

Public Abstract

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Title: INTRAGUILD INTERACTIONS BETWEEN NATIVE AND DOMESTIC CARNIVORES IN CENTRAL INDIA

The Indian fox is a small canid found only in the Indian subcontinent. I studied how this species utilises its space and what it prefers in terms of habitat. This study was carried out in a semi-arid short grassland wildlife reserve in central India. Indian foxes primarily used the grassland habitats and avoided human-dominated areas such as agricultural fields and villages. However, domestic dogs which are associated with the farms and villages bordering the wildlife reserve are free-ranging, and may negatively influence how foxes use the landscape. Dogs are dependent on garbage and other human refuse and therefore do not compete for food with foxes which eat mainly small rodents, insects, and fruit. However, because dogs are larger than foxes, they can compete through a process called interference in which just the presence of a larger carnivore can cause the smaller carnivore to avoid using a certain area. Indeed, foxes avoided rich food sources in an experimental setup even when a caged dog was present. This resulted in what is called a foraging-vigilance trade-off which results from foxes spending more time being vigilant and less time eating. Because dogs in this area are present at much higher densities than the foxes, they can also cause foxes avoid certain habitats such as agricultural fields and fallow lands where dogs are more likely to be found, even though these habitats have higher rodent abundance than the grassland habitats. Thus, dogs, by virtue of being a human-subsidized mid-sized carnivore, can negatively affect the presence of smaller carnivores. This can be a problem in many parts of the world, especially where there are endangered carnivores in areas of conservation concern.