1.) *Polyrhachis arachne* Emery 1896

Nest

P. arachne nested in bamboo culms with inner diameters of 1.4-4 cm (median = 1.6 cm, ∅ = 2 cm, SD = 1.1 cm, n = 10), with no regard to whether the culms were living or dead or whether they were in a vertical or in a horizontal position. The ants avoided culms lying directly on the ground. Nests were 33.5-90 cm long (median = 61.5, ∅ = 61.6 cm, SD = 23.1 cm). We found nests 60-230 cm above the ground. As entrances the ants used preformed holes, e.g., those made by woodpeckers or the openings of broken stems. The entrance openings were narrowed to 2-3 mm in diameter by silk, which in addition was covered with a detritus layer on the outside. A single nest had 1-4 entrances. These nests were generally confined to one internode each as the ants were unable to perforate the nodes. If several internodes of one culm had preformed holes, all of them could be occupied.

The inner surface of the bamboo nest wall was lined with a very thin layer of silk to which larvae and pupae were attached longitudinally by a few threads of silk. At the bottom of these nests sometimes a lot of detritus had accumulated, mainly remains of insect prey (beetle elytra, head capsules of cerambycid larvae, ootheca of cockroaches, and unidentified arthropod remains).

Each of the 2-4 partial nests found per colony (n = 10) contained 33-340 workers (median = 136, ∅ = 165.7, SD = 109.7), 14-35 pupae (median = 27, ∅ = 30.3, SD = 17.6), 3-11 larvae (median = 5, ∅ = 6, SD = 3.6), no alate sexuals and varying numbers of eggs. Only rarely a larva or some offered pieces of food were transported from nest to nest or from pavilion to nest. Judging from the fact that there was no permanent worker traffic between the partial nests, they seemed to be relatively autonomous, but shared the same foraging area. The one colony which was collected as a whole was monogynous and its queen was found in one of the nests described above.

Pavilions

While nests are considered as places for rearing the brood and housing the queen, pavilions are accessory structures for keeping trophobionts. The main food source of *P. arachne* was honeydew from homopterans that were kept inside silk pavilions. Though many large leaves of different kinds of plants were available, the ants built their pavilions almost exclusively beneath the leaves of bamboo. Among hundreds of pavilions, only one was found below a ginger leaf that had direct contact with bamboo leaves. No Homoptera were found inside this pavilion. Up to 6 pavilions were clustered at one branch (*fig. 1*). No favoured height or compass direction could be detected, but there were no pavilions in the dark inner area of the bamboo