

A SPECIES-LIST OF FLOWERING PLANTS AND FERNS FOR THE MOOR HOUSE NATIONAL NATURE RESERVE IN UPPER TEESDALE

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The Moor House National Nature Reserve covers 9,500 acres in the north-east corner of Westmorland (v.c. 69), with altitude ranging from 1000 to 2780 ft. A full description of the vegetation is given by Eddy, Welch and Rawes (in preparation); suffice it to say here that much of the Reserve is covered by blanket peat, but some grasslands occur, especially along the Pennine ridge, which traverses the area from N.W. to S.E., and on its steep western escarpment. The underlying rocks are a cyclical succession of limestones, sandstones and shales, belonging to the Yoredale Series of the Carboniferous, but are obscured, except on steep slopes and in water courses, by a thick layer of glacial drift.

About 270 species have been recorded; many of them are confined to limestone grassland, or to calcareous springs and flushes emerging below limestone. Although the area is much less rich botanically than Widdybank and Cronkley Fells which lie a further four miles down the Tees, there being no sugar limestone on the Reserve, it has more than its share of interesting and scarce species when compared with similarly sized upland areas. The paucity of the flora is caused partly by the absence of ruderal, woodland and aquatic species.

In the following list the description of the habitat is normally by English physiognomic naming, but where greater precision has been thought desirable the Latin vegetation units described in Eddy, Welch and Rawes have been used. 'Calcareous grassland' includes both dry limestone grassland and wet calcareous flushes, whilst 'base-rich grassland' includes additionally alluvial grasslands. The lower levels are those below 1600 ft., the higher those above 2000 ft. The nomenclature and species numbering is based on that of Dandy (1958). Additional records for v.c. 69 to those in an annotated copy of the *Comital Flora* (Druce, 1932) are marked §; if previously recorded elsewhere an asterisk is added, and the source given. Species not recorded in the *Comital Flora* (Druce, 1932) are marked †.

- 1/1 *Lycopodium selago* L. Rare on blanket bog, occasional in crevices of sandstone rocks.
1/5 *L. alpinum* L. Rare and sporadic in high-level *Festuca* grassland, and on mine-heaps from disused lead mines.

- 2/1 *Selaginella selaginoides* (L.) Link. Frequent in grassland.
- 4/5 *Equisetum fluviatile* L. Common in pools especially within old mine shafts and levels.
- 4/6 *E. palustre* L. Frequent in wet calcareous grassland.
- 4/7 *E. sylvaticum* L. Single locality on sandstone ledges (Force Burn waterfall).
- 4/9 *E. arvense* L. Present near Moor House and on sandstone ledges in Swindale.
- 8/1 *Pteridium aquilinum* (L.) Kuhn. Confined to dry acidic soils below 1500 ft.
- 9/1 *Cryptogramma crispa* (L.) R. Br. ex Hook. Frequent in sandstone scree.
- 13/1 *Blechnum spicant* (L.) Roth. Occasional on acid drift and rocks.
- 14/1 *Phyllitis scolopendrium* (L.) Newm. Rare on limestone rocks (Knock Ore Gill; Green Burn mine shaft).
- 15/5 *Asplenium trichomanes* L. Occasional on rock, especially at the lower levels.
- 15/6 *A. viride* Huds. Common on limestone.
- 15/7 *A. ruta-muraria* L. Occasional on rocks.
- 18/1 *Athyrium filix-femina* (L.) Roth. Occasional on shaded rocks.
- 19/1 *Cystopteris fragilis* (L.) Bernh. Common on limestone.
- 21/1 *Dryopteris filix-mas* (L.) Schott. Occasional on rocks, chiefly limestone.
- †21/3 *D. abbreviata* (DC.) Newm. Occasional in high-level sandstone scree.
- 21/6 *D. carthusiana* (Villar) H. P. Fuchs. Frequent in shady places amongst rocks and occasional on blanket peat.
- 21/7 *D. dilatata* (Hoffm.) A. Gray. Frequent on rocks.
- †(21/a) *D. assimilis* S. Walker. Recorded by A. C. Jermy in sandstone scree in Knock Ore Gill, and probably occurs elsewhere on the Reserve).
- 22/2 *Polystichum aculeatum* (L.) Roth. Occasional on limestone.
- 22/3 *P. lonchitis* (L.) Roth. Rare in limestone scree and sinkholes.
- 24/1 *Thelypteris limbosperma* (All.) H. P. Fuchs. Occasional in acidic grassland at the lower levels, and on sandstone.
- 24/3 *T. phegopteris* (L.) Slosson. Single locality on whinsill (Force Burn Gorge).
- 24/4 *T. dryopteris* (L.) Slosson. Rare on sandstone (Force Burn waterfall; scree in Knock Ore Gill).
- 25/1 *Polypodium vulgare* L. *sensu lato*. Occasional on sandstone and whinsill.
- 28/1 *Botrychium lunaria* (L.) Sw. Occasional in grassland, especially on mine-heaps.

- 29/1 *Ophioglossum vulgatum* L. Rare, on a mine-heap, and in flushed *Nardetum* in the Moor House area.
- 34/1 *Juniperus communis* L. Three bushes at 1500 ft. on limestone in Swindale.
- 36/1 *Caltha palustris* L. Frequent in wet places with subsp. *minor* frequent at the higher levels.
- 43/1 *Anemone nemorosa* L. Little seen, but present occasionally in limestone grassland.
- 46/1 *Ranunculus acris* L. }
 46/2 *R. repens* L. } Common in their usual habitats.
 46/12 *R. flammula* L. }
- 46/16 *R. hederaceus* L. Rare (rill at head of Middle Tongue Beck).
- 46/17 *R. omiophyllus* Ten. Occasional in pools and springs.
- 46/24 *R. ficaria* L. Occasional in grassland and *Pteridetum* at the lowest levels.
- 50/2 *Thalictrum alpinum* L. Very rare on limestone rocks (Knock Ore Gill at 2450 ft. as given by Wilson (1938)) and in a calcareous flush (Trout Beck Head).
- 50/3a *T. minus* L. subsp. *minus* Rare on limestone rocks (Swindale at 1600 ft.).
- 84/4 *Thlaspi alpestre* L. Common around lead mine workings.
- 85/1 *Teesdalia nudicaulis* (L.) R. Br. Not seen recently, but a single plant at the source of the Tees (*Vasculum*, 1915).
- 86/1 *Capsella bursa-pastoris* (L.) Medic. In garden at Moor House.
- 88/2 *Cochlearia alpina* (Bab.) H. C. Wats. Common on limestone and around mine workings, occasional in flushes.
- 94/3 *Draba incana* L. Occasional on limestone ledges (Green Castle; Middle Tongue Beck; Greatdale).
- §*95/1 *Erophila verna* (L.) Chevall. Rare (on a limestone boulder at 1400 ft. N. of Radar Road). Rather common in v.c. 69, according to Wilson (1938).
- 97/1 *Cardamine pratensis* L. }
 97/4 *C. flexuosa* With. } Common in their usual habitats.
- 100/4 *Arabis hirsuta* (L.) Scop. Frequent on rock ledges on the western escarpment of the Reserve.
- 102/1 *Nasturtium officinale* R.Br. Single locality by the stream draining the Moor House meadow.
- 113/4 *Viola riviniana* Reichb. Common in their usual
 113/9 *V. palustris* L. habitats.
- 113/11 *V. lutea* Huds. Frequent in base-rich grassland.
- 114/2 *Polygala serpyllifolia* Hose Common in grassland.
- 115/11 *Hypericum pulchrum* L. On whinsill scree in a single locality (Force Burn Gorge).
- 131/7 *Cerastium bontanum* Baumg. subsp. *triviale* (Murb.) Jalas Common in base-rich grassland.

- 133/2 *Stellaria media* (L.) Vill. Only recorded from disturbed ground around Moor House and the cattle grid on the Radar Road.
- 133/7 *S. graminea* L. In limestone and alluvial grassland.
- 133/8 *S. alsine* Grimm Frequent in *Juncetum effusi*.
- 136/4 *Sagina procumbens* L. Frequent in base-rich grassland.
- 136/10 *S. nodosa* (L.) Fenzl Occasional in flushes and wet grassland.
- 137/1 *Minuartia verna* (L.) Hiern Frequent in limestone grassland, common on lead-mine heaps.
- 141/1 *Arenaria serpyllifolia* L. On fell-wall at the western foot of the area.
- 149/1 *Montia fontana* L. Common in springs.
- 166/4 *Linum catharticum* L. Frequent in calcareous grassland.
- 168/2 *Geranium sylvaticum* L. Occasional in limestone grassland, especially on ungrazed ledges, and in the Moor House meadow.
- 168/15 *G. lucidum* L. Rare in limestone scree (S. of Knock Ore Gill; Eller Gill near fell-wall).
- 168/16 *G. robertianum* L. Frequent amongst limestone rocks.
- 170/1 *Oxalis acetosella* L. Common in grassland and rocky places.
- 192/2 *Trifolium pratense* L. Confined to the Moor House meadow.
- 192/18 *T. repens* L. Common in grassland.
- 195/1 *Lotus corniculatus* L. Occasional in limestone grassland especially at the lower levels.
- 195/3 *L. uliginosus* Schkuhr Confined to *Juncus acutiflorus* flushes (Middle Tongue Beck Foot).
- 206/11 *Vicia sepium* L. Occasional on ungrazed limestone ledges.
- 210/2 *Filipendula ulmaria* (L.) Maxim. In a few flushes (Moss Burn Flush).
- 211/1 *Rubus chamaemorus* L. Common on blanket bog.
- 211/2 *R. saxatilis* L. Rare in limestone sinkholes (Knock Fell; Green Burn Head).
- 212/2 *Potentilla palustris* (L.) Scop. Rare in flushes at the lower levels near Little Dodgen Pot Sike Foot).
- 212/3 *P. sterilis* (L.) Garcke In grassland, chiefly at the lower levels.
- 212/13 *P. erecta* (L.) Räusch. Common in grassland.
- 215/1 *Fragaria vesca* L. Occasional in base-rich grassland and amongst limestone.
- 216/3 *Geum rivale* L. Occasional in flushes and limestone grassland, especially where ungrazed.
- 220/3(3) *A. filicaulis* Buser Occasional in calcareous grassland. *Alchemilla filicaulis* subsp. *vestita* (Buser) M. E. Bradshaw Frequent in calcareous grassland.

- 220/3 (8) *A. xanthochlora* Rothm. Only in Moor House meadow.
- 220/3 (10) *A. glabra* Neygenf. Common on limestone and sandstone ledges, and in calcareous grassland.
- 220/3 (11) *A. wichurae* (Buser) Stefanss. Occasional on limestone and whinsill (Middle Tongue Beck; Greatdale).
- 225/13 *Rosa villosa* L. Rare on limestone ledges (S. of Knock Ore Gill at 1450 ft.; Swindale).
- 226/1 *Prunus spinosa* L. Only on a limestone scarp (N. of Knock Ore Gill at 1400 ft).
- 229/2 *Crataegus monogyna* Jacq. Occasional on limestone ledges below 1600 ft. (Knock Ore Gill; Swindale).
- 232/1 *Sorbus aucuparia* L. About 25 trees and bushes on limestone scarps in Knock Ore Gill and Swindale.
- 235/1 *Sedum rosea* (L.) Scop. Limestone ledges (abundant on Green Castle; also in Greatdale).
- 235/8 *S. acre* L. Rare on limestone (Scar Limestone in Greatdale).
- 235/12 *S. villosum* L. Frequent in flushes and occasional in alluvial grassland.
- 239/2 *Saxifraga stellaris* L. Common in flushes.
- 239/3 *S. hirculus* L. Occasional in flushes, often amongst *Juncus effusus*.
- 239/15 *S. hypnoides* L. Frequent in limestone grassland, especially in rocky places.
- 242/1 *Chrysosplenium oppositifolium* L. Common in springs and wet limestone crevices.
- 242/2 *C. alternifolium* L. Occasional in similar localities to the above.
- 243/1 *Parnassia palustris* L. Occasional in wet calcareous grassland, mainly at the lower levels of the western escarpment.
- 247/1 *Drosera rotundifolia* L. Frequent in wet bog (*Trichophoro-Eriophoretum*).
- 254/3 *Epilobium montanum* L. Occasional in limestone sink-holes and on wet ledges.
- 254/10 *E. palustre* L. Occasional in wet grassland at the lower levels.
- 254/11 *E. anagallidifolium* Lam. Frequent in high-level *E. alsinifolium* Vill. Occasional in high-level flushes and on wet limestone ledges.
- 254/12 flushes.
- †254/13 *E. nerterioides* Cunn. Common on shingle.
- 255/1 *E. angustifolium* L. Occasional on shingle and peat.
- 258/3 *Circaea alpina* L. Rare in limestone sinkholes (Knock Fell).
- 262/1 *Callitriche stagnalis* Scop. } Frequent in pools.
- †262/4 *C. hamulata* Kutz. ex Kah }
- 268/1 *Hedera helix* L. Occasional on limestone, especially at lower levels.

- 274/2 *Anthriscus sylvestris* (L.) Hoffm. Rare on limestone ledges (Middle Tongue Beck), also on waste ground by Moor House.
- 293/1 *Conopodium majus* (Gouan) Loret Occasional in limestone grassland.
- †294/1 *Pimpinella saxifraga* L. Occasional on limestone ledges (between 1500 ft. and 1600 ft. in Swindale).
- 307/1 *Angelica sylvestris* L. Rare on limestone ledges (Greatdale; Middle Tongue Beck).
- 311/1 *Heracleum sphondylium* L. Occasional on limestone ledges, some plants in the Moor House meadow.
- 318/1 *Mercurialis perennis* L. Single locality by a *Corylus* bush (Knock Ore Gill Foot).
- 320/1 *Polygonum aviculare* L. Occasional in flushes, especially at lower levels.
- 320/5 *P. viviparum* L. Occasional in calcareous grassland, but rarely flowering because of sheep grazing.
- 325/1 *Rumex acetosella* L. Common in grassland.
- 325/2 *R. acetosa* L. Occasional in grassland, chiefly ungrazed.
- 328/2 *Urtica dioica* L. Frequent around buildings and in limestone sinkholes.
- 338/1 *Corylus avellana* L. Rare on limestone scarps at low levels (Knock Ore Gill; Swindale).
- 343/13 *Salix aurita* L. Single locality in a limestone sinkhole (Knock Fell).
- 356/1 *Calluna vulgaris* (L.) Hull Abundant below 2200 ft. on east side of Reserve, almost absent on W. because of grazing.
- 357/1 *Erica tetralix* L. Frequent in heather blanket bog.
- 358/1 *Vaccinium vitis-idaea* L. Frequent in blanket bog, also on sandstone rocks.
- 358/2 *V. myrtillus* L. Common in bog and acidic grassland.
- 358/4 *V. oxycoccus* L. Occasional in wet bog (*Trichophoro-Eriophoretum*).
- 364/1 *Empetrum nigrum* L. Common in blanket bog, occasional in acidic grassland.
- 367/1 *Primula farinosa* L. Single locality on wet limestone ledges (Rough Sike Gorge).
- 367/3 *P. veris* L. Single locality in Moor House meadow.
- 370/1 *Lysimachia nemorum* L. Occasional in wet places.
- 385/1 *Gentianella campestris* (L.) Börner Single locality on skeletal limestone soil with *Sestertia* (Knock Ore Gill).
- 385/3 *G. amarella* (L.) Börner Occasional in limestone grassland (Quarry above Knock Ore Gill; Rough Sike Ford near Moor House).
- 386/1 *Menyanthes trifoliata* L. Rare in acidic flushes and pools (S.E. of Tees Bridge; Little Dodgen Pot Sike Foot).

- 388/1 *Polemonium caeruleum* L. An old record for a limestone sinkhole has not recently been re-found (*Phytologist*, 1, 741).
- 400/2 *Myosotis secunda* A. Murr. Occasional by streams at the lower levels.
- 400/3 *M. stolonifera* Gay (*M. brevifolia* C. E. Salmon) Frequent by rills and in flushes at higher levels.
- 400/6 *M. alpestris* Schmidt Very rare in limestone grassland.
- 400/8 *M. arvensis* (L.) Hill Single locality by the Moor House meadow wall.
- 429/1 *Digitalis purpurea* L. Occasional amongst sandstone and whinsill rocks.
- 430/1 *Veronica beccabunga* L. { Occasional by streams and
430/4 *V. scutellata* L. { in flushes.
- 430/5 *V. officinalis* L. Frequent in calcareous grassland.
- 430/7 *V. chamaedrys* L. Occasional in limestone grassland.
- 430/13 *V. serpyllifolia* L. Occasional in flushes and amongst limestone rocks.
- 430/15 *V. arvensis* L. Seen intermittently in waste places around Moor House.
- 432/2 *Pedicularis sylvatica* L. Frequent in wet acidic grassland at lower levels.
- 433/2 *Rhinanthus minor* L. Occasional in limestone grassland, common in the Moor House meadow.
- 434/3 *Melampyrum pratense* L. Rare on slopes of shallow heather blanket bog (Burnt Hill slope to Trout Beck).
- †435/1(10) *Euphrasia curta* (Fr.) Wettst. Recorded by Wilson (1938) in limestone grassland (Knock Ore Gill).
- †435/1(15) *E. confusa* Pugsl. Common in base-rich grassland.
- 441/3 *Pinguicula vulgaris* L. Occasional in flushed open places.
- 448/3 *Thymus drucei* Ronn. Common in base-rich grassland.
- 457/1 *Prunella vulgaris* L. Frequent in base-rich grassland.
- 459/7 *Stachys sylvatica* L. Single locality on a sandstone ledge (Knock Ore Gill near fell wall).
- 471/2 *Ajuga reptans* L. Single locality on a limestone ledge (at 1600 ft. S. of Knock Ore Gill).
- 472/1 *Plantago major* L. Occasional on base-rich soils in bare places (around Moor House and cattle grid on Radar Road).
- 472/3 *P. lanceolata* L. Frequent in limestone grassland.
- 475/7 *Campanula rotundifolia* L. Frequent in grassland, chiefly below 1800 ft.
- 479/1 *Jasione montana* L. Rare in limestone grassland (by Radar Road; Greatdale).
- 485/2 *Galium boreale* L. Occasional on ledges of whinsill or limestone.
- 485/4 *G. verum* L. Occasional in limestone grassland.
- 485/5 *G. saxatile* L. Common in grassland.
- †485/7 *G. sternerii* Ehrend. Frequent in limestone grassland.

- 485/8 *G. palustre* L. Occasional in flushes.
- 493/1 *Adoxa moschatellina* L. Occasional amongst limestone rocks.
- §*495/1 *Valeriana officinalis* L. Rare on limestone ledges (Middle Tongue Beck). Common in v.c. 69 in wet places up to 2400 ft. according to Wilson (1938).
- 495/3 *V. dioica* L. Occasional in flushes.
- 500/1 *Succisa pratensis* Moench Occasional in flushes at the lower levels.
- 506/1 *Senecio jacobea* L. Occasional in limestone grassland (Rough Sike enclosure; Knock Ore Gill Foot; Green Hole).
- 508/1 *Tussilago farfara* L. Frequent in shingle.
- 517/1 *Antennaria dioica* (L.) Gaertn. Occasional in calcareous grassland.
- 518/1 *Solidago virgaurea* L. Two localities only on acidic ledges (Force Burn Gorge whinsill; Swindale on sandstone near the waterfall).
- 524/1 *Bellis perennis* L.
- 528/1 *Achillea millefolium* L. } Common in base-rich
528/3 *A. ptarmica* L. } grassland.
- 532/2 *Matricaria matricarioides* (Less.) Porter Single locality around fell gate on Radar Road.
- 540/2 *Cirsium vulgare* (Savi) Ten. Frequent in limestone grassland below 1700 ft.
- 540/3 *C. palustre* (L.) Scop. Common in base-rich grassland.
- 540/4 *C. arvense* (L.) Scop. Frequent in limestone grassland below 1600 ft.
- 550/1 *Leontodon autumnalis* L. Frequent in calcareous flushes.
- 550/2 *L. hispidus* L. Occasional on limestone ledges (Melmerby Scar Limestone in Knock Ore Gill) and occasional in the Moor House meadow and Rough Sike enclosure.
- 555/1 *Mycelis muralis* (L.) Dumort. Rare amongst limestone rocks (Green Burn Head).
- 558/1 *Hieracium*
(Cerinthoidea) *H. anglicum* Fr. Common on limestone ledges, occasional on sandstone (2100 ft. in Middle Tongue Beck).
H. ampliatum (W. R. Linton) A. Ley Frequent on limestone ledges (Great Limestone at 2400-2450 ft. in Greatdale and Green Castle; Rough Sike Gorge).
(Vulgata) *H. maculosum* (Stenstr.) Omang Locally common on limestone and whinsill (Knock Ore Gill 1500-1800 ft.)
H. vulgatum Fr. Recorded only on whinsill at 1800 ft. in Force Burn Gorge and below 1550 ft. in Knock Ore Gill.

- H. silvaticoides* Pugsl. Recorded only at 2000-2100 ft. on limestone in Middle Tongue Beck.
- H. pseudostenstroemii* Pugsl. Common on limestone ledges.
- (Sagittata) *H. oistophyllum* Pugsl. Recorded only at 1550 ft. S. of Knock Ore Gill and at 2000-2100 ft. in Middle Tongue Beck on limestone.
- H. crebridentiforme* Pugsl. Locally common on limestone (2000 ft. in Middle Tongue Beck) and whinsill (1800 ft. in Knock Ore Gill).
- H. auratiflorum* Pugsl. Recorded only at 1500-1650 ft. on limestone ledges in Swindale.
- H. rhomboides* (Stenstr.) Johans. Recorded only from Melmerby Scar Limestone at 1500 ft in Swindale.
- (Caesia) *H. cravoniense* (F. J. Hanb.) Roffey Recorded only at 1500 ft. S. of Knock Ore Gill on limestone.
- 558/2 *H. pilosella* L. Occasional in limestone grassland.
- 559/8 *Crepis paludosa* (L.) Moench Occasional in wet calcareous grassland, also some fine specimens on limestone ledges at 1500 ft. in Swindale.
- †560/3 *Taraxacum spectabile* Dahlst. Frequent in disturbed ground, on limestone ledges and flushed gleys.
- †560/4 *T. laevigatum* (Willd.) DC. Occasional in limestone grassland.
- 574/1 *Triglochin palustris* L. Occasional in flushes and on shingle.
- 577/2 *Potamogeton polygonifolius* Pourr. Frequent in pools of acidic water.
- 584/1 *Narthecium ossifragum* (L.) Huds. Frequent in wet bog (*Trichophoro-Eriophoretum*).
- 605/1 *Juncus squarrosus* L. Common on wet acidic soils.
- 605/8 *J. inflexus* L. Wet calcareous ground at the lower levels.
- 605/9 *J. effusus* L. Common on silty peats by streams and rivers.
- 605/10 *J. conglomeratus* L. Frequent up to 1800 ft., chiefly on calcareous drift.
- 605/18 *J. acutiflorus* Ehrh. ex Hoffm. Common in flushes at the lower levels on the western side of the Reserve.
- 605/19 *J. articulatus* L. Frequent in flushes.
- 605/22 *J. bulbosus* L. Occasional in flushes and springs.
- 605/26 *J. triglumis* L. Occasional in flushes (Little Dun Fell; Middle Tongue Beck; Knock Ore Gill Head).

- 606/3 *Luzula sylvatica* (Huds.) Gaudin One locality on a sandstone ledge (Knock Ore Gill near fell wall).
- 606/8 *L. campestris* (L.) DC. Common in limestone grassland and in *Pteridetum* at the foot of the western escarpment.
- 606/9 *L. multiflora* (Retz.) Lejeune Common in grassland.
- 628/1 *Listera ovata* (L.) R. Br. Single locality in a flush (Knock Ore Gill).
- 628/2 *L. cordata* (L.) R. Br. Occasional in blanket bog.
- 635/1 *Coeloglossum viride* (L.) Hartm. Rare in damp limestone grassland at low levels (Knock Ore Gill near fell wall).
- 643/2 *Dactylorhiza maculata* (L.) Soó subsp. *ericetorum* (E. F. Linton) P. F. Hunt & Summerhayes. Occasional in mesotrophic flushes and species-rich *Nardetum*.
- 650/3 *Lemna minor* L. Single locality in shallow standing water in a flush (at 1400 ft. S. of Middle Tongue Beck).
- 654/1 *Eriophorum angustifolium* Honck. Common in blanket bog, and occasional in mesotrophic flushes.
- 654/4 *E. vaginatum* L. Common in blanket bog.
- 655/2 *Scirpus cespitosus* L. Frequent in wet bog, and occasional in acidic grassland.
- 663/7 *Carex lepidocarpa* Tausch Occasional in calcareous flushes.
- 663/8 *C. demissa* Hornem Frequent in flushes and on irrigated gley soils.
- 663/16 *C. rostrata* Stokes Common on soligenous peat.
- 663/24 *C. pallescens* L. Rare on whinsill ledges (Force Burn Gorge).
- 663/26 *C. panicea* L. Frequent in calcareous grassland.
- 663/28 *C. limosa* L. Single locality in eutrophic fen on organic mud (by Tees S. of Green Burn Foot).
- 663/29 *C. paupercula* Michx. Occasional in wet bog (Moor House pasture; Valley Bog).
- 663/31 *C. flacca* Schreb. Frequent in calcareous grassland.
- 663/34 *C. pilulifera* L. Occasional in alluvial grassland, below 2000 ft.
- 663/36 *C. caryophyllea* Latourr. Frequent in base-rich grassland.
- 663/50 *C. nigra* (L.) Reichard Common in wet acidic grassland.
- 663/52 *C. bigelowii* Torr. ex Schwein. Common in grassland above 2100 ft.
- 663/70 *C. echinata* Murr. Common on recolonisation
- 663/72 *C. curta* Gooden. complexes of eroding bog.
- 663/74 *C. ovalis* Gooden. Frequent on flushed slopes, usually on gley soils.
- 663/80 *C. pulicaris* L. Common in grassland.
- 663/81 *C. dioica* L. Occasional in calcareous flushes (Moss Burn Flush).

- 667/1 *Molinia caerulea* (L.) Moench Single locality on an alluvial terrace with wet Nardetum (Tees by Bog Hill).
- 668/1 *Sieglingia decumbens* (L.) Bernh. Frequent in acidic grassland at the lower levels.
- 669/1 *Glyceria fluitans* (L.) R. Br. Occasional in marshes and flushes at the lower levels.
G. × pedicellata Townsend Seen only in a marsh at 1750 ft. near Tees Bridge.
- 670/1 *Festuca pratensis* Huds. Single locality in Moor House meadow.
- 670/6 *F. rubra* L. Common in base-rich grassland.
- 670/8 *F. ovina* L. Common in grassland.
- 670/10 *F. vivipara* (L.) Sm. Frequent in grassland, but only detectable when ungrazed.
- 671/1 *Lolium perenne* L. Single locality in the Moor House meadow.
- 676/1 *Poa annua* L. Occasional on tracks, and at sheep camping sites in grassland; frequent in running-water flushes.
- †676/12 *P. subcaerulea* Sm. Frequent in limestone grassland.
- 676/13 *P. trivialis* L. Occasional in calcareous flushes and on limestone ledges; common in the Moor House meadow.
- 678/1 *Dactylis glomerata* L. Single locality in the Moor House meadow.
- 679/1 *Cynosurus cristatus* L. Frequent in calcareous grassland below 2000 ft.
- 680/1 *Briza media* L. Occasional in limestone grassland at the lower levels.
- 682/1 *Sesleria albicans* Kit. ex Schult. Frequent on skeletal limestone soils.
- 689/1 *Koeleria cristata* (L.) Pers. Occasional in limestone grassland.
- †693/1 *Helictotrichon pratense* (L.) Pilg. Rare on limestone ledges (Melmerby Scar Limestone in Knock Ore Gill; Green Castle.)
- 693/2 *H. pubescens* (Huds.) Pilg. Rare in limestone grassland (Moss Burn Head), also in the Moor House meadow.
- 695/1 *Holcus lanatus* L. Frequent at the lower levels in alluvial grassland and on irrigated slopes.
- 695/2 *H. mollis* L. Occasional in limestone grassland.
- 696/1 *Deschampsia cespitosa* (L.) Beauv. Common in calcareous grassland.
- 696/3 *D. flexuosa* (L.) Trin. Common in acidic grassland.
- 697/1 *Aira praecox* L. Occasional in alluvial grassland at the lower levels.
- 701/2 *Agrostis canina* L. }
701/3 *A. tenuis* Sibth. } Common in grassland.
- 701/5 *A. stolonifera* L. Frequent in marshes and flushes.

- 707/5 *Phleum alpinum* L. Single locality on a limestone ledge.
- 708/2 *Alopecurus pratensis* L. Single locality in the Moor House meadow.
- 708/3 *A. geniculatus* L. Occasional in calcareous flushes.
- §*708/6 *A. alpinus* Sm. Rare in calcareous flushes (Little Dun Fell), as described in Ratcliffe and Eddy (1960).
- 712/1 *Anthoxanthum odoratum* L. Common in calcareous grassland.
- 715/1 *Nardus stricta* L. Common on wet acidic soils.

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ADDENDUM

- †435/1(18) *Euphrasia brevipila* Burnat & Gremli Occasional in high-level flushes (Middle Tongue Beck).