

THE EFFECT OF THE 1997–1998 EL NIÑO ON RHINOCEROS AUKLETS ON PROTECTION ISLAND, WASHINGTON

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Abstract. The 1997–1998 El Niño event was one of the most severe warm episodes the Pacific Ocean experienced during the 20th century. In Washington, it resulted in above-normal sea surface temperatures and sea levels during 1997–1998 on the state's outer coast and in the Strait of Juan de Fuca. Sea surface temperature anomalies of the two areas were highly correlated during 1995–2000. Rhinoceros Auklet (*Cerorhinca monocerata*) chick growth rates on Protection Island in the eastern Strait of Juan de Fuca were significantly lower (19%) during the El Niño years. Although chicks' peak weights were lowest during 1997, they did not significantly differ from non-El Niño years, suggesting that birds were able to compensate for smaller or less frequent chick feedings by extending the chicks' time in the burrow. Consequently, chicks were also significantly older at peak weight during this warm event, which likely led to prolonged fledging periods. However, the 1997–1998 El Niño did not affect other aspects of Rhinoceros Auklets reproductive behavior: chick mortality, although highest in 1997, was not significantly different among years; the number of breeding attempts were similar among years; as was the timing of breeding. Thus, because of its unique breeding biology, the Rhinoceros Auklet is well adapted to ocean climatic fluctuations.

Key words: *Cerorhinca monocerata, El Niño, growth rate, Rhinoceros Auklet, sea level, sea surface temperature, Washington.*