

The Nest Record Scheme Handbook



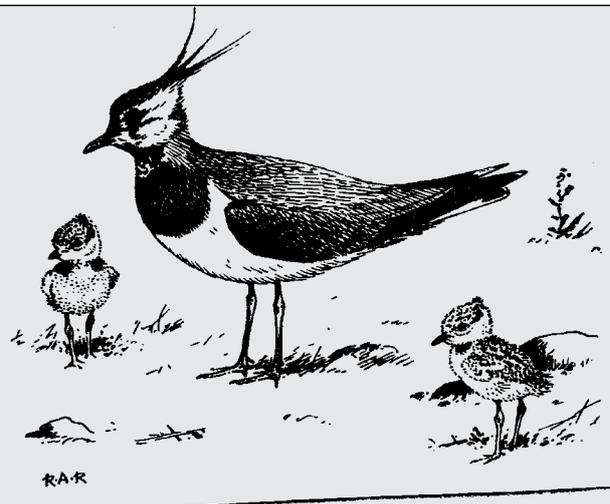
Greenfinch by Hilary Burn

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Nest Records Unit
British Trust for Ornithology
The Nunnery
Thetford
Norfolk
IP24 2PU
(01842) 750050
nest.records@bto.org
www.bto.org



R.A. Richardson

Science Behind Conservation

WELCOME TO THE BTO NEST RECORD SCHEME

The British Trust for Ornithology needs your help to monitor how well Britain's birds are breeding and to increase our knowledge of their basic breeding biology.

Help check the health and needs of our birds

Simply by sending in Nest Record Cards you can help the BTO to assess the nesting habits and monitor the changing fortunes of the birds that breed in Britain and Ireland. For more than 60 years, the BTO has accumulated an unrivalled store of over one million nest record cards. Why the need for more? With each year's intake of over 35,000 cards the precision with which the BTO can detect any changes in the clutch sizes or numbers of young leaving the nest improves.

In many respects, this century has seen the development of an increasingly hostile environment. Like the miner's Canary, carried underground to detect noxious gases, the fortunes of our nesting birds provides valuable indicators as to the quality of the countryside that both birds and man may enjoy or endure.

You can help ensure that the drastic declines recently endured by many of our raptors does not happen again. Nest records demonstrated that marked reductions in nesting success for birds of prey such as Peregrine and Merlin were associated with the increased use of harmful pesticides in the 1950s and 1960s, the use of which were subsequently controlled.

Formerly common nesting birds on farmland like Lapwing have become locally scarce this century in the face of progressively intensified farming methods. Nest records have helped explain why. Lapwings on upland farmland have reared fewer chicks as cow and sheep stocking rates have risen. Nesting success remains high for Lapwings on recently tilled land but the area of this habitat available has been greatly reduced by autumn sowing of cereals and hence populations have tumbled.

The need for constant vigilance is high because changes in bird numbers can occur quickly. Farmland bunting populations have fallen at varying but worrying rates over recent decades. For Yellowhammer, your nest records have linked the effects of pesticides showing a massive decline in nest survival rates in the 1950s and 1960s, especially at the egg stage. Corn Bunting nest failures caused by agricultural operations have risen significantly since 1970.

The Nest Record Scheme is just one of a series of long-running and vital schemes that the BTO co-ordinates as part of its Integrated Population Monitoring Programme. All projects depend upon the combined efforts of enthusiastic birdwatchers countrywide who gather information in an enjoyable but

scientifically valid way. Only through the combined efforts of the various surveys can we construct a clear record of the "health" of the country's bird populations backed up by solid facts.

At the moment, as example, Song Thrush numbers are falling in a number of habitats and parts of the country. By using facts gleaned from BTO surveys in the breeding season (Nest Records and Common Birds Census) and at other times (Ringing) the key causes have been shown to revolve around this tender thrush's inability to bounce back from cold winter losses.

The strength of the BTO's Nest Record Scheme comes from welcoming contributions from both specialist and occasional nest finder alike. The bulk of contributors who form the backbone of the scheme find just a handful of nests each year. Others build up their nest finding into an absorbing hobby taking many hundreds of hours. All agree that there is no better way of understanding how a species "ticks" - providing marvellous insights into their private lives that we need to unravel in order to conserve them.

By sending Nest Record Cards to the BTO, the combined efforts of amateur birdwatchers allow the BTO to monitor how our birds are coping with the modern environment in a way that no single observer could ever do.



Rooks nest socially with groups of nests or rookeries varying in size from just a handful to in excess of two hundred. Where recording involves concentrations of nests, observers may prefer to use the specifically designed Colony Nest Record Card, helping to reduce duplication of common features such as date and location, thus saving time. The Colony Nest Record Card may also be used for other gregarious nesting birds, including seabirds, Grey Heron, Sand Martin and House Martin. Photo: Colin Smale.

HOW YOU CAN TAKE PART IN THE NEST RECORD SCHEME

Taking part in the Nest Record Scheme is simple:

1. Cards are obtainable free from the BTO for use within the Scheme. (They may be bought for private use at 5p each).
2. Please complete one card per nesting attempt.
3. Follow the instructions for filling in the cards carefully and refer to the handy pocket-sized "Coding Card" as a memory jogger.
4. Read the Nest Recorder's Code of Conduct (see page 8) and follow it at all times. It is important to put the bird's interests first and not to endanger the nest. If the Code is adhered to, then there is no need to worry that the nest might suffer, and the information gained will be of great benefit to conservation and science.
5. Be very careful when attempting to record the contents of nests in precarious positions, especially in trees and on cliffs or quarries. Fieldworkers are asked to note that they should not put themselves in a position which could place them, or others, in danger. The Trust does not take responsibility or liability for any actions and subsequent consequences arising from the activities of fieldworkers in any way whatsoever.
6. Please send in cards for all recorded nests. It is very important that contributors do not just send in those records that "seem interesting" or just those which are successful: the BTO needs all records of nests whether successful or not. We cannot calculate success rates if we do not know how many failed.
7. Licenses to record the nests of rare birds protected under the Wildlife and Countryside Act 1981 can be obtained from the Licensing Officer at the BTO (see page 7).
8. Remember that there is no minimum contribution of cards each year: the BTO is grateful for every card that has been completed as fully as possible.



The Sparrowhawk population crashed dramatically, notably from 1957-63, following the introduction of several organochlorine pesticides that caused egg-shell thinning, egg breakage during laying and incubation resulting in reduced hatching success. The Nest Record Scheme helped to chart the decline and subsequent recovery, and continues this important monitoring role as it does for many other birds at the top of terrestrial and aquatic food chains. Photo: Robert T Smith.

YOUR QUESTIONS ANSWERED

1. Do I have to join the BTO?

No, you do not, but we would strongly ask you to join and support the BTO financially as well as by contributing to the Nest Record Scheme.

Whilst you will be supporting the BTO with your membership subscription, you will as a member receive many benefits. On joining you may be able to take advantage of a number of special offers such as discounts on books and bird recordings. Contact the Membership Unit of the BTO at Thetford for details.

As a member you will receive BTO News six times a year, which will keep you up-to-date with new surveys and survey results and with news items of general interest including up-to-date information on how each breeding season fares. BTO News also carries the annual report of the Nest Record Scheme, which reports to members the value of monitoring nesting birds, and how the Nest Record Scheme fits in to the BTO's long term monitoring of British bird populations.

Members also enjoy a reduced subscription rate to the BTO's two journals Bird Study and Ringing & Migration. These journals carry more scientific papers than BTO News, many of which are written using data collected from BTO schemes and surveys and the Nest Record Scheme.

However, if for some reason you cannot become a member of the BTO, then we will still send you our annual Nest Record News in spring that keeps all our contributors in touch with developments and describes the previous year's nesting season.

2. Where can I find out more detail about nests and nest-finding?

Collins publish a field guide - Bird Nests, Eggs and Nestlings of Britain and Europe by Colin Harrison and Peter Castell, which gives basic information for each species.

An excellent Field Guide to Birds' Nests by the late Bruce Campbell and James Ferguson-Lees published by Constable in 1972 can be obtained second-hand and is currently being revised.

3. Do I record any nest?

No. The BTO only needs records of "actively used" nests, i.e. nests that contain eggs or nestlings. Where a nest was abandoned or destroyed some time before being found by the observer, it is impossible to estimate accurately when egg-laying might have begun, or indeed how many eggs the nest originally contained. So, cards are not wanted for:

a. nests in which eggs were not laid,

b. nests which failed before they were found, or

c. nests containing cold eggs only (unless the egg-count increased between two visits or it was absolutely certain that they were fresh).

4. When should I start looking for nests?

You need to keep your eyes open throughout the year as groups like doves, thrushes and sparrows may nest in all months.

Some species start nesting in February, but we would encourage you to start actively watching in March and anticipate most action in April, May and June.

It is always tempting to reduce one's searching effort after July, but birds will continue to nest until September, even later, though their song output will have dwindled. Many species have second, third and sometimes fourth broods before autumn sets in. They often nest in previous nests or very close to them. It is very important that the BTO receives records of such nests every year. So please do try to see the season through!

5. How many visits should I make?

Preferably more than one visit because two checks, even just a day apart, provide so much more useful information than a single visit.

From two visits it is possible to calculate a survival rate for the nest or contents (for example: the nest survived five days; two out of three nestlings in another nest survived four days). It is precisely this sort of information that the BTO needs in order to monitor the success rates of nests throughout the country. So, a card with two or more visits is very valuable to the BTO. However, moving to the other extreme, it is neither necessary nor desirable to inspect nests daily or more than once per day.

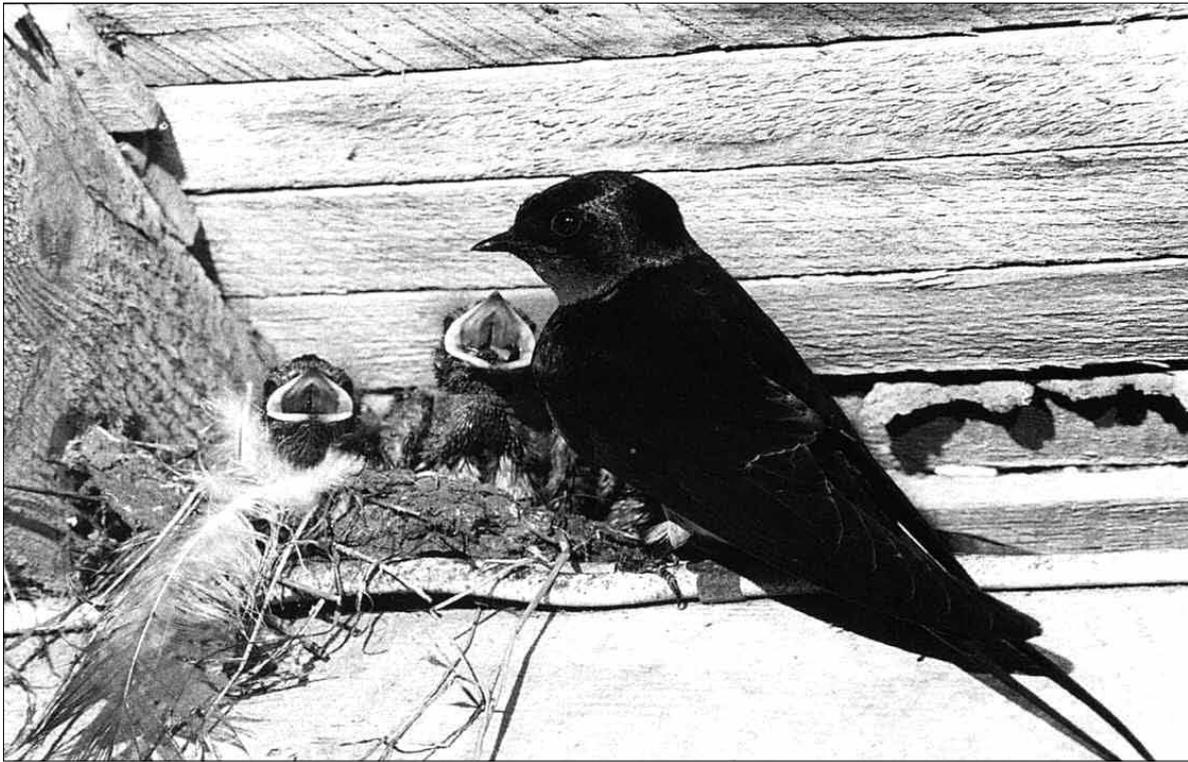
A few well-planned visits can provide all the information required. Ideally these would be:

a. Laying period: two afternoon visits to show date of first egg and rate of laying.

b. Incubation period: two visits to show completed clutch size and later to check that no egg-losses occur.

c. Hatching period: one or two visits at or just after hatching time to give the incubation period and the number of eggs hatched. Care is needed, because parent birds are often sensitive to disturbance during hatching.

d. Nestling period: a visit when half-grown to show how well they are surviving and another at three-quarters grown to give the number which are likely to fly.



Swallows rear two broods in most years given favourable summer weather; just a single set of young at times when the elements are adverse, food supplies limited or predation pressures high; and fewer pairs three broods, most especially in northern Britain when there is extra day length in which to forage. One needs to keep eyes open for early clutches laid by pioneer pairs in the last week of April, and late young in nests in early October. Photo: Richard Vaughan.

- e. Fledging period: one or two visits at this time will help confirm success or failure and furnish an exact fledging period. Care is needed to avoid premature fledging.
- f. Post-fledging period: it is worth checking some time after fledging for dead eggs and young, and also because the birds may re-nest in the same nest, or close by.

Most nests are found after the clutch is complete, so a visit every three days ensures that the approximate hatching date can be obtained. The spacing of visits should be adapted to suit the breeding cycle of each species and to adhere to the Nest Recorder's Code of Conduct.

Of course, it is often impossible to keep to such a schedule, but it is described here to show the optimum routine for most species.

Just remember that any active nest that has been visited more than once provides a valuable record for the BTO.

6. Does the BTO want records of birds in my garden?

Yes! The BTO needs Nest Record Cards from all habitats. We are especially keen to receive records from rural areas, but we need good numbers from towns and suburbia as well. Anywhere birds nest, from seashore to mountain top, the BTO wants their Nest Records!

7. What about nestboxes?

Yes! We want nestbox records too - they are often the easiest way that the BTO can obtain accurate records of the nest contents of some species (e.g. Blue Tit, Pied Flycatcher and Treecreeper).

Not only are nestboxes becoming increasingly important for some species (like Kestrel), but also the BTO can compare nesting success between birds using nestboxes and those using natural sites. (If you want to know anything about nestbox design and siting see the BTO Guide No. 23 on Nestboxes by Chris du Feu, available from Jacobi Jayne (0800 072 0130).

8. What about colonies?

To save time and reduce disturbance, there is a Colony Nest Record Card (see Appendix 1) for recording repeated visits to a large number of nests at one colony of birds such as seabirds, Grey Heron, House Martin, Sand Martin, Rook and Jackdaw. (You may have to make a map of the colony or subtly mark the position of nests, preferably using natural materials, to help you when you revisit them).

However, do complete individual standard Nest Record Cards for nests in colonies where time allows, as these will provide extra detail for analysts in the future.

It is important to remember that, unless extreme care is taken, human intrusion can lead to possibly damaging disturbance at seabird colonies, giving rise to predation by gulls and crows. If you want to work in a colony of seabirds, read Appendix 2 on recording nests in seabird colonies.

9. What about rare species?

In the back of your Nest Record News (which is mailed to all contributors each year) you will find a list of rare species that are specially protected under the 1981 Wildlife and Countryside Act as amended by the Environmental Protection Act 1990. The nests of species on this list can only be visited for nest recording if you hold a licence issued from the appropriate country agency.

Please apply to the Licensing Officer at the BTO. All records of rare species are kept under lock and key and will be treated in the strictest confidence.

10. Which species particularly interest the BTO?

The BTO is monitoring the annual breeding performance of a full range of birds that are highlighted in Nest Record News. These species are being targeted because they live in a diverse range of habitats and feed on different types of food. All records for these species are especially welcomed.

Also, the BTO is very grateful for records of species for which it holds less than 1000 cards (see list of totals in Nest Record News). The BTO needs extra records to allow the investigation of these species' basic breeding biology.

11. Does the BTO want records from past years?

Yes! All records of nests are valuable to the BTO (so long as the contents were counted more than once).

12. What if I go abroad?

A list of organisations which run Nest Record Schemes in other

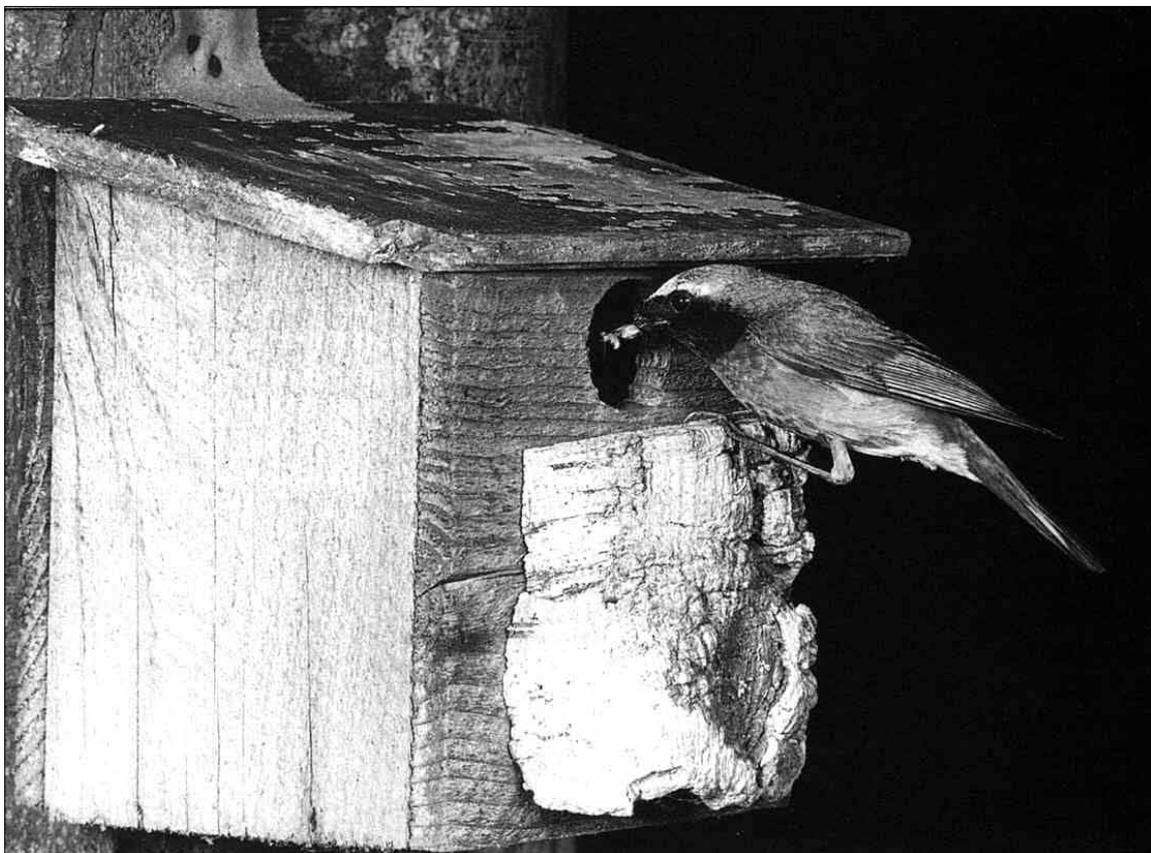
countries is held by the BTO. The BTO will look after cards for nests found in other countries which do not yet run their own scheme. Such cards should be completed in block capitals and must include the Latin names of species. Please also give latitude and longitude.

13. How does the BTO use nest record cards?

The BTO uses nest record cards to monitor the breeding success of British birds in different habitats and regions and over time.

The Nest Record Scheme which is part of the Integrated Population Monitoring Programme combines the results from nest recording with those from ringing and census work. BTO staff, other scientists and scientifically-minded amateurs analyse the cards in the study of the basic breeding biology of British birds.

Well over 200 scientific papers and books have included an analysis of Nest Record Cards and over 50 studies are currently underway outside of the BTO. If you have an interest in a particular species and would like to analyse a set of Nest Record Cards, please don't hesitate to contact the Unit. We would be very pleased to give you advice and help in the planning, analysis and writing up your study. The results from nest record analyses are published in Bird Study and many other scientific journals.



Nestboxes are an ideal tool for allowing the field birdwatcher to keep detailed and accurate records of the breeding habits of otherwise elusive species such as the Redstart. They also provide a valuable scientific vehicle for assessing the relative success of individual sites year by year, and provide the chance to compare pairs in 'artificial' with those in 'natural' sites. Photo: Eric Hosking.

NEST RECORDER'S CODE OF CONDUCT

It is essential to minimise disturbance at nests for both ethical and scientific reasons. The basic principle being that observations should not jeopardise the safety of the nest. If due care is taken by an observer, the chance of accidental damage can be eliminated. Each observer must exercise his or her responsibility, always putting the bird's interests first if a visit might endanger the nest. This applies with redoubled force where rare species are involved.

There are three potential risks to the nest that must be eliminated during nest recording:

- a. Accidental damage to the nest,
- b. Causing desertion,
- c. Revealing a nest to predators.

Desertion may arise through natural causes, such as adverse weather, food shortage or the death of a parent, as well as from human disturbance. Sometimes too, for one of several reasons, a whole clutch fails to hatch despite being incubated well beyond the normal period and eventually the nest is abandoned.

With many species, a fair number of nesting failures are due to predators such as crows, stoats, weasels, squirrels, small rodents and cats.

Observers often fear that increased predation may result from their leaving a track or scent-trail to nests. However, a two year investigation of this possibility showed that nests visited frequently in bushes, hedges and thick undergrowth had similar success rates to others left undisturbed between laying and fledging. This finding has been supported by the consistency of the results obtained from different observers' records.

That heavy predation occurs in the absence of human involvement has also been demonstrated by searches of a completely undisturbed area late in the season: far more nests are found which show obvious signs of failure (e.g. sucked-out eggs) than those which show signs of successful rearing.

Planning

Intelligent planning of observations makes daily visits unnecessary. The nest location should be noted accurately to avoid long searches on subsequent visits. To keep each visit brief, any equipment likely to be wanted at the nest (e.g. cards, notebook, rings) should be made ready beforehand. A sturdy stick is well worth carrying, being useful for:

- a. parting foliage to enable a nest to be seen,
- b. leaning forward on, to inspect a nest without disturbing the immediate surroundings,
- c. covering up tracks on leaving,
- d. attaching a mirror to the end, enabling inspection without close approach,

- e. rustling foliage to give advanced warning of your approach.

Care whilst searching

Avoiding damage to known nests depends largely on common sense, but remember that nests as yet undiscovered may be highly vulnerable. Therefore take care not to dislodge any nests when pushing through dense foliage. In seabird colonies the risk of treading on nests or downy young is obvious, but there is similar danger when searching for other ground nests, e.g. those of Lapwing, Skylark and Willow Warbler.

Approaching and leaving nests

Some natural predators may be assisted by tracks and signs (e.g. droppings). Humans are too, and so it is a basic rule as far as possible to avoid making tracks in the first place, as well as to cover up any traces after making a visit (the stick may help here).

Damaged or trampled vegetation could expose a well-sheltered nest not only to predators but to rain and wind. If possible, tracks should not be made through dew-soaked grass. On approaching a known nest, pick a route that disturbs as little vegetation as possible, stepping over or gently parting clumps of undergrowth. Begin the approach to roadside-nests some yards away along the verge to avoid leaving a direct track.

Obviously a nest must not be inspected while a predator is in the vicinity and can watch you. If faecal sacs are produced by open nesting passerines during your visit to the nest do dispose of them yourself at a distance. Carrion Crow may exploit fresh messages left at nests like Meadow Pipit. A commoner danger is that once a parent is flushed it may not return immediately, so the nest remains exposed to searching predators. This applies particularly to large nests with conspicuous eggs (e.g. Heron, pigeons), and to seabird colonies which are vulnerable to large gulls. In these circumstances visits must be kept to a minimum. Grebes and ducks normally cover their eggs with nesting material when they leave; make sure you do likewise.

In case parent birds are watching, it is good practice to approach nests casually, as if by chance, rather than directly and deliberately. Birds are then likely to regard you as harmless (much as they would a passing sheep), and not as a predator intent on robbing the nest. A sitting bird should never be given a sudden fright as this might cause it to desert. Therefore, as you approach try to see if a parent is sitting; a bird crouching low on a nest above eye-level can very easily be missed. Nestboxes for birds such as Tawny Owl, Redstart and titmice should be tapped first, then tapped again with the lid raised to allow the parent to slip away before you stare directly into the box. Occasionally, in dense cover, if a bird returns and only then sees a person examining its nest it may be so startled as to desert; therefore keep yourself in view whilst making the inspection.

Whether or not a sitting bird should be flushed depends on a variety of factors. A good many species leave their nest unattended while feeding; this provides the ideal opportunity for an inspection. In general, it is best not to flush birds in failing

evening light, but for owls late afternoon and evening may be the best time for visits. Birds should also not be flushed during the egg-laying period or during the early stages of incubation. If the bird is to be flushed, give it ample time to slip off quietly by tapping branches during your approach. A sitting bird may take the opportunity to leave before you look in but leave tight sitting incubating birds intact. Sitting adults should not be picked up, particularly during the egg stage, but should one be accidentally handled (e.g. in mistake for a well-grown nestling) it has been found better to release it a good distance away; this is apparently enough to make it “forget” the circumstances of its capture.

Some species are more desertion prone than others but opinions vary over which. We advise special care for the species in the following list.

SPECIES	ADVICE
Manx Shearwater	Take special care not to damage burrows when inspecting.
Storm Petrel	Sensitive to disturbance when laying and incubating.
Shelduck	Sensitive to disturbance when laying and incubating.
Black Grouse	Do not disturb leks in the mornings; search for nests later in day.
Grey Partridge	Sensitive to disturbance when laying and incubating.
Pheasant	Sensitive to disturbance when laying and incubating.
Sandwich Tern	Particularly sensitive to disturbance early in season; whole colony may desert for a new site. More tolerant at incubation onwards.
Puffin	Take special care not to damage burrows when inspecting.
Turtle Dove	Risk of desertion when laying.
Tawny Owl	Risk of desertion when laying. Also, eggs can chill when female off, so visits best in late afternoon.
Long-eared Owl	Sensitive to disturbance during site selection and early incubation.
Grasshopper Warbler	Risk of trampling when searching nest site.
Wood Warbler	Risk of trampling when searching nest site.
Chiffchaff	Risk of trampling when searching nest site.
Willow Warbler	Risk of trampling when searching nest site.
Jay	Sensitive to disturbance when laying and incubating.
House Sparrow	Risk of desertion when laying.
Tree Sparrow	Risk of desertion when laying.
Bullfinch	Sensitive to disturbance when building.
Hawfinch	Sensitive to disturbance when laying and incubating.
Yellowhammer	Risk of desertion during laying and early incubation.

Some species tend to be rather sensitive to disturbance at certain periods when they should be treated with extra care:

- at the start and finish of their breeding season,
- in the early stages of each nesting attempt,
- to a lesser extent, about the time of hatching,
- in adverse weather such as cold, heavy rain, drought in some species, and
- at the times of food shortage, often associated with (d.).

Special care must also be taken when visiting the nests of tree- and crag-nesting raptors and Raven soon after hatching. Small young can be inadvertently carried to the edge of the nest (or even out of it) by “rapidly departing” brooding birds.

Young inexperienced breeders are as a rule more sensitive than mature established pairs, though birds as individuals vary greatly in the degree to which they will tolerate nest inspection.

At the nest

To avoid needless disturbance, remain at the nest for as short a period as is necessary to make the observations.

When a nest is out on a springy branch, a sudden jerk or release of the branch is to be avoided, or the contents may catapult out.

When partially feathered, the young of many species instinctively scatter from the nest on the close approach of a predator (often described as “exploding”). This gives a chance of survival for at least part of the brood, but once out of the nest the survivors are vulnerable to chill and to ground predators. In small birds this fear of intruders often develops when about 6mm of primary feather has emerged from the quill sheaths - a stage many species of passerines reach at about 9 days of age. The young of hole - nesters and Swallows do not tend to “explode” until somewhat older. Inspections of large young should therefore be made cautiously from a short distance.

If an “explosion” is inadvertently provoked, the young should be quickly gathered and kept together (in the dark if possible) and replaced gently but firmly in the nest cup, the smallest on top, and covered with a hand or handkerchief. The cover is withdrawn smoothly after giving time for the nestlings to settle and is most successful if it can be done with the observer out of the line of sight. (Should they leave again despite this, more harm than good will be done by staying; the more the parents “scold” the more determinedly will the fledglings scatter, and perhaps get lost.) Species particularly prone to “explode” at an early age include the Sylvia warblers, wagtails, Dunnock, Linnet, Song Thrush and Blackbird. Fledgling ground-nesters (e.g. larks, Reed Bunting, Nightjar and Short-eared Owl) leave the nest some days before they can fly but are adapted to survive.

Ringling

The considerations in the last few paragraphs apply especially to ringling adults or nestlings. Additionally, if nestlings have to be taken some distance from the nest for ringling, it is best either to ring half the brood at a time, or work near enough to the nest to discourage the parents from returning and finding it empty. Teaming up with a ringer is of great value because it is possible then to follow the fate of the nestlings through their adult life.

Access to private land

Taking part in the Nest Record Scheme does not give you the right to enter private property. If you wish to search private land as part of your nest recording, you must first gain permission from the landowner. Remember you are asking a favour, and explain your purpose. Assure the landowner that you will adhere to the Countryside Code. Many landowners will probably be interested and keen to know about what you are doing. It is very important to treat the owners and their property with the utmost respect and keep to any special requests they make. If really necessary, we can provide you with a letter of introduction, which contains information on the Nest Record Scheme and names you as a bona fide participant of the scheme.

THE NEST RECORD CARD AND HOW TO COMPLETE IT

The BTO has periodically modified the Nest Record Card with three main aims in mind:

1. To maximise the usefulness of your fieldwork.
2. To increase the speed and efficiency with which the BTO can analyse the cards.
3. To help reduce the amount of writing required from you.

To achieve these aims the current Nest Record Card has several important features.

1. STANDARDISED CODES:

A standardised coding scheme provides you with concrete options to describe the status of the nest and the habitat(s) surrounding the nest. This means that everybody's cards are easily compared and that you do not have to worry about the sort of information that is most useful - it is all laid out for you on the handy "Coding Card". Such information can be entered quickly on to the BTO's computer without the time-consuming need for BTO staff to interpret what recorders have written.

2. TICK BOXES:

The nest-site section of the Nest Record Card employs the use of "tick-boxes" for a defined list of options which cover most nest positions and situations. These save on observer writing time and again standardise the information so that it can be easily computerised.

It is vital to increase the efficiency with which the BTO deals with nest record data on two counts. Firstly we must prove to you, the recorders, that your hard won data are being used to produce up-to-the-minute results of importance for environmental monitoring and for a better understanding of the basic breeding biology of Britain's birds. Secondly, we have to defend the Scheme's running costs to its sponsors (the Joint Nature Conservancy Committee) by demonstrating its great conservation value and cost-effectiveness.

CO-OPERATION WITH RINGERS: The BTO is expanding the interchange of information between the Ringing and Nest Record Schemes. By asking ringers to record the identity of parents and young, it is possible to link breeding success with parental age and experience and to confirm that the young left the nest successfully (if they were retrapped at a later date). Where ringers record the weights and measurements of nestlings (and the eggs of large species) it will be possible to assess the age of the nest's contents accurately from standard growth curves. It is hoped to periodically provide feedback of these growth curves to the Scheme's contributors. (It should be stressed that only ringers are legally qualified to make such measurements: other observers are not allowed to pick up and handle eggs or nestlings and might harm them if they did).

How to fill in the cards

1. **USE ONE CARD FOR EACH NESTING ATTEMPT** If you make more visits than can be fitted onto one card then clip two cards together, mark them accordingly, but do not bother to duplicate habitat and nest site details.
2. **IF A NEST IS USED TWICE** in the same season by the same pair of birds, use separate cards for each attempt but clearly mark on the cards that they refer to the same nest and clip them together. In such cases, it would be very helpful if you could duplicate the information on the back of each card for each new nesting attempt.
3. **STAPLING CARDS TOGETHER.** If you are stapling cards together, either because you have further visits to record or you have details of subsequent nests by the same pair of birds, it would be helpful if you could staple them together in the top left hand corner.
4. **CUCKOOS.** Please complete two cross-referenced cards (or clip the two cards together), one for the host and one for the Cuckoo, giving full details on both. (This allows us to file one under the host and the other under Cuckoo). Under Species for the host card, write "host name (Cuckoo)" and for the Cuckoo card write "Cuckoo (host name)". When recording the number of eggs or young, give the host first, then the details for the Cuckoo (e.g. 4



Nests with somewhat difficult access, such as this one successfully utilised by Nuthatches, can be usefully recorded on Nest Record Cards by carefully noting the behaviour of the parent birds and, where visible, estimated age and minimum number of young. Photo: Eric Hosking.



The historical bank of BTO Cuckoo cards illustrate that today Dunnock, Reed Warbler and Meadow Pipit are the primary hosts in Britain, though over fifty passerines have been parasitized and successfully proved good foster parents, ranging from the diminutive Wren, Tree Pipit (seen ejecting host egg above) to Blackbird in size. Please complete duplicate cards under the names of both Cuckoo and host species. Photo: Eric Hosking.

+ 1 eggs or 0 + 1 nestling). Both host and Cuckoo counts should be written in the Live Eggs/Live Young columns, unless you know for certain that eggs/young are dead. If a Cuckoo's egg is found outside a potential fosterer's nest please record this too, making out a card for the Cuckoo as well. (Please note whether a Cuckoo's egg is a good mimic of the host's egg or not).

5. MIXED BROODS. Occasionally two species lay in the same nest (e.g. Great Tit and Pied Flycatcher). When this happens, treat the nest like that of a Cuckoo and fill out a card for each species, writing the other species' name in brackets and putting the egg or young count for the second species after a "+" (e.g. 4 + 2). Put both counts in the Live Eggs/Live Young columns unless you know for certain that eggs/young are dead.
6. DOUBTFUL RECORDS. If identification is uncertain, please do not send the record.
7. UNUSUAL RECORDS. Please make a special note to emphasise that the entries are correct (for instance when you have recorded an abnormally long incubation period, or a very early laying date). It is very helpful if secretaries of bird clubs and ringing groups check their members' cards for such points. Such unusual contributions can then be incorporated in articles for BTO News or Nest Record News.
8. ESCAPEES AND FERAL SPECIES. An increasing array of birds escaping from collections or having been deliberately released by man are taken to breed feral in Britain. These include many wildfowl (e.g. Mandarin, Egyptian Goose), gamebirds (e.g. Golden Pheasant, Chukar) and even smaller birds (e.g. Ring-necked Parakeet). Completed cards for such birds are required when breeding freely in the feral state so that the BTO can chart their breeding fortunes, but please

mark all cards as feral alongside the species' name.

Sending in your cards

1. Please check each card carefully for mistakes and omissions.
2. Fill in your Summary Form, arranging your cards in the order of species shown on the form. (This greatly assists us in counting and filing incoming cards.)

Please add any species not listed at the bottom of the form. Please remember that "Total NRCs" = number of nest histories and not cards (e.g. if you have made so many visits to a nest that you have continued on to another card, it should be counted as one nest history).
3. Please bind the cards with rubber bands. Ordinary envelopes are not strong enough to take more than about 20 cards. For larger batches, please use a padded envelope or cardboard box with a boldly marked address. (A few cards are tragically lost in the mail each year due to flimsy packaging - please don't let this fate befall your hard-won cards.)
4. Please send them to the Nest Records Office at the BTO, The Nunnery, Thetford, Norfolk, IP24 2PU as soon as possible after the end of the breeding season and by 1ST FEBRUARY of the following year at the very latest. Any subsequent cards can be used, but cannot be reported in Nest Record News.
5. Safe delivery by hand. Cards may be relayed by hand either at BTO conferences or to our headquarters in Thetford, but please telephone in advance.

Front of the Card

The front of the card is where all the basic information about the observer and location is written, along with details recorded on each visit to the nest. It would be very useful if capital letters were used in a bold black or dark blue pen.

1. SPECIES: Either enter the five-letter species code using the boxes provided (a list of codes for the more frequent breeding species is given below) or write the species name in full. Remember to put host name in brackets for Cuckoo cards, e.g. CUCKOO (DUNNOCK) or CUCKO (DUNNO) if using five-letter species codes.

Species	Species Code
Red-throated Diver	RETDI
Black-throated Diver	BLTDI
Little Grebe	LITGR
Great Crested Grebe	GRCGR
Slavonian Grebe	SLAGR
Fulmar	FULMA
Manx Shearwater	MANSH
Storm Petrel	STOPE
Gannet	GANNE
Cormorant	CORMO
Shag	SHAG
Grey Heron	GREHE
Mute Swan	MUTSW
Greylag Goose	GREGO
Canada Goose	CANGO
Egyptian Goose	EGYGO
Shelduck	SHELD
Mandarin	MANDA
Wigeon	WIGEO
Gadwall	GADWA
Teal	TEAL
Mallard	MALLA

Species	Species Code
Shoveler	SHOVE
Pochard	POCHA
Tufted Duck	TUFDU
Eider	EIDER
Goldeneye	GOLDE
Red-breasted Merganser	REBME
Goosander	GOOSA
Ruddy Duck	RUDDU
Marsh Harrier	MARHA
Hen Harrier	HENHA
Goshawk	GOSHA
Sparrowhawk	SPARR
Buzzard	BUZZA
Golden Eagle	GOLEA
Kestrel	KESTR
Merlin	MERLI
Hobby	HOBBY
Peregrine	PEREG
Red Grouse	REDGR
Ptarmigan	PTARM
Black Grouse	BLAGR
Red-legged Partridge	RELPA
Grey Partridge	GREPA
Pheasant	PHEAS
Water Rail	WATRA
Moorhen	MOORH
Coot	COOT
Oystercatcher	OYSTE
Avocet	AVOCE
Stone Curlew	STOCU
Little Ringed Plover	LIRPL
Ringed Plover	RINPL
Dotterel	DOTTE
Golden Plover	GOLPL
Lapwing	LAPWI
Dunlin	DUNLI
Snipe	SNIPE

Species (Code)	M I S T H					County/Region Code	G B N K					Year	2002		BTO Ref.		
Observer Code	A	B	C	Locality (Place-Name)					Altitude	20m		For Ringers Use Only Female Parent Age: Ring No:					
Day	Mth.	Hour	Number of				Status Codes		Grid Reference				Male Parent Age: Ring No:				
			Live Eggs	Dead Eggs	Live Young	Dead Young	(A two-letter code per column - see Coding Card)		T	L	8	7	4	8	2	3	
COMMENTS																	
															Young Ring Numbers		
9	4	15					N4									Rx89925	
12	4	13					NL									26	
14	4	15	2				CO									27	
18	4	13	4				WA AV										
30	4	16	3		1		HA BL NA										
8	5	11	0	1	3		FS YR EA		WING Rx89925				WGT 50.1				
10	5	14			3		FM AF		26				48.7				
14	5	10					NN VA AC		27				49.4				
 PLEASE RETURN TO BTO, NATIONAL CENTRE FOR ORNITHOLOGY, THE NUNNERY, THETFORD, NORFOLK IP24 2PU PLEASE MAKE NO GUESSES (PLEASE RECORD FURTHER VISITS ON AN EXTRA CARD STAPLED TO THIS ONE)																	

The front of the Nest Record Card

Species	Species Code	Species	Species Code
Woodcock	WOODC	Whinchat	WHINC
Whimbrel	WHIMB	Stonechat	STOCH
Curlew	CURLE	Wheatear	WHEAT
Redshank	REDSH	Ring Ouzel	RINO
Greenshank	GRESH	Blackbird	BLABI
Common Sandpiper	COMSA	Song Thrush	SONTH
Arctic Skua	ARCSK	Redwing	REDWI
Great Skua	GRESK	Mistle Thrush	MISTH
Black-headed Gull	BLHGU	Grasshopper Warbler	GRAWA
Common Gull	COMGU	Sedge Warber	SEDWA
Lesser Black-backed Gull	LBBGU	Marsh Warbler	MARWA
Herring Gull	HERGU	Reed Warbler	REEWA
Great Black-backed Gull	GBBGU	Dartford Warbler	DARWA
Kittiwake	KITTI	Lesser Whitethroat	LESWH
Sandwich Tern	SANTE	Whitethroat	WHITE
Roseate Tern	ROSTE	Garden Warbler	GARWA
Common Tern	COMTE	Blackcap	BLACA
Arctic Tern	ARCTE	Wood Warbler	WOOWA
Little Tern	LITTE	Chiffchaff	CHIFF
Guillemot	GUILL	Willow Warbler	WILWA
Razorbill	RAZOR	Goldcrest	GOLDC
Black Guillemot	BLAGU	Spotted Flycatcher	SPOFL
Puffin	PUFFI	Pied Flycatcher	PIEFL
Rock Dove	ROCDO	Bearded Tit	BEATI
Feral Pigeon	FERPI	Long-tailed Tit	LOTTI
Stock Dove	STODO	Marsh Tit	MARTI
Woodpigeon	WOODP	Willow Tit	WILTI
Collared Dove	COLDO	Crested Tit	CRETI
Turtle Dove	TURDO	Coal Tit	COATI
Cuckoo	CUCKO	Blue Tit	BLUTI
Barn Owl	BAROW	Great Tit	GRETI
Little Owl	LITOW	Nuthatch	NUTHA
Tawny Owl	TAWOW	Treecreeper	TREEC
Long-eared Owl	LOEOW	Golden Oriole	GOLOR
Short-eared Owl	SHEOW	Jay	JAY
Nightjar	NIJAR	Magpie	MAGPI
Swift	SWIFT	Chough	CHOUG
Kingfisher	KINGF	Jackdaw	JACKD
Green Woodpecker	GREWO	Rook	ROOK
Great Spotted Woodpecker	GRSWO	Carrion Crow	CROW
Lesser Spotted Woodpecker	LESWO	Hooded Crow	HOO
Woodlark	WOODL	Raven	RAVEN
Skylark	SKYLA	Starling	STARL
Sand Martin	SANMA	House Sparrow	HOUSP
Swallow	SWALL	Tree Sparrow	TRESP
House Martin	HOUMA	Chaffinch	CHAFF
Tree Pipit	TREPI	Greenfinch	GREFI
Meadow Pipit	MEAPI	Goldfinch	GOLDF
Rock Pipit	ROCPI	Siskin	SISKI
Yellow Wagtail	YELWA	Linnet	LINNE
Grey Wagtail	GREWA	Twite	TWITE
Pied Wagtail	PIEWA	Redpoll	REDPO
Dipper	DIPPE	Common Crossbill	CROSS
Wren	WREN	Bullfinch	BULLF
Duncock	DUNNO	Hawfinch	HAWFI
Robin	ROBIN	Yellowhammer	YELHA
Nightingale	NIGAL	Cirl Bunting	CIRBU
Black Redstart	BLARE	Reed Bunting	REEBU
Redstart	REDST	Corn Bunting	CORBU

2. COUNTY/REGION: Use county boundaries officially approved in October 1972 for England and Wales and in October 1973 for Scotland and Northern Ireland. Please write the EURING county codes given below (e.g. GBCU for Cumbria) - there is no need to write the county name in full. Please note that the county codes do not yet reflect changes in local government. New codes cannot be used until maps are available showing the new boundaries, and the changes have been agreed by all EURING (European Union for Bird Ringing) schemes.

GREAT BRITAIN - GB followed by two letters for counties in England, Scotland, Wales and Northern Ireland:

England

Avon	GBAV
Bedfordshire	GBBD
Berkshire	GBBK
Buckinghamshire	GBBC
Cambridgeshire	GBCA
Cheshire	GBCH
Cleveland	GBCV
Cornwall	GBCO
Cumbria	GBCU
Derbyshire	GBDB
Devon	GBDV
Dorset	GBDO
Durham	GBDU
Essex	GBES
Gloucestershire	GBGL
Hampshire (excl. IOW)	GBHA
Hereford & Worcs	GBHF
Hertfordshire	GBHT
Humberside	GBHU
Isle of Man	GBIM
Isle of Wight	GBIW
Kent	GBKE
Lancashire	GBLA
Leicestershire	GBLE
Lincolnshire	GBLI
London (Greater)	GBLO
Manchester (Greater)	GBMA
Merseyside	GBME
Norfolk	GBNK
Northamptonshire	GBNH
Northumberland	GBNL
North Yorkshire	GBNY
Nottinghamshire	GBNT
Oxfordshire	GBOX
Scilly Isles	GBSI
Shropshire	GBSA
Somerset	GBSO
South Yorkshire	GBSY
Staffordshire	GBST
Suffolk	GBSK
Surrey	GBSR
Sussex (West & East)	GBSX
Tyne & Wear	GBTY
Warwickshire	GBWK
West Midlands	GBWM
West Yorkshire	GBWY
Wiltshire	GBWT

Scotland

Border Region	GBBR
Central Region	GBCR
Dumfries & Galloway	GBDR
Fair Isle	GBFI
Fife Region	GBFR
Grampian Region	GBGR
Highland Region	GBHR
Lothian Region	GBLR
Orkney	GBOR
Shetland	GBSH
Strathclyde Region	GBSC
Tayside Region	GBTR
Western Isles	GBWI

Wales

Anglesey	GBAN
Clwyd	GBCW
Dyfed	GBDY
Glamorgan (W, Mid & S)	GBGM
Gwent	GBGT
Gwynedd	GBGD
Powys	GBPO

Northern Ireland

Antrim	GBUN
Armagh	GBUR
Down	GBUD
Fermanagh	GBUF
Londonderry	GBUL
Tyrone	GBUT

CHANNEL ISLANDS - CI followed by a two-letter code:

Alderney	CIAL
Guernsey	CIGU
Herm	CIHE
Jersey	CIJE
Sark	CISA

EIRE - ER followed by a two-letter code for counties in the Republic of Ireland:

Carlow	ERCW
Cavan	ERCV
Clare	ERCL
Cork	ERCK
Donegal	ERDO
Dublin	ERDU
Galway	ERGA
Kerry	ERKE
Kildare	ERKD
Kilkenny	ERKK
Leitrim	ERLM
Leix	ERLX
Limerick	ERLK
Longford	ERLG
Louth	ERLU
Mayo	ERMA
Meath	ERME
Monaghan	ERMO

Offaly
Roscommon
Sligo
Tipperary
Waterford
Westmeath
Wexford
Wicklow

EROF
ERRO
ERSL
ERTP
ERWA
ERWM
ERWX
ERWI

3. OBSERVER CODE: Please put this on all cards. If new to the scheme, please contact the Nest Records Unit once you have completed your first Nest Record Card and we will issue you with an observer code.
4. LOCALITY: Give the nearest village, town or lake etc. to the nest, e.g. "Newburgh, Nr Ellon".
5. GRID REF: Use the National Grid reference as given on Ordnance Survey maps. (Remember to read the figures along the bottom of the map before reading those along the sides.) For counties in England, Scotland and Wales, please make sure you use the two letters denoting your 100km grid square at the beginning of the sequence of numbers, e.g. SH432621. For counties in Ireland use the letter 'I' followed by the 100km grid square letter, e.g. ID213123. If for reasons of confidentiality, you prefer not to give a six-figure grid reference, please give the 10km grid square writing dashes for the figures you wish to exclude, e.g. SH43-62- or SH4--6--. If giving a six-figure grid reference, please give the reference for the actual nest site and not for the locality or place name. For nestbox schemes, you may give a four-figure grid reference for all nestboxes in the same 1km square.
6. ALTITUDE: Above sea level; this can be found from O.S. maps. If using old maps please convert to metres.

7. PARENTS' AGES AND RING NOS: For use by ringers only. Use EURING age codes in the current year (e.g. 4 for a bird which hatched before the current calendar year, but whose exact age is unknown). If sex is unknown, cross out "male" and "female". For broods ringed give the first number in full and the last two numbers for any subsequent young ringed (or all numbers that change) at the end of each following line. Space is given for ring numbers of up to 11 young. If more than 11 young are ringed, write additional numbers in the comments section.
8. DATE: Please write the month, preferably as a number, e.g. 6 for June, 8 for August.
9. HOUR: Give to the nearest hour, using the 24 hour clock, e.g. 18 instead of 6pm. Use the BST or GMT, whichever is in use at the time of observations.
10. NUMBER OF EGGS OR YOUNG: Write the number of viable eggs in the Live Eggs column. Also use this column if you are uncertain whether the eggs are fertile or infertile/addled. Only use the Dead Eggs column if you are certain that eggs are infertile/addled, or to record broken eggs inside the nest, or eggs that have been thrown out of it. For the young, write the number of live young in the Live Young column and the number of dead young in the Dead Young column. If a simple count is not possible, use the following examples to guide you and write a comment if any clarification is necessary:

APPROXIMATE COUNTS:

- ? if the contents cannot be counted with certainty or if the adult is sitting and you cannot see the contents.
- 6+ if there are six or more eggs or young.



Mistle Thrush incubating at nest. Photo: E A Janes

(6) if there are about six eggs or young.
CUCKOO EGGS OR YOUNG:

Put count after a + sign in either the Live Eggs or Live Young column unless eggs/young are known to be dead. E.g. 4+1 on the host card if there are four host eggs plus one Cuckoo egg. In this case 1+4 should be written on the Cuckoo card.

11. **STATUS CODES:** These two-letter codes provide an easy way to describe the stage of development of the nest, eggs and young, as well as the observed activities of the parent birds and the eventual outcome of the nest. Please ensure your status codes always comprise two characters, usually letters but, for nest building, a letter plus a number.

A full list of status codes is printed on the Coding Card which should be taken into the field with you to act as a memory jogger. The codes are described in greater detail on pages 18 - 19.

There are three columns for Status Codes which can be used in any order. If any more codes are needed to describe the nest then write them on the comments line. The status code YR should be entered on each occasion that some young are ringed.

12. **COMMENTS:** Use this space for any further information about the nest or the behaviour of the parents and young that you think is important.

Please record here any ringing measurements of the young. This will help the BTO to age the young. Only Ringers are legally qualified to pick up and handle eggs and nestlings.

If any nestlings are retrapped before the card is sent in, it is important to note this down because it provides evidence of nest success.

For birds of prey, it is useful to record if any prey remains are in or near the nest.

THE BACK OF THE CARD

HABITAT

WHAT IS THE HABITAT? This refers to the area in which the bird lives and nests. The area relevant to a small bird like a Dunnock will be much smaller than that for a wide-ranging bird like a Rook or a Peregrine. It is up to the observer to use his or her discretion and knowledge of birds, to define the size of area immediately surrounding the nest which seems most relevant. But in most cases it will be the area used mainly for foraging for food and containing the nest site.

HABITAT MIXTURES. Habitats in the UK often form a mosaic or mixture of different types that occur close together. The card provides space to enter details of two habitats ("First" and "Second" habitats on the card). We usually say that the First Habitat is that which contains the nest, whilst the Second Habitat is an adjacent habitat used for foraging, song posts etc. However, this is not a hard and fast rule. If the nesting area spans more than two habitats, put further codes into the comments box at the bottom of the card.

THE HABITAT CODES. For the First Habitat:

- Using the Coding Card as reference, write a letter, from A to J, to show the major habitat type in column H1 e.g. A for Woodland, F for Human Sites.
- Next choose one number from Column A of the habitat type you have selected, to help describe the type of Woodland, Scrubland, Semi-natural Grassland and Marsh etc.
- Then select all relevant options from Columns B and C. Please write one number per box and fill boxes from left to right in numerical order without leaving any spaces.

Repeat the process for the Second Habitat, if there is one.

NEST SITE

This section of the card describes the position of the nest, as well as the type of nest involved.

Please mark the boxes for nest site carefully thus:
 [-] but NOT: [/] or [x]

PLEASE USE A BOLD BLACK OR DARK BLUE PEN

Mistakes can be corrected by the careful use of Tippex, Snow Paint or other types of "liquid paper" or correction fluid. Alternatively cross through a mistake.

LOCATION: Mark all the appropriate boxes and give any extra details in the Nest Site section of the comments box.

HABITAT			
Refer to Nest Record Scheme Coding Card for Habitat codes. Choose one letter for the main habitat type (H1/H2) and then one number from column A. More than one number may be chosen from columns B and C.			
FIRST HABITAT			
H1 (One letter)	Column A (One number)	Column B (One number per box Start in left-hand box)	Column C (One number per box Start in left-hand box)
E	1	1 5	4
SECOND HABITAT			
H2 (One letter)	Column A (One number)	Column B (One number per box Start in left-hand box)	Column C (One number per box Start in left-hand box)
F	2	2 5	2 3 8
NEST SITE			
In <input checked="" type="checkbox"/> On <input type="checkbox"/> Under <input type="checkbox"/>		CAREFULLY CROSS THROUGH BOXES THIS: <input type="checkbox"/>	
Tree <input checked="" type="checkbox"/>	Bush <input type="checkbox"/>	Earth <input type="checkbox"/>	Nest Height above Ground _____ m
Dwarf Shrub <input type="checkbox"/>	Creepers <input type="checkbox"/>	Sand <input type="checkbox"/>	Unenclosed <input checked="" type="checkbox"/>
Reeds <input type="checkbox"/>	Herbs <input type="checkbox"/>	Shingle <input type="checkbox"/>	Hole or Crevice <input type="checkbox"/>
Gross <input type="checkbox"/>	Dead Veg. <input type="checkbox"/>	Stones/Rock <input type="checkbox"/>	Ledge <input type="checkbox"/>
Floating Veg. <input type="checkbox"/>	Hedgerow <input type="checkbox"/>	Vertical Ground <input type="checkbox"/>	Nest Box <input type="checkbox"/>
Ditch <input type="checkbox"/>	Wall <input type="checkbox"/>	Sloping Ground <input type="checkbox"/>	In another Bird/Animal Nest (give details below) <input type="checkbox"/>
Building <input type="checkbox"/>		Flat/Gentle Slope <input type="checkbox"/>	Over Water <input type="checkbox"/>
		Other Human Artefact <input type="checkbox"/>	Islet <input type="checkbox"/>
		Other <input type="checkbox"/>	
		Near: Centre <input type="checkbox"/> Margin <input checked="" type="checkbox"/>	Well Hidden <input type="checkbox"/>
		Field <input checked="" type="checkbox"/> of Wood <input type="checkbox"/>	Part Hidden <input checked="" type="checkbox"/>
			Exposed <input type="checkbox"/>
Give details of plant species and any extra comments on Nest Site			
FIRST HABITAT		HAWTHORN HEDGEROWS	
SECOND HABITAT			
NEST SITE		CRAB APPLE	
OTHER BIRD/ANIMAL NEST USED			

The back of the Nest Record Card

The “In”, “On” and “Under” boxes allow you to indicate the position of the nest relative to the tree, ditch or ground etc. It is always obvious which box refers to which: for example you cannot have a nest in a tree under grass, but you can have one in grass under a tree. The “In”, “On” and “Under” boxes should also be used when ledges, nestboxes and islets are involved e.g. a nest may be “In” a nestbox “On” a tree.

If unsure whether to code a nest site as a tree or as a bush, take anything over 5 metres tall to be a tree and anything under 5 metres tall to be a bush. A dwarf shrub is a low-growing woody shrub, such as heather or bilberry.

NEAR CENTRE/MARGIN OF FIELD/WOOD: If the nest is within 15m of the edge of a field or 50m of the edge of a wood then mark the box for “Margin”. If the nest is further than these distances from the edge of the field or wood then mark the box for “Centre”. If the nest is in a small wood with a centre less than 50m from the edge, then cross “Margin” as closeness to edge has been found to be a key factor for nest success in a number of studies. However, of the two boxes “Centre” and “Margin”, only one may be crossed. This also applies to the two boxes “Field” and “Wood” where either one or the other box should be crossed but not both. In cases where the nest is on the edge of a field and a wood, cross off the box for the habitat which actually contains the nest. If the nest is in the wood, cross that box rather than the field one; if it is in the field or a hedgerow separating the field from the wood, cross the “Field” box.



Extra detail about the precise nature of the nest site added on the reverse side of cards greatly enhances the value of a nest history. This pair of Wrens were exploiting a cavity created accidentally by rope coiled in a garden shed.
Photo: Robert T Smith.

TYPE OF NEST LOCATION: In this section, “Unenclosed” refers to any nest that is not enclosed within a cavity or nestbox. A House Martin’s nest on the side of a building is therefore “Unenclosed”. If the bird uses another bird or mammal’s nest then please give details of the species, if known, in the comments box at the bottom of the card. “Islet” includes man-made rafts or artificial nesting islands for terns or geese etc.

HIDDEN/EXPOSED: This is to provide an idea of how well you think the nest is hidden from predators. It is rather a subjective measure, but it is unlikely that one person’s “Well Hidden” will be another’s “Exposed”.

An observer’s opinion will also depend on the species: for example, an “exposed” Grasshopper Warbler nest is likely to be much better hidden than an “exposed” Blackbird nest.

If a nest starts off as “exposed” then becomes better hidden as the surrounding vegetation grows up then mark more than one box. (In the rare cases when the nest becomes more exposed during nesting, please make sure to comment on this).

This section gathers useful information about degree of exposure, in relation to predation rates and seasonality of predation.

NEST HEIGHT: Please record nest height to the nearest 10cm if below one metre, and as accurately as possible if above one metre. Please give figures to one decimal place rather than using fractions. If the nest is on a sloping bank or in a ditch, then give the height as 0m (zero). In cases where the nest is in a bush in a ditch, give the height to the base of the bush and not to the bottom of the ditch. If the nest is that of a ground nesting species, please always write a zero rather than leave a blank space.

COMMENTS BOX: This is for any further details about habitat or nest site. Please put dominant species names, if known, for habitat vegetation beside **FIRST HABITAT** for the first habitat, beside **SECOND HABITAT** for the second habitat; put plant specific names and extra details on nest site beside **NEST SITE**; and write details of another nest that is utilised, e.g. Long-eared Owl using old nest of Carrion Crow beside **OTHER BIRD/ANIMAL NEST USED**.

Continuing the Mistle Thrush example given earlier, hawthorn hedgerows surround the grass fields so “**HAWTHORN HEDGEROWS**” is written next to **FIRST HABITAT** in the comments box. The nest itself is in a crab apple tree so this is written next to **NEST SITE**.

You may use this space, and any space left over on the front of the card, as fully as you wish to record details of habitat management (e.g. age of trees), history of the nest site (e.g. if used by the same, or different species, in previous years) and extra detail on behaviour (e.g. evidence of more than two birds involved with incubation or feeding young).

STATUS CODES EXPLAINED

In the following pages the “Status” and “Habitat” Codes are explained in detail. Please refer to the pocket-sized Coding Card for a full list of codes.

STATUS CODE NOTES

NEST BUILDING STAGE

Only record these codes while building is still in progress.

NL Some species line their nest with softer material than the rest of the nest. Birds of prey are known to line their nests with green leafy material.

EGGS

CO or **WA** Eggs Cold/Warm: If the eggs can be easily reached, very carefully feel them to see if they are cold or warm. This will then tell us whether or not incubation has begun.

UN or **CV** Eggs Uncovered/Covered with material: Some species cover their eggs with material while they are away from the nest. Only record **UN** or **CV** for those species that are known to normally cover their eggs, e.g. grebes, ducks, titmice.

FR or **DE** Eggs Fresh/Developing Embryo present: Freshness of eggs or the presence of a developing embryo can be assessed using the Water Test or by candling. Write to the Nest Records Unit for details.

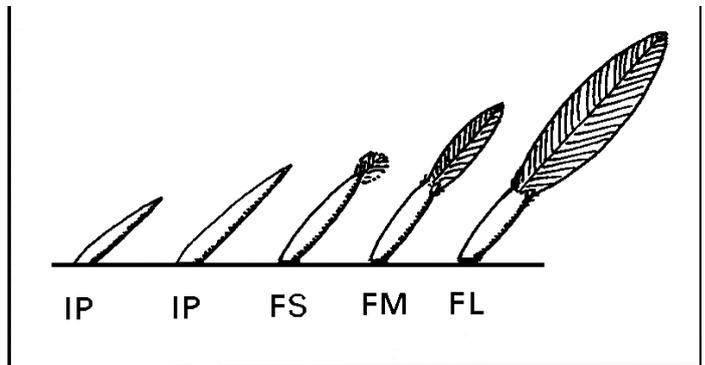
PE Pipping egg: some chicks call from within the egg for one to two days before hatching. Before the chick has broken through the shell, “starring” of the shell occurs where the chick has cracked the shell from within.

YOUNG

Recording growth of species whose young hatch asynchronously. The broods of some species (e.g. owls) normally have young at various stages of growth. In these cases, please record in the columns, status codes to describe the age of the oldest chick only. Codes to describe the growth of younger birds may be recorded in the comments section.

TO Egg Tooth present: The egg tooth is a horny bump on the upper side of the beak that is used by nestlings to break through the shell and out of the egg.

IP Primary feathers In Pin: Primary feathers (the large flight feathers that form the outer half of the wing) which are completely enclosed within the shiny sheath are called “in pin” (because of their pointed shape).



FS/FM/FL Primary feather growth stages.

RF Ready to Fledge: When the nestlings are well feathered and look ready to leave the nest (whether they can fly or not), please leave well alone and record this code. Please note that the status code “**YC**” (Young capable of leaving nest on the previous visit) is a **SUCCESS** code and should not be confused with “**RF**”. “**RF**” should only be used when young look ready to fledge but none have yet done so. “**YC**” should be used when some or all of the young have fledged and may follow a visit where young are described as “**RF**”.

SY Some young fledged; other live young still in nest.

YR Young Ringed: Use every time some young are ringed, even if only part of the brood is ringed.

AY Audible Young in nest: When food-begging or hunger calls of the young are heard in the nest.

ADULT ACTIVITY

Recording the activity of adult birds at or near the nest can be useful when determining the stage of the nest, particularly when the contents cannot be seen (as in the case of a species nesting high in a tree). For example, an adult sitting tight on the nest implies that it contains eggs and/or young; and adults regularly going to and from the nest with food implies that young are present.

The adult activity codes “**AN**” (Adult on/at nest) and “**FN**” (Female on/at nest) are probably the most useful, but there are other codes to use if an adult is found dead, feeding young, trapped at/near the nest for ringing purposes, or in the vicinity of the nest.

NB We have altered the meaning of the status codes **AV**, **MV**, **FV** and **PV** slightly so that they should now only be used if the adult(s) is visibly anxious (e.g. alarming) or carrying food in the vicinity of the nest before the young have fledged. See the coding card for a full list of adult activity codes.

NB Ringers, please note that when an adult is trapped on the nest, please use both status codes AT and AN.

OUTCOME

Put down all appropriate codes. If only some young die, then put both failure codes and success codes.

Young which leave the nest shortly after hatching (nidifugous species like waders, ducks and gamebirds) cannot usually be followed. Some species naturally leave after a period in the nest, but before they can fly (e.g. Short-eared Owls.) For these species, Outcome refers to whether the young left the nest successfully or not. (In exceptional circumstances, it may be possible to follow the progress of such nestlings, in which case further observations would be valuable. But please be sure of the identity of the nestlings once they have left the nest.)

EX Young “Exploded” from nest: Older nestlings may “explode” from or leave their nest in direct response to being approached by a nest recorder (see Code of Conduct). Survival chances may be lessened if this occurs, depending on how close they were to fledging naturally, but the nestlings will still be cared for by their parents.

Outcome success codes for nidicolous species. For young that hatch naked, blind and helpless, such as the typical songbird nestling, outcome success codes should only be used when at least one of the live young have fledged (e.g. codes “VA” and “AC”). Outcome success and failure codes for nidifugous species. For young that hatch covered in down and are able to leave the nest

soon after hatching (e.g. ducklings, wader and gamebird chicks), the code “LB” (Young left nest naturally before fledging; still nearby) should be used until they can fly, after which time “NN” (Fledged young near nest) becomes relevant.

Partial success. Failure codes for individual eggs or chicks can be written for any visit. When a nest is partially successful (i.e. where only part of the clutch/brood produces fledged young), this can be indicated by putting both a success code (e.g. NE) and a failure code (e.g. JD) on the final line. Although the code “NE” means “Nest empty, undisturbed and well-trodden lining, containing feather scale and/or droppings”, it may also be used in cases of partial success, for example, when a small dead chick is found trampled at the bottom of a Blue Tit nest after the rest of the brood has fledged.

Also, in the case of nidicolous species, if some young have fledged whilst others are still in the nest, use the code “SY” (some young fledged; other live young still in nest), but only record the number of young still in the nest in the young column. The number of young seen outside the nest may be written in the comments section. If you see the last live young leave the nest or the entire brood leaves together, record the date and use the success code “SL” (last young seen leaving).

OUTCOME UNKNOWN = OU

Only use this if you have a visit date and you are uncertain of the nest outcome.



For nidifugous species such as Mallard, please start cards only where the nest is located. However, once the young have left the nest, further accurate counts of the surviving young at intervals are valuable where the brood is known to have kept intact. Photo: David Thomlinson.

HABITAT CODING SYSTEM

The habitat coding system is based on the system described in Humphrey Crick's paper in *Bird Study* (1992; 39:1-12), that can be obtained from the Nest Records Unit upon request. See Coding Card for full list of codes.

Habitat notes

Disturbance is included under a number of major habitat categories and refers to: any human disturbance that might affect the birds in the area (such as ramblers or gamekeepers).

A. WOODLAND: Trees generally greater than 5m tall (more than 10 trees).

Mixed: At least a 10% or greater mixture of broad-leaved trees in coniferous woodland or vice versa.

Waterlogged: Swamp woodland/carr.

Mixed-aged or semi-natural: Trees of different ages mixed together, including ancient woodland and abandoned coppice, but not plantations with blocks of different aged trees.

Coppice: Practice of cutting broad-leaved trees to promote regrowth of pole-like timber from stumps. "Standards" are mature trees which provide larger timber.

Parkland: Large, often over-mature trees spaced widely across grassland.

Shrub layer: Woody plants less than 5m tall.

Field layer: Non-woody plants, usually less than 1m tall; including grass, forbs or herbs, nettles, bracken.

Dead wood: Fallen or standing dead trees which are left to decompose; dead wood forming parts of living trees.

B. SCRUBLAND: Woody shrubs or young trees less than 5m tall (several terms are defined under woodland).

Downland: Occurring on chalk or limestone geological formations.

Heath scrub: Occurring on heather areas (e.g. gorse and broom scrub).

Young coppice: Without standards.

Other: Use if unsure which category and give a description in the comments box.

Mixed: See Woodland.

Shrub layer: See Woodland.

C. SEMI-NATURAL GRASSLAND AND MARSH: Not apparently managed intensively for farming (i.e. probably no herbicides; probably no, or very low, fertilizer inputs).

Chalk downland: See Scrubland.

Grass moor: Typically occurring on upland, hill-grazing land, usually on peaty, acidic soils.

Unenclosed grass moor: Typically upland moors without fences, walls, hedgerows etc.

Machair: A grass-covered, flat sandy plain found on the coasts of west Scotland, Orkney and Shetland.

Other dry grassland: Use if unsure, or in conjunction with another habitat (for instance for grassland occurring on coastal sand), or with an extra description in the comments box.

Water meadow/ grazing marsh: Periodically flooded with fresh water and usually grazed by livestock.

Reed swamp: Reedbeds of tall, semi-aquatic plants, especially Phragmites or Typha (reedmace).

Other open marsh: Water-logged marsh or fen not grazed by livestock.

Saltmarsh: Periodically flooded with salt water.

Montane: Cannot simply be defined because montane vegetation occurs at lower altitudes in the north and west than in the rest of the UK. Montane vegetation consists of a dense, wind-flattened carpet of ground-hugging plants, with a substantial proportion of mosses and lichens. It occurs above the altitude at which woody scrub can grow.

Ungrazed: Please check for lack of grazing (i.e. absence of hoof-prints, cow-pats etc.). Light grazing tends to produce tussocks of unpalatable grasses, heavy grazing produces a very short sward.

Other grazers: Please specify in the comments box.

Hay:	Tall grass normally mown in June/July. Where the grass has been improved (i.e. fertilised) then it is classed as "Farmland"; silage is improved and cut earlier than hay, in May/June.	Mixed grass/ tilled land:	Adjacent fields of each; the grass is almost always improved.
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D. HEATHLAND AND BOGS:

Heath: Dominated by heather and heaths, including upland and lowland areas.

Dry Heath: Well-drained, often sandy or gravelly heaths.

Wet Heath: Usually on damp, often peaty soils with Sphagnum mosses in wettest areas.

Bog: Waterlogged peaty areas, often covered with spongy Sphagnum moss.

Breckland: Finely mixed heaths and grassland with areas of moss and lichens (occurring in Norfolk, Suffolk and small areas of Lincolnshire).

Raised bog: On plains where drainage is limited, usually with a gently undulating surface. Hummocks of vegetation dominated by heather are separated by larger wet areas of bog mosses.

Valley/basin bog: Depressions containing stagnant water, or in small valleys.

Blanket bog: Large continuous areas (over entire landscapes) of bog on flat or gentle sloping land subject to a very wet climate.

Ploughed: For heaths/bogs that have been ploughed for forestry.

Burned: Record this until the heath has substantially regrown.

E. FARMLAND: Defined by fields that are enclosed by hedges, walls etc.

Apparently Improved grassland: Grass regularly treated with fertilizer and distinguished by its bright colour, lush growth and even texture. If known, please record under comments whether the field is a ley (reseeded within the last five years).

Apparently Unimproved grassland: Grass not treated with fertilizers, usually mowed or grazed regularly, may be rank and neglected.

Orchard: More than 10 fruit trees.

Ungrazed: See "Grassland". If known, please specify hay or silage under comments.

Bare earth: Please specify whether furrowed or flat in the comments. If a crop is subsequently grown in the field, please include the appropriate code and give details under comments.

Autumn and Spring cereal: These differ sharply in April: autumn cereals are taller or bushier and are darker green than spring cereals, which will have only just emerged and may be at the single leaf stage.

F. HUMAN SITES:

Urban: Densely built-up areas including town and city centres, industrial and residential.

Suburban: Inhabited areas that border rural areas or contain large gardens, municipal parks or recreational areas.

Rural: Areas without buildings or containing just a few scattered houses or other buildings.

Garden areas: N.B. a tennis court measures c. 22m² or 10m x 22m.

Municipal: Including public areas with regularly mown parks/lawns, sports fields, golf course fairways, etc. recreational areas:

Sewage works (Urban): In a built-up area, of the concrete type, and generally without large areas of open water.



Record all the main relevant habitat features embraced by the nest site and foraging area of each pair. This Garden Warbler, for example, was nesting and feeding in scrubland (First Habitat H1, B), in a young plantation (Column A, 5), that was composed of mixed broad-leaved and coniferous trees and little visited by man (Column B, 3, 8), the nest situated low down in brambles emerging through nettles creating a moderate shrub layer, with a dense field layer (C, 4, 7). Photo: Eric Hosking.

Near road railway line: Please describe the vegetation as well. Be very careful not to forget the close proximity of moving vehicles when recording nests near roads or railways and never enter on to railway property immediately adjacent to railways

Other: For features which do not fit into any particular Human Sites category e.g. allotments in use.

G. WATERBODIES: (N.B. a tennis court measures approximately 220m² or 10m x 22m).

Lined reservoir: Lined with concrete or other material. Generally lacking emergent vegetation (especially trees!).

Sewage processing (Rural): Containing water-bodies in a semi-natural environment.

Small Island: Includes artificial rafts.

Eutrophic: Usually situated in lowland farmland where high nutrient inputs promote production of green algae and water-weeds. The substrate is usually soft and muddy.

Oligotrophic: Clear water with low productivity of plants and algae, the substrate is usually stony. Water that is occasionally discoloured by algae (i.e. mesotrophic) should be included here.

Dystrophic: Stained with peat and found in areas of bog.

Marl: very clear water with large water-weeds found in chalk and limestone areas.

H. COASTAL:

Fully vegetated: please record vegetation type in the other habitat section (for example: if "dune grassland" then record the grassland in the first habitat and the coastal dune area in the second habitat).

Small island: less than 100m in diameter.

Dune slack: a wet area with marshy vegetation within a dune system

I. INLAND ROCK: if this is combined with a "Coastal" habitat it becomes "Coastal Rock".

J. MISCELLANEOUS: for habitats that do not fit into A-I above. Please record details under comments.

INTEGRATED POPULATION MONITORING REPORTER (IPMR)

IPMR enables nest recorders to enter their nest record data directly onto computer instead of using nest record cards. At the end of the season the nest records can be submitted to the BTO electronically via email or on a disc. The system allows nest recorders to keep permanent records of nest record data collected each season, and it can also be used to plan nest visits, produce reports and calculate productivity statistics.

Nest record submissions from IPMR are easily loaded into the BTO's nest record database. Increasing use of the IPMR system will therefore enable the BTO to handle and process nest records more quickly and efficiently than ever before.

Any nest recorders interested in using IPMR can download the system from the BTO website www.bto.org/ringing/ringsoft/ipmr. Alternatively, contact the Nest Records Unit for a copy of the program on CD-Rom.

Nest Record submission files should be sent to nrs.data@bto.org as an email attachment or on disc.



Use your knowledge of a species to describe the relative exposure of a nest. Grasshopper Warblers invariably bury their nests deep down in a clump of sedge, reed or coarse grasses with the nest cup fully covered by a canopy of vegetation. This nest could be viewed relatively easily from one angle, hence recorded as only "partially" hidden. Photo: M S Wood.

CONSTANT NEST MONITORING PLOTS (CNMP)

This is an exciting and important new scheme designed to complement the existing Nest Record Scheme, by providing additional information on breeding success throughout the season and relationships between productivity and habitat. CNMP has been developed as a way to achieve a more structured and standardised form of nest recording and will allow us to answer even more questions about our breeding birds.

The basic idea is that nest recorders monitor the breeding activity of one or more species on defined monitoring plots. These same plots are monitored every year and observers need to record

any habitat changes in their study area, along with details of search effort (e.g. number of hours in the field) and counts of the number of pairs present for each of the study species. An initial census of numbers will be important to assess levels of coverage (i.e. the proportion of breeding pairs nests found).

Observers should record nests throughout the entire breeding season of their chosen species so plots should be large enough to include at least one territory of the species concerned. For further details on how to get involved, or to register a plot, please contact the Nest Records Unit.

And finally...

Please see the season through: The nesting season for many birds is considerably longer than many birdwatchers appreciate. For example, Tawny Owl and Great Crested Grebe may have young as early as February, Stock Dove and Barn Owl as late as October and November. Robin may rear three, Blackbird four and Stock Dove five broods, even more, in a single calendar year. It is important to see the season through (see page 5).

Spreading the word: The BTO is keen to recruit new contributors to the Nest Record Scheme. We will happily send an introductory "Starter Pack" to any enthusiastic and competent nest finder and recorder that you may recommend.

Extra materials or advice: If at any point during the nesting season queries arise or you need extra recording cards, Summary Sheet,

Handbook or Coding Cards, we will be happy to help. Contact the BTO at:

Nest Record Scheme
The Nunnery
Thetford
Norfolk IP24 2PU
Tel: (01842) 750050
nest.records@bto.org

ENJOYABLE NEST FINDING TO
ALL CONTRIBUTORS

The BTO aims to have fun whilst collecting the facts but having the birds' interests in mind at all times.



Please 'see the season through' by keeping eyes open in all months of the year. Possible 'early' nest finds include Collared Dove and Feral Pigeon (January), Song Thrush, Great Crested Grebe, Grey Heron (February), then later in the year given mild conditions and favourable food supplies, Greenfinch and House Martin (October), Stock Dove and Barn Owl (November). Photo: Richard T Mills.

APPENDIX 1

The BTO Colony Nest Record Card

Instructions for use

The Colony Nest Record Card is specifically designed to enable the progress of nests in colonies to be recorded more quickly and more conveniently than can be done on individual nest record cards. They should only be used for recording the nests of the following species nesting in colonial situations: Grey Heron, House Martin, Sand Martin, Rook, Jackdaw and seabirds. (See Appendix 2 for information on recording nests in colonies of seabirds e.g. auks, gulls and terns). Please use a separate card for each species and each colony. If more than 40 nests of a species are examined at one colony, continue on one or more extra colony cards. (N.B. When disturbance is not considered a problem and recording time is not limited, please complete individual Nest Record Cards for each nest of the above species, as these carry more detail.)

It should be mentioned that seabird research in particular, has shown that long-established pairs tend to nest nearer the centre of a colony and less experienced individuals around the periphery. Therefore, to help us assess nesting performance, observers should, where possible, record either all the nests or a random scatter of nests, possibly involving a linear transect (where time and circumstances allow). Regular checks of known nests in part of a colony are essential because repeated unsystematic

counts of the whole cannot be accepted. It is often very helpful to make a map of the nests for your own reference to ensure the correct identification of nests on subsequent visits. Under certain circumstances, it may be helpful to mark nests carefully, (preferably using natural materials) unless this would attract attention to the nests by predators or the public.

How to Fill Out the Colony Card

Complete Species Code, County/Region Code, Locality (Place-name), Grid Reference and Observer Code as described for individual Nest Record Cards on pages 12 to 15 of this instruction booklet.

Altitude above sea level

For inland nests and nests on the sea shore, this can be obtained by looking at an Ordnance Survey map and recording the height of the contour line nearest to the colony site. For sea cliff nests, the average height of the nests above the level of the sea should be recorded.

Habitat

Refer to the Coding Card for habitat codes. In the First Habitat section, mark the box H1 with the relevant letter for the actual habitat that the nest is in. Then describe this habitat more fully

BTO COLONY NEST RECORD CARD																								
Please return to: Nest Records Unit, BTO, The Nunnery, Thetford, Norfolk, IP24 2PU BTO Charity No: 216652																								
This card may be used for recording the nests of colonial SEABIRDS (eg auks, gulls, terns), GREY HERON, HOUSE MARTIN, SAND MARTIN, ROOK and JACKDAW. Please use one card per species and one card per colony. Refer to Nest Record Scheme Coding Card for Habitat and Status Codes. Please make no guesses.																								
Species Code:		County/Region Code:		Locality (Place-name, including County-name if code unknown):						Grid Ref.:		Year												
K I T T I		G B N L		INNER FARNE						N U 2 1 8 3 5 8		2 0 0 2												
Observer Code:		Altitude Above Sea Level	Habitat (refer to Coding Card for codes)	FIRST HABITAT						SECOND HABITAT			Total no. of nests whose contents have been recorded at this colony:		Peak number of occupied nests in colony:									
N T F		20 m	H1	A		B		C		H2		A	B	C	412		9	6						
			H	2	4	6		1	8						7									
VISIT DATA, COUNTS & STATUS CODES (Refer to Coding Card for Status Codes)																								
BTO Ref.	Nest No.	Nest Height Above Ground (m)	Nest Site (Choose categories from Nest Record Card and specify plant species where possible)	Day		Mth		Day		Mth		Day		Mth		Day		Mth		Extra comments (and ring numbers of young)				
				Live Eggs	Dead Eggs	Live Yng	Dead Yng	Status Codes	Live Eggs	Dead Eggs	Live Yng	Dead Yng	Status Codes	Live Eggs	Dead Eggs	Live Yng	Dead Yng	Status Codes	Live Eggs		Dead Eggs	Live Yng	Dead Yng	Status Codes
	1	19	ROCK LEDGE	2	0			AN	1	1			HA	0	2		DO	0	1	RF	0	0	YC	
	2	20	" "	2	0				2	0			PE	0	2		IP	0	1	RF	0	0	YC	
	3	18	" "	0	0			N3	2	0				0	2		DO AN	0	2	RF	0	0	YC	
	4	22	" "	0	0			N3 ?	?	0			AN	0	3		DO AN	0	2	1	FL	0	1	RF
	5	21	" "	0	0			N2 ?	?	0			AN	1	1		HA	0	0	2				
	6	20	" "	2	0				0	2			DO	0	2		FS	0	2	0	RF	0	0	YC
	7	20	" "	1	0				0	0			EB											

Example of a completed Colony Nest Record Card.

by writing ONE number in box A and ANY NUMBER of relevant codes in boxes B and C. Fill the dashed boxes in B and C from left to right. Write numbers in numerical order, one per box, without leaving any spaces. The Second Habitat section can be completed if there is an adjacent habitat to the nest site habitat which the parent birds are utilising for feeding etc.

Total no. of nests whose contents have been recorded at this colony

Record the number of nests which have had their contents counted at least once. Do not include nests which were abandoned before eggs were laid.

Peak number of occupied nests in the colony

Write the peak number of nests in the colony in the box headed "Peak number:", then in the boxes next to it, the day and number of the month you recorded this figure, e.g. "30 6" for thirtieth of June. Finally, specify whether the figure is a count or estimate by ticking the relevant box.

BTO Reference

Please do not mark this column as it is for BTO use only.

Nest Number (No.)

You may complete this column with your own personal reference code for each nest as an aid to individual nest identification.

Nest height above ground/cliff base

For species nesting on sea cliffs, write the heights of the nests from the cliff base. Similarly, for a Sand Martin colony in a riverbank, record the heights of the nest holes above water level if the river covers the base of the bank. For species which nest on the ground, please insert a zero rather than leave the space blank.

Nest Site

Please refer to the Nest Site section on the back of the Nest Record Card for the choice of categories and specify plant species where possible, e.g. for a Rook nesting in an oak tree, write: "tree - oak" or "oak tree".

Visit Data, Counts and Status Codes

Write the date of each visit in the Day and Month boxes and then record numbers of eggs and young as specified on page 15 of this booklet. Choose status codes from the Coding Card. If a colony is visited before any eggs are laid write the date of the last such visit in the first visit data column. Also, please record the dates when nests are found empty or failed.

Extra comments and ring numbers of young

This space can be used if you have any other notes to make on the nest that you feel are useful, including ring numbers of young. On the reverse side, additional space is provided for recording other species breeding in the colony and for more general comments about the colony.

APPENDIX 2

Recording Nests in Seabird Colonies

Because of the potential harm it could do, we do not want observers to go into seabird colonies for nest recording purposes. If nests are to be monitored, this should be done from a distance so that adult birds and young are not stressed by your presence.

Please contact the Nest Records Unit to obtain advice on any special circumstances that would allow you to go into a seabird colony.

The following has been adapted from an article in *Ringers' Bulletin* (Vol. 1 No. 10 by I J Patterson & N Tinbergen) and highlights the disturbance that can be caused if seabird colonies are entered:

Adult gulls and terns respond to man as they would a predator, leaving the nest at the slightest disturbance and relying on the camouflage of the chicks and their own social attacks to protect the brood. Neither is entirely effective with such predators as Carrion Crow and Herring Gull, which often use the opportunity created by human visitors to snatch eggs and chicks. Also, in Black-headed and Herring Gull colonies, there may be individual "robber gulls" specialising (particularly towards the end of the season) in grabbing hatching eggs and newly hatched chicks as soon as they are left momentarily unguarded. In addition, birds

like the auks, Shag, Cormorant, and Fulmar often do not return to the nest for some time after disturbance; they often make a wide sweep over the sea before landing and, especially in the early stages of incubation, tend to settle on the water for some time, thus leaving the clutch or brood unguarded.

In gull colonies (except those of Kittiwake) the young often run instead of crouching, particularly if they have been picked up and handled. Such young often wander far from their territories and are then severely pecked by strange adults after the disturbance is over. It seems that this effect increases with the length of the disturbance. It is much reduced, however, just before the young are able to fly, possibly owing to their greater size and mobility.

To minimise egg and chick loss whilst recording nests in such colonies, the following measures should be taken:

1. Limit visits to any particular part of a colony to periods of five to ten minutes at a time.
2. Confine ringing activities to the period when most of the young are almost fledged. Also, after ringing chicks, replace them exactly where found and attempt to make them crouch in cover upon release.



£5
Free to Nest Recorders

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The NRS Handbook was written
by Humphrey Crick, Caroline Dudley and David Glue.
Revised in September 2003 by Peter Beaven and Dave Leech.
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