

## New genera and species of Libellulines from the Belgian Congo

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During the past twelve months I have been working on a collection of Odonata belonging to the Musée Royal du Congo Belge, Tervuren, amounting to about 20,000 specimens, the results of collections made over a period of a little over 20 years in the Belgian Congo, and representing probably the greatest collection of the Order ever amassed at one time. As the results of this study must necessarily take a long time to conclude, I have decided to publish these in a series of short papers, with a concluding one to summarise the whole. These primary papers will deal with species new to science or the descriptions of the opposite sex in cases where only one sex has been described. Whilst this work was in progress, I received great assistance from Mr ELLIOT PISHKY, entomologist attached to the Goryndon Museum, Nairobi, Kenya, by the gift or loan of much material; as the fauna of Kenya and Uganda is continuous and often common to the Belgian Congo bordering the two colonies, it will be convenient to describe some new species which are certain to be found eventually in the Congo. This first paper deals with species belonging to the family *Libellulidae* only.

All figures are original and their size purely hypothetical unless otherwise indicated. Figure 1 shows the male anal appendages of *Noto-gomphus* (SCHOUTEDEN) : in my paper « Gomphidae from the Belgian Congo » (1949, *Rev. Zool. Bot. Africaine*, 42, : 121) I unfortunately showed an incorrect figure of the appendages of this species and I now take the opportunity of correcting it. The curious closed-fist shape of the superior appendages is unique and is a useful character for identifying this species.

For the opportunity of examining and reporting on this unique collection, I am indebted to the authorities of the Musée Royal du Congo

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Belge and more particularly to Mr P. BASILEWSKY for his patience in replying to my queries and for the loan of types from their collection without which it would have been difficult to solve some of the problems which arose. I am also indebted to the authorities of the British Museum (Natural History) for continued facilities in checking up the determinations of obscure or rare species; Mr D. E. KIMMUS in particular having given me continuous advice and assistance.

All types, allotypes and cotypes will be found in the Musée Royal du Congo Belge, Tervuren.

### CONGOTHEMIS gen. nov. (Fig. 1. a).

Rather small Libellulines with reduced venation, coloured black with yellow markings. Head large in proportion to the body, eyes broadly contiguous; frons rounded, narrow, with a deep but narrow sulcus above; vesicle unusually prominent, projecting anteriorly to the level of border of frons and conspicuous in profile; posterior lobe of prothorax small, rounded; thorax small and narrow; legs rather long, slim, posterior femora with a row of widely-spaced long hair-like spines, tibial spines robust, numerous, claw-hooks basal, short. Wings moderately broad, apices rounded, reticulation rather open; discoidal field of forewings with only 2 rows of cells throughout its whole length; discoidal triangles and hypertrigones entire, subtrigones of forewings traversed once by a curved vein from proximal to distal sides; antenodals numbering about 9, the distal one usually complete but occasionally incomplete in both forewings; anal-loop produced to 2 cells beyond level of discoidal triangle, with split cells at base and outer angle; only 2 rows of cells in the anal field of hindwing; sectors of arculus with a long fusion in all wings, no supplementary cross-veins to the Bridge; only 1 *Cu<sub>1</sub>* to all wings; *Rspl* poorly developed, only 1 row of cells between it and *IRiii*; *Mspl* absent. Abdomen swollen at base, especially dorso-ventrally, then cylindrical to the end, but segment 3 somewhat constricted in its middle two quarters; segment 8 nearly double the length of 9 and the latter slightly more than three times the length of segment 10. Anal appendages of great length, slim and cylindrical, the apical end broadening and with a robust subapical spine beneath so that the apex appears to be broadly emarginate. Genitalia prominent, lamina massive and projecting; hamules with a long narrow curved spine projecting well beyond the lobe which is cordate and constricted at base (fig. 1. b).

This new genus is monotypic, with *Congothemis longistyla* FRASER as type species. It appears to have no near relations in Africa and its

venation most closely resembles that of the Papuan genus *Diplacina* BRAUER.

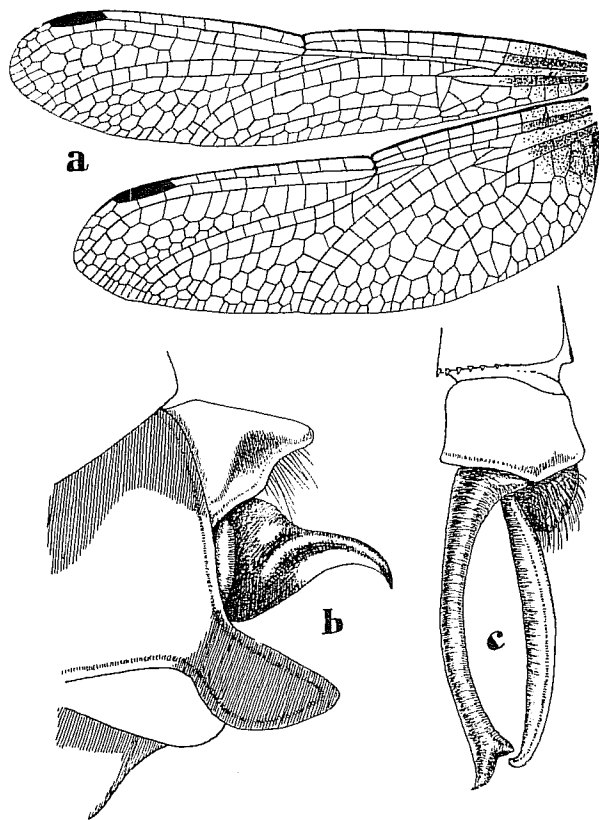


Fig. 1. — *Congothemis longistyla* gen. et sp. nov.  
a. Wings. b. Male genitalia. c. Male anal appendages.

*Male.* Abdomen with appendages 23 mm (Appendages 3.25 mm). Hindwing 23 mm. Pterostigma 4 mm.

***Congothemis longistyla* sp. nov.** (Fig. 1, a-c).

Head : labium bright chrome yellow, midlobe and borders of the lateral broadly black; labrum and postclypeus glossy steely black, anteclypeus dull reddish brown. Whole of frons anteriorly and superiorly pale creamy yellow, its base above steely black; vesicle blueblack metallic; occiput dark coppery brown, with two large spots of pale yellow behind. Prothorax black; synthorax steely black on dorsum, creamy yellow laterally; two very broad pale citron yellow antehumeral stripes on dorsum which are sharply angulated inwards at their upper ends; laterally a very broad steely black oblique stripe which overlaps the spiracle anteriorly and the posterolateral suture posteriorly; alar sinus and some spots on tergum pale yellow. Legs entirely black. Wings hyaline, only the extreme bases tinted with amber and with dark reddish brown rays in the subcostal and basal spaces extending as far out as the 1st antenodal and *Cu<sub>1</sub>* in the hindwings; pterostigm dark brown between thick black veins. 10 antenodals and 7 postnodals in forewings, 8 antenodals and postnodals in the hind. Abdomen black, segments 1 to 3 marked with pale creamy yellow as follows, - segment 1 with a rhomboidal spot on each side; segment 2 with its apical half yellow, this extending basally along the ventral borders but the lobe black; dorsally a fine black jugal sutural line traverses the yellow subapically; segment 3 with a moderately narrow basal annule slightly interrupted on the dorsum by the black dorsal carina. Anal appendages black.

*Female.* Abdomen 24 mm. Hindwing 25 mm.

Very similar to the male in colour and markings. The amber yellow area of the bases of wings more extensive, reaching the 2nd antenodal in the forewings and as far as the arculus and halfway from the *Cu<sub>1</sub>* to the discoidal triangle in the hind, whilst posteriorly it extends into some 6 or 8 cells of the anal field adjacent to the membrane, some of the cells being partly opaque reddish brown; membrane dark cinereous. Abdominal markings more extensive, the annule on segment 3 much broader and additional linear lateral yellowish white spots on the side of segments 4 to 8. Terebra obsolete, a glossy black plate with a minute tubercle along its posterior border; the lateral borders of segment 8 prolonged apically and giving a false appearance of a projecting ovipositor when viewed laterally. Anal appendages black, as long as segment 10.

Habitat : BELGIAN CONGO : Eala, XI and XI-34 and 4-35. J. GUESQUÈRE; Ubangi, Busu : Glandi, VIII-35, A. BAL. Type male, which along

with the allotype female, is in the Musée Royal du Congo Belge, from B. Lite, 30-X-35, A. BAL.

Genus **LOKIA** Rts.

*Apatelia* KARSCHE, 1893, *Berlin ent. Zeitschr.* 28 : 25. (nom. precoc.).

*Lokia* Rts, 1916, *Cat. Coll. Selys, Libellulinen* 9 : 1071 (nov. nom.).

Species type, *Apatelia incongruens* KARSCHE.

To the generic diagnosis should be added, - Segment 9, especially in the female, elongated, often as long as segment 8 (figure 2, f.). The genus is but little known and hitherto, only a few specimens of each known species have been taken, whilst the female of one species - *erythromelas* - was so far unknown. In the present collection, a comparatively large number of specimens of both sexes of three species, one of which is new to science, have been found. In addition, another new species has been sent to me by Mr E. PISTEV taken in the adjoining territory of Uganda and which will almost certainly, be found later to extend into the Belgian Congo.

**Lokia erythromelas** (Rts). (Fig. 2, c).

Description of the female and completion of that of the male. In the type, the head was crushed and so was indescribable; also the wing-figure shows a short space of 2 rows of cells in the discoidal field of the forewing; this is quite exceptional and the whole of the specimens before me show a continuous row of 3 cells to as far as the level of the nodus.

Head : labium dark reddish ochreous with apices of lateral lobes paler; labrum uniform blackish brown contrasting strongly with a pale yellow anteclypeus; postclypeus and frons dark reddish brown with a purplish tinge due to overlying pruinosity. Vesicle and occiput black. Thorax dark reddish brown but purplish due to a thin pruinosity, especially at the sides. Hind femora (missing in type) with a row of very short, very closely set spines and with 2 or 3 more robust and longer ones at the distal end. Abdomen: segments 1 and 2 black, 3 and the basal half of 4 blood-red (segments 4 to 10 missing in the type). The remaining segments black, including the anal appendages which are very long and nearly three times the length of segment 10, narrow and cylindrical but tapering in the apical half, slightly sinuous as seen in profile and with an obtusely pointed apex. Inferior appendage triangular, minutely emarginate at apex, about two-thirds the length of superiors.

*Female*. Abdomen 26 mm. Hindwing 33 mm. Rather similar in size and appearance to the male but the build is more robust and the colouring paler. Lips and face uniform dull ochreous, thorax yellowish brown, scarcely darker on the dorsum than on the sides, femora ochreous darkening to reddish brown and finally black at the apices. Wings hyaline but suffused with pale amber at the extreme bases, especially in the hindwing but not extending distally beyond the *Cuq*. Nodal index  $\frac{9-11 \frac{1}{2}}{9-9} \mid \frac{12 \frac{1}{2}-9}{9-9}$  (This compares with the male,  $\frac{8-12 \frac{1}{2}}{8-11} \mid \frac{12 \frac{1}{2}-8}{10-8}$ ).

Abdomen ochreous, dull reddish brown on dorsum, this deepening in shade towards the anal segments. The sides of segment 8 dilated widely into thin diaphanous pale yellow flaps; segment 9 very narrow and elongate. Anal appendages blackish brown, nearly 3 times as long as segment 10, lanceolate, cylindrical, narrow at base, broadest subapically.

A large number of both sexes from Eala, XI-XII-31 and 1-37, J. GHSQUÈRE; Gele (Terr. Giri), 31-35 and Bobey (Terr. Giri) IV-VI-35, A. BAL. One of the females has been designated as the allotype. The type male is in the Institut royal des Sciences naturelles, Bruxelles.

**Lokia circe** (Rts). (Fig. 2, b).

Described from a general pair in the Tervuren Museum, from Mayumbe. There are about 50 specimens belonging to both sexes and mostly adult, in the present collection. The type male has segments 5-10 missing.

*Male*. Abdomen 27-29 mm. Hindwing 32-35 mm.

In the adult stage the whole of the wings in both sexes are tinted with golden yellow but the basal golden yellow marking still very evident from having assumed a still deeper tint than the rest of the wing; the abdomen in the male becomes pruinose changing from reddish brown to a darker brown and then bright blue from pruinoscence (at least in the four basal segments but probably the whole in a well preserved specimen or in the living state). Beneath the abdomen a rich mahogany red with black apical rings as in *erythromelas*. In the most adult male examined, the thorax is a velvety black and the whole of the legs are dull black. The adult female resembles the young male and is of a dull ochreous over the greater part of the body. Venational details, - nodal index  $\frac{8-13 \frac{1}{2}}{10-10} \mid \frac{14 \frac{1}{2}-9}{10-11}$ ,  $\frac{10-14 \frac{1}{2}}{10-11} \mid \frac{14 \frac{1}{2}-10}{11-10}$  triangles -

$\frac{1 \mid 1}{0 \mid 1}$ ,  $\frac{1 \mid 1}{0 \mid 0}$ ,  $\frac{1 \mid 1}{1 \mid 1}$ ,  $\frac{1 \mid 1}{1 \mid 0}$ ; cells between RS and Rspl, male, 1 row but occasional double cells, female 2 rows in fore- and hindwings or 2 rows in forewings and some double cells or 1 row in the hindwings.

The majority of the specimens are from Eala, XI-31; 1-35; III-36 and 37, all collected by J. GUESQUÈRE; Bobey, IV-35, A. BAL; Bambesa, VII-34, collected by H. J. BRÉDO.

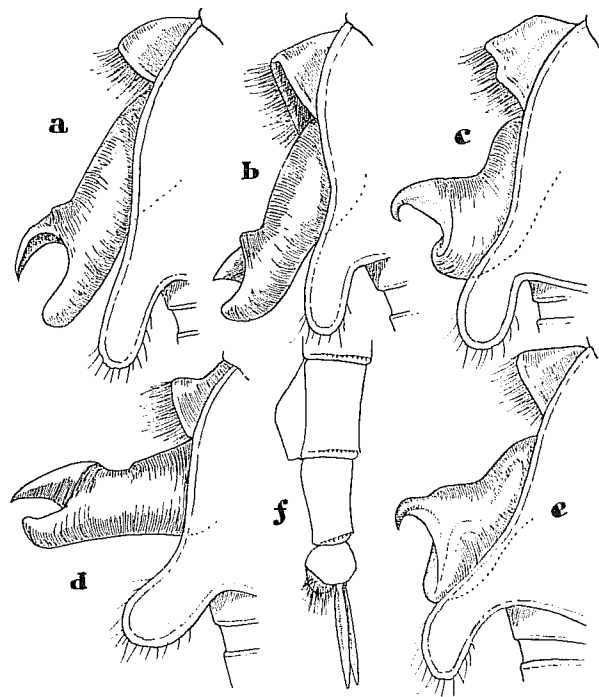


Fig. 2. — *Lokia* Ris. Male genitalia of a. *L. incongruus* (Karsch), b. *L. circe* (Ris), c. *L. erythromelas* (Ris), d. *L. coryndoni* n. sp., e. *L. berenice* n. sp., f. Terminal abdominal segments of female of same.

*Lokia berenice* nov. sp. (Fig. 2, e and f).

This new species resembles *circe* but with the golden amber colouring restricted to the base of the wings as in *incongruus*; by its geni-

talia however, it appears to be most closely related to *erythromelas* from which it differs by not having a red abdomen and by the broad basal golden yellow marking of all wings.

*Male*. Abdomen 24 mm. Hindwing 21 mm. Pterostigma 3.5 mm.

*Head*: labium pale uniform ochreous, labrum, face and frons darker olivaceous brown, the junction of epistome and frons a paler ochreous and the vesicle and occiput dark reddish brown. Prothorax and thorax dull olivaceous brown deepening on the dorsum to a somewhat darker reddish brown; paler on the sides and beneath. Legs dark reddish brown, bases and extensor surfaces of femora a paler ochreous. Hind-legs very long and spidery. Abdomen ochreous, deepening gradually to dark reddish brown from segment 3 to the end; foliations of segment 8 very pale yellow, almost translucent. Wings hyaline or slightly infuscated in old adults especially towards the apices; bases of all wings tinted with deep golden amber from base to halfway to nodus but only two-thirds of that distance in the hindwings; pterostigma dark ochreous with thick blackish brown anterior and posterior borders. All discoidal triangles in forewings traversed once; all entire in the hindwings (save in the wings of one female). Arculus lies between the 2nd and 3rd antennodals; discoidal field of forewing with 3 rows of cells but quite occasionally a short space of 2 rows; only 1 row of cells between Rs and Rsp1; nodal index, -  $\frac{8-11 \frac{1}{2}}{8-9} \mid \frac{12 \frac{1}{2}-7}{10-10} \cdot \frac{8-12 \frac{1}{2}}{9-9} \mid \frac{13 \frac{1}{2}-8}{10-9}$ .

*Female*. Abdomen 25 mm. Hindwing 32 mm. Closely similar to the male in colouring and venational details. The basal markings of the wings are generally more extensive than in the male, in which sex this may be restricted to the extreme base but on the contrary may spread along the costal border of both fore- and hindwings to as far as the pterostigma and as far posterior as the vein Rii. Anal appendages in both sexes very long, twice the length of segment 10 in the female, three times its length in the male, in which the appendages are cylindrical for the basal half then fusiformly enlarged and finally tapering rather abruptly to the acuminate apex. Inferior appendage about two thirds the length of superiors, narrowly triangular and minutely emarginate at apex. Hamules of male very massive and shaped very much like those of *erythromelas* (Figure 2, e).

*Habitat*: a single male from Eala, 1-35, J. GUESQUÈRE; females from Eala, III-35 and Bomboma, Gele (Terr. Giri), III-35, A. BAL. Type and allotype in the Congo Belge Museum, Tervuren.

*Lokia coryndoni* n. sp. (Fig. 2, d).

This new species has been taken in the adjacent colony of Uganda

so that it may well be distributed across the border to the Belgian Congo. By its genitalia, it appears to lie nearest to *erythromelas* but is easily separated from that species by its blue abdomen and by the presence of restricted amber markings at the bases of the wings (entirely absent in *erythromelas*).

*Male.* Abdomen 27 mm. Hindwing 31 mm. Pterostigma 3.5 mm.

Head; labium and labrum bright ochreous, clypeus olivaceous, frons dark olivaceous brown, vesicle and occiput blackish brown. Prothorax and thorax violaceous black (this produced by a thin layer of pruinescence over a black ground-colour), legs black but flexor surface of hind femora bright castaneous. Wings hyaline, apices lined very narrowly with fuscous in some, but clear in others, bases of all wings amber yellow, only to as far as the 1st antedonal in forewings but to the level of 2nd and halfway from the cubital cross-vein to the arculus in the hindwing and extending nearly to tornus posteriorly; all discoidal triangles of forewings traversed once, all those of hindwing entire; 3 rows of cells in the discoidal field of forewings (only in one wing was a short space of 2 rows found); only 1 row of cells between *R*<sub>5</sub> and *R*<sub>5+1</sub> in the males, but quite occasionally a double row in the wings

of females. Nodal index,  $\frac{9-13 \frac{1}{2}}{9-10} \left| \frac{12-7}{10-8} \right.$  very variable and the distal

antennodal occasionally complete. Abdomen with segments 1 and 2 black, 3 to 6 (and probably all in the living state) bright pruinosed blue on dorsum, bright mahogany red or castaneous beneath (as in *erythromelas*) with black apical rings to most segments. Anal appendages similar to those of *bernice*; genitalia very similar to that of *erythromelas* but the hook less produced and with broader base; the lobe more elongated and less angulated posteriorly (figure 2, d).

*Female.* Abdomen: 30 mm. Hindwing: 35 mm. Pterostigma: 3.5 mm.

General females are of an uniform ochreous colour, the articulations of the abdomen, carina and distal portions of the legs alone being blackish or blackish brown. The wings are marked basally with amber as in the males but in some, this colour extends along the costal margins of wings to beyond the nodus. Old adult females show a general darkening in colour but more marked on the abdomen which may even become pruinosed blue as in the male.

Habitat: Entebbe, Lake Victoria, V-52 and X-52, the latter date showing pruinosed adult examples, all collected by E. PRINCEY. The types will be deposited in the British Museum, paratypes in the Co-ryndon Museum, Nairobi, Uganda and Musée Royal du Congo Belge.

**Hadrothemis Vrijdaghi** SCHOUTEDEN.

This species was known only from a single male specimen captured at Coquilhatville by J. VRIJDAGH and now in the Musée du Congo Belge. In the present collections I have found no less than a dozen males and two females, mostly from Eala. The female differs from the male in the same respects as does the female of *camarensis* to which species *Vrijdaghi* is most closely related; the wings are broader and the apices markedly rounded. The description follows.

*Female.* Abdomen 35 mm. Hindwing 42 mm.

The wings, especially in old adults are more deeply tinted and approach a burnt-brown in colour especially towards the apices and posterior border of wings. The colouring of head and body are similar to the male but the metallic reflex of the frons is poorly developed. Segment 8 is but slightly dilated; segment 3 is yellow as in *coacta*. Venational details are similar to the male's with some slight variations as are found also in the male.

Habitat: BELGIAN CONGO, Eala, XI-III-34 and I-V-35. One male, 15-VII-34; a female, III-36, all collected by J. GUESQUÈRE. 1 male, Bobey, IV-35, 2 males Busu Moto (Terr. Gira), VII-35 and 1 male, B. Ndombo, 30-X-35, all collected by A. BAL. This magnificent species is quite the finest of the genus *Hadrothemis*. The majority of the specimens, some 16 in number come from Eala.

**Hadrothemis camarensis** (KIRBY).

This fine species appears to be somewhat rare in the Belgian Congo, as, according to Dr SCHOUTEDEN'S list, it is represented in the Congo Museum by only two specimens. In the present collections I have found nearly a score of specimens most of which are in good condition. As most of these were taken at Lulua, Kapanga, it is probable that the species is more local than rare?

Considerable variation is seen in the venation, and cross-veins in the cubital space of the hindwings vary from 1 to 3 although 2 appears to be the most common condition. The discoidal triangles of the hindwings also may be traversed up to 3 times. Ris in his diagnosis of the genus, states that there are no crossveins to the Bridge (*Bqs*) but although this is the more normal condition, many examples exhibit one or more cross veins in one, two or all wings; not uncommonly 1 is found in each hindwing. I have found these archaic structures in no less than 25 % of the present species and have also observed them in a specimen of *H. Vrijdaghi* SCHOUTEDEN and a female of *H. scabifrons* Ris from Tanga territory. In this respect, the genus seems nearer *Gra-*

tilla than *Orthetrum* and like species of the former, some species of *Hadrothemis* are gregarious, viz. *versuta* and *defecta*; probably also *infesta*, which latter bears a striking resemblance to *Cratilla lineata* (BRAUER). 13 males are from Lulua, Kapanga, XI-33, collected by F. G. OVERLAET; 3 males from Kafakumba, IX-34, F. G. OVERLAET, and 1 male from Bambesa, IV-33, collected by J. LEROY.

***Tritthemis Brédoi* n. sp.** (Fig. 3, a-h).

*Male.* Abdomen 25 mm. Hindwing 29 mm. Pterostigma 3 mm.

Head : labium straw coloured; labrum largely black but the outer borders rich ochreous; epistome and lower part of frons honey coloured, the upper part of frons and vesicle a beautiful metallic violet; occiput reddish brown. Prothorax yellowish brown, the posterior lobe erect. Thorax dull ochreous, the dorsum thinly pruinosed and somewhat violaceous: laterally two black stripes, one centered over the spiracle, the other outlining the postero-lateral suture; anterior to the spiracle a small diffuse violaceous triangular area. Beneath thorax ochreous bordered with black and thinly pruinosed. Legs black, only the anterior femora with the inner side ochreous. Wings hyaline, venation ferruginous to crimson to as far as the apices, the costa to as far as the pterostigma which is ferruginous above, bright ochreous beneath, bordered with black; a limited area of amber colouring in the forewings at the base not usually extending to as far as the cubital vein. In the hindwing a much broader area of brownish golden amber in which the venation is bright yellow, extending to the 1st antenodal, to the arculus or nearly so and to halfway between the cubital vein and discoidal triangle, lastly the anal area to just short of the tornus but invading the base of the anal-loop. Abdomen but slightly dilated dorsoventrally at the base, then narrow and triquetral to the end, red with the mid-dorsum suffused with dark brown to blackish, this expanding at the apical end of segment 8 and covering the whole of the dorsum of 9 and 10 except the apical border of the latter which is bright ochreous. Anal appendages about as long as segment 9, of the conventional libelluline shape, the preapical expansion pointed ventrally, reddish yellow in colour. Genitalia resembling rather closely that of the *Tritthemis basitincta* group and differing markedly from any of the red group. Lamina with a sharply curved tuft of hairs very conspicuous in profile, hamules broad at base, the hook prolonged, narrow and ending in a small incurved hook. Lamina narrow and rather elongate (fig. 3, a).

*Female.* Abdomen 21 mm. Hindwing 28 mm.

Head : labium and labrum bright ochreous, the latter sometimes with a small black medial triangle not extending to its base; epistome

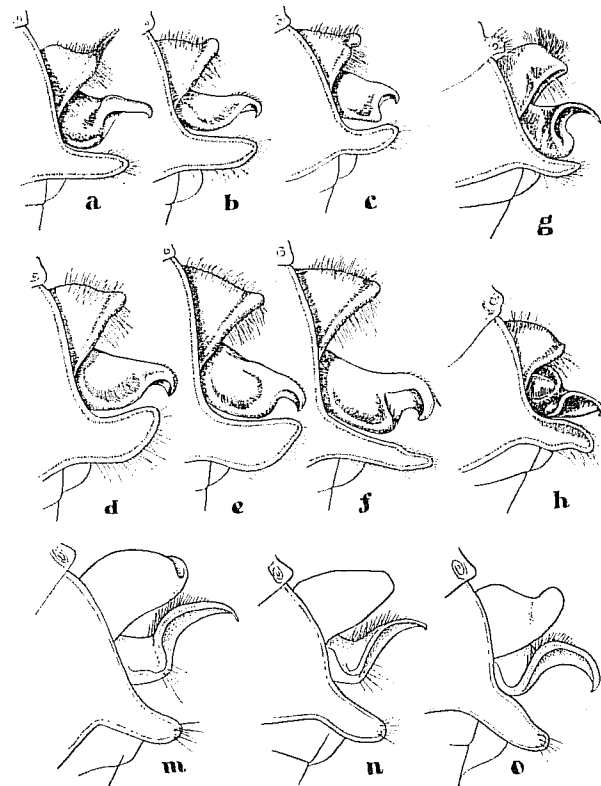


Fig. 3. — *Tritthemis* BRAUER. Male genitalia of a. *T. Brédoi* n. sp., b. *T. arteriosa* (BURM), c. *T. Monardi* RIS, d. *T. annulata* (BEMV.), e. *T. violaceae* SJÖSTEDT, f. *T. pluvialis* FÖRSTER, g. *T. Wernerii* RIS, h. *T. Kirbyi ardens* GERST., i. *T. Donaldsoni* CALVERT, n. *T. africanus* BRAUER, o. *T. tropicana* n. sp.

dull yellow, frons both anteriorly and above, as well as the vesicle bright chrome yellow; eyes and occiput ferruginous above, bright chrome yellow posteriorly. Thorax dull yellow to pale olivaceous according to age, marked with similar black stripes as seen in the teneral male. There is also a diffuse antehumeral stripe of pale reddish or dark brownish colour, as well as a short dark stripe on the upper part of the humeral suture which is more or less confluent with the dark triangular area below and posteriorly. Legs and abdomen as for the male but the ground colour of the latter olivaceous yellow. Wings similar to the male and constantly with  $10\frac{1}{2}$  antennodals. Vulvar scale not visible in profile.

Habitat. BELGIAN CONGO, several of both sexes from Lake Albert : Ishwa, Ubangi : Bosobolo, collected from 1932 to 1935, H. J. BRÉDO after whom this new species is named. It bears a close likeness to *T. arteriosa* (BURM) or a small *annulata* (BEAUV.). Strongly saffronated males may be mistaken for *T. Monardi* RIS but from all these species, it may be distinguished by the highly characteristic genitalia. The type male is from Ubangi : Dula, 4-32; the allotype female from Ubangi : Bosobolo, 8-41, 4-32. A number of both sexes are from Banyville, 24-29-1-32. The types in the Musée du Congo Belge.

Not less than 8 species belonging to the red-coloured group of *Trithemis* have been reported from the Belgian Congo and most if not all of these are best distinguished by the character of their genitalia which I have therefore figured here (fig. 3 a to h).

**Trithemis tropicana** sp. nov. (Fig. 3, m-o).

*Trithemis africana* RIS nec BRAUER, 1912, *Cat. Coll. Selys, Libellulines*: 780. (Congo specimen).

*Trithemis africana* SCHOUTEDEX nec BRAUER, 1934, *Ann. Mus. Congo Belge (Zool.)* (44), (44), *Cat. Faune Ent.* (44) : 29.

This new species has been mistaken from *T. africana* by Dr F. RIS, Dr H. SCHOUTEDEX and more recently by myself when I determined some 80 specimens from the Belgian Congo as such. It was the fortuitous arrival of a single male from the Ivory Coast which led to the discovery that there were two species very similar in appearance and with broad black basal markings to the wings. A reference to the type of *africana* showed that the Ivory Coast example was the true *africana* of BRAUER and that the two species were to be readily differentiated by the characters already mentioned by Drs RIS and SCHOUTEDEX.

*Male*. Abdomen 29 mm. Hindwing 35 mm. Pterostigma 3.5 mm.

*Head* : labium bright chrome yellow, the middle lobe and the apical borders of the lateral lobes black; labrum black, epistome oliva-

ceous but the postclypeus somewhat darker at its middle; frons in front and above, as well as the vesicle violaceous metallic; occiput dark brown. Prothorax dull brown; pterothorax reddish brown in front, pale yellow laterally marked with black; a diffuse blackish brown middorsal stripe, a rather sinuous antehumeral stripe not quite extending up to antelar sinus, a black point at the upper end of the humeral suture, a post-humeral black stripe incomplete above and rather diffusely outlined, a steel black stripe centred over the spiracle, and lastly a similar but much broader stripe covering the anterior half of the metepimeron; these three latter stripes continued under the pectus to become confluent with those from the opposite side. Legs black, only the anterior pair of femora striped with yellow on the inner side. Wings evenly tinted with pale yellow or pale brown but the apices and bases infuscated with darker brown, especially the bases which are broadly blackish brown. Apices obliquely infuscated towards posterior border of wings; bases broadly so and with the border of the marking uneven but sharply defined. In the forewings up to the 4th antennodal, distal end of cubital space and whole of anal field to as far as the triangle; the cubital space and tornus of wing of a deeper tint than elsewhere. In the hindwing the marking extends from the costa to the posterior border (begins only at the subcosta in *africana*) and extends distally to as far as the 5th or 6th antennodal and from there runs obliquely to include the sectors of arculus, hypertrigones, discoidal triangle and the whole of the anal loop save its outer angle; after meeting the posterior border it runs out along the wing margin for a distance of some 12 cells (in *africana* the marking falls short of the posterior margin of the wing and only part of the anal loop is involved). Membrane dull brown; nodal index  $\frac{12-16\frac{1}{2}}{13-14} \mid \frac{16\frac{1}{2}-12}{12-12}$ ; 2 rows of cells *Rs-Rs1* in all wings; outer angle of anal-loop 3-4 cells deep. Abdomen black with narrow subdorsal yellow stripes on segments 3 to 7 (these more evident in young examples). Anal appendages black, rather long, nearly as long as segments 9+10, cylindrical at base, then broadening as seen in profile to form a robust obtuse ventral subapical spine; inferior of nearly the same length, narrowly triangular and minutely emarginate at the apex. Genitalia closely similar to that of the *donaldsoni-basitincta africana* group as shown in figure 3, m to o.

*Female*. Abdomen 27-29 mm. Hindwing 35-36 mm.

Almost exactly similar to the male but the apices of all wings more deeply and more extensively infuscated. Face and frons a bright ochreous, the metallic colouring limited to a narrow basal line on the superior surface of the frons but extending in some specimens somewhat

diffusely to the crest of the frons and then of a blue rather than violaceous metallic colouring. Terebra prominent, extending the whole length of segment 9. The yellow stripes on the abdomen are similar to those seen in the general male.

Habitat : BELGIAN CONGO : Eala, about 80 or more specimens equally sexed, the majority collected by J. GUESQUIÈRE on the following dates : XII-34; 1/10-III-35 and XI-35. A few specimens from Bomboma and Bobey (Terr. Giri) collected by A. BAU, IV-35.

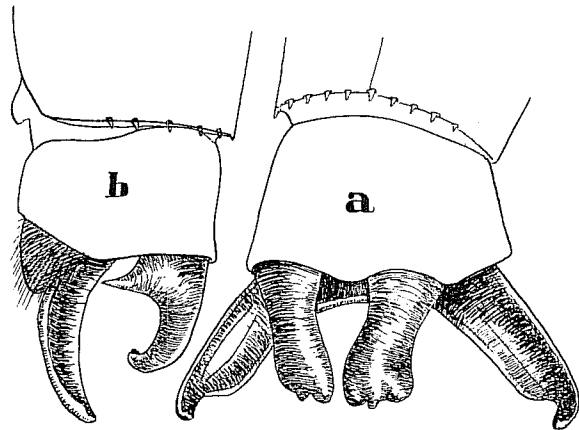


Fig. 4. — Male anal appendages of *Notogomphus lujai* SCHOUTEDEX.  
a, Dorsal view. b, Seen in profile from the left side.

This new species has for long been confused with *africana* (BRAUER) which it much resembles in size, colouring and markings: it is however at once distinguished by the black basal marking of the hindwing extending to and along the posterior border of the wing. In *africana* it falls far short of the border and has a rounded outline: in both species this marking is remarkably constant in character and no variation was found in the large number of specimens of *tropicana* before me. *Types* in the Musée du Congo Belge.

## Trois nouveaux Evaniidae du Congo belge

(Hymen.)

par P. L. G. BENOIT  
(Musée Royal du Congo belge, Tervuren)

Les Types des trois espèces décrites dans cette note font partie des collections du Musée Royal du Congo Belge, à Tervuren.

### *Brachygaster notauliferus* sp. n. (Fig. 2).

Entièrement noir.

Tête à ponctuation profonde et grossière. Les côtés de la face, renflés jusqu'au niveau de la mi-hauteur des orbites, ainsi la face est concave au milieu. De l'angle supérieur de la base des mandibules partent 2 fortes carènes qui longent les orbites intérieurs. La plus grande épaisseur de la tête, vue de profil, peu plus grande que la moitié de la hauteur. Sur l'espace malaire, l'espace entre les points est aciculé. Partie médiane du pronotum invisible du dessus. Notaulus entièrement marqué. Mésonotum ponctué, mais l'espace entre les points couverte d'une dense aciculation transversale. Scutellum nettement plus large que le métanotum et l'aire antépétiole du propodeon combinés, ponctué et aciculé, mais les stries sont arquées, ayant la pointe postérieure du scutellum comme centre. Aire antépétiole du propodeon ponctué et l'espace entre les points densément aciculé transversalement. Partie verticale du propodeon couvert d'un feutrage argenté; la sculpture consiste en grandes cellules réticulées sauf sur une zone centrale qui est finement rugueuse. La zone brillante des mésopleures est densément striée. Méso-et méta-pleures densément couverts d'une sculpture en cécules. Le pétiole peu plus long que l'aire antépétiole, plus épais à la base qu'à l'apex, avec une carène centrale; la ponctuation est entremêlée de quelques fines stries longitudinales. Tibias III munis d'une nette crête qui s'étend sur toute la longueur du tibia.

Longueur : 3,5-5 mm.