

SOMERSET RARE PLANTS GROUP

Recording all plants growing wild in Somerset, not just the rarities



Meeting Report



Dryopteris cambrensis. Photo: Fred Rumsey

Saturday 9th September 2023

Fern Workshop at Horner Wood, Exmoor (VC5)

Leader: Fred Rumsey

Report: Fred Rumsey

On a splendidly sunny Exmoor morning, fifteen members assembled in the NT car park at Horner Wood for the Fern Workshop. By way of an introduction the walls as we left the site immediately gave us an array of *Aspleniums*: Maidenhair Spleenwort (*A. trichomanes* subsp. *quadrivalens*), Wall Rue (*A. ruta-muraria*) and Black Spleenwort (*A. adiantum-nigrum*), together the commonest of our wall fern species. David Gibbs, intrepidly exploring behind the loos, found an impressive stand of Rusty-back fern (*Asplenium ceterach*), otherwise only seen as a single individual on the front wall of the nearby tea-rooms. As we entered the woodland and approached the bridge over the stream the distinctive entire fronds of

Hart's-tongue fern (*Asplenium scolopendrium*) were found – more base-loving, it is uncommon in these acidic woodlands. Interestingly these areas closer to habitation were almost the only sites for the common Male Fern (*Dryopteris filix-mas*), which in many areas is perhaps the most frequent woodland fern.



Entering the woodland and the identification of the features of our commonest species was tackled Photo © Cath Mowatt

It is true that entering the woodlands here the chief delights and also trickiest difficulties are provided by the genus *Dryopteris*, many species, variants, and hybrids of which abound and which the leader admitted still left him often baffled!



Dryopteris paleaceolobata showing the characteristic crimping of the pinnules. Photo © Fred Rumsey



The fronds of *D. cambrensis* and *D. paleaceolobata* show many similarities – the former with more ladder like pinnae, somewhat U shaped in cross section. Photo © Fred Rumsey

The greatest difficulty lay in differentiating Greater Scaly Male-fern (*Dryopteris paleaceolobata* = *D. affinis* subsp. *paleaceolobata*) from Welsh Scaly Male-fern (*D. cambrensis*), which was a particular problem as both occur here and rather more frequently than in much of the rest of the county! The definitive method is by measuring spores, or the

length of stomatal guard cells, as these are significantly smaller in the diploid *paleaceolobata* than in the triploid *cambrensis*. The rachis scales subtly differ in colour but in *cambrensis* vary much more in size and shape. The indusia, always a good character to consult when trying to identify these Male-ferns, are actually quite similar in this pair. Characters which sound so clear-cut and foolproof in field-guides all too often are difficult to demonstrate in real plants which have clearly never read the books! Because of the apomictic nature of the scaly-male ferns differences and evolution tends to occur through mutation. In this way new distinct forms may develop, the novel plants produced then able to create copies of themselves both locally, but also because of the dispersibility of spores further afield.

Over most of the county the two commonest scaly-male ferns are the big, very scaly, winter-green diploid Golden-scaled Male-fern (*D. affinis*) and the more slender-stalked, less scaly triploid Borrer's Scaly Male-fern (*D. borrieri*), whose fronds are little more frost hardy than those of the common Male fern (*D. filix-mas*). We could recognise exemplars of both these species, but each seemed to exist chiefly as local forms which differed somewhat from textbook typical. The more impressed veins on glossier pinnules, thicker more persistent indusia and scaler thicker stipes discriminated *affinis*, while the thinner textured often square ended pinnules on less even length pinnae, less persistent upswept indusia and narrower, less scaly stipes signalled *borrieri*.



Fern Smut (*Psychoides filicivora*) on *Dryopteris borrieri*. Photo © David Gibbs

David Gibbs was able to show us some associated organisms including a fern smut affecting the sporangia.

One fern plant stood out because of its considerable size, always a useful pointer to hybridity. An earlier recce had established that the spores being produced by this plant were largely misshapen and abortive. Although surrounded by plants of *borreri* the general appearance of this plant led to the belief that it was a hybrid between *D. filix-mas* and *D. affinis* (= *D. x complexa*), although neither parent was closely adjacent.



Fred overtopped by a large *Dryopteris x complexa* showing typical hybrid vigour. Photo© Cath Mowatt



Dryopteris aemula. Photo © Fred Rumsey

For me though the fern highlight of Horner is another *Dryopteris*, Hay-Scented Buckler-fern (*D. aemula*). This too poses identification challenges for those not yet familiar with its characteristic crinkle and colours. A speciality of the warmer parts of the wet west, with outliers in the Weald, this attractive, crisped-fronded fern is, like the Bluebell, something of a British and Irish treasure. Here in Horner, one doesn't have to venture too far along the paths into the wood to start to find stands of this plant on the steep trackside banks by and cresting rocks in runnels in the swampy areas.

While in the swamp a brief diversion from the fern theme was made to show the group the splendid leafy liverwort *Trichocolea tomentella* in a typical habitat.



Handsome Woolly-wort (*Trichocolea tomentella*). Photo© David Gibbs

Time was also taken to enjoy some of the other acid loving plants which are more frequent in the west and then found again on the Greensands of the far east. Among these were the declining hemiparasite Common Cow-wheat (*Melampyrum pratense*), in the more usual pale flowered form and not the golden-yellow, smaller flowered var. *hians* which can be a feature of oceanic oak woodlands, as at Watersmeet.



Common Cow-wheat. Photo ©Fred Rumsey

Trackside banks also had Trailing St. John's-wort (*Hypericum humifusum*), growing as it so often does with its congener Slender St. John's-wort (*Hypericum pulchrum*). This hadn't been recorded in the tetrad since before 2000.



Trailing St. John's-wort (*Hypericum humifusum*). Photo © Fred Rumsey

The group eventually reached a rather splendid bank above the track upon which we could finally admire the Lemon-scented Fern (*Oreopteris limbosperma*). This fern of damp acidic soils is not uncommon on Exmoor, the Quantocks, or the Blackdowns, but in VC6 it has a very restricted distribution and is Scarce, found on the acidic parts of the Mendips and on the Lower Greensand of the far eastern edge. While still

a common species in upland Britain it has declined tremendously in lowland England.

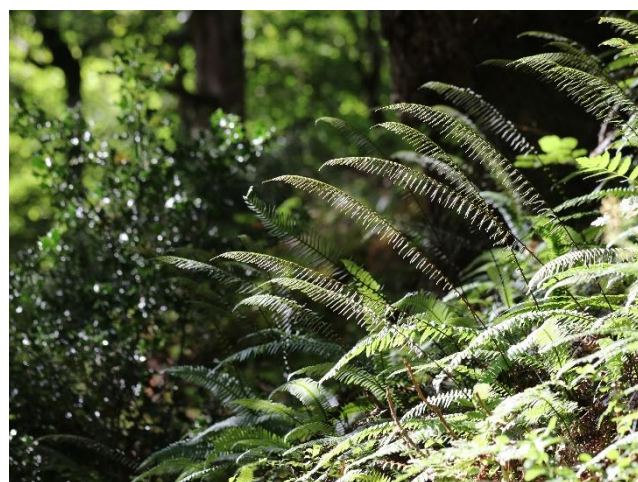


Oreopteris limbosperma characterised by the yellowish rachis, progressively smaller pinnae to the frond base and the apparently naked sori close to the pinnule margins. Photo© Fred Rumsey

Time had run out before we could get to the site where Graham had found Killarney Fern (*Trichomanes speciosum*) gametophytes in 2020; this was the only fern previously recorded we failed to see.

The day was concluded with the remaining members taking well deserved tea and cake at the one of the two tea-rooms adjacent to the carpark which was still serving. The lateness of the hour a testament to the protracted efforts of the group. Our last good-byes were made following conversations over the identity of a very fine tree in the NT carpark with pleasantly aromatic fruit. This was later confirmed as Black walnut (*Juglans nigra*).

During the day, we had seen 20 species of fern and one hybrid, the latter new to the tetrad. Rather fewer than on our 2022 workshop at Priddy but still a creditable haul.



Hard Fern (*Blechnum spicant*) . Photo© Fred Rumsey