

Four systematic sample censuses are described, one of elephants in Tsavo East National Park, and three of kongoni on the Athi-Kapiti Plains. Flight paths in the form of a regular grid with 5-km spacing were used. Distribution maps from each census are shown.

A statistical test is described, which revealed the presence in two of the censuses of non-random features in the spatial distribution of the animals, on a scale large enough to interact with the sampling grid. It is recognized that this could lead to an inflated estimate of variance, as compared to that which would be obtained from a stratified random sample, but it is thought unlikely that any effect of this kind would be appreciable in practice.