



Release:
February 21, 2011
www.prbo.org

Contact:
Russell Bradley

Phone:
(707) 781 2555 x314

E-mail:
rbradley@prbo.org

Cassin's Auklets will decline with climate change

PRBO Conservation Science (PRBO) conducted a population viability analysis to assess Cassin's Auklet responses to anticipated climate change. PRBO found that Cassin's auklet populations are likely to decline over the next 20 years and that predation control could mitigate the effects of climate change representing an effective adaptation tool.

The Cassin's Auklet, a small krill eating seabird, is a California Species of Special Concern. PRBO has monitored the population of breeding auklets on Southeast Farallon Island (SEFI) continuously since 1970. This population has shown declines of over 70% since the 1970's and has demonstrated strong sensitivity to climate variability. PRBO conducted analyses to examine the long term viability of this population and developed a population model to project future population dynamics in the face of anticipated climate change and potential management action.

Under current levels of predation by island based predators and assuming that major El Niño events continue at the same level as has been observed in the last 30 years, the population is expected to show significant declines. If an oceanographic anomaly, as was observed in 2005 and 2006, were also to re-occur, the population would be expected to decrease by more than 62% over the next 20 years.

Population declines can be halted or even reversed if mortality due to predation can be reduced through management actions. If

predation mortality of Cassin's auklets was reduced, populations can be expected to grow substantially over a 20 year period if the 2005/2006 anomaly does not re-occur. Even if this anomaly were to re-occur, reductions in predation would lead to less severe declines.

Thus, reduction in predation mortality is key to increasing long-term population viability of the Farallon Cassin's Auklet population. Without reduction in predation mortality, the prospects for future population growth are very unlikely.

Main Points

- Farallon population is expected to decline by 27% over next 20 years El Niño frequency continues as observed during the last 30 years.
- Farallon population is expected to decline by more than 62% over next 20 years if the 2005/2006 anomaly repeats.
- Partial reduction of adult mortality due to predation could mitigate population declines, leading to stable populations.

For more information see:

Nur, N. et al. 2011 Population Viability Analysis of Cassin's Auklets on the Farallon Islands in relation to environmental variability and management action.