Hi Erica, Andy, et al.

I am about to head back to Ontario having now finished an extremely interesting Canada Jay breeding season at Paradise Meadows. I enclose two files—a Google Earth based map showing the known or approximate locations of nests and a table showing the composition of the social groups on 19 different territories. Main findings are as follows:

1. With the invaluable help of Sharlene James in March and Blair Dudeck in April, 19 nests were located and another 3 proved to exist and located approximately. Another two territorial groups were monitored in early March and again in June although no attempt was made to find their nests.

2. Two cases were observed of 2-year-old males and their fathers courting (feeding) the same new female (not the mothers of the younger males) and helping to build the eventual nest. In one case the young male also fed the female on the nest at least in the early part of the incubation period. Participation by the young males seemed to end at that point. The eggs in one of these nests failed to hatch but the other nest successfully fledged young.

3. Four of the 19 territories had more than one nesting pair (three in one case). Another territory (Rossiter's Rise) had 3 nesting pairs last year and the map shows it that way for this year as well. In this year's nesting season, however, it became clear that the third nesting pair in 2018, had, with a new female, "budded off" part of the territory for themselves, leaving just two pairs (RossRise1 and RossRise2) closely associating on the original territory in 2019.

4. This year had a bumper crop of successfully fledging birds (50 as opposed to just 22 from essentially the same territories last year). Only 3 were banded as nestlings; the other 47 were caught, banded, and blood-sampled as free-flying fledglings from June 1 to July 1 inclusive.

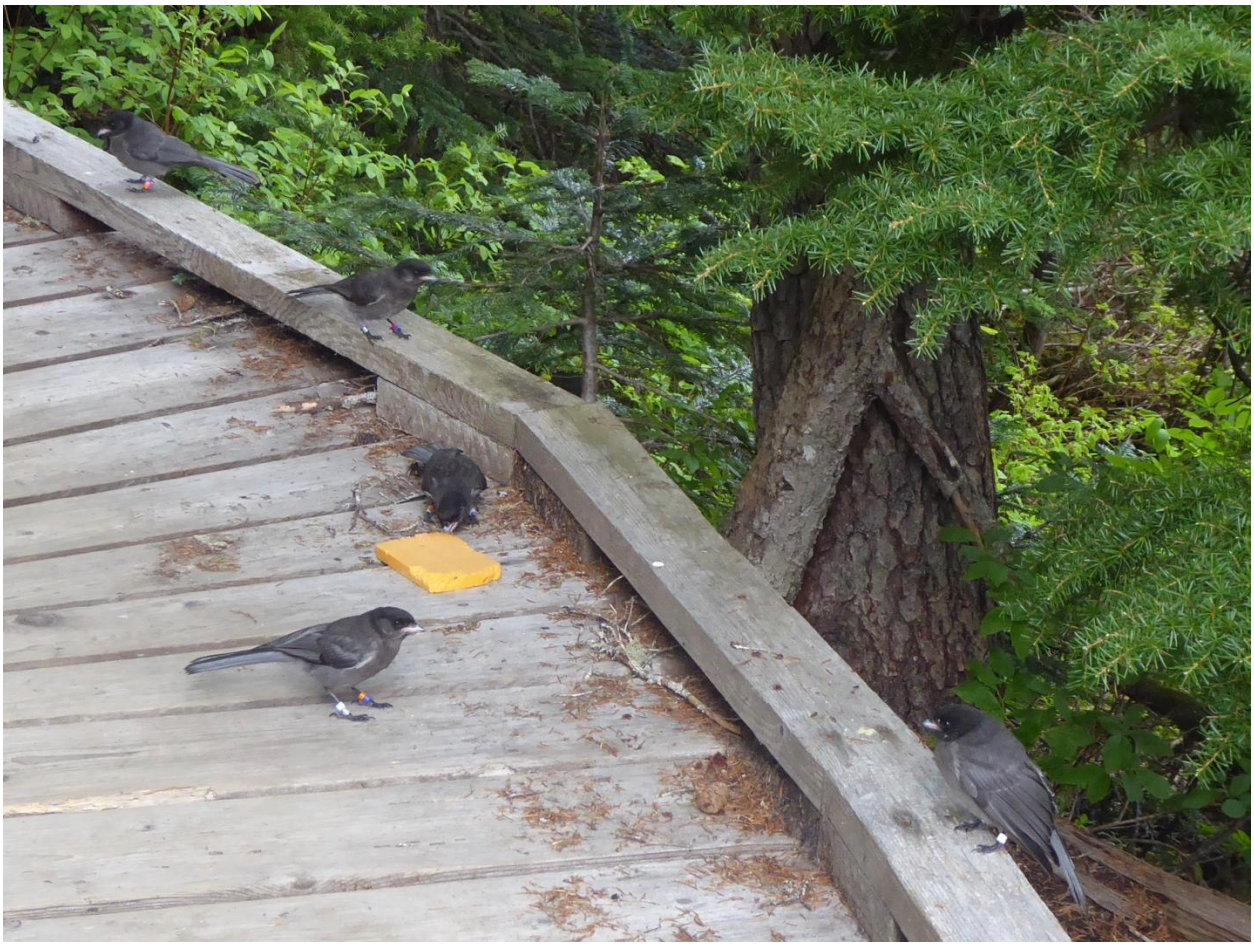
5. All four of the "plural-breeding" territories in 2019 produced fledglings from two nests each, resulting in 8 banded young on the Rossiter's Rise territory, 7 on the Trailhead territory (although 2 from the first batch of 4 had disappeared by the time the second batch of 3 appeared at the very end of June), 6 on the Bridge territory, and 5 on the Midway territory. In all these cases, even when there was a month's difference in the age of the 2 broods, the fledglings were more often than not all mixed in together, as were their parents.

6. Together the 4 "plural-breeding" territories accounted for 26 of the 50 young produced by the total of 19 monitored territories. Note that if the new territory, now designated as "Rossiter's Rise Bud-off", were still considered to be part of the original Rossiter's Rise territory, and its breeding pair still considered to be the third breeding pair on that territory, the total number of fledglings produced by the, in-that-case 4 plural-breeding territories in 2019 would be 30, not 26. That is, 4 of 18 territories (22%)

would have produced 60% of the fledglings and the Rossiter's Rise territory would have had, not 8, but 12 locally produced fledglings (from 3 nests).

Nothing like this has ever been observed/reported from anywhere else in Canada Jay range. In 2017, the first year of the study, I realized, after the fact, that plural breeding had occurred on one, possibly two territories but it was clear, at least on the more closely observed territory, that only one nest had been successful. In 2018 I knew there was one territory with 3 nesting pairs but none of the three were successful. A suspected second nest on another 2018 territory also failed to produce any visible fledglings. All this, and a total lack of reports of large fledgling broods, left me wondering if plural breeding ever amounted to anything. Until this year!

Dan



Five of the 8 banded fledglings on the Rossiter's Rise territory, June 17, 2019

KOSLROLR, one of 7 fledglings produced on the Trailhead territory, June 19, 2019