

## ABSTRACT

In many African savanna landscapes, domestic and wild herbivores cooccur across different land-use systems, but the role of land-use in shaping their spatial relationship is poorly understood. We evaluated the spatial relationship between cattle and wild herbivores categorized by body sizes and feeding habits across different land-use types, namely, private ranches (PR), transitional lands (TRL), and pastoral grazing areas (PGA), in Laikipia County, Kenya. Cattle and wild herbivores spatial distribution data were obtained from Kenya's Department of Resources Survey and Remote Sensing (DRSRS). Spatial relationships between cattle and different wild herbivore guilds were analyzed using Ripley's bivariate  $K_{12}$  function. In PR, wild herbivore guilds showed significant attraction to cattle at short distances. In TRL, wild grazers, mixed feeders, megaherbivores, and medium-sized ungulates exhibited significant attraction to cattle. Additionally, repulsion was observed between cattle and browsers at short distances under this land-use system. In PGA, wild grazers, mixed feeders, and megaherbivores repelled strongly with cattle at short distances while browsers and medium-sized ungulates were significantly attracted to cattle. Cattle and wild herbivores were more randomly and independently distributed in PR than in TRL and PGA. These spatial relationships imply better coexistence between cattle and wild herbivores in PR than in TRL and PGA.