

Breeding Lesser Spotted Woodpeckers in 2019

Ken & Linda Smith for Woodpecker Network
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Thanks everyone for your contributions to understanding breeding Lesser Spotted Woodpeckers and for finding so many nests in 2019. This year we have managed to collect excellent and important data from 23 nests – our best year since we started the Lesser Spotted Woodpecker project in 2015.

We now have good data from over 60 nests covering the period from 2015 to 2019. Over the winter, we plan to analyse the patterns in nesting success and productivity to compare them with historic data. The BTO have kindly provided access to all the Lesser Spotted Woodpecker nest record data going back to the 1940s so we will be able to look at long term patterns in the timing of breeding and productivity.

The 2019 season started in February with reports of drumming and displaying birds from over 70 sites distributed throughout England and Wales. Many observers found excavating birds from early in the season but one thing that was particularly apparent this year was that selecting a nest site and excavating a cavity is not a straightforward process for these birds.

Problems for Lesser Spots

We normally think that interference from Great Spotted Woodpeckers is the main issue but this year we had one cavity taken over by a Great Spot, two taken by Blue Tits and one by Marsh Tits, all in the later stages of excavation.

The pair that lost their cavity to a Marsh Tit (see box on right) quickly excavated another and bred successfully. The nests were not found for the other LSW pairs although we assume, they excavated new cavities.

In the New Forest there were also two cases of a second female causing disruption around the nest site. In one case the cavity was ultimately not used and in the second the nest failed at the young stage during poor weather. It seems to be common that Lesser Spots have false starts before finally selecting their breeding site, but it is only by monitoring the birds closely from early in the season that we get a glimpse of these events.

There is more information on our website
www.woodpecker-network.org.uk



Male Lesser Spot bringing invertebrates to a New Forest nest. Photo Richard Jacobs

Lesser Spots are no match for Marsh Tits!



At a well observed site in Norfolk, the Lesser Spot pair were first seen excavating a nest cavity on 23rd March. Arriving early on 5th April to check progress, Ricky Cleverly found Marsh Tits taking nesting material into the hole. When the Lesser Spot male arrived a bit later, it went to enter the hole but backed off quickly on discovering the Marsh Tit inside. The two confronted each other at the hole entrance for a long four minutes but eventually the Lesser Spot gave up. See Ricky's video of all the action at <https://www.youtube.com/watch?v=NOFMUNQj-8g&feature=youtu.be>



After this setback the Lesser Spot pair were elusive and unsettled. It took two weeks of searching and hours of careful observations, before Mat finally tracked down the new nest site. The pair successfully fledged four young

Results from nest monitoring

The 23 nests this year were reported from nine counties (Table 1) with recently fledged young seen at a further four. This brings the total to 20 counties with reported nests since 2015. We have seen an increase in the numbers of nests found in the New Forest over the years of the study from one in 2015 to an outstanding 12 in 2019. This reflects the fact that the New Forest still holds reasonable numbers of Lesser Spots but also the efforts of a dedicated team of observers who over the years have become more skilled and focussed on this challenging species.

Overall, nine nests were found early enough to determine the clutch size with our nest inspection camera. The mean clutch size was 5.3 eggs (range 3-7) which pretty much matches the average from previous studies both in England and Wales and elsewhere in Europe.



Male Lesser Spot incubating seven eggs in its nest cavity in Nottinghamshire and below the pair changing over, photo Indy Kiemel-Greene

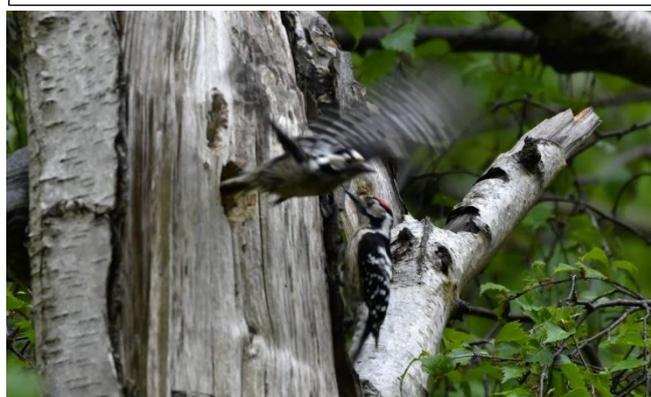


Table 1. Counties with nests in 2019 and over the period 2015-2019. Only active nests where we are sure there were eggs or young have been included in the totals. The asterisks indicate counties where we did not know of any active nests, but birds were seen excavating a cavity which was usurped by another species or not used at all.

County	Number of nests in 2019	Total number of nests 2015-19
Cheshire	*	2
Derbyshire	-	2
Devon	1	4
Gloucestershire	1	3
Greater London	-	1
Greater Manchester	1	1
Hampshire	13	22
Herefordshire	-	4
Hertfordshire	-	2
Kent	*	2
Lincolnshire	-	2
Norfolk	1	4
Nottinghamshire	2	3
Shropshire	-	1
Somerset	1	2
Staffordshire	*	*
Surrey	2	3
Sussex	*	3
West Glamorgan	-	1
Wiltshire	1	1
Worcestershire	-	1
TOTAL	23	64

This suggests that low clutch size is not likely to be a factor in poor productivity. 2019 was an early season with the first eggs laid on 18th April (nests in Norfolk and the New Forest) and an average first egg date of 26th April.

Three of the 23 nests were known to have failed. One was predated by a Great Spotted Woodpecker just before the young were due to fledge. At two late nests the young starved during a period of wet weather in the New Forest. For most of the nesting season the weather was very stable and dry, but these two late nests were still active when the weather broke in early June. Although it is always disappointing when nests fail the overall probability of nest survival came out as 0.82 (Mayfield estimate) which is quite reasonable and comparable with other studies.



Lesser Spot nest (lower hole on left) predated by Great Spot through the back of the tree (right).

How many young fledged?



Three youngsters almost ready to fledge on 2nd June in Wiltshire, photo Ken and Linda Smith.

The mean number of young fledged from successful nests was 3.0 (range 2-4, n = 15) (the brood size) with the overall breeding success allowing for failed nests of 2.5 young per nest (range 0-4, n = 18). It is typical of both Lesser and Great Spotted Woodpeckers that only about 50-70% of the eggs result in fledged young but these Lesser Spot figures seem on the low side.

In the five years since our study started in 2015 the breeding success has been at this level in most years except in 2016 when it was very low. The 2016 breeding season was characterised by a period of cold wet weather in May which led to low breeding success for many species including Lesser Spotted Woodpeckers. Interestingly, the RSPB studies of Lesser Spots over the period 2007-9 found high levels of nest failure and chick loss during periods of poor (mainly wet) weather.



Ken using our nest inspection camera on a telescopic pole to check progress of a nest in the New Forest, found by Rob Clements.

Lesser Spots favoured nest trees

For those living in the south the signs of Ash dieback are very prevalent this year with many dying and dead trees throughout the landscape. When Dutch Elm Disease devastated the elm trees through the 1960s and 70s both Great and Lesser Spotted Woodpecker populations benefited massively, presumably from the availability of bark beetles and their larvae but also the many dead trees as nest sites. For the last few years we have been keeping an eye on the Ash dieback situation to see if there are any signs that woodpeckers will benefit from the pulse of dead and dying trees in the landscape as they did during the Dutch Elm Disease episode.

As far as nest sites are concerned so far since 2015 only four out of 61 Lesser Spot nests have been in Ash trees (Table 2). It remains to be seen whether this number increases as more and more Ash trees die and decay.

Table 2. *Nest tree species used by Lesser Spotted Woodpeckers 2015-19. All nests, including those in living trees, are in dead branches or limbs.*

Tree species	Alive	Dead	Total
Alder	1	11	12
Apple	3	0	3
Ash	2	2	4
Beech	4	8	12
Birch	2	7	9
Hawthorn	0	1	1
Holly	0	2	2
Horse Chestnut	1	2	3
Oak	0	2	0
Poplar	0	5	5
Sycamore	2	0	2
Willow	5	1	6
TOTAL	20	41	61

Up until this year we had seen no signs of Lesser Spotted Woodpeckers foraging on dead and dying Ash trees but this year we have seen it twice. On both occasions the birds were pecking and gleaning on small (up to 2cm diameter) dead branches high in the crowns of mature Ash trees with signs of advanced dieback. It will be interesting to see whether this becomes a common sight over the next few years.

Observing Lesser Spot nests.

Although we gain most information when we can inspect nest contents with our video camera system, a great deal can be learned from observations outside the nests. For instance, the timing of breeding and the overall nest success can be judged by making regular visits and watching the nests and how the adults are attending and feeding the young. This is also a good way to discover whether both the male and female are feeding the young and the relative provisioning rates.

It is also possible to get a good idea of the types of prey being brought to the young in this way. Mat Shore and Ricky Cleverley did this systematically at their nest in Norfolk this year and collected some excellent data. They found the birds were mainly bringing caterpillars (moth and sawfly larvae) but photos from other nests show a much wider variety of prey items. (for example, the photo at the top of this report).

For Great Spotted Woodpeckers we have just published a paper** showing productivity is related to the availability and timing of caterpillars in relation to peak food demand of the young. It could well be that Lesser Spots have the same issues, especially because they nest a few days later than Great Spots.

Finding Lesser Spotted Woodpecker nests

remains a challenge and although we have provided some advice on our website it is by no means infallible. All of us are learning as we continue to work on the species and this year several nests were found by following up what are often single alarm calls from adults in mid to late May. At this time the birds are feeding young so if you get such a call you are likely to be within 100m or so of the nest. Waiting and watching the bird may reveal the location of the nest.

Our original motivation for starting the Lesser Spotted Woodpecker project was to investigate whether low breeding success, as found by the RSPB, was a widespread and continuing problem for the woodpeckers. Our results over the last five years show the breeding success is not as low as found during the RSPB study but it is still not good and may still not be enough to maintain the population in the long-term. We are hoping to have more to say about this once we have analysed the data fully over the winter.

** *Our paper in Bird Study* Ken W Smith and Linda Smith (2019), Does the abundance and timing of defoliating caterpillars influence the nest survival and productivity of the Great Spotted Woodpecker *Dendrocopos major*? See our website www.woodpecker-network.org.uk for a summary of the paper and findings

The Highs and Lows of Lesser Spot nests



The orange dot shows the highest ever nest we have inspected at 17.4 metres in a poplar tree in Norfolk and the

lowest ever nest, found by Tara Dempsey in the New Forest allowing Ken easy access with the video camera to view the chicks.

Acknowledgments

Thanks to everyone who contributed to the project in 2019. In particular those who found and monitored nests or excavations or found recently fledged young: David Anning, Jack Baddams, Malcolm Burgess, Rob Clements, Ricky Cleverley, Simon Currie, Tara Dempsey, Alan Eardley, Martin Garwood, Brian Hill, Gerry Hinchon, Lucy Hodson, Indy Kiemel-Greene, Tom Kistruck, Mark Mallalieu, Connor Rand, Gus Robin, Mat Shore, Ed Stubbs, Mark Swann, Lewis Thomson Matt Twydell, Martin Webber and Thomas Winstone.

A special thanks to all those who searched in vain for nests, please keep searching.

Keep in touch – on Twitter @LesserSpotNet or email ken.smith.lsw@gmail.com plus lots more information and all the latest news is on our website www.woodpecker-network.org.uk

Footnote: Blue Tits hijack Lesser Spot cavity

Mark Swann watched Lesser Spots excavate a nest cavity in the New Forest, which was taken over by Blue Tits, as we confirmed when we took a look with the nest inspection camera.

