

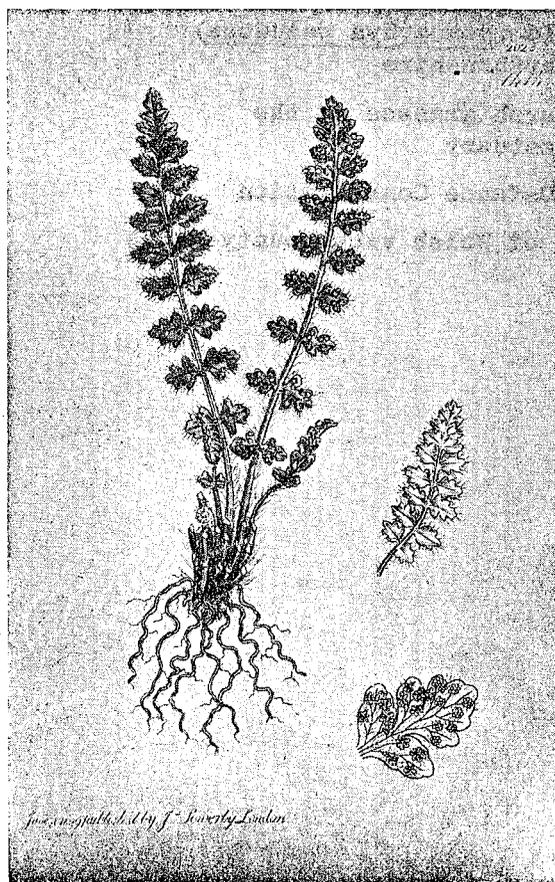
BOTANICAL SOCIETY OF THE BRITISH ISLES

WELSH BULLETIN

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'Alpine Woodsia,' Sowerby's English Botany ed. 1., 1809

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The bog orchid (*Hammarbya paludosa*) in Carmarthenshire

David Davies

On the 8th July, 1978, I acted as leader of a party visiting the Twrch valley. We set off upstream from a bridge (Map ref. SN 755 126) over the river Twrch near the village of Ystradowen, Cwallynfell, and followed the public footpath along the east bank of the river, in Powys (the river here forms the Dyfed/Powys boundary). On the coal tips alongside the path some of the plants noted included :

Birch (*Betula pubescens*)
Cudweed (*Logfia minima*, syn. *Filago minima*)
Hawkbit (*Leontodon taraxacoides*)
Bird's-foot Trefoil (*Lotus corniculatus*)
Common Sallow (*Salix cinerea* subsp. *oleifolia*, syn. *S. atrocinnerea*)
Wood Groundsel (*Senecio sylvaticus*)
Common Wild Thyme (*Thymus praecox* subsp. *arcticus*, syn. *T. drucei*)
Red Clover (*Trifolium pratense*)
White Clover (*T. repens*)

Beneath the trees on the river bank were noted :

Broad Helleborine (*Epipactis helleborine*)
Great Horsetail (*Equisetum telmateia*)
Common Cow-wheat (*Melampyrum pratense*)

After crossing the wooden footbridge into Dyfed, a single young Aspen (*Populus tremula*) was seen growing on the river bank near the chimney of an old works now in ruins. The river upstream of this old industrial site passes through a deep gorge. In the gorge the following plants were noted :

Green Spleenwort (*Asplenium viride*)
Lady Fern (*Athyrium filix-femina*)
Male Fern (*Dryopteris pseudo-mas*)
Tunbridge Filmy Fern (*Hymenophyllum tunbrigense*)
Royal Fern (*Osmunda regalis*)
Beech Fern (*Phegopteris connectilis*)
Hard Shield Fern (*Polystichum aculeatum*)
Globe Flower (*Trollius europaeus*)

(I am grateful to Mr. S.G. Harrison for the identification of the ferns)

In the very wet areas lying between the gorge and Ffrydiau Twrch the following plants were noted :

Bog Pimpernel (*Anagallis tenella*)
Heather (*Calluna vulgaris*)
Low Sedge (*Carex demissa*)

Sundew (Drosera rotundifolia)
 Many-stemmed Spike-rush (Eleocharis multicaulis)
 Crowberry (Empetrum nigrum)
 New Zealand Willow Herb (Epilobium brunnescens, syn. E. nerterioides)
 Cross-leaved Heath (Erica tetralix)
 Heath Bedstraw (Galium saxatile)
 Bog Orchid (Hammarbya paludosa)
 Bog St. John's Wort (Hypericum elodes)
 Bog Asphodel (Narthecium ossifragum)
 Lousewort (Pedicularis sylvatica)
 Butterwort (Pinguicula vulgaris)
 Common Milkwort (Polygala vulgaris)
 Tormentil (Potentilla erecta)
 White Beak-sedge (Rhynchospora alba)
 Ivy-leaved Bell-flower (Wahlenbergia hederacea)

A subsequent visit to the area revealed two populations of the H. paludosa near to each other and comprising 49 plants in all. Although many of the plants were in Sphagnum there were many others rooted in the very dark green moss Campylopus atrovirens. One plant kept under observation was visited on four occasions by small flies during a four hour period. There were small flies walking over the surface of the bog in the immediate vicinity of the plant throughout this period. Most of these flies were long-legged and of a bright metallic colour and members of the Dolichopodidae family. These flies, therefore, as well as others, may be responsible for the pollination of the orchid.

This is the first record of the bog orchid in the old county of Carmarthenshire.

THREE SALT-MARSH GRASSES OF THE SEVERN ESTUARY

T.G. Evans, 1978

From Newport, Gwent, to Woolaston, Gloucestershire, and from Littleton to the River Avon, in Avon the dominant cord-grass is Spartina anglica C.E. Hubbard, which has now been validated by a latin description in Botanical Journal of the Linnean Society, Vol. 76 (4): pp. 364-5 (1978). Identification is helped by Dr. Hubbard's notes, to me, itemizing the salient points that separate it from S. x townsendii H. & J. Groves. For S. anglica "Note the longer ligular-hairs, one should select culms that have not been damaged by sand or debris held in suspension by the waves, as this often forms a hard lump with the hairs (at the junction of the blade of the leaf and sheath) and later may be washed away removing or damaging the tips of the ligular-hairs, so that they appear to be shorter than they should be in fresh material. Note the well-developed long anthers (8-13 mm), which split longitudinally releasing an abundance of perfect, spherical pollen grains". Spikelet width 2.5 - 3 mm. Chromosome number : $2n = 122 - 124$. "It should be possible to have back crosses between S. x townsendii and S. anglica, but we know so

little about Spartina one cannot be precise until extensive cytogenetic investigations of all the variants have been carried out".

In Avon, up the River Avon and at Aust, in Gloucestershire at Beachley, in Gwent at Blackrock, Sudbrook and Newport, I've found patches of Spartina x townsendii H. & J. Groves. Dr. Hubbard has again provided the following useful notes "This male sterile hybrid from which the above S. anglica is derived, is distinguished from it by the much shorter ligular-hairs (1-2 mm) and by the shorter anthers, which do not dehisce and contain only imperfect pollen grains, irregular in shape and size (not spherical and yellowish). You would be able to study the pollen grains with a high power binocular dissecting microscope (c. x 100), or with the low power of an ordinary microscope". Spikelet width 2 - 2.5 mm. Chromosome number : $2n = 62$.

"The width of the spikelet in Spartina should be measured in the upper part of the inflorescence in well-developed plants, with glumes appressed to the lemmas (i.e. not spreading) and the stamens enclosed. S. anglica spikelets have comparatively longer hairs on the surface of the glumes and lemmas than in S. x townsendii in which the hairs are minute or reduced to minute points".

In a letter dated 3/7/1978, Dr. Hubbard asked me to search for Festuca rubra L. subsp. litoralis (G.W.F. Meyer) Auquier, (subvar. tenuifolia Howarth, in New Phytologist, 18 : 267, 1919). Although shortly rhizomatous, it forms compact turf (Howarth describes it as densely caespitose); its leaves are all bristle-like and similar (both basal - and culm-blades). Howarth states that his subvar. tenuifolia is confined to the sea coast and is dominant or co-dominant on the wet marshes etc. It is the common fescue of the salt-marshes of coastal habitats (estuaries) generally, but may spread to adjacent habitats (shingle and sand) as scattered plants. It has dull green leaves, glabrous basal leaf-sheaths, contracted panicles and comparatively large lemmas (6 - 8 mm long) (in typical subsp. rubra these are mostly 4.5 - 5.5 mm long)".

I have now found this grass above the main Spartina muddy area, on the edge of the upper bank, where there is a mixture of grasses and such plants as Trifolium fragiferum L. and Hordeum secalinum Schreb., at Chepstow and Newport in Gwent, at Beachley in Glos. at New Passage, at Aust and at Littleton in Avon and on the Afon Kenfig in Glamorgan.

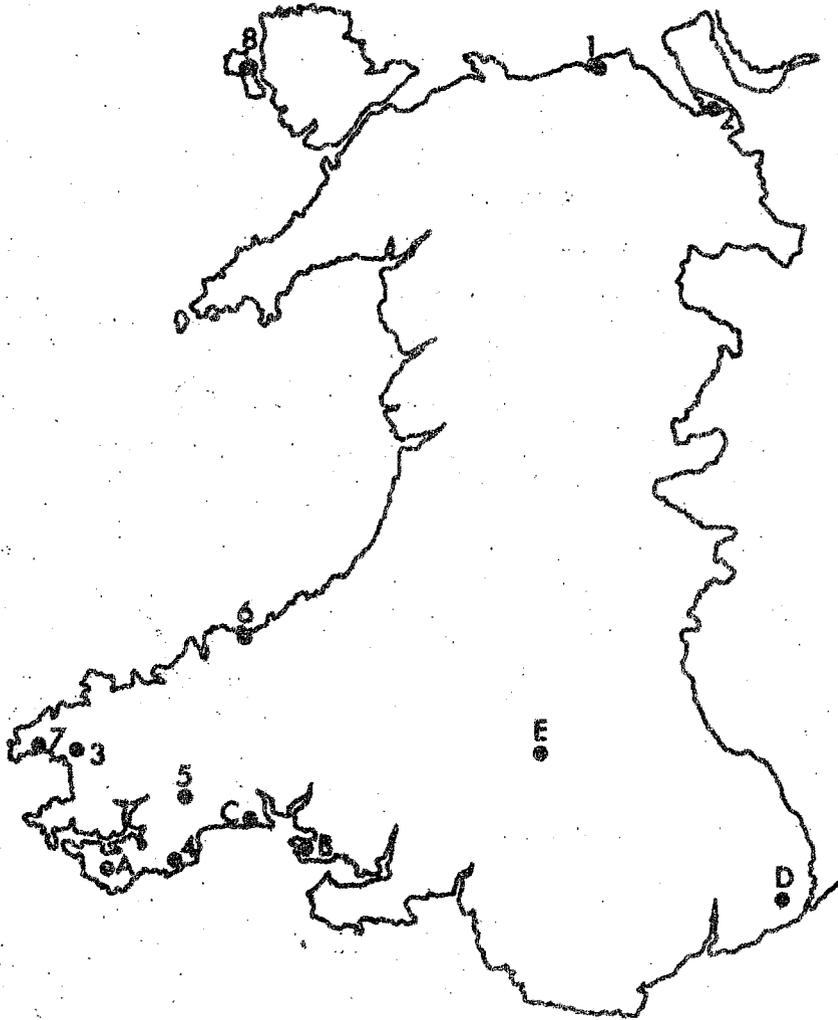
Thus Howarth's Fescue with S. x townsendii, could turn up in many more places, if a search was made.

Dr. Hubbard has edited my article and given his assent to having the information made available to naturalists around the estuary. He informs me that he would appreciate a copy of such publication for his files.

MINISTRY OF DEFENCE CONSERVATION

It is the aim of the Ministry of Defence (MOD) Conservation Officer to record and monitor all wildlife including flora, to be found on all MOD sites throughout the UK.

This is being achieved through the formation of voluntary Conservation Groups. The Conservation Group is headed by the head of the Service establishment and is divided into subgroups representing each interest at the site. The subgroups are usually led by an outside expert in the field. Several of the botany subgroups for instance are led by BSBI members; they sometimes receive the help of fellow members as well as assistance from MOD employees at the site. The expertise within a subgroup varies greatly, hence the need for expert leadership.



MOD SITES IN WALES

A. With Conservation Groups

- A. Castlemartin RAC Range
Merrion
Pembroke
Dyfed SA71 5EB
- B. RAF Pembrey
Burry Port
Dyfed SA16 OHZ
- C. P&EE Pendine
Carmarthen
Dyfed SA33 4UA
- D. RAF Caerwent
Newport
Gwent NP6 4XL
- E. Sennybridge PTA
Sennybridge
Nr. Brecon
Powys

Contact

- Lt. Col. R.G. Webber
Commandant
- Flt. Lt. Donaldson
Commanding Officer
- Major H.T. McCormack RA (Retd)
- Sqn. Ldr. Miller AMBIW RAF
- Lt. Col. G.T.C.M. Graham
Commandant

B. Sites without Conservation Groups

- 1. Rhyl Army Camp
Kimmel Park Camp
Bodelwydden
Rhyl
Clwyd
- 2. Sealand Army Range
Nr. Burton Point
Flint
- 3. RAF Brawdy
Dyfed
- 4. Penally Ranges
Dyfed
- 5. Templeton
Dyfed
- 6. RAE Aberporth
Dyfed
- 7. RAF Airfield
St. Davids
Dyfed
- 8. RAF Valley
Holyhead
Gwynedd

Contact

- MOD
Lands 4
Tolworth Tower
01-309 5281 Ext 132 or 47
- As above

If you wish to help, please contact the MOD Conservation Officer at the following address :-

MOD Conservation Officer
Room 768
Ministry of Defence
Tolworth Tower
Ewell Road
SURBITON
Surrey KT6 7DR

Tel: 01-399 5281 ext 47 or 132

giving details of the area which you wish to study.

Abbreviation of Welsh vice-county names.

At the request of the editors of Watsonia the Committee for Wales were asked to prepare a standard list of abbreviations of Welsh vice-county names. One objection levelled at the existing abbreviations was that some could be confused with the county town. The list approved by the committee is as follows. Members are asked to use these abbreviations where necessary in the future.

| | |
|------------------|-------------------|
| v.c. 35 - Mons. | v.c. 47 - Monts. |
| v.c. 41 - Glam. | v.c. 48 - Mer. |
| v.c. 42 - Brecs. | v.c. 49 - Caerns. |
| v.c. 43 - Rads. | v.c. 50 - Denbs. |
| v.c. 44 - Carms. | v.c. 51 - Flints. |
| v.c. 45 - Pembs. | v.c. 52 - Angl. |
| v.c. 46 - Cards. | |



