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Abstracts

FEATURE ARTICLES

THE PRELAYING INTERVAL OF EMPEROR GEESE ON THE YUKON-KUSKOKWIM DELTA, ALASKA

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Abstract. We marked 136 female Emperor Geese (*Chen canagica*) in western Alaska with VHF or satellite (PTT) transmitters from 1999 to 2003 to monitor their spring arrival and nest initiation dates on the Yukon Delta, and to estimate prelaying interval lengths once at the nesting area. Ninety-two females with functional transmitters returned to the Yukon Delta in the spring after they were marked, and we located the nests of 35 of these individuals. Prelaying intervals were influenced by when snow melted in the spring and individual arrival dates on the Yukon Delta. The median prelaying interval was 15 days (range = 12–19 days) in a year when snow melted relatively late, and 11 days (range = 4–16 days) in two warmer years when snow melted earlier. In years when snow melted earlier, prelaying intervals of <12 days for 11 of 15 females suggested they initiated rapid follicle development on spring staging areas. The prelaying interval declined by approximately 0.4 days and nest initiation date increased approximately 0.5 days for each day a female delayed her arrival. Thus, females that arrived first on the Yukon Delta had prelaying intervals up to four days longer, yet they nested up to five days earlier, than females that arrived last. The proximity of spring staging areas on the Alaska Peninsula to nesting areas on the Yukon Delta may enable Emperor Geese to alter timing of follicle development depending on annual conditions, and to invest nutrients acquired from both areas in eggs during their formation. Plasticity in timing of follicle development is likely advantageous in a variable environment where melting of snow cover in the spring can vary by 2–3 weeks annually.

Key words: *arctic geese,* Chen canagica*, Emperor Goose, migration, nesting, rapid follicle growth, Yukon-Kuskokwim Delta.*