A MAZE OF LEAVES: THE SIZE-GRAIN HYPOTHESIS APPLIED TO ANTS AT THE CAXIUANÃ NATIONAL FOREST (PARÁ – BRAZIL)

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Abstract: An organism perception of the environment depends on its size. So it says the "size-grain hypothesis". Ants are a group closely related to this theory, and it's known that larger ants have longer legs and smaller ants have shorter legs. The objective of the present study was to verify if the smaller ants do reach food faster than the larger ants in substrates with high rugosity, with the Caxiuanã National Forest as study site. To test this, two experiments were made, where the first ant to reach the bait was collected for posterior measurement. The first one consisted of 15 replicates of three treatments (one control, one with intermediate rugosity using grinded leaves and one with high rugosity using whole leaves), with the baits put above the substrate. The second experiment consisted of 10 replicates of two treatments, one control and one with a bait hidden beneath a small quantity of leaves. An ANOVA was carried out to compare the body size of the ants on each treatment for the first experiment and a Student's T-test analysis was carried out for the second experiment. The results of the statistical analysis showed no significant difference in the body size of the ants for the first experiment, whereas it showed a significant difference for the second experiment, showing that the smaller ants were able to reach the hidden bait first.

Key words: *Body size; Morphology; Trade-off.*