

PREDATORY BEHAVIOR OF ANTLIONS

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Antlions belong to the order Neuroptera, class Insecta. They belong to the family Myrmeleontidae. The antlion name is applied to the larval stage of these insects. Adult insects of this family have four lace-like wings, similar to dragonflies. Pit building behavior is characteristic to the genus *Myrmelon*. There are different size antlions and they appear to consume different prey according to preliminary observations. Hence the hypothesis is to establish whether antlions have the ability to select their prey, and whether their level of hunger and their own body size affect prey selection.

Present study was conducted in Khao Chong Wildlife Extension and Conservation Center, Trang Province, Thailand.

In order to identify the predatory behavior of antlions, antlions were collected from the field and kept for about six hours for rest and recuperation, and allowed to make their pit. The experiment was conducted at room temperature. An ant was dropped in the center of the pit and resulting interactions were observed. Observation of the antlion was started as soon as the prey dropped in the center of the pit and ended with either the prey dead or escaped free from the pit.

In order to check whether antlions select their prey according to the prey size, starvation level and their own size, collected antlions were categorized into two groups according to body size (0.5-1.0 cm long and <1.0 cm long). Both size classes were sub-divided into four groups of 15 individuals, and they were fed with ants. After feeding, each group was starved for a different length of time (0 hrs (level 0), 12 hrs (level 1), 24 hrs (level 2), and 36 hrs (level 3), prior to commencing the feeding experiment. Three types of prey were used for this experiment.

From the collected data predatory success for small and large antlions was calculated for each treatment. One sample T – tests were run in order to check whether there was a significant difference in predatory success between three types of prey at the same starvation level. In order to identify the relationship between predatory action and starving level for small antlions and large antlions a contingency analysis was conducted.

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In order to identify the predatory action by prey type a second contingency analysis was carried out. Large antlions always attacked small prey and attacked large prey less frequently, but small antlions attack all prey with equal frequency.

According to results larger antlions attack more large prey as starvation level increased, but small antlions try to attack all prey without regard to size. However, predatory success was low for small antlions, when they attacked larger prey. Smaller antlions may be less experienced in assessing prey size or likelihood of success.

It was found that the selected time scale for the starvation levels was too long. Hence, it was difficult to compare the predatory success of different starvation levels.