

Herefordshire & Worcestershire
EARTH HERITAGE TRUST



Natural History of
Whitman's Hill Quarry & Woodland

Whitman's Hill Geodiversity Discovery Venture

working to record & protect geology and landscape

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QUARRY

Before limestone extraction began, woodland covered the hillside at Whitman's Hill. When quarrying stopped in 1988, there was a large expanse of bare rock with a few pools and no vegetation. Over time, the quarry is being recolonised by plants and animals and progress has been monitored since 2005. In the nearly 20 years since quarrying ceased, colonisation has been slow. The site safety works which took place in 2006 were extensive and removed much of the ground flora. It will be interesting to monitor the recolonisation process in the years to come, particularly on the embankments of loose debris.

As the rock is Silurian limestone, the plants are mainly lime-loving *calcicoles*, but frequently, the lime in the surface gets dissolved by rain water producing more acidic conditions. This is shown by the presence of such plants as Wood Sage and Tormential, whereas Marjoram, Ploughman's-spikenard and Yellow-wort are good lime indicators. Between the limestone rocks are thin layers of volcanic ash, deposited by ancient volcanoes. These softer layers are easier for plants to recolonise as they are more nutrient-rich and hold water more efficiently.

The largest and most obvious plants to colonise the area so far are the *Buddleja* shrubs with their purple flowers and the Silver Birch trees with their distinctive bark. The perennial, Traveller's Joy, is

steadily covering the slopes with its green carpet in Spring and its fluffy seed heads in Autumn.

Plants growing on the quarry floor have to cope with many difficulties. The soil is thin, giving little room for root spread or for earthworms and other invertebrates which help with soil aeration. The plants lack shade which, coupled with poor water absorption and good drainage, mean that they have to cope with very arid conditions, especially in hot summers. Consequently, many of the plants are annuals which rely on rapid flowering and seed dispersal for their survival. Some of these have thick leaves to cope with the dry conditions or seed prolifically. Over 40 species were recorded in 2005/6 but the most common ones were Marjoram, Perforate St. John's-wort, Wood Sage, Wild Basil and Teasel. Also present were Ploughman's-spikenard, Yellow-wort, Centaury, Tormential and Blue Fleabane, whilst the Wild Strawberries seem quite at home on the higher slopes where their many tiny red fruits can be seen in June.



Most of the plants so far are puny specimens, struggling to attain height in difficult conditions. The plants trying to grow on the slopes have to contend with the same difficulties plus rainwater run-off removing the thin soil. Only after many years, with the gradual build up of soil and more invertebrate action, will conditions improve allowing further growth and plant succession.

A few butterflies have been attracted to the vegetation, especially the *Buddleja* bushes. Small Tortoiseshell, Painted Lady, Large White and Red Admiral have been observed.

The ponds are fairly shallow and alkaline, having a bottom of limy mud with negligible plant growth, apart from some Curled Pondweed in the western pond and Stonewort in several others. As the name implies, Stonewort feels gritty as it is encrusted in calcium carbonate. In view of the limited pond plant life, it would seem that the food chains must be based on bacterial decay of leaf litter blown in from the surrounding woods. As a result of this lack of food there is little aquatic animal life so far, apart from some Water boatmen, Caddis-fly, Mayfly larva and one Palmate Newt seen passing through. The reflective surface of the water attracts flying insects such as water beetles and dragonflies. However their visits are short-lived with few plants to sustain the basis for a food chain or for egg-laying platforms.

As the years go by, it will be interesting to see how the vegetation in the quarry changes and increases, encouraging a build-up of soil and being capable of sustaining further insect and animal life.

WOODLAND

The area surrounding the quarry is predominantly Ash-Oak woodland with Hazel understorey. There are also some Sycamore, Yew and both species of Chestnut. Unlike the quarry, it has not been disturbed for a very long time. It is well established woodland with the trees providing holes and niches in which invertebrates and birds can breed and over-winter. Some of the trees have been coppiced in the past for usable wood and there are several grown out coppice stools that are an interesting shape, beside the path. The presence of Yew, Spindle and Wild Service trees indicate it has ancient woodland origins. The first flowers to appear early in the year, before being shaded out by the leaf canopy, are those of Dog's Mercury which produces its small, green, male and female flowers on separate plants. Later in the spring, the woodland floor is carpeted with Bluebells, Wood Anemone and Wild Garlic and has



a patch of the rarer Herb Paris. Clumps of Primroses, Yellow Archangel, Bugle and Violets grow along the edges of the paths. Later, the wild Roses and Honeysuckle scramble through the trees to find the light. A range of fungi grow on the decaying trees and leaf litter throughout the year. The adjacent woodland on the ridge to the east towards Malvern is very rich in plants and has SSSI status.

So far 25 species of birds have been noted in the area. Nest boxes have been erected in the wood and have been well used, mainly by Blue Tits and Great Tits, also a Nuthatch successfully raised its whole brood. A Tree Creeper's nest was found but later predated before the chicks could hatch. Coal Tit, Marsh Tit, Robin and Chiffchaff are



regularly seen as well as the Long-tailed Tit, Wren and Blackcap. The Great Spotted Woodpecker can be heard drumming to attract a mate in spring and pecking to make a nest hole or find insects in decaying trees. There are often several Buzzards to be heard and seen circling overhead.

The site is potentially suitable for Dormice and they have been reported in neighbouring woodland. Boxes have been set up and are being monitored; there is already evidence of Dormouse occupation.

Hopefully the woodland of Whitman's Hill will remain undisturbed far into the future and continue to be a haven for wildlife.



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