Chimney Meadows: a scientific study of plants

The value of a good floodplain meadow

Before the advent of artificial fertilisers, floodplain meadows were greatly valued for their high quality hay crop and the Domesday Book listed them as the most valuable land use in a Parish.

They receive regular inputs of silt deposited by floods, giving them natural fertility, and they were carefully managed by farmers as the hay produced was vital for keeping livestock over winter.

As a result of this careful management, a diverse range of flowers and grasses flourished and floodplain meadows are now highly prized for the plant community originally created by farmers.

The annual hay cut ensures that no single species becomes dominant and enables smaller species to flourish. The constantly changing water regime on a floodplain produces a range of microhabitats that many different plant species can exploit.

Chimney Meadows and the floods of 2007/2008

Many floodplain meadows suffered from the summer flood of 2007 and the subsequent wet summer of 2008, because they were too wet for a hay cut to be taken.

One outcome has been a substantial increase in coarse sedges and rushes. These species make poor quality hay and are not desired by farmers.

A study currently being carried out by the Floodplain Meadows Partnership is looking at the non-chemical control of large sedges. Early findings suggest that cutting in both May and July reduces these aggressive species. Ensuring that meadows are well drained also helps, as these species thrive under poor drainage.

A study of the plants at Chimney Meadows

The Floodplain Meadows Partnership is carrying out a survey of plants at Chimney Meadows in 2012, repeating a similar study carried out in 2004, to assess how much the plant community has changed.

Figure 1 shows the results of the survey in 2004. The red dots indicate the areas of the meadow that were then typical of species-rich floodplain meadow. The results will be used to help guide management; BBOWT are already considering an earlier hay cut and the reinstatement of old drainage channels to reduce the spread of coarser species such as sedges.

Figure 1. Results of a botanical survey of Chimney Meadows in 2004. Red dots indicate areas showing the typical species rich plant community at the time.