THE AFFECT OF CLIMATE CHANGE ON THE PREVALENCE OF NASAL BOTFLY (CEPHENEMYIA STIMULATOR) INFESTATION IN ROE DEER

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Climate change is affecting the prevalence of nasal botfly (Cephenemyia stimulator) infestations in roe deer through several interrelated pathways. Initially, an anticipated increase in roe deer numbers, due to enhanced environmental productivity linked to climate change, has been observed (Melis et al., 2009). Contrarily, the unchanged birthing patterns of roe deer amidst climate change, in comparison to other mammals, suggest a possible asynchrony with vegetation growth cycles, potentially impacting their population structure (Plard et al., 2014). The role of climate-induced shifts in vegetation growth is significant, indirectly impacting roe deer by altering the availability of their food sources, thus emphasizing the need to assess how climate change affects the food resources of these herbivores (Davis et al., 2016). Roe deer's adaptive behaviors to climate change, such as dietary adjustments based on available vegetation, might help them navigate the challenges posed by changing climate conditions, including heightened heatwaves and drought occurrences (Minder, 2011). The shift towards earlier birthing times in roe deer due to climate change reflects the evolutionary pressure favoring early births aligned with changing vegetation phenology (Hagen et al., 2021). These shifts in birth timing are consistently observed across roe deer populations, suggesting a capacity for evolutionary adaptation to climate-related stresses (Plard et al., 2013). Additionally, the influence of climate change on roe deer demographics is notably linked to springtime weather patterns, which may have significant consequences for their survival and population trends (Gaillard et al., 2013). Changes in cervid distribution, such as those involving red deer, could affect the spread and severity of myiasis from Cephenemyia stimulator in roe deer, altering the landscape of parasitic infections (Fontán et al., 2019). In areas where infestations are endemic, observed behavioral modifications in roe deer to evade parasites suggest possible adaptive strategies to lessen the burden of such infestations (Morrondo et al., 2021). In sum, climate change is profoundly connected to multiple facets of roe deer ecology, encompassing population dynamics, demographic changes, adaptive behaviors, and interactions with parasites like the nasal botfly. Grasping these intricate connections is vital for the formulation of effective strategies for wildlife conservation and management amidst ongoing environmental transformations.