

Scientific name	<i>Molinia caerulea</i> – <i>Nardus stricta</i> heath
Common name	Purple Moor-grass – Mat-grass heath
Community code	HE4B

Vegetation

This is a rather variable community in which the main field layer species are *Molinia caerulea*, *Nardus stricta* and *Carex panicea*. Dwarf shrub cover is provided by *Erica tetralix* and *Calluna vulgaris* but is typically low. Other constant vascular plants are *Potentilla erecta*, *Narthecium ossifragum* and *Trichophorum cespitosum/germanicum*. In addition to *Carex panicea*, there are several frequent species which are indicators of disturbance or flushing: *Juncus squarrosus*, *Juncus bulbosus*, *Eleocharis multicaulis* and *Carex viridula*. In the bryophyte layer, the main species are *Racomitrium lanuginosum*, *Hypnum jutlandicum* and *Campylopus atrovirens*. *Sphagnum compactum*, an indicator of disturbance, is occasional.

Ecology

This vegetation occurs mainly on the middle slopes of hills and mountains, on peaty, acidic, infertile soils (mean altitude = 241 m, $n = 14$; mean slope = 13.2° , $n = 13$). It may develop from other wet heath types due to grazing pressure (mean extent of bare peat = 17.3%, $n = 39$). There is also a distinct element of flushing.

Sub-communities

Two sub-communities have been described. The *Juncus bulbosus* – *Carex echinata* sub-community (HE4Bi) represents the more flushed examples of this assemblage. *Eriophorum angustifolium*, *Carex echinata*, *Juncus bulbosus*, *Eleocharis multicaulis* and *Drosera rotundifolia* are all much more frequent there than in the grassier *Nardus stricta* – *Agrostis canina/vinealis* sub-community (HE4Bii) in which *Juncus squarrosus* is often found.

Similar communities

From other HE4 *Molinia* heath communities, HE4B is differentiated by the high cover of *Carex panicea* and the presence of other flush-preferring species. It is noteworthy that 'brown mosses' associated with alkaline flushes and fens are not typically found in this community. From the grassland communities of the GL4 *Nardus stricta* – *Galium saxatile* group, HE4B differs in the abundance of heath species including *Molinia caerulea*, *Narthecium ossifragum* and *Erica tetralix*.

Records and distribution

Number of records (all)

Clearly assigned:	174
Transitional:	36
Total:	210

Number of records (mapped)

2001-2020:	36
1986-2000:	154
1971-1985:	0
Pre-1971:	7
Total:	197

Number of hectads (by most recent time period)

2001-2020:	18
1986-2000:	6
1971-1985:	0
Pre-1971:	4
Total:	28

Number of hectads (records in each time period)

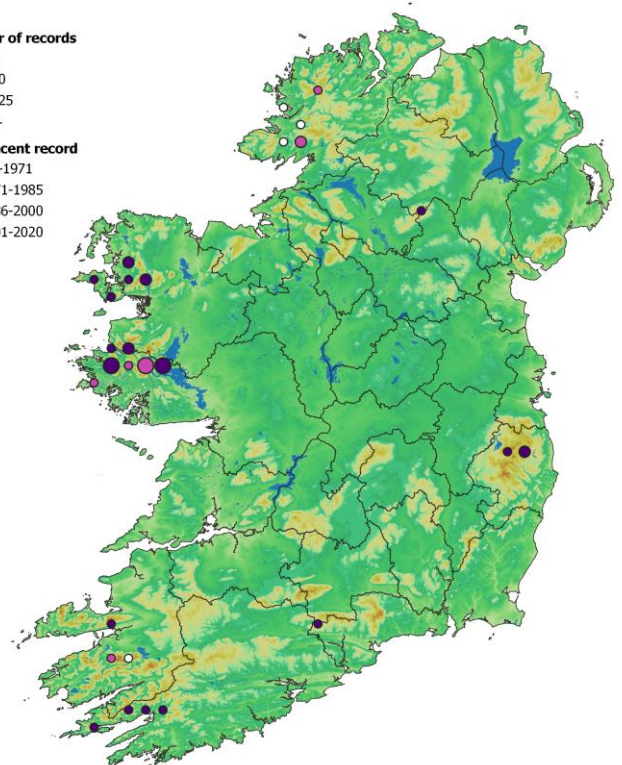
2001-2020:	18
1986-2000:	12
1971-1985:	0
Pre-1971:	6

Number of records

- 1-3
- 4-10
- 11-25
- 26+

Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



Synoptic table (n = 160)

Species	Frequency		Cover		Species	Frequency		Cover	
	(from I-V)		min	(med) max		(from I-V)		min	(med) max
<i>Potentilla erecta</i>	V		1-(3)	-5	<i>Carex echinata</i>	II		1-(3)	-5
<i>Molinia caerulea</i>	V		2-(5)	-9	<i>Agrostis capillaris</i>	II		1-(3)	-7
<i>Carex panicea</i>	V		+(4)	-7	<i>Breutelia chrysocoma</i>	II		+(2)	-5
<i>Nardus stricta</i>	V		2-(5)	-9	<i>Rhytidiadelphus squarrosus</i>	II		+(2)	-5
<i>Narthecium ossifragum</i>	V		1-(3)	-7	<i>Hylocomium splendens</i>	II		+(2)	-7
<i>Erica tetralix</i>	IV		1-(3)	-5	<i>Sphagnum subsecundum</i> agg.	II		1-(3)	-9
<i>Trichophorum cesp./germanicum</i>	IV		2-(3)	-7	<i>Erica cinerea</i>	II		2-(3)	-4
<i>Calluna vulgaris</i>	IV		+(3)	-5	<i>Sphagnum capillifolium</i>	II		+(2)	-5
<i>Racomitrium lanuginosum</i>	IV		+(3)	-7	<i>Sphagnum palustre</i>	II		+(2)	-5
<i>Hypnum jutlandicum</i>	IV		+(2)	-8	<i>Thuidium tamariscinum</i>	II		+(2)	-3
<i>Juncus squarrosus</i>	III		1-(3)	-8	<i>Drosera rotundifolia</i>	II		+(2)	-3
<i>Campylopus atrovirens</i>	III		+(3)	-5	<i>Polytrichum commune</i>	II		+(2)	-5
<i>Juncus bulbosus</i>	III		+(3)	-5	<i>Sphagnum papillosum</i>	II		+(3)	-9
<i>Eleocharis multicaulis</i>	III		2-(4)	-7	<i>Cladonia uncialis</i>	I		2-(2)	-3
<i>Carex viridula</i>	III		1-(3)	-5	<i>Pleurozia purpurea</i>	I		1-(2)	-5
<i>Danthonia decumbens</i>	III		1-(3)	-7	<i>Schoenus nigricans</i>	I		2-(3)	-6
<i>Agrostis canina/vinealis</i>	III		1-(3)	-7	<i>Sphagnum cuspidatum</i>	I		1-(3)	-9
<i>Eriophorum angustifolium</i>	III		2-(3)	-5	<i>Rhytidiadelphus loreus</i>	I		+(3)	-5
<i>Polygala serpyllifolia</i>	III		+(2)	-5	<i>Cladonia portentosa</i>	I		+(2)	-3
<i>Sphagnum compactum</i>	II		1-(3)	-7	<i>Rhynchospora alba</i>	I		1-(3)	-5

Affinities

GHI: GS3 Dry-humid acid grassland / HH3 Wet heath / PB2 Upland blanket bog

ZM: CI01C Nardo-Juncion squarrosi (Oberd. 1957) Passarge 1964 / PB01A Ericion tetralicis Schwickerath 1933

EUNIS: F4.11 Northern wet heaths

NVC: M15 *Scirpus cespitosus-Erica tetralix* wet heath (68.4%)

Annex I:4010 Wet heath / 7130 Blanket bog (active)*

Proxy environmental data

Light: 7.3 Reaction: 3.0 Wetness: 7.5 Fertility: 1.8 Salinity: 0.0

Conservation value

This is on average a species-rich community (species/4 m² = 20.8, n =133). Most instances can be referred to the EU HD Annex I habitat 4010 Wet heath but there are also some cases from habitat 7130 Blanket bog (active)*.

Management

This community, which often forms parts of commonages, is usually used as rough grazing land (typically for sheep) and there are signs of overgrazing. Burning may be periodically used across large areas to suppress the dwarf shrubs and encourage grass growth. Another threat is agricultural improvement.

Key references

Bleasdale, A. (1995) The vegetation and ecology of the Connemara uplands, with particular reference to sheep grazing. (Ph.D. thesis). National University of Ireland Galway.

MacGowan F. L. (2000) The influence of anthropogenic activity on the vegetation of Atlantic blanket bog in the west of Ireland. (Ph.D. thesis). University College Dublin.

Perrin, P.M., Barron, S.J., Roche, J.R., O'Hanrahan, B. (2014) Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland. *Irish Wildlife Manuals* No. 79. National Parks and Wildlife Service, Dublin. [and associated series of site reports from the National Survey of Upland Habitats]

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Synopsis author(s): P.M. Perrin



Photo 1. HE4B *Molinia caerulea* – *Nardus stricta* heath, Glenummera, Sheeffry Hills, Mayo (J. Conaghan, October 2010)



Photo 2. HE4B *Molinia caerulea* – *Nardus stricta* heath, Kilcaskan, Caha Mountains, Cork (J. Roche, August 2014)