The Red-billed Chough

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ABSTRACT The Red-billed Chough *Pyrrhocorax pyrrhocorax* has a restricted range in Britain and has been in long-term decline since at least the early 1800s. Southwest England was a former stronghold and Cornwall was the last county in England from which it was lost as a breeding species, the last successful breeding attempt being in 1947. The reduction of suitable foraging habitat owing to changes in the management of clifftop pastures, and the direct impact of human activities are thought to be the main factors responsible for the loss of Red-billed Choughs from the southwest. Recently, there has been much interest in restoring the Red-billed Chough to Cornwall, and this has increased following a small influx of birds to the county in spring 2001 and successful breeding in 2002. The Cornwall Chough Project has been launched to monitor the birds currently present, and to encourage natural recolonisation through appropriate management of coastal habitats. There is now more potentially suitable habitat in Cornwall, and adjacent parts of Devon, than at any time since the species was last present, and such habitat is likely to increase further during the next few years.

The Red-billed Chough *Pyrrhocorax pyrrhocorax* breeds patchily from Ireland south to the Atlas Mountains of Morocco and the Canary Islands, and from the Bale Mountains of Ethiopia eastwards to China. The European population, of between 12,000 and 17,000 pairs (Hagemeijer & Blair 1997), has declined in recent decades and the bulk of the population is now found in Spain, France and Greece. Even here, many populations are small, isolated and of doubtful viability (Tucker & Heath 1994). In Britain, the Red-billed Chough has been in serious decline since the early nineteenth century and the population, estimated at only 315 breeding pairs, is restricted to the coasts of Wales, the Isle of Man and the islands of Islay, Colonsay and Jura in Scotland. There are about 830 pairs in Ireland (Gibbons et al. 1993) but a small population in Northern Ireland is now on the verge of extinction (Giles Knight *in litt*). A full survey, being carried out in 2002 and 2003, will provide a more up-to-date population estimate for Britain & Ireland.

One means of helping a vulnerable species with a small population and a restricted distribution is to encourage appropriate management and subsequent recolonisation of areas within its former range. For some time now, there has been interest in restoring the Red-billed Chough to its former English stronghold, in Cornwall (Meyer 2000; Brown *et al.* 2002). This paper describes the background to a new Red-billed Chough restoration project in Cornwall, and shows how its aims and objectives have been shaped by the first successful breeding of this species in England for more than 50 years, in 2002.
A brief history of the Red-billed Chough in England

The Red-billed Chough was once widespread along the south and southwestern coasts of England, and also occurred on both the west and east coasts of northern England. A long-term decline was already apparent during the early 1800s, and by 1860 the species had ceased to breed in Northumberland, Kent, Sussex, Hampshire and the Isle of Wight (Brown & Grice in prep.). The species was lost from Cumbria by about 1865 and from Devon by 1910, and then remained only in its stronghold of Cornwall (Holloway 1996). Even here, it had become scarce by the early part of the twentieth century. After 1930, the majority of the known nest sites were between Watergate Bay and Tintagel on the north coast and, although only 3-4 sites were occupied in any one year, young continued to fledge almost annually until the last successful breeding in 1947. Two birds were present here between about 1960 and 1967 with just a single bird remaining until 1973 (Penhallurick 1978).

The extinction of the Red-billed Chough in England has generally been attributed to a loss of suitable foraging habitats (e.g. Batten et al. 1990). The species favours heavily grazed, close-cropped coastal pastures enriched with animal dung, and with patches of bare ground where invertebrates are easily accessible. Such habitats have been lost either because they have been ploughed and converted to arable farmland, or because the abandoning of grazing has led to establishment of rank vegetation or scrub where foraging becomes more difficult for Red-billed Choughs. Meyer (2000) highlighted the crash in the Cornish tin-mining industry in the late 1800s as a possible factor in the Red-billed Chough's decline. Once pit ponies and other livestock kept by miners around their crofts were no longer required, the extent of heavily grazed pasture was reduced. In the meantime, other pastures were improved through the addition of inorganic fertilisers, thus reducing the variety of plants and invertebrates that they supported.

As the English Red-billed Chough population fell, so it became an ever more attractive target for specimen collectors, particularly during the Victorian era when trophy hunting for eggs and adult birds was at its peak (Penhallurick 1978). The fact that the Red-billed Chough is a corvid, albeit one which poses no threat to gamebirds or livestock, probably also made it a target for persecution, along with the almost universally disliked Magpie *Pica pica* and Carrion Crow *Corvus corone* (Batten et al. 1990). The direct impact of humans in this way may well have been the final straw for a population already depleted by habitat loss.

The Red-billed Chough in Cornwall

The Red-billed Chough has a particularly strong association with Cornwall and this is reflected in its alternative local name of ‘Cornish Chough’. Despite its absence for the majority of the last 50 years, it remains a popular bird with many people in the county and is even featured in the county’s coat of arms (fig. 1). The species also features strongly in Cornish legend. King Arthur was reputedly transformed into a Red-billed Chough when he died (Penhallurick 1978), the red feet and beak presumably representing the violent and bloody end to which he came!

For many years, a group of conservation organisations, involving both government-funded bodies and voluntary organisations, have been exploring means of restoring the Red-billed Chough to England. ‘Operation Chough’ was launched in 1987 and a great deal of research was carried out into the habitat requirements of the Red-billed Chough in order to assess the species’ future prospects in Cornwall. The focus in recent years has been on trying to restore as
much semi-natural habitat as possible into suitable condition for the species, concentrating on the coast of north Cornwall and adjacent areas in Devon. Much has already been achieved through land being entered into management agreements, either based on the voluntary cooperation of landowning bodies such as the National Trust and their tenant farmers, or through the Government’s Countryside Stewardship scheme, sponsored by the Department for Environment, Food and Rural Affairs (Defra). It is particularly important that Defra has been willing to amend its national Countryside Stewardship guidelines in order to maximise the potential for restoring good Red-billed Chough habitat in the region. This has enabled details such as livestock densities and the time of year when grazing animals are present to be adjusted so that the best possible foraging habitats can be created.

In 2000, Richard Meyer suggested that there was sufficient apparently suitable habitat along the Cornish coast to sustain a population of Red-billed Choughs (Meyer 2000). It was then widely believed that the species was unlikely to return without human assistance, since Red-billed Choughs are generally sedentary and southwest England is a considerable distance from the nearest established populations. Adults are extremely site-faithful and although juveniles disperse more widely, they typically show strong natal philopatry, returning to breed close to their own place of birth (Batten et al. 1990; Cross & Stratford unpublished). The nearest populations are in southwest Wales, southern Ireland and Brittany, northwest France, all being separated from Cornwall by large stretches of water. Between 1980 and 2000, there were just three apparently genuine records of Red-billed Chough in Cornwall, with several further records thought to relate to birds which had either escaped from captivity or been deliberately released (Brown et al. 2002).

Perhaps unsurprisingly, there have been regular calls for the Red-billed Chough to be reintroduced into Cornwall. This would not be an easy option as a suitable donor population would need to be identified and techniques established for releasing birds. In particular, the fact that the Red-billed Chough lives in social groups, in which the young learn to forage from more experienced adults, would need to be taken into account. Simply releasing young birds into an area, as has been the case with other re-establishment projects in Britain, such as those involving Red Kites Milvus milvus and Ospreys Pandion haliaetus, would not necessarily result in the successful establishment of a viable population. Some wildlife centres have attempted to breed Red-billed Chough, in captivity to provide birds for release into the wild. Although there are estimated to be 60-70 captive individuals in Britain, however, efforts to produce viable young have so far met with very little success (Brown et al. 2002). The historic events of 2001 and 2002 have, in any case, stalled any thoughts of reintroduction, at least in the short term, and have led to a significant change in emphasis for Red-billed Chough restoration efforts in Cornwall.

Range expansion and the 2001 influx

The first encouraging development involved a significant expansion in the breeding range of Red-billed Chough in south Wales. Between the two breeding atlases for Britain and Ireland (Sharrock 1976; Gibbons et al. 1993), and despite some loss of ground in the stronghold of Pembrokeshire in the far southwest, birds had managed to reach the Gower Peninsular, over 40 km to the east and separated from the Pembrokeshire populations by the wide expanse of Carmarthen Bay. Breeding has been regular here during the 1990s. In the late 1990s, another site, approximately 40 km farther east than Gower, was colonised (Welsh Birds 2000, 2001). These relatively large extensions of the breeding range showed that recolonisation of suitable habitat some distance from established populations was possible, and gave hope to those keen to see the bird back in southwest England. The north Devon coast is less than 40 km from Gower, from which it is easily visible on a clear day. This may account for a recent increase in records from north Devon, and may provide a potential route for the ultimate recolonisation of suitable coastline throughout the southwest.

If the expansion of the breeding range in south Wales had been somewhat surprising, then the events of 2001 in southwest England were totally unexpected. A small influx of Red-billed Choughs took place between late January and May, involving sightings of birds along the south coast from the Isles of Scilly to Portland in Dorset. Establishing the true picture was hampered by access restrictions imposed as a result of the outbreak of foot-and-mouth disease, but at least four different individuals
were seen, including three together on the Lizard peninsula in Cornwall. It is possible that as many as seven Red-billed Choughs were involved in total (Brown et al. 2002).

The origin of the birds involved in the influx has been the subject of considerable debate and will never be known with certainty. The nearest established population is in southwest Wales (see fig. 2), with about 45 pairs breeding along the coast of Pembrokeshire (Welsh Birds 2000). If the birds had arrived from this direction, however, they would presumably have first reached northern parts of Devon or Cornwall and, given that much suitable habitat is available on the north coast, it seems unlikely that all would then have continued overland to the south coast. Ireland supports a population of over 800 pairs (O’Sullivan 1992) but even those breeding on the south coast are more than 230 km from the closest point in southwest England; moreover, birds arriving from this direction might also be expected to reach the north coast first. Another possible source is the small, isolated breeding population on the coast of northwest Brittany, where recent estimates suggest that about 30-40 pairs are present (Kerbiriou 2001). Although the coast of southwest England is approximately 200 km away from Brittany, the distribution of records in spring 2001 along the south coast is consistent with an arrival from the south or southeast. Many birds in the French population are colour-ringed; the fact that all three of the birds on the Lizard were not ringed makes this origin perhaps less likely, although by no means impossible.

**Breeding attempts in 2001 and 2002**

Two Red-billed Choughs were seen together on the Lizard peninsula on 7th April 2001, with three at the same site the following day (plate 19). It is conceivable that they had been present for some time, since parts of the coast were only re-opened to visitors in late March as access restrictions were lifted. Intensive monitoring by English Nature, RSPB and local birdwatchers confirmed that the birds remained in the same area throughout the spring, and their behaviour prompted speculation that two of them were a pair. These two, one clearly smaller than the other and so presumably the female, were often seen in close company, while the third individual usually kept some distance away.

Observations revealed that at least two birds were roosting regularly at the same site on the
cliffs, at Bass Point. Then, in early July one was seen taking sticks into a crevice within the cliff face, which helped confirm that these two were indeed paired up and raised the serious possibility that they might breed. Since adult Red-billed Choughs are highly site-faithful once they have made their first breeding attempt, it is likely that this pair comprised young birds attempting to breed for the first time, rather than an established pair which had moved from another population. This reduced the expectation of successful breeding because, as in other long-lived species, first breeding attempts by inexperienced birds often result in failure. Indeed, the pair got no further than carrying sticks in 2001 but, encouragingly, they remained in the same area throughout the summer and the winter of 2001/02, and developments the following spring were eagerly anticipated.

By the early spring of 2002, the pair had settled at a potential breeding site about 2 km from that used in 2001. Nest-building was recorded from early March, with both birds seen regularly flying into a cave at the base of tall cliffs, easily observed from the coastal footpath. Based on the birds’ behaviour, it was estimated that incubation started around 12th April, but, in order to avoid any disturbance at the nest, the site was not visited until much later in the season. While the female was incubating, a group of local volunteers and RSPB staff maintained a 24-hour watch to protect the nest from unwitting disturbance, and to monitor the activities of the pair. The nest cave was only accessible for a relatively short time at low tide, which reduced the potential for casual disturbance. Despite this, three people acting suspiciously were seen close to the nest cave on 23rd April. Decisive action by the Devon and Cornwall constabulary, including the rapid arrival of police officers on the scene, helped to avoid a potentially serious incident and ensured that the nest site was not disturbed.

Monitoring work showed that the male usually remained close to the nest cliff and returned to the cave regularly to feed the incubating female. Both birds were sometimes seen together for a few minutes, either close to the entrance of the cave or on nearby pasture, before the male resumed foraging and the female returned to the nest. The male spent a remarkable amount of time during the incubation period in a single grazed pasture field, adjacent to the coastal footpath and within 300 m of the nest. At times it was joined in the field by groups of Eurasian Jackdaws *C. monedula*, but for long periods it could be picked out at some distance as a lone bird in an otherwise empty field.

Based on the estimated date when incubation started, it was expected that the eggs would hatch on about 2nd May. Soon after this date, a visit was made to the nest cave to check on progress. Four chicks were found and they all appeared to be fit and healthy. During a later visit to fit colour-rings, it was discovered that only three chicks had survived, all of which were sexed as males from biometric measurements. Between 10th May and 11th June, after the eggs...
had hatched, a total of 179 nest visits by the adult birds were recorded, averaging about 25 minutes between visits. On 11th June, one young was seen outside the cave, followed two days later by the rest of the brood. For the first time in over 50 years, English-bred Red-billed Choughs were now gracing the coastal cliffs of the county with which the bird has had such a long and rich association. Bass Point and the adjacent Lizard Point are both owned and managed by the National Trust and their involvement and keen interest in Red-billed Chough conservation will help to ensure that everything possible is done to encourage the birds in the coming years.

The Cornwall Chough Project

English Nature, RSPB, the National Trust and Defra launched the Cornwall Chough Project in spring 2002. The Project aims to consolidate the conservation work already carried out and has the following major objectives:

• To continue to monitor the behaviour, habitat preferences and movements of the birds which are now present in Cornwall

• To further improve the coastal habitat by encouraging the appropriate management of coastal grasslands

• To promote the return of the Red-billed Chough to Cornwall, and increase awareness of how managed coastal habitats benefit our native wildlife

Monitoring will be carried out throughout the year to help assess the prospects of a small population of Red-billed Choughs becoming established naturally. With only a single breeding pair, the current situation is extremely fragile and the loss of either of the adults from this pair would greatly reduce the chances of further recolonisation. Much also depends upon the survival and movements of the young birds fledged this year. Will they disperse from their natal area and join up with a more established population, or will they remain and help to form the nucleus of a small social group? Optimists have suggested that, because the Red-billed Chough is such a highly social species, even the small number of birds now present could attract wandering individuals from other areas, when previously such birds might have simply passed through, perhaps unnoticed. This would help to improve the genetic diversity of the embryonic population and hence improve the long-term prospects of natural recolonisation.

Monitoring will also help to gather information on foraging habits and habitat preferences in the southwest. Although there have been various studies of Red-billed Chough habitat use in Britain, significant differences have been found between breeding areas. Bignal et al. (1997) concluded that “it is unlikely to be appropriate to extrapolate observations in one area into management prescriptions for

21. Heavy grazing by cattle on parts of the Lizard ensures that suitable foraging habitat is available for Red-billed Choughs Pyrrhocorax pyrrhocorax.
The Red-billed Chough in Cornwall

A key objective of the project is to provide further areas of suitable Red-billed Chough habitat across a network of sites around the Cornish coast. Priority areas have already been identified, based on criteria such as former breeding, existing habitat quality and the feasibility of future habitat restoration, and many of the most suitable sites are on the north coast of Cornwall (Gowenlock 2001). Some of these sites are already being managed for the benefit of Red-billed Choughs by the National Trust or by farmers who have entered land into Defra’s Countryside Stewardship scheme.

The next few years will be critical to the prospects of Red-billed Choughs in the southwest. If a foothold is established in Cornwall, then it is hoped that sufficient habitat will be available to allow the species to increase and expand its range. If, however, the current fragile nucleus breaks down, then reintroduction may have to be reconsidered as an option for securing the long-term future of the Red-billed Chough in southwest England.

Acknowledgments

We would like to thank the team of volunteers who put so much effort into monitoring the breeding pair on the Lizard. Special thanks go to Mike and Alix Lord, RSPB Cornwall members’ group leaders, who co-ordinated the volunteer effort. Alistair Cameron, National Trust, and Ray Lawman, English Nature, helped to co-ordinate work on the Lizard. We are grateful to John Gowenlock, who carried out habitat assessment work around the coast and provided management advice on the Lizard, and to John Holmes, from English Nature’s Cornwall Team, who chairs the Cornwall Chough Project Steering Group.

Kevin Rylands and Dominic Coath carried out monitoring work to help improve our understanding of movements and habitat use of the Lizard birds. Tony Cross visited the nest site to fit colour-rings and take biometric measurements that enabled the young to be sexed. This paper benefited from useful comments by Claire Mucklow (RSPB), Peter Bowden (Defra), Peter Newbery (RSPB) and Simon Ford (National Trust).

References


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Footnote:

Request for help: A Project Officer, Claire Mucklow, has been employed by the Cornwall Chough Project to provide advice and guidance to landowners interested in encouraging Red-billed Choughs and to co-ordinate the monitoring of birds which are present in the southwest. She would welcome any records of Red-billed Chough in Cornwall, or elsewhere in southwest England (with details of colour-rings if appropriate), in order to build up as complete a picture as possible of the bird’s current status and distribution. Contact Claire at the RSPB’s southwest regional office (see address above), or e-mail claire.mucklow@rspb.org.uk

A research project has been undertaken to assess the foraging behaviour and habitat requirements of Red-billed Choughs on the Lizard. A paper describing this work is currently in preparation for submission to British Birds.