Evaluation of sampling devices for glossina species in the Tarangire National Park- Northern Tanzania

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Abstract

Sampling devices for Glossina species are important in conducting population studies. Based on previous findings on trapping device performances in Tanzania, experiments were initiated to compare the existing devices in capturing the morsitans group of tsetse. Five different trap types including S3, Nzi, Biconical, Pyramidal, and Epsilon were evaluated for their effectiveness in capturing Glossina species in the Tarangire National Park. A total of 25 traps (five per trap type) were compared without odor attractants relative to S3 trap as a standard in a Latin Squares of 5x5x5 (treatment x site x days). The experiments were repeated twice in the rain and dry seasons. The only tsetse species found in the study area were Glossina swynnertoni and G. pallidipes. Results indicated that there was a significance difference in catches between traps and best traps were S3 and Nzi compared to other trap types. The comparison of catches with seasons showed a significance difference in fly catches more flies were captured during the dry season than in wet season. There was no statistical significant difference in catches between sex. Observations showed a statistical significant difference between species, G. swynnertoni being captured more compared to G. pallidipes in dry and wet seasons. The Nzi trap was recommended for use in sampling of Glossina species (morsitans group) in the Northern Tanzania due to its design and cost.