INFORMATION
Blue and Great Tits

Eight of the 11 species of European tits are found in the UK. Of these, the blue and great tits are the most numerous and widespread. They are found throughout the UK, absent only from treeless hilltops of Scotland, from Shetland, Orkney, and much of the Outer Hebrides.

Blue and great tits come readily to gardens for food and to make use of nestboxes erected for them. This familiarity makes them among the best liked of all garden visitors. They are instantly recognisable by their yellow under parts, but they are easy to tell apart from each other.

The **blue tit** *Parus caeruleus* is 11.5 cm (4.5 ins) long and weighs 11.4 g. It is the only British tit with bright blue in its plumage. It has an electric blue cap over a white face, a black eye-stripe and small black bib. The yellow underside contrasts with the yellowish green back and shoulders and blue wings and tail. There is an obvious white wing bar. The calls are varied but tsee-tsee-tsit is often heard in spring.

The **great tit** *Parus major* is 14 cm (5.5 ins) long and weighs 20 g. The large white cheek patches stand out from the black head and throat. A black stripe runs down the sulphur yellow chest to the belly. The stripe is broader in the male and extends to the vent area, while the narrower stripe of the female tends to fade towards the bottom of the stomach. The width of the stripe indicates the dominance status of the individual. The rump, tail and wings are blue-grey with white outer tail feathers and a white wing bar. The back and shoulders are yellowish green. The great tit has a large repertoire of calls with some tendency to imitate. The calls are generally fuller and louder than other tits and most have metallic quality. The best-known call teechuteechu-teechu ('teacher-teacher-teacher') is heard from January to June.

Habitat

Blue and great tits are primarily birds of lowland broad-leaved woodlands. Blue tits show a particular preference for oak woods. Both species have adapted well to 20th century life in man-modified habitats, including urban gardens. The breeding density and clutch size of both species is far higher in broadleaved woodland than in other habitats such as conifer woodlands or gardens, suggesting that the tits are tolerant of, rather than adapted to, these habitats.

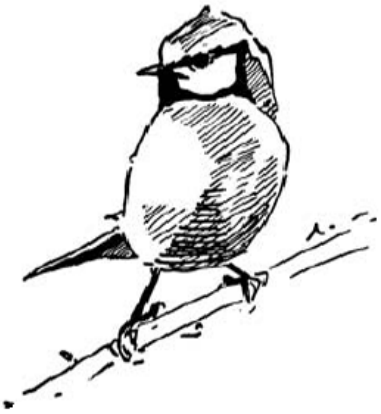
Food

Blue and great tits feed mainly on insects, their eggs and larvae, and other invertebrates. Most prey is either picked off the surface or extracted from a crevice, although blue tits are regularly seen fly catching when there are plenty of flying insects. Blue tits are extremely agile and can feed on the thinnest of twigs in the outer canopy of trees. The larger great tits look for food on the sturdier branches and twigs. During winter when low temperatures increase the birds' energy requirements,

they preferentially take plant matter with high fat content. Nuts and seeds are important, particularly during December and January.

Tits are opportunistic feeders, and have an outstanding record in overcoming problems to reach food. They quickly learn to pull up a string to reach a piece of food at the end of it, and great tits have even been recorded using a pine needle as a tool to reach food deep in a cavity.

Camouflaged caterpillars are detected by looking for their silhouettes through the underside of leaves. Tits learn new feeding methods and identify sources of food by observing other birds foraging. Great tits regularly follow other birds such as coal tits while they are storing food, and then steal the store. Tits can be slow to respond to new foods or feeders, but once one bird has discovered the food, the message is passed on quickly. The inquisitiveness of the blue tits was probably behind the habit of opening milk bottle tops to drink the cream. This behaviour was first recorded in Southampton in 1921, and it spread rapidly to most parts of the UK within a few years as birds learnt the behaviour from each other. As the use of semi-skimmed milk became commonplace, the habit slowly declined and is now seen only rarely.



Territory

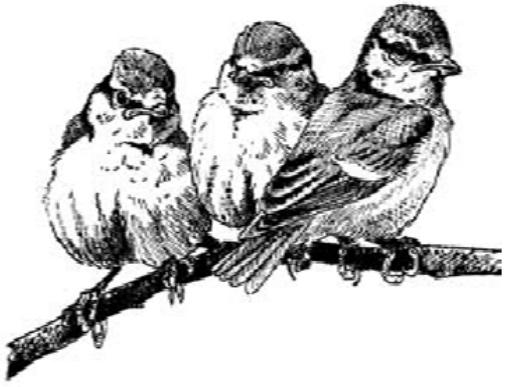
Territorial activity starts in earnest at the end of the winter, on mild fine days as early as February. Adult males tend to hold on to the territory from the previous year, though boundaries can change. Young males breeding for the first time establish themselves in the gaps between these territories. Territory boundaries are firmly determined by end of March. Breeding densities of blue tits tend to be 2-3 times greater than of great tits. Broad-leaved woodland is the best habitat, and breeding densities there can be several times higher than in the marginal habitat of suburban gardens. In an average year, nest building starts around mid- to late March in the south and mid-April or later in the north of the UK. Mild winters, and changes in weather, including abnormally cold or warm spells, can alter the timing considerably. The female is likely to have roosted in the nest chamber for days or weeks prior to nest building.

Nesting

The nest is normally in a hole or a crevice in a tree or rocky or earthy bank, although cavities in quarries, walls or other masonry are also used. Both species take readily to nestboxes. Blue tits are renowned for nesting in unusual locations, which include bottles, tin cans, boxes, pipes of all types, sizes and angles, letterboxes, car dashboards, glove compartments and radiators. One blue tit was found sharing a large letterbox with a wren. The nest is built entirely by the female, and is made of moss, dead grass and other plant matter. Great tits line the nest with fur or hair, while a blue tit nest is normally lined with feathers. One egg is laid each day, although if the weather turns cold the

interval is sometimes extended to two days. The clutch size varies with season, ages of the parent birds and with habitat. Woodland clutches are on average twice the size of urban ones. Blue tit clutch size is 5-16 eggs, while great tit produces 5-12 eggs. During the egg laying the male provides the female with up to one third of her food, which is essential for the egg production. If the clutch is lost to predation or cold, the birds often re-nest, although fewer eggs are laid on the second attempt.

The female starts to incubate when the last egg is laid, and the male continues to provide her with a significant quantity of food. Fourteen days later the young hatch, blind and naked. The female spends the first couple of days almost constantly brooding the young, while the male provides the family with food. Later both parents share the feeding duties, although brooding will be done by the female alone.



Chicks are fed primarily with caterpillars of certain moths, and spiders are important for the first few days after hatching. Other prey tend to feature more strongly in the diet in late nests and during cold or wet weather. Only at times when there is a shortage of insect food will plant material such as seeds and nuts feature in nestling diet. Raising a brood of tits is hard work – parent birds may bring more than 10,000 caterpillars to the brood. Every day they carry almost their own body weight of food to the nest.

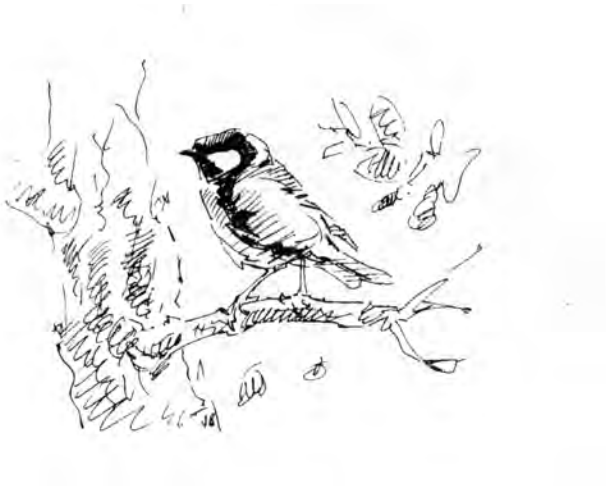
Chick survival

Tit nests are relatively well protected from predators, and cold and starvation are main causes of nest failure. The main predators of eggs and chicks are weasels, grey squirrels and great spotted woodpeckers. The nesting season is very closely tied to the abundance of moth caterpillars on trees such as oaks. A cold and/or wet spell in May or early June can result in delay or failure of the caterpillar ‘crop’. The resulting food shortage can cause desertion if the parents cannot find enough food to meet both their own needs and those of the brood. Birds are far more likely to desert a breeding attempt in poorer habitats in towns than in deciduous woodland.

Fledging

The young are ready to fledge, on average, at 19 days old. As fledging time approaches the female stops roosting in the nest, and the amount of food brought to the nest is reduced. The brood is forced to fly by hunger. Chicks have already been encouraged to receive food at the nest entrance, and on the morning of fledging the parents call to them, tempting them out of the nest with a beakful of food. Adults lead the newly fledged young high to the tree canopy, where feeding

opportunities are greater. The fledglings take another week to reach full independence. They are easy to tell from the adults. They are duller in colour and have yellow instead of white faces. Most young will have fledged by late June or early July. Both species tend to have only one brood a year in gardens, although many are double brooded in good woodland habitat.



Flocking

After a few days, the family parties join others to form mixed flocks. Increasingly, the juveniles range further with the flock, while the adults remain close to their original territory and join a passing flock temporarily. By early winter, the area covered by each flock is well defined. The flocks are well integrated, moving together between known food sources along a fairly standard route. Changes in food sources can change movement patterns considerably. Sometimes large aggregations of birds form at locally abundant food supplies, such as a good crop of beech masts.

Lifespan and survival

Tits, like other small songbirds, are relatively short-lived. The mortality amongst inexperienced fledglings is very high, and almost half perish by late autumn. However, chicks that fledge early in the season stand a better chance of survival and recruitment to the breeding population. Birds that reach breeding are can expect to survive two or three breeding seasons, though a few can reach quite an advanced age. The oldest known wild blue and great tits were both around 15 years old.

Deserted families

At least one in five nesting attempts ends in failure for one reason or another before the young fledge. If parent birds have an accident or desert the nest due to food shortage, the young birds have no chance of survival. Interfering should only be a last resort, and you must be absolutely sure that no adults are attending to the nest. Hand-rearing is time-consuming and difficult, and the chance of success very low. Orphaned young should be passed on to an expert rehabilitator.

Tits and the law

Blue and great tits and their nests are fully protected by the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird. It is an offence to intentionally take, damage or destroy eggs, young or nest of any tit whilst it is being built or in use. Nestboxes can be cleared out only between August and January (any infertile eggs remaining must be destroyed). It is also essential to ensure nests are not destroyed when hedge trimming or tree felling in the breeding season.

Further reading

The Blue Tit by Jim Flegg, Shire Publications (1987).
The Great Tit by Andrew Gosler, Hamlyn (1993).
British Tits by Christopher Perrins, Collins (1979).
The Titmice of British Isles by John Barnes, David & Charles (1975).

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