

# **2020 Report**

## **Canada Jay Research Project**

### **Paradise Meadows, Strathcona Provincial Park**

**Dan Strickland, October 7, 2020**

This year (2020) marked the fourth year of field work aimed at documenting and understanding the social behaviour of the Pacific morphotype of the Canada Jay (*Perisoreus canadensis obscurus/griseus*) in and adjacent to the Paradise Meadows area of Strathcona Provincial Park on Mount Washington, Vancouver Island. Given the concurrent coronavirus epidemic, the work might not have taken place at all but, fortunately, I and assistants Blair Dudeck and Megan Buers were already living in, and working out of, my Courtenay condominium when the covid-19-inspired shutdown took place in mid-March. This allowed us to keep living, travelling, and working together as a *de facto* “family unit” through March and April. Just as important, BC parks quickly gave us a dispensation from the sudden closure of Strathcona Provincial Park and we lost only one day in the field.

#### **Principal Findings in 2020**

1. The study area was expanded slightly to now include 22 territorial groups (Table 1). Group size ranged from 2 to 12, with a mean of 5.9 on March 1 (beginning of the nesting season), 6.7 in June (when social groups included free-flying fledglings), and 6.2 on October 1 (after some attrition over the summer, mostly of first-year birds).

2. Twenty-three nests were found on 18 of these territories (Figure 1). Plural nesting (two or three nesting pairs on a single territory) was proven on 6 of the 18 territories and quite likely, though not proven, on several more (Figure 2). In addition, as was noted for the first time in 2019, there were several cases where young, nonbreeding males persistently fed the breeding females in the days leading up to clutch initiation (Figures 3 and 4). Such behaviour may help females meet the demands of egg production in wintry conditions but whether or not the young males fathered any of the subsequently produced nestlings will have to await genotyping of young.

3. Only one nest was low enough to permit the banding of nestlings but all other young produced in 2020 were subsequently captured in June or early July on the ground after they began travelling with their respective social groups. This year’s production of young was far less than that observed last year. On the 20 territories observed in both years the number of young present in June was 52 in 2019 but only 18 in 2020, a reduction of 65%. When first observed, many of the 2020 broods consisted of only one or two juveniles. This suggests that, compared to 2019, greater fledgling mortality occurred this year in the period between fledging and the full integration of the young into their respective social groups. Juveniles are presumably

especially vulnerable in this “inbetween” stage of their development and losses might be severe in years when, say, a pair of Goshawks nests in the study area.

### **Associated Developments**

Based mainly on data collected in this study, a paper written by me and Stéphanie Doucet, an authority on avian plumage colours at the University of Windsor, is now “in press” at the Canadian Journal of Zoology. The paper, “A bird that changes colour without moulting: how Wisakedjak tricked the taxonomists” documents, through spectral analyses and photographs of marked individuals at Paradise Meadows, the highly unusual colour change in living individuals of the Canada Jay’s Pacific morphotype from fresh grey to year-old brown.

A second paper led by Brendan Graham and Theresa Burg at the University of Lethbridge and Carla Cicero at U. Cal. at Berkeley has been submitted and is now under review. It documents genetic discordance between the three Canada Jay morphotypes (Pacific, Boreal, and Rocky Mountain) along their common distributional boundaries in southern mainland BC. The principal conclusion is that the plumage differences between the Pacific and Boreal morphotypes correspond quite closely with genetic differences whereas the relationship between the Boreal and Rocky Mountain morphotypes is much less straightforward.

A third paper in the queue will be the publication of the Canada Jay’s genome by a group of medical geneticists at The Centre for Applied Genomics at the Hospital for Sick Children in Toronto. Based on a Boreal bird I collected for the project in northern Ontario, the genome has been assembled and is being supplemented by material from the other two (Pacific and Rocky Mountain) morphotypes.

These three papers, along with the yet-to-be-published social behaviour data from the Paradise Meadows study, will have a bearing on whether or not the Pacific morphotype of the Canada Jay is eventually restored to the status of a full, separate species, a status it held (as *P. obscurus*, the “Oregon Jay”) from 1880 to 1944, before the era of modern genetics.

### **Acknowledgements**

Special thanks are due this year to Andy Smith and Erica McLaren of BC Parks for quickly granting me and assistants a dispensation from the covid-related closure of Strathcona Park in mid-March. This allowed us to continue the study in the critical nest-finding period with the loss of only one day in the field.

For the fourth straight year, the 2020 field activities received salary support (March and April) for field assistant Blair Dudeck from Ryan Norris, University of Guelph. Further much appreciated help in nest finding and field observations was received this year from volunteers, Megan Buers and Heather Holmes, not to mention numerous cases of recreationists emailing photographs or descriptions of colour-marked birds after the park was re-opened. Ongoing genetic analyses are being performed by Brendan Graham and Theresa Burg at the University of Lethbridge.

All these contributions are gratefully acknowledged.

| June-Fall Composition of Paradise Meadows Canada Jay Social Groups 2020 <sup>1,2</sup> (Contact Dan Strickland: perisoreus1@gmail.com) |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|----------------------------|----------------------------|-------------------------|-------------------------|-----------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------|--------------------------|--|
| 2020                                                                                                                                   | ViewTwo                   |                         | Biathlon                |                         | NewGroup                |                         | GreatBigView               |                            | Trailhead               |                         | TreeBeard                   |                          | RossRise Bud-off <sup>3</sup>                                                                                                |                            | Rossiter's Rise <sup>4</sup> |                          |  |
|                                                                                                                                        | June                      | Fall                    | June                    | Fall                    | June                    | Fall                    | June                       | Fall                       | June                    | Fall                    | June                        | Fall                     | June                                                                                                                         | Fall                       | June                         | Fall                     |  |
| "ADULTS"                                                                                                                               | PLPOSr                    | PLPOSr                  | LOSLSRm                 | LOSLSRm                 | TOYLOSPr <sub>14</sub>  | TOYLOSPr <sub>14</sub>  | GOSLSORR <sub>16</sub>     | GOSLSORR <sub>16</sub>     | PLBOSRm                 | PLBOSRm                 | POSLSWR                     |                          | WLOSLSRm                                                                                                                     | WLOSLSRm                   | LOPOSLSm <sub>19</sub>       | LOPOSLSm <sub>19</sub>   |  |
|                                                                                                                                        | POSLSr                    | POSLSr                  | TLPOSr                  | TLPOSr                  | WOTLOSPr <sub>14</sub>  | WOTLOSPr <sub>14</sub>  | (DO)SLRR                   | (DO)SLRR                   | LOSLSRf                 | LOSLSRf                 | YOSLSWBRf <sub>19</sub>     |                          |                                                                                                                              |                            | BLKOSRf <sub>11</sub>        | BLKOSRf <sub>11</sub>    |  |
|                                                                                                                                        | RLWOSr <sub>17</sub>      | RLWOSr <sub>17</sub>    | BOSLSWR <sub>17</sub>   | BOSLSWR <sub>17</sub>   | LOSLSPOKR <sub>9</sub>  | LOSLSPOKR <sub>9</sub>  | BORLSOR <sub>14</sub>      | BORLSOR <sub>14</sub>      | TORLSWOSR <sub>14</sub> | TORLSWOSR <sub>14</sub> | WIKOSRm <sub>17</sub>       | WIKOSRm <sub>17</sub>    | TOSLSROWR <sub>19</sub>                                                                                                      | TOSLSROWR <sub>19</sub>    | TOSLSRm <sub>2</sub>         | TOSLSRm <sub>2</sub>     |  |
|                                                                                                                                        | ROPLBOSr <sub>18</sub>    | ROPLBOSr <sub>18</sub>  | KOSLSOBR <sub>18</sub>  | KOSLSOBR <sub>18</sub>  | ROSLSOPYR <sub>18</sub> | ROSLSOPYR <sub>18</sub> | ROSLSOBR <sub>18</sub>     | ROSLSOBR <sub>18</sub>     | KOSLSOLR <sub>18</sub>  | KOSLSOLR <sub>18</sub>  | LOBLOSLSR <sub>18</sub>     | LOBLOSLSR <sub>18</sub>  | BOWLSOR <sub>18</sub>                                                                                                        | BOWLSOR <sub>18</sub>      | KLGSORf <sub>2</sub>         | KLGSORf <sub>2</sub>     |  |
|                                                                                                                                        | KOPLYOSr <sub>18</sub>    | KOPLYOSr <sub>18</sub>  | OOSLSWOPR <sub>18</sub> | OOSLSWOPR <sub>18</sub> | POSLSGOTR <sub>18</sub> | POSLSGOTR <sub>18</sub> | LOSLSPORR <sub>18</sub>    | LOSLSPORR <sub>18</sub>    | BOSLYOTR <sub>18</sub>  | BOSLYOTR <sub>18</sub>  | BOTLOSLSR <sub>18</sub>     | BOTLOSLSR <sub>18</sub>  | ROSLSOYR <sub>19</sub>                                                                                                       | ROSLSOYR <sub>19</sub>     | OOSLSOTR <sub>19</sub>       | OOSLSOTR <sub>19</sub>   |  |
|                                                                                                                                        |                           |                         | TOSLSROBR <sub>18</sub> | TOSLSROBR <sub>18</sub> | WOSLYR <sub>18</sub>    | WOSLYR <sub>18</sub>    | POSLSOLR <sub>18</sub>     | POSLSOLR <sub>18</sub>     | LOSLSOPPR <sub>19</sub> | LOSLSOPPR <sub>19</sub> | KOSLSOGR <sub>19</sub>      | KOSLSOGR <sub>19</sub>   |                                                                                                                              |                            | LOSLSYOGR <sub>19</sub>      | LOSLSYOGR <sub>19</sub>  |  |
|                                                                                                                                        |                           |                         |                         |                         | KOPLBOSR <sub>18</sub>  | KOPLBOSR <sub>18</sub>  | BOSLSOLBR <sub>18</sub>    | BOSLSOLBR <sub>18</sub>    | ROSLSGOTR <sub>19</sub> | ROSLSGOTR <sub>19</sub> | BOSLSWORR <sub>19</sub>     | BOSLSWORR <sub>19</sub>  |                                                                                                                              |                            | ROBLPOSr <sub>19</sub>       | ROBLPOSr <sub>19</sub>   |  |
|                                                                                                                                        |                           |                         |                         |                         | OOSLSOPBR <sub>18</sub> | OOSLSOPBR <sub>18</sub> |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            | KOOLGOSr <sub>19</sub>       | KOOLGOSr <sub>19</sub>   |  |
|                                                                                                                                        |                           |                         |                         |                         | YOSLSGORR <sub>18</sub> | YOSLSGORR <sub>18</sub> |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         | GOSLYOLR <sub>18</sub>  | GOSLYOLR <sub>18</sub>  |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
| YOUNG Hatched in 2020                                                                                                                  | GOYLOSr <sub>20</sub>     | GOYLOSr <sub>20</sub>   | GOSLYOPR <sub>20</sub>  | GOSLYOPR <sub>20</sub>  | None                    |                         | ROLKOSR <sub>20</sub>      | ROLKOSR <sub>20</sub>      | None                    |                         | LOSLSGOOR <sub>20</sub>     | LOSLSGOOR <sub>20</sub>  | None                                                                                                                         |                            | YOSLSOBR <sub>20</sub>       | YOSLSOBR <sub>20</sub>   |  |
|                                                                                                                                        | WOSLSPOOR <sub>20</sub>   | WOSLSPOOR <sub>20</sub> |                         |                         |                         |                         | OOSLSWOSR <sub>20</sub>    | OOSLSWOSR <sub>20</sub>    |                         |                         |                             |                          |                                                                                                                              |                            | KOYLOSr <sub>20</sub>        | KOYLOSr <sub>20</sub>    |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         | LOBLYOSr <sub>20</sub>     | LOBLYOSr <sub>20</sub>     |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         | YOWLSBR <sub>20</sub>      | YOWLSBR <sub>20</sub>      |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
| 2020                                                                                                                                   | Bridge <sup>4,5</sup>     |                         | Halfway                 |                         | Battleship              |                         | Campground <sup>4,6</sup>  |                            | Midway                  |                         | RealRabbit <sup>4,9</sup>   |                          | JackRabbit                                                                                                                   |                            | LakeBottom                   |                          |  |
|                                                                                                                                        | June                      | Fall                    | June                    | Fall                    | June                    | Fall                    | June                       | Fall                       | June                    | Fall                    | June                        | Fall                     | June                                                                                                                         | Fall                       | June                         | Fall                     |  |
| "ADULTS"                                                                                                                               | GLWOSr <sub>1</sub>       | GLWOSr <sub>1</sub>     | PLWOSRm <sub>17</sub>   | PLWOSRm <sub>17</sub>   | OOSLSGrm                | OOSLSGrm                | (YO)SLGrm <sub>1</sub>     | (YO)SLGrm <sub>1</sub>     | ROSLSRm <sub>17</sub>   | ROSLSRm <sub>17</sub>   | YLS(DO)SRm                  | YLS(DO)SRm               | WPLSORM                                                                                                                      | WPLSORM                    | POSLSGOUR <sub>16</sub>      | POSLSGOUR <sub>16</sub>  |  |
|                                                                                                                                        | BLROSr <sub>2</sub>       | BLROSr <sub>2</sub>     | PLWOSRf                 | PLWOSRf                 | TOSLS(DR)f              | TOSLS(DR)f              | POSLSBOKRf <sub>11</sub>   | POSLSBOKRf <sub>11</sub>   | KLBSORf                 | KLBSORf                 | WOSLSORPrm <sub>18</sub>    | WOSLSORPrm <sub>18</sub> | TOSLSGRf                                                                                                                     | TOSLSGRf                   | ROSLSROKRm <sub>16</sub>     | ROSLSROKRm <sub>16</sub> |  |
|                                                                                                                                        | SORLSGr <sub>2</sub>      | SORLSGr <sub>2</sub>    |                         |                         | GLWOSr <sub>17</sub>    | GLWOSr <sub>17</sub>    | BOSLSPrm <sub>2</sub>      | BOSLSPrm <sub>2</sub>      | LOSLSBORr               | LOSLSBORr               | WOSLSORPrm <sub>18</sub>    | WOSLSORPrm <sub>18</sub> | LOSLSROSr                                                                                                                    | LOSLSROSr                  | OOSLSPTRf <sub>18</sub>      | OOSLSPTRf <sub>18</sub>  |  |
|                                                                                                                                        | (WO)SLKrm <sub>3</sub>    | (WO)SLKrm <sub>3</sub>  |                         |                         | GOTLYOSR <sub>18</sub>  | GOTLYOSR <sub>18</sub>  | YOSLSGOPRf <sub>2</sub>    | YOSLSGOPRf <sub>2</sub>    | GOTLOSr <sub>18</sub>   | GOTLOSr <sub>18</sub>   | POPLOSr <sub>18</sub>       | POPLOSr <sub>18</sub>    | OOSLSKORr                                                                                                                    | OOSLSKORr                  | GOWLSBORr <sub>19</sub>      | GOWLSBORr <sub>19</sub>  |  |
|                                                                                                                                        | YOPLOSr <sub>18</sub>     | YOPLOSr <sub>18</sub>   |                         |                         |                         |                         | TOSLSOGR <sub>19</sub>     | TOSLSOGR <sub>19</sub>     |                         |                         |                             |                          | YOSLSBOTr                                                                                                                    | YOSLSBOTr                  | YOSLSBOTr <sub>19</sub>      | YOSLSBOTr <sub>19</sub>  |  |
|                                                                                                                                        | ROSLSPOKR <sub>19</sub>   | ROSLSPOKR <sub>19</sub> |                         |                         |                         |                         | ROSLSWOTR <sub>19</sub>    | ROSLSWOTR <sub>19</sub>    |                         |                         |                             |                          | ROLLWOSr <sub>19</sub>                                                                                                       | ROLLWOSr <sub>19</sub>     |                              |                          |  |
|                                                                                                                                        | TOSLYOOR                  | TOSLYOOR                |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
| YOUNG Hatched in 2020                                                                                                                  | OOTLGOSr <sub>20</sub>    | OOTLGOSr <sub>20</sub>  | None                    |                         | None                    |                         | None                       |                            | None                    |                         | ROTLGOSr <sub>20</sub>      | ROTLGOSr <sub>20</sub>   | (YOGLSOSr <sub>20</sub> )                                                                                                    | (YOGLSOSr <sub>20</sub> )  | None                         |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         | BOSLSOBR <sub>20</sub>      | BOSLSOBR <sub>20</sub>   | (BOSLSPOWR <sub>20</sub> )                                                                                                   | (BOSLSPOWR <sub>20</sub> ) |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         | KOSLKOR <sub>20</sub>       | KOSLKOR <sub>20</sub>    | (KOGLYOSr <sub>20</sub> )                                                                                                    | (KOGLYOSr <sub>20</sub> )  |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
| 2020                                                                                                                                   | LakeApproach <sup>4</sup> |                         | Gully <sup>7</sup>      |                         | BackBait                |                         | TenEleven                  |                            | FalseMack               |                         | HelenMackenzie <sup>8</sup> |                          | Canada Jay Naming System                                                                                                     |                            |                              |                          |  |
|                                                                                                                                        | June                      | Fall                    | June                    | Fall                    | June                    | Fall                    | June                       | Fall                       | June                    | Fall                    | June                        | Fall                     | Name is based on each bird's unique combination of coloured bands (brackets indicate a lost band; subscript is year hatched) |                            |                              |                          |  |
| "ADULTS"                                                                                                                               | (GLR)SRm <sub>1</sub>     | (GLR)SRm <sub>1</sub>   | POTLOSPr <sub>18</sub>  | POTLOSPr <sub>18</sub>  | GOSLSRm                 | GOSLSRm                 | TLOSORM                    | TLOSORM                    | RLROSr                  | RLROSr                  | TOSLSWR <sub>17</sub>       | ROSLSR                   | O = Over (when 2nd letter or 3rd last) or Orange                                                                             |                            |                              |                          |  |
|                                                                                                                                        | SOBLOSr <sub>16</sub>     | SOBLOSr <sub>16</sub>   | ROSLSGTr <sub>19</sub>  |                         | KLROSr                  | KLROSr                  | GLGOSr <sub>17</sub>       | GLGOSr <sub>17</sub>       | LOSLSKf <sub>17</sub>   | LOSLSKf <sub>17</sub>   | OOSLSOR <sub>16</sub>       | OOSLSOR <sub>16</sub>    | L = Left (when 2nd or 4th letter) or Light green                                                                             |                            |                              |                          |  |
|                                                                                                                                        | LLPOSr <sub>27</sub>      | LLPOSr <sub>27</sub>    |                         |                         | GOSLSTrm                | GOSLSTrm                | POSLYOLR <sub>19</sub>     | POSLYOLR <sub>19</sub>     | LOSLSYORm <sub>18</sub> | LOSLSYORm <sub>18</sub> | WOPLOSr <sub>17</sub>       | WOPLOSr <sub>17</sub>    | R = Right (when last letter) or Red                                                                                          |                            |                              |                          |  |
|                                                                                                                                        | KLWOSr <sub>17</sub>      | KLWOSr <sub>17</sub>    |                         |                         | ROBLSWOSr <sub>17</sub> | ROBLSWOSr <sub>17</sub> |                            |                            |                         |                         | KORLSOR <sub>19</sub>       | KORLSOR <sub>19</sub>    | Y = Yellow                                                                                                                   |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         | TOSLYOBR <sub>18</sub>  | TOSLYOBR <sub>18</sub>  |                            |                            |                         |                         | LORLSOR <sub>19</sub>       | LORLSOR <sub>19</sub>    | T = light blue                                                                                                               |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         | (BOSLSOOPR <sub>20</sub> ) | (BOSLSOOPR <sub>20</sub> ) | None                    |                         | BOSLYOSR <sub>20</sub>      | BOSLYOSR <sub>20</sub>   | S = Standard                                                                                                                 |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         | (ROSLSGOYR <sub>20</sub> ) | (ROSLSGOYR <sub>20</sub> ) |                         |                         | ROSLSOPR <sub>20</sub>      | ROSLSOPR <sub>20</sub>   | B = dark Blue                                                                                                                |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         | WOBLSOR <sub>20</sub>       | WOBLSOR <sub>20</sub>    | P = Purple                                                                                                                   |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         | POSLSOKR <sub>20</sub>      | POSLSOKR <sub>20</sub>   | G = dk Green                                                                                                                 |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
| YOUNG Hatched in 2020                                                                                                                  | None                      | None                    | None                    |                         | None                    |                         |                            |                            |                         |                         |                             |                          | Example: ROSLSGTr <sub>19</sub> = Red Over Standard Left, light T blue                                                       |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          | Over dark Green Right (hatched in 2019)                                                                                      |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |
|                                                                                                                                        |                           |                         |                         |                         |                         |                         |                            |                            |                         |                         |                             |                          |                                                                                                                              |                            |                              |                          |  |

<sup>1</sup>Sex, if known, indicated by "m" or "f". Breeders listed first (but see footnote 2).

<sup>2</sup>Year of birth indicated by subscript after name. A minus sign following the year indicates that indicated year is latest possible year of birth. No year indication means bird was hatched in 2016 or earlier ("≤16").

<sup>3</sup>Female position vacant in both June and September

<sup>4</sup>Two or more pairs attempted to nest on this territory. Rank of breeder indicated by number after its name and sex

<sup>5</sup>The primary male (KOSLSr) built a nest with the primary female (GLWOSr) but he disappeared during the incubation period. GLWOSr may mate with secondary male (BLROSr) in 2021?

<sup>6</sup>The secondary Campground pair was formed by BOSLSr (at least 4 years old) and YOSLSr a 2018 juvenile banded on Helen Mackenzie territory

<sup>7</sup>The Gully nest was not found but its existence strongly indicated by pair's behaviour and subsequent disappearance and reappearance of female at appropriate times.

<sup>8</sup>Helen Mackenzie nest has never been found and breeder identity is uncertain

<sup>9</sup>In list of RealRabbit territory jays, the horizontal lines separate the two breeding pairs and their respective fledglings

Table 1. Occupants of 22 Canada Jay territories in Paradise Meadows study area in June (grey columns) and “fall” (ca October 1) 2020. In contrast to the Boreal morphotype population studied in Algonquin Park, Ontario, this population of the Pacific morphotype shows very little over-summer mortality.

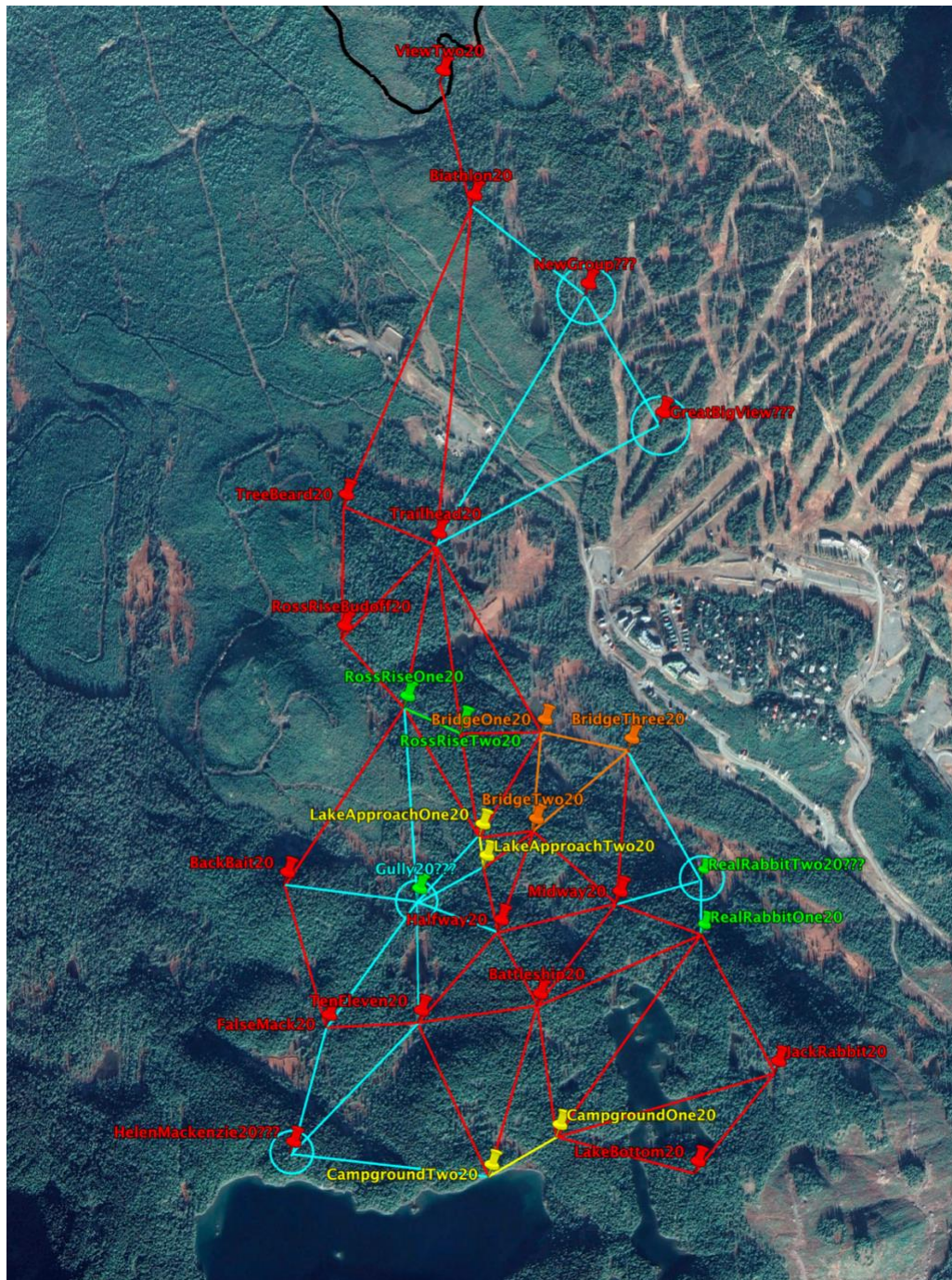


Figure 1. Paradise Meadows 2020 nest locations. Red indicates single nesting pair on named territory. Cyan circles enclose probable location of nests not actually found. There were two nesting pairs on the Campground, RealRabbit, LakeApproach, and Rossiter's Rise territories (nest locations shown in yellow or green) and three nesting pairs on the Bridge territory (nest locations shown in orange). The mean distance between nests was 480 metres, corresponding to a mean territory size of ca 20 hectares.





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Figure 2. TOSLKR, the secondary male on the Rossiter's Rise territory, carrying a twig to his unfinished nest, April 6, 2020, Photo by Blair Dudeck



Figure 3. LOSLKR, the FalseMack female begging at her mate, RLROSR, March 29, 2020. Photo by Blair Dudeck



Figure 4. LOSLY00R, a 2-year-old nonbreeder still on his natal territory (FalseMack) feeding his stepmother, LOSLKR, March 29, 2020. Photo by Blair Dudeck





Figure 5. The primary LakeApproach pair, GLROSR and SOBLLOKR, mating, March 26, 2020, Photo by Blair Dudeck.



Figure 6. Megan Buers and Blair Dudeck at TreeBeard nest tree, April 6, 2020.

