

Dwarf Willow - *Salix herbacea* in the Outer Hebrides

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The Outer Hebrides have some high hills, but a relatively impoverished alpine flora compared with mainland Scotland, which has both higher altitude land and a much wider range of geology. Amongst the species which are found mainly in the hills, I always look forward to finding Dwarf Willow, *Salix herbacea*. It has a characteristic habitat on the highest hills, occurring on the plateaux, generally where the rock is breaking through the surface or where there is sparse vegetation on rocky substrates, as diminutive creeping plants with small, round leaves. Indeed, the round leaves mean that it doesn't look as if it should be a willow at all, but in the spring it obviously has catkins – male and female on separate plants as in almost all willows – though as diminutive as the rest of the plant.



Salix herbacea with female catkins (left) and male catkins (right).
Meabhal, S. Harris (NG0291), 24 April 2005. Photograph © Paul A Smith

Salix herbacea is also found on cliffs and ledges, where it can form much more luxuriant plants – up to maybe 15cm high! It is generally glabrous, but occasional plants have quite long hairs; both types occur together above Sron Smearasmal. N. Harris (NB08900800).

A curiosity of *Salix herbacea*'s habitat is that it seems to like exposure, much more critically than altitude. No matter how high the hill that you are walking up, if it's there it will be on or near the summit. If it's growing on the cliffs and ledges then it may descend a bit further on the north side of the hill, and if there is an exposed ridge then that too may support it. It clearly does not compete well, and occurs only where there is considerable exposure to reduce competition from other species, and *Salix herbacea* is not terribly picky about how high the summits are. It has long been known from the Harris hills, where it frequents the higher tops, but there are old records from relatively low altitudes on Crogearraidh Mor on N. Uist (Clark 1939) at 150 m

and (perhaps less surprisingly) *Hirta* (first by Barrington 1886, with remarkably few records since). In the course of concentrated recording for a new flora, it has turned up in many places, some of them at quite low altitudes, for example on Hairtebreac at the SE tip of S. Uist (NF8214), at 170 m, and on Beinn a' Charnan, Lewis (NB2018) at 240m. It even occurs among the Lewis peatlands, on the north slopes of the summit of Beinn Mholach (NB3538) at around 280 m. But all of these are on or within a few metres of the summit.



Salix herbacea with fungus, Sgaoth Aird summit plateau (NB1604), N. Harris.
Photograph © Paul A Smith

Salix herbacea is also part of quite an interesting community. Wilmott (1948) noted its close association with *Hymenophyllum wilsonii* on Suaineabhal (NB0730). Being a 'tree' it has its own mycorrhizal fungi, and it can be worth a look around a summit plateau to see what is growing (see above).

It also has quite a good suite of parasitic fungi. It has its own rust, *Melampsora arctica*. Though willow rusts are generally a difficult group, this one is easy – both the host and the appearance of the sori on the top of the leaf give it away. Tar-spot fungus, *Rhytisma salicinum* (which occurs on many species of willow) is particularly conspicuous when infecting *Salix herbacea*, producing shiny black spots, which are white inside when cut. Both occurred together on the specimen pictured below, one of the more luxuriant cliff specimens, this one from Stulabhal, N. Harris



Salix herbacea on the summit cliffs of Stulabhal, N. Harris, 2 August 2019 with *Rhytisma salicinum* (the glossy black swellings) and the orange, powdery uredinia of *Melampsora arctica*.
Photograph © Paul A Smith

Salix herbacea may be Dwarf Willow, but it is by no means the least interesting. Look out for it on summits above 150 m; and if you find it, take some time to examine it closely and see what else might be there too.

References

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