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Queens in Control: Males do not show adaptive mating behavior in hybridizing harvester ants

Sexual conflict arises in biological systems where the optimal fitness strategies of males and females differ, resulting in antagonistic coevolution between the sexes. The differences in fitness from these strategies can be extreme, as is the case with a population of hybridizing harvester ants. In these populations, females must mate with males from both their own and a second genetic lineage to successfully found a colony and produce daughter queens. However, males only receive a fitness benefit from mating with same-lineage females because hybrid progeny develop exclusively into sterile workers. Therefore, we predicted that males would discriminate among females based on lineage identity, allocating more time and energy toward matings with their own lineage. To test whether male discrimination occurs, we compared the time males took to initiate copulation and their copulation duration when paired with same-lineage versus alternate-lineage females. Our results were contrary to our predictions. Males and females from one lineage took significantly longer to initiate copulation overall, but there was no significant interaction effect between the lineages. Mating duration was significantly shorter in same-lineage pairs compared to opposite-lineage pairs. This suggests that in this system, females have gained an advantage in the sexual conflict, and are able to maximize their fitness at the expense of opposite lineage males.