



Botanical
Newsletter for
South Northumberland

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Do you recognise the subject of the title photograph? If so, and you live in Northumberland, you probably know where the photograph was taken. Yes, on the vertical cliffs beside Hareshaw Linn waterfall above Bellingham. This is the only known site in the county for *Asplenium trichomanes* subsp. *pachyrhachis*, and at the time of the New Atlas in 2002 it was one of only eight sites for this distinctive subspecies of Maidenhair Spleenwort in the country. Twenty years ago, just after it was first discovered, the population was quite small, probably less than 50 plants. I am happy to say that it has since flourished and spread there, as has the scarce grass *Festuca altissima* which accompanies it. This subspecies is said to be a specialist of damp shady vertical limestone, although the rock at Hareshaw Linn is a presumably calcareous sandstone. It would certainly be worth searching similar places in the county for other stations.

Some under-recorded small trees

Betula pubescens subsp. *tortuosa*

There is only a single record for this upland, northern variant of Downy Birch in Northumberland. This was made by George Swan 25 years ago and surprisingly for a first record was unlocalised. Clive Stace considers this subspecies 'rather ill-defined', but we are now being encouraged to look for it. Certainly, it might be expected to occur in our upland areas at over 350 m altitude. Mature plants should be shrubby and to have leaves not exceeding 3 cm in length. Perhaps diagnosis should only be attempted on fruiting material which can then be considered mature, in which case the wings of the fruit should not exceed the width of the body of the fruit.

Salix caprea subsp. *sphacelata*

Here we have another dwarf upland variant of a common and familiar species. Subspecies *sphacelata* of the Goat Willow is a shrub rather than a tree with smaller, hairier leaves which do not exceed 7 x 4.5 cm and which have an entire margin (or nearly so). The underside of the leaf is persistently appressed hairy. The only native record was made from rocky ground beside the N Tyne at Coldwell (for more on Coldwell, see later), but it is almost certainly more widespread in this habitat and should be sought on the South

Tyne and Coquet. Interestingly, it has now been recorded on three occasions from urban planting schemes in Tyneside. Possibly this material is of Scandinavian origin and has been selected horticulturally for its neat and slow-growing habit.

Salix x fragilis

It has turned out that our familiar Crack Willow is a hybrid between *Salix alba* and an Asian species called *S. euxina* (the Euxine was a classical name for the Black Sea). This hybrid is now correctly called *S. x fragilis*. As *S. euxina* is also found as a planted tree, always as a male in this country, as is *S. x alopecuroides* (*S. x fragilis* x *S. triandra*), it is necessary to distinguish between them. Most plants in Northumberland will be *S. x fragilis*, either as the Bedford Willow, v. *russelliana* (always female, with uneven leaf teeth), v. *furcata* (always male with broader leaves), or v. *fragilis*. The latter has even remote teeth on the leaves. All these have leaves and twigs with some hairs when young (use a lens!). *S. euxina* is always glabrous and has glossy very serrate leaves, glaucous below.

Rosa caesia

In some parts of our county roses can be tricky to determine due to hybridity, but over large areas there are only a few hedgerow roses which are easily identified. In most areas the commonest species is *Rosa canina* which has glabrous leaves, strongly hooked prickles and sepals which reflex in fruit. We only have one other rose with hooked prickles. This is *R. caesia*, in which the fruiting sepals are erect. It is locally common in the county, particularly in upland areas, but is greatly overlooked. Our commoner form is the northern subspecies *vosagiaca*, with glabrous leaves which are very bluish beneath and glaucous stems, but subsp. *caesia* with leaves which are greener and hairy beneath also occurs.

Some other possible targets for 2017

Valeriana officinalis subspecies.

Common Valerian is a very variable plant with many chromosome races and considerable ecological variation. Continental botanists have recognised these races for many years, but it is only in the last few years that the treatment by Sell & Murrell has caught peoples' attention. Essentially we have two very different forms in Britain, and in Northumberland we might have both. The tall marsh plant with a large end-lobe to the leaf and fewer than 15 leaflets is subsp. *sambucifolia*. Doubtless this is our commonest form. However, we should also look out for subsp. *collina* on drier, more calcareous sites. This has more than 15 leaflets and the end-lobe is no larger than the others. It seems not yet to have been recorded from the county.

Dryopteris cambrensis

For some years, we have become accustomed to treating the various segregates of False Male-fern at specific level. All are probably best diagnosed by having a black mark at the base of the pinna underneath, but they have a different look to the male fern with scallier stipes and more erect, 'shuttlecock' leaves. The most distinctive is *D. affinis* with very rusty stipes and dark shiny flat leaves. The duller *D. borneri* is also easy to tell once the very square ends to the pinnules are recognised. The third species we have, *D. cambrensis* is much less frequently recorded, and has been thought much rarer in our region. However, it is the least distinctive and it does seem to be quite widespread, at least in our western woods. There are three features that should be looked for:

- Fronds are not flat but are slightly folded, so v-shaped in section (as is male fern)
- Pinnules have few very blunt teeth at the rounded apex
- The lower pinnule of the basal pair on a pinna is elongated and deflexed so that it overlaps the stipe

This final feature is distinctive, and although it does occur in other species, it is less obvious in them.

Agrostis gigantea

The so-called Black Bent is in my experience very under-recorded in south Northumberland. It is an introduced species which is often found in rather unremarkable lowland sites such as the rides of plantations and secondary or urban woodland, but also sheltered road verges etc.. As the name suggests this is a large bent in which the panicle branches stand out horizontally which is the best way of separating it from *A. stolonifera*, Creeping Bent, which also has a long acute ligule. Also, the stem leaves are wide, at least 5 mm in width. It is an unremarkable species of late summer which is worth looking out for.

A spectacular new site for *Gagea lutea*.

This has been an exceptional year for the flowering of Yellow star-of-Bethlehem which has prospered at well-known sites such as Howford Banks, Plessey Woods and near Felton. A good new site has also been reported from the Tyne riverside east of Bywell. However, chasing up an old record of George Swan from the 1970's led to the discovery of a most spectacular population which must be as impressive as any in the country. This is a steep woodland bank above *the* North Tyne at Coldwell, below a meadow also known for the occurrence of *Alchemilla micans*. Here there are several dense patches of the gagea each of which is several metres across and together stretch over 80 m or more. In these patches the plant is dominant, usually to the exclusion of other species, and there must be many thousands of bulbs. It flowers late here, and in the first week of April I counted 67 flowering stems, most of which bore 5-10 flowers, although there were probably more.



In fact it is unclear whether this was Swan's original site as Quentin Groom had previously checked out this record, finding a few plants lower down, by the river.

As always, contributions to this newsletter are always welcome and should be sent to John Richards at hightreesgarden@btinternet.com and all records to him or to ggroom@botanicalkeys.co.uk. Remember that recording cards can be downloaded from the Flora North-east website which is also a magnificent resource with 2 km maps for all species, and Rare Plant Registers for the relevant vice-counties. If you are

tempted to help with recording towards the 2020 Atlas project, it might help to know which tetrads are poorly recorded and the following map may help you to choose a poorly-known area of the county.

