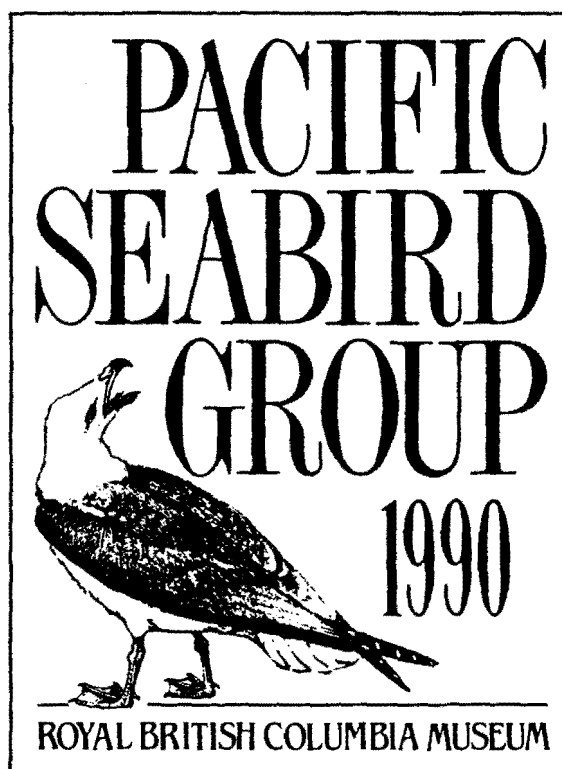


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REPRODUCTIVE PRODUCTIVITY OF GLAUCOUS-WINGED GULLS ON EGG ISLAND, 20 KM SOUTH OF CORDOVA, ALASKA, FOLLOWING THE EXXON VALDEZ OIL SPILL OF MARCH 24, 1989. S. M. Patten (Div. of Wildlife Conservation, Alaska Department of Fish and Game, P.O. Box 90, Bethel, Alaska 99559)

Glaucous-winged Gulls are among the most numerous species of birds in Prince William Sound. Approximately 50,000 Glaucous-winged Gulls use Prince William Sound in the summer, and lesser numbers are present the year round. They survive primarily by scavenging and foraging in the intertidal and littoral areas. After the *Exxon Valdez* oil spill, a high percentage of Glaucous-winged Gulls observed had been oiled. Existing literature indicates that small amounts of injected crude oil inhibit gull chick growth and affect osmoregulation, hepatic, and adrenal gland activity. Existing literature also demonstrates that minute quantities of North Slope Crude oil are toxic to gull embryos. Transfer of oil from adult gull breast feathers to eggs will likely cause embryo mortality. Previous research has verified that most of the Glaucous-winged Gulls frequenting Prince William Sound come from Egg Island and smaller colonies such as Perry Island within the Sound. The Egg Island colony, located about 25 km from Prince William Sound, is the largest

Glaucous-winged Gull colony in the world. This project is replicating prior studies of Glaucous-winged Gulls on Egg Island to determine if the *Exxon Valdez* oil spill injured the population or its long-term reproductive viability. The Principal Investigator has collected data on numbers of breeding pairs, nest density, clutch size, hatching success, and fledging success, using identical methods as in prior studies on Egg Island and other sites in southern Alaska. Results are compared directly to other previous data sets from Egg Island and other sites in southern Alaska from gas and oil baseline studies conducted well before the *Exxon Valdez* oil spill.



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