85. MERLIN POPULATION ECOLOGY AND CONTAMINANT LEVELS IN CENTRAL ALASKA

Kimberly Titus. Alaska Department of Fish and Game, Division of Wildlife Conservation, P.O. Box 240020, Douglas, AK 99824.
Philip F. Schempf. U. S. Fish and Wildlife Service, Raptor Management Studies, P.O. Box 021287, Juneau, AK 99802.

From 1983-89, we evaluated productivity, habitat, contaminant levels, and adult turnover at 84 Merlin (*Falco columbarius*) nests along a 125-km long study area paralleling the road corridor in Denali National Park and Preserve. Merlins nested in trees and on the ground. Seventy-seven percent of 35 nests from 1987-89 contained 5 eggs. Seven to 17 nests were located annually and productivity was 2.8-3.8 young banded/pair/year from 1983-89. More than 200 nestlings were banded and only four males were subsequently recaptured as breeding adults. We were able to capture 90% (77 of 86) of the adults at 43 nest sites from 1987-89. Adult males return to the same nesting area in subsequent years more frequently than females. Females had almost no site fidelity among years. Radio-telemetry data indicate that males do nearly 100% of the foraging until postfledging. We speculate that females have little investment in a territory or nesting home range. DDE, mirex, dieldrin, mercury and other organochlorines were detected in >50% of the eggs analyzed, which averaged 13% thin. Long-distance band recoveries were from Venezuela and southern California.

Keywords: contaminants, radio-telemetry, banding, productivity, Denali National Park and Preserve, Merlin, nesting habitat, site fidelity, raptors.

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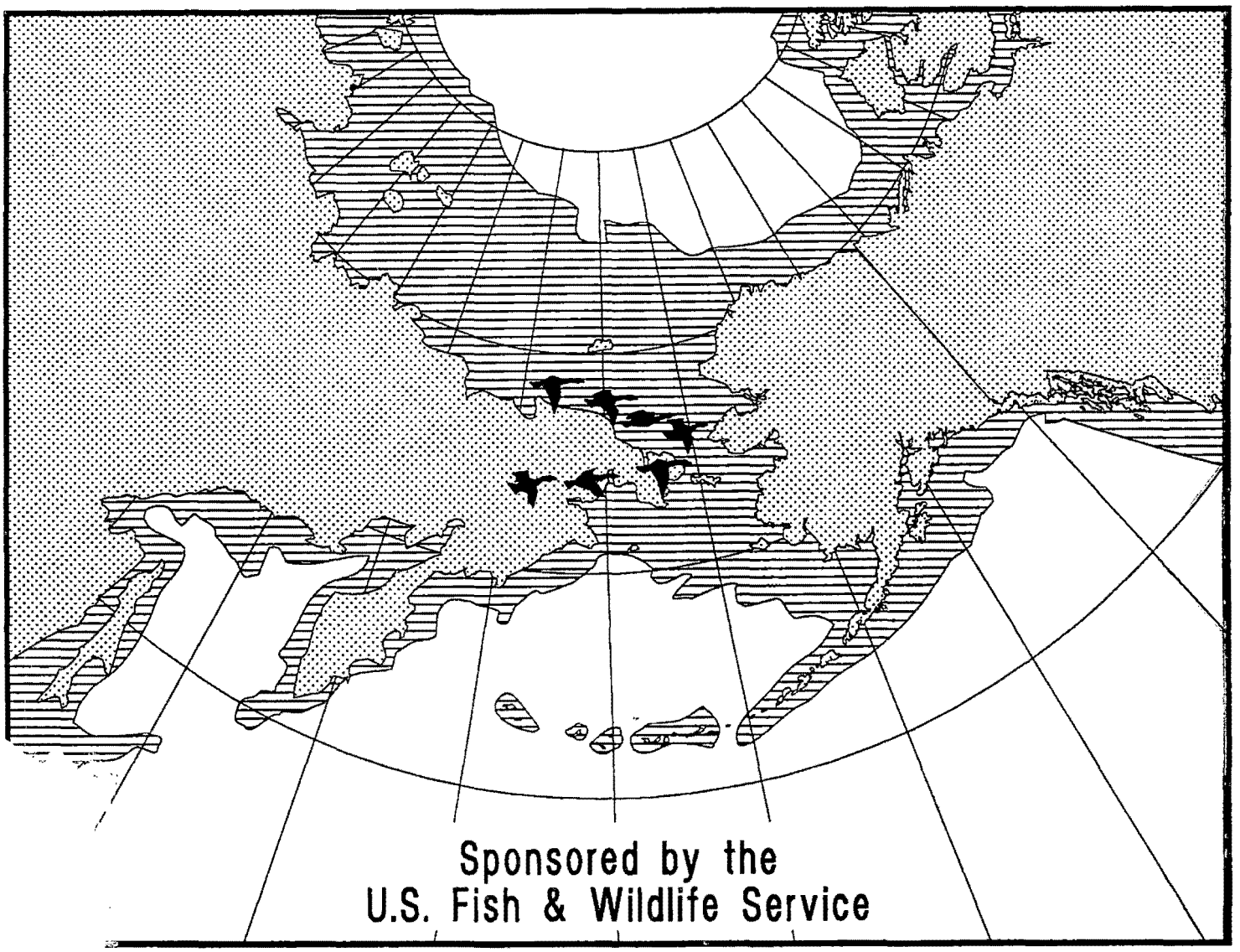

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