

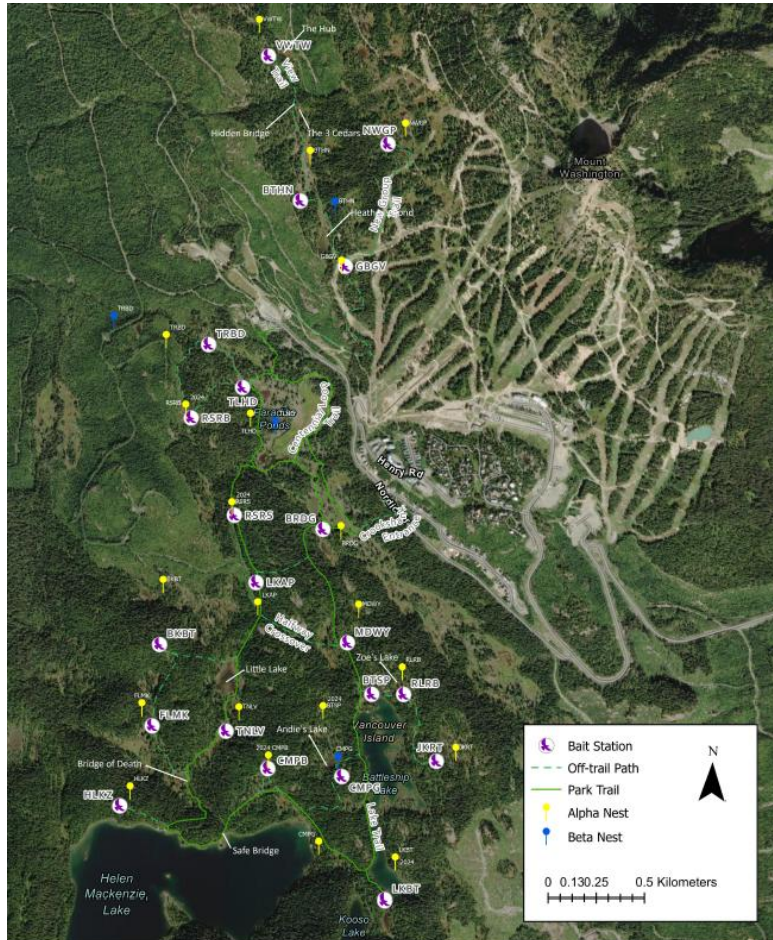
CAJA Field Report

Summer 2025

Andie Siemens

Field Map

- Updated field map for summer 2025
 - Alpha nests represented by yellow pins
 - Beta nests represented by blue pins
 - We did not search for nests at 5 territories (CMPB, RSRB, RSRS, LKBT, BTSP), so I pinned last year's nests and labelled nests as 2024



CAJA Field Map Summer 2025

Territories

- Monitored 22 territories
 - Midway went vacant, pair that nested on Midway in march have now joined Battleship (female was a part of Battleship last year)
 - A new territory, named ThreeCedars, appeared between Biathlon and ViewTwo
 - BackBait pair disappeared after the first week and was not found again despite checking territory weekly
 - Birds on RealRabbit last summer disappeared in March and were replaced by a pair that left JackRabbit
 - LakeApproach territory finally produced fledglings for the first time since 2019
- 125 birds observed
 - 63 adults
 - 8 second-years (born summer 2024)
 - 54 hatching-years (born summer 2025). Not counting 2 HYs that Dan found and banded at "JackRabbitBudOff" (a new bud-off territory, difficult to access)
- Group sizes
 - Largest group = 13 birds (Biathlon, 7 adults, 0 second-years, 6 HYs)
 - Smallest groups = 2 birds (BackBait, FalseMack, RealRabbit, and ThreeCedars)
 - Average = 5 birds
- 3 confirmed plural-breeding territories
 - Beta nests found at 3 territories (Biathlon, Campground, and Trailhead)
 - HYs from both alpha and beta pairs found at campground (7 HYs) and biathlon (6 HYs)
 - Trailhead produced 3 HYs, unknown if from the alpha or beta pair

Territory	Territory_code	Nests	# Adult	# SY	# HY	Total	
BackBait	BKBT	1	2	0	0	2	
Battleship	BTSP		4	1	0	5	
Biathlon	BTHN	2	7	0	6	13	
Bridge	BRDG	1	3	1	5	9	
Campground	CMPG	2	4	0	7	11	
CampgroundBudO	CMPB		2	0	4	6	
FalseMack	FLMK	1	1	1	0	2	
GreatBigView	GBGV	1	3	1	4	8	
HelenMackenzie	HLKZ	1	3	1	3	7	
JackRabbit	JKRT	1	2	0	3	5	
LakeApproach	LKAP	1	2	0	3	5	
LakeBottom	LKBT		3	0	4	7	
Midway	MDWY	1	0	0	0	0	vacant
NewGroup	NWGP	1	3	0	2	5	
RealRabbit	RLRT	1	2	0	0	2	
RossitersRise	RSRS		2	0	4	6	
RossitersRiseBudO	RSRB		2	1	3	6	
TenEleven	TNLV	1	3	0	0	3	
Trailhead	TLHD	2	6	0	3	9	
ThreeCedars	THCD		1	1	0	2	
TreeBeard	TRBD	2	4	1	1	6	
ViewTwoBudOff	VWTB		2	0	0	2	not monitored
ViewTwo	VWTW	1	2	0	2	4	
		20	63	8	54	125	

Dominance Sessions

- Conducted a total of 147 dominance sessions
- Every territory visited weekly to record birds and check for HYs
- Conducted at least 3 dominance sessions at every territory (weeks 1, 2, and 8)
- Conducted an additional 4 sessions at territories with HYs (weeks 4, 5, 6, and 7) for a total of at least 7 sessions
 - 3 territories had late HYs that didn't come out until week 5 (NewGroup, LakeBottom, and JackRabbit), so had only 6 sessions
- Number of interactions per dyad per territory
 - Minimum = 4 (conservative number because this includes HYs that left/died early in the season)
 - Maximum = 29
 - Mean = 11
- LakeApproach seemingly has a circular dominance structure between the HYs (A>B, B>C, C>A)?

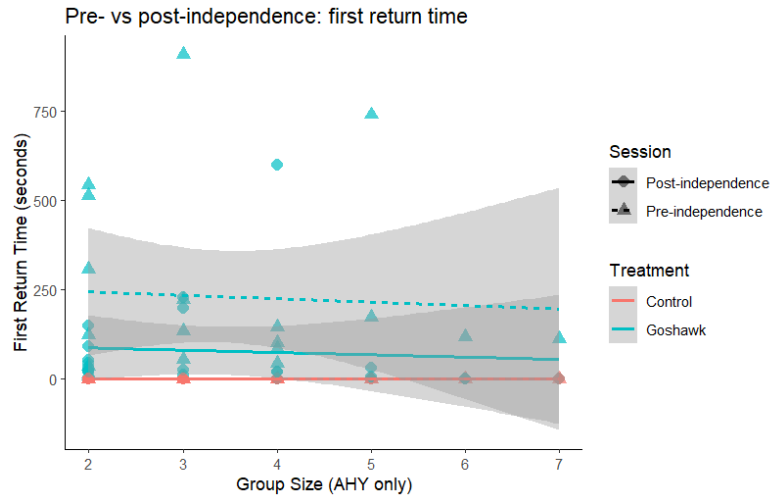
Goshawk Playback Experiment

- Conducted 2 goshawk playbacks experiments for 19 territories (BKBT territory was not found)
 - Pre-juvenile independence (weeks 2 & 3)
 - Post-juvenile independence (weeks 7 & 8)
- For each experiment (pre- and post-independence), each territory received a control and a goshawk in random order a week apart
 - Control: randomly assigned 3 versions of dark-eyed junco calls from Vancouver Island
 - Goshawk: randomly assigned 3 versions of a goshawk alarm call from Vancouver Island, Haida Gwaii, and Alaska
 - Total of 19 paired controls and goshawk treatments for both pre- and post-independence
- Recorded immediate response and location (on bait, on ground, nearby tree...) per bird
 - No response
 - Freeze
 - Flee/cover
 - Searching/sentinel
- Recorded IDs and return times of all birds after playing call
- Filmed the first experiment (weeks 2 & 3) for reference
- Preliminary results:
 - All 3 versions of the goshawk call produced a response (freeze, flee, and/or search). None of the 3 dark-eyed junco control calls produced a response, some birds paused eating to listen but then continued to eat while call played. No birds left the bait for the control call, therefore first return time (time of the first bird to return to the bait) was always 0.
 - Slight negative relationships between group size and first return time for the pre-independence experiment (beginning of June). Slightly positive relationship for

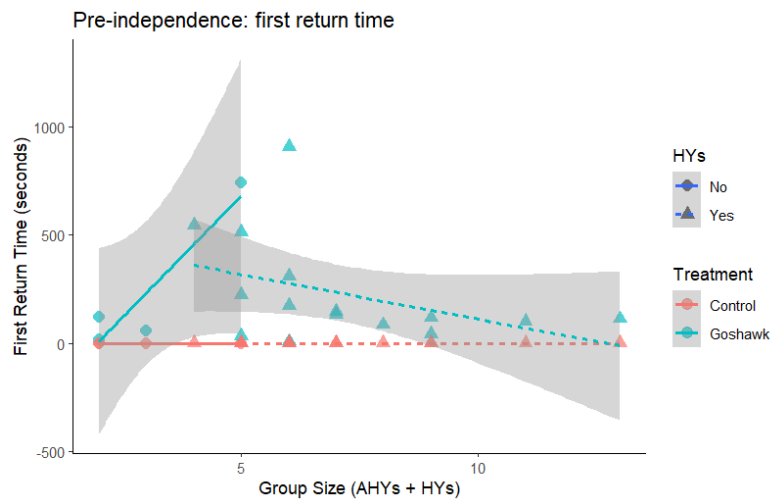
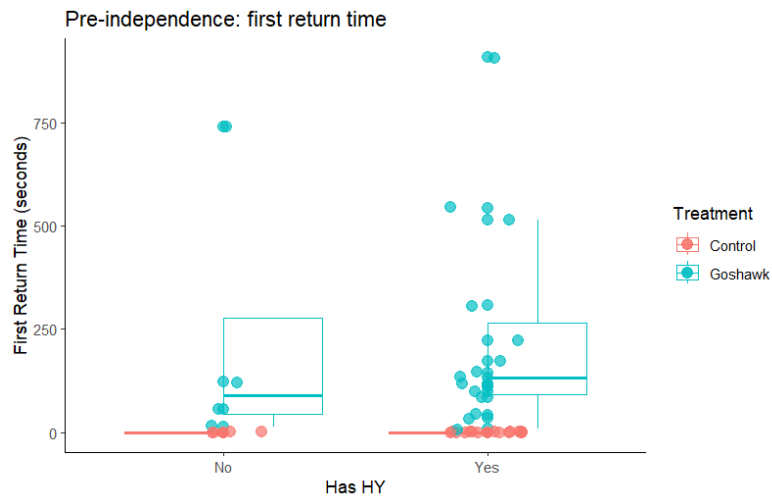
post-independence experiment (end of July). Group size counted as number of adults and hatching-years (AHYs + HYs). Yet to test significance.

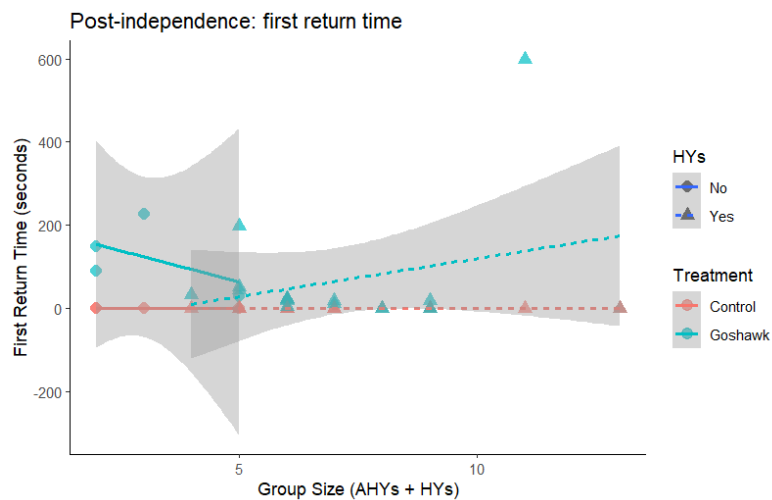
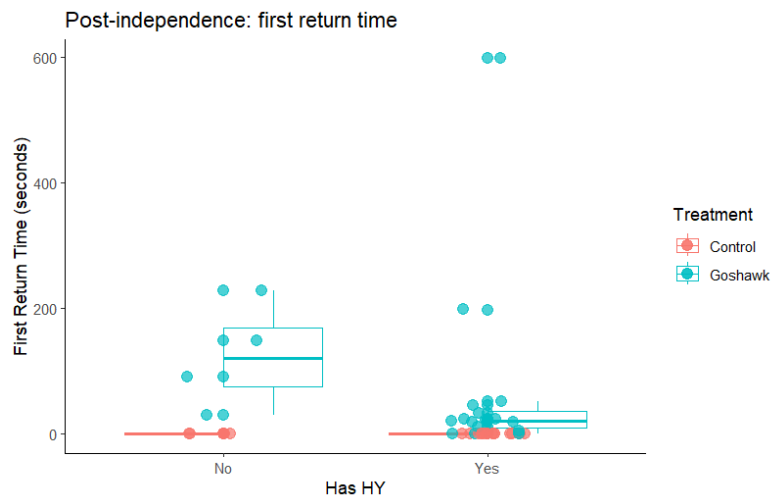


- Return times were shorter for the post-independence experiment (end of July) compared to pre-independence experiment (beginning of June). Difficult to see in the graph, but triangles and dotted line are pre-independence, and circles and solid line are post-independence.



- Unclear if groups with HYs vs groups without HYs affected first return time. Not enough groups without HYs to include an interaction between group size and presence of HYs?





- Can also analyze last return time, average return time, SD return time.
- Yet to look at dominance in the order of birds returning, but seems like low-ranking birds are first to return and alpha males are last to return
- Yet to look at the immediate response types (freeze, flee, search), but seems like responses are less severe post-independence compared to pre-independence, (Pre-independence adults would flee for cover and sometimes freeze in the branches before flying to the tops of the trees searching and scanning the area. Post-independence adults would only fly to branches to search but wouldn't flee or freeze.)

Banding

- Banded 40 HYs
- Recaptured 14 birds to take adult measurements
- Re-collected blood from 4 birds where Theresa's genotyping returned no result

Other

- Gave a 45min talk of my work to date at the Strathcona Wilderness Institute and led field trip to demonstrate a dominance session
- Got permission from Mount Washington to use the Hawk chair lift to access upper territories more easily
- Made a mock-up for a website to share Paradise Meadows CAJA research with public (got a lot of interest in the research from speaking with people on the trail), including a form to submit photos of bands for extra re-sighting data
 - Discuss paying for squarespace website subscription to publish website or build a new page on Ryan's lab website?
 - Add Algonquin research and a general CAJA research website?
- Next steps:
 - Test significance of goshawk data
 - Candidacy exam fall semester
 - Extract DNA from march and summer 2025 blood samples
 - Send all blood samples and feather samples from Theresa's lab to SFU for organizing
 - Organize visit to Cornell for genotyping and sexing