

# Buzzard monitoring in your *Raptor Patch* – a guide to the essentials

This guide takes you through the Buzzard monitoring year highlighting some of the things to be doing and to be looking out for. It assumes little prior knowledge and links to (or references) more detailed resources for those that wish to learn more.

## Introduction

Buzzards can be found in all habitats that provide open areas for hunting, including moorland and other upland habitats, but they prefer pasture or cultivated farmland with small woods or copses, and open forests. They will not nest within extensive closed forests but will breed in thinned plantations or near the forest edge and make use of clear-felled areas. They avoid high mountainous areas. Breeding territories typically include perches (trees, posts, rocks) and suitable trees or crags for nesting. They have a very varied diet, including young rabbits, voles, amphibians, birds and invertebrates.

A breeding pair generally occupies an area of 2–3 km<sup>2</sup>, of which a core area of 0.5–1 km<sup>2</sup> is usually defended against other rival Buzzards. The size of the home range varies with the abundance of prey. In highly productive areas, nests of separate breeding pairs have been found as close as 90 m apart, with up to five active nests having been found in a single kilometre square. Densities of pairs more typically range from 2.4 pairs per km<sup>2</sup> in areas with dense rabbit populations compared to 0.1 pairs per km<sup>2</sup> in areas with few rabbits.

## Winter

Buzzards remain territorial throughout the year, so winter sightings can be a useful indicator of breeding territories. They can be extremely inconspicuous at this time of year, however, as they don't generally display and usually hunt using 'sit and wait' tactics, during which they can be hard to spot. Juveniles from the previous breeding season typically disperse during autumn and winter and can be found occupying non-breeding territories. Non-breeding adults can also be found in such areas. Winter sightings of birds should be recorded (noting adults and juveniles where this can be determined) but should not be used as more than an indicator of areas to check again during the breeding season.

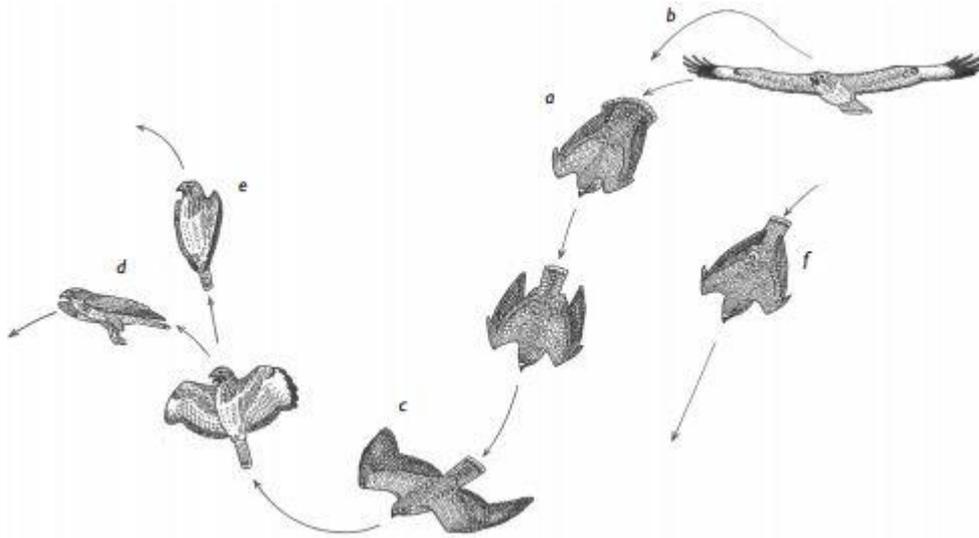
One of the most productive uses of your time during the winter months is to visit areas of deciduous woodland to look for large nests and accurately record their grid references to 100 m resolution (i.e. 6-figures). If you have access to a GPS device you should be able to record your nests even more accurately to a 10 m resolution i.e. 8-figures. Some Buzzard pairs use the same nest for many years in succession, whereas others change annually. One to a few old nests in a territory is normal, but exceptionally a pair may have up to 15. Buzzard nests in trees can vary considerably in size, from around 50cm in diameter and 25cm deep at the smallest through to nearer a metre across and 75cm deep for a nest that has been used and enlarged by successive occupants. It will be hard to be certain which species built the nest at this time of year, but recording the locations of large nests in this way will help you to find active nests later in the year, particularly once leaves have emerged on deciduous trees [see the *Raptor Nest Guide* for further information].

## Late February and early-March

As March approaches, Buzzard pairs become far more conspicuous and vocal, soaring frequently and performing various aerial displays. Now is the time to **check for occupancy** of breeding territories. Most display activity takes place between mid-morning and mid-afternoon. Vantage Point watches of 30 minutes or longer during February and early-March can be useful for identifying territorial pairs. Fine days with a mixture of sunshine, cloud cover and moderate winds seem to be best for observing display. One or two birds soaring or displaying over a block of woodland at this time of year is a good indication of territory occupancy. From a good vantage point (which may be low down, rather than necessarily up high) several pairs can be seen circling and displaying over their respective territories. A range of behaviours may be observed (for details see [Prytherch 2009](#)) but you should particularly look out for aggression towards other raptors (including other Buzzards) or corvids, [alarm calling](#) and aerial displays. Of the various aerial displays, 'display stooping' (also known as sky-dancing) is the most frequently performed (see Figures 1 & 2 below). Note down the locations of any such behaviours on your field map.



**Figure 1: Display stooping.** A schematic outline of several versions of this variable display. Having seen off an intruding Buzzard an intruder, the adult glides over the territory (a) then suddenly closes its wings (sometimes after rising slightly) and dives down (b). It soon pulls up and after rising, at the point of stall (c), it continues into the second stoop of four it performs before gliding off to settle near its mate. Alternatively, after two stoops it changes direction, performs two more rather shallow stoops before dropping down to settle near its mate. Otherwise it may circle up (d) then sail off over the territory, or display dive down to settle close to its mate (e). The number and intensity of the stoops can vary greatly even within a series. Reproduced from Prytherch (2009).



**Figure 2: One display stoop to reveal the detail.** The degree of closure of the wings at (a) is highly variable (both within and between series) and some display stoops will be so shallow that the wings will not close more than shown at (c). The display dive posture is shown in (f).

In addition to vantage point watches, spend some time walking through your Raptor Patch keeping an eye out for field signs of Buzzards (such as prey remains, pellets or potential nest sites). If you are searching an area on foot you should attempt to get within 100 m of every part of your Raptor Patch. Buzzards will often [alarm call](#) if you walk close to the nest location during the breeding season so this is a legitimate way of locating nesting territories. Note the locations of any signs or behaviours on your field map.

*Evidence for occupation* – Sightings of a pair or a single bird on several occasions over a localised area during the breeding season indicates that a territory is occupied. Freshly built nests, recently used roosts and fresh prey remains provide supporting evidence for occupancy but are not sufficient in the absence of sightings.

## Late-April to May

Time is best spent during this period **visiting known nests to check for signs of activity**. Such signs include newly-added branches (which will have pale 'snapped' ends), sprigs/branches with green leaves (so-called nest 'decoration'), down and moulted feathers (adult females do most of their moulting during egg laying and incubation). Note that a pair may repair and decorate more than one nest within a territory. By late-May there may be white faecal droppings underneath the nest.

The location of these nests should hopefully tie in with display activity from the current or earlier visits (remember that displaying birds can reveal nest site locations as they will dive down quite close to the nest site) but if not you must also visit any other locations where you recorded promising display activity to check for other active nests, remembering that nests can be less than 100m from one another.

Care must be taken to avoid excessive disturbance during egg laying and early incubation. During incubation nest visits should be kept as brief as possible. Try to view from a distance to avoid flushing the incubating bird from the nest.

In addition to the behaviours, calls and field signs that you were looking out for on your March/April visits also look out for and record the following:

- Incubating females sitting on nests (try to avoid flushing them)
- Adults passing or delivering food to their mate
- Faecal droppings/whitewash around or under the nest

## June

During the June visit to your Raptor Patch you should visit all of your known nests to **check for Buzzard young**. A good indication of the presence of young is pure white **faecal droppings/whitewash/'splash'** around the nest and on the ground/crag underneath. Note however that in deciduous trees, it is common for little or no splash to make it down to the ground through the dense canopy.

If you are lucky enough to have a vantage point down into the nest then try to count the nest contents (number of eggs and/or small chicks) and estimate the ages of any chicks that you see (see the *Young Raptor Aging Guide*). However it is more likely that you will not be able to count nest contents accurately, if at all, until the chicks are larger and simultaneously visible over the nest edge. You should however be able to infer that eggs have hatched - Listen out for [begging/hunger calls](#) from young and watch for adults carrying food to the nest or feeding young.

June is also a good time to find new nests which you have not located on previous visits. Previously-noted field signs plus alarm-calling adults can help you home in on the right area, and 'splash' underneath the tree or ledge can help to confirm that you have found the right site. It is more efficient to search for new nests at this time of year, once young have hatched, than earlier when incubating females will sit tight on the nest and no 'splash' will be visible.

*Evidence for breeding* – Active nests are an indication of breeding. Whether or not a nesting attempt is considered successful is determined by whether or not chicks successfully fledge.

*Evidence for non-breeding* – In a territory that is apparently occupied early in the season, the absence of an active nest, despite several searches during the appropriate visit periods, and a decline in alarm response from the adults, are indicative of non-breeding or early nest failure.

## July and early-August

During the July and August visits to your Raptor Patch you should visit all of your known territories and nests to **check for fledged Buzzard young**. As in June, if young are still present in the nest and you are able to see them from a suitable vantage point, try to estimate their age. For help on aging young see the *Young Raptor Aging Guide*.

*Evidence for fledging* – If the chicks in the nest are at least four weeks old (they will have primary feathers at least half way out of quills) it is fairly safe to assume that they will fledge successfully, as few die after reaching this age.

## Additional information

You may find the following resources useful if you wish to learn more about Buzzards:

- *The Life of Buzzards* by Peter Dare (2015). Whittles Publishing. ISBN-13: 978-1849951302
- *The Social Behaviour of the Common Buzzard* by Robin J. Prytherch (2009). British Birds 102: p247–273. [Available online here](#).
- *Buzzards*, from *Raptors: a Field Guide to Survey and Monitoring* by Hardey et al (2013). The Stationery Office. [Available online here](#).

## Monitoring Buzzards – at a glance

We recommend that you undertake six breeding season visits, one per month, to your Raptor Patch between February and July. During the winter we would recommend that you also visit your *Raptor Patch* to identify potentially suitable nest sites.

The table below shows the optimum timing for visits to your *Raptor Patch* during (red) and outwith (blue) the breeding season and how these visits are timed to coincide with when Buzzards are likely to be undertaking key activities in their annual cycle (grey). Cells marked with an “X” indicate peak periods for particular Buzzard activity within the wider range.

Aim of monitoring visit and key breeding activities of Buzzards	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<b>Visit: To search for potential nest sites</b>												
Occupation of home range												
<b>Visit: To check for occupancy</b>												
Occupation of home range												
<b>Visit: To check activity at known nests</b>												
Nest building			X X X									
Egg laying				X								
Incubation												
<b>Visit: To check for young</b>												
Hatching					X X							
Young in nest												
<b>Visit: To check for fledged young</b>												
Fledging							X X					
Juvenile dispersal												