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**Aculeate Hymenoptera from the Drakensberg
Mountains, Natal**

By

G. Arnold

(With 8 Text-figures)



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Aculeate Hymenoptera from the Drakensberg Mountains, Natal.

By

G. Arnold,

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With 8 Text-figures.

MR. B. R. STUCKENBERG of the Natal Museum has kindly sent me for determination a collection of Hymenoptera which he and Mrs. P. J. Stuckenberg made in the Cathedral Peak Forestry Reserve in the Drakensberg Mts. in March 1959. It comprises 34 species of which a surprisingly large number, 6, are new. I have little doubt that intensive collecting during other months of the year, particularly in the summer, would reveal some more new species.

In the following descriptions, the least magnification required to resolve the sculpture, using a stereoscopic binocular microscope, is shown in brackets (. . . diameters).

To avoid unnecessary repetition in the following pages the collecting stations are indicated only by the initial words given in the following list.

Little Berg Summits, *Themeda* Grasslands, 5,500–6,000 ft.

Indumeni River, 6,300 ft.

Fire Lookout, Cathedral Peak, 7,500–7,700 ft.

Headwaters Indumeni River, 8,500–9,200 ft.

Organ Pipes Pass, *Erica* consociates, 9,600 ft.

FORMICIDÆ.

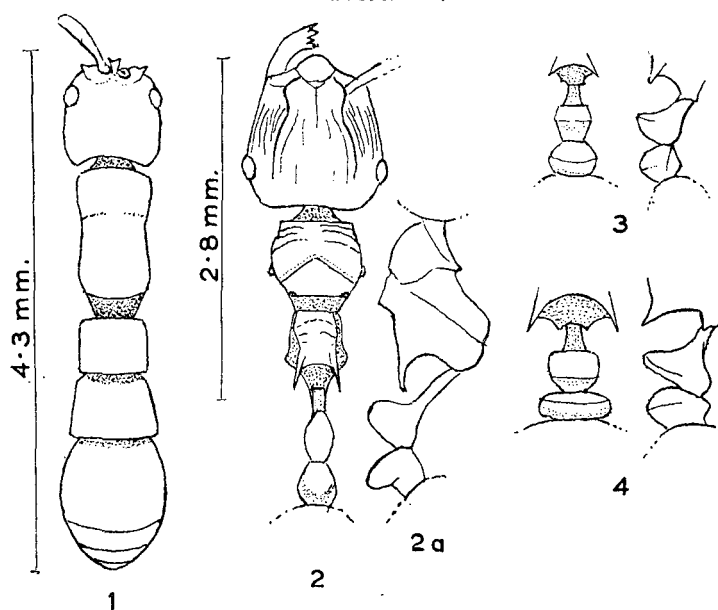
Subfamily CERAPACHYINÆ.

Cerapachys validus n. sp. Text-fig. 1.

♀ 4.3 mm. long. Black. Antennæ, mandibles and legs castaneous or reddish-brown. Whole body moderately shining and covered with a sparse, long, yellow and decumbent pubescence, very fine and short on the legs and antennæ. Head closely and finely punctured (16 diameters) over the anterior part, more sparsely behind the level of the eyes and very sparsely at the sides below the eyes. Scapes and mandibles closely and finely punctured. Thorax sparsely punctured, the interspaces for the greater part three times wider than the punctures. Petiole with a large and shallow puncturation, the punctures wider than the interspaces; postpetiole with similar punctures but sparse and with the interspaces puncturate. The rest of the abdomen with a fine punctura-

tion, the interspaces about three times wider than the punctures. Head about as wide as long, including the clypeus, the sides feebly convex, the occiput slightly concave and marginate below. Median area of the clypeus concave and very narrow, its lateral margins raised into lamelliiform carinae. Eyes large and with many facets, placed a little in front of the middle of the sides and in front of them the anterior angles of the head are raised into a high carina adjoining the antennal sockets on the inside and sharply bent on the outside, thence curved inwards. All the joint of the flagellum excepting the apical, wider than long; the apical joint is nearly two and a half times longer than

TEXT-FIGS. 1-4.



1. *Cerapachys validus* ♀. 2, 2a. *Myrmicaria anomala* ♀.
3. *Tetramorium squaminode*, ♀ petiole. 4. *Tetramorium do* ♀, petiole.

wide, as long as the first eight joints united, and acute at the apex. Thorax moderately convex lengthwise and transversely, slightly narrowed over the middle third, four-fifths longer than wide in front. The pronotum in front and the epinotal dorsum behind are distinctly marginate. The pro-mesonotal suture is faintly indicated. Petiole as wide behind as in front, nearly one-third wider than long, the lateral margins feebly convex. Postpetiole as wide in front as the petiole, and one-third wider behind than in front. Second abdominal segment one-fourth wider than the postpetiole and one-fourth wider than long.

Little Berg Summits, 1 ♀.

As large as *C. cribrinodis* Emery from which it differs considerably in sculpture and colour, and in the shape of the petiole. More closely related to *C. sylvicolus* Arnold but larger, less coarsely punctured and with a wider head.

Type in the National Museum, S. Rhodesia.

Subfamily PONERINÆ.

Euponera (*Trachymesopus*) *wroughtoni* Forel, var. *crudelis* Forel.

Little Berg Summits, 2 ♀, 6 ♂ and ♀♀.

Plectroctena mandibularis Smith, 5 ♀, Little Berg Summits, a dwarfed montane form.

Ponera spei Forel, 1 ♀, Little Berg Summits.

Leptogenys (*Lobopelta*) *nitida* Smith, ♀♀, Little Berg Summits.

Subfamily MYRMICINÆ.

Myrmicaria anomala n. sp. Text-figs. 2, 2a.

♀ 5.2 mm. long. Brownish-black, the antennæ and legs reddish-brown, the tarsi paler. A sparse whitish pilosity on the mandibles, clypeus, epinotum and abdomen. The whole body shining. Mandibles striated, quadridentate. Median area of the clypeus about one-fourth longer than wide, with a strong median carina and two thinner carinæ on each side. Frontal carinæ divergent caudad, reaching back to about the level of the eyes. Below them the sides of the head are strongly and longitudinally rugose, and between them the top of the head has about eight fine rugæ which do not extend over the posterior third of the head. Pronotum with two or three thin, curved and transverse rugæ in front; the pro-mesonotal suture is indicated by a slight depression behind which there is a raised angular line on the mesonotum with the apex of the angle cephalad. The anterior ventral corner of the sides of the pronotum are produced into blunt teeth, which are shorter than in *M. basutorum* Arnold and less visible from above. The mesonotum is narrowed caudad, wider than long, and its posterior third is smooth and subvertical. Meso- and metapleura and sides of the epinotum with a sparse, fine and longitudinal rugosity. Dorsum of the epinotum nearly twice as long as wide, concave, with a few short rugæ in front, the posterior corners produced into acute spines which are shorter than the space between their bases. First node of the petiole shorter than its peduncle, convex lengthwise; the posterior node a little wider than the first. Head a little longer than wide (not including the closed mandibles), the eyes placed well behind the middle of the sides. Second joint of the flagellum slightly longer than the first or third.

Indumeni River Headwaters, 8,500–9,200 ft. Type in the National Museum, S. Rhodesia. This is the highest altitude at which a species of the genus has been recorded. It is not a subspecies or variety of *M. basutorum*,

and can be distinguished from all the other species by the transverse rugosity on the thorax.

Myrmicaria basutorum Arnold.

Little Berg Summits, 1 ♀.

Messor barbarus subsp. *capensis* Mayr, 1 ♀.

Little Berg Summits.

Solenopsis punctaticeps Mayr.

Cathedral Peak, ♀ ♀.

Pheidole foreli Mayr.

Little Berg Summits, 2♂ 2♀, ♀ ♀.

Tetramorium squaminode Santschi.

Organ Pipes Pass, ♀, ♀ ♀.

These specimens agree fully with Santschi's description and text-figure, except that they are a little smaller, 2.8 mm. Santschi's specimens were collected on Mt. Kilimanjaro at a height of 3,800 m., or about 12,430 ft. Forel described a subspecies *do*, specimens taken in the Bulawayo district, 4,500 ft. It is now evident to me that *do* must rank as a distinct species, to which should be attached the varieties *flaviceps* Arnold and *mut* Arnold. Apart from the improbability of an alpine species like *squaminode* having a subspecies at a much lower altitude, not only the sculpture, but also the shape of the petiole are very different in *T. do* as is shown in text-figures 3 and 4.

Crematogaster monticola Arnold.

Fire Lookout, ♀ ♀. The description of this species was based on material which had been bleached by long immersion in alcohol. The colour in fresh specimens is black.

Subfamily FORMICINÆ.

Plagiolepis montivaga Arnold.

Little Berg Summits, ♀ ♀.

Camponotus cleobulus Santschi, ♀ ♀, Organ Pipes Pass.

Camponotus thraso Forel subsp. *montinanus* Santschi.

Little Berg Summits, 2♂, ♀ ♀.

Camponotus niveosetosus Mayr subsp. *irredux* Forel.

Organ Pipes Pass, ♀ ♀.

Family SPHECIDÆ.

Subfamily Pisoniinae.

Pison montanus Cameron.

Indumeni River, 1 ♂.

Subfamily PHILANTHINÆ.

Philanthus promontorii Arnold.

Cathedral Peak, 1 ♀, 4 ♂♂.

Philanthus histrio F.

Little Berg Summits, 3 ♂♂.

Subfamily CERCERINÆ.

Cerceris mutabilis Arnold.

Little Berg Summits, 4 ♀, 3 ♂.

Subfamily AMPULICINÆ.

Ampulex nigrocærulea Saussure.

Little Berg Summits, 2 ♂. Smaller than specimens from lower altitudes ; possibly a variety.

Subfamily SPHECINÆ.

Ammophila (Podalonia) tydei Guill. var. *capensis* Lep. 1 ♀.

Little Berg Summits.

Ammophila insignis Smith, subsp. *litoralis* Arnold, var. *nigricollis* var. nov.

This differs from the race in having the antennæ, clypeus and pronotum entirely black, the smaller size 23 mm. long, and darker coloured legs.

Little Berg Summits. Type in National Museum, S. Rhodesia.

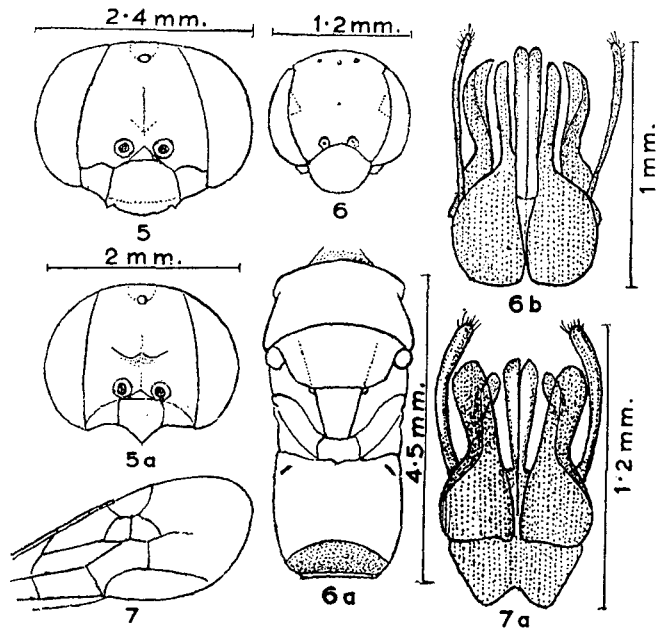
Subfamily LARRINÆ.

Tachysphex diversilabris n. sp. Text-figs. 5, 5a.

♀ 7.3 mm. long. Black. Moderately shining except the face and epinotum which are dull. Sides of the clypeus and the temples with decumbent silvery pubescence. Pleura and sides of the epinotum with a short and white pubescence. First four tergites with apical fasciæ of microscopic, silvery pubescence. Wings hyaline, the veins black. Median area of the clypeus sparsely and coarsely punctured, the apical margin depressed and excised at the corners. Ocellar area and sides of the face finely reticulate-punctate, the middle of the face less closely, the interspaces as wide as the punctures. Vertex with a large puncturation, the interspaces about three times wider than the punctures. Mesonotum and scutellum closely punctured, the punctures as large as those on the middle of the face. Mesopleuræ closely, and more finely punctured than the mesonotum. Dorsum of the epinotum microscopically reticulate-punctate (32 diameters), and with a few longitudinal rugæ at the base, the sides and the declivity transversely striate. Tergites 1-5 closely and microscopically punctured (35 diameters) the pygidium very sparsely and finely punctured, elongate triangular and at least twice as long as wide at the base. Clypeus two and a half times wider than long, the median area convex, nearly one and a half times

wider than long. Inner orbits strongly divergent below. Interocular distance on the vertex equal to the length of the second and third joints of the flagellum united; the third joint one-fourth longer than the second. Dorsum of the epinotum twice as wide at the base as long, moderately narrowed caudad. Comb of the anterior tarsi composed of long brownish cilia, of which there are six on the basal joint.

TEXT-FIGS. 5-7a.



5. *Tachysphex diversilabris* ♀, head. 5a. *Tachysphex diversilabris* ♂, head. 6. *Platyderes flavoscutellatus* ♀ head. 6a. *Platyderes flavoscutellatus* ♀ thorax. 6b. *Platyderes flavoscutellatus* ♂ genitalia. 7. *Paracyphononyx montanus* ♀ fore wing. 7a. *Paracyphononyx montanus* ♂ genitalia.

♂ 5.7 mm. long. Punctuation of the head and thorax closer than in the ♀. Median area of the clypeus produced into a sharp triangular tooth. The interocular distance on the vertex equal to the length of the first three joints of the flagellum. The inner orbits less divergent below than in the ♀. Dorsum of the epinotum twice as wide at the base than at the hind margin, and twice as wide there as long; it is much more convex lengthwise than in the ♀. Seventh tergite broad, the apical margin convex. Otherwise like the ♀.

Fire Lookout, 1 ♀, 1 ♂. Types in National Museum, S. Rhodesia. Related to *T. hermia* Arnold but with a finer punctuation of the thorax, and in the ♂ with the median area of the clypeus produced into a wider and longer apical tooth.

Family POMPILIDÆ.

Subfamily PEPSINÆ.

Hemipepsis capensis F. Little Berg Summit, 1 ♀.

Hemipepsis hilaris Smith. Little Berg Summit, 2 ♂ and 1 ♀, a giant specimen, 23 mm. long.

Priocnemis braunsi Arnold, var. *nigricornis* Arnold.

Little Berg Summit, 1 ♀, 1 ♂.

Subfamily CTENOCERATINÆ.

Trichosalius (*Paratrichosalius*) *obesus* Arnold, subsp. *montanus* Arnold (1958, 'Occ. Papers Rhod. Mus.', 22b, 140). Little Berg Summit, 1 ♀.

Subfamily PSEUDAGENINÆ.

Micragenia calcarata Arnold, Indumeni Forest 1 ♀; Little Berg Summit 1 ♂.

Subfamily POMPILINÆ.

Galactopterus rufipes Arnold, Little Berg Summit, 1 ♂.

Platyderes flavoscutellatus n. sp. Text-figs. 6, 6a, 6b.

♀ 10.7 mm. long. Black, the abdomen with a bluish sheen due to a microscopic decumbent pubescence. A triangular spot on each side of the face and the upper margin of the occiput, reddish-yellow. Pronotum, scutellum and the hind margin of the mesonotum where it is adjacent to the scutellum, orange-yellow. Wings fuscous, the apical part beyond the cells darkest. Clypeus flat, subcircular, the anterior margin very convex, one and a half times wider than long. Face in the middle three times wider than one eye. Interocular distance on the vertex one-fifth greater than at the bottom of the eyes, and equal to the length of the first three joints of the flagellum. Posterior ocelli very little farther from the eyes than from each other. Second joint of the flagellum slightly more than twice as long as wide at the apex, and a trifle longer than the third joint. Pronotum one-ninth wider behind than in front, twice as wide behind as long in the middle. Mesonotum not quite twice as wide as long, the scutellum as long as wide in front, the metanotum nearly half as long as the scutellum. Dorsum of the epinotum very little narrowed caudad, one and a half times wider at the base than long, the posterior margin strongly concave, the declivity concave, smooth and without rugæ. First tergite one-seventh wider at the hind margin than long. Second sternite with a transverse impressed line at the basal third. The proportions of the first three abscissæ of the radius are as 4 : 8 : 1.

♂ 10–11 mm. long. The two yellow spots on the face smaller than in the ♀. Posterior ocelli one half farther from each other than from the eyes. Cly-

peus shorter than in the ♀. Interocular distance on the vertex equal to the length of the second, third and fourth joints of the flagellum united. Dorsum of the epinotum three-fifths wider at the base than long in the middle. Otherwise like the ♀.

Little Berg Summit, 1 ♀, 4 ♂. Types in the National Museum, S. Rhodesia. Related to *P. chalybeus* Tasch. but smaller, with a larger clypeus and much longer epinotum.

Paracyphononyx montanus n. sp. Text-figs. 7, 7a, 7b, 7c.

♀ 9.5–10.5 mm. long. Black. The hind femora, except at the extreme base and apex, and the hind tibiæ reddish ochreous (in one specimen the apical half of the middle femora and the whole of the middle tibiæ are also reddish ochreous), the spines black. Wings pale fuscous, the apical part beyond the cells, darker. Clypeus, lower half of the face and the coxæ with a decumbent and fine, grey pubescence. Clypeus a little more than twice as wide as long, the anterior margin slightly concave. Face in the middle twice as wide as one eye. Inner orbits moderately convergent above and below. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus one-fourth of the third joint. Posterior ocelli one-third farther from each other than from the eyes. Second joint of the flagellum slightly more than three times longer than wide at the apex; the first joint as long as the third. Dorsum of pronotum two and three-fifths wider than long in the middle, the hind margin obtusely angular. Mesonotum twice as wide as long. Dorsum of the epinotum about one and a half times wider at the base than long, the lateral margins feebly convex, the junction with the declivity bluntly angular, the declivity half as long as the dorsum and with a fine transverse striation. The proportions of the first three abscissæ of the radius are as 5 : 3 : 2.

♂ 8.5 mm. long. Interocular distance on the vertex equal to the length of the first three joints of the flagellum. Ocelli as far from the eyes as from each other. Dorsum of the epinotum more convex lengthwise and transversely than in the ♀, and also shorter, being less than twice as wide at the base as long. In the allotype ♂ the first three abscissæ of the radius are in the proportion of 7 : 6 : 4, but in another specimen as 7 : 7 : 5. Otherwise like the ♀.

Little Berg Summit. Type in the National Museum, S. Rhodesia.

Episyron turneri Arnold, Little Berg Summit, 2 ♀, 3 ♂.

Family MUTILLIDÆ.

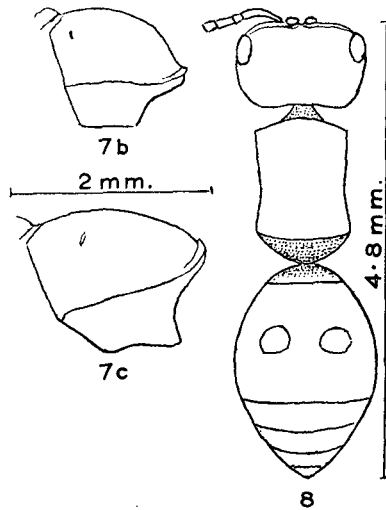
Odontomutilla horrida Smith. Indumeni Forest, 1 ♀.

Smicromyrme (Viereckia) nigra n. sp. Text-fig. 8.

♀ 4.8 mm. long. Black. Mandibles and tarsi pale brown, legs dark brown. Second tergite with two nearly circular yellow spots, the colour of the integument and not of the pubescence. The whole body with a sparse, long, black

and erect pilosity. The head behind the eyes and the dorsum of the thorax with a sparse, decumbent and yellowish pubescence. Head coarsely reticulate-punctate; a fine carina extends on each side from above the antennal sockets to the inner orbits. Dorsum and declivity of the thorax coarsely reticulate-rugose, punctured between the rugæ; the punctures on the declivity shallow but large, about half as wide as the first joint of the flagellum. Pleura smooth, shining and with a few small punctures. First two tergites closely and longi-

TEXT-FIGS. 7b-8.



7b. *Paracyphononyx montanus* ♂, profile of epinotum. 7c. *Paracyphononyx montanus* ♀, profile of epinotum. 8. *Smicromyrme (Vioreckia) nigra* ♀.

tudinally striate, tergites 3-5 finely and sparsely punctured, the pygidium smooth and shining. Sternites shining, finely and sparsely punctured. Head a little wider than long, wider than the thorax. Mandibles falcate. Scapes strongly curved, the second joint of the flagellum two-thirds longer than wide at the apex, and equally longer than the third joint. Thorax narrowed in the middle, a little wider behind than in front, and not much longer than wide behind at the hind margin of the dorsum.

Fire Lookout, 1 ♀. Type in the National Museum, S. Rhodesia.

This differs from the other five species of the subgenus by the entirely black colour of the head and thorax, and, excepting *S. rufomaculata* Arnold, by the much coarser sculpture.