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British Honey-buzzard survey 2020–21

British Birds

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Abstract

Given the species' secretive nature and generally low breeding density, the true number of Honey-buzzards *Pernis apivorus* breeding in Britain has been difficult to calculate. A survey in 2000 found 59 territories across Britain, including 27 breeding pairs. The most recent survey, in the 2020 and 2021 breeding seasons, found up to 109 territories with 48 pairs confirmed as breeding and 61 probable/possible breeding pairs.

Alan Harris

The Honey-buzzard *Pernis apivorus* has long proved difficult to survey, and its numbers in Britain have been a subject of speculation and intrigue amongst raptor enthusiasts. Early reports from the Rare Breeding Birds Panel (RBBP) suggested a small population, largely in southern England, amounting to perhaps 10–15 pairs, although the reluctance of observers in some counties to provide records was noted and it was acknowledged that the species was likely to be grossly under-reported ('only [one] report for 1973, which gives a completely false impression of the actual situation in Britain'; Sharrock *et al.* 1975). The publication of Roberts *et al.* (1999) was important in establishing a greater spirit of openness amongst fieldworkers. A national survey in 2000 established that Honey-buzzards were present in many parts of Britain, with 59 territories reported and breeding outcome recorded for 27 pairs (Batten 2001; Ogilvie 2003; RBBP pers. comm.). Data from Ogilvie (2003) was reviewed (Mark Holling pers. comm.), resulting in the deletion of some records where supporting evidence was absent. Subsequent RBBP reports have typically recorded lower numbers, with around 35–50 occupied territories each year, but have stressed that annual coverage was known to be incomplete and a more realistic estimate of the British population is around 100–150 pairs (Roberts & Law 2014).

A national Honey-buzzard survey in 2020 was organised with the support of the RBBP. Despite much uncertainty associated with planning a national survey during the global Covid-19 pandemic in 2020, adequate to good

coverage was achieved in many areas during this year although, owing to travel restrictions (particularly in Wales), survey work was limited largely to July and August. This resulted in the decision, with the support of the RBBP, to extend the survey through to 2021, when travel restrictions were relaxed and coverage from May to September was achieved. In this paper we describe the organisation and methodology of this survey, the results of fieldwork over the two breeding seasons 2020 and 2021, and the changes and trends in Honey-buzzard numbers in Britain since the 2000 survey.

Methodology

To initiate and plan the survey, national coordinators across Britain were established: RC (England), KDS, CJM and CM (Scotland), and SR (Wales). In turn, national coordinators recruited regional coordinators, made connections with raptor study groups and local and county bird recorders, and recruited volunteers to complete survey work through public talks and notices. For example, about 120 surveyors were recruited across Scotland. Once surveyors were recruited, national and regional coordinators allocated sites and locations for survey work to ensure maximum coverage and avoid duplication.

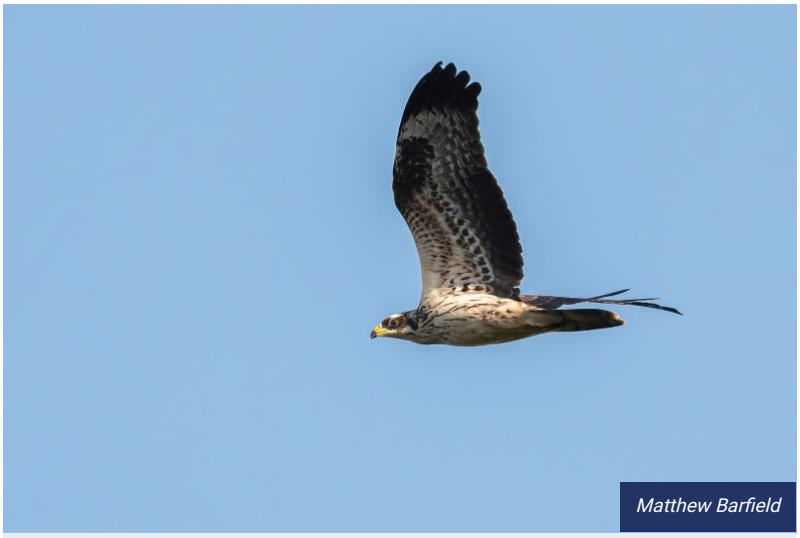
Honey-buzzards are difficult birds to survey for many reasons. They are normally secretive and only relatively easily detectable for a short period in July and August, when they are displaying above territories and, later in that period, carrying food to young in the nest (McInerny & Shaw 2018; Shaw *et al.* 2021). Weather conditions are also important: Honey-buzzards, along with many forest raptor species, are more visible above the woodland canopy in sunny, breezy weather. Even then they can appear just a few times each day, and surveyors chose vantage points that gave wide views over selected woodland and watched, typically for three to four hours, sometimes longer, scanning the area frequently with binoculars (Shaw *et al.* 2021).

At regularly watched sites, returning Honey-buzzards were noted from mid to late May, but the bulk of survey work was undertaken in July and August when adults are more visible. Following reports of Honey-buzzards, the local coordinator was informed and repeat visits were planned to check whether two or more birds were present, or whether food was being carried into the woods suggesting the likely location of a nest with young. At some locations, where long-term studies were being carried out, nests were visited under licence and young birds ringed. At many sites, however, no attempt to find the nest was made, as Honey-buzzard nests can be extremely difficult to locate. Instead, proof of breeding depended on persistent observations from vantage points, looking for repeated food-carrying flights to the presumed nest site or, in late August/early September, watching for juveniles in flight above the nest area, before they migrated south to their African wintering areas.

At the end of the season, the national coordinators collated results from the locations covered by the survey, along with reports of Honey-buzzard presence from county recorders and local recorders, and raptor study groups. A few observations were submitted to the survey organisers as confidential, and not reported to county recorders or raptor study groups. Where we were certain of their authenticity, we included these records in our totals.

Survey volunteers were issued with advice based on our collective experience on how to locate birds, as well as criteria by which to note observations of Honey-buzzards, which allowed sightings to be categorised as either evidence of confirmed breeding or evidence of probable/possible breeding. These criteria were: successful breeding (an active nest, observation of food being taken into a wood, mature young, ‘branching’ young, or juveniles flying above the wood); failed breeding (direct evidence that a breeding attempt had taken place but had failed at any stage); evidence of a pair holding territory; aerial display over the woodland, perhaps only seen once; multiple birds present, including possible non-breeders, seen more than once; and a single, non-migrating bird seen in suitable breeding habitat.

Records of successful breeding, failed breeding and the presence of pairs where breeding success was unknown are self-explanatory; the first two were judged as confirmed breeding and the last to be probable/possible breeding, following published criteria (Batten 2001; Hardey *et al.* 2013).



125. Juvenile Honey-buzzard *Pernis apivorus*, Hampshire, August 2021.

An unknown proportion of the British population consists of non-breeding birds that hold territory throughout the breeding season and which may construct a nest and carry food items. Some of these pairs return the following year and breed successfully. Such birds will have been recorded as 'probable/possible breeding' and they are included in the total number of territories. In some areas, there appears to be a surplus of males, some of which hold territory, display and attempt to attract mates. These present a problem for recorders, since it takes time and repeated visits to establish whether they are truly singles or part of a breeding or non-breeding pair. In 2018, for example, there were ten singles recorded in Sussex along with seven confirmed pairs. Although some of these singletons may attract a mate and breed on the territory the following year, they are excluded from our totals.

Harder to interpret were records of single birds seen on several dates, which could have been indicative of breeding but equally might just have been one individual bird holding territory, and of single birds reported on one date only. As with the 2000 survey, we had to judge whether records of single birds in suitable habitat are indicative of possible breeding, or refer to wandering non-breeders or single territory-holding birds. Clearly such categorisation is never going to be 100% accurate. However, we attempted to categorise these in the same way that they were treated for the 2000 survey (Batten 2001; Hardey *et al.* 2013) to ensure comparability of results between the two surveys, but recognise that some records will be subject to differing interpretation by county and local recorders.

126. Pair of Honey-buzzards, western central Scotland, June 2008.

Results

In the first year of the survey, 109 territories were identified, which included 48 confirmed breeding records and 61 probable/possible breeding records (table 1). In 2021, 102 territories, including 39 confirmed breeding records

and 63 probable/possible breeding records, were recorded (table 2).

Data from county recorders submitted to RBBP may lead to slight adjustments in the 2021 data, and the figures presented here should be considered close to accurate but nonetheless provisional. Any adjustment to the data will be reported in the 2021 RBBP report.

	confirmed breeding	probable/ possible breeding	total
England	25	30	55
Scotland	22	27	49
Wales	1	4	5
TOTAL	**48**	**61**	**109**

Table 1.

Honey-buzzard *Pernis apivorus* territories found in 2020.

	Conf	Prob/Poss	Total
England	24	26	50
Scotland	15	33	48
Wales	0	4	4
Total	**39**	**63**	**102**

Table 2.

Honey-buzzard territories found in 2021.

As with the 2000 survey, around half the breeding records were possible or probable with, in some cases, just one bird seen on one occasion. With a narrow window in which to survey, some remote, upland sites were visited just once. Even at sites where a pair was known to be breeding, it was not unusual for only one bird to be seen during a 3–4-hour watch, and several repeat visits were required to ascertain that a pair was present or that food was being carried to a nest.

	2000	2020
England		
Sussex, Hampshire & surrounding counties	25	41
elsewhere	10	14

Wales	10	5
Scotland		
Highland and Moray	12	16
central Scotland	2	22
elsewhere	0	11
TOTAL	**59**	**109**

Table 3.

Comparison of number of territories per region between the 2000 and 2020 British Honey-buzzard surveys.

Compared to 2000, the results of the 2020–21 survey showed a large increase in the number of territories reported in Scotland, a moderate increase in England and a reduction in Wales (table 3).

The bulk of the territories were found in southern England (Sussex, Hampshire and surrounding counties), central Scotland and northern Scotland (Highland and Moray). Nil returns from a number of surveyed sites showed that some large areas of seemingly suitable habitat in Britain are currently unoccupied by Honey-buzzards.

England

During the 1960s and 1970s, the Honey-buzzard held an almost mythical status in England, being little known and infrequently observed by the majority of birders. Although birds were known from the New Forest, it wasn't until the first widely accessible watchpoint, at Haldon Forest, Devon, opened that birders were able to see Honey-buzzards in England with relative reliability. Birds were first seen at this site in 1978 and breeding occurred sporadically until 1995. Other watchpoints, in Norfolk, Nottinghamshire and Yorkshire, were publicised in subsequent years, allowing many more birders to observe the species in Britain. Pairs of Honey-buzzards were located during atlas survey work in counties such as Bedfordshire and Hertfordshire, perhaps illustrating the random and sporadic occurrence of this species in suitable habitat away from the regularly occupied sites. During the 2000 survey, away from the core area of southern England, breeding Honey-buzzards were reported from Cumbria and Shropshire, as well as Norfolk, Nottinghamshire and Yorkshire, but breeding records from Devon had ceased by then (Batten 2001; Ogilvie 2003).

Southern England has a long history of Honey-buzzard study, originally centred on the New Forest population (Wiseman 2012) but later expanding as local raptor groups monitored pairs in the surrounding counties of Dorset, Sussex, Surrey, Kent and Wiltshire. Numbers in this region appear to have steadily increased over the past 50 years, with 18 territories reported to RBBP in 2008 and 30 in 2018. During 2020, we received reports of 41 territories from this region. Breeding pairs were reported from several previously unrecorded locations in 2021 and we are aware that some areas of potentially suitable habitat were not surveyed. We estimate that the true population in this region is around 50 territories.

Records (including probable breeding) from locations in Somerset may reflect a real expansion of range away from the core area in the New Forest and surrounding areas.

Honey-buzzards were reported throughout the survey period from locations in Norfolk (with breeding confirmed in 2021) and a non-breeding pair was present at the same site in Northumberland over both years. There was no evidence of an increase in numbers since the 2000 survey in the Midlands or in northern and western English counties. Survey efforts in Devon, Shropshire and Cumbria failed to find evidence of breeding, suggesting that a decline noted in Wales (see later) may extend into western England.

Scotland

Scotland has historically held small numbers of breeding Honey-buzzards, present mainly in the Highland region, and in the north and southwest of the country (McInerny & Shaw 2019). More recently, a significant number of breeding birds have been found across sites in central Scotland, where an estimated 15–20 pairs have been discovered following systematic monitoring (McInerny & Shaw 2022). The success of this monitoring encouraged other observers to search elsewhere in Scotland, resulting in more birds being located and, in some cases, breeding being confirmed, leading to 49 territories being found across Scotland in 2020, a large increase from the 14 identified during the 2000 national survey (table 3).

During 2020, successful breeding was recorded in nine territories in central Scotland, another nine territories were held and birds were recorded as present at another two sites. Fewer proven successful breeding records were identified in 2021 than 2020 but one new breeding location was recorded. Central Scotland is a huge area with much potential habitat for breeding Honey-buzzards, and the numbers counted during 2020–21 are likely an underestimate. This is supported by the observation that Honey-buzzards were not found during the survey period at six sites that were known to have been used in the previous five years.

In Highland and Moray, raptor workers have been aware of the presence of

Honey-buzzards since at least the mid 1970s. Several key breeding areas were identified, and many of these sites continue to be occupied to this day, although numbers fluctuate from year to year. Indeed, there are years when few birds have been recorded. During 2020–21, 64 sites were monitored for occupancy and birds were found to be present in 20 different locations across six areas. Of these 20 locations, nests were confirmed in six and four successfully fledged young. Pairs were present in a further three locations, indicating a total of nine occupied territories. As in central Scotland, there is much potentially suitable habitat that could not be surveyed and the real number of territories is likely to be higher.

Elsewhere in Scotland, small numbers of breeding birds were found in Dumfries & Galloway, Angus and North-east Scotland. Despite considerable effort being made, signs of breeding were not recorded from Argyll or Borders.

Wales

Despite occasional reports of possible breeding through the twentieth century, Honey-buzzards were confirmed as breeding in Wales for the first time only in 1991. They have bred, attempted to breed or held territory every year since. Up to 2019, there were 84 confirmed breeding records in Wales across a minimum of 14 different territories. From these, 93 chicks are known to have fledged (Pritchard *et al.* 2021). In 2000, ten territories were recorded from Wales.

Despite valiant efforts by a few individuals and teams of fieldworkers, coverage in Wales was poor during the 2020–21 national survey, and was hampered in 2020 by Covid-19 restrictions, which were generally stricter than in the rest of Britain. The well-studied Gower population, surveyed annually since 1999, has fluctuated between one and five pairs. In 2020, there was just one confirmed breeding pair, plus one other territorial pair and an unattached

single male holding territory.

In North Wales, one territorial pair was located and a single bird was seen on several occasions at another site. Both these records came from former regular breeding locations.

Pairs of Honey-buzzards can relocate to new breeding areas, and breaks in annual surveying, as in North Wales, can result in surveyors losing track of such breeding birds. For example, a colour-ringed pair that nested in Gower in 2015 had, after successive annual movements, relocated nearly 7 km away by 2019. Observers can often fail to relocate such pairs if searching is concentrated around former nesting sites.

In 2021, a new territorial pair was located in Breconshire, though one of the Gower pairs was not relocated. Birds were again seen at the 2020 sites in North Wales, although breeding was not confirmed. In addition to these two territorial pairs, a further three individuals exhibiting territorial behaviour were recorded.

The upland forests of Wales have proved successful breeding grounds for Honey-buzzards over the past 30 years. However, they are at the westernmost edge of the species' range, so fluctuations in numbers are perhaps to be expected here. There is confidence amongst Honey-buzzard researchers in Wales that successful breeding will be maintained and that a number of pairs are likely to remain undetected each year. Nonetheless, results from 2020 and 2021 suggest that the Welsh breeding population is at a low ebb currently.

Discussion

The survey in 2020 recorded 109 territories, including 48 confirmed breeding and 61 probable/possible breeding records (table 1). Of these territories, 55

were in England, 49 in Scotland and five in Wales. The highest numbers were found in three core areas: southern England (Sussex, Hampshire and surrounding counties), central Scotland and northern Scotland (Highland and Moray) (table 3). Away from the three core regions, which together contributed 79 territories, distribution remains distinctly patchy.

Breeding density over large areas of Britain remains extremely low, but there was evidence of the establishment of small clusters of pairs breeding at much higher density than previously recorded in Britain. In central Scotland, there were up to ten pairs in 90 km^2 of well-wooded habitat, though numbers fluctuated across years (McInerny & Shaw 2022). In Sussex, four pairs occupied a 20-km^2 study area of mixed woodland in 2020 (Mallalieu & Scott-Ham 2022). By contrast, the maximum population recorded over 60 years of study in the New Forest was nine pairs in around 570 km^2 (Wiseman 2012).

127. Honey-buzzard, Sweden, May 2012.

It remains unclear why breeding density is so much higher in some areas while numbers remain low or fluctuate considerably in others. We know of locations where a pair of Honey-buzzards has bred successfully one year but not returned subsequently. Whether these birds have relocated outside the

immediate area or failed to return at all is unknown. More typically, an area is colonised by several individuals, which engage in wing-clapping and circling displays for a year or two before breeding commences. When one or both of the breeding birds fail to return, the site often falls vacant. Breeding may recommence the next year with a new pair, and can continue for many years. A well-known site in Nottinghamshire, which has been monitored for over 50 years, is typical of this pattern, with two pairs breeding occasionally, one pair breeding or present in most years, and birds being absent in a few years – in one year, a pair from the Nottinghamshire site moved 25 km to a site in Derbyshire. Similar changes in numbers have been observed in Scotland (McInerny & Shaw 2022). This shifting pattern of occupation of sites and fluctuating fortunes in different areas makes it hard to establish the true population.

Despite determined survey effort in some counties, Honey-buzzards were reported at just five locations in Wales, a reduction from the ten in the 2000 survey. It seems possible that there has been a real reduction in numbers since the 2000 survey, the reasons for which remain uncertain. The western half of Britain seems to have lost much of the population that was recorded in the 2000 survey, with continued reported absence from former breeding locations in Devon, Shropshire and Cumbria, and farther north only a handful of reports from Argyll and Dumfries & Galloway. The trend towards wetter summers over the past 20–30 years could be a negative factor resulting in a reduction in the Honey-buzzards' ability to forage successfully for wasps, an important food source, as could the increase in the Northern Goshawk *Accipiter gentilis* population in these areas, which are known to prey on Honey-buzzards, especially newly fledged juveniles (McInerny *et al.* 2018; Pritchard *et al.* 2021).

With our estimates for the three core areas amounting to around 100 territories and the population in the rest of Britain estimated to be around 30–50 territories, the British population could be around 150 territories in total,

tallying with the figures given by Roberts & Law (2014). For the true population to be much higher than this would require the presence of substantial undiscovered or unreported groups of breeding Honey-buzzards in parts of Britain away from the core areas. In our view, this seems unlikely, especially given the reduction in records from the more remote western parts of Britain.

128. Honey-buzzard, New Forest, Hampshire, May 2018.

In most areas where Honey-buzzards have been present for a long period, groups of enthusiasts have monitored breeding birds for many years. However, in some counties and regions where Honey-buzzards have been present recently on a regular basis, we are unaware of any such monitoring groups having been established. We would welcome contact from observers wishing to set up such study groups to locate birds and monitor breeding success in these areas and are keen to provide support, advice and encouragement.

Finally, we strongly encourage finders of Honey-buzzards to submit their records to the appropriate recorders or raptor study group, since it is clear

that the increased openness concerning Honey-buzzard numbers at county level, as recorded annually in RBBP reports, has not impacted on the population and there appears little reason not to inform recorders of newly discovered pairs. Furthermore, such information is important for conservation reasons as it can inform windfarm applications, prevent the unintended loss of nests through forestry operations, and assist RSPB Investigations with potential egg-collecting cases, for example.

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