

Putting ditches back on the map

The importance of Fenland ditches for biodiversity

The Fens were formerly England's largest wetland, but the remaining 1% of wetland habitat is now fragmented within the country's most important agricultural landscape.

Criss-crossing this arable landscape are 26,978 kilometres of rivers, drains and ditches and whose flood defence, drainage, irrigation and navigation functions are well known. However, many of the drains/ditches have the potential to provide important wildlife refuges and corridors and to connect the remaining fragmented habitats. The idea of increasing connectivity within a landscape has become increasingly recognised as a way of ensuring more biodiversity resilience (Lawton- *Making space for nature*. 2010). Not only can ditches help to connect core areas of high biodiversity but they can also be important in their own right as a wildlife resource.



Recent evidence has shown that ditches within the Fens hold some of the best and most precious freshwater habitats and species in England such as Tubular Water-dropwort (*Oenanthe fistulosa*). Together with high densities of birds, stronghold for water voles, good amphibian populations and internationally important Spined Loach populations the Fens as a resource is comparable to more well-known wildlife rich areas such as the Broads.

A survey of 175 ditches in the Ouse Washes Landscape Partnership scheme during 2013-2014 found the following species outside known conservation sites:

- **118 bank plant species**
- **120 drain plant species**
 - 1 Endangered
 - 5 Vulnerable
 - 2 Near threatened
 - 3 Nationally scarce
- **122 water beetle species**
 - 1 Vulnerable
 - 4 Near threatened
 - 18 Nationally scarce

Ditch Biodiversity

The recent Fens Biodiversity Audit (2012) has confirmed that ditches are important for 200 priority species (include many Biodiversity Action Plan Species). At least 13 of the species are 'fen specialists' and are especially important because if these species are lost from the Fens they will be lost from the whole of the UK.

Recent ditch surveys, including work undertaken as part of the Heritage Lottery Fund grant-aided Ouse Washes Landscape Partnership scheme (results shown to the left) and an aquatic plants survey in the southern Lincolnshire Fens found many nationally and internationally notable species.

The biodiversity of drainage channels in the Fens is determined by a combination of environmental factors, which may include ditch water quality, adjacent land-use, soil type, channel size, proximity to the edge of the Fen basin or to a Fen island, and proximity to upwelling groundwater as well as how the ditches are physically managed.

The need for more surveying

Ditches have the potential to provide greater ecological connectivity between areas of higher biodiversity but we are unable to manage this resource in the best way if we do not know where their important habitat and species actually exists and what management is needed.

Most previous interest in ditches has focused on grazing marshes and within designated wildlife sites and intensively agricultural areas such as the Fens has only recently been considered a priority. Although surveying work is taking place more work is still needed especially to locate ditches of particular biodiversity interest.



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Eubrychius velutus

This water-milfoil weevil was found in the recent Ouse Washes Landscape Partnership Scheme survey.



The weevil can fly but it is actually more completely aquatic than most water beetles, spending its entire life-cycle (egg-larva-pupa-adult) on the submerged foliage of water mil-foil (an aquatic plant). Almost all 'proper' water beetles normally at least pupate out of water.

Outside the core Fenland sites such as Wicken Fen, Woodwalton Fen, Nene/Ouse Washes and Baston Fen there are gaps in the information available i.e. within Cambridgeshire & Lincolnshire nearly five hundred 1 km squares have no species records of any description let alone aquatic species that are more difficult to identify and some of the existing data is at least 25 years old.

Additional surveying will locate and help to better manage wildlife rich ditches and their important species. This in turn will maintain the Fens wildlife for the long term future and help acknowledge their value fully.



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Ouse Washes
The Heart of the Fens