Birdlife in your garden

Last month in this column, we considered why birds sing and how their vocal apparatus permits them to produce such an incredible variety of spectacular sounds. But how do birds acquire their distinctive songs? Why does a Song Thrush sound like a Song Thrush and not a Mistle Thrush? Songs are, after all, unique to a particular species and are part of the process of maintaining the distinctiveness of a particular species by discouraging hybridisation. A cock bird that sings the 'wrong' song will not, under normal circumstances, be attractive to a hen of his species and will leave no offspring.

Are birds pre-programmed from hatching to sing their species' song? Or do they learn the song by listening to other birds of their type? The answer to both questions seems to be 'yes' but to varying degrees for different species. It is known, for example, that some cage birds raised in isolation, will fail to sing as adults or will produce a feeble, unstructured version of their species' song. Other cage bird evidence shows that a young bird raised with members of a different species may well adopt the song of that species. These cases suggest that learning by imitation must play a role in song acquisition.

On the other hand, how does a Cuckoo learn its species' distinctive song? It never meets its biological parents but is exposed to incessant exposure to its foster parents' vocalisations (which it somehow manages to avoid adopting). Other species, including Great Tit and Whitethroat, also seem to possess innate songs from birth. The consensus seems to be that most species exhibit both innate and learned aspects to their songs. From the egg they may possess a weak and unstructured version of their kind's song (perhaps little more than a ditty that reflects its tonal structure and the rough rhythm), which is enriched over time by imitating singing adults. Many birds are known to practice their songs, starting with a quiet 'subsong' and gradually refining this as they gain expertise and confidence. Here are a few other bird song facts of interest.

- Prominent (loud and persistent) songs are characteristic of male birds which inhabit deep cover and need to be located by the female non-visually (e.g. Nightingale, Blackbird, Reed and Sedge Warblers), as well as those that sing at night (e.g. Nightjars).
- Birds that forage in the canopy may sing while feeding (e.g. tits) but ground feeders (e.g. thrushes) rarely sing while they eat.
- Deep sounds travel further through obstructions and are associated with birds that live in woods and reeds (e.g. owls and Bitterns). High pitched sounds are used more by birds of the open country.
- Mated pairs of many species of birds, primarily in tropical parts of the world, are known to sing duets. In the UK, this is less common but the Tawny Owl's tu-whit, tu-who (more accurately, kew-wick...hoo-hoo-hoo) is a duet, with the kew-wick sung by the female and the hoo notes from the male.
- Some species of birds (e.g. Chaffinches) exhibit regional 'accents' in the tone or structure of their songs.
- Non-vocal sounds are used by many birds in exactly the same way as more conventional songs. A Great Spotted Woodpecker declares his ownership of a territory just as effectively by drumming on a tree as does a Blackbird with his melodies. Likewise, the wing clapping of a Woodpigeon and the 'drumming' of a Snipe (a sound made by air flow over special tail feathers during the bird's dive) are functionally equivalent to birdsong.
- Many species of birds are very adept at mimicry and will incorporate the songs of different species, as well as other common noises, into their songs. Jays are well known for imitating birds of prey, especially Buzzards. This imitative skill is prized by human beings, and Starlings have a long history of domestication for this reason. Mozart kept a much-loved pet Starling for several years and some have suggested that his divertimento "A Musical Joke" (K. 522) has more to do with representing the somewhat clumsy, mechanical and repetitive strructure of the song of this bird, as well as its tendency to whistle off-key, than as a parody of poor musical composition and performance.

Make the most of the bird song you hear this month in your garden and out and about as we are coming to the end of this summer's concert.

John Arnfield

The Meadow Pipit (left) is a frequent victim of the Cuckoo's parasitic breeding strategy on the Long Mynd, but how does the young Cuckoo learn the correct song when it never meets its biological parents? (Photo: Edmund Fellowes, BTO Library)

Was the song of Mozart's pet Starling responsible for "A Musical Joke"? (Photo: John Harding, BTO Library)