

## **The Danish Little Owl population 2007**

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As in most of its Northwest European range, the little owl is declining in Denmark. At least since the 1970s where little owls were recorded in approximately 450 5X5 km<sup>2</sup>-quadrants (out of in total 2160 such quadrants in Denmark), the population has been steadily declining to a current estimate of approximately 100 pairs in 2007.

The remaining stronghold for Danish little owls is in northern Jutland with estimated 80 % of the breeding pairs (Fig. 1). The only other population consists of few pairs in western Jutland. In 2007, 58 territories (of which seven were new) and nine solitary birds were found. 12 known regular territories were not controlled. We still find new territories, mainly by using play-back. In the last three years 17 new territories are found this way. In 1981, we knew of more than 120 pairs in Northern Jutland. Almost all pairs were associated with farmhouses or villages, and most nests were placed in buildings.

The Danish little owl study was started in 2005, when very little was known about exact factors causing the decline, and with the aim of understanding what causes the continued decline in the Little Owl population in Denmark. The project runs as a collaboration between researchers from University of Copenhagen and University of Århus and so far 4 master's students have been associated with the project.

Because no knowledge exists on home-range size, use of habitats and seasonal variation of little owls in Denmark, we have used radio telemetry to track 30 individuals in northern Jutland during the last 3 years. The results from telemetry and registrations of breeding success are used to link population parameters such as fecundity and survival to habitat and nest availability, weather parameters and other relevant factors.

Telemetry surveys has demonstrated that the owls spend most of their time close to the nest (less than 1 km) and showed preference for gardens and grazed areas in the breeding season, when farmed land was generally covered with tall crops.

Analyses of filed data on clutch and brood size show that the production of young has been declining since 1980s, and production of young seems to be more successful when grassy/grazed areas are found near the nest.

During the last 2 years, we additionally experimented with provision of extra food to a few nests during the breeding season. These pairs have reared more young than average, indicating that insufficient food might limit reproductive success, at least for some pairs.

An important outcome of the project will be recommendations for help maintaining a viable population. Possible recommendations would likely focus on the availability of

permanently grazed areas near little owl nests and the accidentally induced mortality of young (which e.g. drown in farmers' equipment) as well as adult owls.

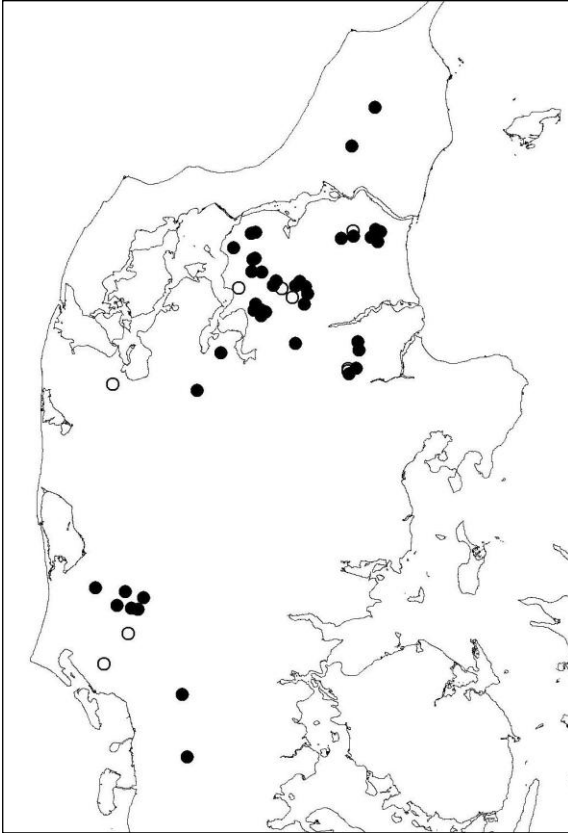


Fig. 1. Location of 52 territories of little owls in Denmark in 2007. None were found outside of Jutland. Pairs (solid) and single individuals (open) are shown. Information from 12 sites previously used regularly is lacking, and 14 territories where the exact location is not known are not shown. In total, little owl was recorded on minimum 67 localities in Denmark in 2007.



Little owl with earthworm, Himmerland, northern Jutland, June 2007. Photograph: Stig Frode Olsen.