A Tale of Tails:
The Function of Tail-Flagging Behaviours in Eurasian Red Squirrels

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Introduction

Animals use various forms of vocalizations and visual signals to communicate to one another. Situations such as foraging needs, competition with conspecifics, and threats from predators has necessitated the use of diverse methods of communication.

One method of communication in Eurasian Red Squirrels is tail-flagging. During this process, tails are waggled purposefully in S-shaped movements. Currently, there has been no research to determine what the function of this visual signal is. Our study aims to investigate the purpose, content, and audience of tail-flagging in Eurasian Red Squirrels. Understanding their communication provides valuable insight into the conservation of this endangered species.

Method

Phase 1: Observational Research
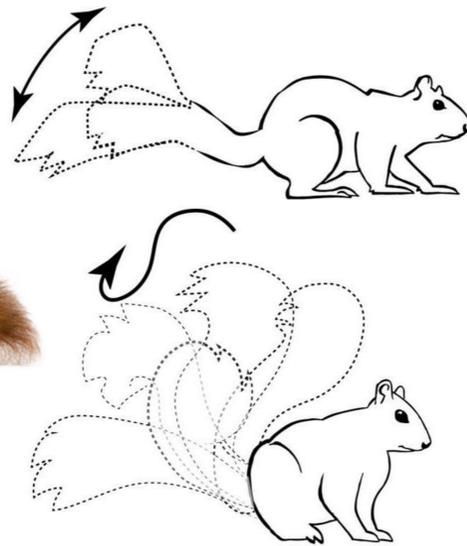
First, we will code different tail movements in Eurasian red squirrels. McCrae & Green (2014) classified tail movements of gray squirrels as:

Flick: smaller than 45°
Flag: larger than 45°

Image by Scott Bradley

Phase 2: Experimental Research

After coding, we will introduce different predator and conspecific presentations. McCrae & Green (2014) found that twitches and flags corresponded to different predators in gray squirrels.
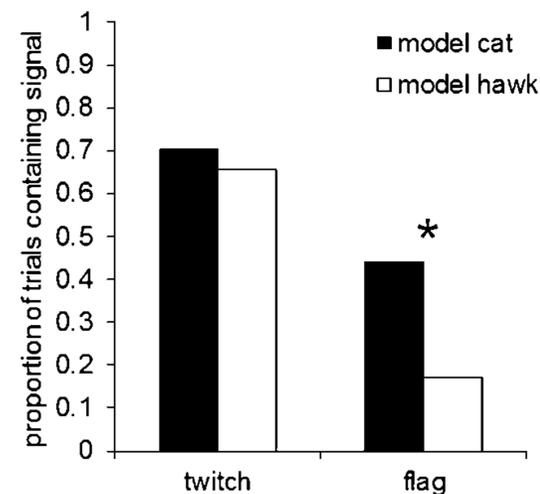
McRae, T. R., & Green, S. M. (2014). Joint tail and vocal alarm signals of gray squirrels (Sciurus carolinensis), *Behaviour*, *151*(10), 1433-1452. doi:10.1163/1568539X-00003194.

Expected Results

- Eurasian red squirrels will respond similarly to gray squirrels when presented with aerial and terrestrial predators.

- Because Eurasian reds are more social than gray squirrels, tail-flagging in red squirrels may function as a social component to thwart conspecifics.

Implications

- Novel research area
- Potential to aid the conservation of an endangered species