



Survival of Skylark *Alauda arvensis* chicks until fledging

Study area

- Organic farm "Ökodorf Brodowin" (1,200 ha) in Brandenburg, 60 km north-east of Berlin, in the biosphere reserve "Schorfheide-Chorin"
- Legume-grass forage, the only crop suitable for breeding during the entire breeding season, covers more than 30% of arable land
- Fodder is cut ca every 5-6 weeks which might be a problem for ground-breeding birds



Methods

- 43 young with a weight of at least 20 g were radio-tagged in 2002 and 2003, 32 left their nests successfully
- Pip 3 transmitters from Biotrack (weight: 0.46g)
- Wing-looped-backpack with flexible silicone pipe

Spatial behaviour

Flightless young enlarged their range continuously up to 130 m around the nest before they were observed actively flying (one exception of 176 m away from the nest was due to mowing disturbance – open dot in figure).

Age dependent mobility of 26 chicks >>

Survival outside the nest

The overall survival probability observed was low, reaching $p = 0.823$ (after Mayfield) which equals a survival of only 14%. Similarly, 16% out of 26 chicks radio-tagged in their nests survived until day 18 (see figure).

The majority of young died during the first 4 days outside the nest usually through predation (predators included Marsh Harrier *Circus aeruginosus* and carnivorous mammals). Later, losses were usually caused by human activities.

Chick survival and losses per day >>

Influence of mowing

Before the onset of mowing, no obvious difference in fledging success was found between cereals and fodder ley. Preliminary results raise concern that flightless chicks hardly survive mowing. Some chicks were killed directly by mowing operations. Those surviving mowing immediately sought cover, guided by their parents, but probably died due to higher predator numbers after mowing.

Fate of 32 chicks after leaving the nest >>

Conclusions

Substantial numbers of Skylark chicks leaving their nest might be killed especially during the first days of the pre-fledging period.

In the absence of similar studies elsewhere it remains to be tested whether our results are typical for farmland breeding Skylarks.

Further study is required to show

- whether the population under study is self-sustaining
- whether "bird friendly" mowing methods can lower the losses observed.

This will be the focus of our study in 2004.

Young Skylarks leave their nests at an age of 8 (6-9) days but remain flightless until they are ca 18 days old. We studied spatial behaviour and chick losses during the critical pre-fledging period on organic farmland using radio-tracking.

