

**Diversity of ground dwelling beetles (Coleoptera) in urban forest fragments of
Mwanza, Tanzania**

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Ilemela municipality is located in the fast growing city of Mwanza Tanzania. It comprises of forest fragments under human pressure in such that one of the fragment was completely replaced with human residences. No any scientific documentation was ever done on the forest fragments in Ilemela. Thus; the assessment of diversity of ground-dwelling beetles at National Institute for Medical Research, Kawekamo and Kasamwa forest fragments in Ilemela was carried out with predictions that human population density and disturbances do impact the diversity proportionally. Ground-dwelling beetles were sampled by pitfall trapping and hand searching methods. Disturbances were quantified by measuring DBH, leaf litter thickness and coverage. The sizes, distances from each fragment and age of the forest fragments were correlated for diversity of ground-dwelling beetles. Data of ground dwelling beetles was analyzed with respect to abundance, Shannon's index H' , species richness, evenness and dominance. The effects of human pressure on the diversity components were found not to be significant $p > 0.05$ with exception to DBH, litter thickness and coverage. Although in all sites litter thickness and coverage were different significantly, they were probably influenced by unfavorable management and natural occurring landscape patterns comprising of large bare rocky floor. The site with least disturbances and low human population density was found to have low diversity parameters significantly different from the other two sites; Kawekamo with high disturbances and high human population density was found to have higher diversities than all, while NIMR with intermediate disturbances and moderate human population density was found to have intermediate diversities. The human population density and determined disturbances did not correlate with impact on diversity of ground-dwelling beetles. Instead management and geographical features might have altered the diversities at Kasamwa significantly compared to the other sites. Interaction between town planners and conservationists by formulating improved urban forest management should be encouraged to ensure environmentally friendly approaches and biodiversity integrity is maintained.