

Information bulletin

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Distribution of Pacific Flyway Greater White-Fronted Geese in Mexico

The population of greater white-fronted geese (*Anser albifrons frontalis*) in the Pacific Flyway declined 80% between 1968 and 1986, prompting a Service research project to gather basic life history information about the species. An analysis of Alaska banded white-fronted geese recovered in Mexico (RIB No. 86-32) suggested that geese from different Alaska breeding regions might migrate to different wintering areas. In 1987, the Northern Prairie and Alaska Fish and Wildlife Research Centers began a cooperative project to examine the relation between breeding and wintering areas of Pacific Flyway geese.

Geese Were Captured in Two Regions of Western Alaska

Pacific Flyway whitefronts were captured, with the assistance of Region 7 personnel from refuges and migratory birds, in two areas (Figure 1): the Bristol Bay Lowlands (BBL) and the central Yukon-Kuskokwim River Delta (YKD). In 1988, 22 BBL and 17 YKD geese were captured and marked with radio transmitters. An additional 30 BBL and 20 YKD geese were radio-marked in 1989, and 78 geese from both areas were collar-marked. Radio-marked geese were tracked from airplanes in Alaska until they migrated south during September and October. They were relocated in Washington, Oregon, California, and Mexico by aerial and ground tracking crews.

Geese From the Bristol Bay Lowlands Migrated Earlier

Out of 89 geese marked with radios in Alaska, 72 (81%) were relocated in the lower 48 states or Mexico. Bristol Bay geese arrived at the Klamath Basin in mid-September, significantly earlier than YKD geese, which did not arrive until October. BBL geese fed in fields in the northeast section of the Klamath Basin, whereas later arriving YKD geese stayed near the refuge. Bristol Bay geese departed the Klamath Basin in October, and most of these geese were not relocated in California until February, when they were in the San Joaquin Valley and the Sacramento-San Joaquin River Delta.

Pacific Flyway Geese Were Found in the Mexico Interior

We traveled to Mexico in December 1989 to search the west coast and interior highlands for Pacific Flyway geese. We located 20 radio-marked geese in Mexico (Figure 2); 17 were from the BBL. Two radio-marked and three collar-marked geese (all BBL) were on the west coast of Mexico on Bahia de Santa Maria near Culiacan, Sinaloa. Aerial counts of waterfowl indicated 5,000-8,000 white-fronted geese used these coastal wetlands during winter.

Seventeen radio-marked and 24 collar-marked BBL geese were in the interior highlands. One goose had been previously located on the west coast a week earlier, suggesting migration did occur between the two areas. Most geese were found in central Chihuahua in Lagunas

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Babicora (10), Bustillos (3), Mexicanos (5), and Toronto (1). We conservatively estimated that 10,000–15,000 white-fronted geese wintered in southern Chihuahua, based on the limited areas we visited.

Bristol Bay Geese May be a Unique Subpopulation

Our studies of radio-marked geese suggest that a significant number of the Pacific Flyway population may use wintering areas in northern Mexico. We estimate 11% (2 of 18 radios located in winter) of YKD geese and 71% (14 of 24 radios) of BBL geese may migrate to Mexico. Bristol Bay geese may be part of a distinct population that winters entirely in Mexico. We will continue telemetry studies on white-fronted geese in Mexico and will study their genetic

similarity to determine whether BBL and YKD geese are actually isolated subpopulations.

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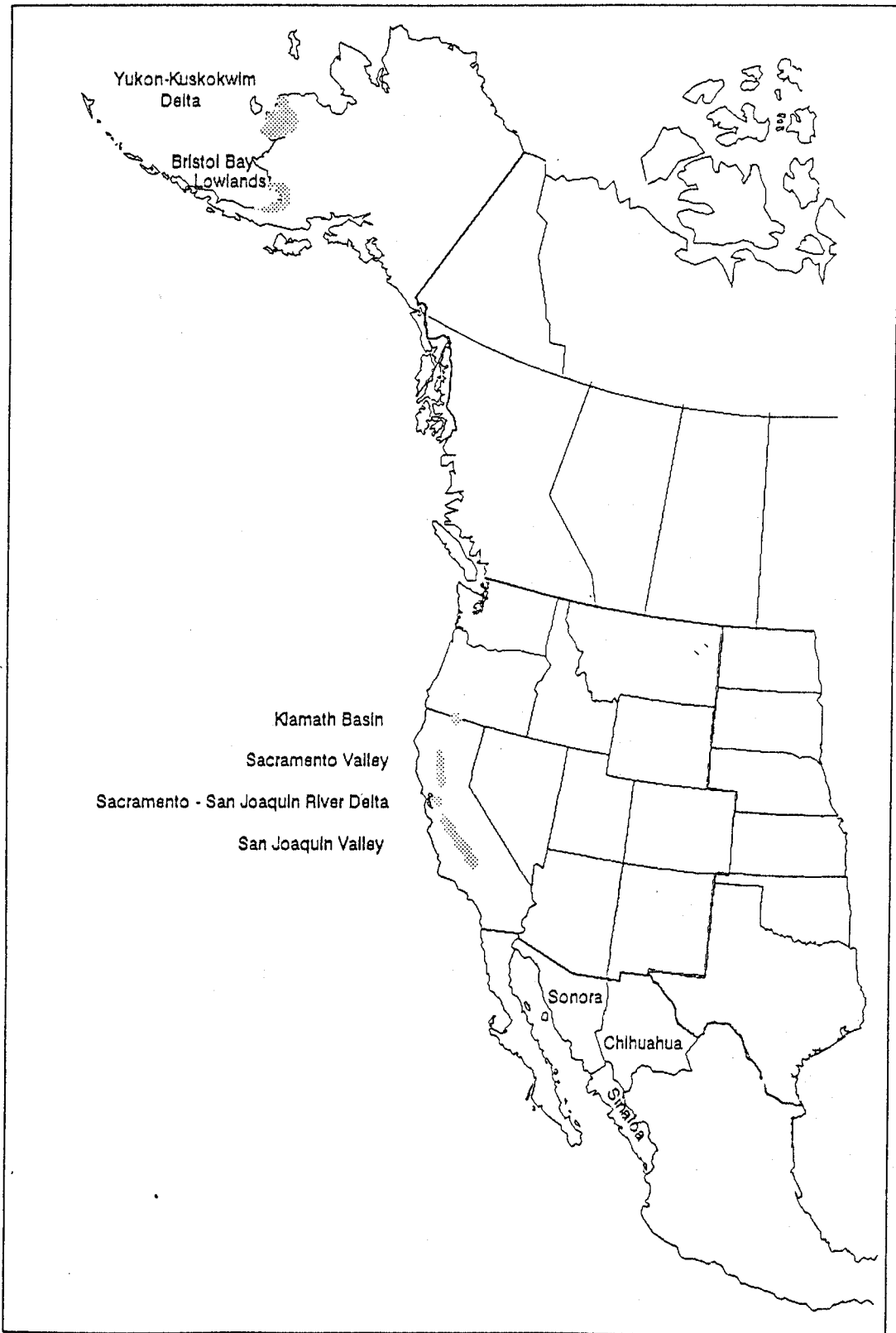


Fig. 1. Breeding and wintering areas of Pacific Flyway Population greater white-fronted geese.

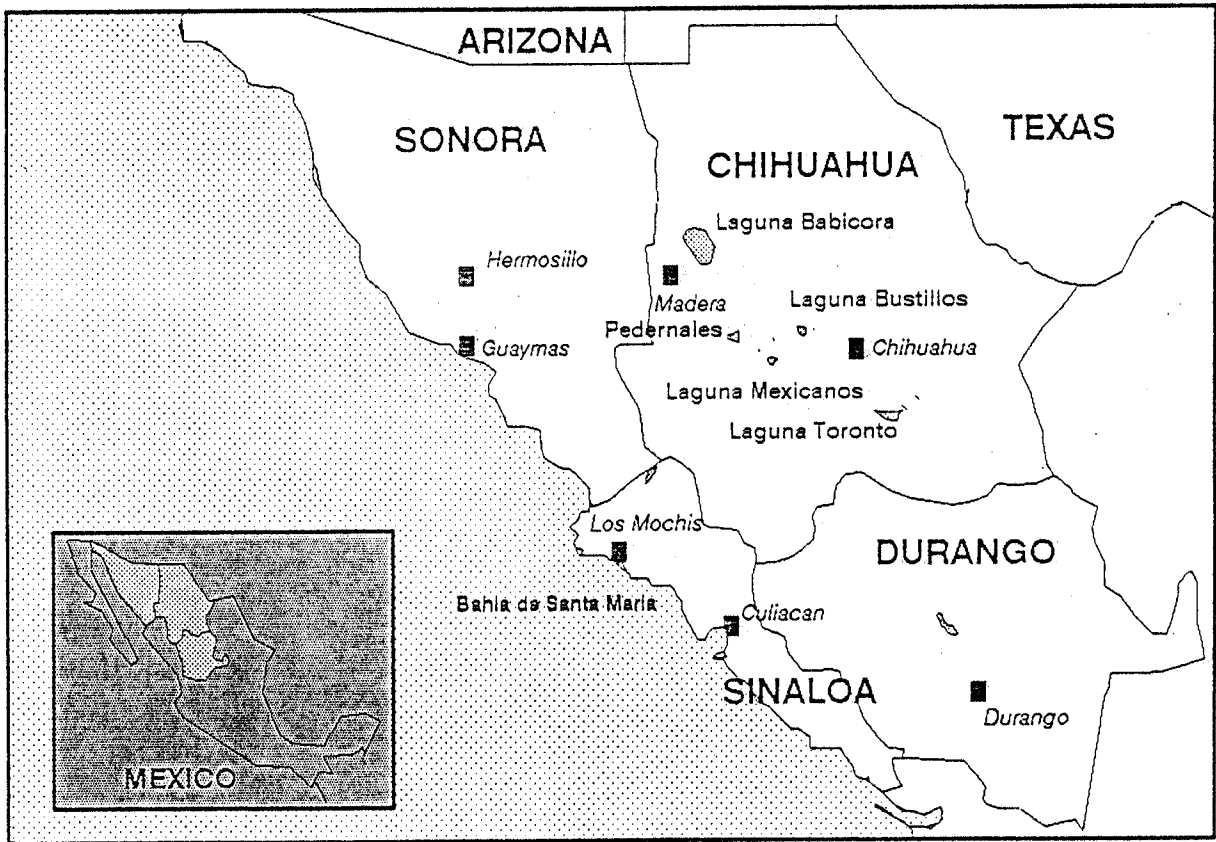


Fig. 2. Location of wintering areas used by PFP greater white-fronted geese in Mexico.