

Willow Tit

In 2005 the population in Greater Manchester was estimated at less than 100 pairs.



Ecology

Willow Tit (*Poecile montanus*) is a brown, black-capped Tit with white cheeks and a bullnecked appearance, and both sexes are similar. It was not described as a separate species until 1900, and prior to this all brown-plumaged Tits were considered to be Marsh Tit *Poecile palustris*. British Willow Tit is of the endemic race *kleinschmidti*.

In the UK the favoured habitat is damp, early successional woodland, particularly patches of Elder, Alder and Birch scrub, and riparian woodlands often at the edges of wetlands. They will also nest in urban areas, especially in marginal scrub around gravel pits and flashes. In Europe the southern montane population inhabits mainly conifer forest, while populations at lower levels inhabit similar scrub and damp woodland habitat as British breeders.

Willow Tit is the only English Tit species to excavate a new nest hole each breeding season, the work normally being carried out by the female. The nest is positioned less than a metre above the ground in a rotten stump. Nesting takes place in April and May (Mean laying date 28th April) and 6-8 eggs are laid in each clutch, with an average of 7. They rarely take to standard nest boxes and there are no records of second broods.

Pairs remain together year after year defending the same territory, which can frequently be large (up to 9ha in one study in southern England), and as a consequence breeding densities are usually relatively low.

They feed low in the canopy, usually in the shrub layer (2-4m), and often amongst deadwood. In summer the diet consists

largely of invertebrates, and studies of breeding Willow Tit in the Brecklands of Norfolk suggested that the most important food items brought to nests were Moths (larvae, pupae, and some adults), Bugs, Beetles and Spiders. In winter Willow Tit readily take seeds and occasionally use bird feeders.



Nest Hole, Wigan Flashes

In Britain, Willow Tit is resident and highly sedentary; of 114 ringing recoveries 89 were within 5km of the original ringing site and only 4 were from distances greater than 20km.

They may be found in mixed species feeding flocks during the winter though they appear

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less inclined to join such flocks than other Tit species.

Current status and distribution

International

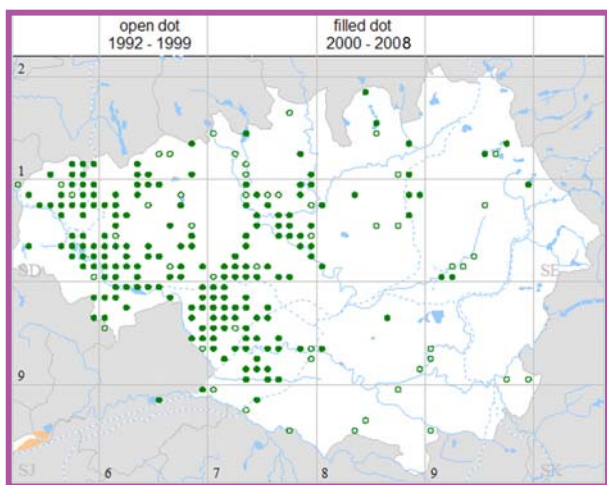
The species is widely distributed across the Palearctic from central and northern Europe to the Pacific. Around 5 million pairs breed in Europe, and the population is considered stable, with the largest populations in Russia and Scandinavia. However, there have been notable declines in Scandinavia recently, with an overall population decline of 40% in Finland and 53% in Sweden since 1990. Similarly, the French population has declined by 50% during the same period.

National

Willow Tit is a red listed species of conservation concern and a UK Biodiversity Action Plan Priority species. Results from national monitoring schemes suggest the British Willow Tit population declined by 87% between 1970 and 2005, making it one of the UK's most rapidly declining breeding birds. In many parts of England, primarily the south and east, Willow Tit has almost disappeared. The UK population was estimated at 8,500 territories in 2000.

Greater Manchester

The 1994 atlas *Breeding Birds in Greater Manchester*, estimated the population at 300 pairs and suggested that there were two main areas for Willow Tit in the county; the west and the southeast. However, by 2005 (bird report) the Greater Manchester population was estimated at less than 100 pairs and the population in the southeast had been lost completely. Willow Tit is now concentrated in the western side of the county; out of 61 sites where Willow Tit was recorded in 2006, all but 4 were from sites in Wigan, Salford, Trafford and Bolton.



Distribution of Willow Tit across Greater Manchester between 1992-2008

The population associated with the flashes in and around Wigan does appear to have remained stable throughout, and is now considered a regional stronghold for Willow Tit in the northwest. It is possible that this population may also be of national

importance, and survey work for the forthcoming British Trust for Ornithology (BTO) atlas will establish if this is the case.

Legal

Willow tits are not a schedule 1 species but they do have general protection under the Wildlife and Countryside act 1981, and are listed as a priority species on the UKBAP.

Factors affecting the species

Three hypotheses have been put forward to explain the decline in Willow Tit populations:

◆ Competition

The national increase in Blue Tit (*Cyanistes caeruleus*) (28%, 1970 -2003) and Great Tit (*Parus major*) (63%, 1970-2003) populations over the last few decades may have resulted in an increased competition for nest holes amongst Tit species. This may have increased the number of oustings of Willow Tit from nest holes by both these behaviourally dominant species.

However, results from extensive research undertaken by the RSPB, to determine the cause of the national decline of Willow Tit, strongly suggested that competition with other Tit species was not a major factor.

◆ Predation

Great Spotted Woodpecker (*Dendrocopos major*) are known to prey on a variety of nesting birds, including Willow Tit, and have increased in abundance nationally (108% 1994-2004). This increase may have in turn caused an increase in predation of Willow Tit nests, which has led to the national decline.

However, results from the RSPB research project did not support the hypothesis that an increase in predation from Great Spotted Woodpecker was responsible for the national decline in Willow Tit

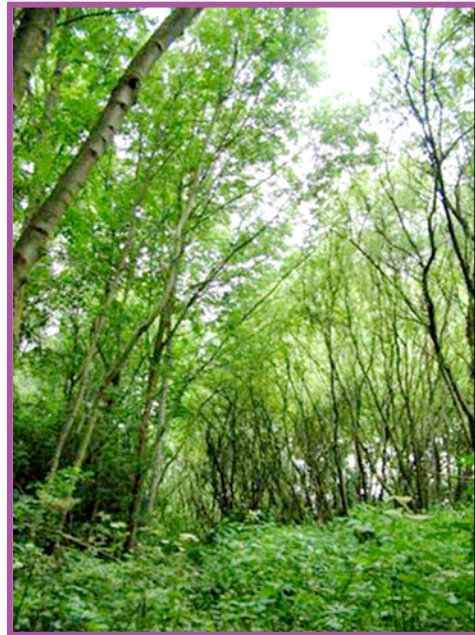
◆ Habitat loss

A reduction in standing dead wood suitable for nesting Willow Tit has also been put forward as a possible explanation for the national decline. But again, results from research indicated that this was not a major factor, with no significant difference in the amount of suitable standing dead wood present in occupied and abandoned sites.

However, a positive correlation was established between high soil moisture and site occupancy. This supports results from national surveys, which indicate that Willow Tit populations have remained relatively stable in wetland habitats, with the greatest losses from woodland and farmland. It suggests the drying out of sites due to

drainage or poor management has had a negative impact on Willow Tit populations.

Over the last 40 years the loss of early successional woodland has been considerable (1960: 95,000 ha, 1990: 51,000ha). Loss of scrub habitat has primarily been due to urban development and agricultural clearance, although a reduction in management, particularly the decline in the use of coppicing, has also led to the maturation of many early successional woodlands.



Breeding habitat

Scrub often occurs in small patches in what is considered 'wasteland' and does not have the same perceived biodiversity value as mature woodland. Many post-industrial sites

are characterised by early successional woodland, poor drainage and water bodies, and these brownfield sites are frequently targeted for urban development and lost as habitat for Willow Tit.

This link between the strong preference by Willow Tit for damp, early successional stage woodland (scrub) and the associated loss of this habitat is considered the principal cause for the national population decline.

Current actions

Greater Manchester

Habitat management specifically for Willow Tit has been ongoing at Wigan Flashes for several years.

- ◆ An extensive programme of thinning of mature trees (particularly White Poplar and White Willow cultivar) has been undertaken to develop an understory of early successional woodland.
- ◆ A range of scrub species has also been planted (Elder, Alder, Hazel and Hawthorn) to develop new scrub zones between woodland blocks.
- ◆ Trees that have been felled have been cut leaving 1m tall stumps, and once

these have become well rotted are regularly used by Willow Tit for nesting.

- ◆ Where stumps are unavailable well-rotted logs have been secured against living trees to provide further nesting sites.
- ◆ A major habitat management project is planned across Greenheart Regional Park and Wigan borough. It includes extensive thinning to create successional woodland, the provision of stumps for nesting, and planting of scrub species to create new areas of habitat. There will also be a programme of survey and long term monitoring of the area.

Objectives and targets

- ◆ To maintain the existing breeding population through appropriate management and protection of current sites
- ◆ To increase both population size and range through appropriate habitat management at new sites

Objective	Target	Quantity	Target Date
Increase the population size by enhancing habitat	Ensure the population is 200% of the 2008 baseline.	200 Breeding pairs	2013
Increase the range by expanding habitat	Aim for an increase to 200% of current level.	120 Sites	2013

Proposed actions

National

The RSPB funded research project continues, with further research needed on habitat selection by Willow Tit. RSPB, Ongoing

Greater Manchester

It is essential that habitat management projects are undertaken at all sites where Willow Tit currently breed, and that similar projects are also undertaken at former sites, particularly in western districts.

- ◆ Highlight the importance of Willow Tit and their associated breeding sites and consider them for SBI status. LA's, GMEU, WT's. Ongoing
- ◆ Encourage and promote habitat management for Willow Tit at key breeding sites that have been identified within Wigan, Trafford, Salford and Bolton, as well as, previously known

sites. Projects such as, thinning and ring barking to provide decaying tree stumps to create nesting sites. LWT, WLCT, WBP, GMBP, LA's. 2013

- ◆ Identify areas for potential expansion of Willow Tit habitat and source funding opportunities for habitat creation. LA's, GMBP, LWT, WBP. 2010
- ◆ Regular survey and monitoring programme using standard BTO methods, of known, and former sites, and ensure all records are forwarded to relevant record centre. LWT, WBP, LA's. Ongoing

Lead partners

GMBP	Greater Manchester Biodiversity Project
GMEU	Greater Manchester Ecology Unit
LA's	Local Authorities
LWT	Lancashire Wildlife Trust
WBP	Wigan Biodiversity Partnership
WLCT	Wigan Leisure and Culture Trust
WT's	Wildlife Trusts

Best practice guidelines

Habitat management needs to be focussed on protecting areas of scrub currently occupied by Willow Tit, particularly in areas supporting high densities. High water levels should be maintained to prevent such areas from drying out and stands should be managed to ensure sufficient areas of young growth are maintained.

[Willow Tit Conservation](#) – Example of habitat management at Wigan Flashes

Links to relevant BAP's

Wet woodland

Reedbed

References

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