

ANT LIFE IN CENTRAL AUSTRALIA.

BY CHARLES BARRETT.

On the Reso tour to Central Australia, in August, 1927, opportunities for natural history collecting were limited. But advantage was taken of every halt, delays while the cars were crossing the dry sandy bed of the Finke River, and an hour or two, morning and evening, around camping-places. A day at Alice Springs was most productive.

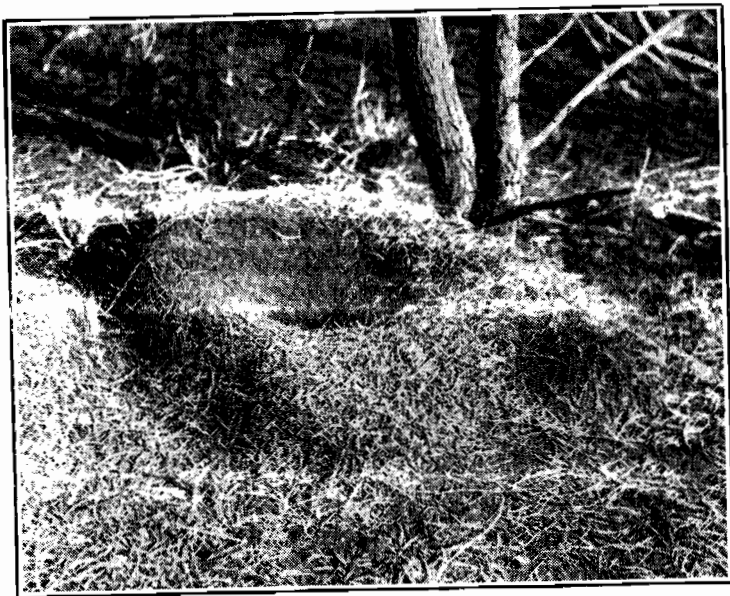
Devoting myself mainly to ants, I was able to make a fairly representative collection, which was given to the National Museum. Mr. J. Clark tells me that the collection includes several new species, and specimens of rare ants, already known. This material will be studied, together with the collections made by the Horn Expedition, and naturalists who visited the Central region more recently.

Ants, of course, are the most conspicuous and abundant insects in Central Australia—with the exception, perhaps, of flies, in summer time! There is not a distinctive ant fauna—a number of species confined to the Central region. All, perhaps, are arid country forms, but the known species are widely distributed, Mr. Clark informs me: some range right across the continent and are familiar in Western Australia; others have been recorded from Western Queensland.

On the Burt Plain, north of the Macdonnell Range, crater-nests of *Polyrachis* (*Campomyrma*) *macropus* Wheeler, are a feature of the landscape for many miles. Through the mulga scrub, craters are so numerous in some places, that 50 or more could be seen almost at a glance. We dug out one nest, and found that the "living apartments" were several feet down in the hard dry ground. For coolness and moisture, ants must tunnel deeply in Central Australia. They accommodate themselves to circumstances. Ants of the genus *Polyrachis*, in Victoria, for instance, commonly nest under logs and stones. *P. macropus*, I believe, is the only Australian member of the genus known that builds crater-nests. The craters are large and often fairly high. They are covered—a kind of shingle—with dry mulga leaves, which also are scattered around in thousands. The object, it has been suggested, is to safeguard the nests from flooding in a season of generous rains. But more probably, while the thatching tends to conserve

such moisture as exists beneath the surface, the craters may serve chiefly as a protection against sand-laden wind: nest-entrances, lacking craters, might easily be "smothered."

Forel has observed, as Wheeler remarks in his fascinating chapters on Ant-nests (*Ants*, pp. 192-224), that the walls of craters formed by desert ants, such as *Messor arenarius*, of the Sahara, are built up to a greater height on the windward side. The Australian ants of the genus *Aphænogaster* are widely distributed, and *A. longipes*, F. Smith, is perhaps one of the commonest; it ranges from the Tropics to



Photo—C. Barrett.

Crater-nest of *Polyrachis macropus*.

Victoria, and Melbourne is the type locality. Now the *Aphænogaster* ants are notable excavators, and a colony may build up numbers of craters around the nest openings. Some of these walls of earth-pellets and tiny grains of sand, are perfectly formed; others are carelessly made. I have counted nearly 40 craters along a few yards of country roadside. But almost anywhere around Melbourne, *A. longipes* is to be found, and its nest-craters, and irregular little tumuli over and around embedded rocks and logs, are familiar objects.

Many of the beautifully rounded craters formed by *P. macropus* could barely be covered by a large hat. They are cleverly thatched, all over the exposed surfaces, including the inner slopes. Two or three may be grouped so closely that their bases are merged; usually they are a few yards apart; here and there, one quite isolated is seen. Captain S. A. White's photographs of *Polyrachis* craters, in the Everard Range (*Trans. Royal Soc., South Aust., XXXIX., 1915, pl. LXV.*), created much interest, revealing, as they did, the very distinct nesting habits of an Australian species of *Polyrachis*.

The crater-building species was one of the novelties in Captain White's collection of insects from the north-western region of South Australia. It was originally described by Wheeler as *P. longipes*; but subsequently the specific name was found to be pre-occupied.

At Alice Springs, and in other localities, I found colonies of Honey-pot ants, *Camponotus inflatus*, Lubbock, but failed to take any repletes. Ordinary workers were discovered under stones, and were very quick upon their ways. The nest-tunnels were long, and in ground so hard that digging-out was a task for which time was lacking, with so much else to be done.

In a romantic and lonely spot, the Ooraminna Rock-hole, a new species of *Camponotus* was taken. When picking up flint scrapers, broken stone knives, and other relics of the aborigines, I noticed ants issuing from a small hole in the ground. Close by lay a nearly perfect knife, fashioned in stone, perhaps a hundred years ago.

Formerly Ooraminna Rock-hole was worth visiting as an "art gallery" of primitive man. But the rock-drawings have either been defaced by vandals, or worn away. There are modern "paintings," probably the work of Afghans and white men, with a twisted sense of "humor," camping at the hole, which years ago, was walled across, to form a reservoir. It was dry on the occasion of our visit.

My Central Australian collection includes specimens of 26 species of ants. The sub-families Ponerinae, Myrmicinae, Dolichoderinae, and Formicinae, are represented, the latter by four genera and 10 species (of which two are undescribed). There are five species of *Iridomyrmex*, including the widely-distributed Mound-ant, *I. detectus*, Sm., and the variety *viridiaeneus*, Vich., This variety is a very beautiful ant, the body of the

worker being rich metallic-green, while the gaster shows violet reflections. The nest was revealed only by a slit-shaped opening—there was no mound.

At Blood's Creek, when seeking Lacewings by torch-light, I noticed large "sugar-ants" (*Camponotus*, sp.) issuing from moundless nests, with slit-like orifices. In the day-time these nests had been overlooked, the ants being underground: they are nocturnal hunters.

Odontomachus rubriceps, Forel, was found among the rocks at Alice Springs. The nest was in ground so hard that it had to be *chipped* out with a sheath-knife. The rock and the earth were hot to the touch, but in shady nooks and crevices nearby grew ferns of three species, *Cheilanthes vellea*, F.v.M., *C. tenuifolia*, Swartz, and *Grammitis rubraefolia*, F.v.M., ferns with cool, green fronds, that told of moisture.

I am indebted to Mr. J. Clark, F.L.S., for his kindness in identifying the ants of my Central Australian collection.

BLUE-TONGUE LIZARDS IN CAPTIVITY.

About two years ago I brought home from the hills a young Blue-tongue Lizard (*Tiliqua*), about four inches in length. After a few weeks' captivity, it disappeared. But recently some neighbours sent word of the presence of a "big lizard" in their garden. Collecting the spoil, we found a splendid sample of a full-grown Blue-tongue, and in all probability, our friend of two years ago. Now he is in an enclosure, feeding voraciously on Cape Weed flowers and snails.

We have kept an assortment of Blue-tongues for many years. One individual was kept for about six years. Then it disappeared, and over a year afterwards we had news of its accidental death, in a neighbour's garden, during grass-mowing operations.

The diet of our lizards has been very varied. Minced steak is a popular food, but they do not care to eat too freely of this. Finely-chopped carrots are gladly accepted; chopped lettuce is always refused. Cape Weed flowers are eaten greedily, on account of both nectar and pollen contained in the flowers. Dandelion flowers are not relished so much; neither are flowers of the Sow Thistle. Perhaps the most popular item in the daily diet is snails (*Helix aspersa*). The shells must be broken, as the lizards do not understand how to break them. One of our hungry lizards, which had not been recently fed, managed a meal of 24 large-sized snails.

Milk, in almost any form, is greatly relished. Our lizards, unless well fed, never refused cream, custards, rice or sago custards, and similar foods. Evidently the Blue-tongues are fond of a mixed diet.—E. E. PESCOTT.