



Saving Oxford's Wetland Wildlife

Ex-situ Wetland Plant Conservation Project

About

Oxford is a critical area for freshwater biodiversity, and ranks in importance alongside well-known areas such as the Lake District, the Norfolk Broads and the New Forest. Rare and important wetland plant species that rely on Oxford's freshwater habitats include Creeping Marshwort, Fen Violet, Greater Water-parsnip and Water Violet. However, these plants are only just clinging on in the Oxford area, as threats such as pollution, a lack of suitable habitat management and climate change all still pose very serious risks to remaining populations. Something needed to be done to help safeguard the future of the Oxford populations of these rare wetland plants.

As part of its 'Saving Oxford's Wetland Wildlife' project (which you can read more about [here](#)), Freshwater Habitats Trust is collaborating with Oxford Botanic Garden and local expert Judy Webb to establish an ex-situ wetland plant conservation project. This involves cultivating rare wetland plant species and, when they are of a suitable size, planting them out at suitable receptor sites around Oxford, to boost populations and increase the number of sites they occur at. For example, Creeping Marshwort, a small, Critically Endangered wetland plant, only occurs naturally at one site in the whole of the country (which is in Oxford), but it is currently present at four sites in Oxford as it has been propagated and planted out at three other sites (with necessary permissions from landowners and Natural England). This kind of work is vital to prevent these species from going extinct, especially in the face of climate change, which is increasing summer droughts that may render previously good habitats unsuitable for species' long-term survival.

So far, Greater Water-parsnip and Creeping Marshwort have been planted out as part of this project. Fen Violet, another endangered plant, was also planted out experimentally as part of a university project 5 years ago on one receptor site, and has miraculously survived. All three species are doing well so far at their receptor sites, which is excellent news, and practical management work is currently being undertaken at several sites around Oxford ready for the planting out of some more Greater Water-parsnip plants in July and August 2020.

Currently, the Oxford Botanic Garden is propagating Greater Water-parsnip, Creeping Marshwort and Fen Violet, although plans are underway to expand this to include four further rare wetland plant species: Frogbit, Water Violet, Common Bladderwort and Marsh Stitchwort. This is where our 'Species Conservation Hubs' come in. The botanic garden has limited space and resources, especially rain water, which is needed to water plants that are sensitive to nutrient pollution (tap water is high in nitrate, so it is unsuitable for this purpose). In addition, two of the aims of Saving Oxford's Wetland Wildlife are to raise awareness of Oxford's freshwater heritage and to engage the local community with the conservation of Oxford's wetland wildlife and habitats. We therefore decided we would invite two local community groups to take part in the project by setting up wetland plant nurseries. This would increase the capacity of the project as we would have more space to grow rare wetland plants, and would also be a great way to involve members of the local community and raise awareness of just how important Oxford is for wetland wildlife.

Wetland Plant Species

About some of the wetland plant species that will feature in this project.

Greater Water-parsnip

Greater Water-parsnip has declined rapidly over the last 200 years, mostly due to the drainage of wetlands and loss of suitably managed habitats. Greater Water-parsnip is particularly sensitive to the right amount of disturbance. Not enough disturbance and the habitat become scrubbed over, too much grazing and the plants are eaten and the habitat trampled. With intensification and increased numbers of stock on smaller fields and fencing of pond and river margins, the conditions at many historic sites are now unsuitable. It is classified as Scarce in the UK, due to its still widespread but declining range. It is a Priority Species for conservation in both England and Wales.

The Greater Water-parsnip that has been planted out at Cutteslowe Meadow in Oxford is doing very well. To the right is a photograph from July 2020 of its beautiful white flowers. Below is a work party inspecting the deer-proof cage containing the Greater Water-parsnip plants at Cutteslowe (left) and planting out the original 8 plants (right). We are currently experimenting to see if the plants can survive without this cage.



Creeping Marshwort

Creeping Marshwort is a small umbellifer that flowers from late July to November. It is now only found at a small number of sites in Oxford. It is currently listed as Endangered in the Red Data Book for Great Britain. Threats include habitat loss, loss of grazing and lack of management. Creeping Marshwort likes damp, nutrient-rich grassland on the margins of floodplain ponds that is prone to winter flooding. It prefers sparsely-vegetated, muddy pond-edge habitat kept short by grazing.

The Creeping Marshwort that has been planted out is doing well at the moment, however it isn't doing so well on its only remaining native site – droughts in two consecutive years are likely to have had severe consequences. Hopefully we can continue to boost the number of plants in the wild by continuing the ex-situ conservation work. The top photo was taken in July 2020 at a receptor site.



Fen Violet

Fen Violet is found in winter-wet habitats such as base-rich fens, bogs, marshes and unimproved wet meadows. It is found on peat and clay in areas with some bare soil, like those created by peat digging and the edges of seasonal pools, and it thrives where surrounding vegetation is kept short by grazing. The seeds of fen violet can remain viable in the seed bank for many years and populations tend to disappear and reappear from different sites.

This species is currently listed as Endangered in the Red Data Book for Great Britain and it is listed on Schedule 8 of the Wildlife and Countryside Act 1981. In the UK it is confined to a few sites in Oxford and East Anglia. The dramatic decline of Fen Violet is a result of factors such as habitat loss, drainage and lack of management.

The Fen Violet is currently doing well at the site it was planted out at (as part of the university experiment). So far this year some seedlings have appeared, but it is late to flower, which is likely to be because the plants were late emerging this year due to the dry weather we had in May.



Water Violet

The Water Violet is not actually a Violet, but rather a species of Water Primrose. It is classified as a submerged aquatic plant, because the stem and leaves are entirely under (or just floating on) the water surface, and only the flower spike sticks up above. Water Violet can be found in ponds, ditches, and the slow flowing backwaters of some rivers.

Water Violet is widespread in south-east England but has undergone a significant decline recently, and is now included on the Red Data List for England. Threats include habitat loss, drainage and poor management. The submerged nature of Water Violet make it very susceptible to water quality. Widespread nutrient pollution is a real problem in many of our waterways, making lots of them unsuitable for Water Violet. We will be propagating Water Violet for this project in the near future, which will be an exciting development.



Where you come in!

It would be wonderful if you could join us in helping these rare wetland plants by becoming one of our 'Species Conservation Hubs'. The idea is for you to help us to expand the number of species we are able to help by setting up a rare wetland plant nursery at Boundary Brook Nature Park. We will collect some small plants from the botanic garden for you to look after until they are big enough to be planted out at one of the receptor sites.

We have some funding for the equipment you will need to set up the hub: glass tanks, watering can, water butt, plant pots, drainpipes etc. – virtually anything you require to get the

hub up and running. We also think it would be nice to have a sign up to explain about the project and the plants, to help raise awareness of Oxford's importance in supporting rare wetland species. We'd be able to supply that, too. We will also provide training on how to look after the plants.

What we would need from you is volunteer time to look after the plants, and an area where you would be happy for us to set up the Species Conservation Hub (which we discussed during my visit last week). If you have any questions, I'd be really happy to answer them for you, and/or pop down to the nature park to meet you again.

Thank you!

Best wishes,

Ellie