

# Light pollution contributing to fledgling 'fallout'

October 15 2014

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Turning the street lights off decreased the number of grounded fledglings, according to a study published October 15, 2014 in the open-access journal *PLOS ONE* by Airam Rodríguez and colleagues from Phillip Island Nature Parks, in Victoria, Australia, and Estación Biológica de Doñana, in Spain.

Thousands of birds are attracted to lights—sometimes referred to as [light-pollution](#)—every year worldwide during their first flights from their nests to the open ocean, a phenomenon called 'fallout.' Short-tailed shearwater breeding on the coast of Australia are also affected when fledgling chicks leave their nest about a month after their parents. In an effort to understand the magnitude of 'fallout,' the authors of this study have reported the number of fledging short-tailed shearwaters found grounded during evening and morning rescue patrols conducted at Phillip Island, Australia, during a 15-year period (1999-2013). Additionally, they assessed factors affecting numbers of grounded birds and mortality including date, [moon phase](#), wind direction and speed, number of visitors, and holiday periods and tested whether turning lights off could make an impact on the number of birds found on the ground.

Over 8800 fledglings were found during the 15-year study period and almost 40% were dead or dying. This mortality rate was 4-8 times higher than reported elsewhere, at sites where searching for fledglings was more opportunistic rescue rather than regular patrols, indicating that mortality numbers may be underestimated in other locations. The researchers found more grounded birds in peak fledging, moonless, and windy

nights. Mortality increased through the fledging period, in the mornings, and with increased traffic on holiday periods, but turning the road lights off decreased the number of grounded birds. While researchers could not control for the moon and wind, they suggest that reduction of light pollution and better traffic management might help mitigate artificial light-induced fledgling mortality.

**More information:** *PLoS ONE* 9(10): e110114. [DOI: 10.1371/journal.pone.0110114](https://doi.org/10.1371/journal.pone.0110114)

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