Ecology, physiology and behaviour

The effects of sex, age, season and habitat on the diet of red fox (*Vulpes vulpes*) in Western and Central Lithuania

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DOI: 10.20315/evmc.2025.106

We investigated the dietary diversity of red fox (*Vulpes vulpes*) in different seasons depending on the individual's sex and age in Western and Central Lithuania. The objectives were: (a) to assess the dietary diversity depending on the sex and age of the individual; (b) to investigate the dietary diversity of foxes in different seasons; (c) to investigate the dietary diversity of foxes in different regions of Lithuania; (d) to assess the effect of health on the diet of foxes.

465 red fox carcasses were collected from October 2021 to December 2023, and their diet was investigated by stomach content analysis in two regions of Lithuania. Additionally, each fox was weighed, measured, sexed, aged, and examined for scabies infection. Food remains were detected in 379 stomachs (81.5%). The study showed that small rodents (*Microtus*) dominated in the foxes' diet (51.6% of stomachs). Other food remains were found less frequently: carrion (24.4%), birds (18.8%), fish (4.9%), invertebrates (45.0%), fruits, seeds and vegetables (39.4%), plant materials (55.0%), anthropogenic materials (1.7%), and others (1.3%). Characteristic differences in dietary diversity were found depending on sex and age. The food niche of adult male and juvenile foxes was more diverse than that of adult females. Based on our findings, red foxes can be recognised as omnivorous predators, feeding on readily available and abundant prey. 46 individuals were found infected with scabies, representing (9.9%), therefore the healthy individuals represented 90.1% of studied foxes. The diet was not affected by the scabies infection.