

## Abstract: Sexual Conflict in Hybrid Harvester Ant Reproductives

By Mike Herrmann

Sexual conflict in organisms arises when the fitness interests of males and females differ. In hybridizing harvester ants, the sexual interests of males and females vary. In this unusual system, queens produce workers from hybrid matings, but daughter queens are produced from matings with males of their own lineage. As a result, queens must mate with males from the other lineage as well as males of their own lineage in order to successfully found a colony. However, males will only receive a fitness benefit if they mate with a same-lineage queen, since mating with an opposite-lineage queen will only produce sterile workers. Therefore, we expect to see sexual conflict arising during the mating flights in these ants. If the males can discriminate the lineage of the females, we expect to see males allocating more sperm into same lineage females, and breaking off matings with opposite lineage females, resulting in a shorter duration of hybrid matings. To test this hypothesis, reproductives were collected during four mating flights over the summer in Arizona and New Mexico. Individual queens were randomly paired with a mate and observed. If copulation occurred, the duration was timed and the specimens were frozen following mating. These specimens were later genotyped to identify their genetic lineage. Preliminary results show little difference in mating time between same- and cross-lineage matings, suggesting that the males do not selectively mate longer with queens of their own lineage. One possible reason why they do not discriminate is that they are unable to do so because queens of the two lineages have evolved similar chemical signals to prevent male selectivity. Further work is planned to look at the chemical profiles of each lineage of these ants to look for a convergence of signals from the females.