about 7.5 mm were spanned. By successively adding new threads of silk the ants were able to build large webs. Other workers brought plant particles and attached them to the outside of the fresh silk web. Silk from destroyed pavillons was rolled to balls larger than the ant's gaster and reused for pavilion building. Sometimes relatively short pavilions were built which were later enlarged without full removal of the former outer walls. So a few of the pavilions were divided into two to several more or less separated compartments.

The underside of the leaf constituting the upper wall of the pavilion was covered with a very thin layer of silk fixed to the numerous small hairs of the bamboo leaf. It was completely free of detritus. The brood was fixed longitudinally to this layer with a few threads of silk. In some of the pavilions refuse piles were found near the leaf tip.

Trophobiosis

The pavilions contained Hormaphididae and Pseudococcidae. At least two species of each taxon were involved, which have not been identified so far. Nearly all pavilions inhabited by the ants contained homopterans. Species of Hormaphididae and Pseudococcidae were often found together in the same pavilion. Pseudococcidae were present in all pavilions which contained trophobionts (2-300, median = 33, $\varnothing$ = 81.5, SD = 96.0, n = 12), and they outnumbered the aphids, which occurred only in 30-75 % of a colony's pavilions (0-150, median = 0, $\varnothing$ = 21.6, SD = 44.1, n = 19). The total numbers of homopterans varied from 0 to 370 individuals per pavilion (median = 104, $\varnothing$ = 122.8, SD = 113.5, n = 24). The nests normally contained no homopterans. Only in one nest in a green bamboo culm there were 4 Pseudococcidae tended. *P. arachne* workers collected all honeydew-producing homopterans they encountered on the bamboo and carried them into the pavilions. No homopterans were present outside the pavilions unless strongly protected by other ants (e.g., by *Crematogaster, Myrmicaria*). Eggs of homopterans were found on the bamboo leaves, even on those where pavilions were built. For evaluating the trophobiont-retrieving behaviour in more detail, we presented to *P. arachne* workers Hormaphididae and Pseudococcidae from destroyed pavilions of their own or of foreign colonies. Soon the workers accumulated at such sites by recruitment behaviour and cautiously started to pull at the aphids and pseudococcids. When these released their grips, they were carried to a pavilion, normally to the nearest one, but sometimes also more than 5 m away. Occasionally workers handed the homopterans over to other ants. Within 3 hours hundreds of homopterans were carried into the pavilions. In a few cases we also observed that homopterans offered in this way were thrown off the leaf.