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EFFECT OF BACKPACK RADIO TRANSMITTER ATTACHMENT ON CHUKAR MATING

Bartel T. Slauch^{1,3}, Jerran T. Flinders¹, Jay A. Roberson², and N. Paul Johnston³

Results of a previous study (Slauch et al. 1989) indicate that backpack radio transmitter attachment is more compatible with Chukars (*Alectoris chukar*) than is a poncho apparatus. It appears, though, that backpacks, especially the antenna angle, could inhibit Chukar mating. The objective of this study was to determine the effects, if any, of backpacks and antenna position on mating and fertility.

MATERIALS AND METHODS

Chukars were housed (as pairs or trios) in 45-cm-high × 75-cm-wide × 90-cm-long wire cages. Six pairs had no radio transmitters attached (group I). In group II each of six cages contained one male and one female without radios plus one female with a simulated backpack radio with the antenna angled downward along the tail (Fig. 1). In group III each of six cages contained one male and one female without radios plus one female with a simulated backpack radio with the antenna angled upward (Fig. 1). The purpose was to determine if the males would prefer to mate with the females without radios and exclude the females with radios. Eggs were collected from females for one week prior to exposure to males to ascertain fertility status. Females were exposed to males for four days and then separated and caged individually to facilitate individual fertility observations. Eggs were collected for one week, incubated for one week, and then opened to determine fertility.

RESULTS AND DISCUSSION

Females in all groups produced fertile eggs, indicating that males did not exclude radio-

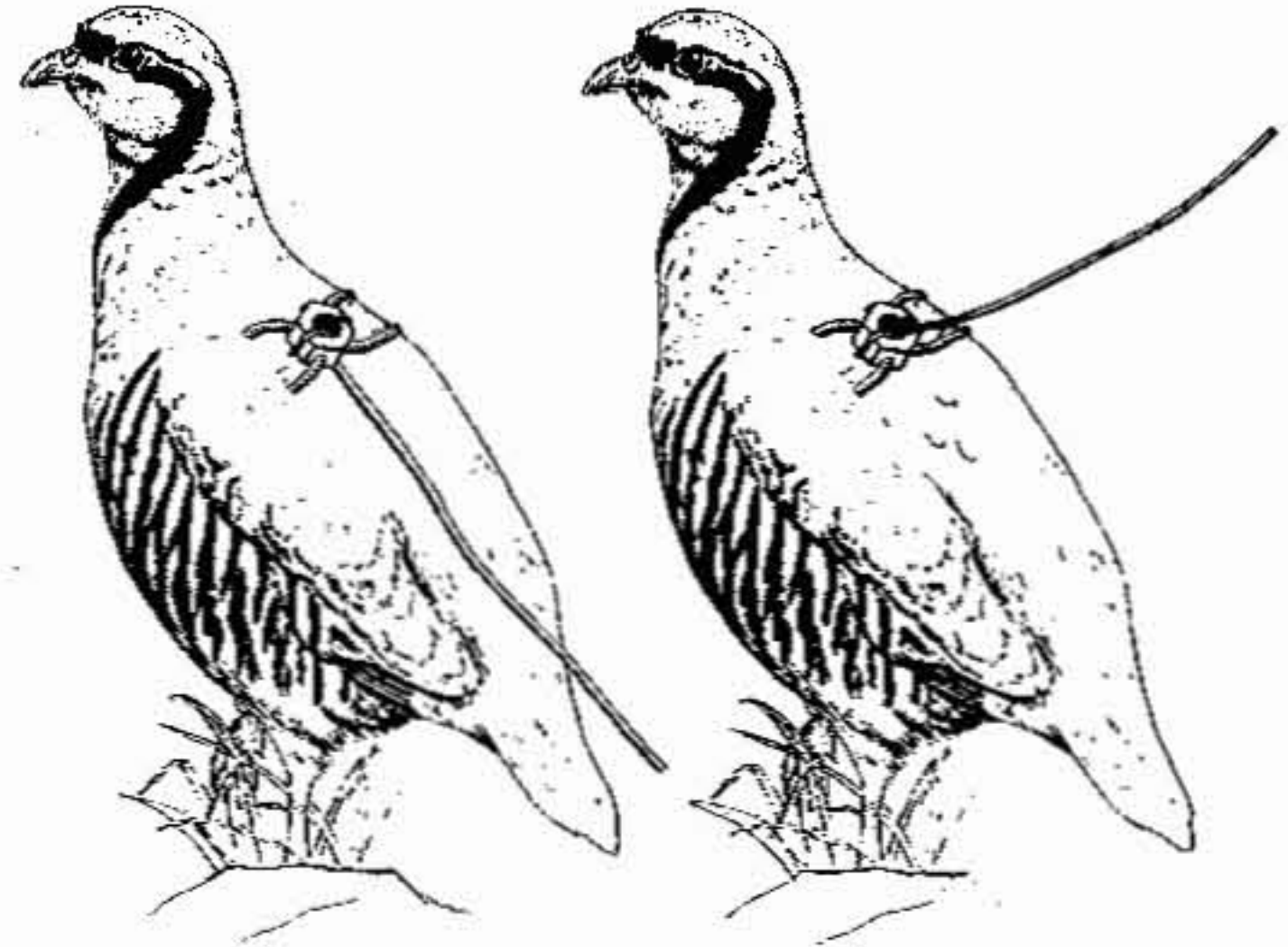


Fig. 1. Backpack attachment of simulated radio transmitters with antenna angled downward (left) and upward (right).

attached females from their mating. The radios and antennae did not impair mating even when antennae were angled upward. Males were observed to either straddle the antenna or grasp it with a foot and bend it downward while mating. These results indicate no mating problems with captive Chukars fitted with radio transmitters. Their behavior, however, could possibly differ in the wild.

This study did not include any field observations of mating or fertility. The only problem observed with released Chukars carrying backpacks was that, with the antenna angled upward, some birds experienced difficulty in flying as a result of a wing coming in contact with the antenna. Attachment one week prior to release (to allow time to become accustomed to radios) did not affect flight ability or survival.

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