

# After a volcano erupts, bird colonies recover

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Crest auklets. Credit: G. Drew

Where do seabirds go when their nesting colony is buried by a volcano? In 2008, the eruption of the Kasatochi volcano in the Aleutian archipelago provided a rare opportunity to track how the island's Crested and Least auklet populations responded when their nesting colony was abruptly destroyed. As a new study from *The Auk: Ornithological*

*Advances* shows, the birds were surprisingly adaptable, establishing a new colony on freshly created habitat nearby in only four years.

Crested and Least auklets rely on [habitat](#) that must be maintained by continual disturbance—they nest in crevices in talus slopes formed by rock falls, which eventually become unusable when they're filled in with soil and debris. The volcano's 2008 eruption buried all of the suitable nesting habitat for the 100,000 Crested Auklets and 150,000 Least Auklets that had been nesting on Kasatochi.

The U.S. Geological Survey's Gary Drew and his colleagues surveyed the island and its bird community by boat twice prior to the eruption and five times in the first eight years afterward, as well as deploying time lapse cameras at two locations on Kasatochi to monitor the auklets' activity. Eleven months after the eruption, [birds](#) were sitting on the thick layer of ash covering their former nesting [site](#), with no sign of any successful nests; the number of auklets turning up at the site declined each year. However, in 2012, Drew and his colleagues found a new auklet colony at a recently formed talus field north of the original colony site. Surveys of birds at sea indicated that some may also have moved to another nearby island.

"We were surprised at the speed at which the auklets were able to shift and make use of the new [colony](#) site. These birds typically nest in very large colonies, so there may be a tipping point where newly available habitat shifts rapidly from being a site of no or low density nesting to a site of high density nesting," says Drew. "Fortunately, both Crested and Least auklets are currently doing well and we do not have any immediate concerns regarding the status of these two species. That said, these findings provide us a potential template for predicting the trajectory of auklet populations in response to habitat loss and interpreting auklet behaviors following future disturbance events."

"The volcanic [eruption](#) at Kasatochi in 2008 provided the rare opportunity to document the response of a colonial seabird to the sudden and complete destruction of their nesting habitat. This study capitalized on that opportunity and gives us a glimpse into the ability of these species to disperse to nearby colonies and colonize new habitat," adds the University of New Brunswick's Heather Major, an expert on Aleutian seabirds who was not involved in the study. "This study is therefore important to our understanding of dispersal and habitat selection, and more generally, the ability of these two species to respond to large disturbances at their nesting colonies."

**More information:** Gary Drew et al, Biological responses of Crested and Least auklets to volcanic destruction of nesting habitat in the Aleutian Islands, Alaska, *The Auk* (2018). [DOI: 10.1642/AUK-17-180.1](https://doi.org/10.1642/AUK-17-180.1)

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