



Tees Valley Biodiversity Partnership

Tees Valley fen habitat survey 2010

Summary report

Introduction

In 2010 the Tees Valley Biodiversity Partnership (TVBP) commissioned the Wildflower Ark to carry out a survey of fen habitat in the Tees Valley (Darlington, Hartlepool, Middlesbrough, Stockton and Redcar and Cleveland). The project was funded by Natural England for the following purposes;

- To identify and map the extent of NVC fen/wetland habitat on Local sites
- To provide habitat data captured on GIS to an appropriate standard to allow it to be incorporated into Natural England' updates of the Habitat Inventories.

The project was completed in 2010. The data is held by the Wildflower Ark and Natural England. Below is a summary provided by Martin Allen of the Wildflower Ark.

The survey

A total of 13 different sites of herb-rich fens and bogs in the Lower Tees Valley were surveyed in summer/autumn 2010 by the Wildflower Ark. Each site was split into different plant communities (according to the National Vegetation Classification (NVC); M (mire) and S (swamp) communities only) and then every plant and moss was identified in a series of 2m by 2m squares chosen within the community. A list was made of all the plants and mosses in the community and their relative abundance. The sites were chosen from the Local Wildlife Sites list.

Results

There was a total of 10.35 ha of fen, swamp, or bog plant communities – the largest being 2.5 ha and the smallest 0.02 ha. Of the 25 separate plant communities surveyed, 17 were less than 0.5 ha. Of the 16 different communities found, the most common was M22 Blunt-flowered Rush and Marsh Thistle fen-meadow. This was also the most species-rich community, commonly having over 40 species present and was generally found on a sloping site kept moist by a spring. Next most common was M27 Meadowsweet-Wild Angelica mire which is characteristic of damp ungrazed areas on fairly nutrient-rich soil. Other NVC communities were S6, S10, S11c, S27b, S28, M5/M23, M6, M23; sometimes it was difficult to easily assign a plant community to the published accounts as some of the species were atypical. This was particularly the case with Sharp-flowered Rush replacing the absent Blunt-flowered Rush within most of the M22 communities.

Comment

Owing to the small scale of the majority of the fens and their fragmented distribution across the local landscape, there are two pressing concerns for the future of fen sites in our area; one is the effect of increasing amounts of fertiliser getting into the marshes either through more nutrient-rich

water entering the system via a spring/runoff from surrounding arable land, or simply as pollution from the rain (around 10 – 15 kg Nitrogen per hectare per year at present). More nutrients enable the larger, more robust wildflowers to grow and shade out the smaller ones. Although the effect of nutrients was only clearly damaging one site (and some mitigation had been undertaken) and only another two sites looked as if they could be deteriorating slightly, once nutrients are added to the system they are very difficult to remove.

The second is how the sites are managed. This is particularly a problem with the grazing fen communities (M22) which require regular grazing to maintain the presence of many of their smaller wildflowers. Some sites are small and either not forming a useful economic part of the present farm or are simply isolated units of land no longer part of a farm. Nutrient-rich ungrazed sites tend to favour larger more vigorous wildflowers, the smaller plants being shaded out. Half of the ten M22 stands were grazed and in good condition. Ungrazed stands can develop into M27 communities which tend to be less species-rich.

One community has changed over the last 20 years from M10 to M22 with sadly the loss of Bird's-eye Primrose at its only site within the area, although a few mosses and sedges still remain from the M10 community.

Notable plants for the Lower Tees Valley

Two new populations of Tufted-sedge (rare in the north-east) were found near Darlington, along with Tubular Water-dropwort and Skullcap both not present in the old Cleveland area. Two sites north of Wynyard had present Blunt-flowered Rush, a predominantly southern species which was thought not to grow within the old Cleveland boundary. Other plants noted that are rare in our area were Marsh Speedwell, Water-violet, and the acid bog-plant Round-leaved Sundew. Most sites had some of the scarce Marsh Valerian, Bogbean, or Marsh Cinquefoil.

17 January 2011

Tees Valley Biodiversity Partnership,

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