Jay for germination

One of our most beautiful birds has an intriguing sideline as a key player in the establishment of new oak plantations

WORDS POLLY PULLAR

The naturalist Henry Williamson described the distinctive shrill call of the jay as like the sound of tearing linen. But this bird has a large repertoire of vocalisations and is one of the best mimics in the avian world, particularly adept at mimicking sheep, lambs and horses. Some become specialists; I once followed the sounds of a 'keewicking' tawny owl at a roost, and instead found a jay.

The first jay I saw was hanging on the fence of our local gamekeeper, along with assorted dried husks: weasels, stoats, moles, crows, an owl and some foxes. Dead things often intrigue children, and though I loathed this gruesome line-up, I also had a morbid curiosity, and frequently went to see what else was there. The freshly killed jay with its flamboyant coloured feathers seemed more beautiful than any bird I had ever seen.

The jay is one of the least predatory members of the opportunist clan crow. Its diet includes fruit, berries and seeds as well as passerine eggs and chicks. Woodpigeon eggs and squabs are also frequently taken, as are moths, mice, caterpillars, invertebrates and even the fare from a garden bird table. Like all corvids, jays are clever birds but they are shy and secretive; I have only once found a nest and was surprised at the small size of the eggs in relation to the bird.

Scientists and naturalists in Europe have long known of the jay's role as a vector for our most iconic deciduous tree, the oak. Now, independent forestry advisor and naturalist Rick Worrell, who is based in Highland Perthshire, a particular stronghold for the jay, has joined forces with Richard Ennos and Christina Rosique of Edinburgh University to carry out a detailed survey to prove that jays have a vital contribution to make in re-establishing oak woodland.

'The symbiotic relationship between jays and oak probably holds the key for understanding oak succession (or lack of it) in many of Scotland's pioneer native woodlands and the potential for oak to expand its range in the future,' says Worrell.

Jays put extraordinary effort into dispersing acorns, carrying them up to a mile and burying thousands in a season; even more impressive is the fact that in most cases the birds choose highly suitable sites on woodland edges or clearings where the young oaks will have the best chance of germinating. They can carry a few acorns at a time, one in the bill and

MAIN IMAGE: TOM LINSTER; ABOVE: MIRCEA BEZERGHEANU/SHUTTERSTOCK

Image: Jays are members of the crow family, but their varied diet means they are far less predatory than some of their corvid cousins.

'The symbiotic relationship between jays and oak holds the key for oak succession in Scotland's pioneer native woodlands'

several others in the crop, but these birds will also fly back and forth ceaselessly all day long transporting acorns. On Worrell's chosen study sites, where oak seedlings planted by jays were appearing at densities up to 400 per hectare, DNA analysis of the tiny oak seedlings proved that in most cases the acorns came from mother trees between 1km and 1.5km away.

'British foresters and ecologists have long bemoaned the scarcity of oak regeneration in and adjacent to mature oakwoods; this study demonstrates that a significant proportion of seedling establishment actually happens at sites remote from parent oakwoods,' says Worrell. 'If managers also start looking in the wider landscape to identify jay-stashing sites, they could protect oak seedlings in these locations. This would help to initiate important landscape-scale woodland succession processes.'

That the acorn should be so well adapted for long-distance dispersal is also surprising. We have been conditioned to think that when acorns fall from the tree they are eaten by a host of creatures such as pigeons, pheasants and rodents. Squirrels frequently bury acorns too. Some literature even states that the acorn is not specialised for dispersal by any particular agent, something this new research contradicts.

'Efforts to incorporate jay-set seedings into the management of native woodland would help to initiate important landscape-scale woodland succession processes that have been overlooked as a result of our inadequate understanding of acorn dispersal,' says Worrell.

'Woodland managers need to familiarise themselves with local jays to try to determine their stashing sites. Potential stashing sites could be searched for oak seedlings in early June or late September when the seedlings are easiest to locate. Protection could be through deer fencing or by protecting individual seedlings with plastic mesh stapled to a treated stake.'

The jay's reputation has never been good. During the reign of King George ll the birds were so loathed that an Act of Parliament was passed letting certain authorities pay a bounty of 3d per jay's head. Viewed as a threat to game birds through their stealing of eggs, jays were demonised. Their numbers fell to an all-time low at the end of the 19th century due to intense gamekeeping activities, and were also sought for taxidermy collections, prized by the millinery trade, and kept as caged birds for their mimicry skills and fine appearance.

Above: Jays have a major role to play in the dispersal of acorns. **Right and Below:** The bird's stunning plumage has long made it a target of taxidermists and milliners.

Their beautiful feathers are frequently used to adorn the rough shooter's bonnet, as well as being valued for fly-tying. In fact, the writer and naturalist WH Hudson called the jay the British Bird of Paradise in acknowledgement of its stunning plumage. In 1880 the Duchess of Edinburgh caused a stir when she wore a spectacular muff made entirely of beautiful blue and black feathers from jays' wing bars.

'Jay' has been used as an unflattering term to signify a loose woman, but the bird's Latin name, *Garrulus glandarius*, refers to its noisy calls as well as its love of acorns, while its Gaelic name, *Sgreuchag-choille*, means 'screecher of the woods'.

The establishment of the Forestry Commission in 1919 began to provide more suitable jay habitat, but it was not until the second half of the 20th century that numbers began to recover as persecution levels dropped. Since that time, numbers have risen again and this arboreal species has expanded its range and currently appears to be doing better.

For foresters and silvaculturists, the findings of Worrell's study are exciting. While we shouldn't need a reason to protect the jay, now that one of our most beautiful and misunderstood British birds has finally proved its usefulness in helping oaks to regenerate, it would seem appropriate to remove it from the quarry list. It is also further proof that nature has a way of re-establishing the balance that we have so upset.

'Jays put extraordinary effort into dispersing acorns, carrying them up to a mile and burying thousands in a season'

ABOVE: VETAPI; RIGHT: MENNO SCHAEFER; LEFT: ILONA 6555/SHUTTERSTOCK