

THE ETHIOPIAN *CERCERIS* SPECIES

By H. BRAUNS, M.D.

Willowmore, Cape Colony

With Plates XL-XLIV and 1 Text-figure

Introductory

IN the following pages an attempt is made to improve our knowledge of the species of *Cerceris* of the Ethiopian region. Whereas the publications of R. Turner have made our knowledge of the *Cerceris* species of the Oriental and Indo-Australian regions fairly extensive, that of the Ethiopian region seems to be rather fragmentary. Apart from the work of the earlier authors and some single descriptions scattered over the world's literature nothing of a comprehensive nature exists on the species of the Ethiopian region. The author of this paper has collected in South Africa for the last three decades and has brought together a not inconsiderable amount of material for study. The number of species in this sub-continent is large and probably still larger in tropical Africa. Of course a claim to completeness is not to be made. For this the material is too small and the difficulty of getting the literature together too great for a private collector. Therefore, in this paper only the material of my collection and a few other collections has been worked with for the purpose of creating a basis for further study. The study of the material at hand has shown completely that descriptions based on coloration have no value at all, as the variability in this respect seems to be extraordinarily great. But even the structural characters are far from being reliable and unchangeable in all cases. In limiting the species a certain structural variability of the characters of the median part of the clypeus, of the cordiform area of the median segment or epinotum, and of the pygidium has to be considered in the Ethiopian species of *Cerceris*.

Genus *CERCERIS* Latr.

Hist. Nat. Crust. and Insects, XIII, p. 315. 1805

The habitus is more or less compact. Head large, as broad as or broader than the thorax and seen from the front more or less circular, but a little broader than long. The eyes are large, elliptical and not emarginate. They always reach to the base of the mandibles. The inner orbits are parallel or oftener more or less divergent below. The ocelli form an isosceles or equilateral triangle. An imaginary line touching the hind margin of the eyes crosses the two hind ocelli or is tangential to them or runs past behind them. The maxillary palps have six, the labial palps four joints. The mandibles are strong, edentate or unidentate or bidentate. The antennae arise at the median height of the eyes or above it. Between the antennae is a high carinate protuberance, broadening and convex anteriorly. The antennae, in the ♂ 13-

jointed, and 12-jointed in the ♀, are always shorter than the head and thorax taken together, the single joints distinctly separated. The temples very broad above are acutely attenuated below. Occiput short, abruptly truncate behind and simply marginate. The median part of the clypeus is in most cases distinctly bordered and separated from the side parts, rarely fused with them without traces of separation (*C. multipicta*). The form of the median part of the clypeus is very varied in the ♀, but very uniform in the ♂. It can be wholly detached from the base forwards, partly so or not at all, excised in front, emarginate or simply truncate, impressed, flat or concave in the ♀. The thorax is very compact, longer than high, higher than broad. The pronotum is abruptly truncate anteriorly. The neck short. The upper part of the pronotum (collar) is convex and sometimes saddle-shaped or medially sulcate. In some cases the shoulders are prominent and angular. The mesonotum shows a linear longitudinal median impression. Mesopleurae rounded, often with lateral protuberances. Scutellum rarely saddle-shaped in the middle. The metanotum is a narrow transverse torus. The epinotum slopes more or less abruptly behind. The cordiform area is separated laterally from the rest of the epinotum by a crenulated line which is sometimes more or less indistinct. The form of the area is triangular, equilateral or isosceles. The metasternum is more or less impressed and protrudes between the hind coxae. The coniform median and hind coxae are closely approximated. The femora of the four anterior legs are medially strongly thickened, those of the hind legs broadened from base to apex and bilobate apically, the two lobes enveloping the hind tibiae. The anterior tibiae are fimbriate on the inner side, the median ones spinose externally, the hind ones serrate and spinose externally. The four anterior tibiae have one, the hind tibiae two spurs.

The abdomen is attenuate between the epinotum and the second segment, the first segment or petiole being much narrower than the rest of the segments. All the segments are conspicuously constricted at the base. The pygidial area is well defined. In the ♂ it has the shape of a more or less rectangular quadrangle with the lateral margins not fimbriate. In the ♀ it is edentate and laterally more or less fimbriate. The shape in the ♀ is trapezoidal, elliptical, barrel-shaped, pyriform with intergrading shapes. The last sternite in the ♀ has apically more or less strong fimbriae or pencils of stiff hairs and is sometimes covered by a dense tomentum at the base. The sculpture (puncturation) compared with most of the other sphegid genera is a very coarse one. The use of the terms "very fine," "coarse" or "somewhat coarse" or "very coarse" and so on, is, therefore, to be taken relatively. Generally the cordiform area alone shows a contrasting sculpture. The ventral surface of the abdomen is always more shallowly punctured than the dorsal and towards the middle is not rarely smooth. Frequently the penultimate abdominal ventral segment of the ♀ is more or less impressed or arcuately emarginate and in the ♂ bears lateral angles or teeth. The second ventral segment often has at the base a distinctly raised plate. A groove at the hind margin of the petiole above is not rare in many species. The fore wings are nearly always apically more or less smoky, the hind wings mostly hyaline, but in many cases the wings are entirely smoky. The frenal hooks number from 12 to 36 and are placed in a continuous row. The radial cell of the fore wings is from three to five times as long as broad, apically rounded. The second cubital cell is mostly distinctly petiolate and nearly triangular or not petiolate and trapeziform. The first and second cubital cross veins are in a state of approximation and fusion. A progress in this direction leads necessarily to the disappearance of the second cubital cell. If, however, the convergence of the first and second cubital vein is so slight that they do not fuse together towards the radius the shape of the second

cubital cell remains trapezoidal. This happens as a matter of fact in the case of some ♂s. The creation of the genus *Eucerceris* Cresson for such species is, therefore, superfluous. The colour is mostly black with golden yellow, citron yellow, yellow or white markings. More rarely the red or ferruginous colour prevails. However, the variability of the markings is so great, that the coloration is generally of no value for the separation of species. The sexual differences are great. In the ♂ the median area of the clypeus is very uniform, oval, more or less convex and never separated from the underlying base. The lateral sclerites of the clypeus have dense silky fimbriae on their anterior margins. Abdomen with eight segments. The other differences from the ♀ have been enumerated above. The ♂s are mostly smaller than the ♀s. The clypeal margin of the ♀ is not fimbriate. The median area of the clypeus is differently shaped from that of the ♂. Antennae thicker, shorter and 12-jointed. Abdomen with seven segments. Pygidial area differently shaped as mentioned above, with laterally fimbriated margins.

Biology. *Cerceris* digs its galleries in the soil. Both sexes visit flowers for nectar and to seek their prey. They store various kinds of insects for larval food, but very little is known of the customs of South African species. I myself have observed *Halictus*, Curculionidae (*Tanymecus*) and Buprestidae (*Sphenoptera*) taken as prey.

In separating *Cerceris* species the following characters have to be considered:

1. Shape of the median part of the clypeus.
2. Relative length of the first three joints of the antennal flagellum.
3. Whether the orbits are parallel or divergent.
4. Distance of ocelli from each other and the eyes.
5. Shape of prothorax, mesopleurae and scutellum.
6. Shape and sculpture of the area of the epinotum (median segment).
7. Shape and sculpture of the pygidial area.
8. Plate of second sternite.
9. Shape of the petiole.
10. Coloration.

A description of the following species, *C. pictiventris*, *diodonta*, *morosula*, *africana*, *transvaalicola*, *schoutedeni* and *katangae*, has been given by me in the German language in the *Revue zoologique africaine*, vol. III, fasc. 2, 1913, p. 218, and is here translated.

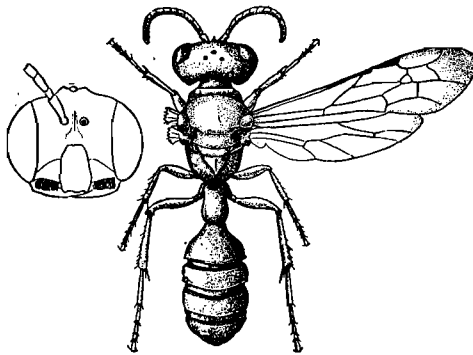


Fig. 1. *Cerceris varicincta* ♂.

I wish to express my sincerest thanks to Dr G. Arnold for drawing the plates which illustrate this paper.

Species with the median part of the clypeus flat and long, oval or elliptical in shape.

Cerceris Kobrowi n.sp. Brauns. ♀ and ♂. (Pl. XL, fig. 12; Pl. XLI, fig. 8.)

Coloration. ♀: Black, the following parts are ferruginous: all the legs and antennae, pronotum, scapulae and tegulae, scutellum, the apical two-thirds of the petiole, tergites 2 and 5, pygidial segment, the tumid parts of sternites 2, 3 and 4, and 5 and 6 wholly. The clypeus and face are yellow, the latter broadly so up to beyond the antennal sockets. In addition the base of the mandibles, the antennal scape, the metanotum, broad fasciae on the apical margins of tergites, including 2-4, are yellow. The fasciae are strongly attenuate towards the middle and laterally cover the whole of the segment.

♂: In the ♂ the pronotum may be yellow. Otherwise it is coloured like the ♀.

Sculpture. ♀: The median part of the clypeus is produced tongue-shaped from the base of the mandibles forwards, the free margin smooth and rounded and has the shape of a long oval plate, entirely flat. The inner margins of the mandibles are feebly unidentate in the middle, exteriorly with a feeble callus. The median part of the clypeus is very shiny, feebly and discretely punctate, the lateral part and face dull, silky, sparsely and shallowly punctate with a finer puncturation in between. The frontal keel terminates anteriorly in a dentiform protuberance which is directed downwards. This keel is very sharp and lamellate. The inner orbits are feebly divergent towards the base of the mandibles. The frons is densely and finely rugosely punctate. The occiput and temples have a somewhat stronger and denser puncturation, dull, with two shining smooth places close to the posterior ocelli. The pronotum is shallowly and finely punctate, the mesonotum and scutellum finely undulatingly rugose longitudinally, also with a scattered fine puncturation. Epinotum densely rugosely punctate, dull like the head. The epinotal area is sharply bordered and has a median furrow with raised margins and coarse oblique keels laterally. The middle furrow is broadened posteriorly and has short transverse rugae. The petiole is broadly rounded, barrel-shaped, distinctly but not densely punctate and provided with a groove like the following tergite. The tumid parts of the tergites are broad and flat, those of the sternites likewise flat and little prominent. The tergites are sharply and coarsely punctate, particularly at the sides and posteriorly in the middle. The punctures are scattered, and in between there is a finer puncturation visible. The pygidial area is long, tongue-shaped, everywhere evenly and undulatingly rugose. The mesopleurae are rugose without tubercles. The tumid sternites are finely and sparsely punctate posteriorly; the fifth is medially shallowly crenate, densely and finely punctate, laterally and posteriorly with long brown fimbriae. The last sternite is posteriorly exceedingly deeply excised. The incision is oval with a short longitudinal keel at the bottom of it. The sides of the sternite have long fimbriae, and the apical posterior teeth are straight. The wings are basally stained brownish yellow, otherwise lightly fuscate, the veins black, costa and stigma and the basal parts of the veins yellowish brown, the apex darker. The third joint of the antennae is much longer than the fourth.

Length: 14-15 mm.

The ♀ has the habitus of a *Philanthus* as the construction of the abdominal segments is less marked than with most of the *Cerceris* species.

♂: The median area of the clypeus is convex, rounded anteriorly, the middle of the anterior margin protruding as a little point, therefore bluntly three-pointed. The anterior margin is black. The surface is scantily covered with

very coarse irregular punctures, the lateral parts are very finely and irregularly punctate with long golden yellow fimbriae. The face and the frontal protuberance are finely and sparsely punctate, finer than the median part of the clypeus and coarser than the lateral parts. The puncturation of the body is otherwise like that of the ♀, but is denser on the tergites. The pygidial area is feebly rounded apically, on the whole rectangular, smooth, with large and widely separated punctures. The tumid parts of the sternites are much more strongly developed than in the ♀. The sixth is medially flatly emarginate; all are shortly pilose posteriorly, the hairs arranged in rows. The apical teeth are long and pointed. The last sternite is roundly emarginate with long fimbriae and apical brush. The joints 9-13 of the antennae are shortly and longitudinally keeled; the last is obliquely truncate, as long as the penultimate, apically attenuate.

Habitat: TRANSVAAL: Johannesburg, G. Kobrow. The types are in my collection.

The species is nearly related to *C. eburneofasciata*.

Cerceris fongosi n.sp. Brauns. ♀ and ♂. (Pl. XL, fig. 5; Pl. XLII, fig. 5.)

Coloration. ♀: Black, the tergites 2 and 3 and the sides of 4, the sternites 2, 3 and parts of 4 are ferruginous.

The extension of this colour is probably variable. In the face are three longitudinal parallel and fairly equilateral stripes of yellowish white. The first is in the middle line from the insertion of the antennae to near the anterior margin of the clypeus, and covers, therefore, the lower part of the frontal carina. The two lateral ones fill the inner orbits up to the level of the antennal sockets. They broaden a little at the lateral parts of the clypeus. Two comma-shaped maculae on the occiput extending obliquely from the middle line, and a small spot behind the eyes are yellowish white. Another mark of the same colour is at the base of the mandibles. The sides of the petiole posteriorly and likewise the tergites 2-5 have a larger macula, but the latter are smaller than those of the petiole. All the tibiae have externally a yellowish white longitudinal stripe. Probably this coloration will prove to be variable.

♂: The markings of the ♂ are the same as in the ♀. In the specimen before me they have the tendency to get obliterated. In addition the anterior and median metatarsi are more or less yellowish white. The facial stripes, which are similar to those of the ♀, are conspicuous. The ♂♂ of the *Cerceris* species have usually a more extensive light coloration of the face, different from the ♀. The antennae are black in both sexes; the under side is more or less brownish. The wings are in both sexes very darkly infuscated, iridescent above. Veins and stigma black.

Length: ♀ and ♂ 13 mm.

Sculpture. ♀: As in *C. Kobrowi* and *C. eburneofasciata* the median part of the clypeus has the form of a long oval plate, which is transversely deepened apically before the anterior margin and bent upwards. The surface of the clypeus, face and rest of the head is very dull, coriaceous. The epinotum is likewise sculptured, including the area, which is of median size and has an impressed longitudinal median line. The lower face is densely pubescent and yellowish. The mandibles are simple on both margins. The inner orbits are very little divergent towards the clypeus. Mesopleurae without tubercles. The puncturation of the tergites is as close as in the ♂ but much deeper and sharper. The pygidial area is dull, subelliptical, the apex widely rounded, the lateral margins densely fimbriated with brownish hairs, the basal half densely punctate and pubescent, the apical half glabrous and impunctate. The apical sternite is dull, microscopically coriaceous, its apical margin

narrowly and deeply excised in the middle, with a pencil of pale brownish yellow hairs on each side. The basal halves of sternites 3-5 are microscopically rugose and have a slight greasy lustre; the apical halves of the same are fairly closely punctate but not so strongly as the tergites. The second sternite is slightly shining, fairly strongly punctate, less closely on its basal than on its apical half. The legs are pubescent, the hind legs are spinose but not strongly serrate. The wings are dark fuscous with a bluish or violaceous lustre, iridescent, the stigma and veins all black.

♂: The ♂ has the same dull appearance as the ♀, and the sculpture is nearly the same. The pygidial area is narrow, parallel-sided with elevated margins, the surface rugose. The complex of the abdominal segments is little constricted, the last sternite with pointed teeth each side. The second sternite has a raised sub-quadrangular plate covering nearly all the segment and has a greasy gloss. The last antennal joint is curved, thinner than the penultimate and rounded apically. Wings a little paler than in the ♀.

Length: 13 mm.

Habitat: ZULULAND: M'Fongosi. Collected by W. E. Jones. The types are in my collection.

Cerceris eburneofasciata n.sp. Brauns. ♀ and ♂. (Pl. XLIII, fig. 4.)

Colour. ♀: Black, the following parts are white: the clypeus, sides of the face and frontal keel, antennal scape beneath, base of the mandibles, scapulae, tegulae partly, metanotum, a transverse fascia on the petiole, attenuated towards and interrupted in the middle, a broad fascia on the second tergite bisinuate in the middle in front, and the third, fourth and fifth tergites except a narrow anterior margin. The legs are partly yellowish red, partly yellowish white, the coxae black, trochanters basally blackish. The antennae are red, the apical joints and the upper side of the preceding ones blackish.

♂: The clypeus, the face and frontal keel, the upper side of the mandibles, except the black apex, the legs partly, large lateral maculae on the second tergite and a narrow margin of the same medially and apically are white. Otherwise the ♂ is marked like the ♀.

Sculpture. ♀: The median part of the clypeus forms an oval, very flat disc. This plate protrudes anteriorly and is rounded, margined with black, medially indented. The lateral parts are short. The inferior angle of the frontal keel protrudes just above the clypeus in the shape of a conical acutely nasiform protuberance, which is bent a little downwards, but otherwise porrect. The upper part of the frontal keel is sharply lamelliform. The oval plate of the clypeus is as smooth as a mirror. The lateral parts of the clypeus are finely pubescent, very finely punctured and microscopically shagreened in between. The inner orbits are parallel. The head, like the thorax and epinotum, is densely and evenly rugosely punctured. The puncturation of the mesonotum and scutellum is somewhat longitudinally rugose. The metanotum is smooth. The epinotal area is anteriorly coarsely and longitudinally densely rugose, apically transversely rugose. The mesopleurae are thick. Behind the scapulae and beneath the base of the anterior wings at the epimerum is a somewhat flat conical tubercle. Abdomen smooth, hardly shining. The tergites are evenly and sparsely punctate. The puncturation is very distinct. The petiole has a large groove, the second tergite a small one. The petiole is broad and thick, broadly barrel-shaped, and the abdomen is sharply constricted between it and the following tergite. The tergites are strongly constricted laterally. The tumid parts are broad and flat, the depressed margins being narrow. Pygidial area parallel sided, long and large, apically rounded, dull irregularly and strongly granulate. The lateral fimbriae are thick. The sternites are black, very

shining, the tumid parts feebly punctate, 4 and 5 apically fimbriate, the last one incised, the penultimate with a groove. The wings are hyaline, the veins black, the costa yellow, the margin and apex infusate. The hind tibiae are strongly serrated. The markings are probably variable. The fascia of the second tergite is medially emarginate, or it may be straight.

Length: 16 mm.

♂: The median part of the clypeus is convex, flatly impressed anteriorly; the anterior part is broadly truncate, flat, rectangularly porrect without teeth. The side parts of the clypeus are sinuous and reflexed. The fimbria is thick and golden yellow. The frontal carina close to the clypeus is bullate, behind it narrow and sharp. The inner orbits are parallel. The clypeus is smooth, but distinctly and sparsely punctate like the lower face. Close to the posterior ocelli and touching them is a smooth rounded impunctate space. The other sculpture is as in the ♀. The pygidial area is elongate rectangular, a little attenuated towards the apex, transversely truncate. At the surface a number of coarse shallow punctures are sharply defined. The tumid parts of the sternites are distinct, 3, 4 and 5 with small yellow lateral dots. Sternite 6 is fimbriated at the disc; the preceding sternites have a similar pilosity but feebler. The coloration of the wings is the same as in the ♀. The ultimate joint of the antennae is as long as the preceding one, arcuate and concave internally, the apex angularly truncate. The seventh to the thirteenth joints have on the inner side longitudinal keels which become stronger towards the apex of the antennae. The third joint of the antennae is in the two sexes distinctly longer than the fourth.

Length: 15 mm.

The types, ♀ and ♂, were collected at Johannesburg in the Transvaal by my friend G. Kobrow in January and April respectively, and are in my collection. I have also seen a ♀ from Johannesburg, Transvaal, collected by A. I. Cholmsby, which is in the British Museum.

The species is easily recognized in the ♀ by the protuberance of the frontal keel.

Cerceris xosa n.sp. Brauns. ♀ and ♂. (Pl. XLIII, fig. 7.)

Coloration. ♀: Black, with the following parts ferruginous: the antennae, excepting the apical upper side, the tegulae, scapulae, hind border of the penultimate tergite, pygidial segment and all the legs. The coxae and trochanters, at least the posterior ones, are more or less piceous. The following parts are yellow: an oval mark close to the inner orbits half-way up, the median and side parts of the clypeus (the median part is bordered narrowly by black), the frontal carina, basal three-fourths of the mandibles, a very narrow streak at the hind margins of the pronotum and postscutellum, both interrupted in the middle, the former broadly, the latter narrowly, the hind margin of the petiole, the hind margins of the second and third tergites, the latter narrow; underside all black. Wings hyaline with hardly any infuscation on the tip of the fore wings, the stigma ferruginous.

♂: Median and side parts of the clypeus, the face up to half the inner orbit, and the frontal carina, yellow. The yellow fasciae of the tergites are the same as in the ♀, and in addition, the median and hind coxae in front, transverse apical fasciae of the petiole underneath and the second tergite and the median and hind metatarsi are yellow.

Sculpture. ♀: Inner orbits distinctly but moderately divergent towards the base of mandibles; median part of the clypeus flat, elongate ovate, depressed in the middle and bent upwards in the apical part, broadly tongue-shaped apically, the basal surface polished and with only a few scattered

punctures, the apical half less polished, and with punctures more abundant although scattered. The face is silky, and aciculate with scattered punctures; frons, vertex, temples, thorax and epinotum are evenly rugosely punctate. The epinotal area is longitudinally rugose in the upper part. All these parts are dull. The petiole has a groove at the apical margin, the tergites are distinctly punctate and finely aciculate in between, dull. The pygidial area is elliptical, broadly rounded basally and apically, the surface rugose, marginate all round, the side margins fimbriate. The sternites are aciculate, the second polished in the middle, depressed at the sides, medially and basally longitudinally elevated. The last sternite is medially deeply incised. The sternites are pubescent. The mandibles are simple, the mesopleurae without tubercles.

♂: Orbits divergent. The median clypeus is trapeziform apically. The petiole is elliptical, the pygidial area long, oval, apically bispinose laterally, shallowly emarginate, grossly and sparsely punctate on the surface. The shape of the second sternite is the same as in the ♀.

Length: 5-6 mm.

Habitat: NATAL: Malvern, collected by Mr C. H. Barker. The types, a ♀ and a ♂, are in my collection.

Cerceris dondoensis n.sp. ♀. (Pl. XLIV, fig. 4.) •

Coloration. ♀: Black; the median area of the clypeus excepting its anterior and lateral margins, the lower half of the face as far as the level of the antennal sockets, and the interantennal carina, are pale yellowish white. A thin transverse band on the apical margin of the third tergite broadened laterally, and a very narrow band on the apical margin of the fourth tergite are also yellowish white. The median part is bordered with black apically and laterally. The following parts are ferruginous: the antennae except their piceous part towards the apex above, the basal two-thirds of the mandibles, pronotum, pronotal tubercles, scutellum and postscutellum, tegulae, apical half of the petiole, apical margins of the second and fifth tergites, the latter broadly, the whole of the pygidial segment and the penultimate sternite. The coxae are black, the rest of the legs all ferruginous with lighter coloured tarsi. Wings pale fuscous with black veins.

Sculpture. ♀: Head as broad as the mesonotum. The median part of the clypeus is of a very prolonged tongue-like shape and places the species in the group headed by *C. Kobrowi*. The sides are parallel, only the apex is rounded. The mandibles are simple exteriorly and internally. Inner orbits distinctly divergent towards the clypeus. The sculpture of the lower face and clypeus is very subtle, the median part of the latter is smooth and shining with a very few scattered fine punctures. The face up to the antennal insertion is finely shagreened and like the sides of the clypeus covered with a short silvery pubescence. The vertex, temples and occiput are densely rugose and dull. The puncturation of the pronotum, mesonotum, scutellum, postscutellum, epinotum, excepting the epinotal area, and pleurae is fairly uniform, but the disc of the mesonotum is longitudinally very finely striated, with fine punctures irregularly interspersed. The epinotal area of medium size is diagonally ridged and dull, the rugae directed outwards. Petiole barrel-shaped, as long as broad, with a fovea in the middle of the hind margin. The puncturation of it and of the tergites is simple, distinct and not rugose. The tergites are rendered dull by a fine silky white pubescence. The sternites are smooth, the fifth dull and finely rugulose. The pygidial area is nearly rectangular, the sides almost parallel and margined; the apex rounded. Mesopleurae without tubercles. Bristles on the legs white.

Length: 12 mm.

The unique specimen was found by Mr R. H. R. Stevenson at Dondo, Portuguese East Africa, 4th February, 1923.

Species on which the median part of the clypeus is entirely or to some extent separated anteriorly from the underlying part and protruding free or partly free in the ♀. The median part of the clypeus protrudes more or less tectiform at different angles.

This group includes the species related to *Cerceris labiata*, *Ferreri*, v. d. L. and others.

C. pictiventris Gerstacker. ♀ and ♂. *Monatsberichte Berlin. Acad. Wissenschaften*, 1857, p. 509, ♂. Peters, *Reise Mozambique*, Bd. v, 1892, p. 474, ♂.

Cerceris erythrosoma Schl. ♀. Schletterer, "Die Hymenopterengattung *Cerceris* Latr." in *Zool. Jahrbücher*, Bd. II, pp. 450 ff.

Cerceris ornativentris Cam. Cameron, *Trans. South African Philos. Soc.* 1905, p. 219.

This species has been described by Gerstacker in the ♂ only. Schletterer described the ♀, *loc. cit.* Cameron's name is also synonymous. (Pl. XL, figs. 1, 18; Pl. XLII, fig. 6.)

Coloration. ♀: Black, abdomen red except the petiole. The tibiae and tarsi, the three first joints of the antennae, the apex of the last joint and sometimes the under side of the flagellum more or less red. The legs are reddish with darker femora. On the face the following parts are white: clypeus, the median part of it with a black margin, two triangular maculae on the lower part of the face close to the inner margin of the eyes. Sometimes only a transverse macula of the median part of the clypeus is white. Labrum rusty red. Mandibles at the basal half yellow-white, then reddish, the apex black. I have not yet seen specimens with white markings of the thorax. Sometimes a spot of the tegulae is white. The tergites can be entirely red—the petiolus being black—or can have yellowish markings of variable size laterally at one or more tergites. These in dry specimens are more or less visible, but for the most part not very conspicuous.

Coloration. ♂: The typical form—to judge by the greater number of the individuals—has the abdomen black. But the ♀ coloration with more or less extensive red or reddish yellow abdominal segments occurs. I collected such specimens in Orangia and Transvaal. Transitional specimens occur, and, therefore, this ♂ form with the coloration of the ♀ does not merit a special name. Owing to the different coloration the habitus of the two sexes is fairly different so that Schletterer did not realize that he described the ♀ of Gerstacker's species as a different and new species. The ♂♂ are black with yellow markings. The entire face is yellow up to just above the antennal insertions; the latter are situated in black extensions of the frontal coloration. Yellowish white are the outer corners of the collar, a spot of the tegulae, and the median part of the metanotum—*i.e.* postscutellum. The extent of the yellowish white coloration of these parts is variable, but the collar is usually of that colour. The tergites 2-5 have on each side large, nearly quadrate yellowish white spots which decrease in size on each following tergite and leave the median line of the black coloration free. The pygidial area is more or less rusty red. The sternites are mostly blackish brown, rarely with lighter indistinct parts. In the specimens which have a more or less red abdomen, the yellow lateral

spots are less pronounced. The legs are more or less red, the femora sometimes darker. The trochanters, namely the posterior ones, are mostly yellowish white. The basal joints of the antennae are red to a variable extent. Mandibles white above or reddish with the apex black.

Sculpture. ♀: The median piece of the clypeus is free of the lateral sclerites almost to its posterior margin, leaving the whole of the labrum exposed. It is moderately convex, quadrangular, and projects above the labrum at a sharp angle, like a roof. Its sides are slightly divergent in front and the anterior margin is feebly sinuate. Behind its anterior margin is an irregular series of punctures, and on the rest of the surface the puncturation is shallow and diffuse. The labrum carries near the anterior angles a horny tooth which bends inwardly. The lateral parts of the face are finely punctured. The vertex has a dense and fairly rough puncturation, almost wrinkled. The interior margins of the orbits are strongly and downwardly divergent. The temples and occiput are largely developed. The mesonotum has a moderately dense and acicular puncturation, the collar is finely and sparsely, the scutellum sparsely, but roughly punctured. The cordiform area is coarsely furrowed diagonally. The furrows run diagonally and outwardly at the base, transversely at the apex. The rest of the median segment—epinotum—is very densely wrinkled like the mesopleurae, which are protuberant and bear traces of two tubercles similar to those of *Cerceris curvitaris* Schlett. The tergites have at the sides a more distinct and rougher, above a finer and very sparse puncturation; the sternites are sparsely punctured and otherwise are smooth and shining like the tergites. The abdominal segments are bare above; below, the fourth and fifth have each a brush of grey hairs, directed backwards. They are most conspicuous when seen from the side. The sternites 3, 4 and 5 have medially a distinct transverse impressed line. The penultimate sternite is posteriorly and medially distinctly impressed transversely. Last sternite deeply and roundly emarginate with small tufts of hair. Pygidial area anteriorly with parallel sides narrowed towards apex, the posterior margin nearly straight. The surface is dull and finely granular. The lateral fringe of hairs is poorly developed. The abdominal segments are clearly constricted at the base. The petiole is broad and inversely trapezoid, narrower than the following segment, coarsely and sparsely punctured at the sides and with a conspicuous punctiform impression in front of the hind margin. The wings are strongly fuscous throughout. The posterior tibiae are strongly serrated, twisted at base. Sterna with a fine median impressed longitudinal line. Mandibles edentate on the inner margin, obtusely angular on the outer.

Length: 15–16 mm.

♂: Median part of clypeus convex, somewhat impressed medially. The anterior margin protrudes a little and is fairly straight, laterally angular, medially without teeth, with a fine black anterior margin. The lateral fringe of fimbriae is golden yellow, feebly developed. Surface of the clypeus and face shallowly and sparsely punctured. The puncturation of the body corresponds with that of the ♀. Sculpture of the cordiform area as in the ♀. Of the teeth of the mesopleurae only the posterior one is visible. The pygidial area is rectangular and posteriorly truncate, shining and sparsely punctured, the disc depressed. The last sternite is deeply, the penultimate shallowly, emarginate. The posterior margins of the sternites have a fringe of fimbriae, especially the fourth. The whole abdomen is shaped as in the ♀. Specimens collected by Dr Bequaert in the Katanga region have hardly any puncturation medially on the posterior tergites. Wings hyaline with smoky anterior margins and darker apex of the forewings. The last joint of the antennae is as long as the penultimate one, a little arched, acute, and indistinctly truncate. The mandibles

have inside at the base a tooth; exteriorly they are angular as in the ♀. The posterior tibiae are feebly serrated.

Length: 13–15 mm.

Geographical distribution: Cape Colony, Orangia, Transvaal, Natal, Zululand, Basutoland, Katanga, East Africa.

The ♂♂ with red coloration of the abdomen appear to belong to the north of the South African region. The species appears from November to February. As larval food I observed *Curculionidae*, namely a species of *Tanymecus*.

C. diodonta Schletterer. ♀ and ♂. Schletterer, "Die Hymenopterengattung *Cerceris* Latr." *loc. cit.* p. 451, ♂. (Pl. XL, figs. 2, 16; Pl. XLII, fig. 1.)
Cerceris melanospila Cam. Cameron, in *Trans. South African Philos. Soc.* vol. xv, part 4, 1905, p. 221.

This species, described by Schletterer, has been re-described by Cameron, *loc. cit.* Schletterer's name has priority. I have seen Cameron's type of *C. melanospila*, ♀, ex Albany Museum at Grahamstown.

Coloration. ♀: Very variable, reddish brown and black mixed on the head and thorax. The abdomen is yellow or yellowish brown, rusty red or yellow, with the last segments black.

The following parts are ferruginous: clypeus and face from the eyes to the base of the antennae, the frontal keel and the lower half of the mandibles, occiput and the temples partially or entirely, the greater part of the collar, the pronotal tubercles, a spot of variable size on the mesopleurae beneath the insertion of the wings, lateral margins of the mesonotum, scutellum and post-scutellum, sometimes the mesopleurae and metasternum and a smaller or larger, sometimes very large, lateral spot on the epinotum, sometimes the margins of the cordiform area, all the abdomen, the legs including coxae and trochanters, and the antennae.

The ferruginous colour may be replaced more or less by yellow or by brownish yellow, namely on the mandibles, clypeus, face and all the tergites. The sternites are generally extensively black, the apex of the abdomen diffusely darkened (after death). Sometimes there is a longitudinal band of black colour on the clypeus between the antennae extending over the frontal keel, but occasionally this band is red or yellow. The base of the petiole is sometimes black. I have some specimens from the Congo territory (Katanga, Elizabethville) collected by Dr Bequaert, ♀ and ♂, which seem to occur there in a more or less stable form. In this form the greater part of the sternites and the last three tergites are entirely black, tergite 4 laterally with yellow macula, tergite 3 medially at times with a black macula, the anterior tergites yellow. In view of the great variability in coloration in the species it seems unnecessary to give the Congo form a special name. A ♀ from Bloemfontein (Orangia) is an intermediate form in which also the black fifth tergite is laterally marked with yellow.

♂: The coloration of the ♂ is equally variable as in the ♀ and fluctuates between ferruginous, yellow or brownish yellow. The distribution of colours is the same as in the ♀. But the red spot of the epinotum seems to be more often absent, and the median joints of the antennae are dark above. The colour variety of which I described the ♀ from the Congo territory also occurs in the ♂ from that territory.

Sculpture. ♀: Head very large and massive, of cubical form. Temples and occiput strongly developed, inner orbits parallel, barely perceptibly diverging towards the base of the mandibles. The median part of the clypeus is strongly convex, fused at the base above, freely protruding below. It is

conical seen from above, with the free apex rounded and nasiform when seen from the side. The anterior margin of the clypeus below the projection has five distinct blunt teeth with single stronger bristles between them, chiefly laterally. Mandibles on the inner margin with two teeth. In fresh specimens a third basal one can be seen. The teeth get worn away very soon. Externally the mandibles are angulated. Clypeus and face microscopically and densely aciculate, dull and with very little gloss, silky, without larger punctures. Front, occiput and temples densely and finely rugosely punctured, dull. The collar has the same sculpture, but in front it is also finely and longitudinally striate. The mesonotum and scutellum are a little more coarsely punctured than the head and densely rugose. The mesopleurae are thick, coarsely punctured, furnished with a little tubercle below. Metapleurae transversely rugose. Sterna smooth and shining, the mesosternum with a fine longitudinal keel, metasternum medially roundly grooved. Epinotum almost impunctate. Median or cordiform area of epinotum, with sharp and distinct rugae which extend diagonally outwards on each side from the base. The direction of those rugae is not constant, they are sometimes diagonal and at other times arcuate. The rest of the epinotum has the same rugose puncturation as the mesonotum. The sides of the epinotum are transversely rugose. The sternites are mostly smooth and shining. The fifth is very flatly emarginate, laterally with a short brush of yellow hairs at the outer corners. The surface is densely punctured with a deepened middle line. The second sternite is singly and grossly punctured and the second and third medially have a round groove. The surface of the last ventral segment is granulate, dull, deeply triangularly excised, with strong and ferruginous fimbriae. The petiole of the abdomen is broad and thick, inverted trapezoidal with a deepened punctiform groove in the middle of the posterior margin. All the tergites are smooth with fine and sparse puncturation, the second and third with a little round groove in the middle of the posterior margin. Pygidial area pyriform, anteriorly finely undulating rugose, posteriorly smooth, more or less dull. The lateral fimbriae are dense and ferruginous. The lateral parts of the last tergite outside the pygidial area have some strong discrete punctures. The surface of the insect is bare without pilosity except the silky face. Posterior tibiae serrate at the outer side. The teeth are lamelliform, widely separated from one another. Wings entirely fuscous with a darker apical margin of the forewings. Stigma and veins brownish yellow; the subcosta of the forewings is black.

Length: 17-18 mm.

♂: Median part of the clypeus feebly convex, oval. The anterior margin is bluntly tridentate. The teeth are short but distinct. The lateral fimbriae are strong and dense, of a golden colour. Mandibles on the inner margin with a weak tooth near the middle, on the outer with a weak angle before the apex. The puncturation is the same as in the ♀. The tumid parts of the sternites are smaller and higher. The sixth sternite has at the outer corners on each side an acute tooth and behind it a distinct brush of yellow hairs. Pygidial area sharply quadrangular, at the surface indistinctly and shallowly rugose, truncate behind. The colour of the wings is the same as with the ♀. Last joint of antennae as long as the penultimate, proximally narrowed and feebly arcuate, at the apex feebly and diagonally truncate.

Length: 13-15 mm.

The species has a wide geographical distribution as far as tropical Africa. It is on the wing in the south of the continent from November till February. I have seen specimens from the following localities:

CAPE COLONY: Port Elizabeth, Sunday River, Grahamstown. ORANGIA: Bothaville, Dewetsdorp, Bloemfontein. TRANSVAAL: Lichtenburg, Johannes-

burg. RHODESIA: Salisbury, Bulawayo. CONGO: Katanga, Elizabethville, Buchama. SOUTH-WEST AFRICA.

This is one of the larger and more robust species of the territory and cannot be mistaken for one of the related species.

Cerceris morosula n.sp. ♀ and ♂. (Pl. XL, fig. 10; Pl. XLII, fig. 9.)

Coloration. ♂, ♀. Black. Ferruginous are the clypeus, lower face, large maculae of the temples, the anterior part of the collar, scapulae and squamulae, pygidial area, antennae, basal half of the mandibles, legs and sometimes also the whole of the occiput. Upper surface of the posterior and median femora blackish. In the ♂ transverse maculae on the sides of the first and second tergites are ferruginous, the clypeus, face and base of the mandibles, a stripe on the anterior tibiae and a small spot on the lateral part of the second tergite being yellow. Two spots on the first sternite, the apical margin of the penultimate tergite, the apical segment and the end of the penultimate sternite are ferruginous. The extent of the ferruginous, and in the ♂ of the yellow colour, is apparently variable. This species is clearly characterized by the dense pubescence which covers the whole body and also a part of the legs. This pubescence is white and decumbent on the 2-5 tergites and sternites, shaggy on the mesopleurae, yellowish brown on the rest of the body. In the ♂ it is stronger, and on the thorax darker brown.

Sculpture. ♀: The median part of the clypeus is roundly convex, formed as in *C. diodontia* Schl. The protruding plate, seen from above and behind, is trapeziform and narrowed, truncate in front. Anterior margin of the clypeus medially truncate with five feeble tubercles, laterally feebly undulated. Labrum transversely trapezoidal, the anterior margin shallowly emarginate. Inner margin of the mandibles at the base and before the apex feebly sinuate, without teeth. External margin angulated in the middle. The inner orbits are strongly divergent towards the base of the mandibles. The head is widest at that point. The occiput and temples are strongly developed. The face, vertex, temples and occiput have a long brownish pilosity. Clypeus and face finely and densely punctured. The puncturation of the rest of the head is rougher and densely rugose, dull. The mesonotum, scutellum and epinotum are not more coarsely but very densely punctured and dull. The median (cordiform) area of the epinotum is large, laterally sharply bordered by fine deepened lines and without an impressed median line. The puncturation of the area is like that of the rest of the epinotum but somewhat finer and more dense. The area is, therefore, dull. It is densely hairy, the hairs being erect and of a brown colour. Tubercles are hardly indicated on the mesopleurae which are large, densely punctured, dull and hirsute. The sterna have a greasy lustre and a fine and not dense puncturation. The mesosternum has a fine keel, the metasternum a small round groove. The petiole of the abdomen is very broad and thick, inverted trapezoidal, densely and more strongly punctured than the following tergites, as long as apically broad. The tergites are dull, finely, closely and evenly punctured. The anterior and posterior margins of the tergites are very narrowly depressed so that the segments do not look very tumid. The pygidial area is large, nearly regularly barrel-shaped, truncate at the apex. Its surface is flat, irregularly punctured, the punctures setiferous, particularly in the anterior half. The petiole has a round groove at the posterior margin which is hardly indicated on the following tergites. The tumid areas of the sternites are narrower and more sharply defined, triangularly impressed in the middle posteriorly. The last segment is apically deeply incised, the tufts of bristles are thick and the lateral fimbriae of the pygidial area rather thin. The tumid areas of the sternites are shining, sparsely punctured. The legs are stout and thick. The

posterior tibiae are bluntly serrated, the spines short and thick. Apical two-thirds of the wings dark fuscous, the base paler. The veins are yellowish red at the base, black towards the apex.

Length: 18–20 mm.

♂: The median part of the clypeus is feebly convex, the anterior margin a little protruding, broad and truncate; without distinct teeth. The outer corners and the middle are a little bluntly prominent. A deepened line of black colour runs diagonally from the insertion of the antennae towards the base of the mandibles, but disappears in the lower third. Internal orbits strongly divergent towards the base of the mandibles. Clypeus and face with a fine and sparse puncturation, smooth and shining, without hairs. The puncturation of the rest of the body is just as symmetrical as in the ♀. The cordiform area is also similarly sculptured. The whole of the body is densely hirsute, the sternites with tufts of hairs, conspicuously so at the sides. The last segment is emarginate, the apical angles acutely protruding. The pygidial area is almost barrel-shaped as in the ♀, but smaller and with very scattered large punctures. The petiole of the abdomen has ventrally at the base a round protuberance and the deflected margins are carinate. The metatarsus of the first pair of legs is sinuous and enlarged towards the apex. The following joints of the anterior tarsi are broad and cordiform. The metatarsus of the posterior legs is deformed, rather suddenly broadened in the second third. The broadened part has at the outer side a shallow excavation. The metatarsus is about as long as the three following joints taken together. Inner margin of the mandibles edentate, the outer margin sharply angulated. The last joint of the antennae is very long, strongly bent inwardly and emarginate, the extreme apex is broadened and black, with the truncation shining. The joints of the antennae are carinate above. The wings are less smoky than in the ♀.

Length: 17 mm.

This species is easily distinguished by its size, pubescence, and symmetrical puncturation. The dark coloration and the formation of the metatarsi in the ♂ are also prominent characters.

The habitat seems to be restricted to the more northerly parts of South Africa. The types of the ♀ from Umbilo (Natal), and ♂, Congella (Natal), collected in October, are in my collection. I have seen another ♀ from the Congo territory, collected by Dr Bequaert at Kibimbi (3rd February, 1911). This co-type is in the Congo Museum at Tervueren. In the British Museum collection I have seen 2 ♀s and 1 ♂ from Natal. Mr R. H. R. Stevenson collected some ♂s at Dondo in Portuguese East Africa in February.

Cerceris bulawayoensis n.sp. ♀ and ♂. (Pl. XLIV, fig. 9.)

Coloration. ♀: Black. Abdomen chocolate brown; the following parts are ferruginous: clypeus, face between inner orbits and antennal insertions and as far as the level of the latter, antennae except the apical upper side, mandibles, occiput, and temples, pronotum, scapulae, tegulae except the yellow base, two large maculae of the mesopleurae beneath the base of the wings, the sides of the epinotum, petiole and second tergite, the corresponding sternites, the legs including trochanters and coxae. The following parts are yellow: the inter-antennal carina, the postscutellum, an apical fascia of the petiole, hardly interrupted in the middle, the apical margin narrowly of the second tergite. The petiole has a longitudinal median line of black.

♂: The following parts are yellow: the whole of the face up to two-thirds of the inner orbits, the basal third of the mandibles, the broad apical margin of the second tergite, the apical margin of the third tergite narrowly, the basal

third of the hind femora beneath, half of the hind tibiae underneath and the bases of the metatarsi. The yellow band of the petiole is more widely interrupted in the middle than in the ♀.

Wings hyaline with a black tip. Marginal vein and stigma yellow.

Length: 14 mm. ♀.

Sculpture. ♀: This species belongs to the *C. diodonta* section of the genus. In size it is one of the larger ones. The inner orbits are parallel. The median part of the clypeus is free, protruding about half of its length. The protruding part has the sides parallel and is truncate apically. The mandibles are stout and angular externally.

The face and clypeus are dull on account of a very fine sculpture. At the vertex, occiput and temples the sculpture is more rugose. The mesonotum is rugosely punctate, dull. Epinotum and epinotal area uniformly punctate. The petiole is highly trapezoid, shining, with a simple conspicuous puncturation and an apical median fovea. The other tergites are covered with a dense and very fine puncturation, and a dense yellow tomentum, which gives them a dull appearance. The pygidial area is of an oval shape, truncate apically, finely marginate laterally and covered with very shallow scattered punctures. It is acuminate in between, dull. The sternites are very shining, smooth and bare, the hind margins of the tumid portions medially incised. There are no tubercles on the pleurae. Temples, thorax, sterna, pleurae and sides of the epinotum with a long whitish pilosity.

♂: The median part of the clypeus is regularly hexagonal, its apical margin truncate, simple. The epinotum is medially impressed below the area. The inner orbits are divergent towards the clypeus. The pygidial area is rectangular, margined, shining, with a few scattered punctures. Otherwise the shape, size and sculpture are the same as in the ♀.

Length: 13 mm.

The ♀ type was collected by Mr R. H. R. Stevenson at Bulawayo, Southern Rhodesia, 28th May, 1923.

The ♂ type was found by Dr G. Arnold at the Victoria Falls, 3rd January, 1920.

Cerceris africana Cameron. ♀. (Pl. XL, fig. 3; Pl. XLII, fig. 7.)

Cameron, *Trans. South African Philos. Soc.* vol. xv, part 4, 1905, p. 222.

This species occurs as two geographically separated races. The type of the species described by Cameron belongs to the southern parts of the sub-continent; its coloration is black and ferruginous. The northerly race, mostly indigenous in Orangia, Transvaal, Rhodesia, but occasionally also south of the Orange River, I have named *karooensis* m. It is a black and yellow insect, rarely with traces of red. I have seen Cameron's type, a ♀.

Coloration. ♀: Black; ferruginous are the clypeus, face and frontal carina, posterior orbits and a transverse spot on the temples, the tegulae and the tergites almost entirely. The antennae are red, black towards the apex. Petiole of the abdomen black with a fine ferruginous apical margin. The anterior margins of tergites 2-5 are black. Sometimes the tergites 2-4 have black longitudinal spots in the middle. These are abbreviated posteriorly and form a longitudinal interrupted line. The pygidial segment and the whole of the ventral surface are ferruginous. Legs ferruginous, the median and posterior coxae more or less black. Sometimes the lateral angles of the collar are brownish. Mandibles apically yellowish.

Length: 14-15 mm.

♂: Face and clypeus yellow. The temples are marked as in the ♀. In lighter

coloured specimens the collar, pronotum and scutellum are more or less yellow. The abdominal segments are largely black, the fasciae are yellowish, margined all round with ferruginous. The sternites are ferruginous with their bases and depressed apical margins blackish.

Length: 13-14 mm.

The wings are fuscous at the apex in both sexes.

The sculpture is the same as in race *karooensis* m. The ♂s of the two races graduate into one another in their coloration. I know *C. africana* hitherto only from the CAPE COLONY: Port Elizabeth, Willowmore, George, Sunday River, Dunbrody. From the latter place comes Cameron's type, November—February.

Race: karooensis m. ♀ and ♂.

Coloration. ♀: Head and thorax black with abundant yellow markings. The following parts are yellow: clypeus and the sides of the face up to above the antennal insertion, frontal keel and a short frontal line continued from the frontal keel, a large arcuate macula on the temples partly touching the orbits, the back of the pronotum, tegulae, two maculae on the mesopleurae, the scutellum, metanotum and a large oval macula on each side of the epinotum extending over the whole length of that segment. The greater part of the abdomen is yellow, only the bases and apical margins of the tergites are black, mixed sometimes with ferruginous. The petiole is black, laterally with a yellow macula at the base. Tergites 2-4 with a median ferruginous narrow line. The pygidial area is brown, dull, and leathery; the sternites are yellow, their depressed areas ferruginous. Mandibles in greater part yellow, legs ferruginous, yellow underneath. Coxae yellow, but the posterior pair is darker. Antennae ferruginous, the apex darker above. Scape of the antennae yellow beneath.

Wings hyaline with yellow veins. Only the area behind the radial cell and the third cubital cell as far as the cubital vein infuscate.

♂: Coloured like the ♀ but partially more brightly coloured, though darker specimens occur. The face is yellow as far as the antennal sockets with extensions of that colour on each side and in the middle which reach the level of the anterior ocellus. The maculae on the epinotum are sometimes smaller. The apical margins and bases of the tergites are more extensively black. In a specimen from the Transvaal the tergites are black with broad apical yellow bands which are deeply emarginate in the middle as far as the posterior margin and slightly interrupted medially in tergites 2-5.

Sculpture. ♀: Median part of clypeus convex above. The size of the protruding free lamina varies. Seen from behind and above the sides are very conical, the anterior margin is a little truncate and more or less rounded, but in some cases it is small and forms only a prominent tubercle. Anterior margin of the clypeus straight in front, the apical angles barely projecting, indistinctly and roughly crenulated from end to end. The frontal keel extends only a little beyond the antennal sockets. Inner orbits divergent towards the base of the mandibles. Inner margins of the mandibles without teeth, exteriorly with a blunt angle. Mesopleurae with a small tubercle below. Metapleurae very rugose transversely. Metasternum with a deep impression, reaching to the posterior margin. Cordiform area large, densely punctured, the punctures finer and sparser than those of the rest of the epinotum. The petiole is inverted trapezoidal, widest behind, broadly sessile, longer than its apical width, in the middle with a groove in front of the posterior margin.

Abdomen strongly constricted between the segments. The pygidial area

is barrel-shaped, its posterior margin straight. The apical sternite is deeply and triangularly excised, keeled at the sides.

This species is very pilose, densely so and white on the temples and occiput, pleurae and epinotum, sides of abdomen and less densely on the ventral segments. The insect is dull, densely punctured on the head and thorax, only the scutellum and the cordiform area more sparsely punctured. The puncturation of the tergites is very fine and dense. The sternites are shining, sparsely diffusely punctured.

Length: 15 mm.

♂♂ of about the same size as the ♀♀, but much smaller specimens also occur. The median area of the clypeus is moderately convex above, more or less trapezoidal, slightly produced in front, its anterior margin truncate and slightly angular in the middle. Inner orbits distinctly divergent towards the base of the mandibles. Last joint of the antennae long, arcuate on the inner side. Mesopleurae without tubercles. The petiole of the abdomen has the same form as in the ♀. Pygidial area large, almost rectangular, a little narrowed towards the apex and also towards the base, without lateral teeth, straightly truncate behind. Last ventral segment excavated, at the apical margin roundly sinuate.

The metatarsus of the last pair of legs is obtusely enlarged in the middle, twisted, seen from below strongly clavate towards the apex.

The ♂ is also strongly pilose, and the tumid sternites more especially have dense tufts of brownish hairs. The puncturation is the same as in the ♀. The clypeus and face are shallowly and sparsely punctured. Mandibles simple on the inner margin, bluntly angulated on the outer.

Length: 11-15 mm.

Habitat: CAPE COLONY: Willowmore. TRANSVAAL: Lichtenburg, Pretoria Krugersdorp. ♂ (British Museum). The types of ♀ and ♂ are in my collection.

Cerceris transvaalicola n.sp. ♀ and ♂. (Pl. XLI, fig. 12; Pl. XLIII, fig. 9.)

♀: *Coloration*. Black; the following parts are ferruginous: occiput and upper part of the temples, the first four tergites, all the sternites, the coxae and all the legs in so far as they are not yellow, the first seven joints of the antennae and also joints 8 and 9 below. Antennae otherwise black. The following parts are lemon-yellow: the greater part of the mandibles, all the clypeus, a triangle below the antennae, the frontal carina between the antennae, large lateral maculae on the face extending up to the insertion of the antennae. These leave between them and the triangular spot of the clypeus only narrow black lines. The following are also lemon-yellow: a rhomboid macula in the middle above the antennal insertion, a spot on each side directed diagonally inwards and upwards as far as the upper margin of the eyes; a narrow border behind the eyes, a line situated anteriorly on the collar above, the scapulae, two small spots at the anterior corners of the scutellum, a transverse line on the metanotum, two long lateral spots on the epinotum and a marginal band interrupted in the middle on the petiole. Tergites 2-5 have continuous lemon-yellow fasciae at the posterior margins. Those of the second to fourth tergites are emarginated in the middle basally. The fifth is entire and of the same width. The anal segment is yellow above. The dorsal fasciae do not touch the apical margins. The fourth tergite is indistinctly bordered with black in the middle, the fifth is black with a yellow band and laterally only faintly ferruginous. The pygidial area is brownish yellow except the inferior third. Of the sternites the second to fourth have small yellow spots laterally. Equally yellow are a spot on the anterior coxae, the trochanters II and III, femur I below, the greater part of II and III below and the apex of

III, as well as the scapes of the antennae below. In view of this kaleidoscopic coloration one may surmise that the extent of the red and yellow colours will prove to be very variable.

The wings are hyaline, the veins at the base brownish yellow, otherwise brown. The apical margin externally from the radial cell up to the discoidal cell is infuscated, narrowed to the apical margin. The apex of the hind wings is feebly infuscated.

Sculpture. ♀: Median part of the clypeus with a small and narrow protruding lamina directed towards the apex and ending just above the anterior margin. It is raised very little above the surrounding surface. Seen from above, the sides of the lamina form a flat trapeze with the anterior margin truncate. Median part of the clypeus convex. Anterior margin of clypeus broad and straightly truncate, indistinctly and distantly crenulated. Labrum with a small and round emargination in the middle of the anterior margin. Inner orbits strongly divergent towards the base of the mandibles. The latter without teeth on the interior margin, but at the base deeply and broadly excised, the outer margin bluntly enlarged. Frontal keel narrow, lamellate. Temples and occiput wide and thick. Head as wide as the thorax. Scutellum flatly convex. Cordiform area of the epinotum large, densely punctured, somewhat finer than the rest of the epinotum which is also densely punctured. Petiole inverted trapezoidal, wide at the base, the posterior margin a little narrower than it is long and bearing a groove. Abdomen distinctly constricted between the segments. The pygidial area is truncate posteriorly, its sides are nearly parallel, hardly narrowed behind or in front. Posterior tibiae strongly spined, serrated at the outer margin. Metatarsus III narrowed towards the base. Metasternum with a deepened groove. Tubercle of the mesopleurae small, covered by the pubescence and hardly visible. The insect is dull all over owing to the dense puncturation. The clypeus and face are very finely and densely punctured with white silky pubescence. The front, occiput and temples, pronotum, mesonotum, mesopleurae and epinotum are densely punctured. The puncturation is everywhere of nearly the same strength and density. Metapleurae transversely rugose. Temples, mesopleurae and the lateral margins of the first two abdominal segments are clothed with a long white pilosity. The scutellum is somewhat more sparsely punctured. The apical margins of the tergites are more finely punctured than the anterior parts and are smoother. The pygidial area is dull, densely coriaceous and rugose. Ventral segments very finely punctured, their apical margins more strongly and more sparsely punctured.

Length: 17 mm.

I captured a ♀ of this splendid species at Lichtenburg, Transvaal, in December. The type is in my collection.

The species is nearly related to *C. africana* and *karooensis*.

The ♂ type is the property of the British Museum and comes from Delagoa Bay in Mozambique.

I have seen another ♂, captured by Mr R. H. R. Stevenson at Sawmills, S. Rhodesia, March, 1924.

♂: *Coloration.* Clypeus and face up to above the antennal insertion yellowish white. The frontal carina and a line in the continuation of the same which reaches almost to the anterior ocellus yellowish white. Of the same colour are the mandibles except the darker apex and a streak, abbreviated above, marginating the posterior orbits. The temples have above on each side a ferruginous macula. Otherwise the head is black. On the thorax, which is in greater part black, the following areas are yellow: the pronotal collar, a transverse macula on the scutellum, the middle part of the metanotum, the

squamae and a macula on the upper part of the mesopleurae. First tergite black, 2, 3 and 4 ferruginous, 5 and 6 black. The pygidial segment is yellow, the pygidial area brown at the apex. As in the ♀, the 2-6 tergites have the yellow marginal bands entire, that of the sixth segment broader than those of the preceding segments. Sternites ferruginous, 2, 3, 4 and 5 with transverse lateral yellow markings which are continuous with the yellow marginal bands of the tergites. Legs ferruginous and yellow. All the coxae are yellow at the base and front. Sterna with yellow spots. The coloration will prove to be variable. Antennae yellowish brown, the terminal joints blackish above. Lower face and the fimbriae white and silky.

Sculpture. ♂: Sculpture and puncturation as in the ♀. The median part of the clypeus is flatly convex, anteriorly broadly trapezoidal and protruding, the anterior margin truncate without teeth or tubercles. Inner orbits strongly divergent towards the base of the mandibles. Pilosity and pubescence are as with the ♀. The pygidial area is feebly narrowed to the apex and sparsely punctured above. The sternites are shining, the tumid parts thick, triangularly impressed behind. The fifth and sixth have a pencil of brown-red bristles at the sides of the posterior margins. Metatarsus of the hind pair of legs apically clavate. Antennae: joints 10-12 short and thickened, the thirteenth strongly arcuate, attenuated apically, concave inside, and nearly as long as the three preceding ones taken together.

Length: 16 mm.

The ♂ is clearly distinguished by the formation of the metatarsus of the hind legs and of the antennal joints.

Cerceris Schoutedeni n.sp. ♀ and ♂. (Pl. XLI, fig. 13; Pl. XLIII, fig. 11.)

Coloration. ♀: The whole body is dark chocolate-brown with a black tinge in parts. Blackish more or less are the antennal grooves and the front, the anterior part of the mesonotum, the pleurae and the cordiform area of the epinotum and the middle tergites. In the ♂ the blackish parts are less pronounced. In the ♀ the following are bright yellow: the frontal lamella between the antennae, a transverse line on the pronotal collar, a transverse line on the postscutellum, sides and posterior margin of the petiole above, sides of the first tergite, narrow bands on the posterior margins of tergites 2 and 3, the lower side of the petiole, and a large macula at the base of the second sternite. In the ♂ the yellow colour on the pronotal collar is sometimes obliterated.

♂: Coloration and pilosity and pubescence and sculpture are the same as in the ♀. Median part of the clypeus convex above. The rounded anterior margin of the clypeus has three distinct teeth. Mandibles simple, without teeth and angles. Clypeus in the middle and the sides of the face shallow and distantly punctured. The apical joint of the antennae is simple, as long as the preceding one. Inner orbits parallel. The tumid parts of the sternites are narrow and shining. The pygidial area is rectangular, roughly punctured. Sixth sternite laterally with a small tooth at the posterior angles.

Length: 13 mm.

Sculpture. ♀: Inner orbits almost parallel. The median part of the clypeus nearly as far as its middle is free, protruding and tectiform. Seen from above the protruding lamina is nearly quadrate with the sides parallel and the anterior margin bluntly excised. Anterior margin of the clypeus straight, in the middle feebly sinuate, laterally angular. Inner margin of the mandibles without teeth but bisinuate in the middle, feebly angular exteriorly. Lateral parts of the clypeus dull, microscopically coriaceous, without puncturation. The lamella of the clypeus is finely and distantly punctured above. The sides

of the face are dull, sparsely punctured. The puncturation of the front, occiput and temples is somewhat coarser but also not very dense. The whole of the head is covered with a fine silky and adjacent pubescence not obscuring the sculpture. Temples and occiput thick, head transversely cuboid. Mesonotum, scutellum and sides of the epinotum densely and more strongly punctured than the head, dull, clothed with white silky and adpressed pubescence. Metanotum glabrous and impunctate. The cordiform area is shining and fairly regularly longitudinally furrowed, at least in the middle. The form of the cordiform area is that of an equilateral triangle. The petiole is very much narrower than the following tergites, almost nodose. It is largely and sparsely punctured above with a small groove at the posterior margin. The rest of the abdomen is oval in shape. Tergites 2, 3, 4 and 5 are covered with a dense yellowish brown tomentum which hides the sculpture almost completely. These tergites have a distinct and not dense puncturation on a dull surface. The pygidial area is narrowed towards the apex, almost pyriform, rounded behind, dull and finely granulate. The lateral pencils of hairs are thin and whitish. The tumid parts of the sternites are dull, very finely punctured, the fifth with a fine impressed median line. The metasternum is deeply and longitudinally furrowed. Mesopleurae with a posterior small tubercle, densely and roughly punctured. Legs brown; antennae ferruginous, the apex blackish from the fifth joint onwards, the terminal joint ferruginous. Veins blackish. Hind tibiae serrate and with five or six spines.

Length: 14 mm.

This species was collected by Dr Bequaert at Elizabethville, in the Katanga. I have seen a few ♀s and ♂s which were captured in February and March. The types are in the Congo Museum at Tervueren and co-types in my own. The species is named in honour of Dr von Schouteden, the curator of the Tervueren Museum.

Cerceris nigeriae n.sp.

Coloration. ♀: Black, with the abdomen red. The following parts are ferruginous: the external angles of the pronotum, scapulae, tegulae, the basal half of the mandibles, terminal joints of the antennae and all the legs including trochanters and coxae. The antennae are piceous. An indistinctly limited spot at the base of the mandibles above and the median tectiform plate of the clypeus, except a black anterior and posterior seam, are ivory white. Wings evenly fuscous with a strong blackish iridescence.

Sculpture. ♀: Median part of the clypeus very tectiform, free and produced. Seen from above, the sides of the salient plate are very little attenuated anteriorly, apically truncate; there is before the anterior margin of the plate on each side an impressed groove-like puncture. The anterior margin of the clypeus has three blunt teeth.

The mandibles have anteriorly a blunt angle; the inner margin has a blunt tooth and a smaller one behind it. The inner orbits are feebly convergent towards the clypeus. The clypeus and the lower face have a white silky pubescence. The clypeus is dull, very finely coriaceous, without puncturation. The lower face up to the antennal sockets is likewise sculptured but with fine dispersed punctures. Above the antennal sockets the punctures become coarser and rugose. The frons, temples and occiput are evenly rugosely punctate and dull. The temples are broad and have white pubescence beneath. The collar is anteriorly longitudinally rugulose, posteriorly coarsely rugose-punctate and dull, like the mesonotum and scutellum. The sides of the epinotum are likewise punctate and dull. The epinotal area is large, dull and distinctly limited and has eight to ten sharp transverse rugae across the disc.

The mesopleurae have two distinct tubercles each and are very coarsely rugose and dull. The sterna are finely sculptured with a greasy lustre. The metapleurae are transversely rugose. The petiole is stout and has a groove before the apical margin. The tumid portions of the tergites are smooth and shining, sparsely punctate. The pygidial area is strongly attenuated towards the apex, rounded apically, laterally strongly fimbriate, coriaceous on the disc and dull. The tumid parts of the sternites are smooth and shining, scarcely punctate. The pilosity is yellowish brown. The posterior tibiae are strongly but distantly serrate. The habitus is thick and bulky.

Length: 16 mm.

The type from Afikpo in South Nigeria is in the British Museum. The species resembles *C. pictiventris* Gerst. in size and general appearance.

Cerceris katangae n.sp. ♀.

Coloration. ♀: Black, marked with yellow. The yellow parts are: the median part of the clypeus above, sides of the clypeus, the sides of the face up to above the insertion of the antennae, and the frontal carina between the antennae. A yellow line is continued from the carina, broadened above, which reaches almost as far as the anterior ocellus. Antennal grooves black. Hind margin of the orbits and a large macula on the temples connected with it are yellow. Yellow also are the collar above, squamulae, a transverse band on the anterior margin of the scutellum, nearly interrupted in the middle, the middle part of the metanotum and a large macula on the mesopleurae beneath the base of the wings as well as a smaller one below it. Epinotum black, the cordiform area yellow except at its apex. Abdomen black, the petiole and tergites 2-5 with large lateral yellow maculae. These lie on the posterior margins of the tergites and decrease in size progressively on each segment. The pygidial area is dark brown, the lateral parts of the pygidial segment being yellow. The anterior coxae are spotted with yellow in front. Sternites black. Legs yellow below, black at base. The femora of the hind legs are brown, all the tarsi brownish. Mandibles brown, washed with yellow at the base. Antennae blackish above, light brown below, the scape yellow in front. Wings feebly fuscous, the apex of the fore wings darker beyond the cells.

Sculpture. ♀: Head large, seen from above transversely cuboid. Occiput and temples broad above, rapidly attenuated apically. Inner orbits distinctly but not strongly divergent towards the base of the mandibles. Anterior third of the median part of the clypeus protruding free and nasiform. Seen from above the protuberance is conical, rounded anteriorly. Behind the brown apex there is a series of impressed punctures. The anterior margin of the clypeus is truncate and has five tubercles. The part of the clypeus below the lamella is smooth and shining. Mandibles on the inner margin without teeth, on the outer margin angulated before the apex. The convex median part of the clypeus, the lateral parts and the lower face are microscopically and finely aciculate and coriaceous, very finely and sparsely punctured. The front is flattened, dull and finely coriaceous. The temples and occiput have the same sculpture but somewhat coarser. Mesonotum dull, densely rugose. The scutellum and postscutellum are rougher and more distantly punctured and, therefore, somewhat shining. The mesopleurae are distinctly and coarsely punctured, moderately shining without distinct tubercles. The sterna have a greasy lustre, and are depressed in the middle. The mesosternum has a fine keel, and the metasternum a large round groove in the middle. The cordiform area is large, distinctly marginate and has a fine longitudinal depressed line in the middle. The puncturation, which is shallow and not very close, is like that of the rest of the epinotum. Abdomen distinctly constricted laterally. The petiole is large

and thick, more coarsely punctured above than the following tergites and with an impressed groove behind in the middle. The puncturation of the following tergites is much closer than that of the petiole or almost rugose. Pygidial area feebly barrel-shaped and very large, wrinkled and roughly coriaceous except the apical part which is more finely sculptured and somewhat bent upwards. The tumid parts of the sternites are narrow, posteriorly triangularly impressed, shining and very distantly punctured. Hind tibiae strongly serrated (7-8 spines). Body distinctly hairy. On the head and thorax above the pilosity is erect and brown, on the temples, pleurae and sides of the epinotum long and white. The tergites have a very fine brown and adpressed pubescence.

Length: 18 mm.

The only ♀ and type which I have seen was collected by Dr Bequaert in Katanga (Kibimbi), 4th February, 1911, and is in the Congo Museum at Tervueren.

Cerceris Severini Kohl. ♀ and ♂. (Pl. XLIV, fig. 10.)

Fr. Fr. Kohl, "Neue Pompiliden u. Sphegiden vom belgischen Kongo-gebiet," in *Revue zoologique africaine*, vol. III, fasc. 1, 1913, pp. 207 ff. mit 2 Textfiguren. ♀.

Original description here translated: "12 mm. Robust, black; abdomen, legs, scape of antennae anteriorly, the shoulders, scapulae and tegulae, ferruginous. The coloration is certainly variable. The wings are fuscous with violet reflections. The median part of the clypeus is a nasiform plate, yellow, the anterior half free. The antennal scape is rufous in front. The mandibles are yellow above at the base. Face broad, the inner orbits a little convergent towards the vertex. Occiput and temples thick. The puncturation of the head, pronotum, mesonotum and epinotum is coarctate, proportionately not coarse. The cordiform area transversely strigose, the anterior abrupt part of the pronotum strigose. The sides of the mesothorax are coarsely rugose. The mesopleurae have a spiniform tubercle above the median coxae. Abdomen broad, the petiole broader than long. The second tergite is more than double as broad as long. The same applies to the following three tergites, particularly to the third. The puncturation of the tergites is dense at the sides, medially sparser and finer. The frontal keel is continued to the anterior ocellus as a sharply elevated lamella. The pygidial area is rather narrow, attenuated behind. Not without value for the recognition of the species is the length of the radial cell. The fourth abscissa of the radius is one and a half times longer than the first three united, which are very short. This proportion becomes conspicuous when other *Cerceris* sp. of the section with a nasiform clypeus are compared, e.g. 4-cincta. v. d. L., *S. fasciata* Rossi, *rubecula* Schlett., *nasidens* Schlett.

Very near to *C. Severini* is the South African *C. diodonta* Schlett. This species is somewhat larger, and less compact. In *Severini* the tergites 3, 4 and 5 are covered medially with distinct sharp and dispersed punctures. Laterally these are stronger and denser. In *diodonta* the puncturation in the middle of the 3, 4 and 5 tergites is almost obsolete, but the radial cell and the sculpture are otherwise very similar to *C. Severini*.

Habitat: BELGIAN CONGO, 1 ♀."

I have seen the type which is the property of the Tervueren Museum, and have also examined a second ♀, collected by T. T. Simpson, 1910, at Afikpo in S. Nigeria. This co-type is in the collection of the British Museum.

Coloration. ♂: The colour is like that of the ♀. Legs entirely red, the coxae blackish behind. The clypeus has a large round yellow macula in the middle

of the median part. Tegulae entirely ferruginous, the basal two-thirds of the mandibles yellowish and ferruginous, the apex black, the funiculus and second joint of the antennae dark ferruginous, the antennae black; the extreme base of the petiole is black. I believe this ♂ to be that of *C. Severini* Kohl. The differences are only the usual ones between the sexes and, moreover, the shape and colour of the clypeus clinches the identification. They both come from the same district, Ndola, being on the border between the Congo and Northern Rhodesia.

Sculpture. ♂: Head as broad as the mesothorax, stout, the inner orbits parallel. The mandibles angled exteriorly, the inner margin of them simple. The median part of the clypeus is feebly convex, rounded basally with three blunt teeth apically; the surface is smooth and shining with a few scattered punctures, the face below the antennae minutely coriaceous and sparsely, more largely punctate, covered with a silky tomentum which gives it a dull appearance. The head above the antennal insertion is densely rugosely punctate, dull. An identical puncturation covers the epinotum, mesopleurae and the rest of the thorax.

The epinotal area is densely transversely ridged, large and somewhat shining. The epinotum is medially and transversely striated behind the area. Meso- and metapleurae with a small tubercle each. The petiole is compact, with a groove at the posterior margin, shining and smooth with scattered minute punctures. All the tergites are nearly smooth, somewhat shining, and carry punctures only at the sides and near the posterior margins. The pygidial area is nearly quadrate, small with two sharp points apically, the sides margined. The ventral surface is nearly smooth and shining. There is a conspicuous pencil of golden hairs at both sides of the penultimate sternite. Body and abdomen almost bare. The ultimate and penultimate joints of the antennae are of equal length, the latter curved and truncate apically.

Length: 13–15 mm.

Wings violaceous with iridescence, veins black.

The type of the ♂ was captured by Mr Griffith Williams at Ndola in Northern Rhodesia, May, 1923. A co-type from there is in my collection.

Cerceris proteles n.sp. ♀.

Coloration. ♀: Black, with the entire abdomen dark red, similar to *C. pictiventris* Gerst. In addition, all the legs are reddish with the exception of the base of the hind coxae, the anterior and median coxae and femora, and a streak on the outer side of the anterior tibiae, which are black or mottled with black. The mandibles are brownish yellow with the apex infuscate. The antennae are blackish with the base fuscous underneath. The lower half of the inner orbits is bordered by a longitudinal yellow band. The free plate of the clypeus has a transverse kidney-shaped yellow macula in the middle which is bordered all round with a black border. Just above the plate is a punctiform yellow spot. The wings are dark fuscous, the hind pair paler.

Sculpture. ♀: Median plate of the clypeus entirely free, protruding as in *C. pictiventris* Gerst. Seen from above, the sides of the plate are fairly parallel, deeply and acutely excised in front. The surface is shining and smooth with some scattered large but shallow punctures and it is also somewhat aciculate towards the apex of the plate. The median part of the clypeus is truncate in front and has laterally before the anterior margin a stout black spine on each side directed downwards. The clypeus is smooth below the protruding plate, with a few punctures laterally and some stout yellow bristles anteriorly. The antennae are stout and compact, relatively short. The orbits are fairly parallel, the frons, occiput and temples dull, coarsely rugose. The pronotum is nearly

rectangular in front, steeply precipitous, with the humeri prominent and rectangular. The dorsum of the collar is narrow, the frontal surface coriaceous and dull. The back of the mesothorax has not quite the coarse sculpture of the occiput, but like the scutellum and postscutellum has well separated, discrete and large punctures on a dull surface. The mesopleurae are coarsely reticulate rugose, finely coriaceous in between the rugae. They are rounded and without tubercles. The epinotum is coarsely rugose, dull, with the cordiform area fairly large and the same dull sculpture except that the rugae are transverse in the middle. The contrast between the area and the sides of the epinotal dorsum is but slight. The petiole is thick and broad. Like the following tergites it is smooth and shining, impunctate in the middle, discretely and not very densely punctate at the sides. The pygidial area is oblong, rectangular with the posterior angles rounded, the surface dull, widely coriaceous. The sternites are smooth and shining, for the greater part impunctate, only very sparsely punctured at the extreme lateral margins. The last sternite is excised nearly to the anterior margin and provided laterally with a long fine spine. The excision is semi-elliptical. Hind tibiae serrulate with six spines. Legs stout.

Length: 16 mm.

The type, a ♀ from Kiborno, Belgian Congo, is in my collection.

The species has a great similarity to *C. pictiventris* but is quite distinct.

Cerceris lichtenburgensis n.sp. ♀ and ♂. (Pl. XLI, fig. 16.)

Coloration. ♀: Black; the following parts are white: the median plate of the clypeus, a spot on the clypeus laterally at the base of the mandibles, the frontal keel and a narrow longitudinal stripe bordering the inner orbit and extending to the antennal insertion. The following parts are yellowish white: on the abdomen the margin of the third tergite which is laterally broadened, sometimes a spot before the apical margin of the petiole or a small spot at the hind margin of the fifth tergite and the tumid part of the third sternite. The following are ferruginous: the anterior margins of the median area of the clypeus and of the protruding tectiform part of the same, the mandibles from the base to near the apex, the tegulae, the petiole except the black anterior margin, the lateral and hind margins of the second and fourth tergites, the fifth sternite, the pygidial area, the tumid parts of sternites 4 and 5, the last ventral segment, all the legs except the coxae of the posterior ones, the antennae except the apex of the flagellum above. Sometimes the penultimate tergite is entirely brown.

♂: The hind margin of the petiole, also of the fourth and fifth tergites are ferruginous, the fifth with a yellow transverse band, the sixth all ferruginous. Otherwise like the ♀.

Length: 10–12 mm.

Sculpture. ♀: The median plate of the clypeus, in greater part freely protruding, is fused only a little at the base above. The true anterior margin of the clypeus is transversely truncate with rectangular, sharp and almost spinose lateral angles. The protruding plate has a rectangular shape, anteriorly transversely truncate. The clypeus is in its front part almost flat, before the anterior margin it is transversely concave, smooth and almost impunctate immediately before the anterior margin. The sides of the clypeus and of the face are sparsely and indistinctly punctate, the face silky. The head is densely punctate and dull. Pronotum, mesonotum and scutellum are densely and largely punctate like the head, but the punctures are decidedly larger than those of the head. The puncturation of the epinotum is like that of the mesonotum. The cordiform area is shining, medially deeply furrowed longitudinally, the furrow broad

and transversely crenate. The sides of the area have a few coarse oblique rugae above. Before the apex the rugae are transverse. Mesopleurae strongly rugose and dull. The petiole is barrel-shaped and like the tumid parts of the tergites coarsely and evenly punctured. First sternite distinctly and coarsely but sparsely punctured. Mesopleurae without tubercles and crests. There is no elevated plate at the base of the second sternite, though the latter is smooth and impunctate medially behind. The tumid parts of the third to fourth sternites are narrow, but thick and shining, sparsely punctured. The fifth is densely and finely punctate. The pygidial area is oval, attenuated apically, the apical margin rounded, the surface undulatingly rugose. Head and thorax with a fine and erect pilosity. The posterior sternites, particularly the penultimate, have short hairs. The hind angles of the second to fourth tergites are dentiform. The inner margins of the mandibles are feebly notched with a larger denticle before and a smaller one behind the indentation. The wings are pellucid, the apex and anterior margin of the fore wings infusate. Veins black.

♂: Pygidial area sub-rectangular with a few gross but shallow punctures above. Median part of the clypeus convex, anteriorly hardly projecting, the anterior margin 3-dentate. The teeth are blunt. The surface of the median area of the clypeus has a few large and flat punctures, mainly in the basal part.

The inner margin of the mandibles is edentate. The sculpture is otherwise the same as in the ♀. The inner orbits are parallel in both sexes.

The species is nearly related to *C. ruficauda* Cam.

Habitat: TRANSVAAL: Lichtenburg. The types, 2 ♀s and 1 ♂, are in my collection.

Cerceris languida Cam. ♂. (Pl. XL, fig. 15; Pl. XLI, fig. 2.) *Trans. South African Philos. Soc.* vol. xv, part 4, 1905, p. 218. ♂.

One specimen of this species, collected by Father O'Neil at Dunbrody, Cape Province, a mission station of the Jesuits, situated on the banks of the Sunday River between Graaff Reinet and Uitenhage, is in the Albany Museum at Grahamstown, Cape Province. I have compared this specimen with my own material. The type, collected by O'Neil, is probably in the collection of the British Museum where nearly all types of Cameron are to be found as far as they still exist.

The description of Cameron is partly incorrect. What he calls "clypeus" is evidently the median part or plate of the clypeus. His "metanotal area" is evidently the cordiform or epinotal area and his "epipygium" the area of the pygidium.

Here follows a more detailed and corrected description:

Coloration. ♀: Black; ferruginous are: the petiole and, to a variable extent, the second tergite. The following parts are yellow: an irregular oval macula in the middle of the inner orbits and sometimes some spots on the free protruding median plate of the clypeus, the bases of the mandibles broadly, the collar laterally more or less, the tegulae in parts, the metanotum and fasciae at the hind margins of the second to fourth tergites, but of these one or the other may be more or less obliterated. The fifth tergite has a transverse macula posteriorly. The first three fasciae are medially sometimes attenuated, the transverse macula of an even width. The sternites are brownish. The outer sides of the tibiae and femora are yellowish white. Coxae, trochanters and femora are black, the knees, tibiae and tarsi light brown. The scape and pedicellus of the antennae are black, the flagellum yellowish brown, a bit darker above.

♂: Face, antennal tubercle and clypeus are yellow, the latter with black anterior margin. The second and third tergites have generally a yellow-banded

hind margin, the sixth a large transverse macula. Otherwise the distribution of the coloration is the same as in the ♀. Some of the bands may become reduced or disappear. Yellow bands may also occur on some of the other tergites. Exceptionally the petiole may be partly black.

Sculpture. ♀: The median part of the clypeus convex, transformed in front of the anterior margin into a plate, protruding anteriorly. The sides of the plate are basally parallel, anteriorly a little divergent. Only the anterior third of the plate protrudes freely. The middle of its anterior margin is finely crenulated, the lateral angles sharp, the anterior margins of the excision are straight, crenulate, laterally with two strong teeth of which the external one is directed outwards, the inner inwards. The inner orbits are parallel. The clypeus is coarsely and irregularly punctate, the face has a similar puncturation and has a very much finer and dense puncturation between the coarse sculpture. The labrum is anteriorly roundly emarginate with a broad lateral margin. The inner margins of the mandibles are sinuate and without teeth, the external not angular. The head is densely and fairly strongly punctate, the punctures are somewhat confluent. The collar has laterally a transverse and smooth protuberance and is in the middle somewhat depressed longitudinally, coarsely scrobiculate. Mesonotum shining, broadly longitudinally depressed in the middle and also irregularly so at the sides; it has in front of the scutellum a transverse depression. The puncturation of the mesonotum and scutellum is very coarse, sparse and irregular, the spaces between the punctures are smooth and shining. The postscutellum is nearly impunctate and, therefore, smooth and shining. The epinotum is shining but as coarsely and irregularly punctate as the mesonotum. The cordiform area is in the middle as smooth as a mirror, somewhat raised, convex, anteriorly with a shallow median furrow and without puncturation. The lateral furrows bordering the area are deep and sharp, finely crenulated. This sculpture renders the area very conspicuous. The declivous part of the epinotum is deeply longitudinally grooved in the middle. The petiole is broadly barrel-shaped, well constricted. The sides are anteriorly somewhat more attenuated than posteriorly. It has, like the tergites 2-4, a distinct groove in the middle, before the hind margin. The puncturation of the tergites is extraordinarily coarse and irregular. In between are broad, smooth and shining spaces. The pygidial area is long, the lateral margins feebly arcuate and slightly raised, broadened at the base, posteriorly attenuate. The posterior angles are feebly rounded, the posterior margin truncate. The area is very finely rugose and dull. The anterior two-thirds of the area has, in addition, a few coarse punctures. The second sternite has no conspicuous median smooth plate. The posterior margins of the tumid parts of sternites 2-4 are medially distinctly crenulate and posteriorly punctate. The last sternite is emarginate, the teeth rounded. Surface dull, finely coriaceous. Mesopleurae coarsely rugose with tubercles feebly indicated. Wings slightly fuscous, stigma and veins black.

Length: 6-8 mm.

♂: The median part of the clypeus is oval, convex, anteriorly little prominent, trapezoidal with three rounded teeth, of which the two lateral form the corners of the trapeze while the third median one is more distinct. The clypeus and face have a very sparse broad and shallow puncturation. The sculpture is on the whole the same as in the ♀. The lateral bosses of the pronotal collar and the saddle between them are very distinct. The groove of the petiole is very conspicuous, those of the following tergites less so. Pygidial area truncate apically, laterally feebly arcuate. It is covered with groove-like large punctures, otherwise shining. The sculpture of the sternites is the same

as in the ♀. The ♂♂ are usually somewhat smaller than the ♀♀. The joints 3 and 4 of the antennae are nearly equal in length in both sexes.

This species is easily recognizable by the coarse and crumpled sculpture, principally of the tergites, which is extraordinarily coarse in proportion to the small size of this species.

The coloration, especially of the protruding lamina of the clypeus of the ♀, is variable, the sculpture fairly constant.

The species appears to be fairly common in the southern part of South Africa. I know it only from the Cape Province, Port Elizabeth and the whole of the Karroo, and have examined a large number of both sexes. The nesting localities are sandy places in the dry rivers which carry water only periodically.

Cerceris macalanga n.sp. ♀. (Pl. XLIV, fig. 1.)

Coloration. ♀: Black; the following parts are yellow: a transverse band on the median part of the clypeus, the basal two-thirds of the mandibles, the inter-antennal carina, the inner orbits narrowly up to two-thirds from the base, a small spot on the shoulders, the postscutellum, half of the tegulae, a large median macula at the base of the second tergite, a small spot laterally at the hind corners of the same tergite, a band on the hind margins of the third and fifth tergites, the first attenuated in the middle, the latter broader than that of the third and little narrowed in the middle. The femora are black, the fore and middle tibiae and tarsi yellow; the tibiae and metatarsi of the hind legs are yellow with the rest of the tarsi piceous. All the tibiae are blackish beneath. The second sternite has a large yellow mark on each side connected by a very narrow line in the middle.

Sculpture. ♀: Head large, a little wider than the mesothorax, the inner orbits distinctly divergent towards the clypeus. The median part of the clypeus is one-third wider across its middle than long, rounded above, prominent apically with the front margin shallowly and arcuately excised, its upper surface feebly convex. Mandibles with a tooth at the inner margin at the basal third and a blunt ridge towards the apex. The external margin is simply rounded. The sculpture of the clypeus and face up to the ocelli is extremely subtle. These parts as well as the temples are covered with a very fine white and silky pubescence obscuring the sculpture, but the occiput is bare and shows a distinct but not coarse puncturation. Collar abruptly truncate and smooth in front. The pronotum, mesonotum and pleurae are distinctly and not very densely punctate, the mesopleurae with a blunt tubercle beneath. The epinotum is laterally distinctly punctate and dull; the median area is small and polished, with a median longitudinal furrow. The petiole is longer than broad, parallel-sided and shining, the punctures being scattered. The tergites are distinctly and sparsely punctate, more or less dull. The pygidial area is feebly oval, laterally marginate, truncate apically. The surface is coriaceous and rugose. The second sternite is laterally depressed and densely punctate, the middle appears elevated by a feeble median longitudinal ridge which is smooth and shining, sparsely punctate; the third sternite is smooth and shining, the fourth to sixth feebly punctate. Antennae piceous, lighter in colour beneath. There is a small yellow spot above at the apex of the scape. Wings hyaline, the apex fuscous, the stigma black.

Length: 10 mm.

The type specimen was taken at Sawmills in S. Rhodesia by Dr Arnold, 27th December, 1923.

The broad median area of the clypeus and the smooth epinotal area renders this species very distinct.

Cerceris mazimba m. n.sp. ♀. (Pl. XLIV, fig. 6.)

Coloration. ♀: Black; the following parts are bright yellow: the clypeus, the lower two-thirds of the face excepting a black streak on each side of the inter-antennal keel, the basal two-thirds of the mandibles, the scape of the antennae except the very tip which is black, the shoulders, tegulae, postscutellum, a broad transverse and oval macula at the middle of the anterior margin of the second tergite, the hind angles of the same tergite, the posterior margin of the third tergite, widened laterally and attenuated towards the middle, hind angles of the fourth tergite, the posterior margin of the fifth tergite broadly, the four anterior legs, the posterior legs except the apices of the hind femora and their inner side near the apex which are black. The coxae of all the legs are black. The upper side and tip of the scape are blackish, the under side ferruginous.

Sculpture. ♀: The species has a very dull appearance owing to the coal-black colour and the very dense rugose puncturation of the occiput, vertex, thorax and tergites, including the pygidial area. The inner orbits are parallel. The apical margin of the median part of the clypeus protrudes only to a very small extent and is arcuately emarginate. This margin is black, smooth and shining. The upper surface is a little convex. The clypeus has a thin silvery pubescence. Mandibles externally barely angular, internally with two blunt teeth at two-thirds of its length. The epinotal area is rugosely crumpled. The petiole is short and barrel-shaped. The pygidial area is narrow, elliptical, apically attenuated, marginate all round and without fringes. The sternites are smooth at the depressed parts, the tumid parts punctate, the second sternite laterally depressed and medially sub-carinate. The mesopleurae have no tubercles; the wings are hyaline, the apex smoky, marginal vein and stigma yellow, the others black.

Length: 9 mm.

The type was collected by Mr R. H. R. Stevenson at Dondo, Mozambique Territory, 4th March, 1924.

A co-type from the same place is in my collection.

Cerceris macololo n.sp. ♀ and ♂. (Pl. XLI, fig. 14.)

Coloration. ♀: Black, with the following parts yellow: a spot on the median part of the clypeus, covering the greater part of the raised lamella, the frontal keel, a longitudinal band on the inner orbit (fairly equilaterally truncate above and below), the basal two-thirds of the mandibles, lateral angles of the pronotum, tegulae externally, the dorsum of the epinotum, maculae at the hind angles of the second tergite, a band on the posterior margin of the third tergite laterally enlarged, a band on the hind margin of the fifth tergite which is medially excised. The flagellum of the antennae is light brown, black above on the last five joints. The scape and pedicel are black, the last joint light brown. Legs black, femora of the first and second pair with the apex yellow. The posterior femora are black, tibiae and tarsi yellow. Hind tibiae apically brownish above. The joints of the hind tarsi have the bases brownish.

♂: The yellow colour is more extensive. All the face is yellow, the clypeus included. The following parts may also be yellow: a macula at the base in the middle of the second tergite, a band on the posterior margin of the fifth tergite, and the whole of the sixth tergite more or less. The third sternite may sometimes have yellow lateral spots.

Probably the yellow coloration is variable within certain limits.

The wings of both sexes are hyaline with a feeble infuscation at the apex and frontal margin. Veins and stigma black.

Sculpture. ♀: The median part of the clypeus is feebly convex, the anterior margin straight and truncate with four blunt and small tubercles. Above it the free median plate protrudes similarly as in *C. lichtenburgensis* and *C. ruficauda*. But this lamella protrudes in a much less tectiform manner from the level of the clypeus, and the protruding angle is, therefore, smaller. The shape of the plate is different from *C. lichtenburgensis*. It is broader, and the free anterior margin is medially bluntly excised. Clypeus and face flat and diffusely punctate, silky and with a much finer general puncturation. The head and prothorax are densely rugose. The pronotum is without any lateral bosses, punctured more finely than the head, and dull. The mesonotum is evenly, sparsely, grossly and distinctly punctate. Anteriorly there is a short longitudinal keel in the middle which, however, nearly disappears in the surrounding coarse puncturation. Scutellum like the mesonotum, punctate. Epinotum densely and rugosely punctate, the median area small, deeply longitudinally furrowed in the middle, elsewhere obliquely and irregularly rugose. The rugosity contrasts little with the surrounding sculpture of the epinotum. Petiole barrel-shaped. Tergites coarsely, distinctly and fairly evenly punctate. The pygidial area is narrow and oval like that of *C. lichtenburgensis*. It is evenly rugose, its lateral rows of bristles composed of long hairs. Epimerum normal. Mesopleurae strongly and densely rugosely punctate. The tumid parts of the sternites are laterally and posteriorly strongly and coarsely punctured, the second medially carinate. The body is long, with an erect pilosity. Inner orbits parallel.

Length: 8-9 mm.

♂: Median part of the clypeus distinctly convex, the anterior margin laterally bluntly angled and in the middle with a short point. It is margined with black, the surface and the face sparsely punctate, finely pubescent. The sculpture is like that of the ♀. The oblique rugae of the median area of the epinotum are indistinct. The pygidial area is small, posteriorly truncate; the punctures are large and separated. The space between the punctures is finely coriaceous and has a greasy lustre. The tumid parts of the sternites are punctate only in the corners and are very shining. The posterior teeth of the last sternite are acute. Last joint of the antennae rounded.

Length: 7-8 mm.

Habitat: TRANSVAAL: Johannesburg, 2 ♀s, G. Kobrow, collected in February; Lichtenburg, 2 ♂s, in January. These types are in my collection.

Cerceris ruficauda Cam. (Pl. XL, fig. 19; Pl. XLI, fig. 9.) *Trans. South African Philos. Soc.* vol. xv, part 4, 1905, p. 224.

Coloration. ♀: Black; the antennae except the apical joints of the flagellum above, the mandibles except the black apex, the legs, trochanters, pygidial segment and tegulae are ferruginous. The disc of the median part of the clypeus, the lateral parts of the clypeus, the inter-antennal keel and the inner orbits up to the insertion of the antennae are yellow; the longitudinal bands of the inner orbits are equilateral. The thorax is black. A transverse spot on the petiole posteriorly, a broad band on the hind margin of the third tergite and a transverse macula on the posterior margins of the fifth tergite and third sternite are yellow; the coxae are blackish. This coloration seems to be fairly constant in the ♀. In the ♂ the whole face is yellow up to the antennal insertion with the exception of the black colour which separates the yellow orbits from the keel between the antennae. The tibiae and tarsi are pale yellowish. Of the bands of the abdomen one or more may be wanting, e.g. the ventral ones or that of the petiole; the fifth is sometimes totally black. The fringes of the lateral sclerites of the clypeus are thick and pale golden yellow. The wings

are pellucid or slightly cloudy. The anterior margin is darker, chiefly towards the tip; stigma yellow, veins black.

Length: 7 mm.

Sculpture. ♀: The hexagonal median part of the clypeus is convex above. It is fused up to the apical third, the rest protrudes freely and the anterior margin is truncate and the lateral angles are rounded. The anterior margin of the plate is black, the disc yellow. The part overhung by the plate is black or yellow, smooth and shining, the anterior margin broadly truncate, rectangular, with sharp angles and two spiniform teeth in the middle. The surface of the clypeus has single sparse punctures of large size and is smooth between them. The sides of the face are also covered with punctures of the same large size and are finely coriaceous in between and, therefore, have a dull lustre. The inner margins of the mandibles are emarginate in the middle and have a small tooth-like projection above the emargination and a bigger one below the same. The outer margins are bluntly angulated. The lower parts of the face have a silky, fine and white pubescence. The vertex, occiput and temples have a gross reticulate puncturation and little lustre. This same sculpture prevails over the pronotum and epinotum. The epinotal area is sharply triangular with a deepened furrow in the middle line and about five rugae on each side directed diagonally and outwardly. The sculpture does not make the area stand out in strong contrast with the rest of the epinotum. The petiole is broad and thick, distinctly constricted, with rounded sides and large punctures as on the other tergites; the punctures are well separated, and the spaces between them are smooth and shining. Pygidial area elongate oval, weakly attenuate at the apex and rounded, marginate all round and with a series of bristles along the margins. The upper face is grossly wrinkled. Last sternite deeply and roundly grooved and incised, with the outer angles lamellate and on each side provided with a long brush of hairs. The sternites have the same coarse sculpture as the tergites but more irregular. The body is covered with an erect white pilosity, but not very conspicuously except in certain parts such as the under side, the temples, sides of epinotum, etc. The mesopleurae have no indication of tubercles, nor are there grooves on the petiole and tergites. In the ♂ the median part of the clypeus is convex, oval. The anterior margin is fairly truncate, black with three fairly prominent teeth of which one is in the middle, the other two forming the external angles. Scattered single punctures cover the surface. The inner margin of the mandibles is simple, edentate, but the outer is angulated. The epinotal area is of the same shape and structure as in the ♀. The pygidial area is rectangular, with the lateral margins arcuate and the same sculpture as in the ♀. The apical margin is truncate. Otherwise it has the same features and sculpture as the ♀. The orbits are parallel in both sexes.

Length: 6–7 mm.

The three species, *C. lichtenburgensis*, *C. ruficauda* and *C. macololo*, are very nearly related.

Habitat: The type locality is Stellenbosch, and Grahamstown in the Cape Colony. I have the species from Port Elizabeth.

Cerceris pearstonensis Cam. (Pl. XL, fig. 13; Pl. XLI, fig. 1.) *Trans. South African Philos. Soc.* vol. xv, part 4, 1905, p. 223. ♀.

Coloration. ♀: Black; the petiole entirely, and the second tergite entirely or partly red. The latter may be also entirely black. The extension of the red coloration varies considerably. Sometimes the extreme base only is red or even the whole of the second tergite may be red. White or yellowish white are the following parts: the inner orbits, forming a broad longitudinal

band which extends somewhat beyond the antennal insertion and is attenuated above and below. Further, the frontal keel between the antennae, sometimes a spot on the median clypeus, lateral maculae on the pronotum, tegulae entirely or partly, the metanotum (postscutellum), the third tergite with the exception of a broad black fascia in the middle of the anterior margin, which is arcuate behind, and an irregular band on the posterior half of the fifth tergite. Tibiae white exteriorly, legs brownish red. The anterior femora above and the middle and posterior femora are blackish, also the hind tarsi except the metatarsus.

The ♂ is coloured like the ♀, but the whole face including the clypeus is yellowish white. The frontal part of the scape, a transverse bar at the base of the second tergite in the middle, the abdominal fascia on the sixth tergite and lateral maculae or a band on the third sternite are yellow. All the tibiae are yellowish white, the posterior with a blackish apex above. Metatarsi whitish.

Sculpture. ♀: The median part of the clypeus is convex and fused with its base almost up to the anterior margin. Only the extreme anterior margin protrudes. The lateral angles of the deeply and triangularly excised margin terminate in acute lamelliform points and protrude anteriorly and downwards. The lateral margins of the indentation are smooth, almost carinate. The true anterior margin of the clypeus, transverse and truncate, is visible below the deep excision. Labrum arcuately emarginate in front, its anterior margin sinuate. Mandibles stout, with a strong tooth at the end of the basal third of the inner margin, exteriorly hardly angular. Face and clypeus with silky pubescence. The median area of the clypeus is rugose anteriorly, posteriorly dull, shallowly and sparsely punctured and with a fine and microscopical puncturation in between. Inner orbits parallel. The front is densely rugose, occiput with large rather dense punctures. The temples are more densely rugose and have a silky pubescence anteriorly. Pronotum and mesonotum are largely and distinctly punctate, the scutellum has large sparse punctures on the disc. Metanotum (postscutellum) smooth. The epinotum is punctate like the mesonotum. The epinotal area is smooth and shining and has the median longitudinal furrow deeply impressed, and this, like the lateral furrows, is irregularly crenate. Mesopleurae without tubercles, dull, densely rugose. Petiole barrel-shaped, hardly broader than long, with discrete and large punctures.

Pygidial area broadly barrel-shaped, truncate behind with a small tubercle before the middle of the hind margin. The surface is dull and sinuously rugose with a somewhat greasy lustre, nearly impunctate. The flat sinuous rugae are directed from the sides to the middle. The tumid tergites are evenly, not densely, but largely punctate. The second sternite is smooth and impunctate in the middle at the base but has anteriorly and basally widely spaced large punctures. The following sternites have the same puncturation; the fifth sternite very coarsely rugose and protrudes laterally a little angularly. Last sternite with broad reddish terminal teeth at the sides. Scape and pedicellus of the antennae black, the rest brownish. The third joint is distinctly longer than the fourth.

Length: 6-7 mm.

The ♂ is here described for the first time.

The median part of the clypeus is slightly convex, elongate oval, anteriorly distinctly project, but distinctly longer than the anterior margin of the lateral parts of the clypeus. The anterior margin has in the middle a round tooth, laterally rounded angles. The fimbriae are pale yellow. The margin of the lateral part of the clypeus is straight, slanting obliquely towards the base of mandibles. Clypeus and face sparsely and shallowly punctured.

The general puncturation is somewhat denser than in the ♀. Tergites

laterally posteriorly feebly spinulose. Pygidial area almost rectangular, the lateral margins arcuate, little attenuated towards the apex, shining with a few shallow but very large groove-like punctures. Posterior margin almost straight, smooth. Petiole a little longer than broad. The posterior angles of sternite 6 are a little more acute than in the ♀. Otherwise the sternites have no peculiar distinctions and are bare. The apical teeth of the last sternite are very sharp and distinct. Third joint of antennae longer than the fourth.

Length: 5-7 mm.

Wings hyaline with the stigma distinct. The veins behind the radial cell are infusate. I know the species from the CAPE COLONY: Pearston, Willowmore, Grahamstown, Port Elizabeth; ORANGIA: Reddersburg; TRANSVAAL: Lichtenburg.

The nesting habits are the same as in *C. languida* Cam.

The species is rare.

Amongst the related species it is distinguished by the shape of the clypeus, the epinotal area and the shape of the pygidial area.

C. pearstonensis Cam. *Race: bantu*. n.r. ♀. (Pl. XLIV, fig. 7.)

Coloration. ♀: Black, with yellowish white markings. The following parts are yellowish white: a streak on each side of the face adjoining the inner orbits and reaching a little beyond the level of the antennal sockets, the inter-antennal carina, the postscutellum, a transverse macula across the middle of the basal margin of the second tergite, the apical margin of the third tergite, broadened laterally, the apical margin of the fourth tergite, the tegulae, tibiae and tarsi; the tibiae black beneath. The basal two-thirds of the mandibles, antennae in greater part and the petiole are ferruginous, the femora piceous.

Wings hyaline, veins and tip of wings blackish.

Length: 8.5 mm.

Sculpture. ♀: Head as broad as the mesothorax. Inner orbits parallel. The median part of the clypeus is convex, frontally deeply and rectangularly excised, placing this race in the group of *C. pearstonensis* Cam. The mandibles are externally simple and have in the middle of the inner margin two small teeth close together. The puncturation of the clypeus and face is shallow, also finely coriaceous and covered with a fine silky pubescence of white colour. The vertex, occiput, temples, mesonotum, scutellum, postscutellum and epinotum laterally have a distinct, simple and moderately large puncturation, and are not rugose. The epinotal area is small, longitudinally grooved in the middle, smooth and shining, faintly transversely rugose. Petiole barrel-shaped. The tergites are shining, punctate, like the mesonotum. The pygidial area is oblong oval, marginate all round and apically very shallowly arcuately emarginate. The surface is crumpled and dull. The sternites are smooth and shining in the depressed parts, sparsely and coarsely punctate on the tumid areas. The second is very smooth in the middle with a few scattered punctures laterally. The mesopleurae have no tubercles.

Mr R. H. R. Stevenson collected the type specimen at Sawmills in South Rhodesia, December, 1923. As there is no difference in habitus, sculptural characters and size between this species and the typical *Cerceris pearstonensis* Cam., I regard it as a race of the latter, inhabiting the northern parts of the territory.

Cerceris Arnoldi n.sp. ♀. (Pl. XLIV, fig. 3.)

Coloration. ♀: Chocolate-brown; the clypeus, two large quadrate maculae on the lower angles of the face adjacent to the clypeus, the inter-antennal

carina, the sides of the second tergite connected at the hind margin by a very narrow yellow line, and a smaller spot at the hind angles of the third tergite are yellow. The mandibles are ferruginous with black tips. The clypeus is lined with brown in front. The median third of the face as far as the posterior ocelli, the mesonotum in the middle, the epinotal area medially and the upper side and tip of the antennae are blackish. The ventral surface and the sterna are suffused with black, but the tumid portions of the sternites are brown. The legs are all brown. It is to be assumed that the extension of the yellow coloration is subject to variation.

Sculpture. ♀: Head large, a little wider than the mesothorax. The inner orbits are parallel. The median part of the clypeus is broader than long, arcuately emarginate, apically protruding over its entire breadth, the sides oblique, the upper margin flatly rounded. The occiput, vertex, and face are rather irregularly but densely rugosely punctate, the clypeus more sparsely, and shining. The puncturation of prothorax, mesothorax and epinotum is about the same as that of the head, but the epinotal area is large and smooth, and shining in the middle. The tegulae are smooth and shining. The petiole is short and broad, attenuated towards the thorax and with a distinct fovea at the middle of the posterior margin. Like the other tergites, it has a similar puncturation to that of the thorax but somewhat more distinct and less rugose. The pygidial area is oval, truncate apically and basally, marginate all round, transversely rugose and dull, the sides finely fimbriated with whitish hairs. The whole insect has an erect and very short white pilosity on the upper side and on the sterna. The mesopleurae are rugosely punctate and have a minute denticle at the middle of the inferior margin and a still smaller one posteriorly. The sternites are shining, the basal halves tumid, sparsely and coarsely punctate in the middle, more closely so at the sides, the apical margins widely depressed, smooth and shining. Mandibles simple externally, the inner margins with a few denticles near the apex. Wings hyaline, the apex fuscous, the veins ferruginous. The insect is of a compact build.

Length: 12 mm.

Dr Arnold collected the type at Sawmills in Southern Rhodesia, 29th December, 1923.

Cerceris Stevensoni n.sp. ♀. (Pl. XLIV, fig. 5.)

Coloration. ♀: Black; the hind margin of the third tergite is yellow, attenuated to the middle. Yellow are furthermore a lateral spot on the hind angle of the second tergite, the inter-antennal carina and a short line adjacent to the inner orbits on the upper two-thirds of the face. The femora are all black, the tibiae and fore and middle tarsi piceous, the posterior metatarsi yellow. All the tibiae are black on the upper surface. The basal two-thirds of the mandibles are yellow. The antennae are piceous with the lower surface ferruginous.

Sculpture. ♀: This species appears nearly related to *Cerceris makalanga* m., but the narrow median part of the clypeus, the smaller rugose epinotal area and the remarkable shape of the pygidial area separate the two species easily. The head is as broad as the mesothorax. The inner orbits are very little divergent towards the clypeus. The median part of the clypeus is dull, a little longer than broad, nearly quadrate, apically protruding, with a small emargination medially, the extreme apical margin shining. The sculpture of the clypeus and the face as far as the ocelli, and the temples, is hidden under a silky white pubescence and, therefore, dull. The occiput is distinctly punctate and bare. The sculpture is, therefore, very near to that of *C. makalanga* m. The puncturation of the thorax, mesopleurae, lateral parts of the epinotum and the tergites

including the petiole is as coarse and distinct as that of the occiput; the petiole is nearly quadrate and feebly rounded laterally. There is no tubercle on the mesopleurae. The median area of the epinotum is much smaller than in *C. makalanga* and diagonally rugose at the sides with a median impressed longitudinal groove. All the tergites are dull owing to the sculpture. The pygidial area is narrowly oblong, attenuated to the apex, which is rounded at the hind angles, marginate at the sides and fringed. The surface of the area is coriaceous. The penultimate sternite has laterally a tuft of white hairs. The sternites are punctate laterally, smooth medially. Mandibles externally edentate, internally with two very small tubercles at the apical third. Wings hyaline, narrowly infusate apically.

Length: 10 mm.

The type specimen was taken by Mr R. H. R. Stevenson at Dondo, Portuguese East Africa, 4th February, 1923.

Cerceris nigrostoma n.sp. ♀ and ♂.

Coloration. ♀: Black. The petiole and the following tergite are very constantly red. The following parts are white or yellowish white: the metanotum, a marginal fascia on the posterior part of the third tergite, which is somewhat broadened laterally, and a transverse macula before the hind margin of the fifth tergite. Legs reddish brown with dark coxae and trochanters. The posterior femora, tibiae and tarsi are pale brown. Scape of antennae dark, the flagellum above likewise. The latter is light brown below. The first two-thirds of the mandibles ferruginous, the apex blackish. Sternites 1-3 light ferruginous, the posterior ones fuscous. Squamulae ferruginous.

♂: The coloration of the ♂ corresponds in general to that of the ♀. The metanotal macula is generally only indicated by two white spots in the middle. The posterior transverse macula on the sixth tergite is absent in all the ♂♂ which I have seen, but may sometimes be present. The flagellum is much darker than in the ♀, apically quite black. The metanotum may be ferruginous instead of white.

Sculpture. ♀: Inner orbits parallel. The median area of the clypeus is similarly formed as in *C. pearstonensis* Cam. but more flatly convex. The anterior margin is likewise angularly excised but distinctly less deeply. The lateral edges of the incision are straight, not or hardly angularly porrect. The elevated part of the median area of the clypeus is much more coarsely punctured than in *pearstonensis*. Doubts as to the identity of this species can be settled by the sculpture of the epinotal area, the shape of the pygidial area and the constancy of the colour of the second tergite. The median part of the clypeus is a little more strongly punctate than the lateral parts and the face. Frontal margin of the labrum semilunarly concave, the lateral margins broad. The inner margin of the mandibles has a stout tooth at the end of the first third and a smaller one towards the base. The outer margin is bluntly angular. The occiput and temples are densely and coarsely punctured. Likewise punctate are the pronotum and mesonotum, the latter more sparsely at the disc. Scutellum sparsely and largely punctate. Metanotum and epinotum are coarsely punctate and somewhat rugose. The epinotal area has a wrinkled sculpture, mostly longitudinal. It is medially deeply and broadly furrowed longitudinally; the furrow is laterally lined by a more or less distinct keel. It is formed by the rugosity and, therefore, somewhat irregular. The rugae are most distinct anteriorly and obliterated more or less posteriorly. The apex of the epinotal area is transversely rugose, the lateral furrows posteriorly obliquely rugose. The petiole is well-defined, broadly barrel-shaped, posteriorly strangulated before the apical margin. The tergites are posteriorly coarsely

punctured. The pygidial area is strongly and evenly attenuated towards the apex, oviform, posteriorly rounded with a strong lateral row of bristles. The surface has anteriorly sporadic irregular and shallow punctures and is posteriorly finely rugose and dull. The single rugae are hardly recognisable. Mesopleurae coarsely rugose, dull and without tubercles. A raised area is not distinct at the base of the second sternite but the position is indicated by a feeble convexity. This sternite is laterally distinctly punctate, medially and basally smooth. The tumid portions of sternites 3 and 4 are posteriorly very distantly punctate. The puncturation of the fifth sternite is coarser, laterally and posteriorly rugose; the margin is hardly sinuate and without protruding lateral angles. Last sternite narrowly and deeply roundly excised, the apical teeth straight and rounded.

Length: 5-6 mm.

♂: The median part of the clypeus is convex, little porrect in front, rounded, with three points, distantly and coarsely punctate at the disc without an additional fine puncturation and therefore somewhat shining. The lateral parts and the face are more finely punctate and have a very fine puncturation in between the other. They have a silky pubescence up to above the antennal insertion. The puncturation of the head and of the rest of the body is as in the ♀. The two keels of the epinotal area are mostly very distinct but sometimes interrupted and indistinct. The pygidial area is laterally feebly rounded, truncate, with groove-like irregular punctures above and rugose in between. The last sternite is roundly excised with acute apical teeth. Legs more or less blackish. Third joint of antennae a little longer than the fourth. Wings infuscated with the anterior margin darker. When the characters of the epinotal area are not sharp and typical the ♂ of this species may be distinguished from related species by the entirely *black* face. The ♀ has also always a black face.

Length: 5 mm.

The species is nearly related to *C. pearstonensis*. I know this species only from the Karroo of the Cape Province. Here at Willowmore it is on the wing all through the summer from November to February.

The types are in my collection.

Cerceris dominicana n.sp. ♀. (Pl. XLI, fig. 15.)

This species corresponds in colour and sculpture perfectly with *C. nigrostoma*, but is larger, as large and larger than *C. pearstonensis*. It could be taken for a large form of *C. nigrostoma* and eventually may prove to be so. But the difference in the form of the clypeus gives a good distinctive character. Besides, the ♂ is not yet known. I prefer, therefore, to look upon this species as distinct from *C. nigrostoma*, at least provisionally, until more material is available.

Coloration. ♀: The coloration is the same as in *C. nigrostoma* with the following differences: the legs are wholly ferruginous with black coxae and trochanters; squamulae partially yellowish white.

Sculpture. ♀: The median part of the clypeus convex, the anterior margin of the elevated part medially deeply incised as in the two preceding species. Its lateral angles protrude, forming a smooth, broadly rounded lamella on each side which points downwards as in *C. pearstonensis*. In the latter the angles are sharp, in *dominicana* lamelliform and broadly rounded, in *nigrostoma* hardly projecting angularly. The incision is narrower and steeper in *dominicana*, owing to the broad lamelliform angles, than in the two other species. The epinotal area is strongly rugose longitudinally, similar to the sculpture in *C. nigrostoma*. The apex of the area is transversely rugose. Pygidial area oviform, the surface sinuously rugose. The rest as in *C. nigrostoma*.

Length: 8 mm.

In my collection are three uniform specimens which served as types. Willowmore, Cape Province, in December.

Cerceris latifrons Bingham. (Pl. XL, fig. 7; Pl. XLI, fig. 4.) *Ann. and Mag. Nat. Hist.* (7), x, 1902, p. 244. ♀.

Procured on the Natal border of the Transvaal.

Coloration. ♀: Black; the antennae beneath, the femora, tibiae and tarsi, the mandibles except the black apex and the labrum, ferruginous. The coxae and trochanters are black. The third tergite is yellow, arcuately emargined anteriorly and black in the emargination. There is a narrow yellow line on each side of the apical margin of the fourth segment. The squamulae are tipped with yellow. The inner orbits have a parallel yellow band. This does not fill all the orbit, but leaves the upper and lower quarter black. Wings *uniformly fuscohyaline*. This is the typical coloration. The species is very variable in respect to yellow coloration. The following parts may be yellow: a narrow line on each side of the apical margin of the fifth tergite, two small dots on the metanotum or the whole of the metanotum, the hind margins of the fourth and fifth tergites partly or wholly, the outer angles of the pronotum, the median part of the clypeus, the squamulae of the wings wholly, the lateral parts of the clypeus and the frontal keel.

The ♂ is here described for the first time.

The ♂ has the same distribution of colour as the ♀ and also the same variability. All the specimens from the Karroo have the wings hyaline and an infuscated anterior margin and apex of the fore wings. R. Turner, who compared these at the British Museum with the typical form with uniformly dark wings, declared them identical with it, but wrote later saying that the Karroo form was different from the type, the latter having a deeper excision of the median clypeus. Having examined much material from very different parts of the territory, I cannot see that there is a distinct difference between the two forms, or that a new name should be needed for the Karroo form. The differences are so slight, the size of the specimens so different, that sculptural differences such as the emargination of the clypeus clearly intergrade. The constant difference of the two forms is the coloration of the wings.

Sculpture. ♀: The head, thorax and two basal tergites are coarsely, closely, cribrately punctate, the fourth and following tergites have large scattered and shallow punctures. Head, thorax and abdomen are pubescent, the pubescence pale yellowish white and most dense on the front below the antennae and on the clypeus, hiding the sculpture. Mandibles on the inner margin with a small denticle just behind the middle, hardly angular exteriorly. Clypeus slightly convex, the median part deeply emarginate anteriorly, the lobes somewhat protruding. The side parts are angular each side. The apical margin of the clypeus shows, therefore, four lobes more or less developed and divided two and two by the deep emargination. The face is flat and remarkably broad, being a little broader above than its length measured along the inner orbits. Head above, occiput and temples broad and flat, the occiput truncate posteriorly. Thorax massive, the mesonotum twice as broad as long. The epinotum convex, epinotal area at its base obliquely striate, more transversely so posteriorly. The rest of the area is smooth and shining, the median line deeply impressed. The sculpture of the area is evidently variable. The petiole is barrel-shaped, about one-third as wide as the following tergite. Pygidial area oblong, truncate apically, margined laterally, dull, finely rugose all over. Last sternite roundly emarginate. The sternites are smooth and shining medially, the second impressed at each side, leaving a narrow raised



line in the middle. There is a raised area at the base of the second sternite. The mesopleurae have no tubercles.

Length: 14 mm.

The ♂ is smaller than the ♀, but I have a large ♂ from Piet Retief, Transvaal, as big as the ♀.

The pubescence and sculpture are the same as in the ♀. The median part of the clypeus is anteriorly flatly rounded, without teeth. The anterior margin is black, the rest yellow. The median area is separated from the side lobes in the upper part only. The pygidial area is oblong rectangular with separate and coarse punctures.

Length: 9–14 mm.

The species is very variable in size, coloration and partly in sculpture. The typical form with uniformly infuscate wings seems to occur on the eastern side of South Africa from Stellenbosch to Piet Retief and Natal near the coast. I have examined large series from Stellenbosch, Cape, and Port Elizabeth, belonging to the type form. The non-typical form occurs in the Karroo, at Willowmore.

Habitat: CAPE PROVINCE: Stellenbosch, Somerset West, Port Elizabeth, Sunday River Valley, Willowmore. TRANSVAAL: Piet Retief.

Cerceris reginula n.sp. ♀ and ♂. (Pl. XL, fig. 14; Pl. XLI, fig. 10.)

Coloration. ♀: Black; the petiole and the following tergite are partly red, as in *C. pearstonensis* (Cam.) to which this species is nearly related. In addition, the first two sternites are red. The underside of the antennae and the legs are ferruginous. The tibiae are striped with yellow externally, and the hind tibiae otherwise are blackish. Coxae black. The clypeus has a broad black anterior margin. This colour includes the lamellae. It is otherwise yellow or whitish yellow. The frontal keel and the inner orbits broadly are also of this colour. The yellow colour of the face is attenuated upwards and coalesces sometimes with the colour of the clypeus. Scape of the antennae with a yellow line anteriorly. The anterior margin of the clypeus may be wholly yellow. The following parts are yellow: the lateral angles of the pronotum, the squamulae wholly or partly, the hind margin of the scutellum, sometimes the metanotum, a large transverse macula at the anterior margin of the second tergite, sometimes more or less obliterated, a band on the hind margin of the third tergite, attenuated in the middle, a transverse macula at the hind margin of the fifth tergite and a band on the third sternite, sometimes obliterated. Pygidial area dark brown.

♂: The ♂ is coloured like the ♀ but the transverse macula is on the sixth tergite.

Sculpture. ♀: The median part of the clypeus anteriorly with two lamelli-form plates which are rounded and smooth. They protrude somewhat obliquely from the middle line outwardly and are separated by a round incision and are exactly like those of *C. dominicana* m. Inner orbits distinctly divergent towards the mandibular base. The disc of the clypeus is nearly flat. The clypeus and face are sparsely and shallowly punctured, and covered with silky pubescence. The inner margins of the mandibles are a little broadly and roundly excavated before the attenuated apex, the angles of the excavation dentiform. The puncturation of the body is nearly the same as in *C. pearstonensis* Cam. The pronotum has laterally distinct transverse tubercles, which are broader but not so high as in *C. holconota* Cam. The tubercles are smooth and shining, impunctate. Mesonotum anteriorly with a short deepened longitudinal middle line. The epinotal area is smooth as a mirror with an impunctate deepened middle line, at the lateral margins with some separate

and large punctures and indications of some transverse rugae. The disc of the area is tumid and convex. Petiole barrel-shaped, truncate behind, dull and coriaceous. The second sternite is laterally depressed, the middle, therefore, feebly tectiform. There is no distinct raised plate at the base. The fifth sternite is rugose behind without protruding angles. The last sternite has a broad and round emargination.

♂: It is difficult to separate the ♂ from *C. pearstonensis*, ♂. By sculpture and coloration it is like its ♀. The formation of the clypeus is the same as in *C. pearstonensis*. One has to compare, therefore, the description of the ♂ with that of *C. pearstonensis*. The principal differences are as follows:

The whole insect is more slender than *C. pearstonensis*.

The lateral tubercles of the pronotum are usually as distinct as in the ♀, but little or not distinct in *C. pearstonensis*, ♂.

The petiole of *C. reginula* is larger and much narrower than in *C. pearstonensis*, ♂, the lateral margins of it parallel.

The mesonotum in the anterior half is longitudinally deepened in *C. reginula*, ♂.

The inner margins of the mandibles are simple in *C. reginula*, ♂, emarginate close to the base in *C. pearstonensis*.

The epinotal area is smooth as a mirror and without any sculpture on the disc in *C. reginula*, but not so in *C. pearstonensis*.

In smaller specimens the characters become obliterated. But the shape of the petiole and the sculpture of the epinotal area allow the ♂s of the two species to be separated with certainty.

The coloration of the wings is the same in both species.

Length: 8-9 mm.

Habitat: CAPE PROVINCE: Sunday River Valley, Willowmore. Not rare from November to March. The types are in my collection.

Cerceris amakosa n.sp. ♀ and ♂. (Pl. XLIII, fig. 1.)

Coloration. ♀: Black; petiole red or ferruginous, the face and clypeus entirely so. Tubercles of the antennae, keel between the antennae, the front of the scape, upper sides of the mandibles, lateral bosses of the pronotum, the tegulae in parts, metanotum, a transverse macula on the anterior margin of the second tergite, a fascia at the posterior margin of the third tergite and laterally broadened, and a transverse fascia of the fifth tergite at the apical margin, yellowish white. The posterior coxae and femora and stripes on the hind surface of the tibiae are black. The anterior sides of the tibiae and the under sides of the first and second femora are yellowish white. The upper surfaces of the first and second femora are also black. Sometimes the first sternites are ferruginous, the third yellowish white.

♂: The red petiole has in the middle a black macula in the only ♂ specimen which I have seen. The fifth and sixth tergites have posteriorly each a transverse yellow macula. The coloration is probably variable.

Sculpture. ♀: The median part of the clypeus is a little convex, apically very little but distinctly free and protruding, and the apical margin very little but clearly arcuately emarginate. This feature places the species in the group of *reginula* m. The angles of the emargination are rounded, and on each side of them is a little protuberance. The margin is broadly black and smooth. On the inner side of the mandibles is a blunt tooth at the beginning of the last third. Inner orbits parallel. The clypeus and face are discretely and finely punctate, with whitish silky pubescence. The head is rugoso-punctate. The pronotum has no prominent shoulders and is finely

punctate, as is the mesonotum. This and the scutellum and epinotum are distinctly and discretely punctate, but not densely. The metanotum is smooth and impunctate. The epinotal area is smooth, small, with a fine median impressed line, apically groove-like but feebler than in *C. nobilitata* Cam. At the sides are a few larger irregular punctures. The surface is not highly convex. The petiole is feebly barrel-shaped. The puncturation on the tergite is somewhat weaker than that of the thorax. Mesopleurae dull, rugosely punctate without tubercles.

The pygidial area is weakly barrel-shaped with strong and dense lateral fimbriae; apically rounded, sinuously rugose at the surface, dull. The sternites are not in any way remarkable.

Length: 6 mm.

♂: The median part of the clypeus is nearly flat apically with a blunt point in the middle of the margin, rounded laterally. The sculpture is the same as in the ♀. The pygidial area is hardly rounded laterally, with single gross punctures, straightly truncate apically. The tumid portions of sternites 3-6 are strongly pubescent at the apical margins. The last sternite is truncate. Last joint of antennae rounded.

Length: 6 mm.

The wings are hyaline, the apex feebly infusate. The species resembles *C. nobilitata* in puncturation, but is much smaller.

Habitat: TRANSVAAL: Lichtenburg, 2 ♀s and 1 ♂, December and January. The types are in my collection.

Cerceris gomphocarpi n.sp. ♀ and ♂. (Pl. XL, fig. 11; Pl. XLI, fig. 5.)

Coloration. ♀: Black, including clypeus and face. On the face there is a transverse narrow band, brownish yellow or yellow, extending from the antennal insertion towards the orbit and gradually widened towards the eye. Sinuate bands a little broadened laterally on the posterior margins of the second to fourth tergites and a transverse macula of the fifth tergite in front of the posterior margin are yellowish white. The mandibles, antennae from joints 1-7, and the legs, the coxae excepted, are ferruginous. Wings infuscated, the apex darker; veins black.

♂: The clypeus and face, the antennae, scape and the frontal carina are pale lemon-yellow. The yellow coloration fills nearly three-quarters of the inner orbits. The squamulae, broad bands on tergites 2, 3 and 4, covering almost the whole of the tergites and attenuated a little laterally, are lemon-yellow. In rare cases these are attenuated and reduced medially. The legs are bright yellow. The coxae and basal half of the anterior femora, basal maculae of the middle femora, basal longitudinal dots of the posterior femora, and the apical half of the posterior tibiae are black. The tarsi of the hind legs are fuscous with the apices lighter. The colour of the legs is apparently variable. Wings hyaline, with the apex infuscated. Stigma brown, bordered by black.

Sculpture. ♀: Median part of the clypeus flat, anteriorly somewhat depressed. The anterior margin is somewhat bent upwards. The margin is medially indented, almost bilobate. The lateral angles are sharp and dentiform. These lobes become quickly worn out, apparently as in other *Cerceris* sp., by the fossorial work, and the margin then seems to be more or less rounded; in such cases one has to use great care in the determination of the species. One generally finds the mandibles of such specimens more or less worn away as well. The median part of the clypeus and the protuberance of the keel are smooth and shining, sparsely punctured, the punctures large, posteriorly more densely punctured. The lateral parts of the clypeus and of the face are dull, distinctly and microscopically punctured in between. Inner orbits

parallel. The front has medially a fine longitudinal rugose sculpture. The rest of the head is moderately densely and distinctly punctured, with two smooth and shining spaces close to the ocelli. The pronotum is longitudinally striate in front, irregularly punctured on the collar. Mesonotum smooth, very distantly and coarsely punctured, the scutellum smooth, convex and with a few punctures. Metanotum smooth, convex and higher than the scutellum, feebly punctured. Epinotum shining, with scattered large puncturation. The epinotal area is polished and shining without the least sculpture, with a fine longitudinal impressed line in the middle. The petiole is large and very broad, well constricted, laterally rounded and like the following three tergites with a distinct apical groove, which is linear on the tergites. The tumid portions of the tergites and the petiole are broad and flat, finely and sparsely, otherwise largely and not closely, punctured at the base. The pygidial area is narrowly tongue-shaped, elliptically rounded at the apex, with long and dense fimbriae, dull coriaceous, without rugae apically. Mesopleurae dull, rugose and with distinct acute tubercles. The posterior trochanter is internally strongly emarginate. Sternites 2-4 with the apical halves depressed, dull and microscopically reticulate-punctate, the tumid posterior halves shining with sparse and shallow punctures, the fifth sternite wholly rugoso-punctate with an impressed median line. The last sternite is closely punctured, very finely so at the base, the apex roundly emarginate with the lateral angles produced into blunt teeth. Legs stout. Inner margin of the mandibles with a small denticle.

Length: 15 mm.

♂: The median part of the clypeus flatly convex, hardly porrect anteriorly. The anterior margin is feebly trispinose. Fimbriae golden yellow. The sculpture of the clypeus and face is the same as in the ♀. The puncturation of all parts is as in the ♀ but coarser and more sparse. The grooves of the petiole and of the tergites are as in the ♀. Pygidial area long and rectangular, apically broadly rounded and sparsely coarsely punctured. Sternite 2 medially longitudinally keeled on the anterior half. The tumid parts are narrow, smooth, very sparsely punctured anteriorly. Last joint of the antennae strongly curved inwards, as long and as wide as the penultimate, apically truncate. The inner margin of the mandibles is simple.

Length: 12 mm.

I know this species only from the Karroo of the Cape Province at Willowmore. It visits, apparently almost exclusively, the flowers of *Gomphocarpus ramosus* (*Asclepias*) in February, specially the ♂. The ♀s seem to be rare. The types are in my collection.

In the South African Museum at Cape Town the species is represented from Klipfontein, Cape Province, collected by Dr Perinquey.

Species with the median area of the clypeus flat or flatly convex, and simple structure.

Cerceris africanula n.sp. ♀ and ♂.

Coloration. ♀: Black, with yellow markings predominant. The face and clypeus are lemon-yellow. The yellow coloration extends obliquely from the antennal insertion along the inner orbits to about four-fifths of the length of the eyes. In addition, the frontal keel, the mandibles except the brownish apex, the antennae, the greater part of the temples (the yellow coloration of the temporal macula is attenuated below to the external margin of the eye), the squamulae, scutellum and metanotum, pronotum, the anterior half of the mesopleurae, the mesosternum, geminate maculae on the metasternum, ovi-form large maculae laterally on the epinotum, a transverse oval macula on the

petiole, the whole of the abdomen except the petiole and all the legs, including the coxae and trochanters, are yellow. The posterior margin of the second tergite, the anterior margins of tergites 3-5, the pygidial segment with the pygidial area, and the depressed parts of the sternites are light brown. The tumid parts of the sternites are yellow. There is hardly any black coloration except on the head and thorax.

Length: 9 mm.

♂: The ♂ is by no means so richly marked with yellow as the ♀. The face, the antennae and mandibles except the black apex are yellow as in the ♀. On the thorax the pronotum, the squamulae and the metanotum are yellow. The yellow coloration of the pronotum is interrupted in the middle. A large transverse macula nearly covering the second tergite, the third tergite, the posterior margins of the fourth and fifth tergite and the depressed parts of sternites 2-5 are brownish yellow. The pygidial area and last sternite are brown. The bases of the anterior femora posteriorly, the basal half of the middle femora posteriorly, the greater part of the hind femora and the coxae of all the legs are black. The trochanters are yellow.

Length: 8 mm.

Sculpture. ♀: The median part of the clypeus is very little convex, almost flat, anteriorly depressed medially, almost rectangularly porrect, the anterior margin is broadly transversely truncate. The inner orbits are parallel. The median area of the clypeus has some discrete longitudinal pits in place of punctures. The face is hardly punctured, but very finely shagreened. The front, occiput and temples are sparsely but largely punctured and shining. Pronotum finely sculptured, smooth. The mesonotum is like the occiput coarsely punctured, scutellum very sparsely punctured, metanotum smooth. The epinotum is distantly punctured and pitted, shining, the area smooth with the median line impressed and the lateral furrows crenated. Mesopleurae without tubercles, largely punctured and pitted. The petiole is barrel-shaped and like all the tergites sparsely pitted. The pygidial area is oviform, apically rounded, finely coriaceous. The lateral fimbriae are feeble. The sternites are sparsely pitted, the apical brushes feebly developed.

Hind tarsi strongly serrate. Wings hyaline, with the stigma and veins yellow, the apex infusate.

♂: The median part of the clypeus is rounded anteriorly without teeth, the anterior margin somewhat elevated, the mandibles simple. The pygidial area is rectangular, smooth and shining, pitted. Otherwise the sculpture is just the same as in the ♀. Wings hyaline with yellow veins and stigma and the apex infuscated. The ♂ resembles in coloration, especially of the abdomen, a small specimen of *C. gomphocarpi* m., while the ♀ has the superficial appearance of a diminutive *C. curvitorsis* Schlett. The ♀ is very distinct in the rich yellow colour.

I found a pair of this graceful species at Willowmore, Cape Province, in January. The types are in my collection.

Cerceris curvitorsis Schletterer. (Pl. XLIII, fig. 8.) Schletterer, "Die Hymenopterengattung *Cerceris* Latr." in *Zool. Jahrbücher*, Bd. II, p. 449. ♂. 1887.

Cerceris O'Neili Cameron. ♀ and ♂. *Trans. South African Philos. Soc.* vol. xv, part 4, 1905, p. 220; *Ann. Trans. Mus.* vol. II, part 3, 1910, p. 150.

This species has been re-described (*loc. cit.*) by Cameron. Schletterer's name has priority. I have seen a specimen in the Albany Museum at Grahams-town which has a label "*C. O'Neili* Cam. *teste* Cameron."

Coloration. ♀: Black; the head to a variable extent, the pronotum partly or entirely, the squamulae, scutellum and middle of the metanotum (post-scutellum) more or less bright ferruginous. The metanotum may be wholly black. According to Cameron two ferruginous maculae may be present on the epinotum. The first three joints of the antennae and the half of the fourth and the last joint are usually ferruginous. Sometimes the entire under side is ferruginous. The abdomen is entirely lemon-yellow. The pygidial area only is darker and sometimes blackish apically. Legs lemon-yellow with the tibiae and tarsi ferruginous. The coxae and trochanters are generally darker with irregular ferruginous spots. The extent of the black coloration of the head is variable. Sometimes an irregular mark on the front enclosing the ocelli, the antennal grooves and the back of the head are black. This coloration may be extended over the greater part of the front and occiput, so that only the temples are ferruginous. The apices of the mandibles are more or less ferruginous. The scapulae are black or more or less ferruginous.

♂: In the ♂ only the temporal maculae are ferruginous. Otherwise the head is black with the clypeus and face yellow. The yellow colour of the face occupies the orbits up to the anterior ocellus. The yellow frontal carina is furcate above, enclosing the anterior ocellus. The antennal grooves are black. The mandibles are yellow and apically black. The antennae are yellowish red with the upper side more or less dark. The legs including the coxae and trochanters are yellow, but the lower half of the hind tibiae is black. The pronotum is yellow to a variable extent; the squamulae and the scutellum entirely or partly ferruginous. The middle of the metanotum is red, partly red or wholly black. Abdomen lemon-yellow, the base of the petiole, the depressed margins of the tergites black, the sternites more or less obscure medially, but mostly yellow with brownish dots.

Sculpture. ♀: The median area of the clypeus is convex, smooth and shining, very finely and sparsely punctured. The anterior margin is a little depressed with small and shallow indentations in the middle, otherwise simple. The whole anterior margin of the clypeus is very slightly arcuate. The lateral parts of the clypeus are covered by a dense silvery tomentum which obscures the sculpture. The frontal carina is short, the edge not sharp but rounded. The mandibles are long, falcate, without stronger teeth on the internal margin. The latter is shallowly emarginate from the base to beyond the middle, the external margin bluntly angular in the second third. The face is somewhat more sparsely punctured than the clypeus and has also a fundamental microscopic puncturation. The temples have the same kind of sparse puncturation and are smooth and shining in between. The front and occiput have the strongest puncturation, inclining to be rugose at the front. The pronotum is smooth and shining, with separated punctures. Mesonotum smooth and shining, sparsely punctured at the disc, more densely on the sides. Scutellum flat, polished, with a few dispersed punctures. Metanotum smooth and impunctate, shallowly impressed in the middle. Mesopleurae swollen, coarsely and densely punctured, dull, with two dentiform tubercles each, of which one is situated at the height of the convexity, the other close to the median coxae. The prosternum is shining, distantly punctured, grooved longitudinally in the middle. Side parts of the pronotum with downwardly curved rugae. Epinotum very shining, everywhere strongly but not densely punctured. The epinotal area is sharply defined, triangular with a fine impressed median line, very smooth and shining, hardly punctured at the disc; the sides have a few punctures and fine transverse rugae. Metapleurae transversely rugose. Petiole barrel-shaped, narrower than the second tergite and strongly constricted. Abdominal segments weakly constricted, with the

segments broad. The tergites are convex, the depressed frontal and apical margins narrow. The tergites are smooth and shining in general, sparsely and moderately punctured, the petiole apically with a punctiform groove in the middle. On the three following tergites the groove is linear. Pygidial area long and feebly barrel-shaped, truncate apically or sometimes feebly emarginate, dull and sparsely punctured on the disc, in between microscopically rugose. The lateral fimbriae are thick and ferruginous. The apex is bare. The sides of the pygidial segment are sparsely punctured, smooth and shining, the lateral edges sharply raised. The second to fifth tumid sternites are apically triangularly emarginate, and the third to fifth are medially halved by a transverse impressed line. The apical halves of these three segments have also an impressed longitudinal line. The last sternite is quadrate and spinose laterally at the apex. The sternites are smooth and shining, hardly punctate. Hind tibiae are somewhat sinuate at the base, club-shaped and very serrate externally, the anterior three teeth lamelliform. The build of the ♀ is robust and bears a likeness to *Philanthus triangulum*, race *diadema*. The head is large and broad, transverse when seen from above, with the temples and occiput thick. The greatest breadth lies between the bases of the mandibles. The inner orbits are distinctly but not very strongly divergent towards the clypeus. The pilosity is weak, the insect bare and shining. The last joint of the antennae conical. The wings are hyaline, very feebly infuscated, stigma and veins yellow, the apex beyond the radial cell infuscate. The sockets of the hind femora before the insertion of the tibiae are reniformly truncate and sharply margined.

Length: 17–18 mm.

♂: The median part of the clypeus is moderately convex, the anterior margin trapezoid and truncate without teeth. The fimbriae are golden yellow, the mandibles are shorter than in the ♀, the internal margin not sinuate, edentate, the external margins angular. The clypeus and face are more coarsely punctured than in the ♀, and the divergence of the orbits is much stronger. The development of the occiput and temples is weaker. Of the mesopleural tubercles only the second is present, and the mesopleurae are less enlarged. The grooves of the tergites are flatter and more indistinct, and the apical emarginations of the sternites shallower and more arcuate. The mesonotum, scutellum and epinotal area are very shining. The first metatarsus of the middle legs is basally strongly curved. The pygidial area is elongate, rectangular, the surface very rugose and sparsely punctured. The sternites have a long, silvery grey and dense pilosity. The second joint of the front tarsi is shallowly emarginate beneath; the hind tibiae are serrate. The last joint of the antennae is longer than the penultimate, curved and apically truncate.

Length: 15–16 mm.

This beautiful species occurs, according to Cameron, in Cape Colony and Damaraland. I have seen specimens from the latter country and captured the species myself at Port Elizabeth, the Sunday River Valley and at Willowmore, from December to February. One finds them, specially the ♂♂, on the flowers of *Gomphocarpus ramosus*, and they often carry the pollen of this plant adhering to the claws. In the northern parts of the territory I found the species at Vryburg; Cameron gives also Pretoria, Transvaal, as habitat.

Cerceris jackal n.sp. ♀ and ♂. (Pl. XLIII, fig. 12.)

Coloration. ♀: Black; the following parts are yellow or yellowish white: the scape of the antennae and more or less triangular spots on the face with their base towards the orbits, and the apex of the antennal keel.

Sometimes the yellow colour extends beyond the border of the lateral parts of the clypeus. A small dot lateral of the median line of the clypeus close

to the anterior margin, is yellow. The greater half of the outer side of the mandibles is yellow basally. The thorax is entirely black. A postmarginal band, broadened laterally, on the third tergite and a small apical band on the fifth tergite are yellow. The posterior margin of the petiole and of the second and fourth tergites, as well as the whole pygidial segment, including the pygidial area, are ferruginous. Of the same colour are the antennae (the upper side of the flagellum is darker), tegulae and the legs. The coxae and trochanters of the four posterior legs are black, the femora blackish.

♂: The coloration is the same as in the ♀. The facial markings seem to be constant, but not the colour of the antennal tubercle. This can be very much reduced or disappear. Of the abdominal bands the anterior seems to be constant, the posterior, situated in the ♂ on the sixth tergite, may disappear or be replaced by ferruginous. In addition segments 5 and 6 may have a sub-apical marginal band.

Sculpture. ♀: The whole insect is dull, only the epinotal area being polished and shining. The median part of the clypeus is flat, transversely impressed before the anterior margin and there somewhat turned up, anteriorly trapezoidally prominent with angles acute. The anterior margin is fairly transversely truncate. The inner orbits are parallel. The clypeus and face have a white silky pubescence and are sparsely punctate with a fine puncturation in between. The insect has otherwise a large and distinct even puncturation from the occiput and temples to the last tergite. The petiole is barrel-shaped; the thorax below and the epinotum have an erect pilosity. The sculpture of the pronotum and metanotum is finer than in the other parts of the thorax. The crest behind the base of the wings is acute, the inferior one indistinct. Mesopleurae without tubercles. The pygidial area is long, fairly regularly oval; the surface is thoroughly evenly coriaceous. The lateral fimbriae are feebly developed and white. The sternites, except the penultimate, are only laterally punctate. The penultimate one is strongly rugose and laterally hirsute. The plate at the base of the second sternite is distinctly bordered. The last sternite is very deeply and narrowly excised without distinct apical pencils of hairs. The inner margin of the mandibles has a small tooth, the outer margin is angular. The epinotal area is large with a fine impressed and crenulated median line. The lateral furrows are crenulated. The crenations are long and partially continued over into the disc of the epinotal area, which somewhat reduces the smoothness of that part. The legs are sparsely spinose, the hind tibiae serrate. Wings throughout feebly infuscate with brownish veins and stigma.

Length: 11–12 mm.

The ♂♂ are also dull all over as in the ♀♀. The median area of the clypeus is fairly flat, prominent anteriorly with somewhat rounded rectangular angles. Its anterior margin is smooth, trisinate, without sharp points or teeth. The clypeus is medially more strongly punctate than laterally. The inner orbits are parallel. The mandibles are simple. The sculpture is otherwise the same as in the ♀. The pygidial area is fairly rectangular, the surface irregularly and sparsely pitted. The apical angles of the last sternite are acute. Sternite 2 with a basal plate. Wings as in the ♀.

Length: 8–11 mm.

This species can be recognized by the opaque surface and the facial markings, which seem to be constant. It appears to be confined to the eastern coastal region of the sub-continent. I have not met with it in the Karroo.

Habitat: Port Elizabeth. The types are in my collection.

Cerceris holconota Cam. (Pl. XLI, fig. 6.) *Trans. South African Philos. Soc.* vol. xv, part 4, 1905, p. 215. ♀, Dunbrody, Cape Colony.

In this species I recognize with certainty the *C. holconota* Cam. Though the author does not mention the real specific characters of the species, it can hardly be mistaken from the description. I regard the form which is richly decorated with yellowish white as the typical form.

Coloration. ♀: Black; the following parts are white: clypeus and face, the latter at the inner orbits up to the antennal insertion and attenuated upwards, the base of the frontal keel triangularly, the basal two-thirds of the mandibles, the scapulae, tegulae, metanotum, posterior margins of the third and fifth tergites, the former triangularly enlarged at the sides, the latter laterally a little broadened, and the tumid third sternite. The bands on the tergites are more yellowish white, likewise the streak on the outer sides of all the tibiae. Legs light reddish yellow, the coxae darker. The scape is black, the flagellum more or less fuscous above, light brown below.

Wings hyaline, the margin and apex lightly infuscate, veins dark brown. The extension of the white colour is variable, but constant on the face. The rest of the white markings may be reduced, vestigial or totally wanting. But in addition there may be a large transverse oval spot at the middle of the anterior margin of the second tergite.

♂: The coloration of the ♂ is the same as in the ♀, but the yellowish white band is situated on the sixth tergite instead of on the fifth. Usually the band is equilateral and covers nearly all the segment. Antennal scape marked with white beneath.

Sculpture. ♀: The median area of the clypeus is sharply trapeziform, apically porrect with sharp angles and the anterior margin fairly truncate, smooth, a little rounded and black. The disc is very feebly convex, flat towards the anterior margin, not perceptibly concave. The anterior margin is bent upwards. The lateral parts have silky and white fimbriae. The inner margin of the mandibles is basally shallowly emarginate, the outer margin bluntly angular before the apex. The clypeus and face are finely and sparsely punctured, and have also in addition a microscopical puncturation. The head above and the temples are distinctly more strongly but not very densely punctured, dull. The inner orbits are a little divergent towards the base of the mandibles. The puncturation of the mesonotum is still more dispersed, medially with an impressed line. The pronotum is finely punctured with the lateral angles *sub-tuberculate*. This character gave the name to the species. The scutellum is sparsely punctured, the metanotum smooth. The epinotum is punctured like the mesonotum. The epinotal area is smooth and shining, somewhat convex with a median longitudinal furrow, anteriorly strongly impressed and more or less crenulate like the lateral furrows. The epimera of the mesopleurae are distinguished by a lamella close below the base of the wings and lower down by a transverse sharp and lamelliform tooth, which is directed downwards. Mesopleurae and mesosternum coarsely punctured. The petiole is long and barrel-shaped, the sides slightly arcuate and evenly strongly and largely punctured like the following tergites. The pygidial area is oval, apically rather strongly attenuated and rounded, evenly coriaceous, basally with a few large punctures. Second sternite basally with a distinct plate which is almost smooth.

The rest of the sternites is sparsely and irregularly punctured. The basal portions of sternites 3-5 are narrow, tumid and strongly elevated, the third to fourth laterally punctured, medially smooth, posteriorly flatly emarginate. Its posterior angles are sharp and almost dentiform.

Length: 11 mm.

♂: The median area of the clypeus is somewhat convex, the apical margin hardly porrect. There is no distinct dentition of the black anterior margin. The inner margin of the mandibles have basally a *strong triangular tooth*. The external margin is angular before the apex. The puncturation is the same as in the ♀, but more distinct. The median impressed line of the mesonotum is narrower and less distinct than in the ♀. The puncturation of the mesonotum, epinotum and of the tergites is coarser than in the ♀. The apical angles of the second to fifth tergites appear to be dentate when seen from above owing to the apical margins being raised and protruding. The petiole is shaped as in the ♀. The two lamelliform crests of the epimerum are present as in the ♀. The second sternite is very coarsely rugose, and has not the raised basal plate. The angles of the basal tumid portion of the fifth sternite are feebly dentiform. The pygidial area is rectangular, the corners feebly rounded, punctured above. The pleurae are coarsely punctured. The apical joint of the antennae is attenuated.

Length: 9-11 mm.

This species is easily distinguished from related species by the sub-tuberculate shoulders in the ♀ and by the strong tooth on the inner margin of the mandibles in the ♂.

Habitat: CAPE COLONY: Port Elizabeth, Sunday River, Willowmore, from November to March. ORANGIA: Bothaville, in December.

Cerceris nobilitata Cam. (Pl. XLI, fig. 7.) *Trans. South African Philos. Soc.* vol. xv, part 4, 1905, p. 216. ♀.

Coloration. ♀: Black; the petiole and the greater part of the second tergite red. The red coloration is undoubtedly variable in extent. On the second tergite a large spot in the middle or at the posterior margin is black. The clypeus and face together are yellowish white, the colour at the inner orbits attenuated above and reaching to above the antennal insertion. The thorax is all black without yellow markings. A transverse streak on the second tergite anteriorly in front of the black median part, the third tergite except a basal large semilunar black spot medially, and a transverse macula in the middle of the posterior margin of the fifth tergite are yellow. The squamulae are yellowish white anteriorly, brown behind. Third sternite with yellowish white lateral spots on the tumid part. The antennal scape anteriorly and all the tibiae above are yellowish white. The legs are red including the coxae and trochanters. The posterior tibiae are black beneath. The antennae are brown beneath, darker on the upper side. The anterior sternites are partly ferruginous, darker in the middle. The bases of the mandibles are yellowish white, then red and blackish apically.

♂: The coloration is the same as in the ♀, but the second tergite is more rarely red, mostly very narrowly at the sides and in front. The face is mostly black, excepting always the attenuated maculae at the orbits. The clypeus is mostly black, rarely with a transverse white macula in the middle before the antennal tubercle. A transverse macula on the sixth tergite and sometimes on the fifth are yellowish white. Otherwise like the ♀. Legs red, anterior and median tibiae yellowish white anteriorly, black posteriorly. The hind tibiae and femora are black with the knees red. Coxae black, the trochanters partly so. Scape of the antennae and the flagellum are ferruginous beneath, blackish above. The wings are in both sexes hyaline with black veins and stigma, the apex is infuscated.

Sculpture. ♀: The median part of the clypeus is a little convex above, flat towards the anterior margin, almost a little impressed. The anterior

margin is black, broadly and transversely truncate, rounded and somewhat sinuous in the middle. The lateral angles are distinct and rounded. Face densely pubescent. Clypeus and face evenly, shallowly and sparsely punctured. The front is densely rugose. The occiput is largely but sparsely, the temples somewhat more densely, punctured with silky pubescence anteriorly. Inner orbits distinctly but moderately divergent towards the base of the mandibles. Pronotum distinctly and sparsely punctured. Mesonotum shining on the disc, distantly and largely punctured, with a fine deepened median line in the anterior part, laterally more densely punctured. The epinotum is very sparsely punctured, the punctures being large. The cordiform area is well defined, and round it is a broad shining zone which is impunctate and as smooth as a mirror. This zone has here and there some separate punctures. The epinotal area is polished, shining, and has a deep longitudinal median line and a large groove in the lower angle. Epimerum with a sharp lamelliform crest behind the scapulae and a dentiform lamella beneath the base of the wings. Mesopleurae largely and coarsely punctured without tubercles. The inner margin of the mandibles has a shallow emargination and a denticle in the middle of it, externally a blunt angle. The petiole is well constricted and barrel-shaped. The tumid tergites are very sparsely and largely punctured. The pygidial area is posteriorly strongly, anteriorly feebly attenuated, apically rounded, therefore more or less oviform, and has a number of coarse sparse punctures above. Otherwise it is coriaceous and dull. The lateral fimbriae are dense and long. The second sternite has a distinct, smooth and impunctate plate basally. The tumid parts of the sternites are smooth and shining, sparsely punctured posteriorly. The tumid fifth sternite is arcuately impressed posteriorly; the lateral angles are bluntly acute, the tumid part itself coarsely punctured. Last sternite deeply and narrowly incised, the apex straight, not very sharp.

Length: 10-11 mm.

♂: The median part of the clypeus is convex, a little overtopping the anterior margin with the latter rounded, strongly but shallowly punctured like the side parts. The punctures are groove-like. The face is more finely punctured, but sparsely so and pubescent. The puncturation of the vertex is denser than in the ♀. The pygidial area is truncate apically but little attenuated. The surface is covered with a few groove-like punctures. Second sternite at the base with a distinct smooth plate as in the ♀. The sculptures of the other parts are the same as those of the ♀. The third joint of the antennae is in both sexes distinctly longer than the fourth.

Length: 9-11 mm.

Habitat: CAPE COLONY: Sunday River, Willowmore, Oudtshoorn. TRANSVAAL: Lichtenburg.

I have seen the type, a ♀, which Cameron himself marked with a type label. This specimen is in the Albany Museum at Grahamstown, Cape Province.

The species occurs in the Karroo from November till February.

The species is easily recognized in both sexes by the smooth polished zone round the epinotal area and the deep groove at the apex of the area. The light colour of the face of the ♀ and the dark one of the ♂ are also distinguishing characters. This condition is as a rule reversed in *Cerceris* species.

Cerceris discrepans n.sp. ♀. (Pl. XLIV, fig. 12.)

This species is intermediate between *nobilitata* and *hypocritica* and shares with them most of the sculptural characters.

Coloration. ♀: Black; the petiole red, and the basal parts of tergite 2 more or less red. Yellowish white are the whole face with the clypeus and the base

of the frontal carina, the coloration being confluent. At the orbits the yellow colour is attenuated upwards and extends somewhat beyond the antennal insertion. The anterior side of the scape and the basal two-thirds of the mandibles are yellowish white. The scapulae, the tegulae, metanotum, the latter usually medially narrowly interrupted, a transverse mark mostly divided into two on the second tergite, and a sub-apical band on the third tergite, generally interrupted in the middle, are of the same colour. All these markings may be more or less reduced or wanting, so that the mesonotum may be wholly black. The coloration seems to be very variable. The four anterior tibiae are yellowish white, the greater part of the femora blackish. The posterior legs are totally blackish, only the extreme tips of the femora and tibiae being of a lighter colour. All the coxae and tibiae are black. Antennae yellowish brown beneath, fuscous above.

Sculpture. ♀: The sculpture agrees almost wholly with that of *hypocritica*, with the following differences: the median part of the clypeus is raised, roundly convex above, flattened towards the anterior margin and feebly bent upwards with the anterior margin mildly rounded. The width of the anterior margin is very much smaller than in the ♀ of *C. hypocritica*. There is further a *large triangular tooth* in the middle of the inner margin of the mandibles while *C. hypocritica* has only a small denticle at the border of half their length. The pygidial area is fairly oviform in *C. discrepans* and holds an intermediate shape in *C. hypocritica*. It is sparse, very finely coriaceous with a few larger punctures in the anterior part and more sinuously rugose in the apical third. The puncturation of the various parts of the body is fairly the same as in *C. hypocritica*. The tumid parts of the sternites are more strongly and more copiously punctate. The basal plate at the second sternite is not indicated. The impressed median longitudinal line of the polished epinotal area is very fine and not very deep, without transverse rugae as in *C. hypocritica* in which species the line is deeply and broadly impressed. A fovea at the apex of the epinotal area is also discernible. The extensive yellow colour of the lower part of the head in front seems to be very constant.

Length: 6–7 mm.

I have seen three ♀♀ from Oudtshoorn and Willowmore, collected in December. I could not find amongst the ♂♂ of *C. hypocritica*, with which the ♂ of this species must be very similar, a specimen which could be associated with *C. discrepans*.

The types are in my collection.

Cerceris hypocritica n.sp. ♀ and ♂. (Pl. XLIV, fig. 11.)

This species resembles *nobilitata* considerably, but differs in both sexes by the smaller size, and can be distinguished therefrom by constant characters.

Coloration. ♀: Black; the following parts are red: the petiole and sometimes the second tergite anteriorly and laterally. The red petiole is sometimes black in the middle. The clypeus and the sides of the face at the orbits up to base of the antennae are yellow. The frontal carina is usually black. A semi-lunar space at the superior margin of the median area of the clypeus is as a rule black. Sometimes a more or less large part of the clypeus inferiorly is black as well. The antennal scape is sometimes striped with yellow anteriorly. The tegulae, a transverse fascia, attenuated medially at the posterior margin of the third tergite, the tibiae laterally and base of the mandibles up to two-thirds of their length are yellow; very rarely irregular yellow spots occur at the anterior margin of the second tergite and at the apical margin of the fifth tergite. The bar of the third tergite may be more or less interrupted medially. The sternites and the apical half or the whole of the pygidial area are

ferruginous. Legs brownish, trochanters and coxae blackish. The antennal scape is brownish yellow beneath, blackish above.

♂: The colour of the ♂ shows the same variability as in the ♀. The yellow colour of the face is sometimes limited to the orbits.

Sculpture. ♀: The median part of the clypeus is convex above, the disc flat and depressed, transversely impressed before the anterior margin, so that the margin appears to be bent upwards. The shape of the anterior margin is trapezoidal, broadly truncate anteriorly with fairly sharp angles. The lower face is silky, very distinctly punctate, and, like the upper face, has a finer puncturation in between. The head is posteriorly more densely rugosely punctate. The orbits are feebly divergent towards the mandibular base. Mandibles internally feebly dentate, externally strongly angular. The pronotum is finely punctate. The disc of the mesonotum and the scutellum are sparsely but largely punctate, metanotum smooth. The epinotal area is polished and smooth as a mirror, with the median furrow deep and transversely crenate, the apex foveate but not so conspicuously as in *C. nobilitata* Cam. The lateral furrows are likewise deep and finely transversely crenulated. The epinotum is large and fairly densely punctate, more so than in *C. nobilitata* Cam. The puncturation reaches on all sides to the epinotal area without showing an impunctate border zone. The petiole is well constricted, feebly barrel-shaped. The tergites are distinctly and strongly punctate; the puncturation is moderately dense.

The pygidial area is almost oviform, apically rounded, finely coriaceous without puncturation. The mesopleurae are rugose without tubercles. The crest of the epimerum is distinctly triangularly acute. The plate at the base of the second sternite is distinctly raised, but indistinctly bordered. Sternites 2-4 are, punctate laterally, polished in the middle. The fifth sternite is rugose, the angles blunt. The last sternite is deeply but narrowly excised.

Length: 7 mm.

♂: The median part of the clypeus is a little convex, a little prominent anteriorly, trapezoidal with rounded angles and medially with a rounded tip, and like the lateral parts of the face with a long pubescence, strongly and irregularly pitted. The mandibles are simple on the inner margin. The sculpture and puncturation is the same as in the ♀. The pygidial area is weakly barrel-shaped, apically transversely truncate with scattered large groove-like punctures, shining. The petiole is long and narrow, similar to that of *C. regimula* m.

Length: 6 mm.

Habitat: CAPE PROVINCE: Sunday River, Willowmore, from November to February. The types are in my collection.

Cerceris pictifacies n.sp. ♀. (Pl. XLIII, fig. 13.)

Coloration. ♀: Black; the following parts are white or yellowish white: the antennal tubercle, a small dot at the apex of the scape anteriorly, the external half of the tegulae, an apical band laterally broadened on the third tergite, a broad transverse macula at the apical margin of the fifth tergite, the four anterior tibiae and tarsi, the tibiae with a longitudinal streak posteriorly. The posterior tibiae are yellow anteriorly, the tarsi apically brown. The knees of the anterior legs are yellow as well as the under side of the flagellum. The mandibles are yellow over the basal two-thirds. Face black.

The coloration is apparently variable.

Sculpture. ♀: The median part of the clypeus is convex, flattened anteriorly and weakly constricted before the anterior margin. The latter is fairly transverse with five blunt teeth, of which the two lateral ones and the median one are stouter than the two others. Inner margin of mandibles edentate. The

clypeus is discretely punctate with a much finer puncturation in between. The face is somewhat more finely and more sparsely punctate, also with a very subtle puncturation in between, pilose and opaque. The head is distinctly and partly somewhat rugosely punctate. The puncturation of the pronotum is scattered and distinct. Mesonotum and scutellum more sparsely but distinctly punctate, somewhat more densely so than the metanotum. Epinotum largely and distinctly punctate, at the sides more densely so than near the median area, laterally rugulose. The epinotal area is polished and shining, anteriorly with a deep median impressed line, which is transversely crenate. The lateral furrows are transversely or obliquely crenulated. The crenulation is continued upon the disc. The petiole is distinctly constricted, laterally rounded. The tergites are largely and distinctly punctate. The pygidial area is oval, on the disc distinctly and undulatingly rugose, opaque. The raised plate at the base of the second sternite is distinct. The tumid portions of the sternites are medially smooth, laterally distinctly punctate. The last sternite is triangularly excised, the teeth acute. The crest of the epimerum, seen from behind, is sharp. The mesopleurae are large and thick, not very densely punctate, without tubercles. The body has a fairly long and erect pilosity. The wings are apically weakly infuscated.

Length: 7–8 mm.

The species is to be separated from similarly marked and related species by the formation of the clypeus.

Habitat: CAPE COLONY: Uitenhage, ♀, in December. The type is in my collection.

Species ♀ with four teeth on the apical margin of median clypeus in the ♀.

Cerceris Barnardi n.sp. ♀. (Pl. XLIV, fig. 8.)

Coloration. ♀: Black; an irregularly shaped spot on each side of the face extending half-way up, a small dot at the hind angles of the third tergite, a broad apical band on the fourth tergite, narrowly interrupted in the middle, and a broad apical band on the fifth tergite are yellowish white. The following parts are ferruginous: the antennae, the basal two-thirds of the mandibles, the tegulae, sides of the epinotum, petiole and second tergite, second sternite and tumid areas of the third sternite and all the legs except the trochanters which are black. The tarsi of the posterior legs are piceous.

Sculpture. ♀: This is a compact species of medium size and broad face. The inner orbits are parallel. The shape of the median part of the clypeus is very peculiar and gives the species a unique position amongst South African species. It is short, hardly broader than long, irregularly trapezoidal. The apical margin is quadridentate; the inner pair of teeth stand close together, prominent, widely rounded. The lateral teeth are small, angular and set further back than the middle ones. The mandibles are simple. The puncturation of clypeus, face, occiput and temples is simple, not rugose, somewhat irregular, finer than on the thorax, pleurae and sides of the epinotum. The pleurae have a blunt and stout tubercle. The epinotal area is quite smooth and shining, without sculpture, but it has a faintly impressed median longitudinal line. The petiole is sub-quadrate, not much narrowed in front, two-thirds wider across the apical margin than long in the middle. The tergites have a coarser puncturation than the thorax. The pygidial area is longer than broad, sub-elliptical, attenuated apically, the apical margin transverse. The sides are marginate, fringed; the surface is rugulose and dull. The sternites are smooth in the middle, the second one very smooth and shining, without any sculpture, the penultimate dull and punctate. The wings

are uniformly pale fuscous, the apex darker and with a slight violaceous lustre, the veins black.

Length: 10.5 mm.

Habitat: S.W. AFRICA: Narebis, collected by Mr Barnard. The type is in my collection.

Cerceris varicincta Cam. (Pl. XLII, fig. 4.) *Trans. South African Philos. Soc.* No. xv, part 4, 1905, p. 224. ♀.

Coloration. ♀: Black; the petiole red; the latter may, however, be black with the posterior margin and also the sides more or less red or ferruginous. Exceptionally the red colour extends further, so that the bands of the third to fifth tergites wholly or partly may be red or bordered by red instead of yellow. In addition, the pygidial segment may be wholly or partly ferruginous as well as the tumid portions of the sternites and the last sternite. Likewise the pronotum and tegulae are often partly or wholly ferruginous. The clypeus and the whole face, with the antennae, tubercles and frontal keel, are either yellowish white, or the front below the antennae and the median part of the clypeus are more or less black. The yellowish white colour rarely reaches as far as the antennal insertion. The tegulae are yellowish white, ferruginous or black; the third and fourth tergites have broad and anteriorly more or less emarginate bands, and the fifth is mostly wholly yellowish white. All these fasciae may be reduced or may be replaced by ferruginous colour. Sometimes the tumid portions of some sternites may be yellowish or ferruginous. The legs are red with the coxae and trochanters blackish. Antennae usually ferruginous, the upper side being more or less red with the apex darker.

♂: The ♂ is coloured like the ♀, but the bands of tergites 2-6 are yellowish white, or 6 wholly so. The colour varieties are the same as in the ♀.

Sculpture. ♀: The median part of the clypeus is flat, shallowly deepened anteriorly; the anterior margin is rounded, transverse broad and trapezoidal, produced anteriorly, the lateral angles rounded. The lateral parts of the clypeus are small; the inner margins of the mandibles have a small denticle, the outer are bluntly angular before the apex. Lower face and clypeus covered with a whitish silky pubescence. The inner orbits are parallel. The median area of the clypeus and the sides of the face are microscopically and densely punctate and have a few larger scattered punctures in addition. In fresh specimens the sculpture is hidden by the silky pubescence. The front is densely and distinctly punctate, dull. The puncturation of the vertex and occiput and temples is sparser. The temples are more densely punctate. Pronotum finely and sparsely punctate. The mesonotum has a finely impressed median line and a sparse puncturation like the scutellum. The metanotum has a fine puncturation. The epinotum is densely and somewhat shallowly rugosopunctate and has a long pilosity. The epinotal area is smooth, somewhat shining, with a deep longitudinal median furrow which is transversely crenate. The area is microscopically coriaceous. The mesopleurae are dull and densely punctate with a long pilosity and without tubercles. The epimerum has a coarse crest below the base of the wings. The petiole is distinctly constricted, broadly barrel-shaped and irregularly punctate. The pygidial area is also barrel-shaped, truncate apically, everywhere moderately coarsely coriaceous and undulatingly rugose, dull, fairly distinctly pilose with fine and thin lateral fimbriae. The second sternite has at the base a distinct smooth and round plate, the sternite is smooth apically, punctate laterally. The tumid parts of the second to fourth sternites are apically shallowly emarginate, basally smooth, sparsely punctate posteriorly. The tumid portion of the fifth sternite is very coarsely, sparsely and indistinctly punctate, the angles bluntly

protruding, apically broadly emarginate. The emargination has two to four small teeth in the middle. The tumid portion has a dense and long pilosity at the sides. The last sternite is deeply and roundly excised, the lateral teeth are bent and curved outwards.

Length: 11–13 mm.

♂: The median part of the clypeus is a little convex with the rounded apical margin trispinose. Fimbriae golden yellow. The inner margin of the mandibles is simple. The puncturation is somewhat coarser and closer than in the ♀. The angles of the tergites are produced posteriorly. The pygidial area is feebly rectangular, rounded and pitted with very coarse irregular punctures, shining. Epimerum with crest below the insertion of the wings. The plate of the base of the second sternite is not distinct, the sternite is medially cristate or carinate. The tumid portions of the sternite are thick and straight posteriorly. Last joint of the antennae rounded apically.

Length: 9–12 mm.

The wings are feebly infuscate in both sexes with a darker apex. The veins are dark. The hind legs, especially the femora, are faintly fuscous.

The range of the species is very wide.

Habitat: CAPE PROVINCE: Port Elizabeth, Knysna, Oudtshoorn, Willowmore, Pearston. ORANGIA: Bloemfontein. TRANSVAAL: Lichtenburg, Johannesburg, Piet Retief (British Museum). BASUTOLAND: (British Museum). RHODESIA. November—February.

This species can be distinguished at once from *C. nigrifrons* Sm., which has nearly the same livery, by the different sculpture of the epinotal area.

Cerceris nigrifrons Sm. (Pl. XL, fig. 8; Pl. XLII, fig. 3.) *Cat. Hym. Ins. Brit. Mus.* vol. IV, 1856, p. 450. ♂.

This species is very nearly related to *C. varicincta* Cam. but easily separated from it.

Coloration. ♀: Black, with the petiole red, its base sometimes black. The coloration is much more stable than in *C. varicincta* Cam. I have not yet seen specimens with black petiole but do not doubt that they occur. The tegulae, tumid areas of the sternites, posterior margin of the second tergite, pygidial segment and last sternite are ferruginous.

The following parts are yellowish white: the face, clypeus and frontal carina. This colour may be reduced considerably and becomes even vestigial. Sometimes a median spot only on the clypeus and a lateral spot on the face are all that is left. The scape is yellowish white anteriorly, the tegulae partly yellow. A posterior fascia of the third and fifth tergites, laterally usually broadened, the anterior parts of the tibiae and the middle metatarsi are yellowish white, the greater part of the legs ferruginous.

♂: Petiole red, partly black or wholly so. The yellow markings are as in the ♀, but the yellowish white colour of the face may disappear entirely. Specimens with the face and the clypeus black are not very rare. The yellow fasciae of tergites 3 and 6 are also present in the ♂. The scape is yellowish white anteriorly. Sternite 3 has often a yellowish white band. The metatarsi and following tarsi of the middle and hind legs are yellowish white.

Sculpture. ♀: The median part of the clypeus is flatly convex, the anterior border trapezoidal, straight but undulating at the surface immediately behind the anterior margin. The sculpture is sometimes hidden in fresh specimens on account of the dense silky pubescence of the face. The inner margins of the mandibles are edentate, the outer bluntly angulated near the apex, both with a row of fine hairs. Inner orbits parallel. The clypeus and face are broad and flat, rugosely punctate. The front is finely, the occiput and temples coarsely

and densely rugoso-punctate, dull. The pronotum and mesonotum have a coarse puncturation, the latter anteriorly a short median impressed line. Likewise the scutellum, metanotum and epinotum are coarsely and densely punctate. The epinotal area has sharp and coarse longitudinal rugae. In some cases these rugae may be obliterated posteriorly so that the area appears smooth and shining apically. But anteriorly they are always conspicuous. Specimens from Mashonaland have particularly coarse longitudinal rugae. The petiole is broadly constricted, more attenuated anteriorly than posteriorly, rounded laterally and like the tergites densely and distinctly punctate. The pygidial area is strikingly narrow, linguiform and rounded posteriorly, almost parallel-sided, anteriorly with a long and dense lateral fimbria. The surface is dull and finely transversely rugose. The second sternite is smooth and shining with a few very scattered punctures and a denser lateral puncturation. Sternite 5 is medially longitudinally deepened, emarginate posteriorly and impressed there. In the middle before the posterior margin stand two erect lamelliform teeth and the margin is crenulated laterally. The last sternite is deeply excised with strong apical brushes and straight apical teeth. Mesopleurae without tubercles, densely and strongly punctate.

Length: 11-13 mm.

♂: The median part of the clypeus is convex, little porrect anteriorly with three blunt teeth apically. The sculpture and puncturation are the same as in the ♀. The petiole is long and narrow, much narrower than in the ♀, the hind margin reflected. The pygidial area is fairly rectangular, feebly attenuated posteriorly, the hind angles rounded, shining, shallowly rugosely punctate and with large groove-like impressions. On each side it has curved and acute teeth directed posteriorly. The tumid portions of the sternites are thick and prominent, the hind margin of the sixth sternite is truncate and the posterior angles acutely dentate. The lateral angles of the last sternite are acute. Last joint of antennae rounded. Wings hyaline in both sexes, the extreme of the fore wings fuscous, the veins and stigma black.

Length: 9-12 mm.

Superficially the species can be easily mistaken for *C. varicineta* Cam., but is easily distinguished by the sculpture of the epinotal area. It seems to have a wide distribution.

Habitat: CAPE PROVINCE: Port Elizabeth, Addo, Sunday River Valley, Willowmore. TRANSVAAL: Lichtenburg. MASHONALAND: Salisbury. CONGO TERRITORY: Elizabethville, Katanga. From November till February.

The ♂ type is in the British Museum. Mr R. Turner compared specimens of my collection with it and established the identity.

A large material has been examined.

Biology: As larval food the species carries Buprestidae into its galleries, for instance, *Sphenoptera* sp. (Mashonaland).

In the Berlin Museum the species is under the name of *Cerceris trivialis* Gerstaecker, with the habitat Zanzibar.

Cerceris varilineata Cam. (Pl. XLI, fig. 11.) *Trans. South African Philos. Soc.* vol. xxv, part 4, 1905, p. 218. ♂.

Coloration. ♀: Black; the tergites 2 and 3, sometimes parts of 4 and usually all sternites are reddish. The clypeus, face and frontal carina, a triangular macula of the temples above, posterior margin of the pronotum, a spot on the epinotum, tegulae, the sides of the scutellum, the metanotum, posterior margins of the tumid portions of tergites 1-4 and a transverse macula of tergite 5 medially at the posterior margin, as well as an oval macula on each side of the epinotum are white. All these markings may be reduced, become vestigial

or disappear altogether. The reddish coloration of the tergites may be replaced more or less by black colour, but then the anterior and posterior margins remain partly red. The legs are yellow with the coxae and trochanters more or less blackish. The antennae are brown beneath, darker above. The scape anteriorly and the mandibles are yellow, the latter with a black tooth on the inner margin and the apex black.

♂: The reddish coloration is usually altogether absent, or is present only at the anterior and posterior margins of the tergites in the ♂. The sternites are more or less wholly reddish, as in the ♀. The distribution of the white markings is the same as in the ♀, but the bands of segments 1-6 are present. The bases of the hind tibiae are yellowish white and sometimes there are white maculae at the mesosternum and pleurae.

The wings are hyaline in both sexes with an infuscated apex of the fore wings.

Sculpture. ♀: The inner orbits are distinctly divergent towards the base of the mandibles. Head and temples are large and thick. The median part of the clypeus is almost flat, the anterior margin bent upwards, a little prominent anteriorly, sharply marginate, without teeth, broad and sharply trapezoidal. The side parts are sinuous towards the mandibular base. The mandibles are sharp, basally emarginate at the inner margin. In the middle of the emargination is a stout and sharp triangular and recurved tooth. On the external margin the mandible is feebly angled. The median area of the clypeus is very discretely and shallowly punctate at the disc, denser before the anterior margin. The side parts of the clypeus are almost smooth and without puncturation. The face is simply and shallowly punctate, all these parts shining. The pronotum above has only spurious punctures. The front, occiput and temples are moderately densely and largely punctate. The mesonotum has sporadic punctures only and anteriorly two short impressed longitudinal short lines. The scutellum is sparsely punctate, the metanotum smooth. The epinotum is discretely, largely, laterally more closely punctate. The epinotal area is smooth, microscopically coriaceous and, therefore, not very shining. It has a very fine, hardly perceptible, impressed median line. Epimerum and metapleurae transversely rugose. Mesopleurae coarsely rugose, dull, with blunt rounded tubercles. The petiole is invertedly trapezoidal, anteriorly attenuated, very sparsely punctate. The groove of the petiole is very distinct. All the tergites are largely and distinctly but sparsely punctate. The pygidial area is nearly parallel-sided. The apical margin is transverse with two denticles in the middle. The lateral margins are apically sharply pointed. Surface dull without punctures and without any perceptible sculpture. In fresh specimens the surface is covered with a fine velvet-like pilosity. The lateral fimbriae are absent and only single hairs are present.

Length: 9-10 mm.

♂: The median area of the clypeus is almost flat, anteriorly broadly tongue-shaped and porrect, edentate. The lateral parts of the clypeus are deeply and roundly emarginate at the anterior margin. The emarginations have a white pubescence. The face and clypeus have a scattered but distinct puncturation; the lateral parts are smooth apically. All these parts are shining. The shape and site of the stout and acute tooth of the mandibles is the same as in the ♀. The front is coarsely rugose, the occiput likewise but more shallowly. The temples are more distinctly punctate. The sculpture is otherwise the same as in the ♀. The tubercles of the mesopleurae are hardly indicated. The pygidial area is highly trapezoidal, apically nearly straightly truncate, somewhat attenuated posteriorly, smooth, with very scattered coarse punctures. The tumid portions

of the sternites are narrow, feebly emarginate, the lateral angles bluntly prominent. The sternites 3-5 are transversely impressed, with pencils of hairs in the impressions and upon the intumescence portions. The second sternite has anteriorly a low longitudinal rib-like elevation. The last sternite is triangularly excised, the apical angles sharply pointed. The last antennal joint is as long as the penultimate, bluntly edged apically. The species is not rare in the Karroo of the Cape from December to February. It is widely spread up to the Victoria Falls in Rhodesia.

Length: 8 mm.

The nesting habits are known to a certain extent. The species prefers the shady beds of our temporary rivers, and carries small Curculionidae like *Sciaphilus* into its galleries as larval food.

Race: bechuana n.v. ♀ and ♂.

This form is so similar to *C. varilineata* in sculpture and habits that it may be looked upon as a race of this species. But the specimens collected in Bechuanaland are much smaller and more graceful in shape; the coloration of the ♀ offers some constant difference. Therefore, I have selected a name for this northern form, which occurs also in S. Rhodesia.

Coloration. ♀: The white markings on the face are the same as in the typical form, but the temples are predominantly yellow, only the upper third being black. Besides, all the specimens which I examined have on each side of the vertex a comma-shaped white macula, running from the compound eyes diagonally backwards to the middle line, and which is only narrowly separated from the corresponding one. These maculae form a delta-shaped figure. The white markings of the thorax are on the whole broader than in the type-form, but the lateral maculae on the pleurae and epinotum are present in one specimen only. In the others which I have seen they are reduced or absent. The petiole is black, all the tergites red with the white bands very much broader than in the typical form. The pygidial area, too, is yellow in parts. Rarely the posterior segments are blackish. The sternites exhibit sometimes white bands of variable extension. The coloration of the abdomen is more yellowish red in contrast to the red colour of the type-form. The legs are much brighter yellow and yellowish red, principally the femora.

I cannot find in the ♀ a definite difference of the sculpture.

I collected this form in February in the southern part of Bechuanaland, near Pudimoe. The types are in my collection.

Cerceris charimorpha n.sp. ♀. (Pl. XLIV, fig. 2.)

Coloration. ♀: The principal colour of the thorax is black, but the head and abdomen are ferruginous with white markings. The following parts are ferruginous: the occiput, temples and sides of head laterally, the tergites and sternites, antennae and legs and the tegulae. Yellow are the following parts: the whole clypeus, the lower three-fourths of the orbits triangularly with the broader part towards the clypeus, the inter-antennal carina, a large triangular macula on the temples, pronotum, scutellum, postscutellum, two large lateral maculae on the epinotum, two adjacent spots on the mesopleurae, large maculae on the hind angles of the petiole and second tergite, the hind margins of the third and fourth tergite, attenuated considerably towards the middle, nearly the whole of the fifth tergite, under side of the four anterior femora, the four anterior tibiae and tarsi and the basal half of the mandibles. The stigma and marginal vein are light brown, the other veins black. The wings are hyaline with the apical part of the fore wings fuscous.

Length: 12 mm.

Sculpture. ♀: Inner orbits divergent to the clypeus. Median part of the clypeus not protruding, flat, the brown apical margin truncate with three blunt protuberances. Clypeus with sparse shallow punctures like the face up to the upper end of the antennal carina. Vertex and occiput densely and finely rugosely punctate, dull; the thorax and epinotum have the same kind of sculpture but a little coarser. The epinotum area is of medium size, ridged diagonally in the upper lateral part, horizontally in the apical part. The petiole is attenuated anteriorly, foveate. The puncturation of the petiole and the following tergites is simple and conspicuous. The pygidial area is large, the sides parallel, the apex rounded, the margins elevated, the surface finely rugose and dull. The mesopleurae have a minute denticle below. The sternites are very smooth, shining and without sculpture, except the two apical ones. The mandibles are angular exteriorly and have a broad quadrangular crest at the base of the inner margin. The species is nearly related to *C. varilineata* Cam. and belongs to the same section of the genus. In coloration it resembles it very much, but the sculpture is vastly different.

The unique specimen was collected at Dondo, Portuguese East Africa, 10th February, 1924.

I have a co-type in my collection taken at Durban, Natal, 5th February, 1919.

Cerceris multipicta Sm. (Pl. XLII, fig. 10.) Smith, *Ann. Mag. Nat. Hist.* vol. XII, 1873, p. 411. ♀ and ♂. Schletterer, "Die Hymenopteren-Gattung *Cerceris*," *loc. cit.* p. 430.

Coloration. ♀: The coloration of the South African form of the ♀ differs apparently from the specimens from Nubia and the Sudan in so far that it lacks more or less or wholly the yellow bands, and that the abdomen is almost black or coffee-brown from the second tergite onwards. This form seems to be constant in South Africa.

The ground colour is black or coffee-brown. The following parts are pale yellow: the clypeus, the sides of the face and frontal keel, anterior side of the scape, a large temporal macula which covers sometimes the upper two-thirds of the temples, pronotum with a median semi-lunar macula, emarginate in the middle, the whole or part of the metanotum, all the epinotum including the epinotal area, but excepting the declivous sides and a more or less broad, dark stripe reaching from the apex of the area towards the base of the abdomen, the petiole, a narrow median streak and the apical margin excepted, as well as two large maculae on each side of the second tergite covering all the sides of this segment and enlarged medially. Of the same colour are the under side of the petiole and the second sternite. The following parts are ferruginous: the basal six joints of the antennae, the mandibles, sometimes two spots on the vertex, the lower third of the temples, sometimes all the occiput, sides of the pronotum, tegulae, scapulae, mesopleurae, sides of epinotum wholly or the anterior margin, diffuse lateral spots on the tergites, pygidial segment and last sternite and legs. The hind trochanters, base of the posterior femora below and a more or less distinct streak on the anterior tibiae are sometimes pale yellow. As already mentioned, all the black parts may be replaced more or less with ferruginous or coffee-brown.

♂: The specimens of this sex which are known to me, and of which I have a number, are distinct and conform to the coloration described by Schletterer, which consists of broad pale yellow abdominal bands interrupted broadly in the middle, otherwise marked as the ♀, but with a larger extension of the yellow colour on the temples, pronotum and legs, mainly on the anterior ones.

The size of the ♂ is very variable. In this sex larger or smaller parts of the black ground colour may also be replaced with ferruginous.

Sculpture. ♀: The median part of the clypeus is not separated in the least degree from the side parts. The anterior part and the margin is deeply and broadly semi-lunary excavated with long brush-like fimbriae at the corners of the excision. The anterior margin is transverse and straight. The mandibles are very stout and thick; the inner margin has an almost cubic, dark dentiform process in the basal third, deeply excised behind it, and with a second triangular tooth before the apex. The inner and outer margins of the mandibles are provided with rows of strong dense and long ferruginous bristles, similar to those which are placed in the outer angles of the margin of the clypeus. The outer margin is arcuate without an angle before the apex. The clypeus is very finely and indistinctly punctate, microscopically shagreened. The puncturation of the head and face is fine but more distinct than on the clypeus, dense and moderately strong on the vertex; occiput and temples have smooth spaces close to the ocelli and behind them. The head is very strongly developed, the inner orbits considerably divergent towards the base of the mandibles. The pronotum and mesonotum have a very fine and dull puncturation, the scutellum likewise, but laterally it is sparsely and more strongly punctate and dull. Metanotum smooth. The epinotal area is smooth, medially without puncturation, laterally hardly punctate. It has a median finely impressed longitudinal line. Otherwise it has no sculpture and stands out in contrast with the rest of the epinotum, which is densely and finely punctate. The petiole has a scattered and fine puncturation. Tergites medially very finely and densely punctate, laterally somewhat more strongly and less densely. The sculpture of so large an insect is remarkably fine. The groove of the petiole is distinct, those of the subsequent tergites hardly indicated. The shape of the pygidial area is very feebly barrel-shaped, the external margins of it strongly fimbriate, the surface broadly rugose and with a dull greasy lustre. The petiole is laterally feebly rounded and, therefore, nearly rectangular, the under side smooth and without punctures. The tumid portions of sternites 3-5 are densely punctate, dull, densely pilose. The under side of the femora, the sides of the epinotum, the temples, pleurae and sterna have a long whitish pilosity. The mesopleurae are thick, the tubercles hardly indicated. The legs are stout, strongly and densely pilose, the hind tibiae strongly serrate. Wings tinted with yellow, the sub-costa black, the apex beyond the cells fuscous.

Length: 21 mm.

Habitat: TRANSVAAL: Pinnaar. ZULULAND: Chirinda Forest. ANGOLA. CAPE COLONY: Vryburg. This specimen has the rich coloration of the ♂ on the abdomen.

♂: The median part of the clypeus is convex, the anterior margin with three distinct teeth which are equally large. The whole clypeus is hirsute, especially at the margin. The puncturation of the clypeus and face is equally dense and fine, the head very strongly pilose. The puncturation of the body is otherwise the same as in the ♀. The petiole is parallel-sided, very long, as long as the epinotum and as long as the following tergite. The pygidial area is broadly linguiform, the sides anteriorly nearly parallel, the apex broadly rounded, dull, with separate coarse setigerous punctures. The third and following sternites are tumid and densely pilose. The mandibles are simple, the inner margin edentate, the outer with a callosity. The last joint of the antennae is a little larger than the penultimate, arcuate on the inner side, the apical margin fairly sharp, roundly truncate. The antennal joints are more sharply constricted towards the apex.

Length: 19 mm.

Habitat: ORANGIA: Bothaville, in December. CAPE PROVINCE: Kimberley, in December. RHODESIA: November and December.

At Kimberley numerous ♂♂ were captured while hiding for the night in the calyx of *Althaea rosea*.

It is evident that the species has a wide area of distribution from Nubia and the Sudan to the Northern Cape Colony.

Cerceris armaticeps Cam. (Pl. XL, fig. 6; Pl. XLII, fig. 2.) *Ann. Trans. Mus.* vol. II, 1910, p. 149. ♀.

The species is of a much brighter colour than the related *C. eulalia* m.

Coloration. ♀: The following parts are ferruginous: the antennae and legs with the coxae, the greater part of the mandibles, the clypeus, the inner orbits very broadly. The colour sometimes coalesces with the all ferruginous occiput. The following parts are also ferruginous: sometimes the temples, the squamulae, the base of the veins of the wings, the scutellum and a spot in front of it on the mesonotum, the metanotum, the whole of the epinotum except the median area, scapulae, two or three spots on the mesopleurae and the mesosternum, the first two abdominal segments and the ventral segments. The following parts are yellow: the mandibles partly, the facial cone, the inner orbits near to the clypeus or higher up, the frontal carina, anterior margin of the pronotum and the metanotum anteriorly. The first three tergites and sternites 2-3 have yellow bands on the hind margin as in *C. eulalia* m. ♀.

The third tergite is dark brown or ferruginous on the disc. The following tergites are more or less ferruginous or dark brown. The wings have, like those of *C. eulalia*, a yellow lustre and brownish yellow veins. The infuscated apex of the anterior wings occupies the radial cell and the apex of the cubital vein.

The ♂ is here described for the first time.

♂: The coloration of the ♂ is very like that of the ♀, but variable. The red of the epinotum may be reduced or even displaced by black. The yellow transverse lines of the pronotum and of the metanotum may partly or wholly disappear. The ferruginous colour of the sternites may be more or less displaced by black. Temples sometimes black with a ferruginous macula. The third yellow abdominal fascia is, however, always present in such melanic specimens. The upper side of the antennae apically and the upper side of the legs are often more or less black. Coloration of the wings as in the ♀.

Sculpture. ♀: The median part of the clypeus has posteriorly, close beneath the frontal carina, a porrect cone which is usually acute at the apex, although sometimes weaker or blunter. To see these parts properly one must observe the head from above. A fine median keel extends from the apex of the cone to the anterior margin of the clypeus. The lateral parts of the clypeus are transverse narrow tumid and sinuous, much lower in height than the median part. The anterior margin of the clypeus is arcuately emarginate from the base of one mandible to the other, but in the middle it is almost straight and transverse. The frontal keel becomes flatter above and reaches to near the anterior ocelli. The mandibles are straight, not falcate, and when closed are adjacent to the anterior margin of the clypeus. In the inner margin they have usually a large and broad, feebly three-cornered, dentiform projection. Externally they are angular at the end of the basal third. The inner orbits hardly diverge towards the base of the mandibles. Mesonotum with a fine median keel. The epinotal area is medially deeply furrowed longitudinally, as in *C. eulalia*, with the rugae sharp and arranged as in that species. The petiole and other tergites are also shaped as in *C. eulalia*, and the first five tergites are grooved. The pygidial area is more distinctly barrel-shaped than in

C. eulalia, the sides being more curved and less attenuated frontally than apically. The apical margin of the area is truncate and shorter than the anterior. The mesopleurae have inferiorly a small tubercle. The metasternum is similarly shaped as in *C. eulalia* without protuberance between the hind femora. The last sternite is very deeply excised in the middle of the apical margin, the inner edges of the excision being parallel. The excision is bordered exteriorly by a raised shining area which is smooth and impunctate. The margins are densely bristly. Hind margins of the sternites finely pilose.

The insect has a much more conspicuous glossiness than *C. eulalia*, ♀, but has otherwise the same sculpture. The latter is very conspicuously longitudinally rugose on the mesonotum and scutellum. Metanotum smooth with hardly any long pilosity, almost bare.

Length: 13–14 mm.

♂: The ♂ is much smaller than the ♀. The median part of the clypeus is flat, the anterior margin of it trapezoidal, porrect, transversally truncate with three blunt teeth, of which the median is stronger than the lateral ones. Inner margin of the mandibles without a distinct tooth, externally feebly angular. Mesopleurae without tubercles. The sculpture of the head and thorax is the same as in the ♀. The frontal keel ends at a considerable distance before the anterior ocellus.

Clypeus and sides of face are sparsely punctate. The petiole is longer than in the ♀, the sides but little rounded or parallel, a little longer than wide at the apex. The grooves of the tergite are more indistinct than in the ♀, but are always indicated. The pygidial area is a little broadened apically; the apical margin truncate. The dentiform angles are acutely pointed, small, a little divergent. Sculpture as in the ♀, but coarser on the tergites. The epinotal area has the same shape and sculpture as the ♀.

Length: 10–12 mm.

The species seems to be commoner in the northern regions, namely Natal, than in the south. I have collected the species in the following localities:

CAPE PROVINCE: Uitenhage, Port Elizabeth, East London, George.
ORANGIA: Bloemfontein. TRANSVAAL: Lichtenburg, Waterberg, Platriver.
NATAL: Durban, Malvern, Eshowe, Howick, Umbilo.

Cerceris eulalia n.sp. ♀.

Coloration. ♀: The antennae, with the exception of the blackish apex from the seventh joint to the penultimate one, the occiput behind the ocelli, the upper part of the temples, squamulae and the base of the veins of the wings, the upper side of the abdomen, except the black base of the petiole and the darker brown segments 4–6, and the pygidial area, are ferruginous. Sternites 1–3 are blackish, the following ferruginous; legs all red, only the coxae and the trochanters in part are black. The claws are blackish. A semi-lunar macula in the middle of the clypeus, a spot on the inner orbits reaching to a little above the antennal insertion, the frontal keel and the greater half of the mandibles, the anterior margin of the pronotum, interrupted in the middle, the metanotum, two large lateral maculae on the petiole, a broadly interrupted apical fascia on the second abdominal tergite and an apical fascia on the third tergite, broadly emarginate anteriorly, are yellow. Sternite 2 with a larger, 3 with a smaller lateral macula of yellow colour. The spines of the anterior legs are short and ferruginous. Wings with a yellow lustre and brownish yellow veins. The infuscated apex of the anterior wings occupies the radial cell and the apex above the cubital vein. Pilosity sparse. Only the temples and sides of the epinotum and mesopleurae have a long white pilosity.

Length: 14 mm.

Sculpture. ♀: The clypeus is concave over its whole breadth, the median part has a fine and sharp elevated longitudinal keel extending from the anterior margin over its anterior third. The anterior margin of the median area of the clypeus is gently arcuate, laterally ending in a tooth. The lateral parts rise arcuately to the base of the mandibles. The latter are stout, formed as in *C. armaticeps*, the inner margin basally with two stout teeth of which the basal one is larger than the other. Inner orbits feebly divergent to the mandibular base. The frontal keel is rounded and short. Occiput and temples are largely developed. The mesopleurae have in the lower part a tooth-like tubercle, directed downwards as in *C. transvaalicola*. The petiole is broadly sessile, nearly parallel-sided, posteriorly with a distinct median groove. The abdominal complex is laterally strongly constricted. The tergites 2-4 have a distinct groove at the apical margin. The pygidial area is elongated and barrel-shaped, anteriorly and posteriorly evenly attenuated, the apical margin truncate. The fimbriae are short. The penultimate sternite has at each side a blunt tubercle ending in a pencil of long hairs. Last sternite deeply and roundly excised as in *transvaalicola*, with a long pencil of hairs on each side. The fourth and fifth sternites are strongly and densely pilose on the disc and laterally. The petiole has a basal median keel beneath. The whole insect is dull. Clypeus microscopically punctate with scattered larger punctures. The front, occiput, temples, pronotum, mesonotum, scutellum and epinotum are densely and roughly punctate. The sculpture of the thorax and scutellum inclines to longitudinal rugosity. Metanotum almost smooth. The epinotal area is sharply defined, somewhat shining, with a sharp median furrow and sharp oblique rugae which are transverse apically. The tergites are coarsely punctured, with a fine primary puncturation. The coarse puncturation is much more dispersed than on the head and becomes finer on the fourth tergite. The fifth is finely punctate with indistinct coarser punctures. The pygidial area is rugose throughout, nearly transversely rugose. Sternites shining, densely punctate posteriorly. Mesopleurae densely punctate and dull.

Described from a ♀ type from Johannesburg in Transvaal. The type is in my collection. The colour is probably variable. The species is nearly related to *C. armaticeps* and may be regarded as a form of the latter.

Cerceris bothavillensis n.sp. ♀. (Pl. XLIII, fig. 5.)

Coloration. ♀: Black; the following parts are white or yellowish white: the median part of the clypeus and sometimes the posterior margin of the lateral parts, the frontal carina and sides of the face at the orbits broadly above and attenuated towards the mandibular base, a broadly interrupted fascia on the pronotum, the middle of the metanotum and broadly interrupted bands of the petiole apically and tergites 2-5. The band of the fifth tergite is hardly interrupted or may be entire. These bands are abbreviated towards the middle and laterally. They may also take the form of transverse lateral maculae. The legs except the black or blackish coxae and trochanters are ferruginous. The ventral surface of the abdomen is brownish anteriorly, and so are the last sternites, the pygidial area and the under side of the antennae. Wings hyaline, externally and apically infuscated. Veins black, brownish in parts.

Length: 12 mm.

Sculpture. ♀: Median part of the clypeus convex, acutely triangular anteriorly and porrect downwards, the apex of this protuberance sharp. Under side of the protuberance flat. Lateral parts of the clypeus concave, the anterior margin arcuate and simple. Inner orbits distinctly divergent towards the mandibular base. Mandibles stout, the inner margin with a stout tumid tooth-like protuberance as in the related species, bluntly angular externally.

The mandibles are black, only the extreme base whitish. The clypeus and the face are finely and sparsely shallowly punctate. The frontal keel is strong, rounded above, and lamelliform. Occiput and temples are well developed, somewhat strongly and densely rugosely punctate. The mesonotum is also similarly punctured, the scutellum more largely. The punctures of the latter are more dispersed. Metanotum smooth. Pronotum finely and indistinctly punctate. The epinotal area is medially deeply furrowed with coarse oblique rugae at each side. Mesopleurae with both tubercles distinct, otherwise rugosely punctate. The petiole is broad, well constricted, thick and broadly barrel-shaped. Like the tergites, it is coarsely and moderately densely punctured on the broad and flatly convex tumid parts. Pygidial area margined, tongue-shaped, rounded apically. The area is densely and finely sinuously rugose. The lateral fimbriae are thin and short and not very dense. The tumid sternites 2-5 are sharply emarginate posteriorly, the angles of the emarginations blunt. The sternites beyond their tumid portions are smooth and shining. The apical brushes are feeble. Hind tibiae serrate. The coloration seems to be constant.

Habitat: ORANGIA: Bothaville.

Two ♀s, caught in November and January, served for examination, and the types are in my collection.

Cerceris Bequaerti n.sp. ♀. (Pl. XLIII, fig. 10.)

Coloration. ♀: Black; the following parts are dull red: head, pronotum, pleurae, scapulae, squamulae, scutellum, metanotum, epinotum, petiole and base of the second tergite, the first two sternites, the basal half of the mandibles, antennae and the legs including coxae and trochanters. There is a black transversely oval frontal ring surrounding the red colour. This ring reaches to the ocellus, the eyes and the hind margin of the occiput. The sides of the epinotal area may or may not be margined with black. Wings bluish black iridescent above. The face has a silky pubescence anteriorly. The red-coloured parts have also a fine whitish silky pubescence. The black abdominal tergites have a black velvety pilosity.

Length: 19-20 mm.

Sculpture. ♀: The inner orbits are divergent towards the mandibular base. The median part of the clypeus has medially a small but distinct nasiform protuberance which is highest near to the anterior margin and extends backwards as a median keel. Otherwise the median area of the clypeus is flat. Close to this protuberance there is on the anterior margin a stout tooth on each side. The apical margin is medially truncate, laterally a little concave towards the base of the mandibles. The inner margin of the mandibles is armed with a strong triangular tooth, placed vertically, and the external margin has a strong angular blunt tooth in its last third. The insect is dull, almost without any shining parts. For a *Cerceris* species of this size the delicate sculpture is very remarkable and consists of a very fine rugosity with single shallow and scattered punctures. On the mesonotum, the petiole and the second abdominal segment dorsally and ventrally, as well as on the pleurae, the rugosity is a little coarser. The scutellum is medially and longitudinally deeply impressed and saddle-like. The mesopleurae have a conical blunt tubercle. The epimerae are very much swollen and separated from the pleurae by a deep depression. The epinotal area has regular oblique rugae. The pygidial area is broad anteriorly, strongly narrowed apically and ends in a rounded narrow tongue-shaped apex. It is densely coriaceous and dull. The lateral fimbriae are thick and dense. The tumid parts of the sternites are coarsely rugose, the penultimate with a groove-like impression in the middle. The last

sternite is deeply and steeply incised, the apical brushes are long. The petiole is broadly barrel-shaped and has a distinct groove. The abdominal segments are not very conspicuously constricted. The legs are feebly spinose.

This species is easily recognizable by the distribution of colours and the delicate sculpture. The habitat is the central Congo Territory at Kilombo. Dr J. Bequaert collected two ♀s. The type is in my collection.

Cerceris oraniensis n.sp. ♀ and ♂. (Pl. XLIII, fig. 3.)

A species ornamented very richly with lemon-yellow.

Coloration. ♀: Head and thorax black. Lemon-yellow are: clypeus, frontal keel and face up to two-thirds of the height of the orbits continuously, the mandibles except the apex, the antennal scape, the larger part of the temples, a transverse macula before the hind margin of the occiput, pronotum, two large maculae of the mesopleurae, the squamulae, scutellum, metanotum (postscutellum) and the entire sides of the epinotum. All the tergites except the narrow anterior and hind margins, the tumid parts of the sternites and the legs, with the coxae and trochanters, are yellow. The antennae are yellowish red except the blackish surface of the apical half; the hind tibiae and tarsi, the pygidial area, the last sternite and the depressed portions of the median sternites are light ferruginous. In the South African Museum at Cape Town is a ♀ of this species, captured at Port Elizabeth, Cape Province, which is less extensively yellow. The occipital macula is wanting. Of the mesopleural ones only the upper one is present and is small. On the scutellum the yellow colour is broken into two maculae. The spots of the epinotum are smaller than in the typical specimens and margined by black. The petiole of the abdomen has two yellow maculae above. The anterior and apical margins of the tergites are broadly yellowish red. Evidently the colour of this species is subject to a large degree of variation. Wings hyaline, the apex sharply infuscate. The veins are red at the base, black at the apex. Stigma and costa are red. Abdomen bare above, the pubescence of the body is blackish on the head and thorax, white on the epinotum.

♂: The extension of the yellow coloration on the head is the same as in the ♀. The fimbriae of the clypeal margin are yellow. The occipital macula is generally absent. The scutellar macula is medially interrupted or broken into two maculae.

Sculpture. ♀: The median part of the clypeus has a sharply keeled tubercle before the anterior margin which protrudes acutely and sharply, more or less conically. As in *C. rhodesiae* a sharply lamelliform median keel traverses it as far as the anterior margin. The height and the width of the tubercle is certainly variable in this species and probably also in the related species. The tubercle can undoubtedly vanish altogether as is sometimes the case with other *Cerceris* species. Even in the two ♀ specimens examined the size of the conical protuberances differs. The anterior margin of the clypeus is medially arcuate and broadly concave, the emargination laterally bluntly angular. The lateral parts of the clypeus are narrow and shaped as in *C. rhodesiae*. The mandibles have on the internal margin a blunt protuberance extending from the base to the middle, externally a blunt angle before the apex. The apex is black. The inner orbits are divergent towards the mandibles. Clypeus and face are smooth and shining, finely silky without distinct punctures. The head is moderately densely and not strongly punctate, with smooth impunctate spaces externally of the posterior ocelli. Pronotum smooth and shining, almost without puncturation. Mesonotum not very closely punctate with scattered longitudinal rugae, shining. Scutellum smooth with dispersed punctures. Metanotum smooth, impunctate and shining. The epinotal area

has a sharply deepened median furrow. It is very shining and has punctures and a fine oblique rugosity laterally, but only single punctures at the disc. It is either totally black or has a median yellow macula. The sides of the epinotum are distinctly but sparsely punctate. The mesopleurae are similarly punctate and have small but distinct tubercles. Petiole well constricted, barrel-shaped. The petiole and three following tergites have a groove in the middle of the hind margin. The tergites are strongly constricted, with the tumid parts broad and flat and the anterior and posterior margins narrow.

The pygidial area is large and long, more attenuated anteriorly than posteriorly, apically truncate. The surface has a greasy lustre and is pubescent at the lateral margins, indistinctly and very sinuously rugose. The sternites are smooth and shining, hardly punctate on the tumid parts. The apical brushes are fine and long. Hind tibiae strongly serrate.

The species is nearly related to *C. rhodesiae* m.

Length: 14–16 mm.

Sculpture. ♂: The last joint of the antennae is about as long as the penultimate, short, a little curved and broadly truncate. The median area of the clypeus is oval and not separated from the side parts by sutures. It is convex above, with three equal dentiform tubercles at the anterior margin. The mesopleurae have a distinct tubercle, the petiole has a groove. The pygidial area is long and narrow, nearly parallel-sided and has large dispersed punctures at the surface. It is rectangularly truncate at the apex. The ultimate sternite has two sharp apical teeth, the penultimate on each side a stout tooth at the posterior angles; the epinotal area is as in the ♀ but smoother, and the sculpture less distinct.

Length: 14 mm.

Habitat: ♀: ORANGIA: Bloemfontein. TRANSVAAL: Lichtenburg.

♂: TRANSVAAL: Delarey. GRIQUALAND EAST: Lady Grey.

The types are in my collection.

Cerceris rhodesiae n.sp. ♀ and ♂. (Pl. XLIII, fig. 6.)

Coloration. ♀: Black; the following parts are yellow: the clypeus and face, frontal carina, orbits to about two-thirds of their height, mandibles excepting the apex, antennal scape, a small macula of the temples and the external margin of the eyes below, pronotum, a macula of the mesopleurae below the base of the wings, scapulae, the metanotum, two large lateral maculae of the scutellum, large oviform lateral maculae on the epinotum, which cover almost the whole of the sides, bands on the petiole and the three following tergites, attenuated towards the median line, but laterally broad, the fifth tergite and the last sternite laterally, the tumid parts of the median sternite and the under side of the legs including coxae and trochanters. The middle and hind femora have a black longitudinal line. The temples and occiput, the pygidial area, hind tibiae and tarsi, the last sternites and antennae are ferruginous. The latter are towards the apex darker above. Wings brownish with darker apex and radial cell. Veins and stigma brown, only the sub-costa black.

♂: The ♂ has much the same yellow pattern as the ♀, but less extensive. The occiput and temples are black, only the pygidial area, last sternite and the penultimate sternite in parts are ferruginous. The fasciae of the sternites are narrower; the black ground coloration is, therefore, more extensive than in the ♀. The coloration will doubtless be variable.

Sculpture. ♀: The inner orbits are moderately divergent towards the mandibular base. The median part of the clypeus is fused with its lateral parts. It has a large conical protuberance, and is not concave below it. The apex of the cone, moderately acute, lies over the centre of the clypeus. The

anterior margin of the clypeus is entire, broadly and shallowly arcuate, angular shortly before the base of the mandibles. Mandibles with a strong erect triangular tooth, placed at the side of the internal margin. The external margin is bluntly angular. Clypeus impunctate with silky pubescence. The face is sparsely and microscopically punctate and shagreened. The head is very densely but not very coarsely rugosely punctate. There is a smooth space at the side of the ocelli. Pronotum but little punctate, almost smooth. Mesonotum finely longitudinally rugose, almost impunctate, dull. Scutellum very finely rugose with very few shallow punctures in between. Metanotum smooth. Epinotum moderately densely and shallowly punctate, not rugose. The epinotal area is distinctly transversely rugose with a shallow median furrow. Petiole well constricted, very sparsely punctate, broadly barrel-shaped. Tumid parts of the tergites broad and flatly convex. They are very finely and densely punctate in front, more sparsely and coarsely so behind and laterally. The punctures are shallow. The penultimate tergite is distinctly punctate. The pygidial area is long and feebly barrel-shaped, apically truncate. The surface is dull, undulatingly rugose, the lateral fimbriae moderately strong. Sternites smooth, the tumid parts of 2-3 emarginate medially behind, sparsely punctate, 4-5 strongly hirsute, the hairs ferruginous. The apical brushes are long. Hind tibiae serrate.

Length: 13-17 mm.

♂: Inner orbits feebly divergent towards the mandibles. The median part of the clypeus is feebly convex, little lengthened in front, bluntly tridentate. The anterior margin of the lateral parts of the clypeus is rounded. Clypeus and face are sparsely and minutely punctate with a dull lustre. Mandibles internally without teeth, externally bluntly angular. The puncturation of the head and thorax is stronger than in the ♀, densely rugose on the head and epinotum, more longitudinally rugose on the mesonotum and scutellum, dull. Pronotum and metanotum smooth with a dull lustre. The mesopleurae are rugosely punctate without tubercles. The abdominal segments are more sharply constricted than in the ♀. Petiole and tergites sparsely and coarsely punctate laterally and apically. The pygidial area is anteriorly strongly attenuated, posteriorly parallel, straightly truncate. The surface of the same has a greasy lustre and is discretely, shallowly and largely but indistinctly punctate. The sternites are shining, including the tumid parts, the latter discretely and largely punctured, the sixth posteriorly flatly emarginate with the external angles swollen but not dentate. The legs are of the usual form. The last joint of the antennae is about one-third longer than the penultimate. The two last joints are arcuately emarginate on the inner side, the last apically attenuated, bluntly carinate. The wings are of the same colour as in the ♀.

Length: 13 mm.

Habitat: MASHONALAND: Salisbury. The ♀ was found in February, the ♂♂ in April and February by Dr G. A. R. Marshall. These types, a ♀ and two ♂♂, are in my collection.

Cerceris orangiae n.sp. ♀ and ♂.

Coloration. ♀: Black, with copious red and yellow markings. Clypeus and lower face with the frontal keel up to above the antennal insertion, a large part of the temples, pronotum, scapulae and two maculae of the mesopleurae, the tegulae, transverse fasciae of the scutellum and metanotum, a large macula on each side, occupying almost entirely the sides of the epinotum, and the tergites 3-5, yellow. Tergites 1 and 2 are ferruginous and so are the pygidial area and all the sternites. The middle of tergites 3-5 is ferruginous or blackish

anteriorly. This coloration invades the yellow colour in a broad triangular mark so that the yellow is emarginate in the middle. Antennae ferruginous, the apical joints darker, the scape yellow. Coxae, trochanters and legs yellow or yellowish red.

♂: The ♂ is not so richly coloured as the ♀. The colour of the clypeus and lower face is the same as in the ♀. The macula of the temples and the fascia of the scutellum laterally are punctiform. The maculae of the pleurae and of the epinotum are absent. The petiole and the following tergite are ferruginous, the latter with the middle black and a small lateral yellow spot at the posterior margin. Tergite 3 yellow, in the middle narrowly brown, 4 and 5 with broad yellow fasciae which are triangularly excised anteriorly in the middle. The emargination is black, the sixth tergite yellow. The pygidial area is ferruginous, basally black. The yellow fasciae of the tergites occupy only the tumid parts, the margins are black or brown. Sternites blackish, the tumid parts are bordered by ferruginous posteriorly. The antennae and legs are yellowish red as in the ♀, the anterior coxae black. The coloration is certainly very variable.

Sculpture. ♀: The median part of the clypeus is flatly convex, in front arcuately margined and apically with five indistinct denticles. On the disc of the median part are two small tubercles placed before the anterior margin similarly as in the palaearctic *C. komarovi* Rad. The head is broadest between the bases of the mandibles. Inner orbits are divergent towards the mandibles. Temples and occiput are thick. The clypeus and face are finely and sparsely punctate. The front, occiput and temples are rugose and dull. The ocellar area is smooth and impunctate. The pronotum is slightly punctate, the mesonotum sparsely so with a fine median line anteriorly reaching to the middle. The epinotal area has anteriorly distinct oblique and posteriorly transverse rugae. The petiole is thick, the tergites are evenly and sparsely punctate. The punctures decrease in density and size on the following tergites. The tumid portions of some are flat and broad. The petiole and the following two tergites have a distinct groove. The pygidial area is tongue-shaped, attenuated and rounded apically, dull, with shallow setigerous punctures, and undulating rugae in the middle. The lateral fimbriae are fine. The mesopleurae are strongly rugose. The epimera have a depressed thick protuberance and an oblique sharp edge. The tubercles of the mesopleurae are stout and distinct. The tumid sternites are broad, posteriorly feebly emarginate. Penultimate sternite excised. The wings are feebly infusate, the veins black, costa and stigma yellow.

Length: 16 mm.

♂: The median part of the clypeus is flatly convex, rounded anteriorly with a denticle in the middle of the apical margin. The lateral angles are not conspicuously sharp. Inner orbits nearly parallel. The sculpture of the body is the same as in the ♀. Epimerum with a similar protuberance as in the ♀. The tumid parts are narrower and thicker. The tergites are more strongly punctate than in the ♀. Mesopleurae without tubercles. The tumid portion of the sixth tergite is sharply emarginate posteriorly, the apex of the emargination and the external angles blunt. The sides of the pygidial area are almost parallel, the hind angles rounded. The disc has discrete and large punctures. Apical joint of the antennae truncate and as long as the penultimate. The under side of the last six antennal joints is keeled longitudinally. The wings are lighter than in the ♀; the apex and the margin are infusate.

Length: 14 mm.

Habitat: ORANGIA: Bloemfontein. TRANSVAAL: Johannesburg. CAPE PROVINCE: Lady Grey, ♂. The types are in my collection.

Var. Korana.

♀: This form, which agrees completely in sculpture with the type-form ♀, I consider to be a dark colour variety of the latter similar to *C. africana* and *karooensis*.

♀: Black; abdomen entirely ferruginous, the petiole included; in addition the following parts are ferruginous: anterior margin of the clypeus, the mandibles in part, a temporal macula which is yellow medially, the pronotum, scapulae, scutellum, metanotum and an indistinctly bordered macula laterally on the epinotum, antennae and legs, the latter including the coxae and trochanters. The scutellum and epinotum are sometimes entirely black. Everything else is as in the type-form including the yellow coloration of the clypeus and face.

Habitat: ORANGIA: Bloemfontein. Two ♀s in my collection.

Cerceris cratocephala Cam. *Sjöstedt's Kilimandjaro-Meru Expedition*, vol. VIII, 1910, p. 275.

Coloration. ♀ and ♂: Black; abdomen brightly yellow from the second segment onwards. The clypeus, lower face and a transverse macula on the upper temples are white. The latter is obliterated in one of my examples. Antennae and legs are black. Wings deeply fuscous with blue-violet reflections.

Sculpture. ♀: The median part of the clypeus is as in the form *deceptrix*, transformed into a long conical protuberance, longer than in *deceptrix*, the apex horizontal, not so sharp anteriorly but somewhat rounded, carinate at the base below. Mandibles spotted with white, bluntly angled externally, the inner margin before the middle with a swollen, thick, blunt and dentiform protuberance and behind at the base obtusely shallowly emarginate. The anterior margin of the clypeus is arcuate to near to the base of the mandibles, medially transversely truncate. The nasiform protuberance is smooth, very finely punctured, with the apex black. Clypeus white, the anterior margin black. The lateral parts of the clypeus are smooth, very finely and densely punctate. The white coloration of the lower face forms a triangle before the antennal insertions but does not extend laterally to the altitude of the same. It is sharply and transversely limited above in both sexes. The lower face is sparsely punctate, but stronger than the clypeus. The front, occiput and temples are strongly rugulose, the latter stoutly developed. A fine frontal keel reaches almost to the anterior ocellus. Head strongly transverse, the inner orbits very divergent towards the mandibular base and, therefore, very broad between the latter. The pronotum is finely and indistinctly punctate. The mesonotum is finely strigose longitudinally, with a fine puncturation in between, mainly at the sides. The scutellum is also longitudinally strigose, the metanotum mostly smooth, very finely and sparsely punctate. Mesopleurae strongly developed, very rugose, the tubercles distinct and pointed. The epinotal area is smooth and shining with an impressed, fine median line and with fine sinuous transverse rugae over the disc. The rugae are concave below and arranged in an arc. The epinotum is laterally coarsely rugose but finely and transversely so posteriorly and at the declivity. The tergites are sparsely and moderately punctate laterally, medially more or less smooth. The petiole is broad, furnished with a distinct median groove before the posterior margin, like the second to fourth tergites. The pygidial area is highly trapeziform, the apical margin arcuate, not emarginate. The lateral fimbriae are feeble. The surface is dull and densely granulate. First sternite with a large, dark blot, 2-4 with transverse lines, the anterior half of the segment smooth, the posterior very finely and discretely punctate, pilose. The last sternite is

emarginate. The apical brushes are long and fine. The hind tibiae are exteriorly strongly serrate, below with a longitudinal edge, a little arched at the base. The complex of the abdomen is as in *C. pictiventris* ♀, with broad but flat tumid parts. Wings totally and deeply infuscated, with a blue-violet lustre above.

Length: 17 mm.

Habitat: GAZALAND: Mount Chirinda. In my collection, found by Dr G. A. K. Marshall. ZULULAND: British Museum. In this specimen the abdomen is yellowish red and the transverse ribs of the epinotal area are very much obliterated. The area is very shining. NATAL: Durban; abdominal segments red; two ♀s in the Durban Museum. ABYSSINIA: Harrar; collected by R. E. Turner; in the British Museum.

♂: The median part of the clypeus is convex, depressed above, shaped as in *C. pictiventris*. The anterior margin is entire, black. The fimbriae are dense and golden. The puncturation of the clypeus and face is shallow, sparse but distinct and fairly strong. The puncturation is otherwise the same as in the ♀, but stronger and distinct on the tergites. Tubercles are hardly indicated on the mesopleurae. Penultimate sternite posteriorly strongly arcuately emarginate. The external posterior angles are dentiform. The posterior surface is semicircularly impressed. The last sternite is emarginate, the hair-pencils are feeble. The pygidial area is elongate rectangular, shining with dispersed coarse punctures. The transverse rugae of the epinotal area are much more pronounced than in the ♀. The abdominal complex is more strongly constricted than in the ♀. The last joint of the antennae is almost longer than the penultimate, arcuate and distinctly truncate. The mandibles have on the inner margin a sharp triangular tooth; outwardly they are bluntly angular. The coloration of the wings is the same as in the ♀.

Length: 14 mm.

Habitat: 1 ♂. GAZALAND: Monte Chirinda, Dr G. A. K. Marshall. In my collection.

1 ♂. NATAL: the abdomen of this specimen is red.

1 ♂. GAZALAND: British Museum; abdomen yellowish red.

Var. deceptrix n.v. ♀.

I have a ♀ in my collection which Dr G. A. K. Marshall collected at Salisbury, Mashonaland, which I take to be a variety of Cameron's species until more material and also the ♂ can be examined. As the length and shape of the nasiform protuberance of the clypeus and the sculpture of the epinotal area varies in other African species of this group, it would hardly be justified to found a new species on a single specimen. It differs from the typical form as follows. Only the nasiform protuberance is white. Otherwise head and face are black. The protuberance is smaller than in *C. cratocephala*; the apex is not horizontal but pointed downwards. The middle line of the epinotal area is shallowly impressed and has the rugae feebly arcuate transversely across the area. These rugae are sharp, smooth and regular, about eight in number, much coarser than in the typical form, forming carinae. Tergites very finely and indistinctly punctate. The petiole has a thin depressed median line in place of the groove. The latter is strongly evident in *cratocephala*. The pygidial area is dull, very sparsely and finely punctate.

Habitat: MASHONALAND: Salisbury. One ♀ in my collection.

I do not know the original description of the species, but the identity is certain, as Mr Turner compared it with the species in the British Museum. According to the description the species must be nearly related to *C. iniqua* Kohl and *C. monoceros* Kohl.

One can regard as an extreme melanic form of the species grouped round *C. cratocephala* the following, which I name only because the ♂ is not yet known.

Forma C. libitina n.v. ♀.

Coloration. ♀: Black, shining and bare. The upper half of the clypeus and the lower face near to it, the lower part of the frontal keel and a transverse macula on the temples in the upper third are white. The white colour does not reach to the insertion of the antennae. A lateral dot on the second and third tergites is yellowish white. A diffuse spot on the external side of the mandibles is yellowish. The margins of the tergites are ferruginous, the whole under side of the abdomen yellowish brown. Legs, antennae and wings are deep black. In some ♀♀, which are in the Durban Museum, the ferruginous colour of the tergites is so extensive that the black is nearly replaced by ferruginous.

Length: 18 mm.

Sculpture. ♀: The head is large and broad, particularly between the bases of the mandibles in consequence of the great divergence, inferiorly, of the inner orbits. The median part of the clypeus below protrudes as a conical nasiform protuberance, the apex of which is sharply pointed and black. Below this protuberance the clypeus is black. From the base of one mandible to the other the anterior margin is shallowly emarginate without any lateral teeth, such as are present in *C. rhodesiae* and *oramiensis*. The median part of the anterior margin is not correct as in the two mentioned species. Mandibles strong and pointed, with a stout dentiform tubercle in the middle of the inner margin. Externally they are more feebly angulated than in the related species. Clypeus and lower face with white, silky pubescence laterally, smooth, and only very distantly and finely punctured. The median part of the clypeus is short, much broader than long. The lateral parts of the clypeus are short and broad, much shorter than broad. The puncturation of the head, scutellum and epinotum is fairly evenly coarse, distinct and dense. The temples are thick, nearly of the thickness of the largest transverse diameter of the eyes. Head dull. Pronotum more shallowly and indistinctly punctate than the mesonotum. The mesonotum is distinctly longitudinally rugose, anteriorly in the middle with three fine parallel raised keels, which are close to one another and reach to about one-third of the median line. Metanotum smooth. Epinotal area large, sharply defined, smooth with a fine, shallow median line. The lateral area is obliquely, the median transversely rugose. The area stands out sharply on the epinotum. Mesopleurae thick, coarsely granulose, dull, with a distinct tubercle on each side. Petiole thick, barrel-shaped. The tergites are smooth and shining with a dispersed even and moderately strong puncturation. The petiole and the following tergites have each a groove. Pygidial area large, tongue-shaped and rounded, widest anteriorly, the disc superficially and finely sinuously rugose, dull.

Sternites with narrow, well-developed tumid parts. The apical bristles are long. The sternites are posteriorly distinctly hirsute. Hind tibiae sharply serrate. Wings with a violet lustre, black veins and stigma.

Habitat: NATAL: Congella. In October. DURBAN: two ♀♀ with brown tergites, except the petiole, are in the Durban Museum. The type, a ♀, is in my collection.

Cerceris rostrifera n.sp. ♀.

Coloration. ♀: Black, with the following parts yellow: the mandibles, clypeus, frontal carina, inner orbits up to the insertion of the antennae, a narrow band of even width at the posterior margin of the petiole, hardly

interrupted in the middle, a narrow band on the second tergite, in the same position as on the first but broadly interrupted in the middle, a band at the posterior margin of the third tergite, hardly interrupted medially, but broadened laterally. The antennae are ferruginous with the upper side of the three apical joints black. All the legs, the black coxae excepted, the posterior margin of the petiole, the lateral part of the fascia on the fourth and fifth tergites, which is broadened laterally, are ferruginous. Of the same colour are the lateral parts of the last tergite and the posterior halves of the sternites from the second onwards. The coloration will prove to be variable.

Sculpture. ♀: The median part of the clypeus is shallowly concave anteriorly. Near the upper margin, below the frontal keel, there is in the middle a large nasiform conical protuberance. The apex of it is blunt and brownish. The anterior margin is medially broadly truncate with feeble lateral angles, the sides towards the mandibular base are sinuate. The mandibles have on the inner margin a distinct tooth in the last third before the apex. Externally they are straight and not angulated. Clypeus laterally with silky pubescence, medially smooth, hardly punctate. The face is microscopically finely rugose, also fairly strongly sparsely but evenly punctate.

The inner orbits are distinctly divergent towards the mandibular base. Frons, occiput and temples are densely rugose, occiput and temples largely developed and dull. Pronotum finely and sparsely punctate. The mesonotum is strongly and more coarsely punctate with an inclination to become longitudinally rugose. The scutellum is somewhat shining, sparsely punctate, the punctures large. The metanotum is smooth in the middle. Mesopleurae tumid, dull, strongly and coarsely rugose with distinct tubercles. Epinotal area anteriorly and laterally with coarse oblique rugae, posteriorly and medially with transverse rugae. The rugae are so coarse that a median one is hardly apparent. The epinotum is densely rugose and dull. Petiole broad, shaped as in *C. pictiventris*, with a median groove. The two following tergites have each a groove. All the tergites are strongly and densely punctate. The pygidial area is long, rounded and attenuated behind, microscopically coriaceous and dull. The lateral fimbriae are dense and short. Sternites smooth, nitidulous, with a fine microscopical sculpture. The tumid portions of the second, third, fourth and fifth sternites are medially impressed posteriorly. Last sternite emarginate, the apical bristles feeble. The squamulae are ferruginous, the wings yellowish brown. The veins are black, radius and stigma yellowish. Hind tibiae strongly serrated.

Length: 16 mm.

This species is easily recognizable by the position of the clypeal cone.

Habitat: CAPE COLONY: Sunday River, in December. The type, a ♀, is in my collection.

Cerceris spinicaudata Cam. (Pl. XLI, fig. 3.) *Trans. South African Philos.*

Soc. vol. xv, part 4, 1905, p. 216. ♀.

Synonym: *Cerceris whiteana* Cam., *ibidem*, p. 225. ♀.

I have seen a ♀ of *C. whiteana* in the collection of the Albany Museum at Grahamstown, Cape Province. This specimen is marked by Cameron himself by a "type" label. I have also examined a ♀ of *C. spinicaudata* in the collections of the Transvaal Museum at Pretoria. This specimen is also marked as "type" by Cameron himself. Both specimens belong to one and the same species.

The description of *C. spinicaudata* stands a few pages before that of *C. whiteana*. The former has, therefore, precedence.

Literature: H. Brauns, "Notes on synonymy of Hymenoptera in the collection of the Transvaal Museum," *Ann. Trans. Mus.* vol. v, 1917, No. 4.

Coloration. ♀: Black; the clypeus and the face contiguously up to the

level of the antennal insertion, the frontal carina only apically, two-thirds of the mandibles, the tegulae externally, postscutellum, a large transverse oval mark on the second tergite at the anterior margin, a band on the hind margin of the third tergite, widened laterally and forming a large macula which occupies the sides of the tergite and leaves only a black macula in the middle of the anterior margin, are white. Of the same colour are a narrow posterior margin of the fourth tergite and a somewhat broader apical fascia of the fifth tergite, the tumid portion of the third sternite and the upper side of all the tibiae. These white markings are subjected to variability. The mark on the second tergite may be reduced to two spots. The metanotal fascia may be interrupted narrowly in the middle. The fasciae on the fourth and fifth tergites may become narrow lines or be reduced to a small spot in the middle of the fifth tergite. Only the hind margin of the petiole and sometimes the apical half of the second sternite and the legs including coxae and trochanters are ferruginous. The antennae are piceous, the under side is lighter, the scape white in front. Wings hyaline, little infusate at the margin and apex, with the veins and stigma black.

The ♂ is here described for the first time.

♂: The colour of the face and clypeus are the same as in the ♀. The extreme apical median clypeus is lined with black. The extension of the white colour otherwise is the following: the basal two-thirds of the mandibles, the transverse mark on the second tergite as in the ♀, fasciae at the apical margins of the third, fifth and sixth tergites, some variable fasciae on the sternites, the lower surfaces of tibiae and tarsi. The fascia of the third tergite is broadened laterally. The antennae are yellowish white in front and on the scape.

Wings are as in the ♀.

Length: ♂, 6-7 mm.; ♀, 8 mm.

Sculpture. ♀: The orbits are very little divergent towards the base of the mandibles. The median part of the clypeus is flat, transversely truncate in front, the extreme margins black and polished, slightly trapeziform and porrect, but in no way freely protruding. The mandibles are simple exteriorly and internally. The lateral angles of the pronotum are not conspicuously prominent as in *holconota* Cam. The epinotal area is comparatively large, smooth and polished, without sculpture of any kind excepting an impressed median longitudinal line. Face and clypeus are sparsely, irregularly and shallowly punctate, vertex, head and temples rugosely, epinotum and tergites largely and scatteredly punctured, more or less dull. The zone around the epinotal area is smoother and more sparsely punctate than the rest of the epinotum but not showing the shining zone of *C. nobilitata*. The pygidial area is very regularly oval, margined on the sides, coriaceous above, thinly fimbriated. The sternites are polished in the middle; the second sternite has a round polished and raised plate at the base. The petiole is a bit longer than broad, feebly rounded laterally. No tubercles are present on the mesopleurae.

♂: The sculpture of the ♂ is in all parts the same as in the ♀, only coarser and, therefore, more dull. The pygidial area is small and rectangular. The raised plate on the base of the second sternite is present. The extent of the whitish colour is undoubtedly variable.

The ♂ of the very similar *C. holconota* Cam. can easily be separated by the prominent pronotal tubercles and the distinct and large basal tooth on the inner margin of the mandibles. In the ♀ the main distinctive character would be the prominence of the pronotal angles in *holconota* Cam. and the absence of the plate of the second sternite of the same species. This species has a very wide range from the Cape Colony through Orangia, Transvaal to Southern Rhodesia and Portuguese East Africa. It is not rare throughout this territory. I found it carrying *Halictus* sp. for larval food.

PLATES XL TO XLIV

NOTE. In these plates the figures of the clypei have been drawn with the head set at a fixed angle, *i.e.* in such a position that the anterior ocellus is just visible; similarly in the drawings of the pygidia, the line of sight is perpendicular to the plane of the middle of the pygidium.

PLATE XL

- Fig. 1. *Cerceris pictiventris*, ♀, × 9.
Fig. 2. *C. diodonta*, ♀, × 9.
Fig. 3. *C. africana*, ♀, × 9.
Fig. 4. *C. cratocephala*, ♀, × 9.
Fig. 5. *C. fongosi*, ♀, × 9.
Fig. 6. *C. armaticeps*, ♀, × 9.
Fig. 7. *C. latifrons*, ♀, × 9.
Fig. 8. *C. nigrifrons*, ♀, × 9.
Fig. 9. *C. multipicta*, ♀, × 9.
Fig. 10. *C. morosula*, ♀, × 9.
Fig. 11. *C. gomphocarpi*, ♀, × 9.
Fig. 12. *C. Kobrowi*, ♀, × 9.
Fig. 13. *C. pearstonensis*, ♀, × 16.
Fig. 14. *C. reginula*, ♀, × 16.
Fig. 15. *C. languida*, ♀, × 16.
Fig. 16. *C. diodonta*, ♀, × 9, lateral view.
Fig. 17. *C. cratocephala*, ♀, × 9, lateral view.
Fig. 18. *C. pictiventris*, ♀, × 9, lateral view.
Fig. 19. *C. ruficauda*, ♀, × 16.
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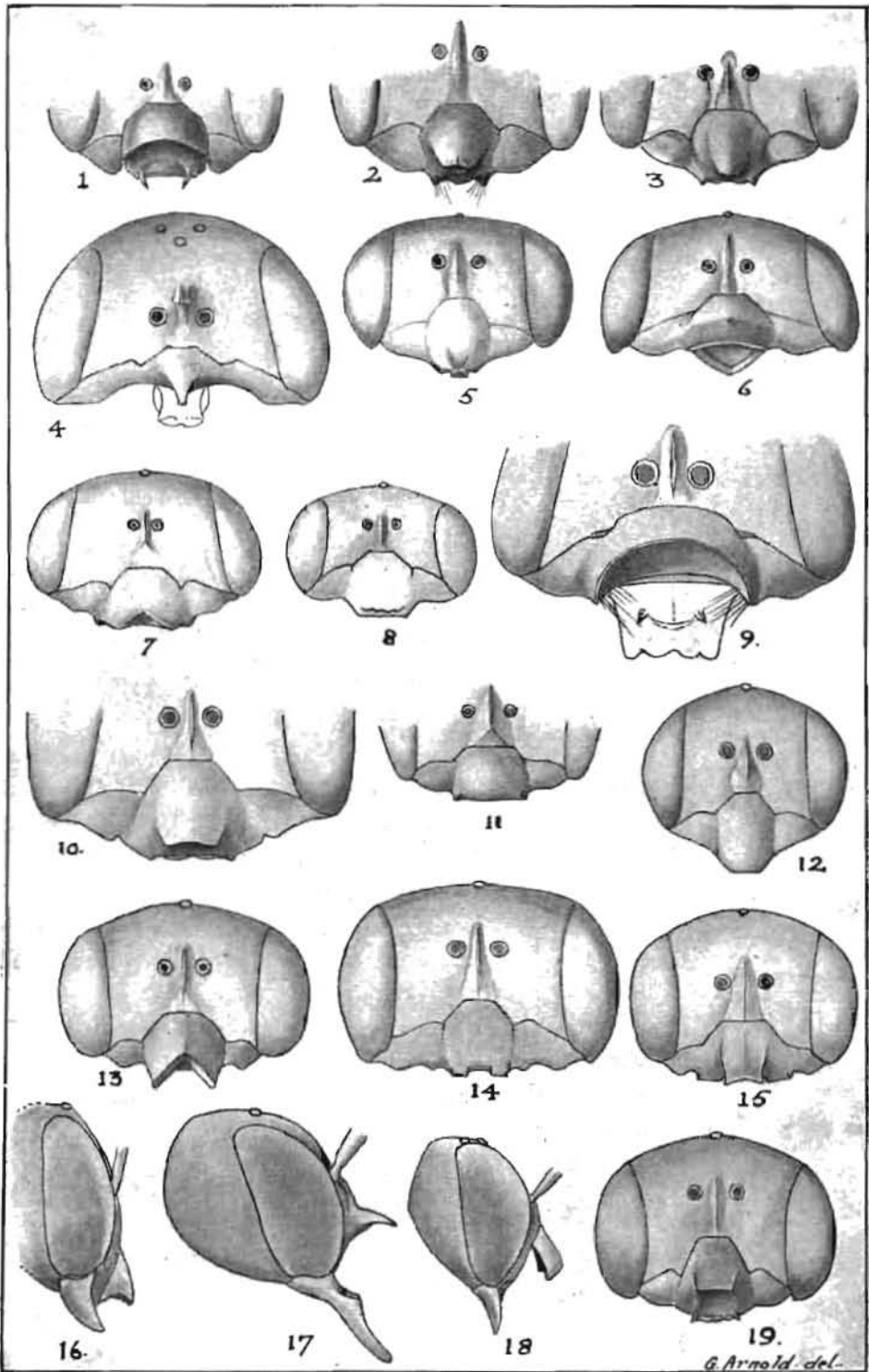
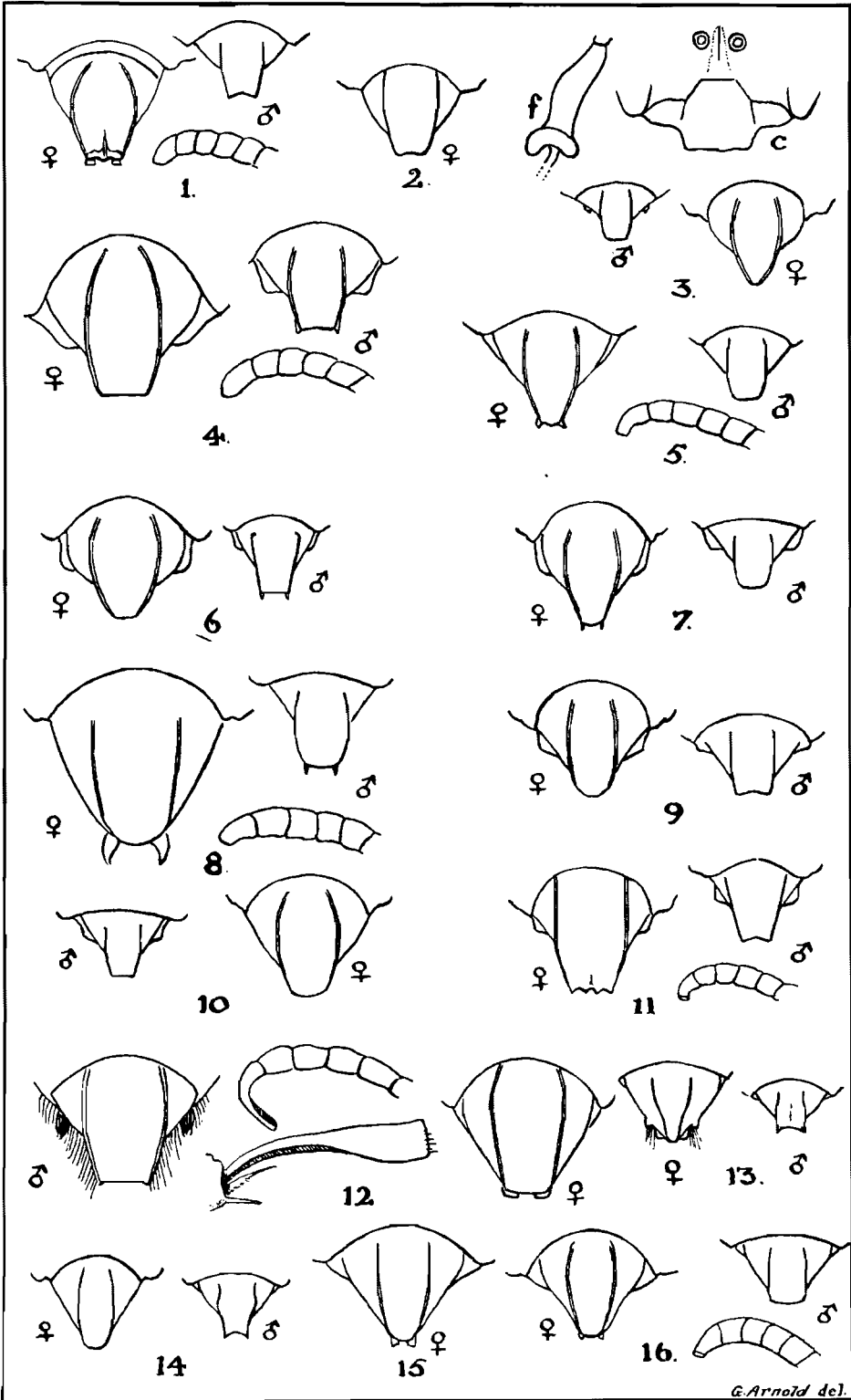


PLATE XLI

Pygidia of ♀ and ♂, and apical joints of the flagellum of the ♂

- Fig. 1. *Cerceris pearstonensis*, × 16.
Fig. 2. *C. languida*, × 16.
Fig. 3. *C. spinicaudata*, × 16; *f* = posterior femur of ♀, viewed obliquely from the apex; *c* = clypeus, ♀.
Fig. 4. *C. latifrons*, × 16.
Fig. 5. *C. gomphocarpi*, × 16.
Fig. 6. *C. holconota*, × 16.
Fig. 7. *C. nobilitata*, × 16.
Fig. 8. *C. Kobrowi*, × 16.
Fig. 9. *C. ruficauda*, × 16.
Fig. 10. *C. reginula*, × 16.
Fig. 11. *C. varilineata* var. *matabele*, × 16.
Fig. 12. *C. transvaalicola*, pygidium of ♀, × 9; pygidium, apical joints of flagellum and outer face of anterior metatarsus of ♂, × 16.
Fig. 13. *C. Schoutedeni*, × 9.
Fig. 14. *C. makalolo*, × 16.
Fig. 15. *C. dominicana*, × 16.
Fig. 16. *C. lichtenbergensis*, × 16.



G. Arnold del.

PLATE XLII

Pygidia of ♀ and ♂, and apical joints of the flagellum of the ♂

- Fig. 1. *Cerceris diodonta*, × 16.
Fig. 2. *C. armaticeps*, × 16.
Fig. 3. *C. nigrifrons*, × 16.
Fig. 4. *C. varicineta*, × 16.
Fig. 5. *C. fongosi*, × 16.
Fig. 6. *C. pictiventris*, × 16.
Fig. 7. *C. africana*, × 16; *mt* = inner face of right hind metatarsus of ♂.
Fig. 8. *C. cratocephala*, × 16.
Fig. 9. *C. morosula*, × 9; *mt* = outer face of left hind metatarsus of ♂.
Fig. 10. *C. multipicta*, × 9; *ma* = mandible of ♀; *f* = hind femur of ♂.

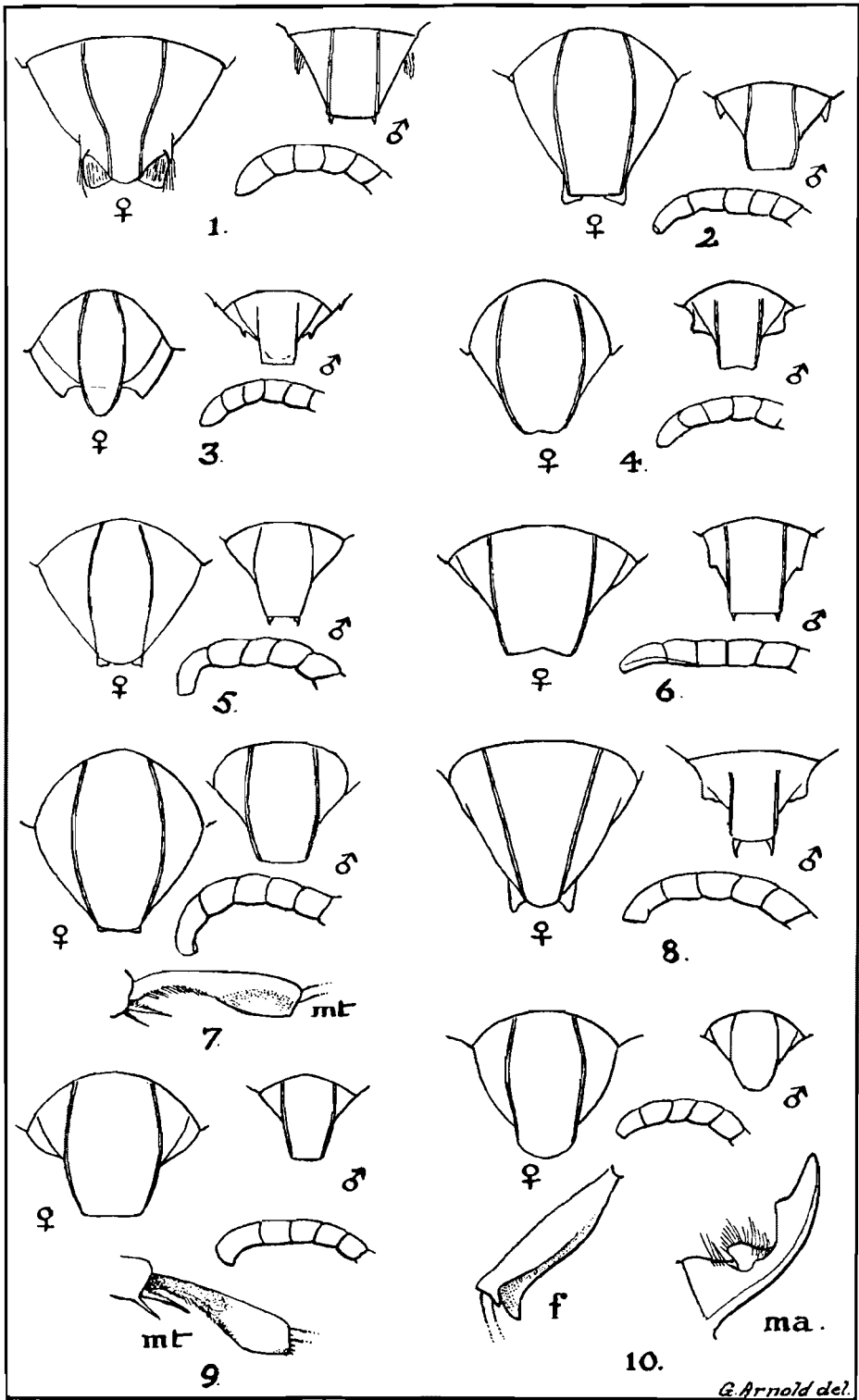
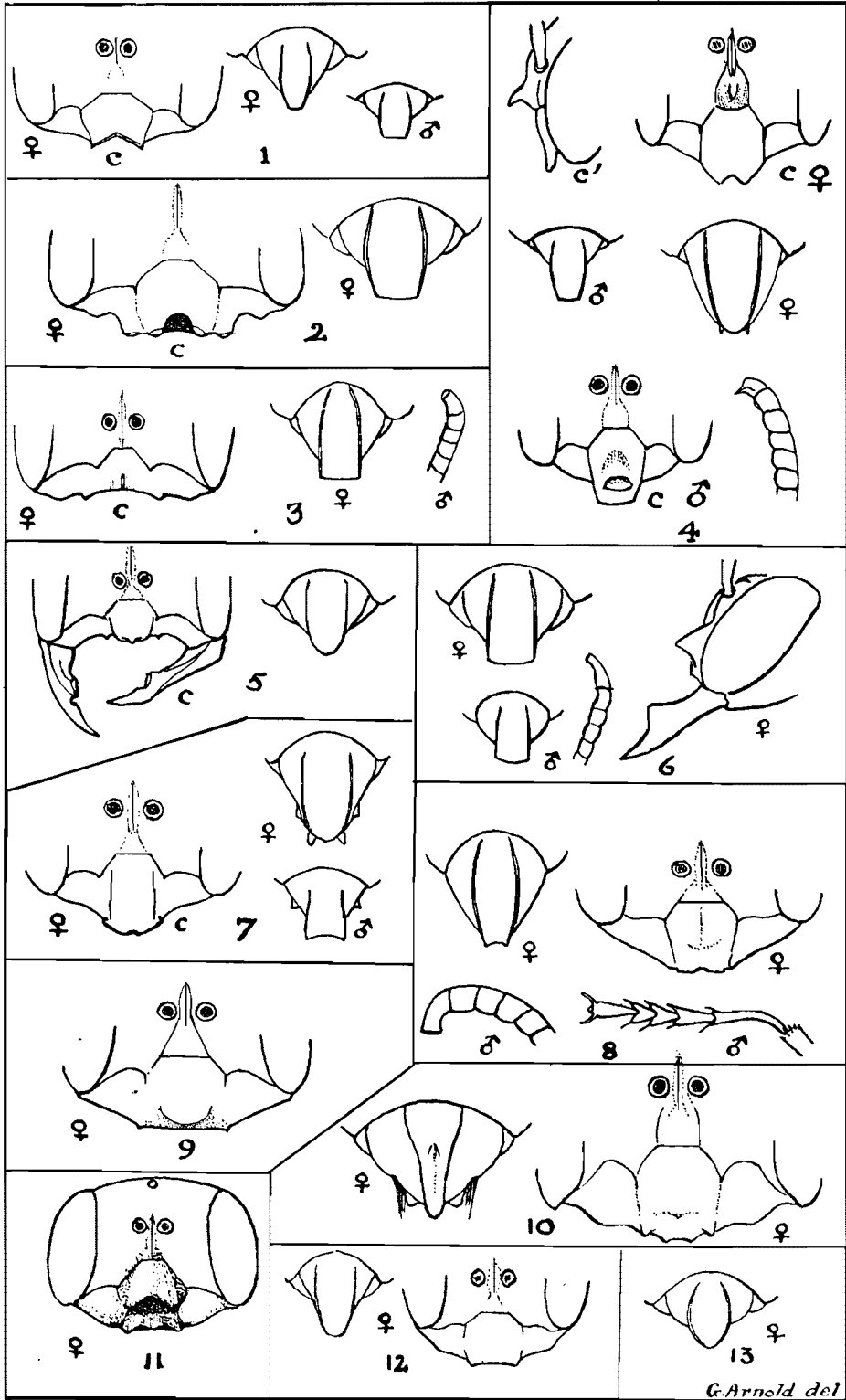


PLATE XLIII

Pygidia of ♀ and ♂, apical joints of the flagellum of the ♂, and clypei (*c*)

- Fig. 1. *Cerceris amakosa*, × 16.
- Fig. 2. *C. fingo*, ♀, × 16.
- Fig. 3. *C. oraniensis*, × 9.
- Fig. 4. *C. eburneofasciata*, × 9.
- Fig. 5. *C. bothavillensis*, ♀, × 9.
- Fig. 6. *C. rhodesiae*, × 9.
- Fig. 7. *C. xosa*, × 16.
- Fig. 8. *C. curvitaris*, pygidia, ♀ and ♂, × 9; flagellum of ♂, × 16; middle tarsus of ♂, × 9.
- Fig. 9. *C. transvaalicola*, ♀, × 9.
- Fig. 10. *C. Bequaerti*, ♀, × 9.
- Fig. 11. *C. Schoutedeni*, ♀, × 9.
- Fig. 12. *C. jackal*, ♀, × 9.
- Fig. 13. *C. pictifacies*, ♀, × 9.

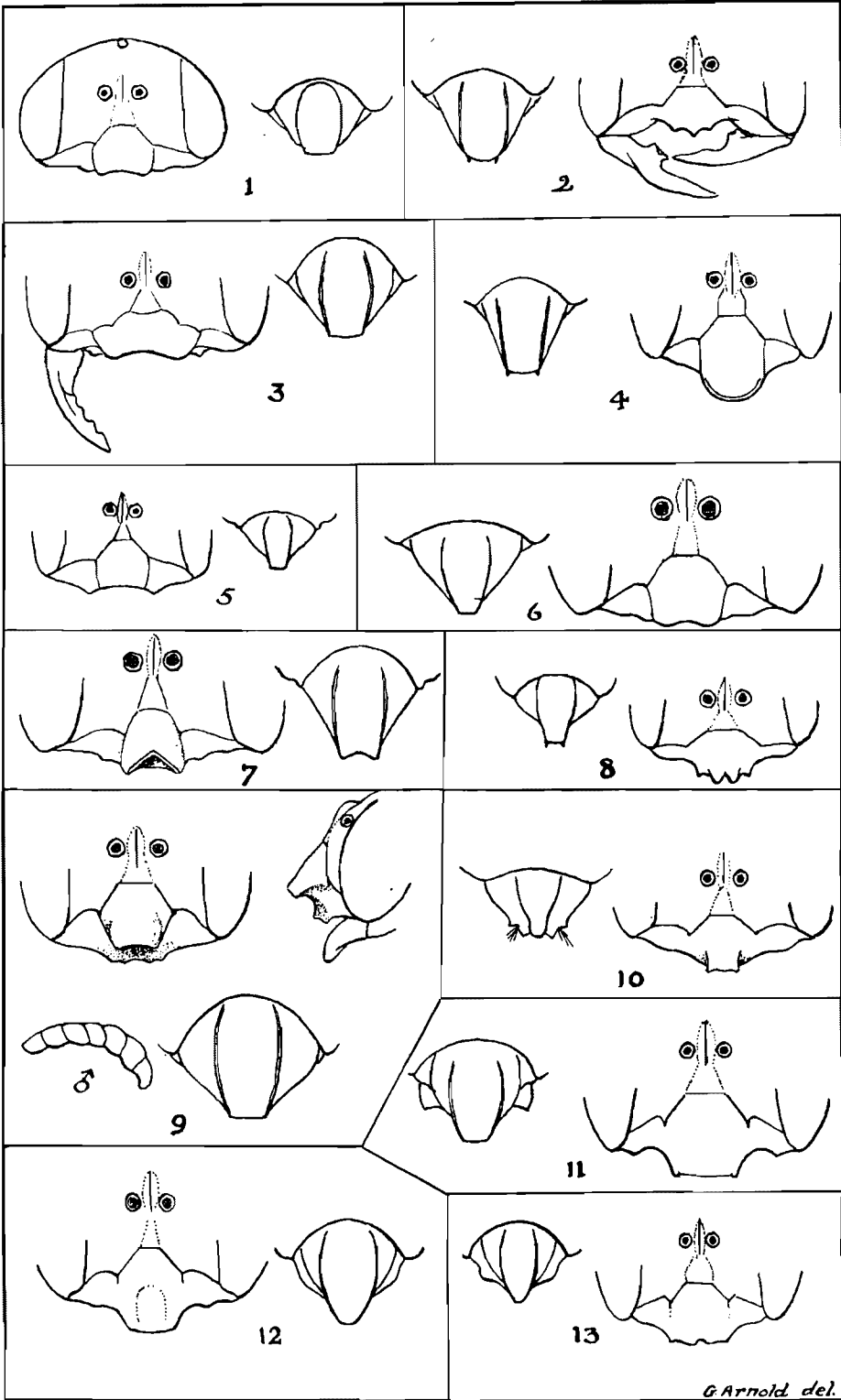


G. Arnold del

PLATE XLIV

Pygidium and clypeus of ♀s only

- Fig. 1. *Cerceris makalanga*, × 9.
Fig. 2. *C. charimorpha*, × 9.
Fig. 3. *C. Arnoldi*, × 9.
Fig. 4. *C. dondoensis*, × 9.
Fig. 5. *C. Stevensoni*, × 9.
Fig. 6. *C. mazimba*, × 16.
Fig. 7. *C. pearstonensis*, race *bantu*, × 16.
Fig. 8. *C. Barnardi*, × 9.
Fig. 9. *C. bulawayoensis*, × 9; with apical joints of the flagellum of ♂.
Fig. 10. *C. Severini*, × 9.
Fig. 11. *C. hypocritica*, × 16.
Fig. 12. *C. discrepans*, × 16.
Fig. 13. *C. holconotula*, × 9.



G. Arnold del.