



Dead Varied thrush – female
(*Ixoreus naevius*)
photo: Krista De Groot

Seasonally frugivorous forest birds and window collision fatalities: novel integration of bird counts in fall improves assessment of species vulnerability to collisions

INTRODUCTION

Bird-window collisions are a growing conservation threat, yet little is known about this threat in mountainous regions and during the overwintering period for birds.

METHODS

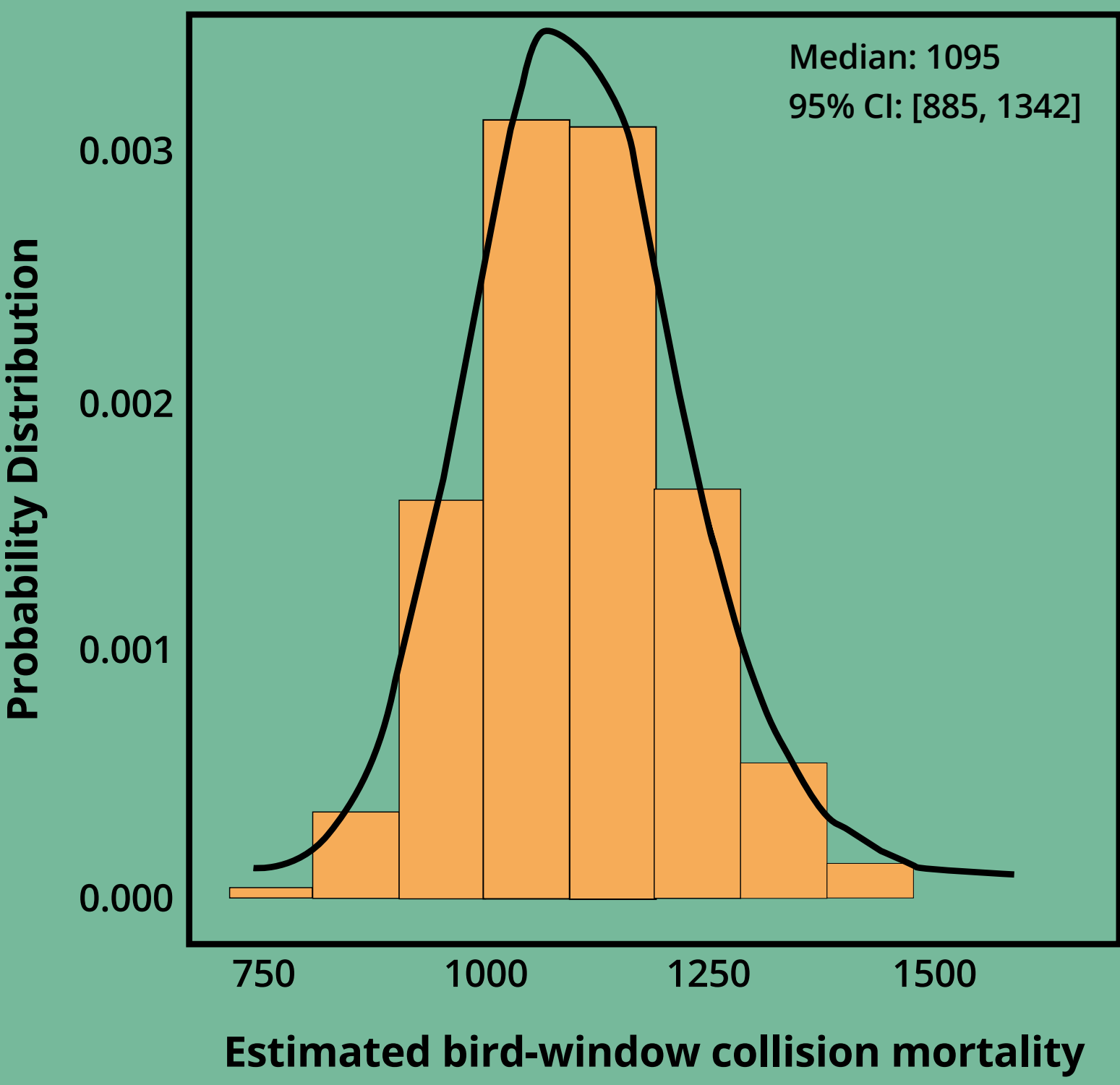
We surveyed for bird-window collisions at a Pacific coastal university and estimated the number of bird collisions that occur at our study buildings and across campus, correcting for carcasses missed by searchers and removed by scavengers.

We evaluated species vulnerability to collisions by comparing collision numbers to local abundance estimates of each species. To account for low detectability of some species on point counts in fall, we developed a novel analysis that integrates point count and mist net capture data to improve abundance estimates.

RESULTS

An estimated 1,095 birds (95% CI 885–1,342) are killed every year by colliding with 51 buildings at the University of Victoria between September 15 and February 10.

An average of 21.5 birds are killed per building on campus during the 149-day fall and winter period.



Seasonally frugivorous forest birds—including Hermit thrush, Varied thrush, Swainson’s thrush, American robin, and Golden-crowned kinglet—were most vulnerable and susceptible to population-level impacts from bird-window collisions.



Hermit thrush (*Catharus guttatus*)
photo: Wild Return (Openverse)



Varied thrush – male (*Ixoreus naevius*)
photo: Paul Jacques



Swainson’s thrush (*Catharus ustulatus*)
photo: Paul Jacques



Golden-crowned kinglet (*Regulus satrapa*)
photo: Paul Jacques



American robin (*Turdus migratorius*)
photo: Lukas Miller

Latitudinal migration in fall, elevational movements in early winter, and behavioral patterns typical of forest birds or associated with tracking ephemeral resources—such as fruits—in fall and early winter, may explain our observed high collision rates during these seasons, and why certain species were more vulnerable to collisions at our study site.