AN APPARENT LONG-DISTANCE FLIGHT BY A DUSKY GROUSE IN MONTANA

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Two closely related species (previously regarded as several subspecies of the Blue Grouse, see Zwickel and Bendell 2005) constitute the genus *Dendragapus*, the Dusky Grouse (*D. obscurus*) of inland mountains and the Sooty Grouse (*D. fuliginosus*) of coastal mountains. The ability of these birds to fly long distances is poorly known because observations of such behavior are at best serendipitous. In eastern Oregon, Anthony (1903) witnessed flights of both adult and immature Dusky Grouse from a mountain ridge to a nearby mountain slope and estimated the distance at "fully a mile and a half" (2.4 km). He noted that the flights were of "gradually descending" trajectory and seldom sustained enough "to carry the birds to the top" of the mountain to which they were flying even though the latter was 400 feet lower than the ridge. In coastal British Columbia, Zwickel and Bendell (2004, 2005) concluded that level flight in excess of approximately 2 km was unlikely for the Sooty Grouse because "few islands more than approximately 2 km from a source population are inhabited." Furthermore, these authors described an instance "in which a hen that flew out over a lake came down in the water after approximately 150 m." To our

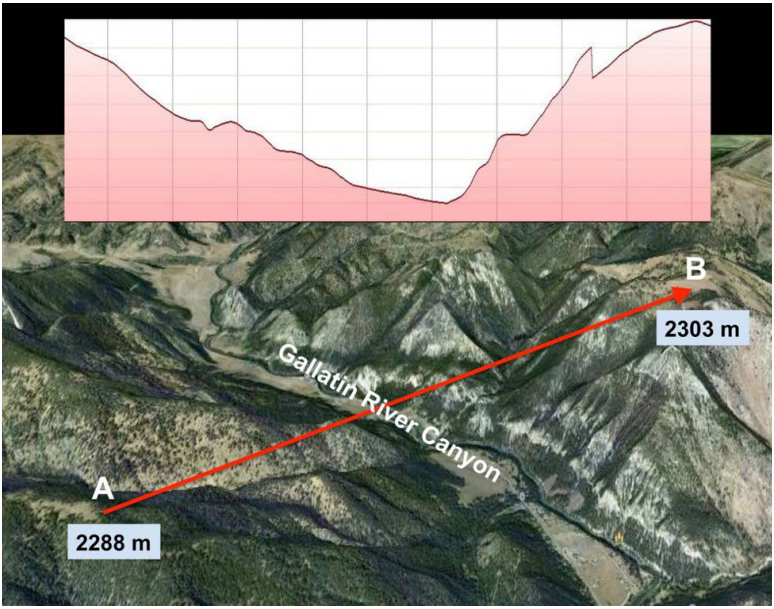

Figure 1. The probable path of a Dusky Grouse flying across the Gallatin River Canyon. Assuming relatively level flight, the bird likely launched somewhere near point A, elevation 2288 m. It then passed point B (where we were standing, elevation 2303 m) and continued onward for an uncertain distance. The upper portion of the figure shows topography between points A and B, with vertical lines at intervals of 0.5 km.

knowledge, there are no additional reports concerning the ability of either species to fly significant distances. Here, we describe the flight of a Dusky Grouse that appeared to be substantially longer than these previous estimates.

Our observation was made on the morning of 18 September 2008 from the crest of an unforested ridge in Gallatin County, southwestern Montana (Figure 1). The ridge is situated above the canyon of the Gallatin River, and the elevation at the river's level is approximately 1642 m. Weather conditions at the time provided unlimited visibility under full sun, and there was no wind. Initially, we noticed an unidentified bird flying toward us from the west in apparent sustained level flight. When first seen the bird was at a distance of about 2 km and on a plane essentially even with our elevation. We assumed it was a raptor, but as the bird got closer the flap-and-glide flight pattern of a grouse became apparent. When the grouse neared us, it flared, gained a few meters of altitude, passed over the ridge on which we were standing, and began a downslope glide out of sight to the northeast. Given that long ascending flight by this species is very unlikely (Caswell 1954, Zwickel and Bendell 2004, 2005, pers. obs.), the point from which the bird launched was presumably at a relatively high elevation on the west side of the canyon. Thus the shortest possible distance for a level flight across the canyon at our elevation was approximately 4.6 km (Figure 1). The bird's path may have been along a gradual descent. If so, the grouse would have taken flight from a higher elevation, and the distance traversed would then exceed 5 km.

Our observation suggests that Dusky Grouse are capable of longer sustained flights than previously thought. Notably, flights of ≥10 km are relatively common among the near relatives of this species, the Sharp-tailed Grouse (*Tympanuchus phasianellus*; Connelly et al. 1998), Greater Prairie-Chicken (*Tympanuchus cupido*; Johnson et al. 2011), and Greater Sage-Grouse (*Centrocercus urophasianus*; Schroeder et al. 1999). It seems likely that flights such as the one we describe played a role in the Dusky Grouse's colonization of isolated mountain ranges such as the Big Snowy and Judith Mountains in central Montana.

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