

THE LEACH'S STORM-PETREL POPULATION SIZE OF THE WESTMAN ISLANDS, ICELAND

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The breeding distribution of Leach's storm-petrel (*Oceanodroma leucorhoa*) and Atlantic puffin (*Fratercula arctica*) were mapped in Elliðaey Island (63°28'N, 20°22'W) in 1991, the largest European breeding colony of both species. Furthermore the breeding density of both species was measured in two transects covering an area of 4600m². All puffin burrows were counted and Leach's petrel breeding density measured using the playback method (James and Robertson, 1985; Taoka *et al.*, 1989ab; Ratcliffe *et al.*, 1998) playing locally recorded male chatter and purr calls between 23:00-04:00 hours. In 164 equidistant (400 m²) plots the species breeding distributions were highly associated ($\chi^2=64,256$, d.f.=1, $P<0,0001$). Out of 35 Leach's storm-petrel burrows, 20 (57%) were dug from within puffin burrows, a previously unreported case of commensalistic breeding association. A strong correlation was found between the breeding densities of the species ($r\approx0,6$), pending a final analysis. Using information on puffin breeding areas in the archipelago (see the posters of Hansen and Gardarsson in this conference), and the density correlation, the Leach's storm-petrel breeding population is estimated.

References

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