

**P185***Ants, Tetramorium species E, learn to avoid predatory antlions' pit traps***Karen Hollis**, Kelsey McNew, Alexandra Bemis, Talisa Sosa, Felicia Harrsch, Elise Nowbahari

Pavement ants, *Tetramorium sp. E*, often inhabit the same sandy soils as a common predator, pit-digging larval antlions (*Myrmeleontidae spp.*). Previous research in our laboratory has shown that pavement ants are able to rescue captured nestmates from antlions' pit traps, thus sabotaging antlions' attempts to capture them. Here we show that pavement ants possess yet another antipredator strategy, namely the ability to learn to avoid antlion pits following a successful escape from a pit trap. In Phase I, an ant was confined to an arena containing an antlion pit and, if it fell into the pit and successfully escaped, which happens in nature as well as in the laboratory, it was tested for its ability to avoid a pit in Phase II. Seven different experimental conditions, including the presence or absence of an actual antlion in the pit during either or both phases, and the opportunity to confront the same or a different pit, allowed us to test various explanations of how, exactly, ants might avoid antlions. Results suggest that ants are able to form a generalizable memory of pit characteristics and that the ability to avoid pits does not depend on cues that the ant, itself, leaves behind in the pit or cues emanating from an antlion's presence.