

GROUND BEETLE ABUNDANCE AT THE UNIVERSITY OF EMBU

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ABSTRACT

Beetles are among the most ecologically diverse group. The carabids (Coleoptera: Carabidae) beetles are distributed in distinct habitats with the highest species diversity in habitats with high vegetation and litter cover. The family Carabidae of ground beetles are common predators of many different insects and other arthropods, including fly eggs, caterpillars, and others. They are taxonomically and functionally very important component of terrestrial ecosystems. The ground beetles are sensitive to environmental conditions and hence form well-defined richness gradients. The ground beetles have been widely used as indicator species of arthropod diversity, altered land use, environmental change, and land management practices. They also act as bioindicators that can generate interest in environmental pollution research. Beetles can be easily sampled by various methods, and there are several methods available for sampling in a variety of habitats and which can vary in efficiency and effectiveness. Pitfall trapping has been commonly used for capturing invertebrates that are active on the ground, as it works on a principle that, an invertebrate moving on the ground simply falls into an open container dug into the ground. The aim of this study was to establish the beetle abundance in different habitats at the University of Embu. Simple random sampling using pitfall traps of 5 cm and 7.5 cm in diameter at two sites over three weeks was carried out. Trap catches were analysed by site and by size of pitfall traps using ANOVA in R-statistics. Results showed no effect of trap size and that different sites were not statistically significant. Over time, there was a fluctuation in trap catches in the two sites sampled. These results indicate that populations of beetles may be influenced by other factors besides disturbance of landscapes.