

Bringing back our NIGHTJARS

After a huge decline, efforts are underway to revive the fortunes of this mysterious bird, writes *Ben Macdonald*



↑ THE FEARED GOATSUCKER!

Nightjar was once thought to steal milk from goats! Now we know better and need to protect it

A WARM, STILL EVENING sky turns purple-blue as the last light fades over a forest clearing. A mechanical, disembodied sound carries from a single pine. Half insect chorus, half monotonous song. As author Eden Philpotts wrote, in 1919: “I love the monotonous music of the goatsucker... He has but two notes, and after sustaining the higher for 30 seconds or more, drops half a tone upon the lower and so concludes his burst of song”. The Goatsucker! The Fern Owl. Strange, feared bird of the night.

For centuries, the Nightjar held rural communities in awe. It accumulated legend around its strange behaviour. The most popular myth told how it suckled from the teats of goats at night. Even the Nightjar’s Latin family name, *Caprimulgus*, means Goatsucker. Perhaps its habit of feeding among cattle and sheep, where it hawked for insects attracted to animal faeces, led to such a bizarre and undeserved reputation. Indeed, as early as 1826, the naturalist Charles Waterton wrote that “the harmless, unoffending Goatsucker, from the time of Aristotle to the present day, has been in disgrace with man. Father has handed down to son that this nocturnal thief subsists by milking the flocks. Poor injured little bird of night. Thou hast never robbed man of any part of his property – nor deprived the kids a drop of milk”.

Today, of course, we know, as Waterton did, that Nightjars do not suckle goats. But these legends were

widespread – as widespread, in fact, as the bird itself. At the end of the 19th Century, Nightjar range extended across every county of Britain. They bred commonly north to Highland, and were especially abundant across the south coast counties, Wales and the Marches. Across the 19th Century, the Historical Atlas reveals little change in abundance and distribution. Moors, heathlands, forests, scrub, pasture and even farmland were, at that time, used regularly for breeding. Urban city expansion – in London, the

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Midlands and northern England – had some localised effect on populations, but overall, the Nightjar remained a widespread British bird.

Declines were noted in earnest from the 1930s, commencing in western Britain. In Wales, where, in the 19th Century, birds had been common and widespread, county-level losses occurred by the 1950s. Retractions took place from the north and west. Around this time, many areas of the Scottish Highlands had become depopulated, and English counties, like

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Oxfordshire and Cambridgeshire, began to lose breeding birds. By the First Atlas, in 1968-72, Nightjars had been lost from most of Scotland, north-east England, most of the Midlands and central Wales. At this time, the BTO estimated that 3,000-6,000 pairs bred in the UK. Between the First and Second Atlas, in 1988-91, Nightjars had been lost from a further half of occupied 10km squares. Between 1920 and 1990, Nightjars underwent one of the fastest and most extensive range retractions of any migrant, ever.

The picture since then has been one of increased abundance, in core areas, but little recovery of the nationwide distribution of the 1900s. The New Atlas shows that, since 1968-72, some gains have been made around Dartmoor, South and north-west Wales, the North York Moors and Galloway Forest. Losses have been more widespread, especially across large tracts of the Home Counties, around London, across the south coast counties, and across the west of its range in northern England (Lancashire, Cumbria) and Scotland. In 1981, a survey recorded 2,100 singing



David Tipling/RPA



David Tipling/RPA

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males in Britain. By 1992, however, there had been a 50% recovery in numbers, albeit within core ranges, to 3,400 males. And by 2004, a national survey showed a further 36% increase – to 4,606 singing males. Numbers are up, but range is still highly restricted.

Today, the New Atlas reveals that Nightjars remain highly concentrated in remaining strongholds. These show a marginal bias along our south and east coastlines, in England and Wales. Nightjars occupy a very specific habitat that can be replicated by a range of landscapes – heathland, young forests, clear-fells, coppiced clearings, scrub with grazing, wood pasture and even dune systems. This rather disparate range of habitats has meant that Nightjar requirements are often described in terms of how a habitat looks, but not in terms of what Nightjars actually need.

Moth hunters

Nightjars are highly specialised insectivores. Diet consists of 81-93% of moths with the remainder being flying beetles and some flies. Prey is captured largely in flight. As far back as 1920, WE Collinge analysed the diet of 62 individual Nightjars in England. He found that 88% of diet consisted of nocturnal insects, predominantly moths. These included Ghost Moth, Common Swift Moth, Winter Moth, Cabbage Moth, Turnip Moth, Heart and Dart and Large Yellow Underwing. Among beetles and flies, he noted the Common Cockchafer, Garden Chafer, Summer Chafer, various earth-boring Dung Beetles and Craneflies. Larger moths are particularly preferred when feeding young. When feeding, it's not only important that

Nightjars have abundant resources to feed themselves and their chicks – from arrival in May to departure in September. Accessibility of prey is key. In eastern England, feeding sites often correlate to ease of prey capture, more than overall prey abundance. Hunting for prey peaks around a full moon, and under clear skies. Nightjar persistence depends on their ability to capture abundant, accessible moths, in the air, at night.

Nightjars have also evolved specialised ways of using the landscape for nesting. Ground-nesting females require their camouflage to work effectively in order to avoid predation. Historically, in coppiced woodlands with charcoal burning, Nightjars nested on the earthy clearings of the previous season's burning. In the Forest of Dean, I have found nests by searching out small, burned tracts of soil within clear-fells. As a rule, for Nightjars to nest successfully, they require miniature clearings within a wider setting of low cover and scattered trees.

At a wider level, Nightjars also use their territories in a specialised manner for feeding and display. By day, as the female sits on her nest, the male roosts within 50m. Come dusk, the male uses scattered trees for displaying and defending territory – often while ‘churring’ – then often associates with other males at food-rich communal feeding sites, like a tract of fen.

South Wales tracking studies show that females left their nests shortly after dusk and just before dawn, mostly from 9pm to 11.30pm, and 3.30am to 6am. Males stayed within the territory at dusk, but ranged widely thereafter. When pairs began feeding young, both male and female remained within the territory.

↑ IN THE DARK

Nightjars spend the crepuscular hours hunting for insects – mainly moths

SPECIES FACTFILE

NIGHTJAR

Scientific name:
Caprimulgus europaeus

Length: 27cm

Wingspan:
60cm

UK numbers:
4,600 males in summer

Habitat: Open heathland

Diet: Insects – especially moths and flying beetles

Home sweet home

To accommodate a balance of camouflaged ground nesting, territorial defence and aerial feeding, Nightjars have developed a rather precise habitat – even if that habitat varies a great deal in its appearance to humans. Essentially, Nightjars inhabit moth-rich areas of low vegetation with scattered trees. Forestry clearings, young plantations, heathland – all can create such conditions. But, in the 19th Century, Nightjars did not only rely on these to survive. Nightjars were a farmland bird, a coppice bird, a pasture bird. So how did this summer visitor retreat from the entirety of Britain?

The widely acknowledged explanation for Nightjar decline has been a massive loss of lowland heathland since the end of the 19th Century. Heathland is not a natural habitat – it results from the clearance of primeval forest on nutrient-poor soils. Human-induced grazing then maintains low heather or brackish vegetation, which would otherwise revert to scrub. As such, heathland grazing, for thousands of years, was the optimal system for those farming poor-soils. By the 19th Century, however, there was a new solution – conversion of heathland to farmland. From a Nightjar's perspective, conversion of heathland to farmland means three things. Loss of suitable ground cover for nesting and roosting. Loss of vital trees and song-posts. Loss of habitat heterogeneity and, as a consequence, food-plants for the large moths on which birds feed. Since 1800, more than 80% of Britain's heathlands have been lost, 17% in the last 50 years. An entire habitat has been ripped out of the countryside.

Yet, while heathland loss goes a long way towards

explaining declines, it must be remembered that Nightjars, like Red-backed Shrikes, only ended up as a true ‘heathland bird’. They started the century, in contrast, as a bird of the wider countryside. Like many species in the UK, the Nightjar's decline is best described not only in terms of range loss, or heathland loss, but as a transition from generalist to specialist. What is fascinating to read in this regard is the ‘Nightjar Enquiry, 1957-8’, in the BTO's Bird Study magazine. This documents, county-by-county, the breeding habits of Nightjars across Britain before some

Where can I find Nightjars?

SOUTHERN ENGLAND

Dartmoor, the Devon Redlands, Wareham Forest and Purbeck, the New Forest, and the South Downs – north to the Thames Heaths in Berkshire and Surrey.

EASTERN ENGLAND

Thetford Forest, the coastal heaths of Suffolk and Norfolk, the Thorne Moors in South Yorkshire, and the forests of the North York Moors.

MIDLANDS

Cannock Chase, in Staffordshire, Sherwood Forest, in

Nottinghamshire, and the Laughton Forest region of Lincolnshire are all sites worth checking out.

WESTERN ENGLAND AND WALES

The Forest of Dean and Wye, forests across South Wales, like Brechfa and Crychan, north, patchily, to Hiraethog Forest in Clwyd.

SCOTLAND,

Nightjars persist viably in Galloway Forest Park. Outside of these extensive, wood-heath landscapes, Nightjars are largely a bird of the past in Scotland.

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range contractions began. In Cornwall, birds bred on “lower grass moors” but also up to 500ft on “high ground... and derelict tin-workings”. In Sussex, on “Crowborough Golf Course at 600ft”, but also “open thorn scrub on downland by the sea”. Overall, the enquiry found Nightjars in the 1950s strongly associated with ground-features, like heather and bracken, but these features seem to have occurred at a huge range of sites – grazed hillsides, commons, coppiced clearings, forestry, dunes and scrub.

Habitat loss

Since that time, just two of these habitats – lowland heathland and forestry – have retained viable Nightjar populations. The interesting exception to this is the Thorne Moors, in South Yorkshire – home to 91 pairs in 2013 and a rare relic of the ‘birch scrub’ sites recorded in the Enquiry. And the key factor across the Nightjar’s range seems to have been the incremental removal of crucial features – bracken, heather, scattered trees – not just from heathland, but the countryside as a whole. In a time when our demands on the landscape were lower, pastoral grazing a widespread phenomenon, and our cultural urge to tidy every inch of Britain less profound, Nightjar habitat appears to have existed in many different kinds of places. Most of these, over time, have succumbed to the inevitable post-industrial processes of landscape simplification.

Whereas many declines today appear driven mainly by loss of food, the speed of the Nightjar’s decline is probably due to the double-blow of a changing ground layer and reduced food, often as a result. Habitats like ‘commons’, derelict birch scrub with some grazing, grass moors like those in Pembrokeshire and Cornwall – all have been lost, degraded or tidied in a relatively short space of time.

Specific changes have also undermined certain habitats. Coppicing of deciduous woodlands routinely created spacious clearings for Nightjars to nest. The rapid extinction of this practice in many areas has vastly reduced food-rich open spaces in which to nest. By contrast, ‘pure’ habitats of high ecological value – like lowland heathland – have, in remaining strongholds, like the New Forest or Breckland, been protected. Likewise, large areas of high economic value, like forestry, have been saved for very different reasons, but proven equally beneficial to the Nightjar.

It is difficult to separate losses of nesting sites,

“Today, Nightjars, unlike our other insectivorous migrants, have entered a period of relative stasis”



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Alamy

↑ FIGHTBACK

Research into Nightjar requirements has led to a greater understanding – and the beginning of a comeback

↓ HIDDEN

Nightjars blend in perfectly with their preferred habitat of forest clearings

however, from associated losses of food. In the past 40 years, large moth species in southern England have declined by 40-90%. Of the species found commonly in the Nightjar’s diet during the 1920s, several continue to be in steep decline. The ‘State of Britain’s Larger Moths’ reveals that Ghost Moths have declined by 73% in just 35 years, Turnip Moths by 68% and Heart and Dart by 67%. These declines have only been quantitatively measured in the past four decades, but have probably accompanied landscape simplification for far longer. Indeed, since 1900, more than 60 species of large moth have become entirely extinct across Britain. Today, therefore, it is not only that heathland and forestry harbour heather, bracken and low trees for nesting. These large refuges also protect the Nightjar’s vital lifeline – viable populations of moths. In the last five years, a steep linear decrease in the number of fledglings per brood, and in overall clutch and brood sizes, has been observed by the BTO. Such factors reflect, in many cases, decreased food availability, and though this is difficult to prove, the extraordinary scale of moth-loss in Britain will certainly hamper widespread range expansion in decades to come.

Today, Nightjars, unlike our other insectivorous migrants, have entered a period of relative stasis. Populations have increased, but range expansion remains very limited. The 2004 national survey, for example, noted just a 2.5% increase in occupied 10km squares since 1992.

So how can we further the prospects of this fantastic bird? In my mind, the key for expanding Nightjar populations today is not fragmented heathland but extensive forestry. Forestry, by contrast, has lower densities of birds than heathland, but is far more pervasive as a habitat across Britain, right across the Nightjar’s former range. And unlike with a lot of our migrant birds, careful habitat creation in the UK has already yielded positive results.

In essence, Nightjars, like any summer visitor, thrive in areas, like the New Forest, where food and habitat is maintained at a landscape level. If we can apply the same logic to other summer visitors, then they too may return to make use of modern Britain for centuries to come. 🍂