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RAVEN JUVENILE SURVIVAL IN THE WESTERN MOJAVE DESERT

Annual surveys in the western Mojave Desert show a dramatic increase in Common Raven (*Corvus corax*) sightings during the past 30 years, coinciding with an increasing human presence in the region. Anthropogenic resource subsidies probably contribute to the raven population increase, but the mechanism is uncertain. We asked whether raven juvenile recruitment could be predicted by a set of environmental and morphological variables such as nest proximity to the nearest anthropogenic resource (NAR). We also asked whether raven juvenile post-dispersal survival rates could be predicted by time, NAR, and sex. A total of 240 raven nestlings from 98 nests were captured and marked prior to fledging. Significant predictors of apparent survival to natal dispersal included nest proximity to the nearest anthropogenic resource (NAR) and fledging date. The best-fitting mark-recapture models predicted post-dispersal survival as a function of time, NAR, and differing between cohorts. Juveniles fledging from nests closer to anthropogenic resources maintain higher rates of post-dispersal survival well into their first year. They probably disperse in better health, and are better suited to learn foraging techniques. These results support the hypothesis that anthropogenic resources contribute to juvenile recruitment and the regional increase in raven numbers. Land managers should expect raven numbers to grow in concert with the human presence in the desert unless raven access to anthropogenic resources is diminished.

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