Wolf depredation management: An investigation into the effectiveness of low-tech primary repellents causing stimuli disruption as potential methods of livestock protection from the Grey Wolf (Canis lupus)

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Abstract

Recent studies have shown Wolves to be a valuable keystone predator providing many irreplaceable ecosystem services. Human wildlife conflicts have been a major cause of extirpation and decline in Wolf populations from many parts of the world. Depredation upon livestock and over-zealous human retaliation are a major problem in the conservation of large carnivores. Low-tech, inexpensive, non-lethal depredation controls would be a valuable conservation tool in parts of the world such as Eastern Europe where Carnivores are persecuted because of livestock losses. Low-tech stimuli disrupting repellents could offer a solution and alternative to lethal control and easily be incorporated into traditional husbandry and management schemes. The experiment tested the effects of five potential repellents upon the behaviour of three test groups of captive Wolves. Proportions of Inquisitive, Fearful and Oblivious behaviour exhibited towards repellents were collated and analysed. Flagging and Wind Chimes were found to have significant effects upon the behaviour of groups two and three, eliciting high levels of fear which did not succumb to habituation over the thirty five day test period. Silent Roar (Lion scented faecal pellets in string bags) significantly impacted the behaviour of a lone male Wolf (group three). Fearful behaviour towards Cd's and Silent roar showed significant signs of habituation over the test period. Some repellents tested showed promise as Wolf deterrents, and could possibly be used as part of an integrated adaptive depredation management programme. Only once human, environmental, carnivore and site specific factors are taken into account can an adaptable management plan be implemented and conservation of large carnivores achieves success. It is of utmost importance to keep striving to discover and test the effectiveness and field application of non-lethal depredation controls if large carnivores and humans are to co-exist peacefully.