

# Prevalence of *Strongyloides robustus* in a population of Southern flying squirrels in central Wisconsin

Two species of flying squirrels, the northern flying squirrel (*Glaucomys sabrinus*) and the southern flying squirrel (*G. volans*), were formerly found in Schmeckle Reserve, but *G. sabrinus* has not been seen in the reserve since 2004. A possible reason for why northern flying squirrels no longer occur in the reserve includes parasitism by *Strongyloides robustus*, a nematode that impacts northern flying squirrels but does not affect southern flying squirrels. Our goal was to determine prevalence of *S. robustus* in southern flying squirrels in Schmeckle and to compare prevalence to data previously published by Pauli et al. (2004). We hypothesized that *G. volans* would have a higher prevalence of *S. robustus* in 2013 than published in Pauli et al. (2004) and that males would have a higher prevalence of *S. robustus* than females. We collected fecal samples from flying squirrels that were captured in Sherman live traps and from known used nest boxes. All scat samples were collected from flying squirrels live-trapped throughout October and nest boxes on 16 October and preserved in 95% ethanol. Fecal samples were analyzed on 12 November for the presence of *S. robustus* using a standard fecal flotation technique. We used a Fisher's Exact test to determine if prevalence varied with gender and to determine if prevalence varied from that published in Pauli et al. (2004). Prevalence did not vary by sex ( $P=1.00$ ), and although prevalence increased in 2013 when compared to early 2000's, the results were not statistically significant ( $P=0.144$ ). These data could be used in the future to help minimize the displacement of northern flying squirrels in areas where the two species are sympatric.

Poster

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