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Influence of habitat and agricultural activities on the prevalence of trypanosome infection in cattle of Maasai Steppes, Tanzania

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The influence of ecological factors such as habitat and human activities on prevalence of trypanosome infection in cattle is less documented. This study aimed at assessing the influence of habitat cultivation as human activities on prevalence of trypanosome infection in cattle. The study took place in three village named Sukuro, Kimotorok and Oltukai. Questionnaires to pastoralists in which cattle bloods were collected were addressed. In addition, field visit was conducted to assess the habitats and agricultural activities taking place in the identified grazing areas. The shape file polygon of the grazing areas was created through Google Earth Pro. In each polygon, proper visualization was made by zooming in and out to identify the cultivated areas and habitat types and estimate the area percentage. The overall prevalence was 13.14%. Cultivation had positive influence in prevalence of trypanosome infection ($P < 0.05$). This is due to livestock being forced to graze in pristine areas with intact habitat for Tsetse flies vector and wildlife which are reservoirs for trypanosome. Out of five habitat type identified only woodland, grassland and ecotone showed negative association with prevalence of trypanosome infection ($P < 0.05$). The negative association existing between the three habitats and the prevalence of trypanosome infection is tied with the vectors existing in this area as evidenced by previous studies in an area. Control effort for trypanosome infection and their vector (Tsetse flies) should consider the existing influencing ecological and human activities.

Biography

Kelvin Ngongolo is currently a PhD student, focusing on assessing the association of trypanosome infection prevalence in cattle with human activities, ecological factors and livestock movement in Maasai pastoral communities in the Maasai Steppe, Tanzania. He has extensive experience in conservation biology where his intensive concern has been looking how local communities are interacting with the biodiversity within and surrounding them. He is currently working as an Assistant Lecture at University of Dodoma.

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