Introduction

Artificial lights cause a high mortality on petrel fledglings when leave their nests and fly for first time towards the sea at night [1]. In contrast, adults are grounded in a much lower proportion [2] and birds nesting on inland colonies have to deal with coastal lights during commuting between colony and sea.

Objective

To track the adult commuting flights in relation to spatial distribution of light pollution; and to uncover if adults cross over the city lights or avoid the lighted areas.

Methods

We GPS-tracked flights of adult Cory’s shearwaters from two inland colonies (A & B; > 5 Km to coast and > 400 m a.s.l) on Tenerife, Canary Is. We translocated 5 adults from A to B to simulate fledglings flights [3]. Nocturnal satellite imagery was employed to evaluate the spatial distribution of light polluted areas.

Results

Adults flew over the cities without apparently avoiding artificial lights. Outward flights were straighter than inward flights, probably due to gliding from high elevated colonies to the ocean. Outwards flights of translocated birds were similar to those of native birds. During inward flights, birds of colony B seem to avoid the most light-polluted area.

Discussion

Artificial lights do not seem to be a problem for adult shearwaters attending their nesting colonies, but more specific analyses are still needed (e.g. on speed or altitude). To find out if breeders have learned to manage light pollution during their visits to their colonies or artificial lights have more subtle effects on their behaviour, experimental research is required.

References

2. Rodríguez & Rodríguez 2009. Attraction of petrels to artificial lights in the Canary Islands: effects of the moon phase and age class. Ibis 151: 299-310
3. Rodríguez et al. 2015. GPS tracking for mapping seabird mortality induced by light pollution. Scientific Reports 5: 10670

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