

29. *Periclimenes (Falciger) kolomadulensis*.
Related to *P. borradalei*, Rathb., 1904 (= *P. tenuipes*, Borr., 1898), but (1) rostrum $2\frac{1}{2}$ times length of carapace, (2) second leg 7 times length of carapace, (3) second legs unlike, one with fingers gaping very widely.
Kolomadulu Atoll, Maldive Is.

30. *Pontoniopsis comanthi*.
Rostrum reaching end of second joint of antennule, its breadth about equal to that of eye. Antennal scale out-reaching antennular stalk, broad. Arm and wrist of first leg subequal. Great chela out-reaching antennular stalk by hand, its wrist very short and wide, with a sharp process below.
Torres Straits, on *Comanthus*.

31. *Periclimenæus fimbriatus*.
Rostrum $\frac{4}{5}$, without teeth behind orbit. Fixed finger of second leg bears knob and movable finger a socket. Fingers of uropods, scales, &c., very long.
Mulaku Atoll, Maldive Is.; Providence.

32. *Periclimenæus robustus*.
Rostrum $\frac{9}{10}$, with two teeth behind orbit. Movable finger of second leg bears knob and movable finger a socket. Fringes not remarkably long.
Amirante I.

33. *Pontonia maldivensis*.
Rostrum reaches middle of first joint of antennule. Maxillipeds without exopodites. Second legs unequal, the larger about twice as long as carapace, with long, parallel-sided hand. Dactylopodites of last three legs simple.
L'adiffolu Atoll, Maldive Is.

N.V.—*New Dragonflies (Odonata) of the Subfamily Libellulinae from Sierra Leone, W. Africa.* By Dr. F. R. R. Rheinau, Switzerland.

The following descriptions have been extracted from proofsheets and manuscript of the writer's 'Monograph of the Libellulinae' (Collections Selys, fasc. ix.-xvi.). By the kindness of Mr. Herbert Campion I was enabled to examine
Ann. & Mag. N. Hist. Ser. 8. Vol. xv. 15

24. *Periclimenes (Falciger) compressus*.
Rostrum $\frac{5}{3}$, rather shallow, straight at first but slightly upturned at end. Antennal and hepatic spines alone present. Second leg unarmed, with short wrist, out-reaching antennal scale by hand.
Saya de Malha.

25. *Periclimenes (Falciger) brocketti*.
Rostrum $\frac{6}{1}$, straight, shallow, directed somewhat downwards, reaching end of antennal scale, and slightly out-reaching antennular stalk. Antennal and hepatic spines alone present. Two distal spines on first joint of antennule. Second leg unarmed, with rather short wrist, slender hand, and simple fingers.
Malé Atoll, Maldive Is., on brown crinoid.

26. *Periclimenes (Falciger) pottsi*.
Rostrum $\frac{1}{2}$, reaching end of antennal scale, out-reaching antennular stalk, its upper edge curving very slightly downward from the base and more strongly upwards near the tip. Hepatic and antennal spines alone present. Last two joints of antennular stalk slender. Antennal scale narrow, longer than carapace, its distal spine projecting beyond its end. Second wrist bears a spine.
Torres Straits, on *Comanthus*.

27. *Periclimenes (Falciger) suvaidivensis*.
Rostrum $\frac{6-7}{2}$, out-reaching antennular stalk, out-reaching antennal scale, straight except at the tip, which is gently upcurved. Hepatic, antennal, and suborbital, but no supra-orbital spines present. Last two joints of antennular stalk stout. Antennal scale narrow, shorter than carapace, its distal spine projecting beyond its end. Second wrist bears a spine.
Suvadiva Atoll, Maldive Is.

28. *Periclimenes (Falciger) seychellensis*.
Rostrum $\frac{7-8}{3}$, deep, its upper edge decidedly concave from base, out-reaching antennular stalk. Antennal and hepatic spines alone present. Antennal scale rather broad, its distal spine projecting beyond its end. Second legs equal, unarmed, palm and fingers subequal.
Praslin, Seychelles.

a great number of very interesting Libellulinae, collected for the Imperial Bureau of Entomology (formerly the Entomological Research Committee, Tropical Africa) in Nigeria, Sierra Leone, and British East Africa. Many records from the earlier consignments, especially those from Nigeria, were entered in the main text of the monograph and published. Others arrived too late for that purpose, but in good time for the "Additions," which, together with the indices, were due to be issued in the last instalment of the monograph. The lamentable situation in Europe generally, and in Belgium especially, leaves us little hope of seeing that last part published in the near future. In the beautiful collection sent home from Sierra Leone by Dr. J. J. Simpson there were four new species, one of them representing an interesting new genus. Instead of separate publication, which was originally discussed, insertion of the novelties in the monograph was preferred, upon the assumption that the "Additions" would appear without any long delay. But under the changed conditions of to-day, separate publication was again considered, and decided upon. Mr. H. Campion has kindly read the descriptions for correctness of language, they being the author's own translation from the original German text.

All the type-specimens have been presented by the Imperial Bureau of Entomology to the British Museum (Natural History).

Allorhizuella campioni, sp. n.

2 ♂, 2 ♀, Sierra Leone; Ka Yima, Kangama, Giggema, Dumballa, 24, 29. vi., 22. viii., 7. ix. 1912 (Dr. J. J. Simpson).

Closely allied to *Allorhizuella kingi*, Karsch, but differing in the following details:—(a) greater number of cubito-anal cross-veins (Cuq), 4 in front wing, 3 in hind wing; (b) at the humeral suture a narrow interrupted light green line; (c) the greenish-yellow stripes on the sides of the thorax a little narrower, slightly concave instead of straight at anterior margin; (d) abdomen of male distinctly fusiform; (e) superior appendages a little longer; (f) slight difference in genitalia of second segment, the internal branch of the hamule being more erect (nearly as figured in Lib. fig. 52 for *A. preussi*, Karsch). Minute as these differences are, they appear sufficient in their totality to justify specific distinction, the more so as there are specimens brought by Dr. Simpson, also from Sierra Leone, that agree perfectly with *A. kingi*, as described in Lib. p. 81. The interesting

species is named after Mr. Herbert Campion, who first observed its peculiar features.

♂ (adult).—Labium light yellow, with a broad median black stripe. Labrum black. Face light greenish yellow. Frons metallic greenish blue, light yellowish at antero-lateral angles. Vertex metallic greenish blue, broadly convex, very slightly emarginate. Prothorax black, a median spot and the vertically erect margin of posterior lobe greenish yellow. Thorax deep black, with light yellowish-green markings:—a narrow line at each side of median suture; in front of humeral suture a narrow dorsal dot and a point in middle of suture itself; two broad lateral stripes, first one from the metastigma to a little more than halfway to humeral suture, second one on posterior two-thirds of metepimeron, of which the posterior ventral angle remains black; anterior margin of both stripes slightly concave, of first one near dorsal end, of second one in middle. Ventral surface dull greenish grey, sutures lined with black. Legs robust, black; first femora yellow internally. Third femora with very numerous, about 30, very small, regular, triangular denticles; second femora with similar, but still more closely arranged and gradually lengthening denticles. Spines of tibiae rather robust, about 10 on third tibia. Teeth of tarsal claws robust, remote from end. Abdomen relatively short, slender; basal segments slightly widened laterally and dorso-ventrally; 3-5 very narrow; 6-8 with slight fusiform dilatation. Black, with yellow markings: on segment 1 a broad lateral and small, triangular, postero-dorsal spot; on 2 a large lateral U-shaped spot and mid-dorsal, posteriorly narrowed stripe; on 3 a lateral stripe, narrowly interrupted at the transverse carina; on 4 two small lateral spots on anterior half; on 5 a small antero-lateral spot; 6 wholly black; 7 with a large elliptical spot on each side, extending over the entire width and three-fourths of the segment's length; 8-10 black. Ventral surface black, with yellowish median spots on segments 3-7. Superior appendages about as long as ninth and tenth segments together, a little longer than in *A. kingi*, but scarcely different in form. Inferior appendage very little shorter than superiors. Genitalia of second segment: hamule generally as in the other two species, internal branch very thin, almost vertical; lobe narrowly elliptical, of about equal height as the hamule.

Wings slightly stained with greyish yellow, golden yellow at base: in front wing a vestige in * sc. and cu, in hind wing

* For an explanation of the terminology employed by Dr. Ris in describing the veins and spaces in the wings of Libellulinae, see that author's monograph of the subfamily, fasc. ix. pp. 14-16.—H. C.

sc. to Anq. 1, cu. to Cuq. 1, 2-3 cells in anal area. Anq. 14. 14; Cuq. $\frac{2.4}{3.3}$; t. $\frac{0.0}{1.1}$; ti. 1. 0; ht. $\frac{1.1}{1.1}$; Bqs. $\frac{2.2}{2.2}$; second specimen: Anq. 14($\frac{1}{2}$). 14; Cuq. $\frac{5.4}{3.3}$; t. $\frac{0.0}{1.1}$; ti. 0. 0; ht. $\frac{1.1}{1.1}$; Bqs. $\frac{2.2}{2.2}$; in both specimens discoidal area with a single row to near end and not widened.

♀.—Markings as in male, only there is also an antero-lateral yellow spot on segment 6. Genital segments not in good condition; they appear scarcely distinct from *A. kangi*.

Wings rather deeply stained with greyish yellow, especially along the veins; yellow basal stripes slightly larger than in male. Anq. 15. 15; Cuq. $\frac{4.4}{3.3}$; t. $\frac{0.0}{1.1}$; ti. 1. 0; ht. $\frac{1.1}{1.1}$; Bqs. $\frac{2.2}{2.2}$; in discoidal area of front wings on right side one row of cells to the level of the bridge, then two rows; on left side two cells twice at beginning, afterwards as on right side; scarcely more widened to wing's edge than in male. Second specimen: Anq. 15. 15; Cuq. $\frac{4.5}{4.3}$; t. $\frac{0.0}{1.1}$; ti. 1. 1; ht. $\frac{1.1}{1.1}$; Bqs. $\frac{2.2}{2.3}$; discoidal area in front wing, right side two rows from the beginning, left side at first one cell and a half, followed by two rows.

♂. Abd. 21-5, hw. 25, pt. > 2. ♀. 21, 25, > 2.

Orthetrum sagitta, sp. n.

1 ♂, 1 ♀, Sierra Leone, Port Lokko, 2, 3. v. 1912 (Dr. J. J. Simpson).

Nearest to *O. africanum*, Selys, but smaller; abdomen not longer than wings, fourth segment not considerably elongate, not fully 5 mm. (7 mm. in *africanum*); internal branch of lamule considerably higher than external branch (of about equal height in *africanum*). Antenodal cross-veins black in sc.; pterostigma dark; very slender species; segments 1-3 much inflated, globose, 4-10 very narrow, parallel; mostly 1 row of cells Rs.-Rspl.

♂.—Labium light yellow. Labrum light yellow, very narrowly lined with black at free margin. Face and frons anteriorly light greenish yellow; frons above obscure olivaceous, but narrowly and indistinctly brown at base. Vertex dull brownish. Thorax dull greenish, with fine elevated black points and the following dark lines, black on dorsum, brown and somewhat diffuse at sides: complete and rather broad line at median suture; about equally broad, dorsally truncate line a little nearer to humeral than to median suture; complete line at humeral suture, somewhat diffusely invading space between suture and antehumeral black line;

three lateral lines: (1) a little in front of metastigma, (2) across metastigma, (3) on second lateral suture. Ventral surface dull ferruginous, with thin whitish pruinosity. Legs black, first femora yellow internally, second and third femora greenish brown in basal half. Abdominal segments 1-3 inflated, almost spherical (but rather considerably smaller than in *africanum*); 4-10 very slender, parallel. Segment 1 dull greenish, obscure dorsally; 2 similar, but dark lining of carinae broader and confluent in posterior half of dorsum; 4-6 black, on each side, slightly behind the middle, a yellow spot, distant by about its own length from end of segment and not fully touching mid-dorsal carina; 8-10 wholly black. Ventral surface 1-3 dull greenish, with carinae narrowly black; 4-8 black, with submedian yellowish spot, large on 4, successively smaller posteriorly. Genitalia of second segment: anterior lamina moderate, depressed; convexity of basal part flat, with many minute black spines; a very small notch at end. Hamule small; internal branch a robust triangular hook, but slightly curved sideways, very little higher than anterior lamina; external branch appreciably shorter, separated by a narrow incision of very moderate depth, broadly rounded. Lobe large, almost circular in outline.

Wings slightly stained with greyish from the triangular region outwards; minute vestige of yellow in cu. of hind wings. Membranule black. Pterostigma dark ferruginous, between strong black veins. Venation wholly black; only a very narrow dull yellowish line at the costa anteriorly. Arculus a little distal to Anq. 2. Anq. 13. 13; t. $\frac{1.1}{0.0}$; ht. $\frac{1.1}{0.0}$; 1 row Rs.-Rspl. Abd. 30, hw. 30, pt. < 3, length of fourth segment 5 mm.

♀.—Almost entirely similar to male in shape, colour, and pattern. Lateral brownish lines of thorax lighter and narrower. Abdomen but little more robust; foliaceous dilations of segment 8 very narrow; vulvar scale not visible. Appendages black, very acute; supra-anal tubercle and sub-anal valves light yellowish.

Minute vestige of yellow in cu. and in anal area of front wings, slightly more yellow in hind wings: vestige in sc. in cu. halfway to Cuq., one cell at membranule. Anq. 14. 15; doubled cells in Rs.-Rspl. $\frac{1.2}{2.0}$; venation otherwise as in male. Abd. 29, hw. 30, pt. 3, length of fourth segment < 5.

CYANOTHEMIS, gen. nov.

Facies of *Hadrothemis*, but differing in the position of the

areculus (proximal to second antenodal) and in the configuration of the eyes, the posterior lobe of the prothorax, and the genital segments in female.

Type of venation between *Crocothemis* and *Bradinygyga*; differing from both by configuration of eyes and of posterior lobe of prothorax.

In regard to eyes and prothorax nearest to *Rhodothemis*. Spines of legs not so markedly differentiated as in *Rhodothemis*. More important differences from that genus: (1) discoidal area in front wing with 3 rows of cells to level of nodus, (2) Cu_1 in hind wing at anal angle of t., (3) 2 rows $Rs.-R_{spl.}$, (4) 4-5 rows between A_3 and wing's edge in hind wing, (5) last Anq. in hind wing incomplete, apparently an almost regular and therefore very curious feature.

Cyanothemis will find its place in our systematic arrangement of Libellulinae immediately preceding *Rhodothemis*.

Head moderate; eyes meeting scarcely more than in a point; occipital triangle very large. Frons very prominent, rounded, without anterior ridge, and not flattened anteriorly; furrow moderate. Vertex broadly convex, very slightly emarginate.

Posterior lobe of prothorax large, erect, divided into two rounded lobes, ciliate. Thorax robust. Legs comparatively short, robust. Male with third femora armed in proximal two-thirds with about 10 moderately robust spines, increasing in length very gradually, 3-4 longer spines at end; second femora with about 7 small, gradually lengthening and 2 terminal long spines. Spines of tibiae long and robust, 8-9 on third tibiae. Teeth of tarsal claws robust, in distal third.

Abdomen rather short, relatively broad, depressed; moderately widened at base dorso-ventrally, very gradually narrowed to end. No distinct transverse carina on fourth segment. Genitalia of second segment small, the hamule with regular external branch. For genital segments of female see under the species.

Wings long, reticulation serrate. t. in front wing on a level with t. in hind wing. Sectors of areculus with a long common stalk in both wings. Arculus between Anq. 1 and 2. Cu_1 in hind wing at anal angle of t. Anq. $12\frac{1}{2}$ - $14\frac{1}{2}$, last Anq. incomplete in hind wing as well. Proximal side of t. in hind wing at arculus. 1 Cu_1 in all wings; no Bqs. t. in front wing narrow, crossed. t. in hind wing crossed; lit. free; ti. in front wing 3-celled. M_2 feebly double-curved; 2 rows $Rs.-R_{spl.}$. Cu_1 in front wing strongly convex; discoidal area considerably widened to end; 3 rows to level of nodus. 1 row $M_1-M_{spl.}$. Anal area of hind wing broad.

Interpolated cells at anal angle of t. and external angle in anal loop; A_2 moderately angulated. 4-5 rows between A_3 and edge in hind wing, conspicuously arranged in transverse rows. Membranule moderate. Pterostigma small.

Cyanothemis simpsoni, sp. n.

Collected for the Imperial Bureau: 1 ♂, Sierra Leone, Yana, 1. iv. 1912; 1 ♂, S. L., Mongheri, 15. ix. 1912 (Dr. J. J. Simpson). Collection of Brit. Museum: 1 ♂, 1 ♀, Southern Nigeria, Oshun Bridge, Oshogbo, i.-iii. 1913 (Dr. H. Strachan).

♂ (adult, Yana).—Labium black, at antero-lateral angle of lateral lobe a brownish spot. Labrum, face, and frons anteriorly brownish black. Frons above brilliant sky-blue. Vertex at base and anteriorly black, sky-blue above. Occipital triangle light blue, narrowly lined with whitish. Prothorax black, upraised posterior lobe light blue. Thoracic dorsum brilliant sky-blue from narrow black line on median suture to slightly more than halfway to humeral suture, including antearalar sinus; otherwise blackish. Sides very dark reddish brown; ventral surface blackish brown, very slightly bluish pruinose. Legs brownish black. Abdominal segments 1-2 black, 3-7 dull bluish (sky-blue in living insect?), 8-10 black. Ventral surface black, moderately whitish pruinose. Appendages small; superiors distant at base, convergent, ending rather abruptly in an acute point; in side-view obliquely cut at end, no distinct inferior angle, about 12 small irregular denticles; inferior appendage broad, more than three-fourths the length of superiors. Genitalia of second segment: anterior lamina depressed, broadly elliptical, ciliate. Hamule small, depressed posteriorly; external branch triangular, acute, directed laterally; internal branch a small fine hook, strongly curved laterally. Lobe long and narrow, strongly depressed posteriorly, slightly higher than hamule (the entire structure of the type found in *Crocothemis* and *Rhodothemis*).

Wings hyaline, very narrowly and diffusely lined with greyish at tips. Deep blackish brown basal spots: in front wing in sc. and cu. not fully to Anq. 1 and Cu_1 ; in hind wing to Anq. 3 in sc. (also in proximal half of length in c.), a little into ht. and t., and obliquely cut to halfway between apex of membranule and anal angle; margins of spot a little lighter. Membranule black. Pterostigma dull ochreous.

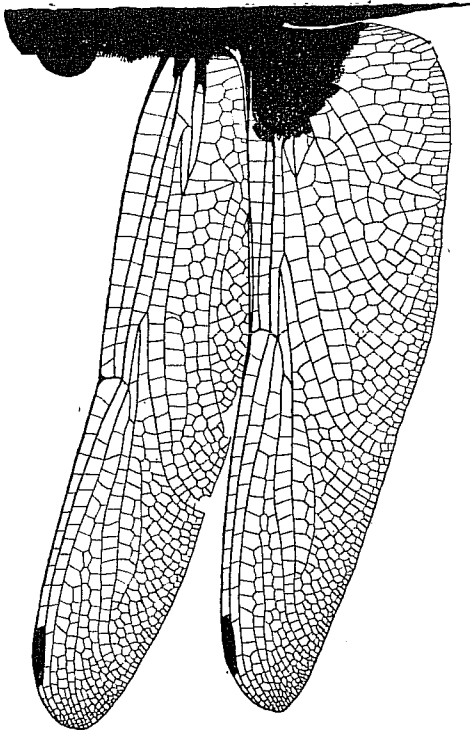
Anq. $13\frac{1}{2}$. $13\frac{1}{2}$.
 $14\frac{1}{2}$. $10\frac{1}{2}$. Abd. 29, hw. 39, pt. 3.

♂ (subjuv., Mongheri).—Like first (type) specimen, but

dull olivaceous instead of blue (perhaps by posthumous decomposition). Anq. $\frac{13\frac{1}{2}}{9\frac{1}{2}} \cdot \frac{10\frac{1}{2}}{6\frac{1}{2}}$.

♂ (subjuv., Oshogbo).—Light colour on frons and vertex pale bluish green, on thorax greyish green with a shade of violet, in interalar space greenish yellow, on abdomen dull and pale greyish violet. Anq. $\frac{14\frac{1}{2}}{10} \cdot \frac{10\frac{1}{2}}{6\frac{1}{2}}$.

♀ (subjuv., Oshogbo).—Sides of labium broadly olivaceous, anteclypeus dull olivaceous, postclypeus brown; head and thorax dorsally as in male, but light green, shading to olivaceous, on thoracic dorsum a diffuse brown dot on each side in green stripe; deep black from dorsal green stripe to a little more than halfway to humeral suture; rest of dorsum and sides wholly dark golden brown. Abdomen robust,



Wings of *Cyanothemis simpsoni*, Ris (type ♂), showing the discontinuity of the last antenodal in the hind wing. Photo. by F. W. Campion.

segments 2-3 a little widened dorso-ventrally, from middle of 4 to end almost parallel, little depressed; indistinct transverse carina on 4. Segments 1-2 dark brown, a rather broad, diffuse, mid-dorsal band of dull greenish yellow; 3 very light bluish violaceous, in front of transverse carina fuscous in lateral half; 4 the same pale colour at sides, obliquely cut; 5 fuscous; 6-8 dull golden brown, shading to olivaceous, carinae lined with black, narrowly on 6-7, broadly on 8; 9-10 black. Ventral surface fuscous. Margins of eighth segment folded, not widened. Vulvar scale erect, at

right angles, about half as long as ninth segment, elliptical in outline, laterally compressed; ninth ventral plate broadly projecting on tenth segment (not visible at base). Supra-anal tubercle large, black, densely covered with long black hairs; appendages small, acute, black.

Basal dark brown spot of wings slightly smaller than in male: vestige in front wing; in hind wing to Anq. 2 in sc., to arculus in costal half of m., halfway between Cug. and t. in cu., to apex of membranule in anal area. Anq. $\frac{12\frac{1}{2}}{10\frac{1}{2}} \cdot \frac{12\frac{1}{2}}{10\frac{1}{2}}$. Abd. 30, hw. 43, pt. <4.

This is one of the most remarkable Libellulinae seen by me. In venation the incomplete last antenodal in the hind wings is unique (absent in one of eight wings examined) in the subfamily. The colour-system is, perhaps, still more extraordinary: a very common pattern in Libellulinae, sky-blue and black, is obtained, not as in all other known cases by pruinosity, but by pigmentation, like the scarlet-red of so many other forms, or the blue and black of *Æschmīnae* and *Agrionidae*. In fact, *C. simpsoni* might be called a blue rendering of *Rhodothemis rufa*.

I have pleasure in naming this beautiful insect after the successful collector of Odonata in Sierra Leone, Dr. J. J. Simpson.

Pseudomacromia chrysobaphes, sp. n.

Sierra Leone: 1 ♂, Sandea, 14. vi., 1 ♂, Jahama, 28. vi., 1 ♀, Sonkonia, 31. v. 1912 (Dr. J. J. Simpson) [the male from Jahama kindly given to the writer for his own collection].

Very large species. Group II. of table in Lib. In venation of discoidal and anal areas nearer *P. pretiosa*, in proportion of antenodal and postnodal part of wing nearer *P. eusebia*; differing from both by rich yellow markings on thorax and abdomen, and in this respect similar to *P. torrida*.

♂.—Labium in one specimen dull ochreous, median lobe obscure, in other specimen blackish, dull brown at free margins. Labrum black, narrowly lined with ferruginous at five margin. Face light olivaceous, a blackish curved line on anterior margin of postclypeus. Frons ochraceous at sides, dark metallic blue above, gradually passing into dull ferruginous at anterior margin. Vertex large, convex, entire, metallic blue. Thoracic dorsum brilliant metallic bluish black, markings very pale dull greenish, almost whitish: narrow antehumeral line, to two-thirds height, about halfway between median and humeral sutures; slightly broader complete line in front of humeral suture, continued in an equally

broad transverse band at antelar sinus. Sides light greenish yellow, with slightly diffuse brownish-black bands with greenish metallic reflections: (1) broad mesepimoral band, almost touching humeral suture and including a round pale spot at dorsal end; (2) narrower complete band across metastigma, with two processes, to dorsal and ventral third of second lateral suture; (3) narrow band on dorsal half of second lateral suture; (4) incomplete moderately broad band a little in front of middle of metepimeron. Ventral surface dull ochreous, sutures narrowly and diffusely brown. Legs dull and rather dark ferruginous. Third femora with about 18 teeth, the first six closely arranged, triangular, small, the following ones gradually increasing in size, more distant, quadrangular, directed towards base. Second femora with about 18 smaller teeth, similar in form, but directed distally. On third tibiae no spines externally, only a corresponding number of obtuse tubercles, internally the spines moderately robust, very short. Spines of second tibiae rather long and slender. Teeth of tarsal claws a little stronger than tips, variable in length, in same individual equal to tips, or slightly longer or shorter. Abdomen at base very little constricted laterally, moderately so dorso-ventrally, very little constricted at third segment, afterwards almost parallel, rather robust. Black, with the following light yellow markings: segment 1, sides and a terminal ring; 2, sides, except a narrow terminal black ring and a very narrow black ring in front of transverse carina; 3, sides, a narrow complete basal ring, a very narrow transverse line at transverse carina, briefly interrupted in middle; narrow, incomplete mid-dorsal line; 4, slightly obscured basal ring, incomplete line at indistinct transverse carina, narrow mid-dorsal line; 5-6, very small spots at middle of lateral carina and indication of mid-dorsal line; 7, broad median transverse band of almost one-half the segment's length; 8-10 wholly black. Ventral surface 3-7 ochreous, with ends of each segment rather broadly and distinctly black; 8-10 black. Appendages black; superiors a little shorter than segment 9, convergent at base, slightly divergent in distal third, a little swollen towards the end and then terminating in a very fine and acute point; in side-view almost straight, inferior angle on distal third obtuse, a row of small, rather irregular denticles preceding it; inferior appendage but little shorter, slightly curved upwards, almost pointed. Genitalia of second segment: anterior lamina broad, erect, slightly emarginate, ciliate, yellowish, black at free margin. Hamule of about equal height, on subquadrate base; internal branch

a small hook, almost touching the anterior lamina, curved posteriorly; external branch merely indicated, being the obtuse posterior angle of basal piece. Lobe very small, narrowly oblong.

Wings stained with light greyish yellow throughout; minute golden-yellow vestige at base. Membranule fuscous. Pterostigma dark ferruginous. First specimen: Anq. $18\frac{1}{2}$. $19\frac{1}{2}$; Cnq. $\frac{1.1}{2.3}$; t. $\frac{1.1}{2.3}$; ti. 3. 3; 3 rows in discoidal area of front wings; 1 row Rs.-Rspl., a few cells doubled in both front wings; 5 rows between A_3 and wing's edge. Abd. 41, hw. 53, pt. 4.5. Second specimen: Anq. $19\frac{1}{2}$. $19\frac{1}{2}$; Cnq. $\frac{1.2}{2.3}$; t. $\frac{1.1}{1.1}$; ti. 6. 6; 1 row Rs.-Rspl.

♀.—Lighter in colour than male throughout; wings with a pattern of rich golden yellow and brown.—Labium ochreous. Labrum orange. Face light olivaceous. Frons brownish orange above, olivaceous at sides. Thoracic pattern as in male, but the dark portions lightened to ferruginous, without metallic reflections, and considerably reduced at sides. Legs light ferruginous. Third femora with very small triangular spinules; second femora with small, gradually lengthening spines; spines of third and second tibiae as in second tibiae of male. Teeth of tarsal claws as in male. Abdomen more widened at base than in male. Dull ferruginous instead of black throughout, pale markings similar, but lateral spots on segments 3-6 considerably larger. Appendages comparatively long, two-thirds of segment 9, very acute. Vulvar scale not clearly visible (covered by a mass of light yellow, relatively large eggs).

Wings light yellow, deep and rich golden yellow at base, in front wing to Anq. 2 and almost to arculus, in hind wing to Anq. 3, t., and a little beyond apex of membranule; lighter golden-yellow zone at nodus in costal half of front wing, over entire breadth in hind wing, and extended proximally to anal loop in anal half; tips golden brown to three cells width, proximally, from pterostigma. Membranule brown; pterostigma dark ferruginous. Anq. $16\frac{1}{2}$. $17\frac{1}{2}$; Cnq. $\frac{1.1}{2.3}$; t. $\frac{1.2}{1.1}$; ti. 4. 4; 3 rows of discoidal cells, 4 cells once at t. in right wing; 1 row Rs.-Rspl.; 5 rows between A_3 and wing's edge. Abd. 43, hw. 53, pt. 4.5.