

Deer Vigilance Behaviors by Species

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Introduction

Purpose:

To investigate whether herds of deer exhibit coordinated vigilance, as exhibiting such anti-predatory behavior could indicate an advanced form of communication that could be attributed to inherited instincts.

Research Questions:

RQ1: Do deer display coordinated vigilance behavior?

RQ2: Do vigilance behaviors differ between *Elaphurus davidianus*, Fallow deer (*Dama dama*), and Red deer (*Cervus elaphus*)?

Methodology:

Over two days of observation at Margam Country Park in Wales, we gathered 90 minutes of video footage in 10-minute intervals, 30 minutes per species.

For each 10-minute video, we used scan sampling and counted the total number of deer in frame. We noted the location of each observed deer within the herd, and recorded whether each observed standing deer had its head up, employing time sampling in 30 second intervals.

It appears that the responsibility of vigilance is a shared behavior, suggesting that the deer have some form of communication to indicate when individuals will take shifts and go from non-vigilance to vigilance and vice versa.

Our findings suggest that vigilance is an instinctual and intentional behavior which may be impacted by the presence of predators, genetic diversity, and environmental factors:

