Height of eye:width of face:width of head = 1.0:0.8:1.8. Length of face 1.0 times width of face. Eyes weakly emarginate. Frons weakly concave, with a superfi-



**Figs 27–32.** Ovipositors, dorsal valve. **27**, *Curriea pulchripennis*, distinctly curved upwards at tip; **28**, *C. acutus*, sharply curved upwards at tip; **29**, *C. polaszeki*, slightly curved upwards at tip; **30**, *C. seyrigi*, flattened, distinctly curved upwards at tip; **31**, *C. transvena*, flattened, not turned upwards at tip; **32**, *C. grata*, cylindrical, not curved upwards at tip, narrowing to a tapered point. Scale bars = 100  $\mu$ m.

cial smooth mid-longitudinal furrow. Horizontal width of eye:horizontal width of head behind eye = 1.6:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:0.6:1.4.

*Mesosoma*. 1.7 times longer than high. Propodeum smooth medioposteriorly.

*Forewing*. Vein 1-SR+M moderately curved. Lengths of veins SR1:3-SR:r = 4.4:3.0:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.9:2.8:4.4:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.2:2.1:1.0. Vein cu-a strongly antefurcal, moderately reclivous. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell without sclerome; cell uniformly setose and infusate, only anterodistally a hyaline glabrous area.

*Hind wing*. Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R more or less interstitial. Marginal cell weakly narrowed medially and parallel-sided distally. Apex of vein C+SC+R with two especially thickened setae (catch bristles).

*Metasoma*. First metasomal tergite 1.1 times longer than sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae; raised median area rugulose. Second metasomal tergite 0.6 times longer medially than wide smooth with lateral smooth grooves; mid-basal triangular area as long as basally wide, smooth; area lateral to mid-basal triangular area crenulated. Third tergite smooth. Ovipositor cylindrical basally, flattened medially and wider at distal fourth.

*Male*. Unknown.

*Etymology*. Named because of the yellow pterostigma of the forewing.

*Type material examined*. Holotype ♀. MADAGASCAR: 'Ranomafana, Madagascar mer., Sikora, i.1899, K. KokyeBa' (MNHN).

***Curriea philippei* Falco sp. n., Fig. 13**

***Diagnosis***

This species may be distinguished from all other African species by the following combination of characters: ovipositor flattened dorsoventrally; forewing vein cu-a antefurcal and vertical; vein CU1b swollen medially but narrowing at junction with vein 3-CU1; hind wing vein 1-SC+R straight before intersection with 1r-m; hind wing vein 2-SC+R longitudinal; eyes strongly emarginate; scapus mostly blackish; pale marks on mesoscutum.

***Description***

*Female*. Length of body 7.0 mm, forewing 6.7 mm, ovipositor (part exerted beyond apex of metasomal tergites) 1.8 mm.

*Colour*. Yellowish-brown; posterior area of central lobe of mesoscutum, anterior area of mesopleuron and metasomal sternites yellow; tip of mandibles, ovipositor sheaths black; antennae piceous; wings transparent, with fuscous transverse band running from distal 0.3 vein C+SC+R, and fuscous distally from intersection of veins r and 3-SR with hyaline spot between veins SR1, r-m and 3-M; pterostigma yellow with apical 0.2 brownish.

*Head*. Antennae (broken) with at least 46 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.0:1.0. Face: clypeus punctated and surrounded by a crenulated furrow, central area of face as wide as the dorsal margin of clypeus, elongate-lanceolate, dorsally continuing as a carina up to area between antennal sockets, lateral furrows rugose. Height of eye:width of face:width of head = 1.0:0.4:1.4. Length of face 1.1 times width of face. Eyes strongly emarginate. Frons concave, mid-longitudinal groove reaching the anterior raised area between antennal sockets. Horizontal width of eye:horizontal width of head behind eye = 3.3:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.6:2.0.

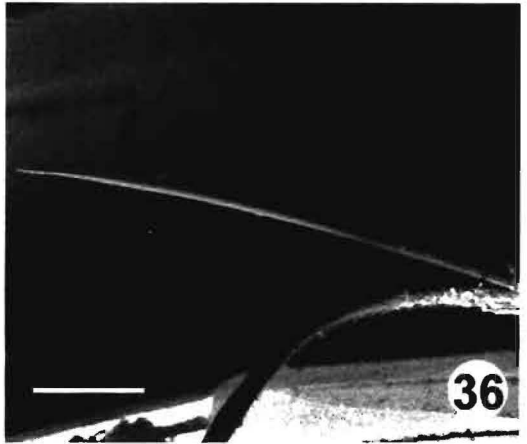
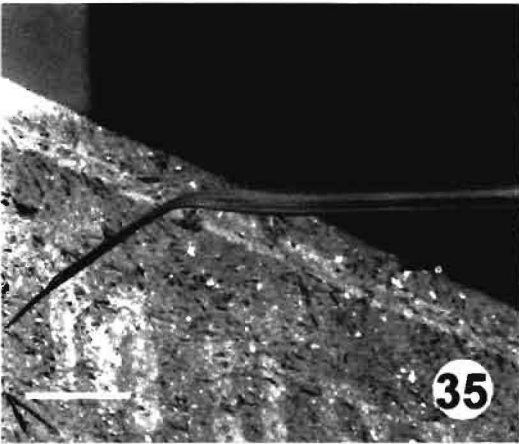
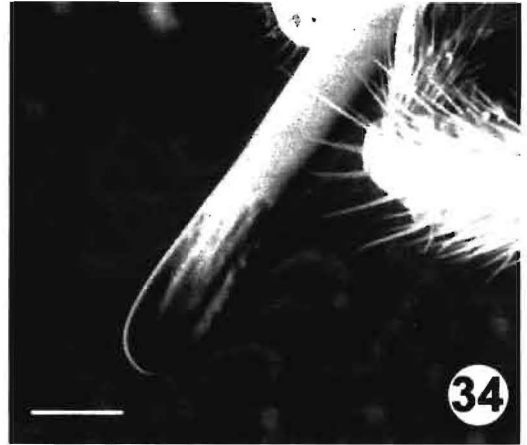
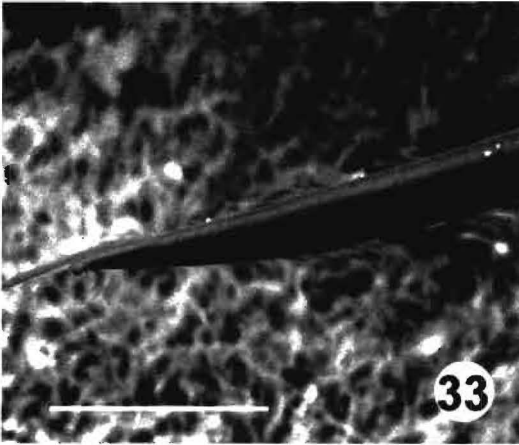
*Mesosoma*. 1.8 times longer than high. Propodeum smooth medioposteriorly.

*Forewing*. Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.3:2.6:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.5:2.6:3.7:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.8:1.0. Vein cu-a antefurcal, vertical. Vein CU1b weakly swollen medially but narrowing before junction with 3-CU1. First subdiscal cell with well-developed, distally enlarged sclerome which is angled posteriorly where the glabrous flexion line is curved; cell membrane with extensive hyaline glabrous area distally and anteriorly extending up to close to base of vein cu-a and surrounding a fuscous setose area.

*Hind wing*. Hind wing vein 1-SC+R angled and straight near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with 3 especially thickened setae (catch bristles).

*Metasoma*. First metasomal tergite 1.2 times

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**Figs 33–36.** Ovipositors, dorsal valve. **33**, *Curriea platycauda*, widened distally, narrowing to a point; **34**, *C. spathicauda*, curved upwards, with distinctly upturned spatulate and expanded tip. Scale bars = 100  $\mu$ m. **35** *C. angulicauda*, strongly flattened, with the apical fifth sharply angled ventrally; **36**, *C. xanthocephs*, not curved upwards at tip. Scale bars = 500  $\mu$ m.

longer than sub-posteriorly wide, with weak dorsal carinae and dorsolateral carinae; raised median area carinated. Second metasomal tergite 0.5 times longer medially than wide, smooth, lateral areas rugulose; mid-basal triangular area 1.1 times longer than basally wide, smooth; area lateral to mid-basal triangular area with crenulated furrows. Third tergite smooth, second metasomal suture crenulated and extending laterally delimiting smooth anterolateral areas. Ovipositor cylindrical basally, flattened dorsoventrally and parallel-sided medially, and pointed at apex.

*Male.* Unknown.

*Type material examined.* Holotype ♀. GHANA: 'W.P. Lowe, 1911-65' (BMNH). Paratype: CÔTE

D'IVOIRE: 1♀, Bingerville (05.20N 03.53W), x.1962, J. Decelle (MRAC).

#### ***Curriea platycauda* Falco sp. n., Fig. 33**

##### *Diagnosis*

This species may be distinguished from all other African species by the following combination of characters: ovipositor flattened dorsoventrally and widened near apex; forewing vein cu-a antefurcal and reclivous; vein CU1b swollen medially and narrowing at junction with vein 3-CU1; hind wing vein 1-SC+R curved before intersection with 1r-m; hind wing vein 2-SC+R longitudinal; eyes strongly emarginate; scapus mostly blackish; pale marks on mesoscutum;

forewing vein C+SC+R basally as yellowish-brown in colour as tegula.

### Description

*Female.* Length of body 5.6 mm, forewing 5.7 mm, ovipositor (part exerted beyond apex of metasomal tergites) 1.6 mm.

*Colour.* Yellowish-brown; posterior area of central lobe of mesoscutum yellow; tips of mandibles, stemmaticum, ovipositor sheaths and antennae black; wings transparent, with fuscous transverse band running from distal 0.4 vein C+SC+R, and fuscous distally from intersection of veins r and 3-SR with hyaline spot beside vein r-m; pterostigma yellow with apical 0.2 brownish.

*Head.* Antennae (broken) with at least 32 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.4:1.0. Face: central area of face punctated, elongate triangular and dorsally continuing as a carina up to area between antennal sockets, lateral rugose furrows from tentorial area up to base of antennal sockets. Height of eye:width of face:width of head = 1.0:0.4:1.4. Length of face 1.3 times width of face. Eyes strongly emarginate. Frons concave, mid-longitudinal groove bifurcated anteriorly surrounding the raised area between antennal sockets. Horizontal width of eye:horizontal width of head behind eye = 3.6:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.3:1.6.

*Mesosoma.* 2.1 times longer than high. Propodeum smooth medioposteriorly.

*Forewing.* Vein 1-SR+M curved. Lengths of veins SR1:3-SR:r = 4.8:2.5:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.4:2.3:3.5:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:2.2:1.0. Vein cu-a antefurcal, reclivous. Vein CU1b weakly swollen medially but narrowing before junction with 3-CU1. First subdiscal cell with a distinct enlarged sclerome distally; with extensive glabrous area large and hyaline distally, anteriorly extending up to the base of vein cu-a and the glabrous line surrounding a setose area darker than the area below the glabrous line.

*Hind wing.* Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with two especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.6 times

longer than sub-posteriorly wide, with dorsal and dorsolateral carinae; raised median area carinated. Second metasomal tergite 0.6 times longer medially than wide, rugose-striate; mid-basal triangular area as long as basally wide, smooth; area lateral to mid-basal triangular area with shallow carinated furrows. Third tergite smooth medially, finely striate laterally, second metasomal suture weakly crenulated laterally delimiting smooth anterolateral areas. Ovipositor basally cylindrical, widened and flattened at distal 0.25 apex.

*Male.* Unknown.

*Etymology.* Named because of the ovipositor being flattened.

*Type material examined.* Holotype ♀. KENYA: 'Diani Beach, viii.1951, N.L.H. Krauss, B.M. 1951-541' (BMNH).

### *Curriea polaszeki* Falco sp. n., Figs 20, 29

#### Diagnosis

This species may be distinguished from all other African species by the following combination of characters: ovipositor flattened dorsoventrally and progressively narrowing from middle towards apex; forewing vein cu-a interstitial; forewing vein CU1b swollen medially and narrowing at junction with vein 3-CU1; hind wing vein 2-SC+R longitudinal; midbasal triangular area of second metasomal tergite equilateral and extended posteriorly to form a carina; mesoscutum and scutellum with yellow marks.

#### Description

*Female.* Length of body 8.0–9.0 mm, forewing 8.4–9.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 2.0–2.4 mm.

*Colour.* Brownish-yellow; tips of mandibles, antennae, stemmaticum and ovipositor sheaths black; last tarsomere and claws of legs brownish; posterior area of central lobe of mesoscutum, scutellum and anterodorsal corner of mesopleuron yellow; wings yellow with fuscous areas below the parastigma, along the vein 1-M and distally from the apex of pterostigma; veins yellow except 0.25 distal of C+SC+R, 1-M, 2-CU1, and 2-1A; pterostigma yellow with distal 0.2 brown.

*Head.* Antennae (broken). Height of clypeus: inter-tentorial distance:tentorio-ocular distance = 1.0:2.5–2.6:1.0. Face: rugose, with triangular central area punctated, the central area continues as a

carina up to area between the antennal sockets, clypeus punctated surrounded by a somewhat crenulated furrow. Height of eye:width of face:width of head = 1.0:0.4-0.5:1.4-1.5. Length of face 1.1-1.2 times width of face. Eyes strongly emarginate. Frons concave, mid-longitudinal groove anteriorly bifurcated reaching a punctated raised area between antennal sockets. Horizontal width of eye:horizontal width of head behind eye = 4.3-5.2:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.2-1.4:1.2-1.4.

*Mesosoma.* 1.8 times longer than high. Pro-podeum smooth medioposteriorly.

*Forewing.* Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.8-5.0:2.6-2.9:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.1-1.5:2.1-2.4:2.8-3.4:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.4-1.6:1.0. Vein cu-a interstitial, vertical. Vein CU1b weakly swollen medially but narrowing before junction with 3-CU1. First subdiscal cell with short sclerome at apex of glabrous line; with hyaline glabrous area large, distally and anteriorly surrounding a central setose fuscous area and proximally reaching the base of vein cu-a and the glabrous line.

*Hind wing.* Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.2-1.3 times longer than sub-posteriorly wide, with dorsal and dorsolateral carinae; raised median area rugulose-carinated. Second metasomal tergite 0.6-0.7 times longer medially than wide, striate, mid-posteriorly smooth, lateral striate areas delimited by strong carina; mid-basal triangular area 1.2 times longer than basally wide, posteriorly closed and extended in a strong carina, smooth; area lateral to mid-basal triangular area with a deep furrow anteriorly crenulated and beside the mid-longitudinal posterior carina smooth. Third tergite smooth with anterolateral areas striate. Ovipositor cylindrical basally, flattened dorso-ventrally and progressively narrowing from middle to apex.

*Male.* Similar to female, the most significant differences are: length of body 7.0 mm, of forewing 6.4 mm; antennae with 46 flagellomeres; horizontal width of eye:horizontal width of head

behind eye = 6.3:1.0; post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.5:1.0; lengths of veins SR1:3-SR:r = 4.4:2.3:1.0; lengths of veins 2-SR:3-SR:2-M:r-m = 1.4:3.1:3.5:1.0; vein cu-a marginally antefurcal; mid-basal triangular area of second metasomal tergite with weak rugulose sculpture; metasoma rugose-striate, sixth tergite smooth.

*Etymology.* Named in recognition of the contribution to Afrotropical parasitoid wasp taxonomy made by Dr A. Polaszek (BMNH).

*Type material examined.* Holotype ♀. SOUTH AFRICA: 'Natal, Weenen (28.50S 30.06E), ii.1925, H.P. Thomasset' (BMNH). Paratypes: KENYA: 1♀, 2♂, Tsavo East NP, nr. Voi Gate, vi.1977, D. Quicke (BMNH).

***Curriea rectivena* Falco sp. n., Figs 4, 6, 16**

#### *Diagnosis*

This species may be distinguished from all other African species by the forewing vein 1-SR+M distinctly straight and the hind wing marginal cell not narrowed medially.

#### *Description*

*Male.* Length of body 6.3 mm, forewing 5.1 mm.

*Colour.* Rufous, sternites of metasoma yellowish, tip of mandibles and antennae black, claws brown; forewing membrane fuscous with hyaline band from base of pterostigma to distal area of vein 2-SR+M, veins brown, pterostigma bicolorous basally yellow and blackish from the vein r; hind wing fuscous.

*Head.* Antennae (broken) with at least 28 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:1.6:1.5. Face: clypeus (smooth) finely punctated, face uniformly rugose with two conspicuous depressions at the tentorial area, and with two lateral furrows transversally crenulated, space between face and mandibles distinctly transverse. Height of eye:width of face:width of head = 1.0:0.9:1.7. Length of face 1.0 times width of face. Eyes weakly emarginate. Frons notably concave, strongly impressed with a median longitudinal raised carina, and lateral acute carinae higher than eyes. Horizontal width of eye:horizontal width of head behind eye = 1.5:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye =



1.0:1.5:2.4.

*Mesosoma*. 1.5 times longer than high. Propodeum smooth medioposteriorly.

*Forewing*: Vein 1-SR+M distinctly straight. Lengths of veins SR1:3-SR:r = 7.1:4.1:1.0. Lengths of veins 2-SR:3-SR:2-M: r-m = 1.3:2.9:4.1:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 2.9:2.9:1.0. Vein cu-a more or less interstitial; moderately reclivous. Vein CU1b swollen but narrowing before junction with 3-CU1. First subdiscal cell without distinct sclerome; with glabrous area only distally on the cell.

*Hind wing*. Hind wing vein 1-SC+R uniformly curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell not narrowed medially and widening. Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma*. First metasomal tergite as long as sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae; raised median area rugose, lateral furrows with carination that continue on the lateral areas. Second metasomal tergite 0.4 times longer medially than wide; mid-basal triangular area 0.7 times longer than basally wide, largely or entirely smooth at most with irregular strigulations distally; area lateral to mid-basal triangular area rugose with two anterolateral smooth areas. Third tergite striate-rugose; third to fifth tergites posteriorly smooth rimmed, sixth tergite medially smooth and laterally punctated.

*Female*. Unknown.

*Etymology*. Named because of straight forewing vein 1-SR+M.

*Type material examined*. Holotype ♂. KENYA: 'Tsavo East NP, nr. Voi Gate, vi.1977, D. Quicke' (BMNH).

### *Curriea sigwalti* Falco sp. n.

#### *Diagnosis*

This species may be distinguished from all other African species by the following combinations of characters: three black areas on mesoscutum; propleuron and mesosternum black; forewing vein cu-a distinctly antefurcal, vein 1-CU1 0.6 times vein 2-CU1.

#### *Description*

*Female*. Length of body 7.0–9.0 mm, forewing 6.3–8.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 2.1–2.4 mm.

*Colour*. Brownish; pedicellus, flagellum and tarsal claws brown; tips of mandibles, scapus, stemmaticum, area behind head, anterior part of central lobe and lateral lobes of mesoscutum, propleuron and antero-dorsal corner of mesopleuron black; head, proscutum and posterior part of central lobe of mesoscutum vivid yellow; first and laterobasal second metasomal tergites dark-brown; wing membrane, veins and pterostigma brownish.

*Head*. Antennae (broken) with at least 40 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:4.0:1.6. Face: punctate-rugose, clypeus punctated, dorsally surrounded by a crenulated furrow. Height of eye:width of face:width of head = 1.0:0.6:1.5. Length of face 1.1 times width of face. Eyes moderately emarginate. Frons weakly concave, with a mid-longitudinal furrow laterally carinated. Horizontal width of eye:horizontal width of head behind eye = 2.3–3.1:1.0. Post-ocellar length: transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.0:1.7–1.8.

*Mesosoma*. 1.8–2.0 times longer than high. Propodeum smooth.

*Forewing*. Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 5.0–5.1:2.8–3.0:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.2–1.5:2.5–3.0:3.4–4.3:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:2.1:1.2–1.3. Vein cu-a strongly antefurcal; moderately reclivous. Vein CU1b moderately swollen at junction with 3-CU1. First subdiscal cell with distal part of glabrous line coloured but without a distinct sclerome; with glabrous area extended only to a band parallel to veins CU1b, 3-CU1 and part of 2-CU1.

*Hind wing*. Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell weakly narrowed medially and parallel-sided distally. Apex of vein C+SC+R with 2–3 especially thickened setae (catch bristles).

*Metasoma*. First metasomal tergite 1.2–1.3 times longer than sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae; raised median area smooth. Second metasomal tergite 0.6 times longer medially than wide, smooth, and two smooth lateral grooves; mid-basal triangular area 1.1–1.3 times longer than basally wide, smooth; lateral furrows of mid-basal triangular area and second metasomal suture crenulated. Third tergite smooth, with distinct smooth lateral

areas. Ovipositor flattened dorsoventrally medially, progressively narrowing at distal part.

*Male.* Unknown.

*Etymology.* Named in honour of the late Bernard Sigwalt of the MNHN.

*Type material examined.* Holotype ♀. MADAGASCAR: Perinet, (MNHN). Paratype: MADAGASCAR: 1♀, Sandrangato (MNHN).

***Curriea spathicauda* Brandt sp. n., Fig. 34**

***Diagnosis***

This species may be distinguished from all other African species by the ovipositor dorsal valve having a distinctly spatulate and expanded tip.

***Description***

*Female.* Length of body 8.5 mm, forewing 9.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 2.7 mm.

*Colour.* Yellow; hind tarsus, anellus, claws, flagellum and ovipositor sheaths brown. Tips of mandibles, scapus and pedicellus black. Forewing membrane fuscous, with area beneath parastigma in cell 2a and around 2-1A dark-brown, forewing veins brown. Pterostigma yellow, brown distally. Mesoscutum with yellow markings.

*Head.* Antennae (broken) with at least 23 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:1.3:0.4. Face: clypeus smooth, face rugose, intertentorial triangular area raised and punctated: central ridge between antennal sockets. Height of eye:width of face:width of head = 2.0:1.0:3.0. Length of face (from dorsal margin of clypeus to anterior edge of antennal socket) 1.4 times width of face. Eyes strongly emarginate. Frons distinctly concave and smooth with central longitudinal carina. Horizontal width of eye (measured perpendicular to face):horizontal width of head behind eye = 3.0:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.1:1.0:1.3.

*Mesosoma.* 1.7 times longer than high. Propodeum smooth.

*Forewing.* Vein 1-SR+M straight, with slight angle. Lengths of veins SR1:3-SR:r = 6.0:2.0:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.3:2.0:3.0:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0:1.7:1.0. Vein cu-a moderately ante-furcal, moderately reclivous. Vein CU1b swollen slightly medially but narrowing before junction

with 3-CU1. First subdiscal cell with distinct sclerome extending from basal to medial part of cell along anterior margin of flexion line; sclerome surrounded by glabrous area.

*Hind wing.* Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R longitudinal. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with 6 especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.3 times longer than sub-posteriorly wide, without dorsal and dorsolateral carinae; raised median area smooth. Second metasomal tergite 0.7 times longer medially than wide and smooth; mid-basal triangular area 1.6 times longer than basally wide, smooth; area lateral to mid-basal triangular area smooth. Third tergite smooth. Ovipositor flattened dorsoventrally and parallel-sided, with the dorsal valve tip curved upwards and spatulate.

*Male.* Unknown.

*Etymology.* Named because of the distinctly spatulated upturned tip of the ovipositor.

*Type material examined.* Holotype ♀. DEMOCRATIC REPUBLIC OF CONGO: Bumba (05.10S 18.41E), xii-1939-i-1940, H. de Saeger (MRAC).

***Curriea transvena* Falco sp. n., Fig. 31**

***Diagnosis***

This species may be distinguished from all other African species by the following combination of characters: ovipositor flattened dorsoventrally; forewing vein cu-a ante-furcal; vein CU1b swollen at junction with vein 3-CU1; hind wing vein 2-SC+R distinctly transverse.

***Description***

*Female.* Length of body 8.6–9.5 mm, forewing 9.0–9.5 mm, ovipositor (part exerted beyond apex of metasomal tergites) 2.0–2.9 mm.

*Colour.* Testaceous; tip of mandibles and ovipositor sheaths black; head yellow; flagellomeres brown, scapus and pedicellus yellowish with brownish lateral mark; legs testaceous or last tarsomere of fore and middle tarsi and entire hind tarsus brownish but with dorsal yellowish band; wing membrane yellow, with fuscous transverse bands cross from parastigma and from pterostigma to apex of wing and apical margin clearer; veins yellow except brownish veins 1-SR, 1-M, 2-CU, 2-1A and distal veins, vein 2-SR+M hyaline; pterostigma yellow, fuscous at apex.

*Head.* Antennae with 63 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.1–2.3:0.9–1.0. Face: clypeus punctated, surrounded laterally by a crenulated furrow; face with a central punctated area over the clypeus that gradually narrowing up to area between antennal sockets, two lateral transversely crenulated furrows from the tentorial area up to base of antennal sockets. Height of eye:width of face:width of head = 1.0:0.6:1.5–1.6. Length of face 0.8–0.9 times width of face. Eyes moderately emarginate. Frons concave, mid-longitudinal groove with wide base near anterior ocellus, medially narrowing and anteriorly bifurcated reaching the raised punctated area between antennal sockets. Horizontal width of eye:horizontal width of head behind eye = 2.9–3.3:1.0. Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.0:1.4–1.6.

*Mesosoma.* 1.6 times longer than high. Propodeum with some striations medioposteriorly.

*Forewing.* Vein 1-SR+M strongly curved. Lengths of veins SR1:3-SR:r = 4.0–4.7:2.0–2.6:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.6:2.2–2.6:3.5–4.0:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 1.0–1.2:1.7–1.8:1.0. Vein cu-a antefurcal, vertical. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell with glabrous line without a distinct sclerome, membrane of cell under glabrous line brownish; with glabrous area large and hyaline distally, anteriorly the glabrous membrane is fuscous, extending up to proximal area but not reaching vein cu-a or glabrous line, central area of cell fuscous and setose.

*Hind wing.* Hind wing vein 1-SC+R curved near intersection with vein 1r-m. Vein 2-SC+R distinctly transverse. Marginal cell weakly narrowed medially and parallel-sided distally. Apex of vein C+SC+R with four especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 1.1–1.4 times longer than sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae; raised median area carinated. Second metasomal tergite 0.6–0.7 times longer medially than wide, smooth, only rugulose close to furrows of the midbasal triangular area, lateral grooves delimiting lateral rugulose areas; mid-basal triangular area 1.3–1.4 times longer than basally wide, smooth; area lateral to mid-basal triangular area from weakly to strongly crenulated. Third tergite smooth, second

metasomal suture delimiting lateral smooth areas. Ovipositor basally higher than wide and from middle flattened and pointed gradually towards apex.

*Male.* Unknown.

*Etymology.* Named because hind wing vein 2-SC+R is distinctly transverse.

*Type material examined.* Holotype ♀. DEMOCRATIC REPUBLIC OF CONGO: 1♀, Prov. de Naniema, Kindu (03.00S 25.56E), 1917, L. Burgeon (MNHN). Paratypes: UGANDA: 1♀, Entebbe (00.04N 32.27E, 11.x.1913, No. 3670, C.C. Gowoley (BMNH)). UGANDA PROT: 1♀, Buamba Forest, Semliki Valley, 2300–2800 ft, 3–7.xi.1911, S.A. Neave, 1912–193 (BMNH). DEMOCRATIC REPUBLIC OF CONGO: 1♀, Lulua: Kapanga (05.08S 17.03E), iii.1933, F.G. Overlaet (MRAC); 1♀, Bena Bendi, v.1915, R. Mayné (MRAC). CÔTE D'IVOIRE: 1♀, Bingerville (05.20N 03.53W), iii.1962, J. Decelle (MRAC); 1♀, Bingerville, 1/15.iv.1964, J. Decelle (MRAC); 1♀, Bingerville, i.1964, J. Decelle (MRAC).

### *Curriea (Endovipio) tsavoensis* Falco sp. n.

#### *Diagnosis*

This species may be distinguished from all other African species by the anal cell of the forewing with the area around vein 1-1A being piceous-coloured; hind wing vein 2-SC+R interstitial to transverse; mid-basal triangular area of second metasomal tergite sculptured; mesoscutum yellow with black marks; ovipositor cylindrical.

#### *Description*

*Female.* Length of body 7.0 mm, forewing 6.0–7.0 mm, ovipositor (part exerted beyond apex of metasomal tergites) 1.4 mm.

*Colour.* Yellowish-brown; tips of mandibles, antennae, stemmaticum, lateral lobes and anterior area of central lobe of mesoscutum, mesosternum, marks on tegulae, tarsal claws and ovipositor black; head, pronotum, central lobe of mesoscutum and notauli, mesopleuron, scutellum, lateral of propodeum yellow (in one specimen propodeum piceous); wings infuscate, with a hyaline band from base of pterostigma to vein 2-SR+M, veins brownish, pterostigma vivid yellow with distal 0.2 brownish.

*Head.* Antennae with 48 flagellomeres. Height of clypeus:inter-tentorial distance:tentorio-ocular distance = 1.0:2.5:1.4–1.5. Face punctate-rugose,

central punctated area elongate-lanceolate extended by a carina up to area between the antennal sockets, clypeus punctated surrounded by a crenulated furrow. Height of eye:width of face:width of head = 1.0:0.6–0.7:1.6–1.8. Length of face 0.8 times width of face. Eyes moderately emarginate. Frons moderately concave, with a mid-longitudinal groove bifurcated anteriorly surrounding the triangular raised area between antennal sockets. Horizontal width of eye:horizontal width of head behind eye = 3.5:1.0 (1 specimen 4.9:1.0). Post-ocellar length:transverse diameter of posterior ocellus:shortest distance between posterior ocellus and eye = 1.0:1.4–1.7:2.2–2.5.

*Mesosoma.* 1.6 times longer than high. Propodeum with striations posteriorly.

*Forewing.* Vein 1-SR+M moderately curved. Lengths of veins SR1:3-SR:r = 4.8–5.0:2.2:1.0. Lengths of veins 2-SR:3-SR:2-M:r-m = 1.5–1.7:2.5–2.6:3.7–4.0:1.0. Lengths of veins 1-M:1-SR+M:m-cu = 0.8–0.9:1.8:1.0. Vein cu-a moderately antefurcal, moderately reclivous. Vein CU1b swollen at junction with 3-CU1. First subdiscal cell without a distinct sclerome; with glabrous area large distally, anteriorly surrounding a central setose area and extending up to the base of glabrous line, cell membrane fuscous with area below the glabrous line darker.

*Hind wing.* Hind wing vein 1-SC+R straight near intersection with vein 1r-m. Vein 2-SC+R more or less interstitial. Marginal cell strongly narrowed medially. Apex of vein C+SC+R with 2–3 especially thickened setae (catch bristles).

*Metasoma.* First metasomal tergite 0.9 times longer than sub-posteriorly wide, without dorsal carinae and with dorsolateral carinae; raised median area carinated, with dorsolateral carination. Second metasomal tergite 0.5–0.6 times longer medially than wide, rugulose, with lateral grooves crenulated transversally, second metasomal suture crenulated; mid-basal triangular area 0.8–0.9 times longer than basally wide, with striate sculpture; area lateral to mid-basal triangular area deep and crenulated. Third, fourth and fifth tergites longitudinally striate-rugulose, fifth tergite with the posterior margin concave. Ovipositor cylindrical, 0.4 times length of metasoma.

*Male.* Unknown.

*Etymology.* Named after the type locality.

*Type material examined.* Holotype ♀. KENYA: 'Tsavo East N.P., Kander, Swamp, viii.1977, D. Quicke' (BMNH).

## MATERIAL EXAMINED OF PREVIOUSLY DESCRIBED SPECIES

### *Curriea fasciatipennis* Ashmead, Fig. 21

*Curriea fasciatipennis* Ashmead, 1900: 137.

*Aphrastobracon fasciatipennis* (Ashmead): Watanabe 1950: 299.

*Type material examined.* Holotype ♀. LIBERIA: 'Mt. Coffee, iv.1897, R.P. Currie collector, Type No. 7320' (USNM).

*Additional material examined.* CÔTE D'IVOIRE: 1♀, Adiopodoume, B.-, 20.xi.50, Ledoux, 75 (IRSNB); 1♀, Adiopodoume, 24.i.1957, P. Dessart (MRAC); 1♀, Bingerville (05.20N 03.53W), iii.1962, J. Decelle (MRAC); 1♀, Divo (05.48N 05.15W), 28.xi.1963, J. Decelle (MRAC).

*Distribution.* Liberia, Cameroon, Côte d'Ivoire, Senegal, Togo, Morocco, Egypt.

### *Curriea fenestrata* Szépligeti, Fig. 10

*Curriea fenestrata* Szépligeti, 1914b: 158.

*Aphrastobracon fenestrata* (Szépligeti): Watanabe 1950: 301.

*Type material examined.* Holotype ♀. TOGO: 'Bismarckburg (08.11N 00.39E), 20–27.iii.93, L. Conradt S.' (ZMB).

*Additional material examined.* CÔTE D'IVOIRE: 1♀, Man (07.31N 07.37W), xii.1938, L. Chopard, 1938–39 (MNHN).

*Distribution.* Côte d'Ivoire, Togo.

### *Curriea flavomaculata* Cameron, Fig. 7

*Megalomnum flavomaculatum* Cameron, 1904: 157.

*Curriea flavomaculata* (Cameron): Szépligeti 1908: 28.

*Aphrastobracon flavomaculatus* (Cameron): Watanabe 1950: 300.

*Type material examined.* Holotype ♀. SOUTH AFRICA: 'Dunbrody (33.28S 25.33E), Oneil, Cam. Coll. 1905–192' (BMNH).

*Additional material examined.* SOUTH AFRICA: 1♂, East London (33.00S 27.54E), v.1923, Beating, H.K. Munro, (BMNH); 1♂, Cape Province, Ceres (33.23S 19.19E), iv.1923, R.E. Turner, Brit. Mus, 1925–210 (BMNH).

*Distribution.* South Africa, Tanzania, Botswana, Madagascar.

*Comments.* The specimens recorded from Madagascar may belong to *C. fuscus* sp. n.

### *Curriea grata* Enderlein, Fig. 32

*Antiolcia grata* Enderlein, 1920: 117.

*Curriea grata* (Enderlein): Quicke & Achterberg 1990:255.

*Type material examined.* Type ♀. TANZANIA: D.O.Afrika, Nyembe-Bulungwa, Hammerstein S, 1914, *Antioleus gratus* Type Enderl., Dr. Enderlein det.1919, Mus. Zool. Polonicum, Warszawa, 12/45, *Curriea* (*Antioleus*) *grata* (Enderlein), C. van Achterberg, HOLOTYPE. (PAN).

*Additional material examined.* GHANA: 1♀, 'Western Region, Anrasa For. Res., 8.iv.1969, O.W. Richards, B.M. 1969-210 (BMNH).

*Distribution.* Ghana, Tanzania.

***Curriea gratosus* Enderlein, Fig. 3**

*Aphrastobracon gratosus* Enderlein, 1920: 53.

*Curriea gratosus* (Enderlein): Quicke & Achterberg 1990: 255.

*Type material examined.* Type ♀. EQUATORIAL GUINEA: Conradt, *Aphrastobracon gratosus*, Type Enderl., Dr. Enderlein det.1919, Mus. Zool. Polonicum, Warszawa, 12/45, *Aphrastobracon gratosus* Enderlein, C. van Achterberg, 1990, HOLOTYPE. (PAN).

*Additional material examined.* CÔTE D'IVOIRE: 1 ♀, Bingerville (05.20N 03.53W), i.1962, J. Decelle (MRAC); 1♀, as above but xi.1961; 2♀, as above but 15–31.iii.1962 (MRAC); 1♀, as above but xii.1962 (MRAC); 2♀, as above but 16–29.ii.1964 (MRAC); 1♀, as above but 1–15.iv.1964 (MRAC); 1♀, Amanikro, 50 km N.W. Abengourou, ix.1961, J. Decelle (MRAC). ANGOLA: 1♀, 1♂, (A26), Salazar, I.I.A.A., 9–15.iii.1972, Southern African Exp., B.M. 1972-1 (BMNH).

*Distribution.* Equatorial Guinea, Côte D'Ivoire, Angola.

*Comments.* The degree to which the first subdiscal cell is glabrous varies between specimens. In some there is just a small glabrous arched area not reaching to the distal point, and in others the entire distal side is glabrous.

***Curriea guttifer* Enderlein, Fig. 24**

*Aphrastobracon guttifer* Enderlein, 1920: 53.

*Curriea guttifer* (Enderlein): Quicke & Achterberg 1990: 255.

*Type material examined.* Type ♂. CAMEROON: Kamerun Barombi Conradt, *Aphrastobracon guttifer*, Type Enderl., Dr. Enderlein det.1919, Mus. Zool. (PAN). Polonicum, Warszawa, 12/45, *Aphrastobracon guttifer* Enderlein, C. van Achterberg, 1990, HOLOTYPE.

*Additional material examined.* CÔTE D'IVOIRE:

1♀. Bingerville (05.20N 03.53W), ii-1962, J. Decelle (MRAC). 1♀: GUINEA: Nimba, Yalanzou, ii.vi.42, M. Lamotte (MNHN).

*Distribution.* Côte D'Ivoire, Guinea, Cameroon.

*Comments.* The male type has been included in the identification key as the females examined key out to *C. guttifer* and are morphologically extremely close, we have therefore assumed that they are conspecific.

***Curriea inareata* Granger, Fig. 17**

*Curriea inareata* Granger, 1949: 25.

*Aphrastobracon inareata* (Granger): Shenefelt 1978: 1428.

*Type material examined.* Holotype ♀. MADAGASCAR: 'Ranomafana, x.38, A. Seyrig, 41' (MNHN).

*Distribution.* Madagascar.

***Curriea pulchripennis* Szépligeti, Figs 12, 27**

*Curriea pulchripennis* Szépligeti, 1908: 28.

*Aphrastobracon pulchripennis* (Szépligeti): Watanabe 1950: 300.

*Type material examined.* (Note.- Holotype ♀ from 'Kilimandjaro: Kibonoto' is lost; Szépligeti (1914b) recorded 1♀ from 'Kibwezi (02.27S 37.57E), 2.x.06').

*Additional material examined.* KENYA: 1 ♀, Kibwezi (02.27S 37.57E), 2.x.06, G. Scheffler J.V. (ZMB); 1♀, Kibwezi, 30.viii.06, G. Scheffler J.V. (ZMB). KENYA: 1♀, Mt. Nyiru, Forest Camp Tum (02.09N 36.50E), dense woodland, 2100 m, 29.iv–1.v.1983, R. de Jong & C. Lepelaar, Expeditie Kenya 1983 (RMNH).

*Distribution.* Tanzania, Kenya.

***Curriea seyrigi* Granger, Figs 9, 15, 30**

*Curriea seyrigi* Granger, 1949: 26.

*Aphrastobracon seyrigi* (Granger): Shenefelt 1978: 1429.

*Type material examined.* Holotype ♀. MADAGASCAR: 'Bekily (24.12S 45.20E), Reg. sud de l'île, x.36, A. Seyrig' (MNHN). Paratypes: 4 ♀, 2 ♂, same data as holotype except xi.36, xii.36, xi.38 (MNHN).

*Additional material examined.* MADAGASCAR: 1♀, Bekily, Reg. sud de l'île, v.34 (MNHN).

*Distribution.* Madagascar.

***Curriea striata* Cameron**

*Curriea striata* Cameron, 1909: 24.

*Aphrastobracon striata* (Cameron): Watanabe 1950: 300.

*Type material examined.* Holotype ♀. MOZAMBIQUE: 'Delagoa Bai' (25.58S 32.35E) (ZMB).

*Additional material examined.* ETHIOPIA: 1♀, Harrar, Abyssinia, R. E. Turner, 1912-21 (BMNH). MOZAMBIQUE: 1♀, 83 27, Del B (25.58S 32.35E) (BMNH).

*Distribution.* Mozambique, South Africa, Ethiopia.

***Curria testacea* Cameron**

*Curria testacea* Cameron, 1909: 25.

*Aphrastobracon testaceus* (Cameron): Watanabe 1950: 300.

*Type material examined.* Holotype ♂. MOZAMBIQUE: 'Delagoa Bai' (25.58S 32.35E) (ZMB).

*Distribution.* Mozambique.

*Comments.* The specimen is damaged and the metasoma is missing. This species may be distinguished by the following combination of characters: body rufotestaceous, scapus and pedicellus black; fore and middle legs paler, more yellowish; coxa, femur, tibia and tarsus of hind leg dark fuscous. Other characters are: forewing vein cu-a antefurcal (almost interstitial), vein CU1b swollen at junction with 3-CU1, vein M+CU straight with vein 2-CU1, vein C+SC+R black, membrane of first subdiscal cell fumous; hind wing vein 2-SC+R short but not transverse.

***Curria testaceipes* Szépligeti, Fig. 23**

*Curria testaceipes* Szépligeti, 1914a: 109.

*Aphrastobracon testaceipes* (Szépligeti): Watanabe 1950: 301.

*Additional material examined.* EQUATORIAL GUINEA: 1♀, 1901, L. Conradt (MNHN).

*Distribution.* Democratic Republic of Congo, Cameroon, Equatorial Guinea.

***Curria xanthocephs* Fahringer, Figs 14, 19, 36**

*Curria xanthocephs* Fahringer, 1928: 164.

*Aphrastobracon xanthocephs* (Fahringer): Watanabe 1950: 302.

*Type material examined.* Holotype ♂. GHANA: 'Addah, Goldkst, ii.1882' (NMW).

*Additional material examined.* CÔTE D'IVOIRE: 1♂, Bouake, Foro-Toro, P.L., 20-21.viii.79, R.C.I., J.M. Maldes (MNHN). KENYA: 2♂, Tsavo East, vi.1977, D. Quicke (BMNH). UGANDA: 1♂, Madi, v.1927, G.D.H. Carpenter (BMNH). YEMEN: 1♀, Taizz (13.35N 44.02E), i.1951, K.L. Knight, 51-7950 (BMNH).

*Distribution.* Ghana, Côte D'Ivoire, Kenya, Uganda, Yemen.

*Comments.* Males from East Africa (Kenya and Uganda) have a more transverse second meta-

somal tergite which is less than 0.6-0.7 longer than maximally wide, and the midbasal triangular area of second tergite is equilateral or obtuse.

Female is characterized by: length of body 7.0 mm, of forewing 7.0 mm, and of ovipositor 2.2 mm; pterostigma yellow and 0.2 distal blackish; forewing vein cu-a strongly antefurcal and reclivous but vertical when cross the longitudinal glabrous line; first metasomal tergite rugose-striate; second metasomal tergite 0.6 times longer medially than wide, rugose-striate with two lateral areas well delimited by a longitudinal carina; mid-basal triangular area 1.1 times longer than basally wide, equilateral, with rugose sculpture, and medioposteriorly produced into a short carina; area lateral to mid-basal triangular area striate; second metasomal suture weakly crenulated; third metasomal tergite smooth; and ovipositor cylindrical, with ventral serration at apex.

***Curria (Endovipio) ceresensis* Turner**

*Endovipio ceresensis* Turner, 1922: 273.

*Curria (Endovipio) ceresensis* (Turner): Falco & Quicke 1997: 549.

*Additional material examined.* SOUTH AFRICA: 1♀, NAMIBIA, Aus 26.40S 16.15E), i.1930, R.E. Turner, Brit. Mus. 1930-117 (BMNH).

*Distribution.* South Africa, Namibia.

***Curria (Endovipio) jacobsoni* Tobias**

*Aphrastobracon jacobsoni* Tobias, 1968: 304.

*Curria (Endovipio) jacobsoni* (Tobias): Falco & Quicke 1997: 549.

*Type material examined.* Holotype ♀. KAZAKHSTAN: 'S.W. Kazakhstan Oblast, 12.v.03' (ZISP).

*Additional material examined.* MOROCCO: 1♀, Maroc Saharien, Maader, Telmaout, 11.v.1968, 120x180, Thewys (MNHN). CAPE VERDE ISLANDS: 2♀, Jaracunda, at light, 25.xi.1984, R. Gsell & O. Muck (RMNH).

*Distribution.* Kazakhstan, Spain, Canary Isles, Croatia, France, Morocco, Senegal, Cape Verde Islands.

***Iphiaulax simplex* Brues, comb. n.**

*Curria simplex* Brues, 1926: 242.

*Aphrastobracon simplex* (Brues): Watanabe 1950: 301.

*Type material examined.* Holotype ♂. ZIMBABWE: 'Southern Rhodesia, Bulawayo (20.10S 28.43E), xiii, E.C. Chubb' (DMAG).

*Distribution.* Zimbabwe.

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