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MEASURING MOVEMENT RESPONSES OF WINTERING MOUNTAIN GOATS FROM AERIAL TELEMETRY OCCURRENCES

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Abstract: Many studies have commented on wildlife movements in response to helicopter and fixed-wing aircraft over-flights. However, research-oriented aerial telemetry has rarely been investigated as a disturbance variable. The potentially deleterious effects of displacing an animal are relatively unknown and are therefore rarely discussed or considered when proposing new telemetry research. We draw on the opportunity of 16 GPS collared mountain goats (*Oreamnos americanus*) that recorded location data over a 4-month winter period where regular telemetry flights were conducted. We evaluate two models using Akaike's Information Criteria to discriminate between distributions of step lengths during telemetry flights and at times other than during telemetry flights. In 7 of 16 individuals there was evidence for different distributions of step length during periods of disturbance. Two behavioral responses, short and long movements, occurred more often on days of aerial telemetry events than expected. The implications for studies that use aerial telemetry and GPS collar locations to track animal movement are discussed.