

A Comparative Study of Plant Species Composition of Grasslands in Saiwa Swamp National Park and Kakamega Forest, Kenya

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ABSTRACT Kakamega forest is a tropical rain forest ecosystem while Saiwa Swamp National Park (SSNP) is a riverine ecosystem. A study was conducted to determine plant species diversity of the grasslands in both the ecosystems with emphasis on herbs and grass species, and the structure of the ecotones. The objective of study was to compare the plant species richness of these two ecosystems with an aim of proposing some conservation strategies. Species diversity was determined using inverse Simpson Index. The sampling sites were determined using stratified random sampling. The random quadrats (1x1M), line intercept, and nested quadrat sampling methods were used to collect data from the clear grassland. A 5x5M sampling plot was used to collect data from the bushy-grassland community of both ecosystems. All plants species present were identified and recorded. The density, frequency, foliage cover, importance value indices and relative values were calculated. Temperature and relative humidity were determined. Results clearly show that Kakamega forest grassland community had the highest species diversity of 0.9 and an abrupt ecotone compared to Saiwa National Park of species diversity of 0.8 and a blending ecotones. These results confirmed that, there is great variation in species diversity in both ecosystems and discontinuity of ecotones due to influence of environmental conditions.