

Adaptive behaviour can permit coexistence between predators

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Where direct killing is rare and niche overlap low, sympatric carnivores may appear to coexist without conflict. Interference interactions, harassment, and injury from larger carnivores may, however, still pose a risk to smaller mesopredators.

The foraging behaviour of red foxes, *Vulpes vulpes*, was studied with automated cameras and a repeated measures giving-up density (GUD) experiment. In an area with minimal human interference (Plitvice Lakes National Park), red foxes utilized olfaction to assess risk and experienced foraging costs due to the presence of a cue (urine) from gray wolves, *Canis lupus*.

Spatial interactions and fox elusiveness was studied with a combination of two and single species occupancy models. Foxes occupied areas with and without large carnivores equally. Fox detectability fluctuated through the year and, against expectations, was positively associated with the presence of large carnivores (particularly lynx), but negatively with humans. A positive association between fox and large carnivore detectability suggests shared habitat preferences, increased activity due to scavenging opportunities and/or a strategy of higher mobility when large carnivores were present. In a less modified landscape where food subsidies were minimal, foxes employed an elusive strategy towards human super predators.

Activity patterns showed temporal segregation between nocturnal carnivores and diurnal