INTRAGUILD INTERACTIONS BETWEEN NATIVE AND DOMESTIC CARNIVORES IN CENTRAL INDIA

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ABSTRACT

I determined various factors affecting the resource selection and spatial ecology of the Indian fox Vulpes bengalensis, a small canid endemic to the Indian subcontinent. I collected radiotelemetry data from 32 Indian foxes in the Great Indian Bustard Sanctuary, Maharashtra, India and assessed resource selection based on landcover characteristics. Indian foxes chose for grassland habitats at the scale of both landscape and home-range level and avoided humandominated areas such as agricultural lands. Indian foxes also share the landscape with freeranging dogs, which occur at higher densities than foxes due to human subsidies. Dogs can compete with carnivores either as exploitative, interference or apparent competitors. Dogs and foxes do not compete for similar food resources because dogs are mainly dependent on humanderived food whereas foxes mainly consumed wild caught food such as rodents, insects and fruit. However, dogs may act as a mid-sized carnivore on the landscape and thus there may be interference competition between dogs and foxes. I experimentally examined if the presence of dogs may deter foxes from accessing rich food sources. I found that when a caged dog was present at a food source, foxes reduced food consumption and increased vigilance behavior resulting in a foraging-vigilance tradeoff. The presence of dogs also negatively affected fox space use patterns at the landscape level indicating that because of the presence of dogs, foxes may avoid habitats such as agricultural fields and fallow lands that may hold higher prey densities. Dogs can occur at high densities in rural areas in India and extend the edge of anthropogenic disturbance, especially for small carnivores, beyond the borders of human settlements.