

Nightjar

1. A Definition

The nightjar (*Caprimulgus europaeus*) is a nocturnal and crepuscular (active at dawn and dusk) bird, just under 30 cm long, with a wingspan of about 60 cm. Its churring song - rather similar to a cricket's - heard on warm summer evenings is one of the most evocative sounds of the countryside and can be heard from up to two kilometres away on still nights. Indeed, nightjars are more often heard than seen, and the bird's remarkably camouflaged plumage of greys, browns and russets makes it almost invisible amongst the low vegetation in which it hides during daylight hours.

Nightjars are summer visitors to Europe, spending our winter in sub-Saharan Africa. They arrive here in early May and are gone by October.

Nightjars are essentially heathland birds, requiring low, sparse vegetation in which to nest, and also find the heath-like conditions that arise in conifer plantations shortly after they have been clear-felled and replanted a very suitable habitat.

In the UK the nightjar is broadly but locally scattered throughout England and Wales where suitable habitats exist, but is very rare in Scotland and Ireland. Elsewhere it occurs locally throughout central and southern Europe.

2. Why an Action Plan?

The particular habitat requirements of the nightjar (described below) means that its distribution and numbers are limited by the availability of suitable habitat. One component of that habitat - mature lowland heathland - has been decimated in southern England over the last century, and whilst today the remaining fragments of heaths are largely protected from further losses (and initiatives are underway to restore large areas of former heathland) the habitat remains a scarce one.

Largely as a result of the losses of heathland area, the nightjar has declined dramatically over the past century, and by 50% nationally between surveys carried out in 1968-72 and 1988-91. Within the last ten years or so, the species has showed signs of recovering, and this is in part due to increases in habitat provided by clear-felling of conifer plantations.

Devon has the second largest population of nightjar in the South-West, so we have a particular responsibility to ensure that it continues to be a prominent part of our rich biodiversity. By maximising the potential of forestry

plantations to support nightjars and restoring and enhancing heathland, we can go a long way to restoring populations of this peculiar and fascinating bird.

3. Relevant ecology

Nightjars nest in patches of bare or sparsely vegetated ground, mainly on free-draining sandy soils (but in some situations on heavier gley soils) within areas of mature dry heathland, young forestry plantations, or in woodland clearings of over 1.5 hectares. Nightjars often rear two broods per season especially in populations in the South of England. Normally two eggs are laid from mid May to mid July; chicks hatch after about 19 days and fly at about 17 days old. They are then reliant on their parents for food for about four weeks.

They feed on flying insects such as moths, beetles and flies mainly at dusk and dawn across a wide range of habitats, although preferred areas are heathland, deciduous or mixed woodland, orchards, riparian and freshwater habitats, and gardens. Forests are most used where there is age diversity within a forest. Birds will travel on average 3 km from nest sites to locate suitable feeding areas.

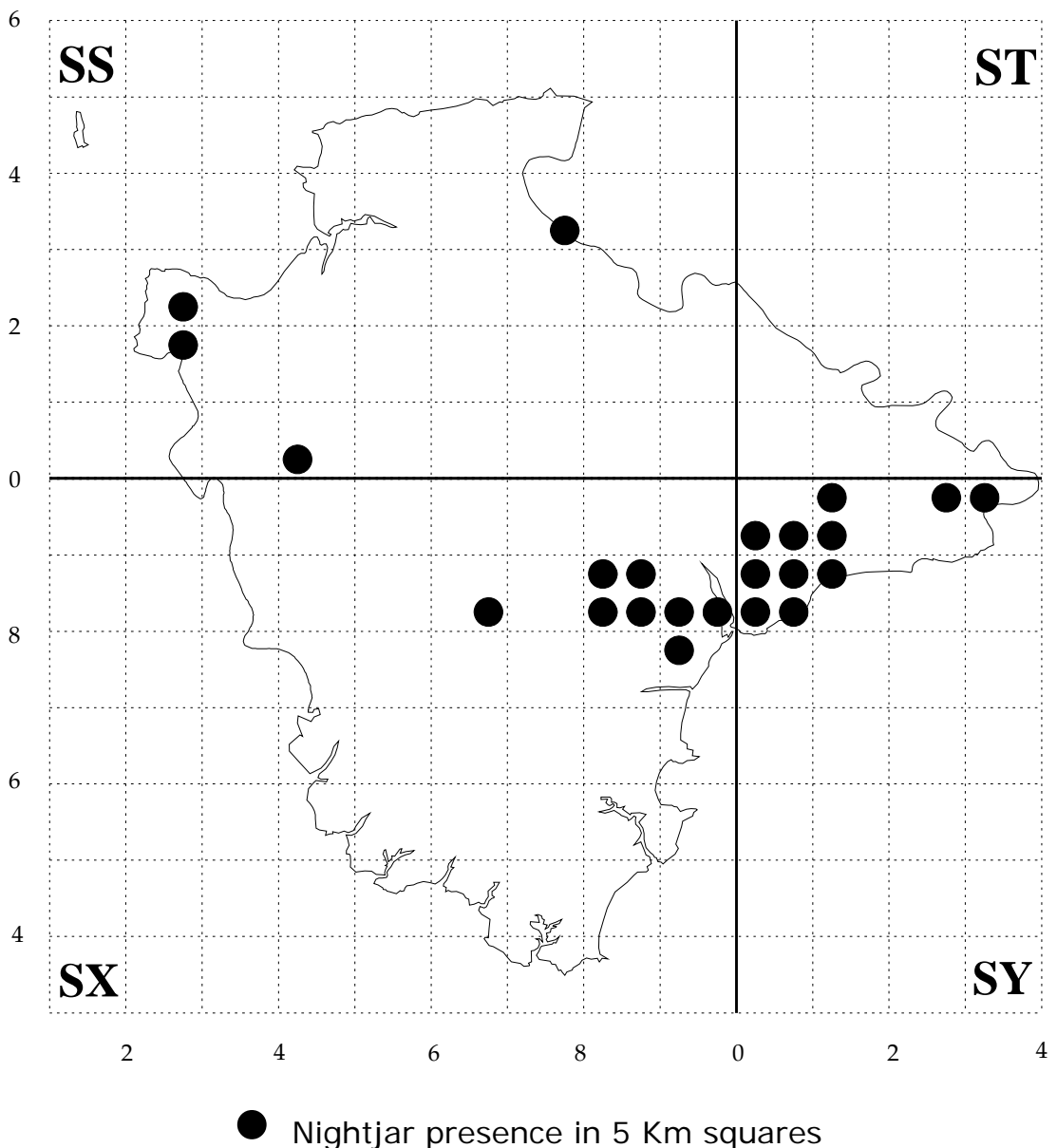
Basic management requirements for the nightjar:

- **Site size:** At least 10 hectares are normally required to attract nightjar.
- **Heather management:** Cyclical heather management to maintain the long term vigour of the heath, on a rotation between 20 and 40 years and/or controlled burning.
- **Scrub control:** Periodically remove invading tree scrub to prevent succession; the density of retained trees should ideally be kept to less than 10 per ha; above this the value of the heath for other species can become compromised, depending on local circumstances. Prevent bracken invasion of heath by herbicide treatment (N.B. mowing or rolling is unsuitable as a method of bracken control as it would have to be done during the nesting season of nightjar and other ground nesting birds).
- **Grazing:** Extensive grazing enhances the vegetation structure, restricts invasion and incidentally increases the number of dung insects, some of which are important elements of the nightjar's diet.
- **Bare ground:** All the above help to create and maintain bare patches of 3-5 m² within the heather-dominated vegetation and at the base of small trees (1-3 m tall). This provides nightjars with suitable nesting habitat in areas where the heather cover is otherwise too dense for sufficient natural sites to be available.
- **Conifer plantations:** Clearings (over 10 hectares) restocked within 10-15 years are preferred by nightjar. Continuity of suitable nest sites may be

extended for two to three years by inter-row ploughing or rotovating. Diversification of the age structure within the more even-aged plantations will ensure a continuity of suitable open space through the production cycle. Ideally the proportion of newly-created open space should then be maintained throughout the cycle. The inclusion of unplanted bays (20-50 m wide) in the form of wide rides can provide nest sites in undisturbed areas, which also provide heathland corridors through large woodland areas, providing sheltered feeding sites.

- **Feeding:** Maintenance and enhancement of areas of heathland, agriculturally unimproved pasture, wood pasture, wet meadows, old hedgerows and native deciduous woods close to nest sites (less than 3 km) is required to ensure sufficient feeding habitat.

4. Distribution of nightjar in Devon (1998)



5. Current population (1998)

In Devon: In 1992 a survey co-ordinated by the British Trust for Ornithology recorded 230 churring nightjars in 41 sites in the County. The number of birds actually breeding is somewhat less than this as a proportion of males will sing without attempting to breed.

Elsewhere in Britain: The table below shows the numbers of nightjar and nightjar sites in the South-West and in the whole of the UK (Figures from the 1992 BTO/RSPB national nightjar survey):

County	No of sites	No of churring males
Cornwall	4	16
Devon	41	230
Dorset	116	524
Gloucestershire	8	12
Somerset	32	57
Wiltshire	17	24
Total South West	218	863
Total UK	1194	3400

6. Current problems for nightjar in Devon (1998)

Area of suitable breeding habitat: The area of open heathland and clearings in conifer plantations, for use as nesting sites, restricts the range and numbers of nightjar in Devon, as it does in the rest of southern England. Although programmes of heathland re-creation and restoration are underway in Devon (see Action Plan for Lowland Heathland), losses of this habitat during the last century cannot be fully recovered. The availability of clearings in plantations (mainly in the form of clear-fell/restock) depends on the balance between the needs of nature conservation, landscape design, public recreation and timber production.

Lack of suitable management of habitat: Suitability of heathland management affects the availability and sustainability of nesting habitat. Heathland which has few areas of bare ground and/or which have very dense stands of heather or invading bracken and scrub become unsuitable habitats for nesting nightjar. In restocked clear-fell areas of plantations, weeding, spraying and other operations at the time of year when nightjar have eggs or young increases the likelihood of nest failure, although the extent to which this affects the productivity of the bird is difficult to assess. Forest Enterprise's Operational Site Assessment System and instructions to their operators aim to minimise disturbance to ground-nesting birds.

Availability of feeding habitat: Availability of good feeding habitats

(especially insect-rich unimproved meadows, ponds and other wetlands) within the range of good nesting habitat limits a site's potential for supporting breeding nightjar.

Disturbance: Disturbance by people or by dogs is a potential problem in some of the more visited areas. However the overall impact is probably very low, since good nightjar habitat makes for uncomfortable walking and people therefore tend not to stray from paths.

Predation: Predation of nests by other birds or by adders or small mammals is a natural part of the lives of birds and is probably no higher than other species. Maximising habitat diversity within a site may reduce the rate of predation by adders, by allowing greater spatial separation of predator and prey.

Urbanisation: Urbanisation increases the chance of predation by cats, nest disturbance due to recreational pressure, light and noise pollution, and in summer, fire risk.

Climatic and other factors: Populations of birds undergo fluctuations due to factors that are beyond our direct control. Changes in climate (long term) or weather patterns (short term) play an important role in determining the fluctuations in population size and distribution of birds. Any assessment of the role of man cannot therefore be viewed in isolation from such factors. Since the nightjar is a migratory species, and indeed spends at least half of its life away from our shores, factors operating on migration or in their winter quarters in Africa should also be considered.

7. Recent changes in population (1998)

The range of the nightjar has declined rapidly over the last 25 years. Nationally, between surveys carried out in 1968-72 and 1988-91, there was a substantial contraction in range, with a 51% reduction in the numbers of 10km national grid squares occupied.

However, between the 1981 and the 1992 national nightjar surveys, the national range was seen to increase by 11%, and the South-West range by 30% (though this could at least in part be due to increased coverage in 1992). This indicates that the long term contraction of range of the nightjar has slowed.

In Devon, D'Urban (1906) described the nightjar to be "very numerous in suitable localities, especially on the borders of Dartmoor" at the beginning of this century. Moore (1969) considered that there had been a considerable decrease in nightjar during the 1950s and 1960s. The 1968-72 survey revealed 28 10 km grid squares in Devon occupied by nightjar, but by the time of the 1988-91 survey only 13 such squares were occupied. However, more recent data sets indicate that numbers were well on the way to recovery. The

nightjar survey of 1981 revealed 89 territories, while the 1992 census located 230 churring males.

8. Current protection

Nightjar is listed in Annex 1 of the EC Birds Directive, and in Appendix II of the Bern Convention.

One of the nightjar's strongholds in Devon, the East Devon Pebblebed Heaths, is a candidate Special Area of Conservation and a Special Protection Area, under the EC Habitats Directive and Birds Directives, respectively.

A large proportion of the stronghold areas of nightjar in the County are SSSIs: notably the East Devon Pebblebed Heaths, Great Haldon Heaths (includes Ideford Common), Haldon Forest and Little Haldon Heaths.

9. Biodiversity planning context

National BAP Context

Species of principal importance in England (NERC Act, S.41):

- Nightjar

Current national BAP targets can be viewed on the [Biodiversity Action Reporting System](#) (BARS).

Associated Action Plans within the Devon BAP:

- Lowland heathland

10. Biodiversity objectives and targets for nightjar in Devon

Please note: very preliminary review of targets undertaken in 2004 – requires further examination.

Objective 1

Maintain the Devon nightjar population, through appropriate habitat management and ongoing implementation of policy mechanisms. *

Target:

- Ongoing.

Objective 2

Continue to reverse the long term decline in range of nightjars in Devon. *

Target:

- By 2010 nightjars to occupy a further 10 tetrads.

Objective 3

Increase the numbers of breeding nightjars in Devon. *

Target:

- 300 churring males by 2010.

***Please note:** The setting of meaningful targets for the nightjar population in Devon is complicated by the following important factors, which must be borne in mind:

- The current state of the population is probably at an artificially elevated level, due the fact that the storm of January 1990 effectively created many hundreds of hectares of good nightjar habitat when plantation trees were blown down and open spaces created in many of the County's forests. Since such areas, which were subsequently replanted, remain good nightjar habitats for only about 10 years (after which young trees become too crowded to sustain nightjars) a decline in numbers is to be expected from about the year 2000, all other factors being equal and assuming no subsequent storms produce a similar event during this period.

- Projections for the production of timber from conifer plantations have a direct effect on the area of clear-fell/restock that will exist in the coming years, and hence will affect the area of potential nightjar habitat. It is likely that in Devon substantial increases in the area which is clear-felled and restocked will occur. Within the private sector forests (which account for about half of the Devon total), it is projected that the area clear-felled and restocked will at least double between 1997 and 2010, whereas the area clear-felled and restocked in Forestry Enterprise forests (the other half of the County resource) is likely to fall over this period. The end result, taking both of these factors into account, is that there is likely to be around a 50% increase in the yearly area clear-felled by 2010.
- Targets for heathland re-establishment in Devon (450 ha by 2010, of which 180 hectares in East Devon Pebblebeds and 270 ha in Haldon/Bovey heaths), would mean a considerable increase in the area of potential nightjar habitat in Devon over the coming years. However, a large proportion of this figure would be gained from land currently under conifer plantation, itself a potential nightjar habitat. Therefore, not all increases in heathland area through re-establishment will necessarily benefit nightjars.

11. Wider benefits from pursuing these objectives

The pursuit of the objectives and targets set out in this plan will not only benefit the nightjar. Conservation has wider benefits and advantages for society, by providing a resource that is the basis of many aspects of the local economy, and by adding to the quality of life of the people of Devon in ways that are beyond financial measure. Thus enhancing the interests of biodiversity also enhances the interests of society as a whole. Some of the wider benefits are as follows:

Enhanced opportunities for green tourism: The nightjar is a species with a high profile in the eyes of the public; a great many people, including non-specialists, are aware of this intriguing bird, even if they have never had the opportunity to see or hear one. By returning Devon to a place abundant in nightjars, either through increasing areas of attractive lowland heathland, or by enhancing the management of existing sites, both for nightjars and a wide range of other wildlife, the County will become even more attractive to visitors.

Education: The nightjar is one of the handful species which can be said to have benefited from increases in the area of our countryside that is covered with conifer plantations. Where these have been planted on areas of former heathland, most conservationists would probably like to see them moved to areas of lower conservation value. However the recognition that commercial forestry, if it occurs in the right place, can be of benefit to certain uncommon and specialised species, such as the nightjar, is point worth making to those studying the role of forestry in wildlife conservation.

12. Priority or indicative actions for nightjar in Devon

Action	Key Partners
1. Ensure that habitat management prescriptions for nightjars are used in Forestry Commission forests as well as privately owned/managed forests (being incorporated into Forest Design Plans and Woodland Grant Scheme Plans).	FC; EN; Private forest owners
2. Ensure that management operations (e.g. cleaning, spraying, bracken control etc) within restock areas of plantations and on heathlands are not carried out before mid August in order to avoid disturbance of eggs or young.	FC; TGA; Private forest companies; RSPB; Landowners
3. Ensure that all regularly occupied significant sites are protected by statutory notification or designation.	EN; RSPB
4. Seek to resist development (e.g. housing, road, industrial) on or adjacent to nightjar nesting sites and seek to establish buffer zones between developments and suitable nightjar habitat.	LAs; EN; RSPB; DWT; EA
5. Ensure that prescriptions for nightjars are incorporated into management of existing heathland sites.	RSPB; DWT; FC; CCMS; MOD; NPAs
6. Seek to provide suitable feeding habitat within 5km of nightjar nest sites especially by targeting agri-environment schemes and WES.	DEFRA; EN; FWAG; DWT; RSPB; CCMS; NPAs
7. Survey and monitor existing nightjar sites and newly created potential nightjar sites to help monitor populations; provide data to DBRC. Provide feedback to those carrying out nightjar site management.	DBWPS; BTO; RSPB; Landowners; DBRC
8. Continue to promote the appreciation and the conservation of the nightjar and use the species as a symbol of Devon's wildlife and heathland restoration programmes.	All
9. Advise landowners of the presence, legal status and management requirements of nightjars.	RSPB; DWT; EN; CCMS; FWAG; DEFRA; NPAs

Nightjar Action Plan Champion – Forestry Commission

Abbreviations used in text and table

BAP	Biodiversity Action Plan
BTO	British Trust for Ornithology
CCMS	Coast and Countryside Management Service of Local Authorities
DBRC	Devon Biodiversity Records Centre
DBWPS	Devon Bird Watching and Preservation Society
DEFRA	Department of Environment, Food and Rural Affairs
DWT	Devon Wildlife Trust
EN	English Nature
FC	Forestry Commission
FWAG	Farming and Wildlife Advisory Group
LAs	Local Authorities
RSPB	Royal Society for the Protection of Birds
SSSI	Site of Special Scientific Interest
TGA	Timber Growers Association

