

The pit building behavior and spatial distribution of antlion larvae are currently not fully understood. In this experiment, we try to identify if antlions possess the ability to sense alternating magnetic fields and if their fields have any effect on their behavior. Antlions were exposed to alternating magnetic fields of strengths ranging for 0-30 μ T and their burrowing behavior was recorded and analyzed. Alternating magnetic fields were produced by four solenoids in a series circuit placed on opposite sides of a sandy field within a Faraday chamber. The resulting magnetic fields was strongest in the middle third of the antlions' environment and weak to undetectable in the surrounding two thirds. At the beginning of each trial antlions were placed, evenly distributed in the center of the testing environment. Spatial distribution and movement patterns were recorded by time lapse video and analyzed to determine sensitivity of these organisms to magnetic fields. The introduction of alternating magnetic fields will help to determine if magnetic fields are used by the insect to orient themselves.