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Invasive alien species invading our health in Kenya

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Abstract

Invasive alien plant species threaten the integrity of ecosystems throughout the world. They affect not only the species diversity of native ecosystems but also threaten their biological integrity. Due to the increase in the movement of people and goods around the world and with new trade routes opening and enhanced transportation, the number of species being introduced into new areas is rising. Currently, the spread of invasive plant species is a major problem in Kenya, where the replacement of indigenous flora. They reduce agricultural yields, irrigated croplands, grazing areas, water availability, and contribute to the spread of vector-borne diseases.

A particular example of invasive plant is *Parthenium hysterophorus* (Asteraceae). Native to the subtropics and tropics of North and South America, the weed has negative effects on human, livestock, agriculture and the environment. The study notes that the weed is one of the world's most serious invasive plants that are able to thrive and spread aggressively outside its original geographical areas.

The aim of this study is to determine the abundance and diversity of mosquito vectors at sites with different degrees of invasive plant infestations in the Rift valley area in Kenya. The study sites are located in Baringo county, which lies between latitudes 0° 12 and 1° 36 N and longitudes 35° 36 and 36° 30 E. Mosquitoes were captured using a combination of different trapping techniques from six sites three of them with Invasive species; *Parthenium* and three without *Parthenium*. 48 species were identified. The survey was conducted to assess mosquito abundance and diversity in selected areas, which might provide beneficial knowledge for targeted control.

The findings of the study will be expected to have an inventory of the mosquito population composition and of the abundance and richness of arboviruses. Further gain insight into how changes in community ecology interact with the main types of land-use change and influence the dynamics of relevant arboviruses in Kenya.

Keywords: Agricultural expansion, agricultural intensification, arboviral disease vectors, invasive plants, land-use changes, mosquito ecology, *Parthenium hysterophorus*, pathogen transmission