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# PYRGOTIDAE (DIPTERA ACALYPTRATA) 

B Y

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In introducing a world revision of the family Pyrgotidae in which I propose to consider the genera and species of all zoogeographical regions, I am anxious as far as it is possible to identify the material with the described species, avoiding the introduction of synonymous names.

Since the original descriptions are mostly poor - i.e. Hendel described many genera and species only in his keys, and Enderlein's descriptions are somewhat unilateral - there is however a possibility that a comparaison with the types of the species herein redescribed, or described, may origin some synonymy.

An interesting little collection of Pyrgotid flies was made available to me through the kindness of the Institute of the Belgian Congo National Parks, and study has led to the following results : the collection contained only 7 specimens of 4 species, of which 3 are described here as new to science, and of which for one a new genus, Congopyrgota is erected.

In my large revision of the South American Pyrgotidae which was published in the Revista Brasileira de Entomologia ( ${ }^{1}$ ), I am distinguishing three subfamilies (Toxurinae, Pyrgotinae and Lochmostylinae), delimiting the Toxurinae on a comparative morphological basis. The subfamily Toxurinae is characterized essentially by having the subcostal vein (sc) rectangutarly bent forward at apex as in Trypetidae, and pedicel almost invariably distinctly cleft above at apex as usual in Acalyptrate flies, except in other subfamilies of Pyrgotidae. The presence of the ocelli and that of a postpedicel with conspicuously pointed or rectangular dorsoapical tip are not essential characters of Toxurinae since all known species of the tribe

[^0]Teretrurini (Pyrgotinae) possess ocelli whilst the ocelli of some Toxurinae species are lacking. Platynostira Enderlein and Congopyrgota n. gen. having their postpedicel dorsoapically pointed, in their other characters belong undoubtedly to the tribe Pyrgotini.

Taken in the restricted sense there are no Toxurinae known from the Ethiopian region, nor Lochmostyliinae or Trepidariini, but all forms of this family hitherto described from this region belong to the tribe Pyrgotini of the subfamily Pyrgotinae. In all known Ethiopian forms the ocelli are absent and the empodium completely bare.

In intending to give here a preliminary key to the Ethiopian genera, I wish it to be distinctly understand that the inclusion of several genera of Enderlein as subgenera, does not indicate their acceptance. In fact I do not even accept Hypotyphlina, Stypina, Euthioza and Clemaxia as subgenera but I was forced to temporarily adopt this course since it may facilitate the identification of many species of Enderlein. Rhagostira Enderlein is very clearly but a synonym of Tephritocampylocera Hendel, and Hexamerinx that of Campylocera. Without examining the type species I was not able to place properly the very insufficiently characterized genus Dicrostira Enderlein, which very probably is only a Campylocera species. I may add that the genera Campylocera MacQuart and Prohypotyphla Hendel are very closely related, in fact I could not find better distinguishing character than the absence or presence of several setulae, or at least a single setula, at base of the third vein on superior wing-surface.

## KEY TO GENERA AND SUBGENERA OF AFRIGAN PYRGOTIDAE (PYRGOTINAE, PYRGOTINI).

1. Postpedicel with a conspicuousiy pointed or rectangular dorsoapical tip. Costal vein ending at, or little beyond, apex of third vein $\left(r_{4+5}\right)$.
2. Antennal grooves of mesofacial plate separated by a wide and slightly convex vertical carina, the grooves are very narrow, tapering ventrally into an acute tip. Cephalic bristles represented only by a pair of ocellars (oc) and thoracic bristles by $1 d c, 1 i a$ and 1 npl bristle pairs; humeral and scutellar bristles absent. Wings pale brown with longitudinal hyaline vittae. (Only 1 species)

Platynostyra Enderlein 1942. (P. iurbata Enderlein 1942, Transvaal.)
2. Antennal foveae separated by a linear and sharp carina, foveae attaining mouth margin. Head and thorax with almost complete chaetotaxy (ors, oc, pvt, vti, vte; scap, dc, 2npl, sa, ia, pa, $2 s c$, $m p l, s t$ ). Wings entirely hyaline. (Only 1 species)

Congopyrgota n . gen.
(C. hyalipennis n. sp., Belgian Congo.)

1. Apex of postpedicel rounded.
2. Third wing-vein $\left(r_{4+5}\right)$ bent forward, ending in costa before wingapex; costal vein ending at apex of third vein. Antennal foveae separated by an indistinct vertical carina, ending at mouth-margin. Genae very wide, as wide as the heigth of an eye. Ocellar triangle greatly developed, reaching to about middle of frons. (Only 1 species) ............................................. Diasteneura Hendel 1908.
(D. laticeps Hendel 1908, South Africa.)
3. Third vein straight or slightly curved downward, ending at, or close to, the apex of wing; ocellar triangle less developed, sometimes rather indistinct.
4. Third wing-vein setulose on superior surface, or at least there is a single setula at base of vein present.
5. Antennal foveae united, no vertical carina present. Second vein $\left(r_{2+3}\right)$ with an appendage. Ocellar bristles strongly reduced; prsut and prsc absent.
6. Humeral ( $h$ ) and sternopleural (st) bristles absent. The minute oc bristles situated but slightly before level of vti. Costal vein ending at apex of fourth vein $\left(m_{1}\right)$. Scutellum bare with 2 pairs of $s c$ bristles. (Only 1 shining reddish yellow species)

Pyrgotomyia Hendel 1934.
(P. ciliata Hendel 1934, East Africa.)
6. $h$ and st bristles present. Lower outer angle of anal cell not produced. Preabdomen only one third as long as the oviscape. (Only 1 pale yellow species)

Metropina Enderlein 1942.
(M. temporalis Enderlein 1942, Togo.)
5. Antennal foveae separated by a conspicuous, sharp and linear vertical carina which never bifurcated below; foveae attaining mouth-margin or ending at most at inferior fourth of the height of mesofacial plate but not higher. Costal vein ending at, or little beyond, apex of third vein. Ocellar triangle conspicuous, shining.
7. Arista thick and distinctly three segmented, shorter than postpedicel. Second vein without an appendage. Frons as wide as one eye. (Only 1 shining yellow species)

Hypotyphla Loew 1873.
(H. loewi Hendel 1908, South Africa.)
7. Arista normally long, with inconspicuous segmentations.
8. oc, pvt, prsut and st bristles absent, vte reduced. (Only 1 species with dark brown wings)

## Lygiohypotyphla Enderlein 1942.

[L. nigripennis (Hendel), Africa.]
8. oc, pvt, prsut and st bristles present $\qquad$
Prohypotyphla Hendel 1934.
9. Second vein with a short appendage. (Only 1 species) $\qquad$ Subg. Hypotyphlina Enderlein 1942. [H. caudata (Hendel) 1914, West Africa.]
9. Second vein without an appendage. ( 10 species) $\qquad$
Subg. Prohypotyphla Hendel 1934.
(P. scalaris Hendel 1934, Kenya.)
4. Third vein completely bare on superior wing-surface.
10. Vein closing anal cell straight or slightly convex, lower outer angle of cell is not produced. Distal margin of pedicel with a dorsal incision. Two pairs of strong genal bristles, and on the frons two pairs of strong ori present. (Only 1 species which has on the wing a zig-zag dark mark from base to apex along the costa)

Toxopyrgota Hendel 1912.
(T. inclinata Hendel 1912, Africa.)
10. Vein closing anal cell more or less conspicuously flexed outwardly near its lower extremity, lower outer angle of cell therefore distinctly produced. Frons at most with a single pair of ori bristles.
11. Costal cell ending at fourth vein $\left(m_{1}\right)$.
12. Antennal foveae united, no vertical carina present. Alula well developed. Postpedicel approximately twice as long as wide. Vertex sharply carinate. Second wing-vein with an appendage. (Only 1 species in the Ethiopian region : A. marshalli Hendel, 1914, reddish yellow to reddish brown; anterior half of wing brown; bristles and hairs black; genae more than one half as high as the eye; anterior region of frons strongly produced in front of the eyes, twice as long as the eye)

Apyrgota Hendel 1908.
(A. scioidea Hendel 1908, Molucca Is.)
12. Antennal foveae separated by a more or less conspicuous central vertical carina. Vertex not carinate.
13. Wings brown with many hyaline spots and dots (reticulate). Vertical carina between antennal foveae bifurcated below.
14. oc, vti, vte and or on the head, h, prsut and $d c$ on the therax, absent; bristles very feebly developed, almost lacking. Frons more than 3 times wider than one eye. ( 3 species) ......

Trichellopsis Bezzi 1929.
(T. muiri Malloch 1913, South Africa.)
14. These bristles are well developed. Frons at most twice as wide as one eye

Tephritopyrgota Hendel 1914.
15. Second vein without an appendage. Scutellum pubescent with two pairs of marginal bristles. (9 species)

Subgen. Tephritopyrgota Hendel 1914. (T. passerina Hendel 1914, South Africa.)
15. Second vein with a short appendage. Scutellum bare with two pairs of marginal bristles. Thoracic calypter longer thar the upper one. (Only 1 species)...

Subgen. Stypina Enderlein 1942.
[S. vesicaíoria (Hendel 1913), East Africa.]
13. Wing without a reticulate pattern.
16. Maxillary palpi unusually elongated, linear and compressed. Second vein with a long appendage. Wings wide and hyaline. (ors, $o c ; 2 n p i, p a, 1 d c$, other bristles inconspicuous.) (2 species)

Siridapha Enderlein 1942. (S. ophionea Enderlein 1942, Cameroon.)
16. Maxillary palpi normally short. Scutellum pubescent, with two pairs of marginal bristles.
17. Postpedicel shorter than twice as long as wide. Basal region of postabdomen wide (abdomen not petiolate). Vertex sharply carinate

Adapsilia Waga 1842.
18. Distal region of prebasal section of fourth vein ( $m_{1}$ ) convex towards discoidal cell. ( 6 African species)

Subgen. Adapsilia Waga 1842.
(A. coarctata Waga 1842, Europe.)
18. Prebasal section of $m_{1}$ straight. Genae, and parafacial plates in front of the eyes, very wide. ( 2 species) ...

Subgen. Euthioza Enderlein 1942. (E. madagascariensis Enderlein 1942, W. Africa.)
17. Postpedicel more than twice as long as wide. Basal region of preabdomen narrow (abdomen conspicuously petiolate). Second vein with an appendage. (Only 1 species) ... Peltodasia Enderlein 1942.
(P. vespiformis Enderlein 1942, W. Africa.)
11. Costal vein ending at, or slightly beyond, third vein $\left(r_{4+5}\right)$. Antennal foveae separated by a vertical carina. Scutellum pubescent, with two pairs of marginal bristles.
19. Wing with reticulate pattern, brown with many hyaline spots and dots. Narrow antennal foveae ending approximately at median region of mesofacial plate. (Syn. : Rhagostira Enderlein 1942.) (6 species) ................ Tephritocampylocera Hendel 1934.
(T. carbonaria Hendel 1934, South Africa.)
19. Wing never reticulate, mostly hyaline, with or without some dark brown markings. Antennal foveae attaining at leasi inferior fourth of mesofacial plate, or mouth margin ...... Campylocera Macquart 1843.
20. Fourth vein $\left(m_{1}\right)$ complete, attaining wing-margin. Second vein with or without an appendage. 2 sc. (4 species)

Subgen. Clemaxia Enderlein 1942.
(C. angustipennis Enderlein 1942, W. Africa.)
20. Fourth vein evanescent apically, or abbreviated. not attaining margin of wing. Scutellum with 2 or 3 (Syn. : Hexamerinx Enderlein 1942) pairs of marginal bristles. ( 20 species)

Subgen. Campylocera Macquart 1843.
(C. ferruginea Macquart 1843, W. Africa.)

## Subfamily PYRGOTINAE.

Tribe PYRGOTINI.
Genus CONGOPYRGOTA n. gen.
Besides Platynostira Enderleiv, Congopyrgota is the second known monotypic genus of Ethiopian Pyrgotini with dorsoapically pointed postpedicel and it may easily be distinguished from the other genera by the characters given in the key and in the original description of the type species.

Antennal foveae attain mouth-margin, and are separated by a conspicuous, sharp vertical carina. Vertex without a sharp transverse carina. Head and thorax with almost complete chaetotaxy. Third vein ( $r_{4+5}$ ) setulose at base on the superior wing-surface.

If the type species did not have a dorsoapically conspicuously pointed postpedicel, it could be identified as a Prohypotyphla species since in its general characters it stands very close to this genus.

Type species : C. hyalipennis n. sp.

## 1. - Congopyrgota hyalipennis n . sp.

(Figs. 1-5.)
Female : Body $7,1 \mathrm{~mm}$ long; wing $7,8 \mathrm{~mm}$ long and $3,0 \mathrm{~mm}$ wide, 2,6 times longer than wide.

Head : $1,57 \mathrm{~mm}$ Jong, $1,93 \mathrm{~mm}$ wide and $1,73 \mathrm{~mm}$ high, testaceous yellow, except for the dull reddish yellow frontal stripe (mesofrons) and a small brown triangular spot below each eyes on the parafacial plate (figs. 1-2). The short and wide ocellar plate (without ocelli), the cerebral plate, parafacial and mesofacial plates are shining. Frons betweer the eyes slightly impressed, at the vertex $0,61 \mathrm{~mm}$ wide. Vertex without a sharp transverse carina. Face below antennae $0,77 \mathrm{~mm}$ wide, $1 / 2,5$ times as wide as total cephalic width. Eyes in profil slightly obliquely placed, twice as high ( $1,41 \mathrm{~mm}$ ) as long (or wide) ( $0,68 \mathrm{~mm}$ ), slightly wider than the postcranium $(0,54 \mathrm{~mm})$ and more than 4 times higher than the genae ( $0,34 \mathrm{~mm}$ ). Mouth parts testaceous yellow, maxillary palpi wide, falcate (fig. 4).

Antennae testaceous yellow, scape and pedicel darker than postpedicel. Pedicel dorsally 0,52 , ventrally $0,27 \mathrm{~mm}$ long, covered with short and fine, dark brown appressed hairs; postpedicel dorsally 0,54 , ventrally $0,70 \mathrm{~mm}$ long and $0,27 \mathrm{~mm}$ wide, 2,6 times longer than wide, with a conspicuous pointed dorsoapical tip (fig. 5). Arista bare, basal two thirds yellow, the rest shining brown.

Cephalic bristles black and shining : 1 proclined and slightly divergent ors, 1 closely spaced, erect and divergent oc, 1 widely spaced and strongly
divergent $p v t, 1$ divergent $v t e$ and 1 distinct $g e$, all relatively short and fine, subequal in length, the ors pair however is the shortest and the pot pair is the largest of all; 1 erect and slightly convergent $v t i$, twice as long as the pvt bristles. ors placed conspicuously in front of level of the oc pair.

Thorax : $2,5 \mathrm{~mm}$ long, $2,2 \mathrm{~mm}$ wide and $2,6 \mathrm{~mm}$ high, testaceous yellow, mesonotum darker; faintly lustrous, only the mediotergite shining. Thoracic bristies black and shining, relatively long and strong : 1 scapular (scap,


Figs. 1-3. - Congopyrgota hyalipennis n. gen., n. sp. $\circ$.
1: lateral view of head; 2: anterior view of head; 3: dorsal view of oviscape. Abbreviations: (head :) af = antennal foveae of mesofacial plate; gv = genovertical plate; pf = parafacial plate; (bristles:) oc = ocellar; ors = upper orbital; pvt = postvertical; vti = inner vertical bristles; (antennae:) $s=$ scape; $p=$ pedicel; $\mathrm{pp}=$ postpedicel with the arista. (40x).
anterior pair of presutural dorsocentrals), as long as the prescutellar dr pair; $2 n p l$ equal in length; $1 s a$, placed nearly in the anterior fourth of the distance between transverse suture and level of $i a ; 1 i a ; 1$ pa, placed midway between level of $d c$ and that of $i a$ pairs; $2 s c$, basal pair slightly convergent, apical pair crossing; distance between both apical bristles slightly larger than the one between a basal and an apical bristles; on the pleurae 1 mpl and 1 st, placed among long black bristle-hairs. The scap and $d c$ bristles are the shortest, and the apical pair is the longest of all. Scutellum haired on disc. $h$ and prsut bristles lacking.

Legs and coxae brownish yellow, tibiae and tarsi darker because of the dense dark brown, golden-brown shining, short and appressed hairs; femora with fine and appressed, short brown-black hairs and black bristles. All femora with a sparse posteroventral row of erect bristles, of which the longest is the basal one, the following (proximomedian) bristle is well developed but the rest is inconspicuous, erect hair-like. Fore leg : femur 2,20, tibia $2,04 \mathrm{~mm}$ long. Mid leg $7,30 \mathrm{~mm}$ long (femur 2,48,
tibia 2,50, tarsi $2,32 \mathrm{~mm}$ ); hind leg $7,03 \mathrm{~mm}$ long (femur 2,54, tibia 2,27, tarsi $2,12 \mathrm{~mm}$ ). Empodium bare and relatively long. Hind tibiae without a dorsal notch.

Wings hyaline, veins brownish yellow, pterostigma long and narrow wedge-shaped. Third vein at base with 5-6 spinules on upper surface. Vein closing anal cell ( $c u_{2}$ ) conspicuously flexed at it posterior third, the lower outer angle of the cell distinctly produced. Costal vein ending a little beyond apex of third vein; tip of fourth vein almost attaining wing margin; second vein without appendage. First costal section (pterostigma) 1,13, second 2,30, third 1,45 (distance between tips of third and fourth veins 0,88 ) mm long. Prebasal section of fourth vein $\left(m_{1}\right) 2,04$, median 0,73 , and ultimate $2,04 \mathrm{~mm}$ long; $t p$ almost twice as long ( $1,04 \mathrm{~mm}$ ) as the median section, and $t a$ placed nearly in the apical fourth of the discoidal cell. Alula well developed, lobate. The wing calypter is relatively narrow, with a fringe of fine dark brown marginal cilia. Thoracic calypter narrow lobate, without cilia but with a microscopically short and fine, shining golden yellow pubescence. Halteres reddish yellow.

Preabdomen $2,0 \mathrm{~mm}$ long and on the sixth segment $1,27 \mathrm{~mm}$ wide, slightly conical but not petiolate. Tergites black with a metallic blue sheen; basal sternites brown-black, apical ones dark brown to yellowish red. Tergites densely covered with short and fine, appressed brownish shining black hairs; last three tergites on both sides with long, shining black marginal bristles. $1+2$ syntergite more than half as long ( $1,18 \mathrm{~mm}$ ) as total length of preabdomen, third tergite 0,34 , fourth 0,25 , fifth 0,20 , and sixth $0,06 \mathrm{~mm}$ long. $1+2$ synsternite nearly as long as wide.

Oviscape subshining brownish red, except for the proximal region which is dorsally black with metallic blue shine; it is densely covered with erect and relatively long, shining black bristle-hairs. Oviscape (fig. 3) from a wide and swollen base conical, tapering into a narrow, subcylindrical, downward curved apex; it is conspicuously longer than the preabdomen; dorsal length 4,61 , ventral length 2,27 , basal width 2,38 and apical width $0,41 \mathrm{~mm}$.

Holotype, female: Karibwe, affl. Lusinga, 1.700 m, 8-10.III.1947 (8a).

Genus PRohypotyphla Hendel.
2. - Prohypotyphla (Prohypotyphla) ochracea Hendel.

Two female specimens are in the collection from Lusinga, 1.760 m , 1-8.XII. 1947 ( $1123 a$ and $1131 a$ ), which the author was able to determine only as $P$. ochracea Hendel (1934, 151). This fact do not excludes the possibility that these specimens represent a distinct new species since ochracea was described in two short sentences only in the key, from Sierra Leone.


Figs. 4-15.

Female : Body $6,0-6,4 \mathrm{~mm}$ long (without oviscape); wing $6,02-6,88 \mathrm{~mm}$ long and $2,27-2,73 \mathrm{~mm}$ wide, $2,5-2,6$ times as long as wide.

Head : $1,27-1,48 \mathrm{~mm}$ long, $1,34-1,73 \mathrm{~mm}$ wide and $1,34-1,57 \mathrm{~mm}$ high, testaceous yellow, except for the dull and chiefly reddish brown frontal stripe (mesofrons), the upper half of the shining parafacial plates, the well developed ocellar plate and the mesofacial plate, which are yellowish brown to brownish yellow (figs. 6-7). Frons between the eyes slightly impressed, at vertex $0,54-0,54 \mathrm{~mm}$ wide. Vertex without a sharp transverse carina. Face below antennae $0,70-0,72 \mathrm{~mm}$ wide, slightly less than one half as wide as total cephaiic width. Eyes in profil slightly obliquely placed, $0,61-$ $0,73 \mathrm{~mm}$ long and $1,04-1,27 \mathrm{~mm}$ high, approximately 1,7 times higher than long ( $=$ wide), considerably wider thar the postcranium ( $0,41-0,52 \mathrm{~mm}$ ) and $3-4$ times higher than the genae ( $0,30-0,32 \mathrm{~mm}$ ). Mouth parts brownish yellow but apex of the subfalcate (nearly straight) maxillary palpi (fig. 8) brownish red.

Antennae : scape and pedicel yellowish brown, postpedicel elongated oval, reddish yellow with apical region usually darkened; pedicel dorsally $0,45-0,52$, ventrally $0,25-0,30 \mathrm{~mm}$ long, covered with short dark brown appressed hairs; postpedicel dorsally $0,45-0,52$, ventrally ( $=$ total length) $0,61-$ $0,68 \mathrm{~mm}$ long and $0,27-0,27 \mathrm{~mm}$ wide, $2,2-2,5$ times as long as wide. Arista bare, $1,1-1,2 \mathrm{~mm}$ long, goldenly shining dark brown, except the yellow thickened basal third.

Cephalic bristles shining black : 1 proclined and slightly divergent ors, 1 rather closely spaced, divergent oc, 1 widely spaced and strongly divergent pvt and vte; the vte pair is the shortest of all, the rest is subequal; 1 erect and slightly convergent $v t i$, nearly 3 times longer than the afore-mentioned weak bristles; ge inconspicuous among many long bristle-like hairs; ors placed slightly but conspicuously in front of level of the oc bristles.

Thorax : $2,0-2,3 \mathrm{~mm}$ long, $1,5-1,6 \mathrm{~mm}$ wide and $1,9-2,2 \mathrm{~mm}$ high, brownish yellow to yellowish brown, mesonotum darker, lustrous, nearly shining. Thoracic bristles shining black : 2 pair of scap, half as long as

## EXPLANATION OF FIGURES 4-15:

Figs. 4, 5. - Congopyrgota hyalipennis n. gen., n. sp. $\%$.
4 : interior surface of right maxillary palpi; 5 : exterior surface of right antenna. ( $40 \times$ ). Figs. 6-8. - Prohypotyphla (Prophypotyphla) ochracea Hendel, $\%$.
6: lateral view of head; 7: dorsal view of head; 8 : interior face of left maxillary palpi. ( $40 \times$ ).

Figs. 9-15. - Prohypotyphla (Prohypotyphla) luteola n. sp.
9 : lateral view of head (ô); 10 : anterior view of head ( $\%$ ); 11 : exterior face of right antenna ( $\delta$ ); 12: interior surface of right maxillary palpus ( $\circ$ ); 13: dorsal view of male postabdomen; 14: lateral view of male postabdomen (from the right side»; 15 : apex of oviscape, lateral view.
Abbreviations: $\mathrm{ae}=$ aedeagus (penis and appendages); $\mathrm{c}=$ cerci; $\mathrm{ep}=$ epandrium; $\mathrm{ss}=$ surstyli; $5 \mathrm{t}=$ fifth tergite; $7+8 \mathrm{t}=7+8$ snytergite; $6 \mathrm{st}=$ sixth sternite. $\quad(40 \times)$.
the prescutellar $d c$ pair; in the $d c$ lines the mesonotal hairs are twice as long as elsewhere; $1 h, 2 n p l$ equal in length; 1 sa placed in the anterior fourth of the distance between transverse suture and ia; 1 pa, placed midway between levels of $d c$ and ia bristles; $2 s c$, basal pair slightly convergent, distance between both apical bristles slightly longer than the distance between a basal and an apical bristle; scap and $h$ bristles are the shortest, and apical $s c$ the largest of all. On the pleurae there are $1 \mathrm{mpl}, 1 \mathrm{ptpl}$ and $1 s t$, placed among many black bristle-hairs; $s t$ is the shortest of the pleural bristles, $m p l$ and $p t p l$ are subequal in length. Scutellum with some appressed hairs on the disc margin. prsut bristle lacking.

Legs : coxae and femora testaceous yellow, tibiae and tarsi dark brown, densely covered with shining brown-black appressed hairs. Femora without conspicuous bristles, only with rather long, sparse black hairs. Ventroapical region of metacoxae with a small convex prominence, densely covered with reclined hairs, as in P. (Hypotyphlina) saegeri (fig. 20). Hind tibiae without dorsal notch. Fore leg $4,97-5,61 \mathrm{~mm}$ long (femur 1,77-2,00, tibia 1,63-1,93, tarsi 1,57-1,68 mm); mid leg $5,73-6,50 \mathrm{~mm}$ long (femur 1,95-2,34, tibia 2,092,43 , tarsi 1,70-1,73 mm); hind leg $5,52-6,00 \mathrm{~mm}$ long (femur 1,98-2,23, tibia $1,88-2,04$, tarsi $1,66-1,73 \mathrm{~mm}$ ).

Wings : hyaline, only the very narrow and long subcostal cell (pterostigma), the apical third to fourth of the marginal ( $\boldsymbol{R}_{1}$ ) cell, and a linear margin of the wing between tips of third and fourth veins, yellowish brown. Vein closing anal cell ( $c u_{2}$ ) conspicuously flexed at its posterior third. Tip of fourth vein $\left(m_{1}\right)$ weakened, attaining wing-margin; second vein without an appendage, third vein with $7-8$ black setulae at base on upper wingsurface. First costal section 1,02-1,13, second $1,85-2,18$, third 1,13-1,23, and the distance between tips of third and fourth veins $0,80 \mathrm{~mm}$ long; prebasal section of $m_{1} 1,48-1,57$, median $0,68-0,82$, and ultimate $1,48-1,73 \mathrm{~mm}$ long; tp $(0,86-0,98 \mathrm{~mm})$ longer than the median section between both cross-veins; ta placed approximately in the apical third of the discoidal cell. Alula well developed. Calyptera narrow, nearly linear; wing calypter with a fringe of fine and short, densely placed dark brown ciliae. Halteres reddish yellow.

Preabdomen : $1,6 \mathrm{~mm}$ long and on the sixth tergite $1,18 \mathrm{~mm}$ wide, subconical. Tergites subshining, rather densely covered with relatively long, fine and appressed brown-black hairs, except basal half of $1+2$ syntergite; distal three to four tergites with long marginal and lateral hairbristles. $1+2$ syntergite brownish yellow and conspicuously longer $(0,88 \mathrm{~mm})$ than the four distal yellowish brown tergites together $(0,68 \mathrm{~mm})$. Third tergite 0,23 , fourth 0,20 , fifth 0,16 and sixth $0,09 \mathrm{~mm}$ long. $1+2$ synsternite conspicuously longer than wide and as testaceous yellow as the fifth and sixth sternites; third and fourth sternites and lateral regions of the fifth, dark brown. Lateral (intrasclerital) membranes testaceous yellow. Third and fourth sternites apparently fused.

Oviscape shining brownish yellow, basal and dorsal regions yellowish red to yellowish brown, covered with rather erect black hairs. Oviscape in both specimens deformed, it may nevertheless be seen that it tapers from a wide base conically into a downwards curved, short and subcylindrical apical region; it is conspicuously longer than the abdomen; dorsal length 2,27-2,77, ventral length $1,48-1,93$, basal width $1,13-1,48$, apical width $0,38-0,45$, very similar in shape to that of Congopyrgota hyalipennis.

## 3. - Prohypotyphla (Prohypotyphla) luteola n. sp.

I was not able to identify the examined specimens as any of the described species of the genera Prohypotyphla, or Campylacera (with Clemaxia) since the single setula at the base of the third wing-vein may easily be overlooked.

Male : Body $6 \frac{1}{1 / 4} \mathrm{~mm}$ long; one wing twisted, the other absent.
Head : $1,36 \mathrm{~mm}$ long, $1,63 \mathrm{~mm}$ wide and $1,50 \mathrm{~mm}$ high (figs. $9-10$ ), brownish yellow except for the dull and mostly brown frontal stripe; upper half of parafacial plates, carina and inferior region of mesofacial plate, yellowish brown; hind region of ocellar plate shining dark brown. Frons between the eyes slightly impressed, at vertex $0,59 \mathrm{~mm}$ wide. Vertex without a sharp transverse carina. Face (parafacial plates + mesofacial plate) below the antennae $0,82 \mathrm{~mm}$ wide, one half as wide as total cephalic width. Eyes in profil obliquely piaced, $0,73 \mathrm{~mm}$ long and $0,95 \mathrm{~mm}$ high, only 1,3 times higher than wide, slightly wider than postcranium ( $0,48 \mathrm{~mm}$ ) and only 1,6 times higher than the genae $(0,59 \mathrm{~mm})$. Mouth parts brownish yellow, labella darker, maxillary palpi reddish yellow, slightly falcate, nearly straight (fig. 12).

Antennae : yellowish brown (fig. 11), only basal region of postpedicel testaceous yellow. Pedicel dorsally 0,48 , ventrally $0,27 \mathrm{~mm}$ long, covered with short black hairs; postpedicel oval, compressed, dorsally 0,46 , ventrally $0,59 \mathrm{~mm}$ lorig and $0,25 \mathrm{~mm}$ wide, 2,3 times as long as wide. Arista bare, $1,0 \mathrm{~mm}$ long, shining dark brown except the thickened yellow basal fourth.

Cephalic bristles shining black : 1 proclined and parallel ors, 1 closely spaced divergent $v t e, 1$ widely spaced and divergent $p v t$ and $v t e$, all relatively short and weak but the shortest is the vte and the longest is the oc pair; the slightly convergent vti pair twice as long as the oc bristles. ge inconspicuous among long bristle-hairs; ors placed slightly but conspicuously in front of the oc bristles.

Thorax $2,2 \mathrm{~mm}$ long, $1,8 \mathrm{~mm}$ wide and $2,15 \mathrm{~mm}$ high, brownish yellow to yellowish brown. Thoracic bristles shining black : 2 pairs of short but conspicuous scap; 2 closely spaced $h$, subequal in length; 2 npl equal in length; 1 sa placed in the anterior third of distance between transverse suture and level of $i a$ bristles; 1 pa placed midway between $d c$ and ia bristles; $2 s c$, distance between both apical bristles slightly longer than
the one between a basal and an apical bristle; scap bristles are the shortest and apical sc bristles the longest of all. On the pleurae there are 1 mpl and 1 st, both relatively short. Scutellum with some appressed hairs on the disc. prsut and ptpl bristles absent in this species.

Legs : coxae and femora testaceous yellow; tibiae and tarsi dark brown, densely covered with shining brown-black appressed hairs. Femora without conspicuous bristles, with sparse and rather long black hairs. Ventroapical region of metacoxa with a small convex prominence, densely covered with reclined hairs, as in $P$. ochracea. Hind tibiae without dorsal notch. Fore leg 5,30 mm long (femur 1,85, tibia 1,82, tarsi $1,63 \mathrm{~mm}$ ); hind leg $5,90 \mathrm{~mm}$ long (femur 2,20 , tibia 2,69 and tars $1,61 \mathrm{~mm}$ ).

Wings : hyaline with brown veins; the long and narrow pterostigma yellow, apical third to fourth of the marginal cell $\left(\boldsymbol{R}_{1}\right)$, a narrow margin of the wing between tips of third and fourth veins, and the linear border of the posterior cross-vein $(t p)$, are brown. Third vein at base with a single black setula on the superior surface. Tip of fourth vein $\left(m_{1}\right)$ weakened, nearly attains wing-margin. Second vein without an appendage. Calypters nearly linear, wing calypter with a dense fringe of fine and short, dark brown cilia. Halteres reddish yellow.

Preabdomen : $2,8 \mathrm{~mm}$ long and on the fourth tergite $1,16 \mathrm{~mm}$ wide, elongated oval. Tergites shining dark brown to blackish brown, except for the yellowish brown $1+2$ syntergite; they are covered with relatively long, fine and appressed, shining brown-black hairs, except basal half of $1+2$ syntergite. $1+2$ syntergite 1,07 , third and fourth tergites each 0,45 , fifth tergite $1,00 \mathrm{~mm}$ long. $1+2$ synsternite considerably longer than wide at base. Sternites and lateral menıbranes brownish yellow to yellowish brown in color.

Postabdomen brownish yellow to yellowish brown with reddish tinge, shining (figs. 13-14); surstyli short, with truncate apex.

Female : like the male. Body without oviscape $5,4 \mathrm{~mm}$ long; wing $6,77 \mathrm{~mm}$ long and $2,70 \mathrm{~mm}$ wide, 2,5 times longer than wide.

Head : $1,32 \mathrm{~mm}$ long, $1,73 \mathrm{~mm}$ wide and $1,58 \mathrm{~mm}$ high (fig. 10). Face below the antennae $0,80 \mathrm{~mm}$ wide. Frons at vertex $0,61 \mathrm{~mm}$ wide. Eyes in profil $0,85 \mathrm{~mm}$ long and $1,16 \mathrm{~mm}$ high, 1,3 times higher than long (wide), nearly twice as wide as the postcranium ( $0,45 \mathrm{~mm}$ ) and 3 times higher than the genae ( $0,36 \mathrm{~mm}$ ). Antennae lacking.

Thorax $2,1 \mathrm{~mm}$ long, $1,8 \mathrm{~mm}$ wide and $2,1 \mathrm{~mm}$ high. Legs and wings as in the male. Fore leg $5,45 \mathrm{~mm}$ long (femur 1,91 , tibia 1,91 , tarsi $1,63 \mathrm{~mm}$ ); mid leg $6,34 \mathrm{~mm}$ long (femur 2,25 , tibia 2,34 , tarsi $1,75 \mathrm{~mm}$ ), and hind leg $5,95 \mathrm{~mm}$ long (femur 2,22, tibia 2,07, tarsi $1,66 \mathrm{~mm}$ ). First costal section 1,25 , second 2,00 , third 1,23 and the distance between tips of third and fourth veins $0,88 \mathrm{~mm}$. Prebasal section of $m_{1} 1,63$, median 0,75 and ultimate approximately $1,70 \mathrm{~mm}$ long, $t p$ considerably longer ( $0,98 \mathrm{~mm}$ ) than median section, and ta situated approximately in the distal third of discoidal cell.

Preabdomen $1,6 \mathrm{~mm}$ long and on the third tergite $1,38 \mathrm{~mm}$ wide. $1+2$ syntergite considerably longer ( $1,02 \mathrm{~mm}$ ) than the four distal tergites together ( $0,69 \mathrm{~mm}$ ). Third tergite 0,27 , fourth 0,20 , fifth 0,18 , and sixth $0,04 \mathrm{~mm}$ long.

Oviscape feebly chitinized and in this specimen deformed, its shape however seems to be similar to that of the oviscape of P. ochracea; it is shining yellowish red to brownish yellow with sparse erect shining black hairs. Oviscape considerably longer than the preabdomen, dorsally 2,77, ventrally $1,75 \mathrm{~mm}$ long, at the base 1,57 , at the apex $0,41 \mathrm{~mm}$ wide. Figure 15 shows the tip of the oviscape with the protruding median part of ovipositor.

Holotype, male, and allotype, female : Lusinga, 1.760 m , 1-8.XII. 1947 (1123 $a$ and 1131a).

## 4. - Prohypotyphla (Hypotyphlina) saegeri n. sp.

The single female specimen belongs undoubtedly to the monotypic genus Hypotyphlina of Enderlein which I accepted here temporarily as a subgenus of Prohypotyphla; it certainly represents a distinct species since $H$. caudata (Hendel 1914, 99-100, from Golden Coast) has the oviscape "doppelt so lang wie der ganze Hinterleib, sehr stark ventral eingebogen ".

Female : Body (without oviscape) $8,2 \mathrm{~mm}$ long; wing $10,45 \mathrm{~mm}$ long and $3,86 \mathrm{~mm}$ wide, 2,7 times longer than wide.

Head : $1,70 \mathrm{~mm}$ long, 2,00 wide and $1,89 \mathrm{~mm}$ high, entirely testaceous yellow (figs. 16-17); parafacial plates, mesofacial plate and the short and wide ocellar plate shining, frontal stripe and lower part of genae below "genal orbits" (= parafacial plate) dull, and postcranium faintly lustrous. Antennal foveae attaining mouth-margin and are separated by a conspicuous sharp carina. Frons between the eyes slightly impressed, at the vertex $0,73 \mathrm{~mm}$ wide. Face below the antennae $0,91 \mathrm{~mm}$ wide, nearly one half as wide as the head. Eyes in profil slightly obliquely placed, $1,02 \mathrm{~mm}$ long ( $0,80 \mathrm{~mm}$ wide) and $1,36 \mathrm{~mm}$ high, 1,7 times as high as wide, slightly wider than the postcranium $(0,57 \mathrm{~mm})$ and nearly 3 times higher than the genae ( $0,48 \mathrm{~mm}$ ). Mouth parts testaceous yellow, labella brownish. Maxillary palpi nearly straight (fig. 19).

Antennae : scape and pedicel yellowish brown; postpedicel elongated oval, reddish yellow with apical half brown. Pedicel dorsally 0,70 (=total length), ventrally $0,45 \mathrm{~mm}$ long, covered with appressed, shining brownblack hairs; there is a conspicuous, long dorsoapical bristle. Postpedicel dorsally 0,59 , ventrally $0,80 \mathrm{~mm}$ long and $0,32 \mathrm{~mm}$ wide, 2,5 times longer than wide (fig. 18). Arista bare, $1,66 \mathrm{~mm}$ long, yellow with golden shine.

Cephallic bristles shining black, relatively well developed : 1 proclined and slightly divergent ors; the closely spaced and divergent oc pair is


Figs. 16-23.
represented in this species only by short and weak hairs, much shorter and finer than the majority of the frontal hairs; we may say therefore that oc bristles are absent as macrochaetae; 1 widely spaced and divergent pvt, 1 divergent and reduced (very short and hair-like) vte; vte is the shortest and pvt is the longest of these pairs; 1 long and strong vti, 1 rather conspicuous ge. ors placed conspicuously in front of the apex of the short and wide ocellar plate.

Thorax : 2,8 mm long, $2,2 \mathrm{~mm}$ wide and $2,9 \mathrm{~mm}$ high, entirely subshining testaceous yellow, mesonotum slightly darken in color, with reddish tinge. Thoracic bristles rather long, shining black: 1 short and weak $h$, shorter and weaker than the 1 scap pair and considerably shorter than the anterior $n p l ; 2 n p l$, posterior bristle longer than the anterior one; 1 sa, placed approximately in the anterior third of distance between transverse suture and $i a ; 1 p a$, placed nearly in line with the $d c$ pair; posterior $n p l$, $s a, p a, i a, d c$, the nearly parallel basal $s c$, all subequal in length; apical $s c$ divergent with apical third parallel, slightly longer than the afore-mentioned pairs; distance between both apical bristle conspicuously shorter than the distance between a basal and an apical bristle. On the pleurae there are $1 \mathrm{mpl}, 1 \mathrm{ptpl}$ and 1 st bristles, all conspicuous among short black bristle hairs; ptpl is the longest and $s t$ is the shortest of all. prsut absent.

Legs : entirely testaceous yellow but tibiae and tarsi appear to be darker colored (yellowish brown) since they are much more densely covered with yellowish shining dark brown appressed hairs than the rest. Hind legs lacking. Fore and mid femora with a very sparse posteroventral row of erect black bristles, of which the longest and strongest is the basal one, the rest developed only as rather short bristle-hairs, but the apical $4-5$ are short but strong and conspicuous spinules. Ventroapical region of metacoxae with a small, convex prominence, densely covered with reclined hairs (fig. 20) as in P. luteola and ochracea. Fore leg $8,49 \mathrm{~mm}$ long (femur 2,82, tibia 2,63, tarsi $3,04 \mathrm{~mm}$ ); mid leg $9,30 \mathrm{~mm}$ long (femur 3,16, tibia 3,34, tarsi $2,80 \mathrm{~mm}$ ).

Wings : hyaline but subcostal cell (pterostigma) yellowish brown; marginal cell $\left(\boldsymbol{R}_{1}\right)$ brownish yellow tinged; the rest of the costa, and the $t p$ with narrow, brownish yellow border. Third vein $\left(r_{4+5}\right)$ near the basis with a single black setula on upper wing-surface. Second vein ( $r_{2+3}$ ) approximately at its distal fourth with a conspicuous appendage $\left(r_{3}\right)$. Ultimate section of fourth vein $\left(m_{1}\right)$ conspicuously weakened, nearly

## EXPLANATION OF FIGURES 16-23:

Figs. 16-23. - Prohypotyphla (Hypotyphlina) saegeri n. sp. ㅇ.
16 : lateral view of head; 17 : dorsal view of head; 18 : interior face of left antenna; $19:$ exterior face of right maxillary palpus; 20 : exterior view of left metacoxa and trochanter, with the convex anteroventral protuberance; 21 : dorsal view of oviscape; 22: lateral view of abdomen; 23: lateral view of the tip of oviscape. ( $40 \times$, excepting 21 and 22 figs. which are $25 \times$ enlarged.)
attaining wing margin. First costal section 1,59 , second 3,07 , third $2,13 \mathrm{~mm}$ long. Prebasal section of $m_{1} 2,54$, median 1,11, and ultimate $2 ; 18 \mathrm{~mm}$ long; $t p$ longer ( $1,36 \mathrm{~mm}$ ) than the median section between both cross-veins; $t a$ placed slightly distad to apical third of discoidal cell. Alula rather narrow. Both calypters very narrow, linear; wing calypter with a fringe of fine and short, densely spaced, dark brown ciliae. Halteres testaceous yellow, knob brownish.

Preabdomen elongated oval, $2,8 \mathrm{~mm}$ long an on the third tergite $1,54 \mathrm{~mm}$ wide. Unique species of the four examined which in the female as long preabdomen has as the thorax. Tergites lustrous testaceous yellow to reddish yellow, covered with suberect, relatively long and fine, brown-black hairs; all tergites with long and strong hind marginal bristles, and with longer and stronger bristles on the lateral margins. $1+2$ syntergite slightly longer $(1,54 \mathrm{~mm})$ than the four distal tergites together ( $1,44 \mathrm{~mm}$ ); third tergite 0,61 , fourth 0,41 , fifth 0,27 and sixth $0,15 \mathrm{~mm}$ long. $1+2$ syntergite nearly twice as long as wide at base. Lateral membranes brownish yellow.

Oviscape shining testaceous yellow, elongated conical-cylindrical (figs. 2122) with the distal half slightly downwards curved, sparsely covered with erect, reddish shining brown-black hairs. Nearly twice as long as the preabdomen; dorsal length 5,13 , ventral length 3,85 , basal width 1,20 , apical width $0,30 \mathrm{~mm}$. Membraneous median part of ovipositor whitish yellow, projecting upwards from tip of oviscape (fig. 23); apex of oviscape with a conspicuous short conical, ventroapical protuberance which has the tip rounded.

Holotype, female : Mulana ( 1.810 m ), 15.III. 1948 (1387a).
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## PLATE.



Wings of Pyrgotidae spp. :
(Photo: M. L. ACZELL.)
A, Congopyrgota hyalipennis n. gen., n. sp.;
B, Prohypotyphla (Prohypotyphla) luteola n. sp.;
C, Prohypotyphla (Hypotyphlina) saegeri n. sp.

# INDEX <br> ARRANGED ALPHABETICALLY. 

## GENERA AND SUBGENERA.




[^0]:    (1) Vol 4, pp. 161-18ł; vol. 5, pp. 1-70; vol 6, pp. 1-38, São Paulo, 1956.

