

Chapter 1:

## INTRODUCTION

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During the second half of the 20th century, North American light geese (i.e., lesser snow geese {*Chen caerulescens caerulescens*}, greater snow geese {*Chen caerulescens atlantica*}, and Ross's geese {*Chen rossii*}) exhibited geometric population growth and have reached historically unprecedented population levels. The rapidly expanding numbers of light geese have been implicated in serious ecological and economic damage, particularly in Canada's Arctic and subarctic (Ankney 1996, Abraham and Jeffries 1997). An earlier report of the Arctic Goose Joint Venture, *Arctic Ecosystems in Peril* (Batt 1997) provided a comprehensive overview of continental light goose issues and problems, with a focus on midcontinent lesser snow geese. A subsequent report, *The Greater Snow Goose* (Batt 1998), specifically addressed issues and dynamics of that eastern North American subspecies. This report, *The Status of Ross's Geese*, compiles current information on the Ross's goose, the third and least conspicuous taxon of North American light goose.

Ross's geese resemble diminutive versions of lesser snow geese, although other morphological differences are apparent on close inspection. Ross's geese are frequently overlooked due to their small size and their sympatric distribution with the more abundant lesser snow goose throughout their annual life cycles. Due to the formerly low numbers of Ross's geese, their restricted breeding and wintering ranges which are shared with snow geese, and the similar appearances of Ross's and snow geese, knowledge regarding Ross's goose population status is more limited than for other light geese. The breeding grounds of the Ross's goose were discovered only in 1938 (Gavin 1940). The species was thought to have been near extinction in the early 1900s and to number only 5,000-6,000 in 1931 (Ryder and Alisauskas 1995). Since then, Ross's geese have exhibited rapid growth in numbers and distribution, and by 1998 the North American spring population of Ross's geese was estimated to number at least 800,000 birds (F. D. Caswell, Canadian Wildlife Service, unpublished data; R. T. Alisauskas et al. 1998, Canadian Wildlife Service, unpublished report).

Recent research and monitoring have documented the rapid population increase of Ross's geese, the expansion of their breeding range eastward across Canada's Arctic and subarctic, and the winter range expansion from California eastward to the midcontinent of the United States and to Mexico. Nevertheless, the extent to which Ross's geese contribute to the environmental and economic concerns associated with other North American light geese has not been explicitly addressed.

In October of 2000, the Arctic Goose Joint Venture (AGJV) formed the Ross's Goose Subcommittee to compile and summarize existing information specific to Ross's geese. This report, *The Status of Ross's Geese*, subsequently was endorsed by the AGJV Management Board in March of 2001 and complements information presented in *Arctic Ecosystems in Peril* (Batt

1997). *The Status of Ross's Geese* addresses topics of Ross's goose biology, population status, disease, harvest, habitat interactions, and population dynamics. To the extent available information allows, this report examines: (1) the impact that Ross's geese have on northern habitats; and (2) the potential effect on Ross's goose populations resulting from harvest regulations that have been implemented to reduce populations of midcontinent lesser snow geese. The authors hope that this information will facilitate science-based management of North America's important light goose resources.

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