

2022 Fall Report

Canada Jay Research Project

Paradise Meadows, Strathcona Provincial Park

British Columbia

Dan Strickland, October 18, 2022

This was the sixth year of the Canada Jay project at Paradise Meadows. The main findings and new developments were as follows:

1. With the able help of Yara Ibrahim (Figure 1), a coop student made available by Ryan Norris (U. of Guelph), 34 nests on 24 territories were found while under construction (and two more were known to exist but not precisely located). See Figure 2.
2. Only 11 fledglings were found on the 24 territories in June, by far the lowest production of June juveniles in the six years of the study (and only one fifth of the greatest production—55 fledglings banded on the same territories in 2019; Figure 3).
3. Persistently colder and snowier than normal conditions during the nesting season may have contributed to the poor production of fledglings (Figure 4). Alternatively, predation on newly fledged (highly vulnerable) young jays might also have been responsible as there was evidence from two sightings and the discovery of two half-eaten Sooty Grouse carcasses (Figure 5) that there was at least one Goshawk in the study area.
4. Complementing the field study, Dr. Brendan Graham, a post-doctoral fellow in the lab of Dr. Theresa Burg of the University of Lethbridge, completed the sex determinations of over 350 Paradise Meadows jays and the parentage of 161 fledglings using blood and feather samples collected at the time of banding since 2016. This is a major contribution to a paper now being written to document the behavioural, social-organization, and other differences between the Pacific and Boreal morphotypes (races) of the Canada Jay. Figure 6, for example, illustrates how knowing the sex of individual birds makes it possible to have a much clearer idea of the size differences between males and females of the two races.
5. As in previous years, miscellaneous insights into Paradise Meadows Canada Jay natural history continued to be collected opportunistically (Figures 7-11).

Special thanks not only to Yara Ibrahim but also to volunteers Heather Holmes, George and Sharon McLeod, Bryan Gates, and Tony Green for help in the field and to Loys Maingon for his identification of Wolf Lichen, *Letharia vulpina* (Figure 10).



Figure 1. Yara Ibrahim at the just-discovered location of the secondary Campground nest, the 34th and last to be discovered in 2022 (April 29).

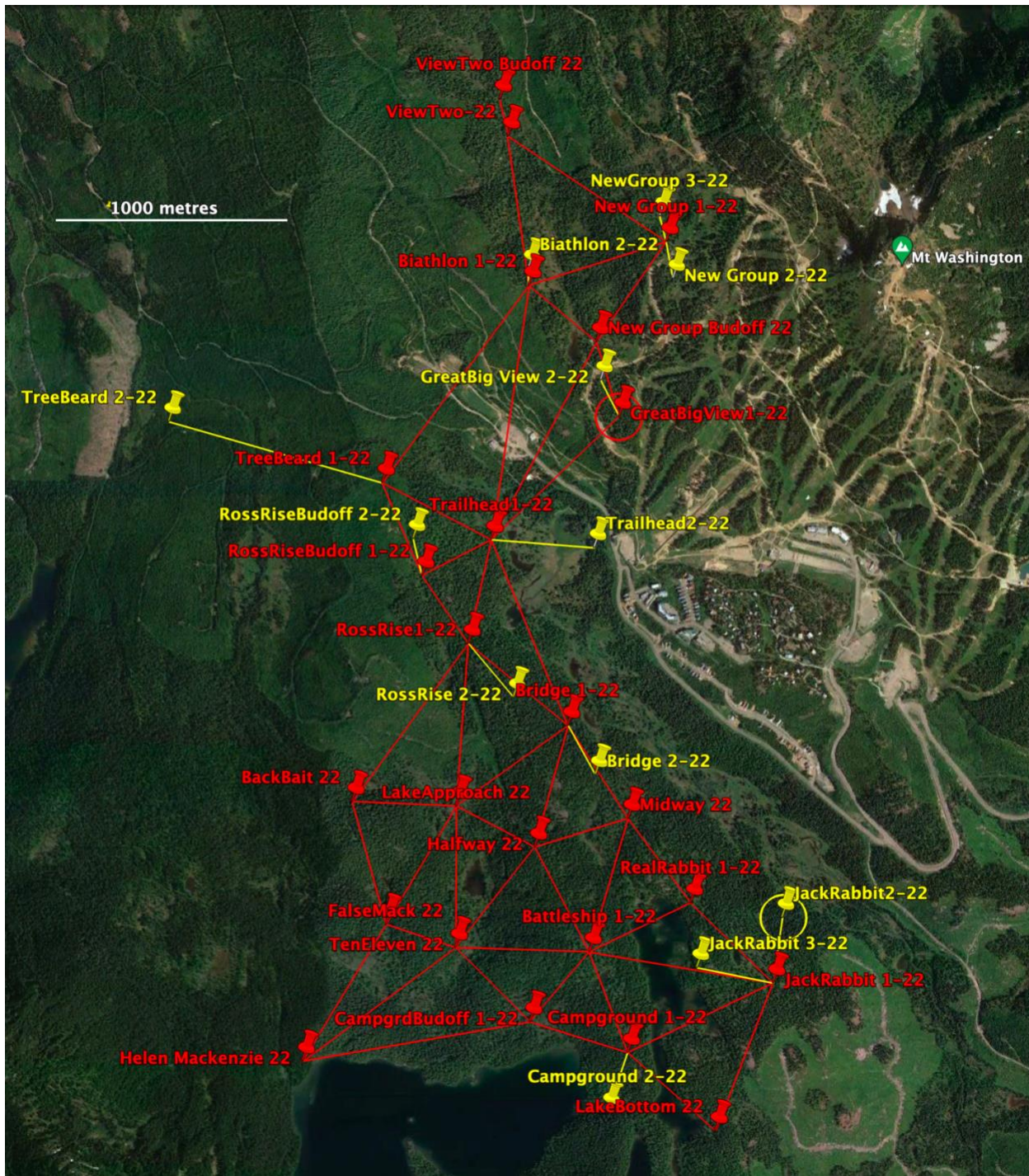


Figure 2. Locations of the Canada Jay nests located in the Paradise Meadows study area in 2022 plus the approximate locations (circles) of two other nests known to exist but not precisely located. Red pins indicate the primary or only nests on the 24 territories and yellow pins indicate the locations of 10 secondary nests and 2 tertiary nests on ten territories.

Figure 3. Identities, ages, sex, and numbers of all Adults, HY, and older juveniles in June and again in the fall (mid-October) of 2022.

June-Fall Composition of Paradise Meadows Canada Jay Social Groups to October 15, 2022 (Contact Dan Strickland: perisoreus1@gmail.com)																	
2022	ViewTwo Budoff?		ViewTwo		Biathlon*		NewGroup*		NewGroup Bud-off		GreatBigView*		Trailhead*		TreeBeard*		
	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	
"ADULTS"	KOPLYOSR _{m19-} YOPLBOSR _{m19-}	KOPLYOSR _{m19-} YOPLBOSR _{m19-}	BOSLWR _{m17} POSLTR _{m15-}	BOSLWR _{m17} POSLTR _{m15-}	LOSRR _{m09-} TPOSRR _{m05-} OOSLWOPR _{m18-} TOSLROBR _{m05-} ROSILTOLR _{m21}	SOLLRR _{m09-3} TLPOSRR _{m05-} OOSLWOPR _{m18-} TOSLROBR _{m05-}	TOYLOSRR _{m19-} OOSLPOBR _{m09-} WOTLLOSRR _{m19-} BOSLKOTR _{m19-} GOSLYOLR _{m19-} OOSLKOBRR _{m19-}	TOYLOSRR _{m19-} OOSLPOBR _{m09-} WOTLLOSRR _{m19-} BOSLKOTR _{m19-} GOSLYOLR _{m19-} LOBLYOSR _{m20}	GOSLYOPR _{m20} KOPLBOSR _{m09-}	GOSLYOPR _{m20} KOPLBOSR _{m09-}	ROSLOPYR _{m19-} GOSLRORR _{m026-}	ROSLOPYR _{m19-} GOSLRORR _{m026-}	PLBOSR _{m15-} LOSILBR _{m15-} LOSLOYR _{m19} TOSLROWR _{m19} POLRPOSRR _{m021} YOBLOOSR _{m021} (WOSLPOOR _{m20})	PLBOSR _{m15-} LOSILBR _{m15-} LOSLOYR _{m19} TOSLROWR _{m19} POLRPOSRR _{m021} YOBLOOSR _{m021} WOSLPOOR _{m20}	WLKOSR _{m17} YOSLWOBRR _{m018-} BOSLWOSRR _{m19} BOSLWOBRR _{m19} (BOTLLOOSR _{m19}) GOGLOSRR _{m021} POWLTOSSR _{m21}	WLKOSR _{m17} YOSLWOBRR _{m018-} BOSLWOSRR _{m19} BOSLWOBRR _{m19} (BOTLLOOSR _{m19}) GOGLOSRR _{m021} POWLTOSSR _{m21}	
YOUNG Hatched in 2022	None	None	OOGLOPSR ₂₂ TOGLTOSR ₂₂	OOGLOPSR ₂₂ TOGLTOSR ₂₂	YOSLTOOR ₂₂ LOKLTOSR ₂₂	YOSLTOOR ₂₂	None	None	None	None	None	None	SOGLTOOR ₂₂ TOPLSOYR ₂₂	TOPLSOYR ₂₂	None	None	
Hatched Elsewhere														KOBLGOSR ₂₂			
2022	HelenMackenzie		FalseMack		BackBait*		TenEleven		Halfway		LakeApproach		Rossiter's Rise*		RossRise Bud-off*		
	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	
"ADULTS"	ROSIPR _{m15-} OOBLOSRR _{m07-} TOBLGOSR _{m21} LORLPOSRR _{m19}	ROSIPR _{m15-} OOBLOSRR _{m07-} TOBLGOSR _{m21} LORLPOSRR _{m19}	RLROSRR _{m15-} LOSILKR _{m07}	RLROSRR _{m15-} LOSILKR _{m07}	GOSLTR _{m15-} TOSLYOBR _{m18} YOKLBOSR _{m21}	GOSLTR _{m15-} TOSLYOBR _{m18} YOSLYOGR _{m19}	TLOSRR _{m15-} POSILYOBRR _{m19} BOLKOSR _{m21}	TLOSRR _{m15-} POSILYOBRR _{m19} BOLKOSR _{m21}	PLROSRR _{m17} ROLLLOSRR _{m021}	PLROSRR _{m17} ROLLLOSRR _{m021}	(GLRO)SR _{m15-4} KLWOSRR _{m07}	GLROSRR _{m15-} KLWOSRR _{m07}	LOPOSRR _{m09-} BKOSRR _{m16} KLGOSRR _{m19} KLGOSRR _{m16} LOSLOYR _{m21}	LOPOSRR _{m09-} BKOSRR _{m16} KLGOSRR _{m19} KLGOSRR _{m16} YORLTOSSR _{m21}	WLLOSRR _{m15-} KOSLROLR _{m19} SOSLOYR _{m19} KOILGOSRR _{m19}	WLLOSRR _{m15-} KOSLROLR _{m19} SOSLOYR _{m19} KOILGOSRR _{m19}	
YOUNG Hatched in 2022	YOGTOSR ₂₂	YOGTOSR ₂₂	None	None	None	None	None	None	None	None	None	None	None	None	None	None	
Hatched Elsewhere					WOSLOOGR ₂₂ YOSLPOGR ₂₂												
2022	CampgroundBudoff		Campground*		LakeBottom		JackRabbit*		RealRabbit		BattleShip		Midway		Bridge*		
	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	June	Fall	
"ADULTS"	(BO)SIPR _{m15-} ROSILTOPR _{m20} TOSLYOPR _{m21}	SOBLPR _{m15-} ROSILTOPR _{m20}	(YO)SILGR _{m15-} POSILBOKR _{m18} TOSLLOBR _{m18} YOSLBOBR _{m19}	SOYLGR _{m15-3} POSILBOKR _{m18} TOSLLOBR _{m18} YOSLBOBR _{m19}	POSILGOLR _{m16-} OOSLPOTR _{m19} ROSLOKR _{m15-} ROTLOSRR _{m21} WOSLTOKR _{m21}	POSILGOLR _{m16-} OOSLPOTR _{m19} ROSLOKR _{m15-} ROTLOSRR _{m21} WOSLTOKR _{m21}	ROLLWOSRR _{m18-} TOSLGR _{m16-} LOGLROSRR _{m19} YOBLOSRR _{m18-} KOGLYOSRR _{m20} POSILLOYR _{m21}	ROLLWOSRR _{m18-} TOSLGR _{m16-} LOGLROSRR _{m19} YOBLOSRR _{m18-} KOGLYOSRR _{m20} POSILLOYR _{m21}	LOSILBORR _{m19} POPLOSRR _{m19-} YOSLKOBRR _{m21}	LOSILBORR _{m19} POPLOSRR _{m19-} YOSLKOBRR _{m21}	POYLWOSRR _{m21} LOSILWOBRR _{m18}	POYLWOSRR _{m21} LOSILWOBRR _{m18}	ROSILLR _{m17} SORLGR _{m16} LOSILBGR _{m21} BOOLWOSRR _{m21} ROSLOOTR _{m21}	ROSILLR _{m17} SORLGR _{m16} LOSILBGR _{m21} BOOLWOSRR _{m21} ROSLOOTR _{m21}	(WO)SIL(KR) _{m16} GLWOSRR _{m15-} ROSLOKR _{m19} YOSLPOLR _{m20} BOWLPOSSR _{m21}	(WO)SIL(KR) _{m16} GLWOSRR _{m15-} ROSLOKR _{m19} YOSLPOLR _{m20} BOWLPOSSR _{m21}	
YOUNG Hatched in 2022	None	None	None	None	None	None	YOSLOOBR ₂₂ LOPLBOSR ₂₂	YOSLOOBR ₂₂ LOPLBOSR ₂₂	None	None	None	None	BOSLTOYR ₂₂ LOOLPOSRR ₂₂	BOSLTOYR ₂₂	None	None	
Hatched Elsewhere					OOGLOSRR ₂₂ BOSLWOGRR ₂₂												

¹ Sex (if known) and year of birth indicated by subscript after name. A minus sign following the year indicates that indicated year is latest possible year of birth.
² Two or more pairs known to have attempted nesting on this territory in 2022
³ LOSLRR rebanded as SOLLRR in fall 2022
⁴ (GLRO)SR rebanded as GLROSRR in fall 2022
⁵ (YO)SILGR rebanded as SOYLGR in fall 2022
⁶ (WO)SIL(KR) rebanded as SOWLKR in fall 2022

Canada Jay Naming System
 Name is based on each bird's unique combination of coloured bands
 O = Over (when 2nd letter or 3rd last) or Orange
 L = Left (when 2nd or 4th letter) or Light green
 R = Right (when last letter) or Red
 Y = Yellow
 S = Standard
 P = Purple
 K = pink
 N = brown
 D = grey
 W = White
 Example: ROSLTOGR₁₉ = R ed O ver S tandard L eft, ligh T blue
 O ver dark G reen R ight (hatched in 2019)



Figure 4. Lingering snow cover near Battleship Lake, July 3, 2022. Of the six years of the study so far (2017-2022) this was the only year when snow lasted into July.



Figure 5. The carcass of a Sooty Grouse (killed by a Goshawk) being scavenged by TOYLPOSR, the highest ranked of three breeding males in the NewGroup, April 3, 2022. Photo by Yara Ibrahim.

Figure 6 (following page). Histograms showing the weight distributions of male and female Pacific morphotypes (at Paradise Meadows) vs those of male and female Boreal morphotypes (in Algonquin Park Ontario). Algonquin males average 9% heavier than Paradise Meadows males but Algonquin females weigh only 4% more than their western counterparts

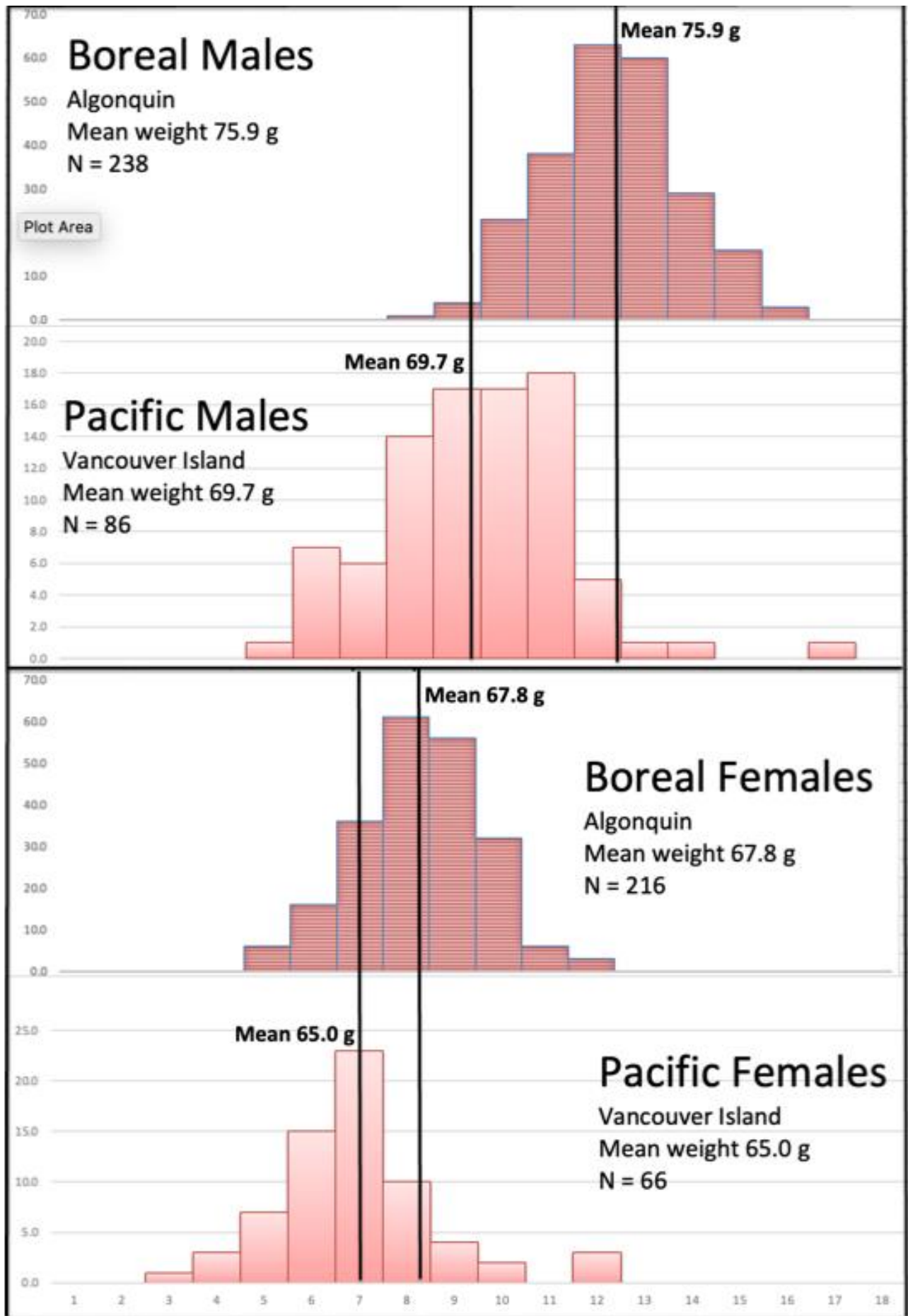




Figure 7. Best seen in photographs, the throat pouch of a Pacific morphotype Canada Jay, when distended with food, often shows a bit of bare pink skin below the lower mandible. I have never noticed this in Boreal morphotypes so this may indicate that Pacific birds are less well feathered than Boreal birds. If so, it would be yet another morphological difference between the two races.



Figure 8. Same feature (exposed skin of a distended throat pouch) in a mouling HY juvenile, August 4, 2017. (Yellow residue on and around bill is from the slime mould, *Fuligo septica*). Photo by Bryan Gates.



Figure 9. TLOOSR, the at least 6-years old breeding male on the TenEleven territory, seemingly in a trance and enjoying(?) a sun bath, June 24, 2022.



Figure 10. A patch of the almost luminescent Wolf Lichen, *Letharia vulpina*, used as nest material on the Battleship territory, March 31, 2022. Identification courtesy of Loys Maingon. (Same species used in Scandinavia to poison foxes and wolves!)



Figure 11. Volunteer Heather Holmes feeding one of the Trailhead fledglings near Raven Lodge, June 20, 2022.