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NEW SPECIES OF PHOROCERA (TACHINIDAE) FROM AFRICA (DIPTERA)

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In this contribution I have used the generic limits of *Phorocera* in a wide sense. From a study of the material before me it does not seem possible at the present time to limit clearly the various groups of species that belong to the genus, since each group possesses characters that clearly connect it with one or more of the other species groups. A number of generic names have been used for African species but it is doubtful if some of these actually apply to species occurring in the region.

A number of species not included in the key have been described but these can scarcely be identified without study of the types.

PHOROCERA DESVOIDY

DESVOIDY, 1830, Mem. Acad. Roy. Sci. Inst. France, II, p. 131.

Ctenophorocera BRAUER AND BERGENSTAMM, 1892, Denkschr. Akad. Wien, LVIII, p. 342.

Pseudoperichaeta BRAUER AND BERGENSTAMM, 1892, Denkschr. Akad. Wien, LVI, p. 92 (*laevis* Villeneuve doubtfully belongs with the genotype).

Campylocheta RONDANI, 1859, Dipt. Ital. Prod., III, p. 169. (This name has been applied to a number of metallic green species but they do not belong with the genotype.)

Phorocera blepharipus Brauer and Bergenstamm

Ctenophorocera blepharipus BRAUER AND BERGENSTAMM, 1892, Denkschr. Akad. Wien, LVIII, p. 342.

? *Phorocera sarcophagaeformis* JAENNICKÉ, 1867, Abh. d. Senckenb. Ges., VI, p. 381.

This is a common and widespread species that shows considerable variation in size and density of the pollen. Townsend places *sarcophagaeformis* as the genotype of *Ctenophorocera* but does not list *blepharipus* as a synonym. I am not certain that the two names apply to the same species so retain *blepharipus* for the present.

Phorocera laevis Villeneuve

Pseudoperichaeta laevis VILLENEUVE, 1932, Rev. Zool. Afr., XXI, p. 285.

Phorocera bolyodes CURRAN, 1933, Ann. Mag. Nat. Hist., XII, p. 166.

I do not think that this can be *Pseudoperichaeta* in the strict sense. It is more closely related to a number of other species which I place in *Phorocera* than to the genotype of *Pseudoperichaeta*.

Phorocera experta Brauer and Bergenstamm

This name apparently applies to a species that has not been described. The authors listed it at the time they described *blepharipus*, crediting the species to Wiedemann. It may be recognized by the characters given in the key.

TABLE OF SPECIES

- 1.—Sternopleurals 1-1.....2.
Sternopleurals 2-1.....5.
- 2.—Occiput clothed with black or brown pile.....4.
Occiput clothed with whitish pile...3.
- 3.—Fourth abdominal segment practically all pollinose.....*senex* Curran.
Fourth abdominal segment pollinose on only the basal third.....
.....*ugandana*, n. sp.
- 4.—Ocellars scarcely longer than the surrounding hairs; wings brown in front and along the veins.....
.....*sallax* Curran.
Ocellars twice as long as the surrounding hairs; wings cinereous hyaline.
.....*nestor* Curran.
- 5.—Second abdominal segment with a pair of discals that are strongly differentiated from the hair even though it is erect.....6.

- Second segment without strongly differentiated discals.....20.
- 6.—Three postsutural dorsocentrals....7.
Four postsutural dorsocentrals....9.
- 7.—Color metallic green and violaceous...
.....*violacea* Curran.
Color blackish.....8.
- 8.—Frontal vitta scarcely half as wide as parafrontal.....
.....*Phorinia verritus* Walker.
Frontal vitta much over half as wide as parafrontal.....*sadista*, n. sp.
- 9.—Femora and tibiae reddish.....10.
Femora black or brown, never clearly reddish.....12.
- 10.—Color metallic green.....
.....*pallidipes* Curran.
Color blackish, or the abdomen reddish and with cinereous pollen..11.
- 11.—Abdomen reddish with black median vitta.....*rubrica* Villeneuve.
Abdomen black, the sides of the intermediate segments reddish.....
.....*cuthbertsoni*, n. sp.
- 12.—Color bright metallic green or bluish...
.....13.
Color not metallic or if so chiefly obscured by pollen.....14.
- 13.—Tibiae dull reddish yellow; abdomen wholly pollinose on all segments from posterior view.*metallica* Bezzi.
Tibiae reddish brown; apical abdominal segments practically without pollen.....*glauca* Karsch.
- 14.—Fourth abdominal segment conspicuously pale pollinose on basal third or more or ventrally.....15.
Fourth segment without distinct pale pollen; third segment, and sometimes the second, with pair of discals, the pile erect on the middle of the segments.....*nudapex*, n. sp.
- 15.—Posterior tibiae closely and evenly ciliate above; anal segment closing slit-like.....*coerulea* Jaennicke
Posterior tibiae with widely spaced bristles and hairs of irregular length.....16.
- 16.—Middle tibiae with only one strong anterodorsal bristle.....17.
Middle tibiae with a very strong and one or more weaker anterodorsal bristles.....18.
- 17.—Third abdominal segment pollinose to the apex.....*solitaria*, n. sp.
Third abdominal segment shining black on apical fourth.*selecta*, n. sp.
- 18.—Tibiae bright reddish yellow; front and thorax metallic bluish beneath the pollen.....*bequaerti*, n. sp.
Tibiae at most brownish red, never with strong metallic reflections..19.
- 19.—Fourth abdominal segment wholly pale pollinose; wings usually brown in front except apically.....
.....*venusta* Curran.
Fourth abdominal segment shining black on apical third; wings cinereous hyaline.....*varicornis*, n. sp.
- 20.—Pile of the occiput mostly pale, yellowish to whitish.....21.
Pile of the occiput black, some brownish hairs below behind the mouth...
.....*laevis* Villeneuve.
- 21.—Fourth abdominal segment practically without pollen and strongly contrasting with the preceding segments.....22.
Fourth abdominal segment with at least thin pollen and not contrasting with the preceding segments...23.
- 22.—Third abdominal segment without discals; ocellars not as strong as the weak upper reclinate pair; wings with strong brown tinge except behind.....*nigrocauda* Curran.
Third segment usually with pair of distinct discals; ocellars much stronger than the reclinate pairs; wings not brownish.....22a.
- 22a.—Scutellum reddish on apical three-fourths.....*nitidicauda*, n. sp.
Scutellum black with the apex reddish laterally.....*nudapex*, n. sp.
- 23.—Posterior tibiae evenly and closely long ciliate with one decidedly longer bristle in the row, the bristles separated from each other by less than their basal width in most species.....28.
Posterior tibiae not ciliate above, the bristles of irregular length and spacing.....24.
- 24.—A strong fold giving an appendage-like appearance beyond the bend of the fourth vein.....25.

- No such fold.....27.
- 25.—Third vein bristled almost or quite to the small crossvein...*setertia*, n. sp.
Third vein bristled not more than halfway to the small crossvein...26.
- 26.—Fourth abdominal segment pollinose on basal two-thirds or more; arista microscopically pubescent.....*setosaria*, n. sp.
Fourth abdominal segment pollinose on only the basal half; arista suddenly thinned at the middle.....*setosina*, n. sp.
- 27.—Ocellars long and strong; three strong reclinate orbitals...*nudapex*, n. sp.
Ocellars weak; only one reclinate orbital or the second very weak....*nigrocauda* Curran.
- 28.—Third abdominal segment shining black with at most the basal sixth pollinose.....29.
Third abdominal segment mostly pollinose from some views.....30.
- 29.—Third abdominal segment wholly shining black.....*ethelia*, n. sp.
Third abdominal segment white pollinose on basal sixth or less.....*seminitida* Villeneuve.
- 30.—Marginals on second abdominal segment little more than half as long as the third segment; if doubtful, the anal segment not reddish yellow or the abdomen not reddish with broad median black vitta.....31.
Marginals almost or quite as long as the third segment.....32.
- 31.—Fourth abdominal segment reddish...*ruficauda* Curran.
Fourth abdominal segment black...*blepharipa* Brauer and Bergenstamm.
- 32.—Two pairs of reclinate frontals....33.
One pair of reclinate frontals.....34.
- 33.—Third antennal segment not three times as long as the second.....*clausa*, n. sp.
Third antennal segment at least five times as long as the second.....*majestica*, n. sp.
- 34.—Ocellars weak and hair-like.....*zenia*, n. sp.
Ocellars long and strong.....35.
- 35.—Third antennal segment almost or quite three times as long as the second.....36.
Third antennal segment not 2 1/2 times as long as the second.....39.
- 36.—Abdominal pollen tessellate in certain lights.....*experta* Brauer and Bergenstamm.
Abdominal pollen not tessellate; the third segment without pollen laterally and ventrally.....37.
- 37.—Abdomen with the sides very broadly reddish on the whole length.....*rufolateralis*, n. sp.
Abdomen black, only obscurely reddish on the sides of the intermediate segments.....38.
- 38.—Large, over 10 mm. long; cheeks with seven or more well-differentiated bristles anteriorly...*setigena*, n. sp.
Under 7 mm.; cheeks with three or four weak bristles in front.....*gnu*, n. sp.
- 39.—Two anterodorsal bristles on the middle tibiae.....40.
Three or four anterodorsal bristles on the basal half of the middle tibiae.....42.
- 40.—Abdominal pollen not tessellate.....*divergens* Curran.
Abdominal pollen tessellate.....41.
- 41.—Color blue-black, rather thinly pollinose (♀).....*gnu*, n. sp.
Color appearing more grayish, thickly pollinose.....*experta* Brauer and Bergenstamm.
- 42.—Four anterodorsal bristles on middle tibia.....*tetra*, n. sp.
Only three anterodorsal bristles on middle tibia.....43.
- 43.—Cheeks with a group of eight or more strong bristles on the anterior third.....*metro*, n. sp.
Cheeks without such bristles.....*nyasa*, n. sp.

Phorocera ugandana, new species

Black, the sides of the intermediate segments reddish; two sternopleurals. Length, 11 mm.

MALE.—Head black, white pollinose, the facial depression brownish yellow in ground color. Front half as wide as one eye; thirteen pairs of frontals, four below the base of the antennae, the upper two or three pairs reclinate, but only the upper strong; ocellars not longer than the

shorter frontals; hair moderately abundant and long, coarse toward the frontals. Occiput whitish pilose, with only a few black hairs behind the cilia below. Cheeks about one-seventh as wide as the eye-height, with fairly abundant black hair and a row of bristles below in addition to those along the oral margin. Parafacials gently narrowing below, of average width. Vibrissae slightly above the oral margin, the ridges with eight strong and some weaker bristles on the lower two-thirds. Palpi brown. Antennae missing.

Thorax with cinereous white pollen, the mesonotum thinly pollinose, the black vittae weak. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 1-1; scutellum reddish, with black base and sides, with three pairs of marginals and a strong pair of decussate apicals.

Legs black; middle tibiae with two anterodorsal bristles; posterior tibiae ciliate, without a long bristle. Pulvilli of medium length.

Wings cinereous hyaline; third vein with two bristles basally. Squamae white with pale yellow rim. Halteres mostly reddish.

Abdomen black, the sides of the second and third segments reddish, the third reddish on only the basal half; second and third segments cinereous pollinose on the basal three-fourths, the fourth thinly pale pollinose on the basal third except laterally. First segment with a pair of erect marginals and some erect bristly hairs; second segment with a pair of strong marginals and short, erect, coarse hairs on the basal half in the middle; fourth segment with erect hair that increases in length and forms bristles apically. No sexual patches. Genital opening not slit-like.

HOLOTYPE.—Male, Lake Kibivera, Uganda, June 7, 1911 (C. C. Gowdey), in British Museum of Natural History.

***Phorocera sadista*, new species**

Black, the abdomen with pale pollinose fasciae; third vein bristled to the small cross-vein; abdomen with discals. Length, 6 to 6.5 mm.

FEMALE.—Head black, white pollinose, the front and upper occiput yellowish, the lower part of the facial depression yellow in ground color. Front at vertex about two-thirds as wide as one eye, gently widening anteriorly; seven pairs of frontals, the upper two reclinate, the anterior reclinate very strong; ocellars long and fine; hair sparse, fine; outer verticals two-thirds as long as verticals. Occiput whitish pilose, a single row of black cilia extending to the cheeks. Cheeks about one-seventh as wide as the eye-height, with fine, sparse black hair. Parafacials moderately narrowing below where they are scarcely one-third as wide as the third antennal segment. Vibrissae practically level with the oral margin, the ridges with strong, widely spaced bristles extending almost to the arista. Antennae blackish; third antennal seg-

ment about four times as long as the second, of moderate width; arista thickened on basal third. Palpi brown.

Thorax with cinereous pollen; mesonotum with four black vittae, the median ones broadened and almost united behind the suture, the outer ones interrupted at the suture. Acrosticals, 3-3; dorsocentrals, 2-3 or 3-3; sternopleurals, 2-1; scutellum with three pairs of laterals and small, decussate apicals, from posterior view with the sides broadly pale pollinose.

Legs brownish, the anterior femora cinereous pollinose behind; middle tibiae with a single anterodorsal bristle; posterior tibiae not ciliate. Pulvilli short.

Wings cinereous hyaline; third vein bristled to the anterior crossvein; bend of fourth vein without fold. Squamae white. Knob of halteres brown.

Abdomen black, the basal fourth of the second and half of the third and fourth segments whitish pollinose. Middle of second and third segments with erect hair and with one or two pairs of discals, the fourth with erect bristly hair, a submarginal row and quite weak marginal bristles.

TYPES.—Holotype, female, Durban, Natal, November, 1919. Paratype, female, East London, Natal, May 9, 1923 (H. K. Munro), returned to Mr. Munro.

***Phorocera rubrica* Villeneuve**

Pales rubrica VILLENEUVE, 1932, Rev. Zool. Afr., XXII, p. 285.

Abdomen reddish with an incomplete, broad black median vitta; legs reddish; posterior tibiae ciliate. Length, 9 to 10 mm.

FEMALE.—Head black, the facial depression and ridges reddish; pollen cinereous and white, thin on the front. Front three-fourths as wide as one eye, with eleven to fourteen frontals, the upper pair reclinate, the anterior five or six below the base of the antennae; ocellars and orbitals strong; frontal hair long and moderately abundant. Occiput with whitish pile and with an irregular row of black hairs behind the occipital cilia. Cheeks about one-third the eye-height, with moderately abundant long hair which becomes coarse below. Parafacials narrowing below where they are not quite as wide as the third antennal segment. Vibrissae slightly above the oral margin, the ridges with five or six widely spaced bristles which are interspersed with bristly hairs. Antennae with the basal segments reddish, the third brown and not two and a half times as long as the second, its sides parallel, the apex obtuse; arista thickened on the basal half. Palpi reddish.

Thorax black, the lateral margins behind the suture, posterior calli and scutellum reddish. Pollen cinereous white, rather thin on the mesonotum, the dark vittae narrow and weak. Acrosticals, 3-3; dorsocentrals, 3-4; sterno-

pleurals, 2-1; three pairs of marginal scutellars and a decussate apical pair.

Legs reddish; middle tibiae with three anterodorsal bristles on the basal half; posterior tibiae moderately closely ciliate; pulvilli short.

Wings cinereous hyaline, somewhat yellowish brown in front, especially toward the base. Third vein with three or four basal bristles; no fold at bend of fourth vein. Squamae yellowish. Halteres reddish.

Abdomen reddish, with a wide tapering black vitta extending from the base to the middle of the fourth segment, the pollen whitish, quite evident on the bases and middle of the segments, almost or quite absent on the sides of the intermediate segments (except basally) and on the fourth apically. Second and third segments each with one or two pairs of discs, the fourth with scattered discs which become more numerous ventrally.

Two females, 5 to 7 miles into Kenia Forest, near Luchi R(iver), February 4-10, 1911 (T. J. Anderson). Type in British Museum of Natural History.

Phorocera cuthbertsoni, new species

Black, the sides of the intermediate abdominal segments and the legs reddish; posterior femora ciliate. Length, 10.5 mm.

MALE.—Head black, the facial ridges and oral margin reddish; pollen white, somewhat thinner on the front. Front three-fifths as wide as eye, with ten or eleven pairs of frontals, four or five below the base of the antennae, the upper pair reclinate; ocellars long; hair moderately abundant and long, becoming coarse toward the frontals. Occiput whitish pilose, an almost complete row of black hairs behind the occipital cilia. Cheeks almost one-third the eye-height. Parafacials slightly tapering below, almost as wide as the third antennal segment. Vibrissae situated a little above the oral margin, the ridges with eight strong bristles and scattered hairs outside the row. Antennae with the basal segments reddish, the third black, about three times as long as the second, the apex rounded; arista thickened on almost the basal half. Palpi reddish.

Thorax black, with cinereous pollen, the posterior calli and scutellum reddish. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; three pairs of marginal scutellars and a decussate apical pair.

Legs reddish, the coxae and tarsi black. Middle tibia with three anterodorsal bristles, the posterior tibia rather closely ciliate.

Wings cinereous hyaline, the veins luteous; third vein with two or three bristles basally; bend of fourth vein without fold. Squamae white. Halteres reddish.

Abdomen black, cinereous pollinose, the sides of the second and third segments very broadly reddish, the pollen thick but appearing thin on the reddish portions from basal view. Second

and third segments each with a pair of strong discs; the fourth with scattered discs ventrally and an irregular row above. Genitalia reddish.

HOLOTYPE.—Male, Inyanga, Southern Rhodesia. November, 1933 (A. Cuthbertson, No. 3558).

Phorocera nudapex, new species

Black, the abdomen with discs on the third and usually on the second segment, the fourth segment without pollen; posterior tibiae not ciliate. Length, 7 to 9 mm.

FEMALE.—Head black, white pollinose, the pollen somewhat thinner on the upper part of the parafrontals. Front three-fourths as wide as either eye, scarcely widening anteriorly; eight to ten pairs of frontals, the upper three reclinate, the lower three or four below the base of the antennae; ocellars long; hair sparse and fine. Occiput white pilose; no black setae behind the occipital cilia. Cheeks about one-seventh as wide as the eye-height, with sparse, fine black hair. Parafacials narrowing below where they are little more than half as wide as the third antennal segment. Vibrissae level with the oral margin, the ridges with seven or eight moderately strong bristles and some bristly hairs below. Antennae black; third segment about twice as long as the second and moderately broad; the apex obtuse; arista thickened on not more than the basal third. Palpi brown with reddish-yellow apex.

Thorax cinereous white pollinose, the mesonotum rather thinly so, the dark vittae narrow and weak. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; 3 pairs of marginal scutellars and a long, decussate apical pair.

Legs black; middle tibiae with two strong anterodorsals and two or three weak ones; posterior tibiae not ciliate; pulvilli short.

Wings cinereous hyaline; third vein with two basal bristles; bend of fourth vein without conspicuous fold. Squamae white. Halteres reddish.

Abdomen wholly black; second and third segments whitish pollinose, the pollen on the apex of the second more or less broadly brownish, the apex of the third shining, the fourth wholly shining. Second segment usually with a pair of weak discs, the third with a pair of stronger ones, the hair on the middle of the segments erect; fourth segment with an irregular row of discs and marginals, the hair bristly.

MALE.—In the single specimen the abdomen has been wet, so it is not possible to follow the pollinose pattern, but it evidently agrees with the female. Front almost two-thirds as wide as eye; eleven pairs of frontals, three below the base of the antennae, the upper three reclinate; hair sparse and fine, an inner row of more bristly hairs. Pulvilli of moderate length. No distinct discs.

TYPES.—Holotype, female, Inyanga, Southern Rhodesia, November, 1933 (A. Cuthbertson). Allotype, male, Vumba Mountains, Southern Rhodesia, March, 1935 (A. Cuthbertson). Paratypes: female, Vumba Mts., Southern Rhodesia, March, 1935 (A. Cuthbertson), and female, Barberton, Natal, April 25, 1920 (H. K. Munro).

***Phorocera solitaria*, new species**

Black, with cinereous pollen; ocellars weak; abdomen with discals; middle tibiae with a single anterodorsal bristle. Length, 6 mm.

MALE.—Head white pollinose; anterior oral margin yellow in ground color. Front almost four-fifths as wide as eye; eight pairs of frontals, two or three below the base of the antennae, the upper two reclinate; ocellars fine but moderately long; hair sparse, bristle-like near the frontals. Occiput whitish pollinose, without black setae behind the cilia. Cheeks about one-third as wide as the eye-height, with fine, sparse, black hair. Parafacials scarcely narrowed below, almost as wide as the third antennal segment. Vibrissae level with the oral margin, the ridges with seven widely spaced bristles. Antennae blackish, arising at the upper fourth of the eyes, the third segment six times as long as the second, moderately wide, its apex obtusely rounded; arista thickened on basal fourth or less. Palpi reddish yellow.

Thorax cinereous pollinose, the mesonotal vittae narrow but distinct. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; three pairs of marginal scutellars and a pair of apical hairs.

Legs black, the tibiae brownish red; middle tibiae with a single anterodorsal bristle, the posterior tibiae not ciliate. Pulvilli small.

Wings cinereous hyaline; third vein with three or four bristles basally; bend of fourth vein without fold. Squamae white. Halteres yellow.

Abdomen wholly yellowish-cinereous pollinose but from posterior view the first segment and the broad apex of the second are shining blackish, the second and third segments with a median dark line in some views. Second segment with one or two pairs of discals, the third with one pair, the fourth with a row and with marginal row; pile appressed. No sexual patch.

HOLOTYPE.—Male, Salisbury, Southern Rhodesia, February, 1918 (No. 923).

***Phorocera selecta*, new species**

Black, the sides of the second abdominal segment reddish; middle tibia with a single anterodorsal bristle; posterior tibiae not ciliate. Length, 6.5 mm.

MALE.—Head black, cinereous white pollinose, the anterior oral margin and edge of para-

facials reddish in ground color. Front five-sixths as wide as eye; seven pairs of frontals, two below the base of the antennae, the upper two reclinate; outside of each frontal row near the anterior third a strong bristle on each side converging toward each other apically; ocellars weak; hair sparse. Occiput white pilose; no black setae behind the cilia. Cheeks about one-third as wide as the eye-height, with fine sparse hair. Parafacials only slightly narrowing below, with one or two hairs on the lower half, about two-thirds as wide as the third antennal segment. Vibrissae level with the oral margin; six or seven bristles on the facial ridges. Antennae black; third segment moderately broad, six times as long as the second, its upper apex angular, the lower gently rounded; arista thickened on the basal third. Palpi reddish yellow.

Thorax cinereous pollinose, the vittae of medium width and distinct. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; three pairs of marginal scutellars and a pair of weak, decussate apicals.

Legs black; tibiae brownish, the middle pair with a single anterodorsal bristle, the posterior pair not ciliate. Pulvilli small.

Wings cinereous hyaline; third vein with two to four bristles basally; bend of fourth vein without appendage. Squamae white. Halteres reddish yellow.

Sides of the second abdominal segment broadly reddish except posteriorly; second and third segments cinereous pollinose on the basal three-fourths, the apices shining but with thin brownish pollen, each of these segments with a pair of discals. Fourth segment pale pollinose except on the apical fifth or less, with a row of discals, only the median two of which are strong.

HOLOTYPE.—Male, Natal.

***Phorocera bequaerti*, new species**

Front and thorax showing strong violaceous color beneath the pollen; tibiae yellow; wings lightly smoky. Length, 7.5 mm.

FEMALE.—Head blue-black, white pollinose, the facial depression reddish in ground color. Front slightly wider than one eye, widening anteriorly, the parafrontals violaceous; seven pairs of frontals, three or four below the base of the antennae, the upper pair long and reclinate; ocellars long, considerably divergent; hair sparse and coarse. Occiput white pilose, a row of black setae behind the cilia. Cheeks about one-fourth the eye-height, with sparse, fine hair. Parafacials narrowing below, about two-thirds as wide as the third antennal segment. Vibrissae level with the oral margin, the ridges with six or seven strong bristles. Antennae black, the third segment four times as long as the second, the upper apex angular, the lower rounded. Arista thickened on the basal third, the second segment almost twice as long as wide. Palpi brown.

Thorax rather thickly ashy-white pollinose

but the dorsum violaceous from posterior view, the dark vittae visible in some views. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; 3 pairs of strong marginal scutellars and a pair of weak, convergent apicals.

Legs black, the femora with thick whitish pollen, the tibiae reddish yellow; middle tibiae with two anterodorsal bristles on the basal half. Posterior tibiae not ciliate.

Wings lightly smoky; third vein with four or five bristles basally; bend of fourth vein without fold. Squamae white. Halteres yellow.

Abdomen blue-black, with whitish pollen which is moderately thin on the intermediate segments, dense on the fourth but becoming thin apically, the apices of the second and third segments rather shining but with brownish pollen. Second and third segments each with a pair of discs, the fourth with two rows and with erect hair.

HOLOTYPE.—Female, Behunge, Uganda, April 4, 1927 (J. Bequaert).

This species is related to the metallic species and *venusta* Curran, being intermediate in coloration, but with the same structure.

Phorocera varicornis, new species

Black, the antennae mostly brownish red; middle tibiae with two anterodorsals on the basal half; abdomen with cinereous pollinose fasciae. Length, 6.5 mm.

FEMALE.—Head black, white pollinose, the facial depression reddish in ground color. Front almost as wide as one eye; seven pairs of frontals, two below the base of the antennae, the upper two reclinate; ocellars long; hair sparse, coarse anteriorly. Occiput white pilose; no setae behind the cilia. Cheeks about one-twelfth the eye-height, with only a few hairs, three of the bristles directed forward. Parafacials narrowing below where they are scarcely half as wide as the third antennal segment. Vibrissae level with the oral margin; six or seven bristles on the ridges. Antennae brownish red, the third segment becoming brown apically, rather narrow, almost six times as long as the second. Palpi reddish yellow.

Thorax with whitish pollen, the shining black vittae of moderate width. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum with three pairs of marginals and a pair of weaker, decussate apicals, brownish yellow except on the broad base.

Legs black, the tibiae more or less brownish red; middle tibiae with a strong anterodorsal and a weak one on the basal half; posterior tibiae not ciliate. Pulvilli small.

Wings cinereous hyaline; third vein with three bristles basally; bend of fourth vein without appendage. Squamae white. Halteres yellow.

Abdomen black, the basal three-fifths of the segments white pollinose, the pollen expanding

medianly on the second and third segments to occupy the basal three-fourths. Second and third segments each with a pair of rather weak discs and with erect hair in the middle; fourth segment with fine bristles over the whole surface.

HOLOTYPE.—Female, Victoria Falls, August.

Phorocera nitidicauda, new species

Black, the fourth abdominal segment without pollen; posterior tibiae not closely ciliate but with bristles of more or less the same length. Length, 10 to 11 mm.

MALE.—Head black, white pollinose, the facial depression and adjacent border of the parafacials reddish in ground color. Front scarcely half as wide as one eye; eleven or twelve pairs of rather fine frontals, the lower three below the base of the antennae, the upper two reclinate but not conspicuously strengthened; ocellars long. Occiput white pilose; no black setae behind the occipital cilia. Cheeks about one-sixth as wide as the eye-height, with fine hair. Parafacials rather strongly narrowing below, not over half as wide as the third antennal segment. Vibrissae situated slightly above the oral margin; ridges with ten or eleven moderately strong bristles and scattered hairs outside them. Antennae black, the second segment more or less reddish; third segment about three times as long as the second, moderately wide, the apex obtuse; arista thickened on about the basal fifth. Palpi brown with reddish apices.

Thorax cinereous pollinose, the dark vittae narrow and only moderately distinct. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum, reddish with black base, with three pairs of marginals and a strong, decussate apical pair.

Legs black; middle tibiae with two anterodorsal bristles on the basal half; posterior tibiae not closely ciliate, but subciliate with bristles of nearly equal length. Pulvilli elongate.

Wings cinereous hyaline, third vein with two or three bristles basally; bend of fourth vein without fold. Squamae white. Halteres reddish, the base of the knob brownish.

Second and third abdominal segments cinereous pollinose, the second with the apical fifth brown pollinose, the third with the apical seventh bare. Venter of second and third segments shining except laterally where the pollen extends moderately inward basally, its inner margin oblique and extending to the lateral margin posteriorly. Hair coarse, suberect on the middle of the intermediate segments, erect on the fourth; fourth segment with scattered discs, the basal segments without discs.

TYPES.—Holotype, male, Pretoria, South Africa, March 20, 1919 (H. K. Munro), returned to Mr. Munro. Paratype, male, Pretoria, January 1, 1916 (H. K. Munro).

Phorocera setertia, new species

Black, the abdomen with cinereous pollinose crossbands; third vein bristled to the anterior crossvein or almost so. Length, 7 to 9 mm.

MALE.—Head black, the face yellowish in ground color, the whole thickly white pollinose, the ocellar area more yellowish. Front three-fourths as wide as either eye; nine or ten pairs of frontals, the upper two reclinate; the lower three below the base of the antennae; frontal hair sparse and fine; ocellars long and strong. Occiput with a single row of black cilia extending to the cheeks, the pile white. Cheeks about one-fifth as wide as the eye-height, with sparse fine black hair. Parafacials very slightly narrowing below, not as wide as the third antennal segment. Vibrissae scarcely above the oral margin, the ridges with well-spaced, strong bristles extending up almost to the base of the arista. Antennae blackish, the basal segments more or less reddish; third segment of moderate width, almost five times as long as the second, its upper apex angular, the lower rounded, the sides almost parallel; arista thickened basally, rather suddenly thinned near the middle. Palpi reddish yellow.

Thorax with cinereous pollen; the mesonotum with four rather broad blackish vittae. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; three pairs of marginal scutellars and a weaker, upwardly directed, decussate apical pair; one pair of discals.

Legs brownish or blackish, the anterior femora cinereous pollinose behind; pulvilli elongate. Posterior tibiae not ciliate; middle tibiae with two strong anterodorsals on the basal half and one or two weak ones beyond.

Wings cinereous hyaline; third vein bristled almost or quite to the anterior crossvein; fold beyond bend of fourth vein long and conspicuous; ultimate section of fifth vein almost half as long as the preceding section. Squamae white. Halteres reddish.

Abdomen black, without discals, the hair on the intermediate segments appressed; with cinereous pollen. The pollen on the second segment occupies a little less than the basal half but expands somewhat in the middle and laterally and also toward the middle of the venter; on the third segment the pollen occupies more than the basal half in the middle but narrows toward the sides and on the venter; fourth segment pollinose on somewhat more than the basal third. Fourth segment with irregular row of discals, the hair coarse and erect. Posterior forceps united, broad basally, extending forward to form an upturned beak.

FEMALE.—Front as wide as one eye; third antennal segment a little more than three times as long as the second; middle tibia with a weak anterodorsal bristle near the base; pollen on third abdominal segment scarcely widening laterally.

TYPES.—Holotype, male, Barberton, South Africa, August 13, returned to Mr.

Munro. Allotype, female, Tanganyika, January, 1935 (A. H. Ritchie), parasitic on *Laphygma exempta* Walker. Paratypes: female, same data as allotype; male, Pretoria, South Africa, May 1, 1919 (H. K. Munro), and male, Bloemfontein, South Africa, May 11, 1921 (H. E. Irving). The allotype is in the British Museum of Natural History.

Phorocera setosaria, new species

Black, the abdomen cinereous fasciate; third vein bristled basally; bend of fourth vein with fold of medium length; posterior tibiae not ciliate. Length, 12 mm.

FEMALE.—Head black in ground color, the facial depression more or less reddish, the pollen cinereous white. Front four-fifths as wide as one eye, widening anteriorly; seven pairs of frontals, two below the base of the antennae, the upper two reclinate; ocellars long; hair sparse and short, more abundant above. Occiput whitish pilose; a few black setae behind the occipital cilia below. Cheeks one-fourth as wide as the eye-height, with sparse black hairs, the lower ones coarse. Parafacials gently narrowing below where they are about as wide as the third antennal segment at the middle. Vibrissae scarcely above the oral margin, the ridges with five pairs of widely spaced strong bristles and a few hairs on the outer side. Antennae blackish, the second segment and base of the third more or less reddish; third segment more than three times as long as the second, widening on the apical third, the upper apex angular, the lower rounded; arista thickened on almost the basal half. Palpi reddish.

Thorax cinereous pollinose, the dark vittae of medium width and moderately strong. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum reddish on the apical half, with three pairs of marginals and a decussate, upturned apical pair.

Legs black; middle tibiae with two strong anterodorsals on the basal half and two weaker ones beyond them; posterior tibiae not ciliate. Pulvilli short.

Wings cinereous hyaline; third vein with about five bristles basally; fold at bend of fourth vein moderately short. Pale pollen on the second and third segments occupying almost the basal three-fourths, somewhat less on each side of the middle, the pollinose band narrowing on the venter; fourth segment pale pollinose on the basal two-thirds. Second and third segments without discals, but with erect, coarse hair in the middle, the fourth with coarse, bristly hair and with bristles on the apical half.

HOLOTYPE.—Female, Salisbury, Southern Rhodesia, September, 1936 (A. Cuthbertson, 4451).

Phorocera setosina, new species

Black, the abdomen cinereous fasciate; posterior tibiae not ciliate; third vein bristled less than halfway to the posterior crossvein. Length, 9 to 9.5 mm.

MALE.—Head black, the face apparently yellowish in ground color; pollen white, thinner on the front near the vertex. Front three-fourths as wide as one eye; nine pairs of frontals, three below the base of the antennae, the upper two reclinate; ocellars long; frontal hair rather sparse and fine. Occipital pile white; no black setae behind the cilia. Cheeks about one-fifth as wide as eye-height, with sparse, fine hair. Parafacials slightly narrowing below, almost as wide as the third antennal segment. Vibrissae slightly above the oral margin; eight or nine strong bristles on the ridges. Antennae black, the second segment reddish above; third segment almost five times as long as the second, the upper apex angular, the lower corner rounded; arista thickened on less than the basal half. Palpi reddish yellow.

Thorax with cinereous pollen, the dark mesonotal vittae moderately wide and distinct. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; three pairs of marginal scutellars and a pair of upwardly directed decussate apicals.

Legs black, the tibiae brown. Middle tibiae with two strong anterodorsals on the basal half; posterior tibiae not ciliate but with many bristles of various lengths. Pulvilli moderately long.

Wings cinereous hyaline; third vein bristled almost halfway to the small crossvein; a long, strong fold beyond the bend of the fourth vein. Squamae white. Halteres reddish.

Second and third abdominal segments pollinose on almost the basal three-fourths laterally, the pollen narrowed toward the middle to occupy only the basal half to three-fifths, the fourth pollinose on the basal third. No distinct discs on the intermediate segment although there may be a few suberect hairs; fourth segment with discs on the apical half.

FEMALE.—Front as wide as one eye, the hair sparse; only seven pairs of frontals; third antennal segment scarcely three times as long as the second. Pulvilli short.

TYPES.—Holotype, male, Tanganyika, parasite of *Laphygma exempta* Walker (A. H. Ritchie), in British Museum. Allotype, female, Salisbury, Southern Rhodesia, October, 1933 (A. Cuthbertson). Paratype, female, New Hanover, Natal, February, 1915 (C. B. Hardenberg).

Phorocera ethelia, new species

Black, the thorax and abdomen shining; posterior tibiae ciliate, the middle tibiae with two anterodorsal bristles. Length, 11 mm.

MALE.—Head black, the facial depression

(with the exception of the antennal grooves) yellow. Front two-fifths as wide as one eye, rather strongly widening anteriorly; about ten pairs of frontals, four below the base of the antennae, the upper pair strong and reclinate; ocellars strong; pile abundant and moderately long. Occiput whitish pilose, a complete row of black hairs behind the cilia. Cheeks one-fifth as wide as the eye-height, with rather abundant black hair. Parafacials a little wider than the third antennal segment, slightly narrowing below. Vibrissae situated a little above the oral margin, the ridges with seven or eight bristles on the lower two-thirds and with hairs outside them. Palpi brown with brownish-red apices. Antennae blackish, the third segment more than twice as long as the second, narrow and with obtusely rounded apex; arista thickened on the basal fourth.

Thorax with thin cinereous pollen, the dorsum practically bare and without vittae. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum reddish on the apical two-thirds, very thinly pollinose, with three pairs of strong marginals and a decussate apical pair.

Legs black, the tibiae mostly obscure reddish; middle tibiae with two anterodorsals, the posterior tibiae ciliate. Pulvilli long.

Wings cinereous hyaline, the alula white basally; third vein with two or three bristles basally. Squamae white, the inner edge brown. Halteres reddish yellow.

Abdomen shining black, short and robust, the genital opening slit-like. Hair rather abundant and short; marginals on second segment short, and not particularly long on the third segment; fourth segment with two rows of discs on the apical half and with row of fairly fine marginals.

HOLOTYPE.—Male, Durban, Natal, August 12, 1925 (A. L. Bevis).

Phorocera clausa, new species

Black, with cinereous pollen, that on the abdomen weakly tessellate; apical cell closed in the costa. Length, 10 mm.

MALE.—Head black, the pollen whitish. Front half as wide as one eye; eleven pairs of frontals, three below the base of the antennae, the upper two strong and reclinate; hair sparse, coarse toward the frontals, two or three bristles outside the frontals anteriorly; ocellars long. Pile of the occiput whitish, the lower half with black hair immediately behind the occipital cilia. Cheeks one-fifth as wide as the eye-height, with coarse black hair. Parafacials slightly narrowing below, two-thirds as wide as the third antennal segment. Vibrissae level with the oral margin, the ridges with five pairs of strong and some weaker bristles on a little more than the lower half. Palpi reddish, becoming brown basally. Antennae black, the second segment more or less broadly reddish apically; third segment somewhat more than twice as long as the second; arista thickened on a little more than the basal third.

Pollen of the thorax moderately thick; on the mesonotum with a pair of narrow and a pair of broad dark stripes, the median pair lying outside the acrostical bristles. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; three pairs of marginal scutellars and a pair of strong, decussate apicals; scutellum reddish on each side of the apex.

Legs black, the tibiae dull reddish; middle tibiae with a single anterodorsal bristle; posterior tibiae subciliate, the bristles rather widely spaced and two of them longer than the others. Pulvilli long.

Wings cinereous hyaline, the alula milky white; apical cell closed in the costa; third vein with five bristles basally. Squamae white. Halteres yellow.

Abdomen wholly pollinose above, very weakly tessellate in some lights, without discals except for a row on the fourth segment. On the under side there are weak, transverse sexual patches on the second and third tergites and the pollen is very thin or absent. Genital opening slit-like but not deep.

HOLOTYPE.—Male, Gatooma, Southern Rhodesia, December, 1927 (A. Cuthbertson).

Phorocera majestica, new species

Black, cinereous pollinose, the mesonotum with four dark vittae, the abdomen somewhat tessellate. Length, 10 mm.

MALE.—Head black, white pollinose, the facial depression mostly reddish in ground color. Front as wide as one eye, the frontal vitta wide, dark reddish, white pollinose from frontal view; nine or ten pairs of frontals, three below the base of the antennae, the upper two reclinate; hair bristle-like toward the frontals, rather sparse. Ocellars long; outer verticals well developed. Occiput white pilose; an entire row of black hair behind the cilia. Cheeks about one-sixth as wide as eye-height, with sparse, coarse black hair. Parafacials slightly tapering below, as wide as the third antennal segment. Vibrissae level with the oral margin; ridges with eight or nine strong bristles on each side and some bristly hairs outside them. Facial depression deep and rather narrow. Palpi reddish, paler apically. Antennae black; third segment of moderate width, five times as long as the second; arista thickened on the basal half.

Thorax cinereous pollinose, the mesonotum with four dark vittae, the median ones more widely separated from each other than from the lateral. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1. Scutellum obscurely reddish apically, with three pairs of strong marginals and a pair of weaker, decussate apicals.

Legs black, the tibiae brownish red; middle tibiae with two strong anterodorsals, the posterior tibiae not closely ciliate. Pulvilli short.

Wings cinereous hyaline, the alula mostly

whitish; third vein with three bristles basally. Squamae white. Halteres reddish yellow.

Abdomen rather thickly pollinose, the pollen strongly tessellate in some views. First and second segments with long marginals, the fourth with discals over most of the surface.

HOLOTYPE.—Male, New Hanover, Natal, November 29, 1914 (C. B. Hardenberg).

This species has very much the appearance of *Sarcophaga* Meigen and I took it to be *sarcophagina* Jaenicke but Townsend indicates that the latter is a quite different species.

Phorocera zenia, new species

Black, the fourth abdominal segment without pale pollen; posterior tibiae ciliate. Length, 11 mm.

MALE.—Head black, white pollinose, the parafrontals yellowish; facial depression reddish in ground color. Front almost half as wide as one eye; eleven or twelve pairs of rather fine frontals, two below the base of the antennae, the upper one reclinate but not very strong; ocellars very weak; hair fine and moderately abundant above. Occiput whitish pilose; no black hair behind the cilia. Cheeks one-sixth as wide as the eye-height, with moderately abundant black hair. Parafacials conspicuously narrowing below, at the middle somewhat narrower than the middle of the third antennal segment. Vibrissae situated slightly above the oral margin, the ridges with ten or twelve rather fine black bristles on the lower three-fourths and with some short hair outside them. Palpi blackish. Antennae black; third segment a little more than twice as long as the second, conspicuously widening on the apical half, the apex obtuse; arista thickened on the basal third.

Thorax with cinereous pollen; mesonotum with yellowish-tinged pollen and with four narrow black vittae from posterior view; from dorsal view with two broad black vittae that are geminate of the anterior half. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum reddish on the sides apically, with three pairs of marginals and a pair of weaker, decussate apicals.

Legs black; middle tibiae with two or three anterodorsal bristles; posterior tibiae rather closely ciliate; pulvilli of medium length.

Wings cinereous hyaline; third vein with three basal bristles. Squamae white. Halteres reddish brown.

Abdomen black, the intermediate segments with yellowish cinereous pollen on the basal two-thirds and with the sides broadly reddish basally. First segment with one or two pairs of long, fine marginals, the second with one pair, the third with a row; fourth segment with erect, coarse hair which becomes long and bristly apically.

HOLOTYPE.—Male, Kampala, Uganda, November 17, 1915 (C. C. Gowdey), in British Museum of Natural History.

Phorocera rufolateralis, new species

Black, the lateral third of the abdomen reddish; posterior tibiae ciliate. Length, 11 to 12 mm.

MALE.—Head black, white pollinose, the facial depression reddish yellow with black antennal grooves. Front one-third as wide as eye, thinly pollinose; twelve or thirteen pairs of frontals, five below the base of the antennae, the upper pair strong and reclinate; ocellars long and fairly fine; hair abundant, long, forming a row of bristles close to the frontals on the lower part. Occiput with white pile, the row of black hairs behind the cilia very much interrupted on the upper half. Cheeks almost one-fourth as wide as the eye-height with rather abundant moderately long pile. Parafacials slightly tapering below, conspicuously wider than the third antennal segment. Vibrissae slightly above the oral margin; ridges with seven or eight strong bristles and with hairs outside them. Palpi dull reddish. Antennae black; third segment of medium width, almost three times as long as the second, its apex rounded below, sharply rounded above; arista thickened on the basal half.

Thorax with cinereous pollen; the mesonotum very thinly pollinose, the dark vittae not conspicuous. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum reddish, with three pairs of marginals and a pair of decussate apicals.

Legs black, the tibiae reddish; middle tibiae with three anterodorsals, the basal one weak; posterior tibiae long ciliate. Pulvilli long.

Wings cinereous hyaline; third vein with three basal bristles. Squamae white with pale yellowish border. Halteres reddish yellow.

Abdomen reddish, rather thinly cinereous pollinose, about the median third black. First and second segments with a pair of strong marginals; fourth with discals on apical half or more. Hair rather abundant; erect on the middle of the second and third segments. Genital opening slit-like.

TYPES.—Holotype, male, and, paratype, male, Zomba, Nyasaland, 1913 (Dr. H. S. Stannius), in British Museum of Natural History.

Phorocera setigena, new species

Black, with cinereous pollen; middle tibiae with two anterodorsals, the posterior tibiae ciliate; cheeks with bristles in front. Length, 11 mm.

MALE.—Head black, the pollen cinereous white, rather silvery on the face; facial depression yellow with the antennal grooves black. Front half as wide as one eye; nine to twelve pairs of frontals, four or five below the base of

the antennae, the upper pair strong and reclinate; ocellars long; hair rather sparse, becoming bristly toward the frontals. Occiput whitish pilose, a complete row of black hairs behind the cilia. Cheeks one-fifth as wide as the eye-height, with fairly abundant hair that develops into a group of bristles in front. Parafacials slightly narrowing below where they are three-fourths as wide as the third antennal segment. Vibrissae slightly above the oral margin, the ridges with nine or ten strong bristles extending to the upper fifth. Palpi brown. Antennae black, the third segment fully three times as long as the second, gently widening on the apical half, the apex truncate with rounded corners; arista thickened on the basal third.

Thorax cinereous pollinose, the mesonotum shining in most views, moderately pollinose and with four slender, dark vittae when seen from behind. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum reddish on apical two-thirds or more, with three pairs of marginals and a pair of long, decussate apicals.

Legs black, the tibiae obscure reddish yellow; middle tibiae with two anterodorsals; posterior tibiae ciliate. Pulvilli elongate.

Wings cinereous hyaline; third vein with three or four bristles at base. Squamae white. Halteres reddish.

Abdomen black, cinereous pollinose, the third segment bare on the lateral third. First and second segments each with a pair of marginals, the fourth with discals on the apical third or more.

FEMALE.—Front three-fourths as wide as one eye; nine or ten pairs of frontals, three to five below the base of the antennae; facial ridges bristled on lower two-thirds or slightly less. Third abdominal segment pollinose except on the narrow posterior border, the pollen tessellate in some views.

TYPES.—Holotype, male, Marley, Stella Bush, May, 1915 (host, *Bunaea angusana*), in British Museum of Natural History. Allotype, female, Salisbury, Southern Rhodesia, May 10, 1910. Paratypes: male, same data as holotype, and male, Pretoria, S. Africa, March 5, 1914 (H. K. Munro).

This species is readily distinguished from *metro* Curran by the length of the antennal segments and the bristles on the cheeks are somewhat weaker.

Phorocera gnu, new species

Bluish black, with cinereous pollen; middle tibiae with two anterodorsals; posterior tibiae ciliate. Length, 6 to 7 mm.

MALE.—Head black, white pollinose, the facial depression reddish with black antennal grooves. Front a little less than half as wide as one eye; nine to eleven pairs of frontals, five below the base of the antennae, the upper pair

strong and reclinate; ocellars long; hair sparse, the inner ones coarse and bristle-like. Occipital pile whitish; a complete row of black hairs behind the cilia. Cheeks one-fifth as wide as the eye-height, with rather sparse black hair that develops into three to five fine bristles anteriorly. Parafacials gently narrowing below, three-fourths as wide as the third antennal segment. Vibrissae level with the oral margin, the ridges with seven or eight strong bristles on the lower three-fifths. Palpi reddish brown. Antennae black, the third segment about two and a half times longer than the second, of medium width, the apex obtusely rounded, more angular above; arista thickened on the basal half.

Thorax with cinereous pollen, the dorsum shining from most views, with only faint indications of dark vittae from posterior view. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum with three pairs of marginals and a pair of decussate apicals, the apical fourth or less obscure reddish.

Legs black, the tibiae reddish. Middle tibiae with two anterodorsal bristles, the posterior pair ciliate. Pulvilli long.

Wings cinereous hyaline; third vein with three or four bristles basally. Squamae pale yellow to almost white. Halteres yellowish.

Abdomen with cinereous pollen, the third segment shining except for a large, median, almost equilateral triangle extending from the base to the apex of the segment; no distinct sexual patch. First and second segments with pair of marginals; the fourth with discals on the apical three-fourths.

FEMALE.—Front two-thirds as wide as eye; eight or nine pairs of frontals, the lower four below the base of the antennae; cheeks usually with very weak bristles in front; third antennal segment somewhat more than twice as long as the second. Abdomen pollinose, the apices of the second and third segments narrowly bare.

TYPES.—Holotype, male, and allotype, female, Ganta Liberia, 1932. Paratypes: 6 males and 8 females, same data, and two females, Ibadan, Nigeria.

Phorocera tetra, new species

Black, with cinereous pollen; middle tibiae with four anterodorsal bristles; posterior tibiae ciliate. Length, 11 mm.

FEMALE.—Head black, the anterior oral margin and borders of the antennal grooves yellowish; pollen whitish. Front three-fourths as wide as eye, widening anteriorly; eight or nine pairs of frontals, the lower three below the base of the antennae, the upper pair strong and reclinate; ocellars long and strong; outer verticals half as long as verticals; frontal hair rather fine, sparse except above. Occiput whitish pilose; a row of black hairs behind the cilia. Cheeks a little over one-fifth the eye-height, with moderately abundant hair. Parafacials moderately narrowing below, almost as wide as third anten-

nal segment. Vibrissae situated practically level with the oral margin, the ridges with seven pairs of bristles and hairs outside them. Palpi brownish. Antennae black; third segment two and one-half times as long as the second, of medium width, the apex obtusely rounded; arista thickened on the basal half.

Thorax blue-black, cinereous white pollinose, the pollen thinner on the dorsum; four narrow dark vittae on the mesonotum. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum dull yellowish red on apical three-fourths or more, with three pairs of marginals and a decussate pair of apicals.

Legs black, the tibiae mostly obscure reddish; middle tibiae with four anterodorsals, the posterior tibiae ciliate.

Wings cinereous hyaline; base of third vein with two bristles. Squamae white. Halteres yellow.

Abdomen black, with scarcely tessellate cinereous pollen, the apices of the segments narrowly shining. First segment with a pair of moderately strong marginals; fourth segment with discals on the apical two-thirds. Genital opening slit-like. The sides of the second and third segments are rather broadly reddish in ground color.

HOLOTYPE.—Female, Barberton, S. Africa, November 12, 1917 (H. K. Munro), returned to Mr. Munro.

Phorocera metro, new species

Bluish black, with cinereous pollen; middle tibiae with three anterodorsal bristles; posterior tibiae ciliate. Length, 9 mm.

MALE.—Head black, cinereous pollinose, the parafacials and posterior orbits silvery; anterior oral margin yellowish. Front two-fifths as wide as eye; nine or ten pairs of frontals, four or five below the base of the antennae, the upper pair strong and reclinate; ocellars long and strong; hair coarse, becoming bristly near the frontals. Occiput whitish pilose, with a complete row of black hairs behind the cilia and several irregular rows on the lower half of the occiput. Cheeks almost one-third as wide as the eye-height, with rather abundant black hair that develops into a group of about ten bristles on the anterior third. Parafacials narrowing below, where they are little more than half as wide as the third antennal segment. Vibrissae situated slightly above the oral margin, the ridges with five to seven strong bristles and weak bristles and long hairs outside them. Palpi black. Antennae black; third segment not twice as long as the second, moderately wide, the apex obtusely rounded; arista thickened on basal two-fifths.

Thorax with cinereous pollen; mesonotum only thinly pollinose so that there are no strongly contrasting vittae. Acrosticals, 3-3; dorsocentrals, 3-4; sternopleurals, 2-1; scutellum reddish on the apical half except in the middle, with three pairs of strong marginals and a weaker, decussate apical pair.

Legs black, the tibiae more or less obscurely reddish; middle tibiae with three anterodorsals, the posterior pair ciliate. Pulvilli long.

Wings cinereous hyaline; third vein with four or five bristles basally. Squamae white, the disc of the lower lobe somewhat brown. Halteres mostly brownish.

Abdomen cinereous pollinose, conspicuously tessellate in some views, the sides of the third segment shining except in front. Under side mostly without conspicuous pollen, the third segment with a large, transverse sexual patch of very short hair on each side, the second with a less well-marked patch. First segment with long, fine marginals, the second with one strong pair; fourth segment with discals on the apical two-thirds. Hair erect on the middle of the second and third segments.

HOLOTYPE.—Male, Victoria Falls, August 24, 1920.

In the single specimen there is a bristle on each side, lying well inside the frontal row opposite the upper end of the first antennal segment. This is probably normal and should occur also in the female.

Phorocera nyasa, new species

Bluish black, with cinereous pollen; posterior tibiae ciliate. Length, 9 mm.

This species is so similar to the preceding that it is best described by pointing out the differences: in the male the third antennal segment is fully twice as long as the second; there is no bristle opposite the base of the antennae inside the frontal row; the frontal hair does not form strong bristles inwardly and there is no strong patch of bristles on the cheeks. The squamae are pure white and there are no sexual patches. The cheeks are only one-fifth as wide as the eye-height and the parafacials are three-fourths as wide as the third antennal segment. In the female there are eight pairs of frontals, only three below the base of the antennae.

HOLOTYPE.—Male, Port Herald, Nyasaland, November 11, 1913 (Dr. J. E. S. Old), in British Museum of Natural History. Allotype, female, Durban, Natal, August 21, 1918, in Government Museum, Pretoria.

