

## Nature Notes 9: The Valley Bottom Fen



*Uppgate Common*

At the far east end of Uppgate Common is a piece of wet marshy ground widely regarded as being “the jewel in the crown” in relation to conservation value. So what is special about this marsh compared with many other pieces of soggy ground? Technically it is not just a marsh or bog but “a valley bottom fen” of which there are only twenty seven in the whole of Great Britain and only another twelve on mainland Europe. Swannington therefore contains approximately **one fortieth of the valley bottom fens on the whole planet.**

No individual species within the fen is as rare as this combination of species. Individually they can all be found in other wet plant communities as well as fens.

What makes the **valley bottom fen** so special is that it is not just one plant community, it is a mosaic of sixteen different plant communities, responding to differences in the height of the soil relative to the water table and differences in pH caused by variation in how deep the underlying chalk is.

The result is that there is an association of plants here in this fen that is found only very rarely elsewhere. Characteristic species include the bog bean, with leaves that look quite similar to those of the quite unrelated broad bean but with pyramids of beautiful delicate frilly white flowers fringed with pink.



*Bog Bean*



*Marsh Cinquefoil*

Common cinquefoil is a small creeping plant with leaves divided into five parts and a small flower with yellow petals. Marsh cinquefoil, one of the most spectacular flowering plants in the fen, is a close but larger relative, with similarly divided leaves but with deep red flowers.

An even larger plant is a close relative of the common garden dock: the great water dock with spectacular flower stems growing up to 2- 3 m high and long spear shaped leaves, on which the caterpillars of the water ermine moth feed.

By the late 1970s the valley bottom fen had almost entirely disappeared from the common because alder trees had invaded the whole of the wet area and shaded out the plants in the ground layer. The common was on the verge of being de-notified as a Site of Special Scientific Interest. The UEA conservation corps came to the rescue and ferociously attacked the invading trees, some of the logs from which were floated down the beck to be used as firewood in the village. Norfolk Wildlife Trust organised a manpower services team to continue the clearance, since when other groups of conservation volunteers have helped keep the alders at bay, as for several years did NWT’s flying flock of hardy sheep.

The most dramatic improvement resulted from damming up a channel originally formed from a collapsed water vole burrow out of which water drained into the Beck. The following year, with water retained for longer, all the special plants characteristic of the fen spread out across it to a spectacular extent. The SSSI status of Uppgate Common was firmly re- established.



*The water ermine moth (photograph by Chris Lewis)*

**Mark** (June 2017)