

David Chiawo¹, Wellington Kombe², Adrian Craig¹

¹*Department of Zoology & Entomology, Rhodes University, Grahamstown, South Africa;*

¹*Kenya Forest Service, Malindi, Kenya*

Avian frugivore and pollinator composition in changing land use systems

Biodiversity conservation calls for identification of biodiversity hotspots where exceptional concentrations of endemic species are undergoing continuous loss of their habitats. Degradation of tropical forests due to land use have resulted in loss wildlife life and associated ecosystem services. Although Arabuko-sokoke forest is a protected area, the neighbouring landscapes are undergoing anthropogenic modifications which could subject it to a mere conservation "island". It is a biodiversity hotspot and one of the Kenya's 60 important bird areas. However, little information is available on effects of land use on different bird guilds and those that offer important ecosystem services in the area. Bird community, vegetation structure and land use characteristics were studied in one primary forest (Arabuko Sokoke forest), one plantation forest and surrounding agricultural farmlands. The study aimed to assess the effects of land use on diversity and abundance of bird frugivores and flower visitors. A total of 81 point counts distributed equally and randomly over the 3 habitat types were surveyed once per month from May 2012 to September 2013. Total bird individuals recorded by sighting and calls formed the abundance at each point count. Bird Species diversity will be measured by Shannon-Wiener Index. ANOVA, regression and multivariate analysis will be performed to determine the response of different bird guilds to different land use systems. The findings are expected to provide a baseline data that would inform decisions on ecosystem management and land use planning for conservation management of bird communities in the area.