

SPRUCE GROUSE — SPRING BEHAVIOUR

Peter Gerrard

1904 Pembina Avenue
Saskatoon, SK S7K 1C3
pgerrard@shaw.ca

For the past six years (2014-2019), I have had the opportunity to observe bird life during the spring and summer on an island on Besnard Lake, Saskatchewan. This lake is best known as a centre of over 50 years of Bald Eagle (*Haliaeetus leucocephalus*) research, coordinated by my brother Jon and his wife Naomi.¹ The island is 13 hectares (32 acres) in size; 70 per cent is covered with white spruce,

10 per cent balsam fir and black spruce, 15 per cent birch and five per cent everything else, including some open and deadfall areas. In this note I describe spring displays and calls of Spruce Grouse (*Falcapennis canadensis*).

I refer to a higher point on the south side of the island as Signal Hill (SH), as this is the best place to get cellular telephone coverage at sunrise or sunset. The cell tower is at La Ronge, which is more than 50 km away. As the signal is weak, I may spend over an hour there in the morning waiting for the signal to strengthen enough to receive emails

and get a weather forecast. For the past four years I have been aware of a male Spruce Grouse displaying 50 m from where I stand at SH. The bird displays in a relatively open area with sparse spruce cover. This spring I set out to document the activities of the Spruce Grouse on the island, especially the male close to SH. The other display area on the island is 150 m to the NW in an open glade in a Birch Forest (BF).

The Spruce Grouse “is known for its relative tameness” as reported in *Birds of Saskatchewan*.² There often are two broods on the island. The females usually start off with seven or eight chicks, hatching in mid-June, and end up with three or four by mid-September. Last year, one female brought her brood around the cabin and had no fear of us. Once, as I was picking gooseberries, the female brought the brood along and one young walked between my legs. The other female was nervous and never brought her young too close to us.

In mid-April 2019, the males start displaying and continued daily (except during inclement weather) until mid-May. This year, one male started displaying on April 13, the other a few days later. They continued displaying regularly until May 18. In 2018, they stopped their regular displaying on May 17.

Males displayed morning and evening in characteristic ways that combined perching with flying. The SH adult perched about 4.5 m up in a spruce tree and hunched up his wings much like I might raise my shoulders; this was an indication that he was about to flush. He would fly some 20 m — for the last 5 m of his flight he would beat his wings rapidly in front of him making a very distinctive sound that was more than a flap but less than a boom. After a short rest, he hunched his wings,



Male Spruce Grouse on May 1, 2019. Photo credit: Peter Gerrard.

took off for his tree or stump and, just before landing, he flapped his wings hard to make this same sound. He carried on this activity for more than an hour. Once, the behaviour was repeated for two hours and 40 minutes. The females do not display. In 2019, two males displayed — last year, there was a third male displaying near BF. If one male was displaying, usually the other was, too. Most mornings they started displaying before sunrise. When they displayed in the evenings, which was about half as often as they did in the morning, they started to display one-to-two hours before sunset and occasionally beyond.

I never saw them display in the above manner at other times of the day. This display is different from the strutting that occurs when they encounter a female at other times of the day elsewhere on the island.

I only once chanced on a female in a display area. This was on May 13, 2019 in BF and copulation was in process. Afterwards, they both gave their feathers a good shake. The male went back to displaying and the female walked towards where I was standing. When she was 5 m away, she noticed me and walked slowly into the bush. While the males are displaying, I often encountered females elsewhere on the island.

On April 20, 2019, I became aware of a bird call that I did not recognize. The bird was calling about 30 minutes before sunrise; the island is particularly quiet at this time. The loons, flickers, and song birds have yet to return. On the fourth day I located the bird high up in a spruce tree — it was a grouse. Dr. Karen Wiebe (professor, Department of Biology, University of Saskatchewan) confirmed that what I was hearing is described in *The Birds of North America* as the spring call of the female grouse.³

“The most song-like vocalization is a

long series of nasal cackles and clucks ... sometimes lasting many seconds, given by females on their spring territories. In southwestern Alberta, during the late prelaying and laying periods, females utter *Cackle* from specific pine trees usually well-spaced within their territories. These trees, used as song perches, are also used as feeding trees at dawn and dusk, and as roost trees, where birds spend the night. This song is apparently uttered spontaneously when light intensities are low (< 33 lux) at dawn and dusk, but can be stimulated at any time of day during this period by playing a recording of it inside their territories. The cackle has never been heard in a courtship context. Female Canada Spruce Grouse utter a similar “long cackling call with several inflections” (J. F. Bendell, personal communication), but its significance remains poorly understood.”⁴

I would describe the call as more like a chicken trying to warble than as a cackle! I heard female grouse warbling 10 mornings in a row from April 20 to April 29 — this was well before their laying or late pre-laying period as, if chicks are hatching between June 11 and 15, egg laying is initiated no earlier than May 9. Godfrey stated that the incubation period is 24 days, which is initiated after all eggs are laid.⁵ Thus, it would take about eight days to lay eight eggs, laying one egg each day. I suspect I heard them calling after April 29; however, my ears could not definitely distinguish the grouse call from the other birds now contributing to the morning and daily chorus. One morning I was only aware of a grouse uttering three calls within a two-minute span. Another morning it (or they as there were at least three female grouse on the island) might have called up to a dozen times over a 10-minute span and from at least two locations.

After May 18, I found the SH male

and the BF male both displaying in the morning of May 26, 28 and 31 and in the evening of June 1. During that period, they were not observed displaying on any other occasion. As the male grouse displayed at the same time despite being 150 m apart, I wondered whether a female grouse called and ‘incited’ them to display?

The BF male was seen in or near his display area on the evening of May 26 and mornings of May 29 and June 2. The SH male was seen in or near his display area on the mornings of May 30 and June 1 and the evening of May 31. They were in their respective display areas but not displaying — I suspect nothing had ‘incited’ them to display.

Spruce grouse are year-round residents on this island, which is 600 m from the nearest island and 2 km from the mainland. For some individuals, I suspect this island is the only home they will ever know. Their relative tameness and the small size of our island enables ready observation of their behavior. They are our island friends.

Acknowledgements

I would like to thank Elston Dzus and Jon Gerrard for their review and comments on an earlier draft of this manuscript.

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