

King's Pond Aquatic Ecosystem

The bottom material of the pond is silt built up over the last two decades since the last dredging coming from clay-with-flints off arable land above brick Kiln Lane, the breakup of the large island when flooded in winter and from road drainage. The River Wey approaching the pond has a clear flint gravel bottom but no waterweed growth as it is heavily shaded by trees, unlike the river through the brewery ground with Stream water Crow-foot and Starwort. Some silt has built up on one bank during periods of low flow, to be expected in a winterbourne.

The River Wey support a few river limpets on chalk lumps bathed in spring water. Under the culvert bridge have been Bullhead and Stoneloach small fish, typical of chalk streams. There have been occasional water snails.

Although the pond has not supported a good population of waterweeds (none at present) there was a diverse bankside emergent vegetation as outlined in the first trail leaflet: Water | Mint, Kingcups, Yellow Flag, Water Figwort, Meadowsweet, Hemp Agrimony, Great Hairy Willowherb and Tussock Sedge. The later lost shortly after the last dredging. This bankside flora is now much depleted owing to woody growth along the banks.

Lack of waterweed or macrophytes has been a continual feature of | King's Pond since I have known it from 1979. These have been checked by the large population of c. 100 mallards that established since the pond was opened to the public. Macrophytes form an important item of food for some of the waterfowl including Mute Swans and Coots. The latter two dive to the bottom to feed on blanket weed during its growth phase. Starwort could well grow in the pond and provide a habitat for water snails but it has no chance with the intense waterfowl numbers.

Most of the invertebrate life of ponds are larval stages of insects together with water lice, water boatmen, water beetles. Damselflies and Dragonflies that would be expected are all but absent from the pond. There is also less evidence of the small flies deriving from aquatic larvae since the 1980s: these are the sole food of Swallows, (now lost), Swifts and House Martins (latter two in decline) and bats.

Some preliminary pond dipping took place a few years ago revealing relatively little aquatic life but various snails and mussels (*Valvata* species, and *Sphaerium corneum*) were found. With dead vegetation on the bottom from leaves there is a potential livelihood for freshwater shrimps and water lice but not for aquatic herbivores or the carnivores that feed on them (e.g. dragonfly nymphs). In the 1980s I was driven from the garden into the house about 8pm of a summer evening by midges in the scalp, but this does not happen anymore. This could also be part of the international insect decline covered in Dave Goulson's book *Silent Earth*. This will impact on insect eating birds and bat. For the first year 2025 is the first that I have not seen Swifts over the pond. Although loss of nesting sites is affecting swifts so too would the insect decline. Contact Tim Norris of Hampshire Swifts.

When the pond was last dredged in 1996 I obtained some silt to look for mollusc shells and found very little.

On 15th August 2025 I took 5 samples of silt from the edge of King's Pond and found very little life in it. There was much black woody debris, suggesting low oxygen levels. Just one juvenile Water Louse (*Asellus aquaticus*) and one Pond Shrimp (*Crangonyx pseudogracilis*), an introduced species were found. Both live on dead plant material and are part of the decomposer channel. Also were two Bloodworms (*Chironomus* fly larvae) in muddy sediments, food for fish and as adult flies birds and

bats. They are typical of low oxygen environments. There was also a cladoceran (typical of ponds), two water mites and two species of Valve Snail (*Valvata cristata* and *V. piscinalis*). The most abundant animals were Lesser Waterboatmen (*Corixa* sp) which feed on algae piecing the cells with a stylet and sucking up the contents and doubtless finding their livelihood on Blanket Weed (*Spirogyra*). I did not proceed further due to the difficulty of navigating the shoreline safely.

Pond edge vegetation

Photographs of the pond pre-1975 show a much more open habitat with few mature trees. Tree growth around the pond has much increased due to self-seeded willows and Sycamores and at one time Ash. Hazel is common although Hawthorn is less common.

The large island was reed grass before the last dredging. Following dredging it was allowed to vegetate naturally from seeds in the dormant seedbank of the silt. Common Figwort was first to take hold along with Celery-leaved water Crow-foot and true Water Speedwell (rather than the hybrid that had displaced it) until the silt dried out when Goat and grey Willow and Sycamore came in. The Sycamores and some willows are frequently toppled over as they find little anchorage in the soft silt. The trees on the island have however provided nesting sites for a small heronry of Grey heron that breed here. These are probably useful predators for the fish population of Roach and perches (including rainbow) that seem to have been thrown in and stir up the bottom as well as adding nutrients to the water. We might need to electrofish to establish the fish population.

The grass sward

Prior to the acquisition of the meadows alongside the pond bought out by AUDC in 1970s these were not accessible to the wildfowl of the pond as it was fenced. During the last dredging (wet dredging not by pond drainage) this area was bunded to receive the wet silt that was allowed to dry out before being transported to build up the large island. As a result, the soil is high in nutrient and not conducive to the more interesting wild flowers. A good meadow mix was seeded with Cowslips (that still survive) and Ragged Robbin (that has not). However, with the very high population of Canada Geese (reaching 100-200 on occasion in later summer) there is much nutrient added from their copious faeces. This makes a flower-rich meadow unfeasible, even if the risings were collected and taken offsite following mowing as was earlier advocated but not followed.

There has been considerable floral change in the grass area from White Clover and Creeping Buttercup with Slender Speedwell, now with Yarrow, Common Knapweed and Creeping Thistle taking hold as the grass has been grazed out by the geese and the result of hot dry summer. Hogweed was until this year very common and this provides valuable nectaring for insects but it has been decimated largely due to over enthusiastic mowing, especially in edge and central patches that were designated for tall vegetation.

The King's Pond Bioblitz

This was organised by ATC in June 20** and an excel spreadsheet prepared by Hampshire Biodiversity Information Centre is available at the Town Hall. The plant list is good with the min recorder being Tony Mundell who is the Botanical Society of the British isles recorder for Hants North. This has the most recorded species, followed by birds and insects (when moth traps were used overnight) but the insects were under-recorded due to lack of entomologists taking part.

Although there is public clamour for tidiness this leads to a tidy but sterile environment.