



Environment: habitat and conservation

The Wetlands of Wicken Fen

Voice Over

The wetlands of Wicken Fen, Britain's oldest nature reserve. Some seven thousand different species of mammals, birds, plants, insects and other invertebrates have been recorded here, making this one of the most biologically diverse places in the UK. Why is Wicken Fen so rich in species? What is the relationship between habitat diversity and species diversity? And what role does conservation play in promoting biodiversity at this very special reserve? Wicken Fen, this is one of the last surviving fens in Western Europe. For much of the year this low-lying land is waterlogged, creating the unique fen environment of waterways, marshes, meadows, and woodland. A remnant of the great fen that once covered six and a half thousand square kilometres; Wicken Fen is situated in Eastern England, just below The Wash, in the county of Cambridgeshire. Today 99.9% of what was the Great Fen has been replaced by farmland, and Woodwalton, Holme, Chippenham and Wicken are the only remaining areas of fen. Wicken Fen, though it covers less than four square kilometres, is now the largest fen in the region. A nature reserve for just over one hundred years, the fen is home to a tremendous diversity of species. Near the woods a herd of deer, one of the fen's twenty-nine mammal species, graze the scrub. Among the grasses and wildflowers of the fen meadows, Ringlet butterflies flutter, one of a thousand species of butterfly and moth recorded here. There are two hundred species of bird on the fen, including Reed Warbler. Counting all of the different species of Wicken Fen, including animals, plants and fungi, is one way of determining its level of biodiversity.

Joanna Freeland, Open University

Biodiversity is a contraction of the terms biological and diversity, and it basically just refers to the number of species, and the number of individuals within each species, living within a particular place and a particular time. The easiest way to measure biodiversity is just to go out and count, first of all how many species there are, and second how many individuals there are within these species.

Voice Over

But biodiversity is more complex than just a headcount. It's influenced by a number of factors. One of these is the range of habitats within an area. A habitat is an environment in which a species, be it plant or animal, can live.

Joanna Freeland, Open University

Within the UK Wicken Fen would definitely be considered to be a biodiversity hotspot. There's an estimated seven thousand species of insects, plants, mammals, all other different types of taxa at Wicken Fen and, of course, going along with that there's a huge range of different types of habitats.

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The open water is just one of the many habitats at Wicken, each with its own characteristic species. Because Wicken is a fen, its multiplicity of habitats depends in part on moisture levels. The wettest areas are the waterways, ditches and ponds; these contain aquatic plant species, like water lilies and pond weeds. Adjacent to these areas are shallower waters which are suitable for reeds. In areas where these waters dry in summer fields of sedge dominate. Drier again are the fen meadows which are home to wild flowers and grasses. Drier areas may also be covered by woodland and bushes like birch and gelder rose. In terms of biodiversity, habitat and species are closely linked to each other.

Joanna Freeland, Open University

The more habitats that you have within an area the more species, as a rule, you will find within that area. That is because for the first part habitats are defined to a fairly large extent by the species living within them.