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ECTOPARASITES OF SMALL MAMMAL COMMUNITIES IN RESTORED OIL PROSPECTING SITES IN BULIISA AND HOIMA DISTRICTS

BY

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2011/HD13/2853U

A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN ZOOLOGY OF MAKERERE UNIVERSITY

OCTOBER 2015

ABSTRACT

A study of small mammal diversity and their ectoparasites was undertaken in seven restored oil exploration sites within the Albertine Graben between April and August 2013. Small mammals were surveyed using Sherman, Museum special and Victor rat traps. From each of the captured small mammals, ectoparasites were recovered, preserved in ethanol and later processed in the laboratory for identification. To determine whether management practices affect small mammal compositions and their ectoparasite infestations, analyses were conducted to compare the compositions and infestation levels in three area management categories; a national park, a wildlife reserve and a communal grazing area.

A total of 143 small mammals belonging to ten species were captured from a total of 2273 trap nights with *Mastomys natalensis* being the most abundant small mammal species and being found in all the sites which were surveyed. A chi-square test showed no variation in the diversity of small mammal species across sites, χ^2 (54, N=29) =32.97, p=0.99. A total of 1339 ectoparasites belonging to 12 species were recovered from the captured small mammals. These belonged to four groups; mites (72.21 %), fleas (9.18 %), lice (11.87 %) and ticks (6.80 %). A Kruskal-Wallis test showed no difference in the ectoparasite diversity on small mammals in the different study sites, χ^2 (6, N=7) =5.07, p=0.54.The mite *Echinolaelaps echidninus* was the most abundant ectoparasite species representing 58.85 % of all the recovered ectoparasites. Only one small mammal species *Crocidura jacksoni* was found without ectoparasites. *Mastomys natalensis* had the highest level of ectoparasites infestation than any other small mammal species. *M. natalensis* and *Tatera valida* had a higher infestation of fleas than any of the other small mammals but the former had all three species of flea and the latter only two. A multiple regression showed a statistically significant variation in ectoparasite infestation levels on small mammal species in the different area management categories, F (1, 19) = 12.85, $p < .0005$, R^2 =0.37.

The study concluded that simplification of habitats was associated with a reduction in the diversity of small mammals as well as their ectoparasites. Measures against human and/or livestock incursion into wildlife habitats to prevent alteration of habitats were recommended.