Shrieker of the Woods

By Mike Toms
GBW Organiser

The wary Jay is more often heard than seen. Bright, beautifully marked and a wonderful mimic, the Jay is a bird full of character and ruffian charm. Here, Mike Toms looks at what makes this bird one of his favourite garden visitors.

There is a strong bond between the Jay and the oak woodland which it favours; a bond that underlines the balance of interactions existing between two organisms that have co-evolved over great periods of time. The Jay, the most arboreal of all our corvids, not only relies on oak woodland for nesting opportunities but also takes the bulk of its winter diet from oaks, in the form of acorns, which it collects and buries during autumn for use as winter bites. In fact the scientific name of *Garrulus glandarius*, given to the Jay, acknowledges its close relationship with the oak and its fruit; *glandarius* derives from the Latin *glandis* ('acorn'). Despite the strength of this association the Jay remains an adaptable bird, readily venturing into gardens to seek out peanuts, bread and other scraps put out by garden birdwatchers.

CHANGING FORTUNES

The changing fortunes of our Jay population reflect changes in our own attitudes towards this bird. Widely condemned for its nest-robbing habits, the species was heavily persecuted throughout the 19th Century, driving the population into decline. Nature writers of the time were unanimous in their description of a species facing a relentless onslaught of persecution. Despite this unceasing slaughter the Jay clung on, perhaps because its secretive habits made it difficult to eradicate, and numbers began to recover during the early 20th Century. This was due in no small part to the fact that so many gamekeepers were removed to another slaughter, that of the Great War.

Two other changes also favoured the Jay's recovery at this time. The first of these was a change in fashion, with bird plumage no longer the must-have accessory for any outfit. The Jay's blue wing feathers had been in great demand for this purpose and also, to a lesser extent, for the tying of flies for game fishing. In 1880, near the peak of fashion interest in decorating outfits with feathers, the Duchess of Edinburgh (Maria Alexandrovna) sported a muff made entirely from Jay feathers. Rightly so, despite her being a Russian grand

Jay in profile by Steve Round

duchess (by birth) and a British royal duchess (by marriage), she was heavily castigated by many naturalists for such wanton plunder. The early part of the 20th Century also saw the establishment of the first conifer plantations across the tracts of 'poor quality' land spread throughout Britain. As these plantations developed, so they provided a new nesting habitat for the now recovering Jay population. Since then, Jay populations have fluctuated somewhat, most recently showing a 10% decline over the last 25 years (according to data collected through the BTO's annual monitoring schemes).

THE IMPORTANCE OF OAK

The breeding season diet of Jays includes a large component of invertebrate prey, notably the larvae of moths and beetles, many of which are taken from the foliage of oaks. However, oak becomes even more important in the winter, with the birds feeding on acorns cached the previous autumn.

Caching behaviour begins in September, peaks in October and then ends abruptly as acorns supplies are exhausted. Jays from breeding territories scattered across the local area will converge on a piece of oak woodland to collect acorns. Each bird will manage to carry three or four acorns, returning to its own territory to bury them before journeying back to the wood for another load. It has been estimated that each bird may cache upwards of 5,000 acorns and, using this figure as an average, the British Jay population probably buries some 1,700 million acorns each year. In order to bury the acorns, the Jay uses its bill to make a hole in the ground at a 45-degree angle. One or two acorns are then deposited in the hole before the bird uses sideways movements of the bill to cover its store.

Jays appear able to relocate a large proportion of the acorns that they have stored, using visual cues as a means of finding each cache. Of course, some of the acorns are not retrieved and germinate to form young seedlings. Since Jays often bury the acorns outside of woodland they act as dispersal agents for the trees, helping oak woodland to establish in new areas. This is why some researchers have defined the relationship between the Jay and the oak as being an example of symbiosis – the two organisms sharing a mutually beneficial relationship. Although not a symbiotic relationship in its truest sense, it does highlight the strength of association between the two species.

ON THE MOVE

The dependence upon acorns explains why the normally sedentary Jay is prone to periodic long-distance movements. Occasional failures of the acorn crop over wide areas may give rise to mass movements of Jays (known as eruptions). These appear to be most pronounced within the more northerly populations of Jays but they can result in significant influxes into Britain of birds from Fennoscandia and the near Continent. The most recent large-scale influx was in 1983, when there was an estimated 90% failure of the acorn crop across much of Europe, including Britain. Jays were witnessed arriving off the sea at a host of coastal sites along the south and east coasts of Britain.

FACT BOX

Common name:
Jay

Scientific name:
Garrulus glandarius

Family:
Crows (Corvidae)

UK population:
160,000 breeding territories
winter numbers unknown

Conservation status:
Green listed

Migratory status:
Resident / winter visitor

Breeding:
Clutch size: 4–5 eggs
Incubates: 18 days
Young in nest: 20–23 days
Number of broods: 1
Breeding season: April–July
Age at first breeding: 2

Typical lifespan:
unknown

Max. recorded lifespan:
16 years, 5 months

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Jay foraging on the ground by Steve Round

Jay by Steve Round

'Jay' was once a dismissive term used to describe a loose woman or overly flashy dresser.

A VOCAL REPERTOIRE

The harsh shrieking '*kschaach*' call is the most familiar of the sounds made by the Jay and it is this that gives rise to its Welsh name of 'Ysgrech y Coed' (shrieker of the woods). However, the species is also well-known for its ability to mimic the calls made by other birds and these are often worked into the rich warbling song. Individuals have also been known to mimic Man-made sounds, including trim phone, car alarm and motorbike (see ***Bird Table 53*** for other examples of Jay mimicry).

Most of the mimicked sounds are delivered with surprising accuracy and some, such as the chattering call of a Magpie, are usually so well delivered that they will fool even the most careful listener. Interestingly, mimicked calls are sometimes used when the birds are agitated or feel threatened. The ornithologist (and Jay expert) Derek Goodwin noted that any approach to an occupied Jay nest would elicit alarm screeches interspersed with the mimicked calls of predators (*e.g.* Tawny Owl, Sparrowhawk and domestic cat), together with the alarm calls of smaller birds (*e.g.* Song Thrush and Blackbird).

Voice is clearly an important component of Jay social behaviour and calls are uttered in a wide range of social settings. Males, particularly young unpaired males, can sometimes be heard singing in late March or early April, directing their attentions towards unpaired females. Various researchers have also described a communal display, referred to as the 'spring gathering', where local birds (including some paired individuals) gather and indulge in a relatively noisy get-together. Not all of the birds get involved since some remain spectators. The voice is also used to back up displays of aggression or, more tenderly, when participating in a bout of courtship feeding.

AN ADAPTABLE DIET

Like other members of the crow family, the Jay takes a wide variety of foodstuffs, some of which (notably young birds) land it in trouble with the shooting fraternity. For much of the year feeding activity takes place on the ground, the bird foraging through leaf litter for beetles, other invertebrates and seeds. However, during the breeding season most of the food is collected from the canopy of trees, with leaf-feeding caterpillars and various beetles the favoured prey. Chief among the leaf-defoliating caterpillars taken in Britain are those of the genus *Tortrix*. These caterpillars construct a 'tent' around themselves from a rolled oak leaf.

The Jay, therefore, has to remove each caterpillar individually. Jays are equally diligent in their handling of beetles collected for growing youngsters. Studies looking at

the prey delivered to Jay nestlings showed that large beetles, notably Cockchafers, are processed to remove the hard parts of the exoskeleton – essentially the wing cases, heads and legs. Cockchafers tend to roost on trees during the day and so it is easy to see why they are so readily taken by foraging Jays.

It is also during the breeding season, when the Jay has young of its own to rear, that the eggs and nestlings of other birds may be exploited. In one particular study, carried out in northern Romania, Jays were found to be responsible for taking 16% of the eggs laid in 91 Song Thrush nests and 7.9% of the eggs laid in 77 Blackbird nests. A different study, this time carried out in Germany, reported higher levels of predation but the Jay population within the study area was unnaturally high because of the very large quantities of cereal grain available in winter. There are no directly comparable published studies from Britain but studies of nestling diet provide supporting evidence that eggs and nestlings are used as a source of additional protein for developing young.

The adaptability and intelligence of foraging Jays is further emphasised by records of them hawking for insects, taking live fish and fishing for newts. In addition, Jays regularly feature at garden feeding stations to take peanuts from hanging feeders and scraps from bird tables (see below).

Jay by Jill Pakenham

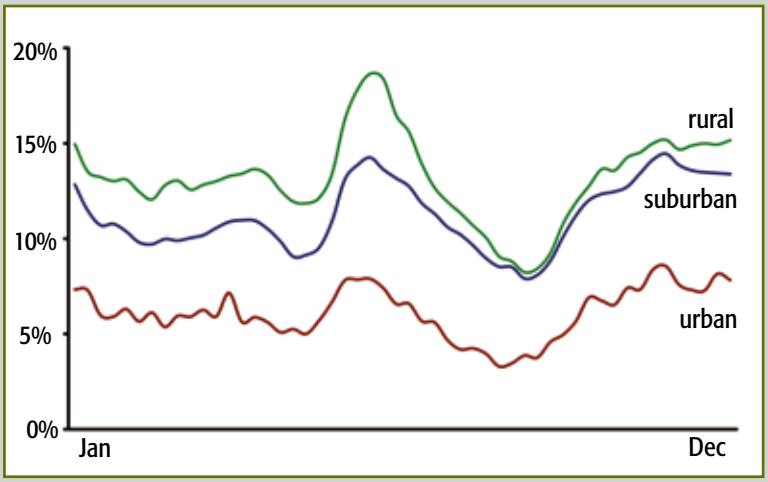
There is no doubt in my mind that this resourceful bird should be a welcome addition to any garden feeding station. Colourful, both in terms of plumage and character, the Jay extols the full range of characteristics displayed across the crow family. To some observers it remains a rogue, and indeed it is one of just a handful of species that can be legally controlled for the interests of agriculture and game-rearing. This may be why it is often wary of Man, visiting gardens early in the morning and quick to utter its shriek of alarm before disappearing into the safety of the woods.

This pinkish brown bird has a white rump, all black tail and black moustache. Each wing shows a fairly obvious white patch and blue 'shoulder'.

Jays and gardens

As you might expect, the BTO Garden BirdWatch results show that it is rural gardens that are most heavily utilised by visiting Jays. In such rural gardens the Garden BirdWatch Reporting Rate peaks in week 24 (early June) at 18.7% before dropping to an autumn trough in the first week of September (when Jays should be caching acorns).

The reporting rates for suburban and urban gardens follow the same general seasonal pattern as that seen in rural gardens, but at a reduced rate. What is of particular interest is the way in which the rural reporting rate troughs at virtually the same level as that seen in suburban gardens. This means that the rural rate falls further than that seen within the other two habitat types.



Additionally, the height of the summer peak in rural gardens exceeds that seen in winter (while in the other garden types it is about the same in both seasons). This seems to suggest that the 'increased' use of rural gardens between weeks 20 and 30 (mid-May to late July) is directly related to locally breeding birds coming into gardens to exploit the food on offer.

Within gardens, Jays seem able to exploit various food scraps and provisioned items like peanuts in hanging feeders. They have even been recorded hauling up bones and fats suspended from branches by bits of string. This highlights a degree of enterprise and initiative on their part.

Jay by Steve Round