

A Biodiversity Tour of Rhondda Cynon Taf

The south Wales Valleys support a treasure trove of biodiversity. Like all good treasure troves it had been lost and long forgotten and has only now been re-found, and like some giant archaeological dig, one discovery has led to another; one find has spurred on the finding of the next.

Local people have started to see how their valued local patch fits into a bigger context and experts have gradually realised the significance of our biodiversity. The surprise is the greater because the Valleys have been viewed as derelict and despoiled, depressed and degraded. This is surely the last place biodiversity would thrive? However, the reality is very different. With an open mind (and a little knowledge) the secret behind the success of Valleys biodiversity is obvious. Partly as result of nutrient poor but varied soils, partly because of an intense and complex topography, geomorphology and geology, partly down to our wonderful mild wet climate, partly due to traditional small farm management and the Valleys industrial legacy, and partly due to the daily interactions of people with their environment: **all of the components for a rich biodiversity are in place**. Blessed with this heady mix of conditions and circumstances, the South Wales Valleys support a range and variety of lowland and upland habitats, which is not bettered anywhere in southern Britain. **Rhondda Cynon Taf lies at the heart of the Valleys and at the heart of this wealth of biodiversity**. This is where landscape and biodiversity come together, where the views have biodiversity substance and depth. This is no shallow and brittle postcard image based on pretence and faded reputation. This is a biodiverse landscape, which is 'breath-taking', and dynamic, and integral to a unique sense of place and belonging. To prove a point let us take a quick tour of Rhondda Cynon Taf. But where should we start?

Perhaps we should begin in the high-hedged, rhos pastures of the lower Ely and Taff Valleys, and the pastures of the Upper Cynon Valley. Here internationally important communities of purple moor-grass and rush pasture are still characteristic landscape features. These **rhos pasture** flower in summer with devil's-bit scabious, meadow thistle and heath spotted orchid and host precious colonies of marsh fritillary and small pearl-bordered fritillary butterflies. No planned landscape this, ancient field patterns are marked by even more ancient hedge-banks cut from the original 'wildwood'. Dormice find a home in the **hedgerows** of hazel, oak, ash, hawthorn, willow, blackthorn, rose, dogwood, spindle and holly, and through this network of hedgerows our remnant ancient woodlands stay connected and viable.

The valley sides of the Rhondda, Cynon and Taff illustrate biodiversity connectivity beautifully. From any bus stop in Pontypridd, or Porth, or Aberdare or Mountain Ash look up at the complex of habitats which forms the valley side **ffridd**. A complex mixture of acid grassland, heath, bracken, woodland, scrub and flushes runs for mile on mile along our main valleys: interconnected in an ever-changing intricate habitat

mosaic. The ffridd is home to bluebells, lizards, slow worms, grayling butterflies and rare upland bumblebees. Bracken slopes with abundant dog violets are important habitat for fritillary butterflies including important dark green fritillary populations (and potentially the rare high brown fritillary). Now if you look closer you can see the signs of **colliery spoil**, small drift workings, egg shaped mounds, and, if you are lucky you'll find one of our remaining tip systems, constructions, which rival the Celtic Hill Forts of Dorset. Sites such as the Gelli Tips, Old Smokey, Wattstown and Dare Valley Tips tell an often hard and tragic story, but now support habitats of enormous biodiversity and cultural value. These are landforms of unique value and a living testimony to a sense of place, which is still strong in our mining valleys. Coal tips are proving particularly important for their lichen-heath communities in which heathland grows amongst white, encrusted mats of *cladonia* lichens. Some of the best examples of lichen-heath in Wales occur on old coal spoil tips in Rhondda Cynon Taf. Recent work has confirmed how important these tips are as invertebrate habitat: survey work on 5 RCT Tips has recorded 85 bee species (including scarce and rare species), this is half the known Welsh bee fauna and a third of the UK list.

From a coal tip, created in the 1890s, wander straight into an **ancient upland oak wood** where stunted welsh oaks cling to the valley side, with a carpeted groundflora of wimberry, heather, ferns, mosses and exposed slabs of pennant sandstone, with their lichen rich bedding planes. These sheep grazed woods are home to classic Welsh woodland songbirds: redstart, wood warbler and tree pipit. In the valleys bottoms **mixed deciduous woodlands** supports oak, ash, sycamore and wych elm with alder and willow on wetter ground. Here there is a rich understorey of hazel coppice and holly, and on the southern limestone dogwood, spindle, and field maple and even the occasional wayfaring tree. These woods have wonderful groundfloras with bluebell, wood anemones, violets, sanicle, wild garlic, primroses, mochatel, twayblades and toothwort. The recovery of woodland fungi and lichen communities is testimony to the clean air. Branches, bowls and twigs are cloaked in a multitude of lichens and tree fungi: rare things like willow glove and golden-eye lichen have recently been found, rare things wait to be found: these are exciting times for our local lichenologists and mycologists.

Stand on a summer's evening in the courtyard of an ancient farm, or barn, or terraced house and count the bats tumbling out of their daytime roosts. On an autumn dawn, shiver by a disused railway tunnel or mine adit and watch for swarming bats (a prelude to hibernation) – perhaps you'll be the one to discover a major bat hibernation site. RCT supports at least 13 species of bats, including rare things like barbastrelle and lesser horseshoe's. On the other end of the scale, Pontypridd is known by bat surveyors as 'Pip City', an affectionate reference to the abundance of common and soprano pipistrelle bats living in the town.

Certain habitats can be 'traced back' to the retreat of the last ice sheet 8,000 years ago. Much of our **peatbog** habitat started to form at that time, as glacial lakes,

hollows and upland plateaus gradually succeeded through fens, and swamp into peat. These quaking, shaking wonders are home to cranberry, sundews and bog asphodel which flower amongst the sphagnum peat-mosses and the tussocks of moor-grass and deer grass. These are places where the occasional snipe still breeds. Llantrisant Common, Hirwaun and Tonyrefail are particularly important areas for lowland bogs, with peat and pollen records which chart the changing face of vegetation over 8 millennia. History can be traced deep beneath 9 metres of peat, deep down to the remnant water of the lost glacial lake. Misused and misunderstood these lowland bogs have somehow survived and now efforts to conserve and restore them have begun. In the uplands our extensive blanket bogs were similarly treated, drained for pasture or afforested with sitka spruce. However now, where the wind turbines turn, you will also find extensive peatbog restoration, delivered as planning permission requirements. In the years to come there is the prospect to recover hundreds of hectares of upland peat bog, swaying in the summer breeze with hundreds of thousands of cotton-grass heads, holding atmospheric carbon, and naturally storing and controlling upland storm water to provide the 'greenest of green' flood protection for the Valley communities below. You may feel a wave of hope that perhaps we do have the capacity to learn? This is wilderness, but wilderness close to home and a biodiversity, which is largely un-chartered and unknown. While you are there, make sure to dip into a forestry plantation edge where siskin and crossbill abound, club-mosses shelter, heronries sway in western hemlocks and at summer dusks, nightjars 'churr'.

In early June take the time to visit your local **species-rich grassland**, a hay meadow or cow or pony grazed pasture: in the winter it may just look like a field but in the early summer the floristic display is proof of another nationally rare habitat. We are very lucky in Rhondda Cynon Taf to still have a superb grassland heritage, which is a vibrant part of our biodiversity fabric. Pastures and road verges are places where flower rich displays of birds-foot trefoil, black knapweed, ox-eye daisy, common-spotted orchid rough hawkbit and red clover thrive: in which common blue butterflies, mother shipton moths, grasshoppers and countless bees flit, hum and buzz. The dry grasslands of the upper valleys slopes are more acidic but just as beautiful with heath bedstraw, tormentil, greater burnet, bluebell and sheep sorrel, while on the limestone there are cowslips and bee orchids. In the autumn, on a bright sunny morning visit and look for another indicator of biodiversity wealth, the reds, oranges, yellows and purples of wax cap fungi.

On a summer's day pause and cool your feet in an upland stream, or meander along the Cynon, Rhondda, Ely or Taff. **Rivers** which forty years ago were dead and lifeless and are now healthy, biodiverse watercourses, home to multitudes of stone and mayflies, dipper, grey wagtail, brown trout and, of course, otter. All our main rivers once had floodplains. Places were winter floodwater spill, and **floodplain** grassland, woodland and wetland flourish. Pant Marsh at Talbot Green is home to species-rich grasslands and flag iris, just up the road Coedcae Marsh has sedge

beds, adder, and marsh cinquefoil. The lagoons and wet pastures of Tirfounder Fields, Aberdare supports regionally important numbers of breeding and wintering water birds, grass snake and dragonflies. These stunning landscapes hold and gently release storm water, precious wildlife refuges which save our living room carpets from flood.

On a crisp winters day take in our glacial landscapes and the cwms: birthplaces of the glaciers, which gouged and ground out the valleys. Marvel at the majesty of Cwm Parc, Cwm Saebren and Cwm Dare. These most southerly **glacial cwms** in the UK are home to peregrine falcons and stranded arctic alpine plants – flowers and ferns, which cling to the coolest, shadiest ledges and wait in hope for tundra summers to return. At the head of the Rhondda Fawr stand in the terrace streets of an alpine village called Blaenrhondda and feel the presence of Pen Pych rise above. Travel up the Rhondda Fach to the scree slopes of Cefn Craig Amos and Tarren Maerdy, where from their school desks kids from Maerdy Comp compose words and pictures from the jumble of frost, shattered sandstone on the hillside backdrop to their school.

Where industry has been cleared, experience some '**brownfield**' biodiversity. Post-industrial sites often support amazing mosaics of grassland, wetland and woodland habitats all naturally developed on apparently derelict land. These eclectic mixtures of habitats hold many a biodiversity surprise and a home to newts, frogs, dingy skipper butterflies and red-belted clearwing moths.

Whichever way you wandered, on the way home count the ferns in your neighbour's front wall, can you find the classic four of harts-tongue, maidenhair-spleenwort, rustyback and wall rue? Make a note to take more care when you next re-point your wall and try to encourage your own fern garden. At the gate pause and watch a leaf-cutter bees ferrying neatly rolled leaves to nest chambers in the drainage holes of your UVPC double-glazed windows. Look up, and marvel that your swifts in the loft and house martins under the eaves have come back to you from across the Sahara and far beyond, and a thousand places you'll never see. Feel equal pride that your year-round house sparrows can nest and 'chirrup' from your bird-friendly soffit boards. Also, with your trusty moth trap you can boast a list of 300 macro-moths in your terrace garden, 50 bee species (with a lawn full of solitary bee mounds), twenty frogs in the pond and dozens of slow worms in the compost heap. After all, biodiversity does start at home.'