

Fascinating Fenland Flora

Introduction

The plants within an area are a key component of a healthy ecosystem, and the species present tell you a lot about the habitats and their importance. Before large-scale reclamation and drainage, fenland was probably the most extensive wetland in England and holds unique and special plants. Despite intensive use for agriculture, the fenland basin still holds relics of the remarkable wetland flora that originally occurred within the primeval landscape and habitats.

Fenland ditch flora

To reclaim and drain the land, ditches, drains and dikes were created. These artificial features have now become probably the most important habitats for aquatic plants in the fens. Their banks also make a significant contribution to the conservation of wetland and wet grassland plants. This is especially true where the watercourse contains clear nutrient-poor water. In these drains, the aquatic flora can be very rich with many local species.

Several species that are Nationally Scarce have significant populations in Fenland ditches, including greater water-parsnip *Sium latifolium*, a species listed as Endangered on the England vascular plant red list (Stroh et al., 2014).



Greater water-parsnip *Sium latifolium* was once typical of very wet, species-rich, tall-herb fen, it is now generally found in ditches, growing amongst other emergent species. This species is listed as Endangered on the England vascular plant red list (Stroh et al., 2014). Photo © Brian Eversham

The ditches are just a part of what makes the fenland area unique for plants. There is currently a project led by Owen Mountford and Jonathan Graham to highlight just how important the fens are for plants. The Fenland Flora project is mapping the distribution of the entire vascular flora and characterising the plant assemblages within the fens.

Threats and conservation

Except for a few small areas protected as National Nature Reserves (e.g Wicken Fen, Woodwalton Fen and Holme Fen), most of the surviving wetland and aquatic flora of Fenland is found in modified or even artificial habitats. These are increasingly in restored or re-created landscapes such as the Wicken Fen Vision area and the Great Fen. These areas need to be managed appropriately to allow the aquatic flora to flourish while balancing the needs for drainage and flood mitigation. Too much management removes the plants from the waterways and the banks, whereas too little management and many plants become outcompeted by reeds.

The Great Fen flora

Cambridgeshire forms a key part of the Fenland basin and, together with the adjacent south-western fens of Lincolnshire, holds the most diverse aquatic and wetland flora in its ditches (O. Mountford & J. Graham, 2020, pers. comm.). In contrast to the more recently reclaimed parts of Fenland near the Wash, the channels here may be on peat, may be sinuous (derived from natural channels) and are long-established. Those around the edge of Fenland or Fenland islands also often have high water quality. Many of the early studies of Fenland and its drainage channels by botanists such as Alfred Fryer, Edward Hunnybun and G.C. Druce occurred within Cambridgeshire. Sites that they discovered still hold rich aquatic floras today and are therefore designated as Local Wildlife Sites for their flora.

One of the key areas for wetland plants within the Great Fen area is Woodwalton Fen NNR. The Wildlife Trust owns this site and we work in partnership with Natural England to conserve the vast array of species present here. This site still holds incredibly important populations of wetland plants in its ditches and on their banks. Over 20 years ago, fen ragwort *Senecio paludosus* was reintroduced to Woodwalton Fen. This site now holds c.95% of the GB population of this critically rare species which is only found on one other site in Great Britain (Stroh et al., 2014).

Halting the declines in wildlife are no longer enough, a nature recovery network needs to be established. Since 2001, the Wildlife Trust's Great Fen project has been restoring vast areas of fenland, including large expanses (over 15km) of drainage channel habitat. We have also been managing the land more sympathetically, reducing agrochemical inputs into

the water. Monitoring of the ditches has occurred since the start of the Great Fen Project. Every year considerable lengths of the ditches are surveyed, focussing on the plants present in the water and on the banks. These surveys are showing that there has been an increase in the number of plants colonising the ditches, indicating an increase in water quality.



The carnivorous greater bladderwort *Utricularia vulgaris* is just one of the uncommon plants that are now flourishing in the restored ditches of the Great Fen. Photo © Henry Stanier.

Landscape-scale conservation

The Great Fen Project is an example of how well landscape-scale conservation can work. During the 17th Century, the fens of Eastern England were drained to create peat-rich farmland. This resulted in 99% of the wild fen being destroyed. Woodwalton Fen and Holme Fen are two of the last areas that remained, but they were too small and isolated to continue to support the special fenland wildlife that had survived.

In 2001, five organisations including the Wildlife Trust BCN, came together to set out a vision for the Great Fen. The aim was to provide a more sustainable future for the area. This ambitious project aimed to connect existing habitats through habitat creation and restoration, bringing benefits

to wildlife and people. The project received the largest ever grant for the natural environment awarded by the National Heritage Lottery Fund. Since then, the project has achieved even better than anticipated positive outcomes for wildlife, with species lost from the area now thriving.

Nature is back on the map and local communities are engaged with the landscape around them. Landscape-scale conservation work is at the heart of what we do as an organisation and through partnership working, we can reverse the declines in wildlife in our area.

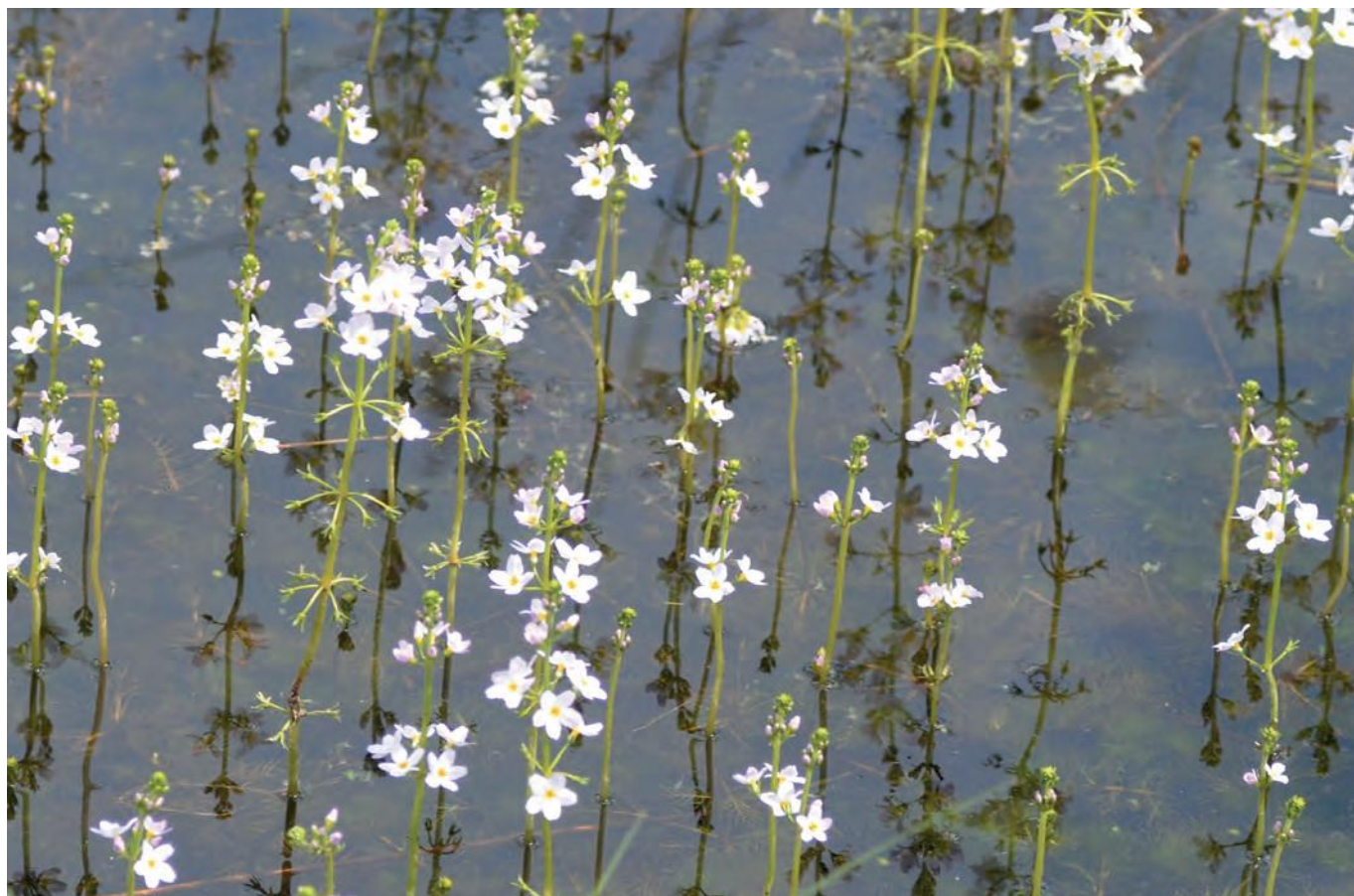


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greatfen.org.uk

Summary

The fens are a very special place for plants. The ditches and associated banks are of particular importance and support unique botanical assemblages. This in turn supports special invertebrates and other organisms. Restoring ditches is just one of the many aims of the Great Fen Project, delivering a living landscape for both wildlife and people.

The water violet *Hottonia palustris* is another special aquatic plant; it produces beautiful spikes of flowers which emerge from the water. This species is now fairly common in some areas of the Great Fen. Photo © Ryan Clark



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References

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