Brown Bear Predation on Dusky Canada Geese and the Results of an Experimental Reduction of Brown Bear Numbers

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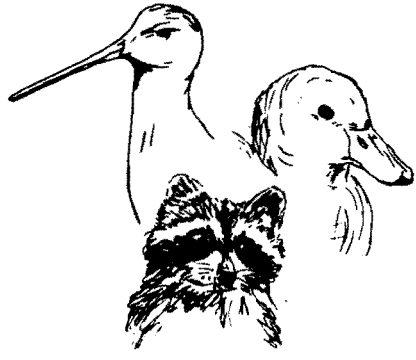
Dusky Canada geese (*Branta canadensis occidentalis*), one of the least abundant subspecies of Canada geese, are known to nest only on the Copper River Delta, Alaska. Their numbers have steadily declined since 1979, dropping from a mid-winter index of 25,500 to 11,300 in 1990. This decline has been attributed to poor nest success which has averaged only 29.1% during the past decade. Brown bears (*Ursus arctos*), coyotes (*Canis latrans*), and predacious birds such as gulls, jaegers, and corvids have been responsible for most of the nest failures. Brown bears have been the major predator, being responsible for over half of the nest destruction during 1982-86. The results of a 1984-86 telemetry study indicated that primarily females with young and immature bears were active on the nesting grounds. Their movement onto the nesting grounds in the spring coincided with foliage emergence and peak of nest initiation. Bears remained in the area until July when they began to move to inland streams with spawning sockeye salmon (*Oncorhynchus nerka*). In the spring of 1987, 19 bears (approximately 40-60% of the population) were transplanted off of the nesting grounds to test the hypothesis that nest success would improve with lower bear densities. Nest success without the transplant was predicted by a logit model using 1982-86 data and compared to actual success. While the number of nests destroyed by bears was halved, nest success (22%) was not significantly different ($X^2=0.623$, $P=0.002$) than that predicted by the model had the transplant not occurred. The proportion of avian, and to a lesser extent, canid predation of nests increased in the absence of brown bears. Based on the results of this test it appears that nest predation by the major predator groups is compensatory. Consequently, manipulation of the brown bear population, by itself, would likely not improve nest success and production sufficiently to justify costs or ecological impacts.

SYMPOSIUM

MANAGING PREDATION TO INCREASE PRODUCTION OF WETLAND BIRDS

15-17 August 1990
Jamestown, North Dakota



ABSTRACTS

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