

## **RELICT WOODLAND ON THE CLIFFS AND WITHIN THE WATERFALL RAVINES OF SWALEDALE**

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This is a short introduction to a programme of current fieldwork designed to record the distribution of native tree species and woodland fragments throughout the River Swale catchment, west of Richmond.

My intention is to publish a full account of the fieldwork in due course . For comparative purposes, adjacent areas within Wensleydale and the Tees-Greta Uplands (Stainmore) are also included. The area of this survey is very large, **see Location Map** which shows Upper Swaledale the first of six study areas. With few exceptions records have been confined to localities at or above the moorland edge. Woods wholly within improved pastures have been excluded. Thus, the scope has been confined to woodland localities on or clearly visible from CROW Access Land.

I have been concerned with the recording of Archaeological Landscapes throughout Wensleydale, Swaledale and the Swale-Tees/Greta Uplands (my study area) for almost 40 years and was introduced to the significance of ancient woodland in the Landscape by Andrew Fleming. It followed that no real understanding of the nature of early human activity in the Pennine Uplands (based on hunting and transhumance) was possible without consideration to the contemporary prehistoric woodland environment

My purpose in undertaking this survey is to place on record the relict woodland vegetation at the remote waterfall ravines and on the extensive limestone cliffs of Swaledale and adjacent areas. These localities can be regarded as refugia for native trees and formerly more extensive woodland worthy of record on aesthetic grounds as the final refuge of specimen trees of great age, of individual character and of many different species. Each locality has unique botanical interest with plant communities reflecting different geology, aspect, aridity, accessibility and economic or, more recently, modification from planting schemes. Each woodland locality may include specimen trees which possess an individual sculptural quality which reflects their hard and long life. Although having enjoyed a fairly intense interest in upland flora throughout my life, I am not a trained botanist and could not achieve the aims of this survey without the assistance and active participation of Linda Robinson (LR), one of

the BSBI Recorders for vc 65. LR has accompanied me on much of the fieldwork and all the credit for the botanical records must be assigned to her.

The survival of native woodland on the limestone scars and in the waterfall ravines of Wensleydale differs from that of Swaledale and today does not include juniper and only very rarely, yew. Aspen is common at lower elevations only. The vegetation of Stainmore does resemble that of Upper Swaledale except for the absence of juniper. Plants, including trees, recorded at very many of the sites (**marked \* on Table 1**) have been listed by LR. Mosses and lichens have not been recorded with the exception of the non-flowering flora recorded by Dr Allan Pentecost on the exceptional tufa formation at the head of the ravine at How Edge Scars.

**Preliminary conclusions on the data:**

1. Limestone ashwood with and without yew is limited to localities, on or below the top of the Main Limestone. **See Photograph 1: Cotterby Scar, NY880 170, 360m.** Limestone Ashwood with aspen on the Main Limestone.
2. Aspen has been recorded in the Swale Catchment above the confluence of Arkle Beck at a total of more than 20 sites. Aspen records are usually for cloned colonies where old 'mother' trees and three or four generations of young ramets springing from her roots are present. Regeneration of aspen is only possible when rabbit damage is minimal. Further work is necessary to determine whether these colonies are clones and of single sex. **See Photograph 2: Birkdale Common. Little Sleddale, NY830019, 435m.** Aspen clones in ravine.  
Elsewhere, aspen has been recognised at Sleightholme Beck on Stainmore, on Deepdale Beck and is widespread throughout UpperTeesdale and also in Lower Wensleydale.
3. Juniper has been recognised to date at more than 40 localities in the Swale Catchment upstream of Ellerton Scar. The prostrate form of Juniper is thought to be present at all or most of the localities.
5. As elsewhere throughout the Uplands, the junipers which survive in Swaledale are usually single bushes or isolated populations of less than 4 bushes at any one Location. These junipers are not viable and, sadly recent rabbit ring barking has led to severe damage or the death of very many isolated junipers. **See Photograph 3. Birkdale Common. Little Sleddale. Isolated Juniper at falls.**

6. Juniper has not yet been found on Stainmore within the Greta Catchment but has recently been identified by LR together with aspen in Baldersdale. Both aspen and juniper are widespread elsewhere in Upper Teesdale.

7. No recent record of juniper in Wensleydale exists, (Millward, 1988).

8. Yews are perhaps the most impressive of the relict woodland trees of the limestone scars of Swaledale. The similar limestone cliffs of Wensleydale are devoid of yews, most of the high limestone Scars of Wensleydale are barren or of any woodland vegetation for that matter.

The cliff yews of Swaledale are of exceptional value for every reason, both as surviving specimen trees of great beauty and as a resource for future research. Many will, I am certain prove to be of immense age. **See Photograph 4. Arkengarthdale. Fell End. NZ025023, 400m. Cliff Yews.**

It has become apparent that the cliff yews may be cloned populations.

9. Discussion of aspen, juniper and yew should not deflect attention or detract from the significant populations of trees of other species - ash, wych elm, bird cherry, gean, hazel, rose spp rowan, rare rock whitebeam, sallows and other willow species, all present on and below the limestone cliffs and within the waterfall ravines of Swaledale.

10. The risk that yews, alders, elms and other trees will suddenly succumb to virus disease is ever present. For example a large population of yews at West Applegarth includes a significant and growing number of recently dead trees.

This dire situation needs to be monitored under a programme of research from a British University, at local level.

11. Finally, and perhaps most significantly, I shall draw attention to the existence of a extensive and healthy population of large leafed lime trees, *Tilia platyphyllos*, mostly managed coppice but also self coppiced ancient trees on the face and top edge of sheer limestone cliffs. in the woods of Lower Swaledale. This population is scattered for upwards of 2km on the south facing cliffs eastward from West Applegarth, beyond Willance's Leap to Whitecliffe Woods. The presence of large leafed limes, *Tilia platyphyllos* in Swaledale, at the northern limit for this species in Britain was, I believe, first recognised by Professor C.D. Pigott.

#### **Future contamination from planting schemes.**

I know that I shall be treading on toes in expressing my view that the planting of inappropriate 'berried' shrubs (ie hawthorn) in vast numbers above sheltered ravines

with native woodland which includes blackthorn but largely excludes hawthorn will have long term effects which are not understood. The effects of this extensive planting on the native woodlands nearby are uncertain.

As an example of the unforeseen consequences of plantation, may I refer the reader to the limestone cliff above Hooker Mill on the west facing slopes of Kisdon Hill where a fine population of aspen, juniper (prostrate form) and ancient yews is now (hopelessly) competing for space with a flourishing population of self seeded larch which originates from a small mature plantation located below the cliff. **See photo 5 Kisdon Hill Hooker Mill Scar. SE894997, 410m. Limestone Cliff with Aspen , Juniper (?prostrate form), Yew and self seeded Larch.** The larch plantation was planted a century ago for the best of landscape reasons when the presence of the aspen juniper and yew on the cliff were probably not recognised.

### **The Woodland Localities**

#### **Generally**

**Detailed accounts of the woodland fragments in their landscape setting and including photographic portraits of all woodland localities are available on the Swaledale and Arkengarthdale Archaeological Society (SWAAG) website:**

[http://www.swaag.org/DB\\_SWP\\_GeoArea1.php](http://www.swaag.org/DB_SWP_GeoArea1.php)

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