

# Wildlife Survey of **BRISLINGTON BROOK**

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## **5. Nightingale Valley and St Anne's**

Heavily wooded and quite naturalistic sections of steep-sided valley in the lower reaches of the Brook providing areas of tranquillity and natural beauty amidst Bristol's inner suburbs. There is evidence of otter here and these sections must also be used by dippers and eels recorded further upstream. The woodlands also support breeding stock doves and bullfinches; many other species of bird are likely to breed here too.

### **B5a: Transition zone**

Leaving the hard engineered sections of the main Brislington Brook behind, and much of the alien tree and shrub species too, this small section marks a transition from a heavily modified stream to a far more natural section. The channel is approximately 2m deep with steep sides and many mature and semi-mature trees on both banks. The stream bed is very rocky. On the left bank is an area of Japanese knotweed which is being chemically controlled.

### **B5b. Nightingale Valley**

This long section is comparatively uniform in that the stream flows through an established broadleaved woodland with mature and semi-mature trees and shrubs not only on the banks but also filling much of the steep and wide valley. Towards the middle of this section are many large and mature planted trees – London plane, sessile oak, common lime etc. which presumably date back to a period when this was a private estate.

Sycamore and ash are the predominant (self-sown) tree species here although there are also some horse chestnut, alder and crack willow. The shade from these large trees creates and maintains a somewhat sparse field layer with ivy and bramble being the dominant species –the latter more so when the effect of shade is lessened. Himalayan balsam is locally abundant where shade is lighter and, as elsewhere along the Brislington Brook system, attracted huge numbers of wild bees of many species as well as very large numbers of honey bees. Ground elder is another invasive alien species frequently found along the banks of the brook here but most distinctive are the ferns such as male fern and hart's tongue fern which lend the area a more established woodland quality. There are records of a scarce native plant here –narrow-leaved bittercress – but none was recorded during the survey possibly as this species is a relatively early flowering plant.

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Along the middle and lower reaches of the stream as it flows through Nightingale Valley there is evidence of revetment masonry that once shored up the earth and rubble banks. Some sections of this revetment still remain but most is derelict. On the left bank there is also some partially buried debris which represents materials (principally oil drums) which were dumped into the valley over sixty years ago when an American army camp was abandoned on the flat land above

the valley. The pollution from this debris may explain why this particular section of valley side is more botanically impoverished than elsewhere.

Half way along this section of the brook the main footpath through the valley crosses the stream by way of an old arched stone bridge (popularly called “the packhorse bridge”). Approximately 10 metres upstream of this bridge there is a partially submerged brick pier to the right of mid channel. On this pier there was a fresh otter spraint; it is likely that the heavy use of the bridge and its environs by humans and their dogs compels otters to leave their spraint slightly away from this otherwise obvious territorial marker.

At the northern, lower, end of Nightingale Valley the stream enters a large gridded and gated culvert –the Brislington Boat Screen – which presumably intercepts large items of debris which could otherwise enter the navigable River Avon and pose a danger to boat traffic. Downstream of the screen the brook takes a sharp westerly turn to flow along the southern edge of the railway line; most of this section is hidden amidst dense scrub and tall herb vegetation.

Throughout Nightingale Valley riparian plant species are scarce –there is some fool’s watercress and pendulous sedge in the lower reaches but very little else. Equally there were very few fish observed (mainly sticklebacks) and despite much stone turning no stone loach or millers’ thumbs were recorded. However the stone turning survey did yield evidence of healthy populations of caddis fly larvae and freshwater shrimps.

The brook is mostly 2-3m in width through this section and is composed mostly of riffles (averaging 20 cm in depth at the time of survey) over a rocky substrate although a number of pools (up to 1m in depth at the time of survey) also occur. The banks average 1-2m in height and are uniformly steep sided.

### **B5c St Anne’s Park**

Emerging from a long culvert under the railway and St Anne’s Park Road the brook flows into the steeply wooded valley known as Nature’s Garden. This is a landscaped area of mature and semi-mature trees and shrubs dating from the early 20<sup>th</sup> century and now quite wild. The stream flows within masonry revetment banks through this shady valley over a very rocky substrate; it is here 2-3m in width and has a very stony bed although there is also a lot of silt. There are small weirs too, 1m in height with plunge pools about 1m in depth.

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Where the stream flows into a slightly broader floodplain the shading effect of the trees, still dense on the valley sides, becomes less dominant and a riparian flora, dominated by Himalayan balsam, becomes established. Small rocks are still common in the stream bed which is mostly composed of riffles approximately 25 cm in depth although there is also much silt and the banks are shallow and silty.

Flowing into the widest part of the floodplain the stream runs by the ancient St Anne’s Well. This ancient spring has a fascinating history and was visited by medieval kings and queens as well as by many tens of thousands of pilgrims right up to the present day. A more detailed account of this important holy well can be found in *Holy Wells of Bath and the Bristol Region* by Phil Quinn.

Logaston Press (1999).

The shallow banks of the brook are here completely enclosed by a very dense growth of tall herb vegetation dominated by Himalayan balsam. The riparian flora here was never very species rich but it has become more impoverished as the balsam has spread and even very competitive native species such as nettle, hogweed and hedge bindweed are struggling here. The positive side of the balsam invasion is that it provides an excellent source of nectar for bees (which are nationally in a rapid decline) as many native sources of nectar are being lost

due to changes in land management.

#### **B5d: Industrial revolution**

As the stream leaves the park of St Anne's Valley it is enclosed within high mesh fencing and trees and shrubs are once again present on its banks. This part of the stream has supported industrial activity for over 500 years. On the left bank of the stream there is a small industrial park (hence the mesh fencing) and this left bank is mostly composed of concrete revetment but with some trees and shrubs growing on the top of it –mostly ash, sycamore and crack willow.

The shade from the semi-mature trees and shrubs inhibits a diverse ground flora with ivy being the most conspicuous plant species here. Pendulous sedge, ground elder, hart's-tongue fern, cow parsley, cuckoo-pint and herb benet are also quite frequent.

The stream remains about 2m in width but is almost entirely riffles over a stony substrate with areas of silt. Much stone turning yielded one stone loach and a number of caddis fly larvae and freshwater shrimps. The northern end of this section is marked by a gridded culvert where the stream is then channelled underground for approximately 200m. Just within this culvert entrance, on the left bank, there was an otter spraint on a rock. Fortuitously one of the lower bars of this culvert had been partially bent –just enough to allow an otter access through the grate and onto the rest of the brook.

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#### **B5e: Journey's end**

This is the final 50m length of the brook as it joins the River Avon. The banks are artificial –concrete –from the end of the culvert up to the banks of the Avon but small ledges of silt have formed which allow grasses and herbs to establish. Of note here are pelitory-of-the-wall, redleg, water-cress, pendulous sedge, water chickweed and mugwort. There is very little woody growth here – mainly small amounts of buddleia and bramble.

Several male banded demoiselles were holding territory on the bankside vegetation here.