

PREDATOR-PREY RELATIONS AND DENSITY ESTIMATIONS BASED ON CAMERA TRAP DATA IN BÜKK NATIONAL PARK, HUNGARY

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Population increase of large carnivores in Hungary is a recent phenomenon that causes many tension among different stakeholder groups affected by these animals. Human-wildlife conflicts are intertwined with strong bias and misbeliefs thus the solution of these conflicts must be based on objective data and sound science. Bükk National Park Directorate in Hungary was our study area for testing the effects of the naturally returning wolf (*Canis lupus*) on the local prey and mesocarnivore population. Being an apex predator, the wolf has the potential to regulate the lower trophic levels by direct consumption or by indirect behavioural changes (ecology of fear). To be able to determine the magnitude and the intensity of wolf presence on its common prey species, such as red deer (*Cervus elaphus*), roe deer (*Capreolus capreolus*) and wild boar (*Sus scrofa*), reliable population density estimations are needed both for predator and prey. The current estimations however, are based on hunting bag data and expert's assessment, which methods are questioned by many experts. Random Encounter Model (REM) can provide reliable alternative for density estimations, by using the information of camera traps without the need of individual recognition of the animal. By comparing the results of REM it is possible to see if this non-invasive, cost-efficient and objective method could offer an alternative of the previous approaches used by wildlife management.