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THE NEST OF POLYRACHIS ANT

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While studying the lac insect of Mysore *Kerria mysorensis*, Mahd., it was found attended by only a few species of ants. There was *Oecophyla smaragedina*, which builds its nest by forming a ball-like nest of leaves of the tree on which some scale insects are introduced by the ant itself. These serve to supply it with their honey-dew. The leaves are stuck together by the larvae which spin filaments like that of a spider and ants manipulate the larvae to discharge this function. It is most marvellous feature to observe and the German Zoologist, Prof. Doflein was the first to illustrate it, which he observed while visiting Ceylon. The next largest nest I could observe was that of the polyrachis ant. The peculiarity of this ant is that while Oecophyla would produce an acid secretion at the same time it tries to bite, polyrachis secretes what smells like amyl acetate. In as much as *Formica rufa* , the European ant, secretes formic acid, Sir Martin Forster, who was the Director of the Indian Institute of Science, Bangalore, while I was working there on lac insects, thought that the secretion of polyrachis ant may be amyl formate rather than amylacetate. It did not take long to prepare amylformate which had a different and unpleasant odour. Polyrachis ant harbours symbiotic bacteria as I have reported in [1]. I imagined that the amylacetate of this ant may be traced to this symbiote. The problem appeared difficult and was never undertaken further. However, the ant as the producer of amylacetate did interest me and I tried to observe it whenever possible.

Among other features which came to my notice, was the construction of its nest. A photograph taken at the time is offered for the first time now and I believe has never been illustrated before. It comprized of bits of cellulose material which was glued together by the secretion of the ant. The contents were larvae and pupae, with adult ants in attendence. No leaf was incorporated nor was there any scale insect to supply honey dew.

It was thus a pure nest unlike that of *Oecophyla smaragedina* . It was found on low growing plants and not high above on large tree. The nest however was sufficiently large as can be judged from the photograph. While other problems of insect life are studied, the one concerning the nests which ants build is also interesting. Among birds the weaver bird and the humming bird as tailor bird which weaves leaves of a tree to construct its nest are the only two examples of special form of bird nests. Ant life would surely offer more

Fig 1. The nest of polyrachins ant.

varied examples and next to the nest of *Oecophylla smargedina* that of the polyrachis ant would be the most sophisticated one.

Key words: Polyrachis Ant, Amylacetate.

Reference

1. S. Mahdihassan, Curr. Sci., **8**, 422 (1939).