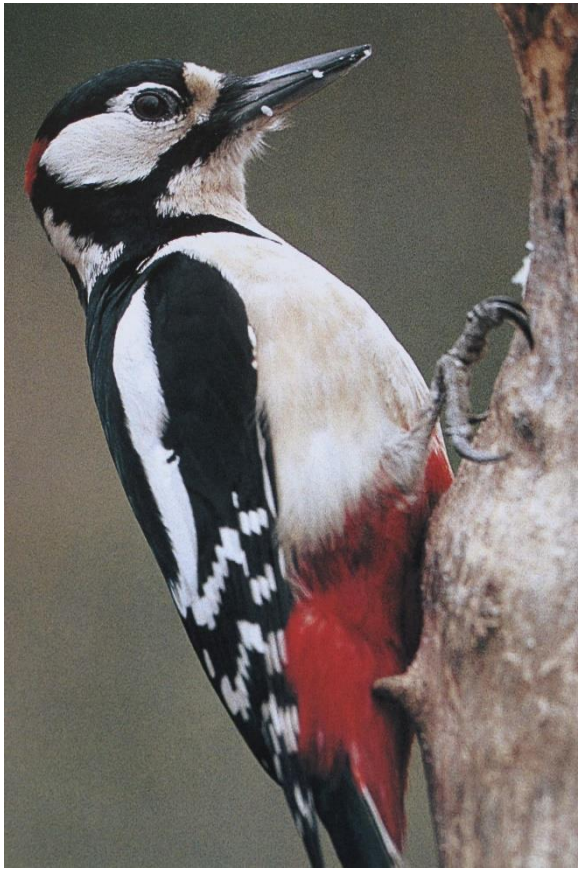
Tuesday Club Nature Notes

with Jan Flamank

Wonderful Woodpeckers, brilliant beaks and a bit about birdsong



We have 3 native woodpeckers and one visitor: Great Spotted, Lesser Spotted and Green Woodpeckers and visiting Wryneck.

The Great Spotted is our most well known woodpecker, and will visit garden birdfeeders, although it is a woodland bird. About the same size as a blackbird at 23cms long, it is mainly black and white with marvellous red ‘trousers’ on its rear undercarriage. The male also has a splash of red on the nape of his neck. It feeds mainly on wood boring grubs and insects, which they excavate from under tree bark. They have a very long, thin tongue, covered in sticky mucus and with backward facing barbs on the tip which they use like a rake to gather up the grubs and insects. The tongue is much longer than their beak, and they have a complex, adapted structure in their head to enable them to retract and extend their tongue, and which also protects their brain when drumming.

All birds have a hyloid structure, comprised of thin bone and cartilage, which attaches the tongue to the floor of the beak, or mouth, with muscles by the ear

openings. When the bird contracts these muscles, the hyloid system pushes the tongue forward. In woodpeckers, this system is much longer, and splits in two in front of the throat into two springy straps, called hyloid horns. These horns, attached to muscles behind the ear openings, support the tongue, as with all birds, but in woodpeckers, they extend much further, wrapping upwards behind the back of the skull, and then coming together over the top of the cranium through a groove in the skull. This extra long system of thin bone and cartilage means there is very little space in the cranium for the brain to move, and acts as a sort of seat belt to keep the brain steady and cushioned when drumming. It also means that when the woodpecker pulls the muscles tight near the ear openings, the extra long, springy hyloid structure can extend the sticky, barbed tongue a very long way to probe for food. Amazing!

Males can drum up to 600 times a day to attract a mate, using their beak to make noise on trees, and metal poles and weathervanes in urban settings. Their long, powerful beak is a self sharpening, chisel shape which penetrates wood easily, and they have extra strong neck muscles to withstand all the effort of drumming. Drumming uses lots of energy, as an unmated male can drum up to 600 times a day to attract a female at a rate of 10 drums a second.

The Lesser Spotted Woodpeckers is much smaller, about the same size as a greenfinch at 15cms long, and harder to see as it tends to stay near the tops of trees, feeding on wood boring insects and spiders. It has bold black and white barring across its back, but no red ‘trousers’. Males have a red crown and females a white crown. It is more abundant in the south, but there are local families in Yorkshire, and it has the same long thin tongue and adaptations as its larger relative. Despite its diminutive size, it drums even faster than the great spotted, at 15 drums per second. Phew. It has red conservation status.

The Green Woodpecker is the largest of our native species, about pigeon size at 33cms long. It is also the most colourful, with an olive green back, yellow green rump and a red crown and black eye mask. The male has a black and red moustache, while on the female it is all black. Unlike their relatives, this large woodpecker favours ants most of all for its dinner, and is seen mainly on the ground, probing under the soil for ants. Their tongue has intrinsic muscles, along with the usual thin bone and cartilage, which enables it to move the tip of the tongue easily from side to side, sweeping up a feast of ants and worms. It is also known for a distinctive laughing call, and is sometimes known as the Yaffingale. They don't drum loudly, but are more vocal than their relatives.

The Wryneck Woodpecker is now extinct as a breeding bird here, but they can appear in gardens in April and May on their migration from Europe and Africa. It is small and discreet, 17cms long, with a mottled brown colour. It feeds mainly on ants, living mostly on the ground, using the long tongue to probe for ants and worms. If disturbed on their nest, the parent bird stretches out their head and neck, then rapidly withdraws it, hissing like a snake.

Brilliant Beaks – a multitude of uses

Beaks are a bony extension of the bird's jaw, with the top, upper mandible fixed to the skull, but the lower half able to move much like a human jaw. Nostrils are usually found in the upper mandible, but some birds such as gannets have no nostrils, but breathe through their mouth instead. Clearly, beaks are primarily used for feeding, and as such, are a myriad of shapes and sizes, depending on the habitat and food supply for each species. This variety ensures different species can reduce unhelpful competition for food, e.g. Goldfinches pinching tiny seeds from teasels; the Curlew's long, graceful curved beak to probe deeply into soft mud; Oystercatchers hammering and stabbing bivalve shellfish; Treecreepers with their long thin, down-curved bill searching cracks in tree bark; Falcons with the special notch in the side of their beak to snap the neck of their prey; Avocets with an upturned bill perfectly designed for the scything action they use to gather crustaceans and fish fry. These are just a few examples from so many more ..... beaks mean survival in many ways.

Essential tools also for preening, birds run their beak through feathers, removing parasites, distributing waterproofing oils, and used in mutual pair bonding preening rituals. Beaks are vital in nest building, skilfully collecting materials and making a safe place to rear their young, and are also used to make tools to retrieve food and explore habitat. So much more than a nose.

A brief note on birdsong

Early Spring is the key time for birdsong and the wonderful dawn chorus, but it doesn't lend itself well to website notes! There are excellent recordings available on CD, apps and the RSPB website to help us identify different songbirds, but here is a reminder about how birds sing.

As we know, birds sing to establish territory and announce to rivals they are there, but springtime is when the song is used to attract females and show how healthy and strong the male bird it to a potential mate. Anyone who has sung in a choir knows it takes lots of energy and stamina to sing, and more so for small birds, outside on a cold early morning.

Birds have specialised vocal anatomy that enables them to have loud, complex songs. Put simply, when we sing, air from our lungs is squeezed through the larynx/voice box at the back our throat, which has two vibrating flaps made of folded mucus membrane which lines the larynx. This vibration is then shaped by our lips, mouth and tongue to make recognisable words and sounds. Birds have a very similar arrangement, but it is called the syrinx, and is lower down in their air canal, where the trachea splits into two to go into the lungs. The name syrinx comes from Greek, meaning panpipes. So, birds have two sets of flaps for the air to squeeze through, and can make different sounds with each set at the same time. Some birds also have air sacs around the syrinx, which amplify the sound, so even tiny birds like the wren can make a gorgeous loud sound.

Enjoy an early walk if you can, away from traffic, and listen to a lovely chorus. One of the very few benefits of lockdown has been a reduction in the cacophony of human noise, enhancing our opportunities to tune into nature.