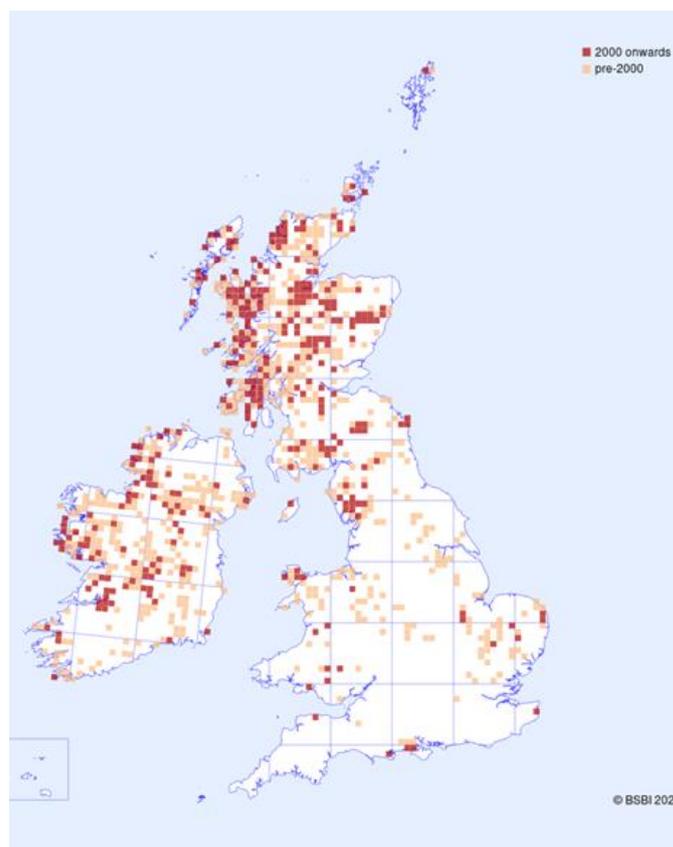
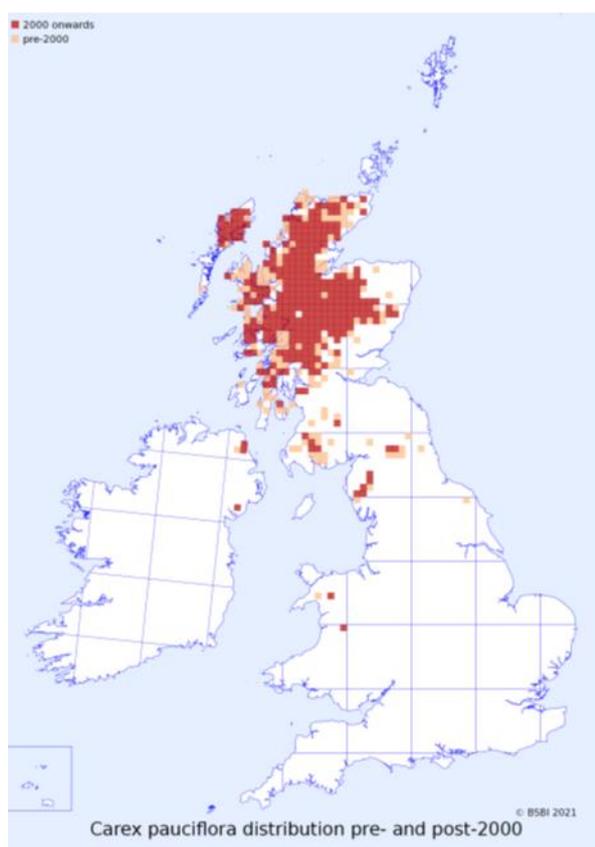


A short note on a Montgomeryshire Flora Group Outing to Carno Wind Farm, Trannon Moor (Vc47) on 4 July 2022

The aims of this outing were to:

- (1) look for *Carex pauciflora* (Few-flowered Sedge) and the two bog sedges, *C. limosa* (Bog Sedge) and *C. magellanica* (Tall Bog-sedge). This is one of only two sites in Wales for *C. pauciflora* (the other is in Caernarvonshire). It grows here at the southern edge of its GB range. (See distribution map below). *C. magellanica* is also approaching the southern limit of its British range.
- (2) look for *Sparganium natans* (Least Bur-reed) at its only site in Montgomeryshire. (See distribution map below).
- (3) record bryophytes.



Distribution of *Carex pauciflora* (left) and *Sparganium natans* (right) pre- and post-2000 (at hectad level). Extracted from BSBI Ddb website 090722. Post-2000 records in dark red.

***Carex pauciflora* (Few-flowered Sedge) Stage: Fruiting.**

Extensive stands were easily identified without the need for close examination (distinctive yellowish, straw-coloured utricles with an obvious persistent style). This sedge was abundant (estimated as >1000 spikes in fruit). Mostly occurring on blanket mire between two streams around SN911953 and 911952. It was much more abundant than anticipated. Ben Averis recorded *C. pauciflora* here in 2000 (1st Vc47 record) and Gill and Peter Foulkes re-found it in August 2021. The Wales Vascular Plant Red Data List (Dines, 2008) lists this species as CR (Critically Endangered) with two sites in Wales. Unless you are looking when it is fruiting, it is inconspicuous and could easily be overlooked (very few fruiting spikes were seen at the same location on 1 August 2021). The sedge is rhizomatous so the number of spikes does not necessarily equate to the number of plants.

Associates included: *Andromeda polifolia* (Bog-rosemary), *Eriophorum angustifolium* (Cottongrass), *Erica tetralix* (Cross-leaved Heath), *Narthecium ossifragum* (Bog Asphodel), *Drosera rotundifolia* (Round-leaved Sundew), *Calluna vulgaris* (Heather), *Carex magellanica* (Tall Bog-sedge), *Sphagna*.



Carex pauciflora on Trannon Moor, 4 July 2022. This sedge has a single spike, is few-flowered, males above and females below. Utricles are straw-coloured, deflexed, subfusiform, tapering more abruptly below and with a persistent style that can be seen protruding from the apex. (Photo Sue Southam).

***Carex magellanica* (Tall Bog-sedge) Stage: Fruiting.**



Frequent across a similar area to *C. pauciflora*.

Carex magellanica on Trannon Moor, 4 July 2022. Note the long, brown, lanceolate glumes that are considerably narrower than the green utricles and have an acuminate apex. (Photo Sue Southam).

***Carex limosa* (Bog Sedge) Stage: Fruiting.**

Abundant in the wetter areas (sometimes in standing water), especially close to the *Sparganium natans* site but also extensive in SN9097 with *Menyanthes trifoliata* (Bogbean) and *Comarum palustris* (Marsh Cinquefoil) as well as at the head of east-flowing streams in SN9197 and SN9296 (subsequent visit by Kate & John Thorne).



Carex limosa specimen from Trannon, Moor 4 July 2022. Note the broader, dark brown, ovate glumes that are just about wide enough to cover the utricle and that have an acute/aristate apex. (Photo Sue Southam).

***Sparganium natans* (Least Bur-reed) Stage: Flowering**



Sparganium natans on Trannon Moor, 4 July 2022. This shows the remains of a single male capitulum (top of each spike) and two sessile female capitula (below). (Photo Sue Southam).

Growing in a boggy depression at SN9099.9729 and extending into SN9197. Most of the colony seemed to be growing in liquified peat (presumably a pool in the past) although a few plants were

growing within drier areas on the western side. The *Sparganium* (1st Vc record and the only site in Montgomeryshire) was found in 2003 by Chris Forster Brown. His monitoring records show that it has expanded from c. 200 plants in 2003, to c. 450 plants in 2007, with hundreds of plants covering about 10m² in 2019 and probably spread over a slightly larger area in 2022.

Associates included: *C. limosa* (Bog Sedge), *Menyanthes trifoliata* (Bogbean), *Drosera rotundifolia* (Round-leaved Sundew), *Narthecium ossifragum* (Bog Asphodel), *C. echinate* (Star Sedge), *C. nigra* (Common Sedge), *C. panicea* (Carnation Sedge), *Molinia caerulea* (Purple Moor-grass), *Equisetum fluviatile* (Water Horsetail), *Juncus bulbosus* (Bulbous Rush), *Eriophorum angustifolium* (Cottongrass), *Sphagna*.

Bryophytes

Mark Lawley (Vc47 Bryophyte Recorder) has commented: we (Ralph Martin) noted the usual Bog moss species *S. rubellum*, *S. fallax* and *S. palustre* but other *Sphagna* were probably present. Of the liverworts, the sheer quantity of *Cladopodiella fluitans* was remarkable, and we also noted *Cephalozia connivens* and *Mylia anomala*. Otherwise, *Splachnum** *ampullaceum* and *S. sphaericum* were both recorded near the *Sparganium*. In *A Bryophyte Red Data List for Wales* (Bosanquet and Dines, 2011) *S. ampullaceum* is listed as Endangered, significant (>50%) decline, 'lost from Carmarthenshire and various sites in most other vice-counties because of decline in cattle grazing in wetlands'.

(**Splachnums* are confined to dung, usually herbivore, and *S. ampullaceum* confined to wet areas in bogs. *Cladopodiella fluitans* is locally abundant in bog pools where it creeps on the surface of Sphagnum carpets; restricted to bogs and wet peaty heaths. *Cephalozia connivens* and *Mylia anomala* are also characteristic of *Sphagnum* bogs. From *BBS Mosses & Liverworts of Britain & Ireland a Field Guide*.)

An observation from David Elias (Mont Flora Group member and ecologist):

'Although the vegetation has, as usual, been degraded/modified by historic grazing and drainage floristically this is one of the best blanket bogs I have seen in Wales - and it may still be improving after what was, no doubt, long years of heavy grazing prior to the wind farm being established. Blocking the drainage ditches would improve things some more by raising the water table. Ornithologically, Trannon is likely to be of little interest for ground nesting raptors due to the sparsity of Heather but it would be worth checking for Golden Plover and Dunlin in the spring. It also looks like a potential site for Large Heath butterfly. The current thinking is that due to historic land use patterns there is too much *Calluna* on much of the North Wales blanket peat - perhaps good blanket bog in Wales should look more like Trannon.'

Trannon Moor – a general comment

Trannon Moor sits on an extensive plateau lying between about 450-480m and has a large wind farm, Carno, soon to be extended to the south. The plateau is sheep-grazed and appears to have quite variable habitat. Recent surveys have shown the presence of dry heath and acid grassland in addition to the blanket bog, and other mire communities. The vegetation is likely to have been grazed more heavily in the past and reduced some areas of heathland to acid grassland. However, recently surveyed areas (at least) appear to be lightly grazed and are often tussocky. One of the most significant mire communities other than blanket bog is the rush-pasture (largely M23, *Juncus effusus/acutiflorus* – *Galium palustre* rush pasture) which is scattered throughout but particularly in the upper reaches of streams around very wet pockets of *Menyanthes trifoliata* (Bogbean), *Comarum palustre* (Marsh Cinquefoil) and/or *Potamogeton polygonifolius* (Bog Pondweed). The rush pasture supports a number of common plant species typical of the M23 community, with occasional stands of the less common *Scutellaria minor* (Lesser Skullcap) and frequent *Viola palustris* (Marsh Violet) the latter likely to be used by Fritillary species. A few species favouring less acidic ground were noted in some of the rush

pasture in the north-east [*Galium uliginosum* (Fen Bedstraw), *C. hostiana* (Tawny Sedge), *C. hostiana x viridula subsp. oedocarpa* and *Triglochin palustris* (Marsh Arrow-grass), all very localized]. *Carex dioica* is, unusually, found on the higher ground in the moorland often but not always associated with flushes.

Dr Kate Thorne & Gill Foulkes (Joint Plant Recorders for Vc47)
26 August 2022