

Together for Wildlife

'Together for Wildlife HC'ITF Conservation Scholarship Recipient 2026

Andie Siemens



Andie Siemens is a PhD candidate at Simon Fraser University, co-supervised by Dr David Green (SFU) and Dr Ryan Norris at the University of Guelph, studying the behavioural ecology of Canada jays (*Perisoreus canadensis*) in the subalpine forests of Paradise Meadows, Strathcona Provincial Park, Vancouver Island.

Climate change is altering winter conditions across Canada, creating new risks for resident wildlife. Canada jays are especially vulnerable because they rely on caches of perishable food to survive and breed in winter. Long-term research in Algonquin Provincial Park shows that warmer falls and freeze-thaw events can spoil these caches and drive population decline. Andie's research extends this work to a highly unusual population on Vancouver Island, which lives in large groups with dominance hierarchies and, sometimes, multiple breeding pairs (plural breeding), providing a rare opportunity to test whether social structure buffers or worsens the effects of climate change on population resilience. Andie has already quantified dominance relationships using behavioural observations of individually marked jays, revealing steeply linear hierarchies driven by sex and territory tenure, consistent with a patriarchal society with social queueing.

Using over a decade of demographic, behavioural, genetic, and environmental data, Andie will examine how climate, social rank, dispersal, and breeding structure interact to shape population outcomes. To further assess this population's unique plural breeding system, Andie is currently sequencing DNA samples at the Cornell Lab of Ornithology to assign mother-father pairs to offspring and estimate relatedness within social groups.

This project also creates new ways for British Columbians to participate in wildlife monitoring. Deploying lightweight Blue Morpho+ transmitters on the jays will allow hikers to help collect recapture data through Bluetooth-enabled phones. Online profiles will allow hikers to learn about individual birds they've encountered on the trails, including their age, social rank, and territory history. In collaboration with local partners like the Strathcona Wilderness Institute and the K'ómoks First Nation, this project supports climate-change research, wildlife stewardship, and public engagement in Strathcona Provincial Park.



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