

RESULTS OF A COLLECTING TRIP TO THE CANN  
RIVER, EAST GIPPSLAND.

By J. CLARK, F.L.S.

[This trip (November 26 to December 8, 1928) was one of a series, undertaken by different members of the Club, and financed from the special fund, a sum of £200 made available through the kindness of Senator R. D. Elliott.]

The journey from Melbourne to the Cann River appeared to offer splendid collecting conditions as far as Warragul; the country containing an abundance of flowering plants, particularly *Leptospermum*. From Traralgon onwards the country began to assume a very dry appearance, and from Sale it was evident that much work would have to be done to get material. Unfortunately, these dry conditions existed throughout the whole area; nevertheless, much valuable material was obtained.

No flowering plants were observed along the Prince's Highway, the flower season having finished some weeks previously. One small area of *Leptospermum*, whose flowers were long past their prime, was located near the Cann River. It was here that most of the main collection of insects was made, during the first two days. The surrounding country appeared to be very promising as a collecting ground, but on investigation it was found to be rather poor. No doubt, during a good season, this district would prove to be a naturalist's paradise, judging from the material collected during the long dry spell.

The Cann River, like most others in this part of the country, is a small stream in summer, but a raging torrent in winter and spring. The banks are deep and steep, with little or no debris lying about, having been washed away by the winter floods. The small township is situated in a large alluvial basin; no rocks or stones are to be found for miles around in either direction. The entomologist is, therefore, disappointed in losing the fine harbour for ground insects afforded by logs and stones. The banks of the river were the most profitable collecting grounds, but here progress was slow, owing to the dense jungle, which, in many places, one could only penetrate on hands and knees. In this river jungle the Rock Orchid, *Dendrobium speciosum*, was abundant, making a fine show on the limbs and trunks of the trees. In many places, the work of the cockatoos was greatly in evidence; numerous trees showing only too clearly where the birds had been cutting out the larvae of wood-boring beetles. From the appearance of the tunnels and pupal chambers observed, the larvae were those of the longicorn beetle, *Tryphocharia*. Near the bridge, in a large belt of



frogs and lizards were obtained. Spiders of various species were captured in all localities, but not in abundance.

Butterflies were not numerous, either in species or individuals; the most important of the group being *Candalides xanthospilos*, Hubn. This is one of the "Blues," and is a rare insect in Victoria, but has been previously taken near Lakes Entrance on two occasions. The only other "Blue" met with, *Neolucia agricola*, was in great abundance. "Skippers" were scarce, only one species being found. One specimen of *Tisiphone* was seen, but not captured. *Heteronympha* was fairly common. Moths were more abundant, but not numerous. Five species of Geometridae and two of Zygaenidae were the most important. No new species in either group were taken.

Coleoptera were the most numerous, both in numbers and species. Over 100 species, representing 17 families, were found. Of these, the most interesting undoubtedly is the small beetle belonging to the Family Scarabaeidae, *Maechidus tibialis*, Lea. Numerous specimens, also larvae and pupae, were obtained in a termitarium of *Calotermes sedulus*, Hill. All stages were found in the middle of the large mound when it was dug into for specimens of the termites. In addition to the beetles, many larvae of an, at present, unknown fly were found in the same place.

Termites were numerous in individuals, but only three species are represented in the collection, one of these being a new species, according to Mr. G. F. Hill, to whom the material was submitted for identification. Diptera are represented by 30 species, in six families, the most interesting being the crane-flies. Four species were found, of which two are new, and one apparently very rare. These have been examined, and dealt with, by Dr. C. P. Alexander. Asilidae, or robber-flies, were common, in a few species. Fifteen species of Muscidae have, so far, been undetermined.

Six species of dragon-flies were found, all known forms. The "scorpion fly," *Harpobittacus australis*, was abundant. One species of May-fly was abundant, hovering over the water during the early evening. Dr. R. J. Tillyard, to whom this was submitted, considers that it is a new species, and it will be dealt with later. The residents in the district informed me that no trout, or other fishes, except eels, are found in the river. This cannot be due to a scarcity of food, as much aquatic insect life was noted there. Hemiptera, or bugs, are represented by 10 species, in five genera. Cockroaches were numerous in individuals, but only three species are represented in the collection. Hymenoptera were not abun-

dant, but 17 species of wasps, eight species of bees, and 22 species of ants were found. A few of the wasps belong to the parasitic groups of Braconidae, and Ichneumonidae, the others being flower wasps. Mr. T. Rayment has dealt with the bees, all of which are included in his article on the subject. The ants include three new species; these are dealt with separately.

#### SUBFAMILY CERAPHACYINAE.

*Eusphinctus Hirsutus*, n.sp.

(Pl. 1, Fig. 1-2.)

Worker. Length, 3.5-5mm.

Head, thorax and node brown, or reddish brown, gaster lighter, more yellowish, legs and apical segments of the antennae pale testaceous.

Head densely punctate. Thorax punctate; these are much smaller and more widely scattered than on the head, more abundant on the sides than on the disc where it is shining between the punctures. Node and gaster also densely punctate, but much finer than on the head. The mandibles are coarsely punctate.

Hairs yellow, sub-erect, very abundant, long and pointed; shorter and more oblique on the antennae and legs.

Head one-sixth longer than broad, the occipital angles rounded, sides feebly convex, almost parallel. Mandibles triangular, abruptly bent near their base; the inner border armed with six small teeth. Clypeus very short, the anterior border with a slight rounded projection in the middle; this projection is yellowish and semi-transparent. Frontal carinae short, erect, truncate and confluent behind, encircling the antennal insertions in front; this portion is indented on the top edge in front. Carinae of the cheeks hardly apparent. No eyes. Antennae short and robust. Scapes extend just beyond the middle of the sides of the head; all the segments of the funiculus broader than long, except the apical, which is as long as the five preceding segments together. Thorax twice as long as broad through the pronotum, without traces of sutures on the dorsum. The anterior border of the pronotum and feebly margined, the sides convex at the pronotum and epinotum, slightly constricted at the mesonotal region, not marginate. The posterior border of the epinotum concave, the declivity abrupt, margined on the sides and above. Node slightly broader than long, the anterior border straight, the lateral and posterior borders convex; in profile it is as high as long, the anterior face vertical, the dorsum and posterior faces united in a curve; there is a long, broad, sharp pointed

tooth on the ventral surface in front, directed forward. Postpetiole one-fifth broader than long, broader behind than in front, the anterior border straight, the sides feebly convex. There is a deep and wide constriction between each of the segments of the gaster. Pygidium feebly emarginate, or depressed, on the dorsum. Legs short and robust.

Female.—Length, 4-6mm. Ergatoid.

Similar to the worker, but larger and the colour much darker. Eyes and ocelli well developed. The pygidium is concave, submarginate on the sides.

A small colony was found under a log on the bank of the Cann River. The nest contained about 60 workers and 5 females. This species is not close to any at present known. It differs from *E. steinheili*, Forel, in being larger and more robust, and more densely clothed with long hair. The form of the clypeus readily separates it from all the other known species.

#### SUBFAMILY PONERINAE.

##### MYRMECIA PULCHRA, n.sp.

(Pl. 1, Fig. 3.)

Worker.—Length, 18-20mm.

Head and gaster black, thorax and both nodes bright red, mandibles, clypeus, antennae, anterior legs and all the tarsi testaceous, the coxae, femora and tibia of the middle and posterior legs brown, the joints lighter. On a few examples, the top and sides of the epinotum are tinged, or shaded, with brown.

Mandibles smooth and shining, with a few scattered, shallow, elongate punctures, and a row of large piligerous punctures on the inner edge at the base of the teeth. Clypeus shining, finely and irregularly rugose, there are some longitudinal striae in the depressions at each side of the median projection. Head longitudinally striate, with a dense microscopic reticulation between the striae. Thorax coarsely striate-rugose, the striae on the pronotum are longitudinally arched, transverse on the mesonotum and epinotum. Node rugose, with a circular direction. Postpetiole and gaster smooth and shining, microscopically punctate.

Hair long and yellow, erect, abundant on all the body, shorter and oblique on the legs, none on the antennae, except a few at the apex of the scape. A very fine short, close-lying pubescence abundant everywhere, but longer and even more abundant on the gaster, where it forms a distinct covering. On the top of the gaster the pubescence has, on most examples, a golden sheen.

Head just a shade broader than long, the occipital border and sides straight, the angles rounded. Mandibles fully one-quarter of their length shorter than the head, their external border straight, or very feebly concave; the inner border convex, armed with eleven teeth, the first two are small, third, fifth, seventh and ninth are large, fully twice as long and broad as the others. The ninth forms a slight angle, from where the mandible is reduced at the base. Clypeus widely but not very deeply emarginate in front. Frontal ridges parallel, not extending to the anterior cellus. Eyes large and convex. Antennae short, the scapes extend beyond the occipital border by twice their thickness; first and second segments of the funiculus of equal length, the other subequal to the apical, which is as long as the first. Thorax two and one-third times longer than broad through the pronotum. The pronotum strongly convex, flattened above. Mesonotum circular, convex above; in profile it is raised above the level of the pronotum and epinotum. There is a deep and wide constriction between the mesonotum and the epinotum, the latter is one-third longer than broad; in profile it is flattened above, the declivity face abrupt, steep, rounded into the dorsum by a strong curve. Node as long as broad, slightly broader behind than in front; in profile it is almost as high as long, the stalk short, only one-fifth of the length of the node, the anterior face straight, forming a right angle with the dorsum, the latter flattened and rounded behind into the posterior face. Postpetiole broader than long. First segment of the gaster broader than long, and much broader behind than in front. Legs short and stout.

Female.—Length, 20-22mm.

Similar to the worker, but larger and winged. The colour is darker, more brownish on the head, thorax and legs; the apical third of the mandibles brown.

Described from a small colony, found under a log, near the bridge at Cann River. This species is not close to any previously described forms. In most species of the genus, *Myrmecia* s.str., the mandibles are as long as, or longer than, the head, but in the present species they are much shorter. These, together with the rather short scapes and node, tend to connect this with *M. esuriens*, Fab., from Tasmania. They are, however, very distinct. Several isolated specimens were taken on tree trunks throughout the bush in the district.

#### MYRMECIA FORFICATA, Fabr.

A widely distributed and common species was found abundant in the district. In most cases, the nests were of the large mound type.

*MYRMECIA TARSATA*, Smith.

Cat. Hymn. Brit. Museum, 6, p. 145, 1858.

A common species in New South Wales, where it is generally known as the "black bull-ant." This species occurs in many places in eastern Victoria, but has not previously been recorded. It is deep shining black, with the mandibles and apex of the gaster yellow. No nests of the species were seen, but many examples were found running on the ground and on tree trunks.

*MYRMECIA TARSATA*, Smith.

Cat. Hymn. Brit. Museum, 6, p. 144, 1858.

A common and widely distributed species in South-east Australia.

*MYRMECIA (PROMYRMECIA) URENS*, Lowne.

"The Entomologist," London, 2, p. 336, 1865.

A common and widely distributed species. It extends from Queensland round the coast to Western Australia. This species is frequently found swarming over plants and trees in flower.

*MYRMECIA (PROMYRMECIA) PILOSULA*, Smith.

Cat. Hymn. Brit. Museum, 6, p. 146, 1858.

The most common and widely distributed species of the genus. Originally described from Tasmania, it is abundant in all the States.

*AMBLYOPONE AUSTRALIS*, Erichson.

Arch. f. Naturg., 8, p. 260, 1841.

A common and widely distributed species, being found throughout Australia and Tasmania.

*CHALCOPONERA ASPERA*, Roger.

Berl. Ent. Zeitschr., 4, p. 308, 1860.

A handsome and not common ant confined to the south-east corner of Australia. It is brilliant metallic green, with reddish antennae and legs. The workers are about half an inch long.

## SUBFAMILY MYRMICINAE.

*PHEIDOLE BOMBALENSIS*, Forel.

Rev. Suisse Zool., 18, p. 43, 1910.

Originally described from New South Wales, this species was found along the river bank.

*APHAENOGASTER (NYSTALOMYRMA) LONGICEPS*, Smith.

Cat. Hymn. Brit. Mus., 6, p. 128, 1858.

Wheeler, Trans. Roy. Soc. S. Aust., 40, p. 214, 1916.

A common and widely distributed ant. The ants of this genus live in small colonies underground. They construct a small crater-like funnel at the entrance to the nest. They

come out at night to forage. During the day a few specimens can always be observed just within the entrance at the bottom of the crater, apparently "on guard"; they drop down the tunnel at the least alarm.

SUBFAMILY DOLICHODERINAE.  
LEPTOMYRMEX ERYTHROCEPHALUS, Fabr.

Syst. Ent., p. 391, 1775.

Common in Eastern Victoria and New South Wales. It is generally known as the "silly ant," from the curious habit of rearing up and spinning around when disturbed. Several species of this genus are known to store honey in their bodies, but not to the same extent as do the "honey pot ants" of the interior. No females have so far been recognised in this genus. Males and workers are commonly met with.

DOLICHODERUS (HYPOCLINEA) SCABRIDUS, Roger.

Berl. Ent. Zeitschr., 4, p. 308, 1860.

A common and widely distributed species, in south-eastern Australia. The colour of the antennae varies from brown to reddish in the members of a nest.

IRIDOMYRMEX DETECTUS, Smith.

Cat. Hymn. Brit. Mus., 6, p. 36, 1858.

The most common and widely distributed ant in Australia. It is generally known as the "mound ant" from its habit of making huge mounds over its nest. It is the largest species in the genus, being about half an inch in length.

IRIDOMYRMEX GRACILIS, Lowne.

*The Entomologist*, London, 2, p. 280, 1865.

Common and widely distributed, it is a rather slender species, and runs very rapidly.

IRIDOMYRMEX FOETANS, n. sp.

(Pl. 1, Fig. 4-4a.)

Worker.—4.5mm.

Black. Mandibles, antennae and tarsi brownish; in a few examples almost black.

Hair greyish, short and erect, very sparse and scattered. Pubescence greyish, very abundant everywhere, forming a light covering, but not quite hiding the sculpture; a little more dense on the gaster than on the head, and also more of a brownish tinge.

Head, excluding the mandibles, as broad as long, broader behind than in front, the occipital border very deeply indented, the angles strongly rounded and lobe-like, the sides evenly convex. Mandibles large, triangular, the inner border armed with nine strong sharp teeth. Clypeus short, truncate in front, its anterior border straight. Frontal carinae short, extending back to about the middle of the eyes. Eyes large



and flattened, their posterior border level with the middle of the head. The scapes of the antennae extend beyond the occipital border by barely their thickness. Thorax twice as long as broad through the pronotum, the latter strongly convex on top and on the sides, one-third broader than long. Mesonotum circular, strongly convex above. Epinotum separated from the mesonotum by a strong constriction, the basal face convex, almost globular, the dorsum and declivity united by a strong curve, both faces are of equal length; in profile the pronotum and mesonotum are much higher than the epinotum. Node scale-like, strongly inclined forward, the anterior face convex, the posterior face flat, the top edge rounded. Gaster oval, much longer than broad; legs long and slender.

Described from a colony nesting in an old stump at Cann River. This species comes nearest to *I. gilberti*, Forel. It is, however, larger and much more robust. In *I. gilberti*, the mandibles and tarsi are red, and the pilosity very abundant, even on the legs and antennae; the sculpture of *gilberti* is also much coarser and the head is not so deeply indented behind, also the epinotum is as high as the mesonotum.

This ant emits a powerful and pungent odour when disturbed. When annoyed, it rushes about with the abdomen erect, as is the habit of many species of the genus *Crematogaster*, diffusing the fumes. The odour can be detected for a considerable distance. This smell is much worse than the usual "rancid butter" smell given off by most species in this genus.

TECHNOMYRMEX JOCOSUS, Forel.

Rev. Suisse, Zool., 18, p. 56, 1910.

A small colony found under bark. This is not a common species, and appears to be confined to Victoria.

#### SUBFAMILY FORMICINAE.

CAMPONOTUS (MYRMOSAULUS) SUFFUSUS, Smith.

Cat. Hymn. Brit. Mus., 6, p. 38, 1858.

Common and widely distributed throughout the State.

CAMPONOTUS (MYRMOPHYMA) INNEXUS, Forel.

Rev. Suisse Zool., 18, p. 56, 1910.

Originally described from New South Wales, this species is found abundantly in this State.

CAMPONOTUS (MYRMOPHYMA) NIGROAENEUS, Smith.

Cat. Hymn. Brit. Mus., 6, p. 60, 1858.

Found abundantly throughout south-eastern Australia.

POLYRHACHIS (CAMPOMYRMA) FEMORATA, Smith.

Cat. Hymn. Brit. Mus., 6, p. 73, 1858.

Common and widely distributed throughout Australia.