

*Pseudagrion superbum*, *Gynacantha flavipes*  
and *Gynacantha immaculifrons*, three new  
species of Odonata from the Belgian Congo

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Continuing my determinations of the Odonata loaned to me for study from the vast collections of the Musée Royal du Congo Belge, I have come upon three more new species, one a *Pseudagrion* belonging to the suborder Zygoptera, and the others to the genus *Gynacantha* of the suborder Anisoptera. The genus *Pseudagrion*, with a total of 118 species described or of which descriptions are now in the press, has become the dominant one of the Order, even exceeding genus *Argia* in numbers; of these, 46 are found in Africa and 25 in Madagascar. Species of the genus *Gynacantha* are very homogeneous in colour and build and usually offer considerable difficulty in determination: I have been able to compare the two new species described here with actual examples of all the African species save the problematical *lindratocy* KARSCH, which is unknown to me and is not included in the late Dr. F. Ris' exhaustive catalogue, and so was apparently unknown to him. Also *Gynacantha usambarica* SjöSTEDT, of which however a good description and a good figure are available; thus I am satisfied that these two species do not belong to any known species.

*Pseudagrion superbum* n. sp. — Fig. 1.

*Male*. Abdomen 37 mm. Hindwing 28 mm.

Head: labium straw coloured; labrum bright citron yellow narrowly bordered with black in some but, in most, with only a spot of black at the external corners; epistome black as well as the frons, vertex and

occiput; two transversely fusiform bright citron yellow spots on the frons just anterior to the middle ocellus which are often confluent more or less by a narrow isthmus and, in extreme cases, broadly confluent with the yellow genae and sending posteriorly projections along the inner side of the base of the antennae; lastly large transversely oval

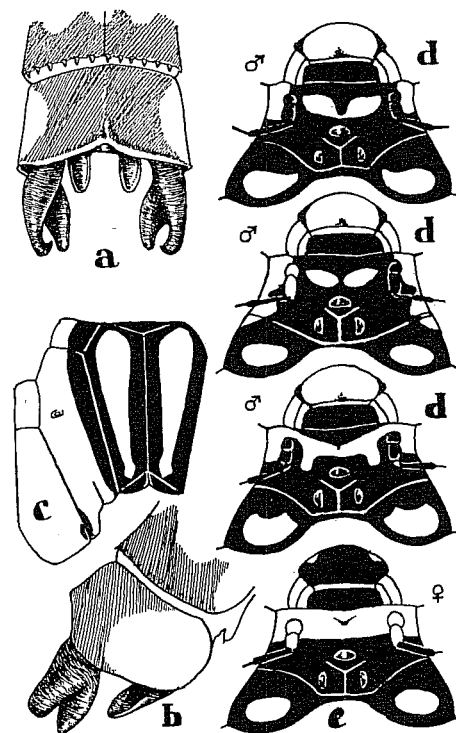


Fig. 1. — *Pseudagrion superbum* n. sp. — a, and b, Male anal appendages, dorsal and right lateral aspects. c, Thoracic markings (diagrammatic) 3. d,d,d, Head of male showing variability of markings. e, The same of the female.

postocular spots which however may be reniform or other shaped. Prothorax black, the anterior lobe, a fine border to the posterior lobe and the sides rather broadly citron yellow. Thorax black on dorsum, this colour slightly overlapping the humeral suture and bearing broad citron yellow antehumeral stripes, which are rather narrow above but expand broadly below. Laterally azure blue changing to yellow below and on the pectus; a short black line on the antero-lateral suture and a narrow black stripe on the postero-lateral incomplete below and, in some specimens, represented by an upper black spot. Legs black, flexor surfaces of femora thinly pruinosed in adults, and the tibiae bright yellow on the flexor surfaces. Wings hyaline; 14-16 postnodals in the forewings, 13-14 in the hind; *Ac* (anal-crossing) meeting *Ab* (anal-bridge) at the border of wings; pterostigma reddish brown but carneous by transmitted light, covering slightly less than one cell. Abdomen steely black on dorsum, this colour bilobate on the 2nd segment and expanding and then contracting again apically to join narrow black apical rings on segments 3 to 6; the sides and apical interrupted rings on segments 2 to 6 azure blue; segments 8 and 9 entirely azure blue save for broad black apical rings which send medial and lateral prolongations towards the base of segments; segment 10 blue with a broad black cruciform dorsal marking. Anal appendages black, superiors about as long as segment 10, deeply bifurcate, the two branches of equal length, the superior branch narrow and terminating in a recurved beak-like spine; the inferior branch twice as broad, flattened and obtuse at apex. Inferior appendages short, half the length of superiors, excavate above and obtuse at apex.

*Female.* Abdomen 35 mm. Hindwing 28-30 mm.

Head with glossy black labrum but with a small citron yellow spot at the border on each side in some specimens; epistome black; frons bright citron yellow to the level of the middle ocellus; postocular spots as in the male. Wings hyaline, palely infuscated in adults; postnodals as in the male; legs and thorax coloured as in the male, the unguulate processes on posterior lobe of prothorax present but extremely short and resembling black tubercles slightly overlapping the medial lobe. Abdomen coloured as in the male save segment 9 which is blue with a broad conical black dorsal marking extending from the base nearly to apex of segment; segment 10 entirely blue. Anal appendages black, short, conical. The ventral surfaces of segments 8 to 10 and the ovipositor bright yellow.

*Habitat:* Several of both sexes from Uele: Bambesa, Belgian Congo, collected by MM. P. HENRARD and J. VRYDAGH from II to IV.1938.

There is also an incomplete male from Kasai, don de M<sup>me</sup> TROLLI. Type, allotype and cotypes in the Musée Royal du Congo Belge, Tervuren.

This new species belongs to the group *angelicum*, *acaciae*, *sjustedti*, *conspicuum* and *thenartum*, from all of which save the last, it is distinguished by the absence of a medial dorsal spot or U-shaped blue marking on segment 2; it is also distinguished by the shape of the superior anal appendages, bright markings of the head and black markings on the terminal segments of the abdomen in both sexes; the glossy black labrum of the female is also a very distinctive character.

*Gynacantha immaculifrons* n. sp. — Fig. 2 b, c.

*Male.* Abdomen 56 mm. Hindwing 45 mm.

Head: labium and labrum bright ochreous, rest of face bright olive green and markedly punctate; the sides and the base of frons above broadly pale yellow and without any indication of the conventional black T-like marking; vertex and roots of antennae ferruginous; occiput reddish brown. Prothorax and thorax an uniform olive green (but probably a brighter green during life (as in *bayadera* SEIXS and *millardi* FRASER). Legs: femora dull ferruginous, tibiae and tarsi bright yellow on extensor surface, claws ferruginous. Wings hyaline, venation dark brown, costa proximal to nodus paler; pterostigma dull ochreous above but a paler brighter yellow below, covering about 4 to 5 cells; nodal index, 22 to 23 antenodals and fourteen postnodals to forewings, 7 Cuqs, anal-triangle 3-celled, anal-loop 10-celled, 3 rows of cells between the forks of IRiii and a maximum of 5 rows between IRiii and Riii. Abdomen with segments 1 and 2 moderately broadened, segment 3 with scarcely any constriction; segment 1 and the base of 2 olive green, the rest of the abdomen dull olive brown, the nodes and carinae darkly outlined. A pale bluish bordering to the basal side of the carina on segment 2 and on the apical side of the carinae on segments 3 to 6; restricted bluish dorsal duplicated spots on segments 3 to 7. Anal appendages dull ferruginous, superiors 6.5 mm in length, narrow at base but broadened to more than twice the width in the apical third, the outer border quite straight, the extreme apex abruptly tapered to a fine point in line with the outer border. Inferior, half the length of superiors, broad at base and then rather abruptly tapered to end in a obtuse point.

*Female.* Abdomen 51 mm. Hindwing 49 mm.

Exactly similar to the male in colouring and venation, differing only in the genitalia. The pale markings of the abdomen more clearly de-

fined than in the male. Segment 9 about one fourth longer than 8. Anal appendages 6 mm. in length, lanceolate acute at apex, dull brown in colour.

Habitat : a male and female from Lubumbashi (Elisabethville) 12.V. 1953, collected by CH. SEYDEL.

This new species, by its uniform green colouring and absence of constriction of segment 3 resembles a large *bayadeva* SELYS (Oriental); the absent frontal T-shaped marking and shape of anal appendages will also distinguish it from other African species. Type and allotype in the Musée Royal du Congo Belge, Tervuren.

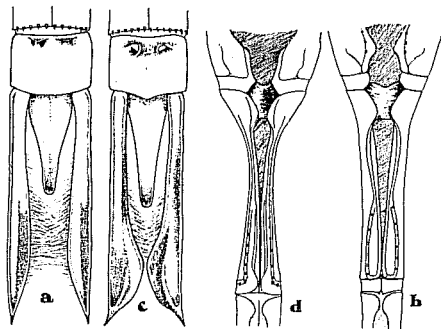


Fig. 2. — Male anal appendages of, — a, *Gynacantha flavipes* n. sp. c, *Gynacantha immaculifrons* n. sp. — Ventral surface of segment 3 of, — b, *G. immaculifrons*, d, *G. flavipes*.

***Gynacantha flavipes* n. sp.** — Fig. 2 a, d.

*Male.* Abdomen 52 mm. Hindwing 47 mm.

Head; labium and labrum bright ochreous, the base of lateral lobes of the former bright green; face olive green; frons broadly yellow at base and sides but this colour bisected by the stem of a thick black T-shaped marking in the median sulcus and along the crest of frons; prothorax and thorax bright olive green but somewhat duller and brownish on dorsum and a much brighter green on pectus. Legs bright ochreous throughout. Wings hyaline, venation dark brown, costa dull brown to as far as nodus after which it becomes a pale yellow; pterostigma golden yellow but the framing veins, save the costal, dark brown. Nodal index, 23 to 24 antenodals and 16 postnodals to fore-

wings; anal triangle 3-celled, 8 Cuqs to forewing, 5 to 6 in the hind, 9 to 10 cells in anal-loop; 2 to 3 rows of cells between forks of IRiii and a maximum of 4 rows between IRiii and Riii. Abdominal segments 1 and 2 slightly dilated, segment 3 distinctly constricted; segments 1 and 2 olive green, the rest dull olive brown becoming slightly ferruginous on the end segments, the nodes and carinae darker. Anal appendages reddish brown; superiors 5.5 mm long, lanceolate, narrow in basal fourth, then dilated medially and of even width to about the fourth-fifth, after which they taper to a fine point; inferior appendage about half the length of superiors, narrow, tapering to an obtuse pointed apex.

*Female.* Abdomen 47 mm. Hindwing 49 mm.

Entirely similar to the male in colouring, differing only in sexual details and venation. The anal-loop larger, of 12 cells. Segment 9 markedly longer than 8. Anal appendages short, 3 mm in length, lanceolate, acuminate at apex.

Habitat : 6 males and a female from Lubumbashi (Elisabethville), 9.VII.52 to 20.VIII.52 and 5 to 15.V.53, collected by CH. SEYDEL.

These two new species, which come from the same habitat are easily distinguished by the absence of a T-shaped marking and constriction of segment 3 found in *immaculifrons*, two characters which also serve to separate this same species from other African *Gynacanthas*. *Flavipes* is to be separated from other African species by its bright yellow legs; it is a larger and more robust insect than either *manderica* or *bullata* and has not the dark knees of the latter nor the great constriction of segment 3 of either. It is separated from other species by its size and by the straight anal appendages. It shows a close resemblance to *bispina* RAMBUR but this species is known only from Mauritius and Madagascar and would hardly be expected to turn up in Central Africa (*bispina* has a closer venation of the wings: the anal-loop with 3 rows of cells instead of only 2.).