

Blue grouse in the Juneau area of southeastern Alaska

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We arrived in Juneau on 8 May and departed on 15 May 2007. This interval of dates provided us with 6 full days of fieldwork (9-14 May). Our goal was to visually observe as many male blue grouse (sooty grouse) as possible. We found likely areas by talking with local experts, biologists, and bird watchers, and by searching potential areas and listening for hooting. All birds were approached on foot from the nearest roads (usually about 1 km away). An effort was made to get within 50 m of the bird before a recording of the female aggressive call was played in the area. The purpose of the 'playback' was to find a blue grouse male that was quiet or to encourage a blue grouse male to become more active so that it could be observed. Without the playback, it is likely that fewer males would have been observed. The playback was also used to evaluate the responsiveness of males to this recording.

We were able to successfully observe 10 males and 2 females during that time period (Table 1). The observed males had light-gray to moderate-gray tail bands that were about 1 cm thick. All males tended to have 6 notes in the hooting call, but some occasionally had either 5 or 7 notes. Regardless of the number of notes, the 5th note in the hooting display was always two syllables. All observed males had red apteria (Fig. 1), in contrast to the predictions based on distribution of the sooty grouse. The birds were found at an average height of 1,050 feet, with the birds at the Eaglecrest Ski Resort being the highest. All observed birds responded in some way to the recording of the female. In some cases the response was relatively small (slight increasing in intensity of hooting display), while in other cases the response was large (flying out of tree and walking toward the tape recorder). Most males were found in trees, but could be drawn to the ground by playbacks of the female call or by an actual female being present. We also documented other photographic evidence for the region (Fig. 2).

Table 1. Blue grouse observed near Juneau, Alaska during 9-14 May 2007.

Location	Sex	Y/m/d	Time	Zone	UTM-E	UTM-N	Status	Apteria	Tail band	Band color	Number notes	Recruits	Tree	Bird height (m)	Tree height (m)	Elevation	Response to recording	Other observations	Photos
Eaglecrest Ski Resort	Male	20070509	636	8	528832	6459554	Alone	Red	Banded	Gray	6		Spruce	25	40	1200	Hooted more & flew	Landed on loud wing	Poor
	Male	20070509	715	8	529233	6459225	W/ female	Red	Banded	Gray	6	18	Spruce	10	30	1650	Hooted more & flew	Landed on loud wing, whoots	Moderate
	Female	20070509	715	8	529233	6459225	W/ male						Ground	0		1650	Responded with calls	Walked toward me	None
	Male	20070514	1150	8	527339	6460005	W/ female	Red	Banded	Gray	6	18	Ground	0		1700	Hooted more & flew	Landed on loud wing, whoots	Good
	Female	20070514	1150	8	527339	6460005	W/ male						Ground	0		1700	Responded with calls		Good
	Male	20070514	1340	8	527086	6460203	Alone	Red	Banded	Gray	6 (also 5 & 7)		Spruce	10	25	1400	Hooted more & flew	Landed on loud wing	Good
Point Bridget	Male	20070509	1428	8	504157	6499422	Alone	Red	Banded	Gray	6		Spruce	35	45	700	Looked at me	Difficult to find	Poor
	Male	20070511	1151	8	502770	6500760	Alone	Red	Banded	Gray	6 (also 5)	18	Hemlock	20	50	750	Flew to ground	Landed on loud wing	Good
	Male	20070511	1331	8	502473	6500639	Alone	Red	Banded	Gray	6 (also 7)	20	Pine	4	15	450	Changed trees	Landed on loud wing	Good
Sheep Creek	Male	20070510	1135	8	542672	6455698	Alone	Red	Banded	Gray	6 (also 7)		Spruce	45	50	950	Walked on branch	In tree with bald eagle	Moderate
	Male	20070510	1251	8	542184	6456041	Alone	Red	Banded	Gray	6		Spruce	30	40	1000	Hooted more	Bear interrupted observations	Poor
	Male	20070512	1550	8	541188	6456967	Alone	Red	Banded	Gray	6		Spruce	5	35	700	Hooted more & flew	Landed on loud wing	Moderate

We also plotted all observations on a map of the Juneau area (Fig. 1). The plot also included observations of birds detected by auditory means. Some of these bird locations were estimated based on triangulation and others were estimated based on the

direction and estimated distance of the hooting display. Regardless of the technique, this map of estimated locations should be considered cautiously.

Fig. 1. Photos of all 10 males observed showing the apteria. The red was clearly observed in all cases with binoculars, but some of the photos appear ambiguous.



Fig. 2. Photo of blue grouse taken at the Tram above Juneau, Alaska.



In addition to the blue grouse observed, we were able to obtain counts of tail feathers on additional male blue grouse that had been harvested in the area. Counts of tail feathers were available for 10 male blue grouse, with 3 of these counts based on partial counts of half the tail feathers (count of feathers from one of the middle two tail feathers to the outermost tail feather). Six of the males had 18 tail feathers and 4 had 20 tail feathers. A tail feather count of 18 was available for only one harvested female.

Numerous additional behaviors were observed among these males including ‘whoot’ calls (males displaying to females), ‘landing on loud wing’ (tree to ground, ground to tree, tree to tree), and courtship behavior (tail fanning and head bobbing). One was observed doing a flutter flight from the ground to a tree branch, which consisted of a loud flight as soon as the bird left the ground. We also photographed a female (Fig. 4).

One of the more interesting behaviors was the loud hooting of these grouse. We estimated some of the larger distances that hooting could be heard based on assumptions about the distribution of birds. In different situations neighboring males were localized on separate occasions and the hooting of each bird was heard from the neighbor’s territory. The longest distance estimated in this fashion was 1.9 km. However, this was not the longest distance. In one situation several blue grouse were heard hooting on Douglas Island from a point above Sheep Creek. Although the location of the birds on

Douglas Island was not known precisely, if they were at the same elevation on Douglas Island as the birds above Sheep Creek, the distance was about 3 km.

Fig. 3. Map of blue grouse locations in the Juneau, Alaska area detected during 9-14 May 2007 (solid dots are confirmed locations).



Fig. 4. Photograph of a female blue grouse taken near the Eaglecrest Ski Resort on Douglas Island on 14 May 2007.

