Irish Vegetation Classification (IVC)

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Community Synopsis

Scientific name	*Nardus stricta – Potentilla erecta* grassland
Common name	Mat-grass – Tormentil grassland
Community code	GL4B

Vegetation

The main grasses of this community are *Agrostis capillaris*, *Anthoxanthum odoratum* and *Nardus stricta*, with *Festuca ovina* and *Danthonia decumbens* also frequent. They form a fairly low sward (mean graminoid height = 12.6 cm, *n* = 172). *Potentilla erecta* and *Galium saxatile* are constant species, and indeed often the only forbs present apart from *Viola riviniana* and *Polygala serpyllifolia*, which are occasional in the sward (mean forb height = 5.9 cm, *n* = 172). There is generally a well-developed bryophyte layer composed of *Hylocomium splendens*, *Rhytidiadelphus squarrosus*, *R. loreus*, *Thuidium tamariscinum* and *Scleropodium purum*. As these grasslands are derived from, and often in mosaic with, dry heaths, there is frequently some low cover of dwarf shrubs in the form of *Calluna vulgaris* and *Vaccinium myrtillus*. *Carex binervis* is frequent and, in more flushed areas, *C. panicea* can be found amongst the sward.

Ecology

The *Nardus stricta – Potentilla erecta* grassland occurs on thin, peaty (mean organic content = 36.3%, *n* = 77), very infertile soils and is restricted largely to unenclosed, sheep-grazed, steep slopes in the high uplands (mean altitude = 238 m, *n* = 172; mean slope = 14.6°, *n* = 172). It occurs at higher altitudes than the other grassland communities.

Sub-communities

Two sub-communities are described. The *Festuca ovina – Luzula campestris* sub-community (GL4Bi) represents swards with some mild basic enrichment and consequently the presence of some species more lowland in character. These are somewhat transitional towards community GL4C. The *Calluna vulgaris – Rhytidiadelphus loreus* sub-community (GL4Bii) is strongly calcifuge in nature and supports a number of species at low abundances that are characteristic of dry and wet heaths.

Similar communities

The most similar community is GL4C *Agrostis capillaris – Potentilla erecta* grassland. That assemblage occurs on average at lower altitudes and frequently supports a much broader range of forbs including *Plantago lanceolata*, *Succisa pratensis*, *Prunella vulgaris*, *Cirsium palustre*, *Hypochaeris radicata* and *Lotus corniculatus*. From GL4A *Agrostis capillaris – Trifolium repens* grassland, GL4B differs in the much lower frequency of upland calcifuges.

Records and distribution

Number of records (all)

Clearly assigned:	377
Transitional:	56
Total:	433

Number of records (mapped)

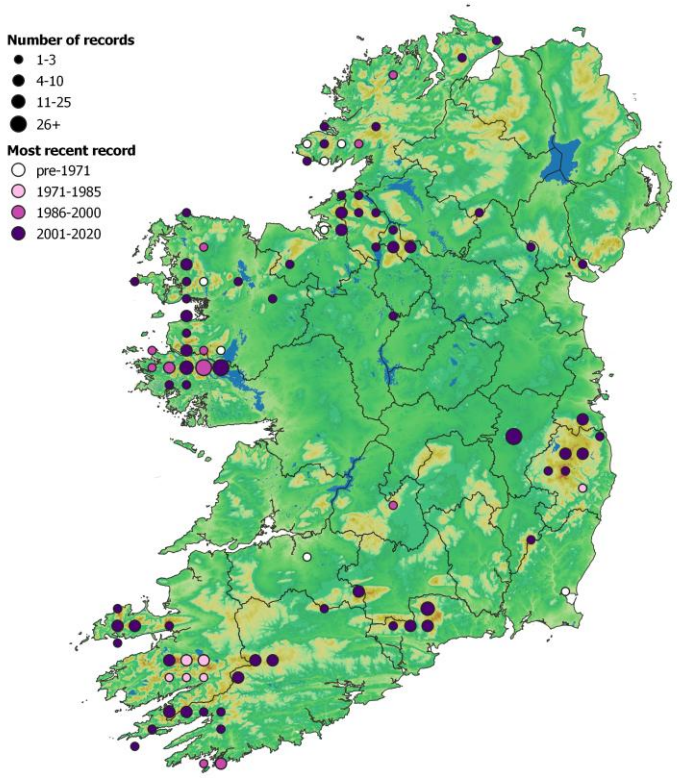
2001-2020:	213
1986-2000:	137
1971-1985:	18
Pre-1971:	25
Total:	393

Number of hectads (by most recent time period)

2001-2020:	65
1986-2000:	11
1971-1985	6
Pre-1971:	8
Total:	90

Number of hectads (records in each time period)

2001-2020:	65
1986-2000:	18
1971-1985	6
Pre-1971:	16



Synoptic table (*n* = 332)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
Agrostis capillaris	V	2-(5)-10	*Hypnum cupressiforme*	II	+-(3)-7
Potentilla erecta	V	+-(4)-8	*Luzula multiflora*	II	+-(2)-5
Rhytidiadelphus squarrosus	V	+-(4)-8	*Juncus squarrosus*	II	+-(3)-7
Galium saxatile	V	+-(3)-8	*Viola riviniana/reichenbachiana*	II	+-(3)-5
Anthoxanthum odoratum	V	+-(5)-8	*Polygala serpyllifolia*	II	+-(2)-5
Hylocomium splendens	V	+-(4)-10	*Polytrichum formosum*	II	+-(2)-7
Nardus stricta	IV	+-(5)-9	*Festuca vivipara*	II	1-(3)-7
Thuidium tamariscinum	IV	+-(3)-7	*Cirsium palustre*	II	+-(2)-7
Festuca ovina	III	1-(5)-8	*Luzula campestris*	I	+-(3)-5
Danthonia decumbens	III	+-(3)-7	*Trifolium repens*	I	+-(2)-7
Carex binervis	III	+-(3)-5	*Hypnum jutlandicum*	I	+-(3)-8
Scleropodium purum	II	+-(2)-5	*Campylopus flexuosus*	I	+-(2)-5
Carex pilulifera	II	+-(3)-7	*Vaccinium myrtillus*	I	+-(2)-7
Calluna vulgaris	II	+-(2)-7	*Molinia caerulea*	I	+-(4)-9
Holcus lanatus	II	+-(3)-7	*Lophocolea bidentata*	I	+-(2)-3
Rhytidiadelphus loreus	II	+-(3)-8	*Pleurozium schreberi*	I	+-(3)-5
Agrostis canina/vinealis	II	1-(3)-7	*Prunella vulgaris*	I	+-(2)-5
Carex panicea	II	1-(3)-6	*Euphrasia officinalis* agg.	I	+-(2)-3
Polytrichum commune	II	+-(3)-9	*Racomitrium lanuginosum*	I	+-(2)-7
Dicranum scoparium	II	+-(2)-5	*Festuca rubra*	I	2-(3)-8

Affinities

GHI: GS3 Dry-humid acid grassland

ZM: CI01B Violion caninae Schwickerath 1944

EUNIS: E1.712 Sub-Atlantic *Nardus-Galium* grasslands

NVC: U5 *Nardus stricta-Galium saxatile* grassland (72.9%)

Annex I: 6230 Species-rich *Nardus* upland grassland*

Proxy environmental data

Light: 6.6 Reaction: 3.8 Wetness: 5.8 Fertility: 2.8 Salinity: 0.0

Conservation value

This is a grassland community of medium species richness (species/4 m^2 = 20.6, *n* = 299). More diverse swards from the uplands may correspond to EU HD Annex I priority habitat 6230 Species-rich *Nardus* upland grassland*.

Management

These swards are managed as rough grazing land (typically for sheep). The main threats to these grasslands include overgrazing, improvement, abandonment (e.g. bracken or heath encroachment) and afforestation.

Key references

O'Neill, F.H., Martin, J.R., Devaney, F.M., Perrin, P.M. (2013) The Irish Semi-natural Grasslands Survey 2007-2012. *Irish Wildlife Manuals* No. 78. National Parks and Wildlife Service, Dublin.

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.

Synopsis version: V2.1 **Synopsis date:** March 2025 **Synopsis author(s):** P.M. Perrin

Photo 1. GL4B *Nardus stricta – Potentilla erecta* grassland, Kilgeever, Mayo (F. Devaney/D. McLoughlin, August 2011)

Photo 2. GL4B *Nardus stricta – Potentilla erecta* grassland, Canagullen, Kerry (C. MacMahon/K. McNutt, August 2012)