Examining Turtle Ants' (C. varians) Preference for Different Types of Pollen

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There are more than 12,000 species of ants, but the only species known to eat pollen as a regular part of their diet are the turtle ants (genus Cephalotes); however, their diet in nature is unknown in terms of preference for pollen. Knowing their pollen preference allows scientists to keep the species in captivity for longer and has the potential to suggest that ants become a more broadly used model organism for research. An experimental design to test pollen preferences was created and four trials were completed using Brassica and pine pollen. These trials were captured by a GoPro camera, which filmed the most after time (2 hours after introduction of pollen source) for the ants. Analysis was done in order to determine whether or not the ants had a clear pollen preference. Paired Wilcox signed rank tests and Friedman tests were used in analysis and the data suggested the ant's need for variation, rather than a clear preference for one pollen type. Two theories that are hypothesized to be the cause of this variation are that the build up of pollen defense mechanisms has a harmful effect on the digestive system of the ant. The other theory is that the ant extracts different nutrients from different pollen sources needing variation as a result of that.

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