OSNZ NEST RECORD SCHEME INSTRUCTIONS

By HUGH A. ROBERTSON

The Nest Record Scheme aims to provide comprehensive information on the breeding biology of New Zealand birds. Since the Scheme began in 1950, about 17 000 cards have been received up to 1985, covering 130 species. The breeding information in the Scheme is used for research and management. Many papers and books have used data from the Scheme and so you can feel confident that your records are put to good use.

In 1985, a new design of Nest Record Card was introduced to improve the amount of data collected for each nest and to allow the data to be transferred to a computer more simply. Instructions for the use of the new card are given here. These instructions are based on those used in the nest record schemes of the British Trust for Ornithology and the Royal Australasian Ornithologists Union.

Participation in the Scheme

Most participants are members of OSNZ, but records are welcome from all people with an interest in the breeding of birds. You may also submit cards completed by friends as long as you have checked their accuracy and include your own name on each card. Nest Record Cards are obtainable free from the Nest Record Scheme Organiser. When you send in completed cards, you will receive fresh ones for use in the next season.

Your contribution

Complete a card for every nest for which you have accurately counted the contents on one or more occasions, or for which you have evidence that birds are currently breeding, e.g. you see birds building a nest or you see an inaccessible nest at which young are being fed. Do not record old nests or nests that failed before you found them, unless there was something unusual about the record, e.g. an old Welcome Swallow nest in a moored boat.

If possible, search for nests from the earliest time that you think birds are likely to be nesting and right through the season until all species have stopped breeding; otherwise the Scheme's records may become biased towards early spring and school holidays. Contributions from rural, forest and island habitats are very useful because most records are from around people's homes, generally in suburban surroundings.

Although cards are needed for ALL nests, regardless of the number of visits, the most valuable information comes from nests visited more than once. Two observations of a nest have more than twice the value of a single one, even if the nest is abandoned shortly after you find it.

You need not visit nests daily, especially if you expect no change in contents. A few well-planned visits can provide maximum information. For instance, for most birds, two afternoon visits during laying are enough for recording the date of the first egg and the laying sequence (not necessarily

an egg laid every day); a visit during incubation gives the clutch size, after which a couple of visits around hatching time will give the approximate incubation period and hatching success. A few visits during the nestling stage will give details of growth, nesting success and fledging periods. If you can, try to follow the successive nesting attempts of each pair through the whole breeding season.

Visiting nests

You must exercise a sense of responsibility and *always* put the welfare of the birds first if a visit might endanger the nest. The three main risks are

(a) Accidentally damaging the nest,
(b) Causing desertion or premature fledging of young, and
(c) Revealing the nest to predators.

Accidental damage: To cause least disturbance, to avoid effort and to save time, as well as to inspect inaccessible nests, use a small mirror adjustably fixed to a pole. Use a torch with a narrow beam to inspect nests in enclosed spaces, e.g. Welcome Swallow or Starling nests. Handle small eggs and young delicately. Young chicks are generally helpless — always replace them well within the nest cup.

Desertion and premature fledging: Whether to flush a sitting bird depends on a variety of factors. Do not flush it if you can gain no useful new information, and some species are best left undisturbed when sitting, at any rate at certain stages. Many species leave their nests unattended while feeding; you can then inspect the nest safely. In general, it is best NOT to flush birds in failing evening light. If the bird is to be flushed, give it ample time to slip off quietly by tapping branches or by whistling as you approach. A bird sitting tightly may leave quietly if you turn your back for a while. If a bird sits really tight, it might be in the process of laying or hatching and should be left undisturbed. Tap a nestbox from below to give the bird a chance to leave before you look in. Do not pick up sitting adults, particularly during the egg stage. If you do handle an adult accidentally, e.g. in mistake for a well-grown nestling, release it some distance away; the bird then seems to 'forget' the circumstances of its capture.

Many species can be sensitive to disturbance and so should be treated with extra care (1) at the start and finish of their breeding season, (2) in the early stages of each nesting attempt, (3) to a lesser extent, about the time of hatching, (4) in bad weather such as cold, heavy rain, and (5) at times of food shortage, often associated with (4). Young inexperienced breeders are as a rule more sensitive than mature established pairs.

When partly feathered, the young develop an instinct to scatter ('explode') on the close approach of a possible predator. 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 the primary feathers have emerged about 6 mm from their quill sheaths — a stage many passerines reach at about 9 days. The young of hole-nesters do not tend to 'explode' until somewhat older. If a brood becomes accustomed to handling, for instance, if you weigh them daily, they lose much of this fear reaction, but nestlings should not normally

be handled after the young are partly feathered. Therefore, inspect large young cautiously from a distance.

If you accidentally cause an 'explosion', quickly gather the young, keep them together, and replace them gently but firmly in the nest cup, the smallest on top. Cover them with your hand or a handkerchief. Give the nestlings time to settle, and withdraw the cover smoothly. If they leave again despite this, you will do more harm than good by staying; the more the parents 'scold', the more the fledglings will scatter, and perhaps get lost. Fledging ground-nesters (e.g. ducks and waders) leave the nest before they can fly, but they are adapted to survive.

Risk of predation: People often fear that they may increase predation by leaving a track or scent trail to nests, but in Britain a two-year investigation showed that nests visited frequently in bushes, hedges and thick undergrowth had a similar success rate to others left undisturbed between laying and fledgling.

Obviously you must not inspect a nest while a predator is nearby and can watch you. A commoner danger is that, if you flush a parent and it does not return immediately, the nest remains exposed to searching predators.

Although natural predators do not seem to be assisted by tracks, children are, and so try not to make tracks, and cover up any traces of your visits.

In case parent birds are watching, approach nests casually, as if by chance, rather than directly or deliberately. Birds are then likely to regard you as harmless (much as they would a passing sheep), not as a predator intent on robbing the nest. Never give a sitting bird 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. Occasionally, in dense cover, if a bird returns and only then sees you examining its nest, it may be so startled as to desert. Therefore, keep yourself in view while making the inspection. Never take an entire clutch or brood away from the nest because a bird is much more likely to desert if it returns to an empty nest.

BE CAREFUL NOT TO ENDANGER YOUR OWN LIFE OR LIMBS!

Filling in Nest Record Cards

1. RECORD FACTS ONLY: MAKE NO ESTIMATES OR GUESSES.
2. Use a separate card for each nesting attempt — staple two cards together if you run out of space, and mark each with your own reference number. If a nest is used more than once use a separate card for each attempt and cross-reference the cards.
3. For visits on which you note no major change (e.g. eggs hatching, nest deserted), show the dates under Remarks.
4. Use an ink that will not smudge, and please print clearly.

Instructions

(1) *Observer* — Give your name. If the nest is recorded by a friend, please add your own name. Please put your address on at least one card each year.

(2) *Obs Code* — Observer's code number — please leave blank for allocation of a personal reference number.

(3) *Species* — Record the common or Latin name of the species — add subspecies if relevant. See (23) *Outcome of nest* for dealing with parasitised nests.

(4) *Sp. Code* — Species code — please leave blank for allocation of a species and subspecies reference number.

(5) *Locality* — Give a locality that pinpoints the area in which you made the breeding record. Give distance and approximate direction to the nearest town or geographical feature.

(6) *Altitude* — Give the approximate altitude above sea level in metres (100 ft = 30 m).

(7) *Latitude & Longitude* — To locate the position of the breeding record accurately please give latitude and longitude coordinates to the nearest minute. Note that the Chathams are in the Western Hemisphere.

(8) *Habitat* — Place a cross in the square that most appropriately describes the general area where the bird is living. For example, if a Blackbird nested in a clump of apple trees in the garden of a country house this would be best placed as farmland rather than horticultural or residential.

(9) *Site* — Place a cross in the appropriate square and briefly describe the site, e.g. macrocarpa shelterbelt, cabin of moored boat.

(10) *Height of nest* — Record the height above ground to the nearest metre.

(11) *Height of nest plant/cliff/structure* — Record the height of the plant, cliff or structure (e.g. building) that the nest is in.

(12) *Height of tallest vegetation over nest* — Record this whenever the nest is in or under vegetation.

(13) *General Notes* — Record information such as band numbers, egg dimensions, weights and colour, any unusual features of the nest, e.g. type of construction or nest materials; note the presence of parasites such as fleas or mites. Note also any cuckoo parasitism or host species, and the presence of any helpers at the nest, i.e. three or more birds attending the nest.

(14) *Observer's Reference No.* — Use any system of numbering to keep for your own notes.

(15) *Ref. No. of other nests of same pair* — Put down your own observer's reference numbers of previous nests of the same pair in the same season.

(16) *Date* — Record this at each visit.

(17) *Time* — Use the 24 hour clock, e.g. 5.30 p.m. = 1730 h. Don't correct for NZ Summer Time — that will be done later by computer.

(18) *Eggs* — Record the number of eggs known to be in the nest. Make no guesses, but if you know that eggs were present but you couldn't count them, mark this column with a tick.

(19) *Young* — Record the number of young in the nest. If you know that young were present but you couldn't count them, mark this column with a tick. If any were out of the nest, note them in the Remarks column.

(20) *Bird on* — If a bird was sitting or flushed from the nest, enter one of these codes: Y = unknown sex, M = male, F = female. If a bird

was not on, N unless you determined that the eggs were W = warm or C = cold.

(21) *Age of young* — It is important to record the age as it helps analysts to deduce the date of laying and to calculate success. Record the age in days, if known, or use categories shown on the card to help to age nestlings. If you know the age precisely, please note eye condition and wing feather growth in the Remarks column as this information will help to age those chicks in other nests whose age was not accurately known.

(22) *Remarks* — Note anything special at each visit, e.g. stage of nest construction, weights of chicks, reasons for eggs or young failing if the whole nest didn't fail (e.g. 1 egg broken).

(23) *Outcome of nest* — Put a cross in the box that describes the fate of the *nest*. A successful nest is defined as having at least one chick leave successfully. Of four eggs, for example, three may hatch and only one chick leave. If the dates of your last two visits to the nest were so far apart that you can't determine whether the nest was successful, mark the box 'Evidence inconclusive'. If the nest was still occupied at your final visit, put a cross in the box 'Observations not continued' unless the chicks were 'Ready to leave', i.e. you judged them capable of fluttering away.

If a nest fails, it is usually obvious which box to mark, but sometimes you have to mark more than one box. For instance, if a Blackbird nest contained three newly hatched chicks on one visit but only one dead 'injured' chick the next day, mark both 'Young gone' and 'Young injured'. The category of 'Young injured' is used mostly for when you find remains of young eaten by predators.

The 'Other' category could include such events as the adults dying or the nests parasitised by cuckoos. If a pair of Grey Warblers raises a Shining Cuckoo chick, their own nest has failed, even though they have successfully raised the cuckoo chick. In this example, use separate cards for Grey Warbler and Shining Cuckoo, with each suitably cross-referenced.

Bird colonies

It is often valuable to select a few nests in a colony and visit the same ones on a subsequent visit, but if you visit a bird colony and cannot follow individual nests, use a 'Colonial Nest Record Card'. These cards are designed to record a SINGLE VISIT to the nests of a SINGLE SPECIES. In mixed-species colonies, use a separate card for each species (but cross-reference them). Normally these cards are used for casual visits to seabird colonies and the colonies of shags, herons and some waders.

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