



## BEST PRACTICE GUIDANCE FOR RINGING AND NEST RECORDING LITTLE OWLS

The following best practice guidance has been based on information kindly provided by experienced fieldworkers Alan Ball and Bob Shepherd.

### NEST BOX LOCATION

Traditionally, Little Owls have not occupied nest boxes but will readily do so if the box is designed to suit them and it is positioned in areas where natural cavities are scarce. As Little Owls are a sedentary species, placing a box in an area with a known territory will usually be more successful than trying to attract them to a previously unused area. Recent research (Clewley *et al* 2016) has shown that Little Owls respond well to sound lures and this method can be used to locate territories and guide box placement.

Little Owls will readily take to boxes placed in old farm buildings in a known territory. They will also use boxes in trees or on poles; boxes placed just above a hedge line seem to be most attractive. Once a pair start using a box, it is likely that the box will then be used for many years as they are particularly site faithful. Boxes can be sited at any height, providing it is free from predation and interference from humans or grazing cattle. The size of hole needed for Little Owls will also allow Jackdaws to use the box. At sites where there is significant Jackdaw pressure, boxes can be sited at a height below two metres, as Jackdaws prefer to nest higher up and Little Owls will even use a box placed on the ground.

### NEST BOX DESIGN

Little Owls will use large boxes with a 70 mm hole, or chimney-type boxes, but prefer boxes with a tunnel-style entrance and a dark nesting chamber, which can be created by the use of baffles. The dimensions of the tunnel are not critical, providing it is wider than the 70 mm entrance hole. For boxes being placed on trees, using marine plywood is preferable as it will last longer than standard plywood. All boxes should have a good layer of wood shavings, bark chip or potting compost (but not sawdust). A cutting plan and further advice has been produced by BTO and is available on our website.

### PULLUS RINGING AND NEST RECORDING

Little Owls normally start laying in mid-April. Undertaking early nest visits prior to egg laying will provide more chance of finding the male in the box with the female. On average, 3–4 eggs are laid, with incubation commencing before the clutch is complete and lasting 27–29 days. Chicks may leave the nest after c. 25–28 days, a week before fledging.

### CATCHING ADULTS

Adult Little Owls are easy to target as they will sit tight inside a nest box and there is virtually no risk of desertion after disturbance. Adult birds can just be picked up out of the box; the females off eggs and/or small chicks, but often males will be in the box in the early part of the breeding season. All adult Little Owls caught on eggs and/or small chicks should be returned to the nest. Little Owl females can simply be placed back in the box or similarly ‘posted’ through the entrance hole and they will always stay in the box.

Two female Little Owls have been encountered nesting together in the same box with one male, so it always worth bearing this in mind if you are having difficulty sexing adults. One cannot assume that two birds in the same box will be a male and female with the heaviest bird (with a good brood patch) being the female and the other a male.

## AGEING AND SEXING LITTLE OWLS

Adult Little Owls have fewer white spots on the crown and those that exist are thinner than first-winter birds. Tertiaries and primaries are much more rounded than in juveniles. The outer greater covert is more rounded and greyish, with a large white patch in adults, as opposed to brownish with a small buff patch in juveniles. It can be difficult to separate ages 5 and 6 and this isn't recommended after May. Most adult birds undergo a complete moult each year, but some retain a few secondary feathers. Jeff Baker's revision of the *Identification of European Non-Passerines* guide provides more detailed information on ageing.

Female Little Owls are slightly bigger than males, but there is much overlap in biometrics between the sexes. Sexing adults when breeding is relatively easy as females develop a very pronounced brood patch and are heavier than males (females 148–260 g but normally over 200 g; males 158–225g but rarely over 200 g).

## SOILING AND CHICK MORTALITY

Little Owls often bring back earthworms as food for their chicks, and in periods of wet weather they can switch to feed exclusively on earthworms. In some instances this causes problems as the chicks' faeces become very sloppy and the nest chamber can get very soiled and wet, resulting in the chicks paddling about in the sloppy material when they can often die. It is a good idea to carry replacement nest substrate and to remove wet nest material and replace with new substrate before returning the chicks to the box.

## NON-TARGET SPECIES

Jackdaw and occasionally Grey Squirrel will use Little Owl boxes, as will smaller species such as Great Tit, Tree Sparrow and Pied Wagtail. Wasps and Hornets can take-over any owl box but Honey Bees particularly like the design of a Little Owl box and can take over the box from the owls. Normally, as shown from subsequent retrap data, the adult owls escape when a swarm occupies the box but obviously the nest then fails. However, adults occasionally don't manage to escape and are stung to death. It is therefore sensible not to locate nest boxes near a cluster of beehives.

## ADDING TO OUR KNOWLEDGE

There is currently only one active Little Owl RAS project. This project has approximately 90 pairs of birds in its study area; however, if sufficient effort was put in to catching both adults each year, a successful RAS project could be done with as few as 40 Little Owl pairs. Over the past five years, between 150 and 200 nest records have been received annually, with between 340 and 500 pulli and fewer than 100 adults ringed each year. Aside from additional RAS projects, we would especially encourage studies to try to gather more detailed nest record information, especially for the calculation of laying dates, clutch size and fledging success.

We are very grateful for all the work that goes into collecting data on Little Owls and would be happy to chat to anyone interested in converting their existing project into a RAS or starting/expanding a ringing or nest recording project. Ringing and retrapping more adults, both at the nest and more generally would greatly enhance our knowledge, especially for males which are typically under sampled. It may also enhance our knowledge of juvenile dispersal and recruitment into the breeding population which may be a key part of their apparent recent population decline. PIT tags may offer a way to increase the number of re-encounters of fledged birds and facilitating a RAS, though it does require an initial large cost to start the study.

## FURTHER READING

Baker, J. (2016) *Identification of European Non-Passerines*. British Trust for Ornithology, Thetford.

Clewley, G.D., Norfolk, D.L., Leech, D.I. & Balmer, D.E. (2016) Playback survey trial for the Little Owl *Athene noctua* in the UK. *Bird Study* **63**: 268–272.

van Nieuwenhuyse, D., Génot, J.C. & Johnson, D.H. (2008). *The Little Owl: Conservation, Ecology and Behaviour of Athene noctua*. Cambridge University Press.

## Little Owl *Athene noctua*

**Clutch size:** 3–4 eggs

**Incubation:** 27–29 days

**Chicks fledge at:** 30–35 days

**Broods:** 1 per year

Seasonality of nests with eggs (E) and young (y), derived from Nest Record Scheme data.

