Irish Vegetation Classification (IVC)

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Community Synopsis

Scientific name	*Betula pubescens – Sphagnum palustre* woodland
Common name	Downy Birch – Blunt-leaved Bog-moss woodland
Community code	WL4C

Vegetation

Betula pubescens is the sole constant of the low canopy of this community (mean canopy height = 12.2 m, *n* = 27). *Salix cinerea* is the only other tree species likely to be encountered, accompanying *Betula* in the canopy or forming an understorey. The field layer is often strikingly dominated by tussocks of *Molinia caerulea*, amongst which can also be found *Dryopteris dilatata*, *Rubus fruticosus* agg. and *Juncus effusus*. A key characteristic is the usual abundance of *Sphagnum* species in the bryophyte layer, chiefly *Sphagnum palustre*, but also *Sphagnum fimbriatum*, *Sphagnum capillifolium*, *Sphagnum recurvum* agg. and *Sphagnum squarrosum*. *Thuidium tamariscinum*, *Scleropodium purum* and *Hypnum cupressiforme* are constants within this layer.

Ecology

This community comprises open stands of birch woodland on soils with a fairly high water table or a high degree of flushing, typically occurring on basin peats or occasionally on peaty gleys (mean organic content = 83.7%, *n* = 23). It is often found in peaty hollows at higher altitudes but also included here are stands of intact and degraded raised bog systems in the lowlands (mean altitude = 100 m, *n* = 26). Consequently, it largely occurs on level ground (mean slope = 0.5°, *n* = 26). Soils are very acidic and markedly infertile.

Sub-communities

Two sub-communities have been described for this community. In the *Calluna vulgaris-Eriophorum vaginatum* sub-community (WL4Ci), bogland species are abundant and *Pinus sylvestris* may occur. The *Rubus fruticosus-Potentilla erecta* sub-community (WL4Cii) is somewhat less acidic and lacks these indicators, but *Molinia caerulea* and the titular species are more frequent.

Similar communities

Molinia caerulea is also a prominent plant within the wet birch woodlands of community WL4E. That community, however, is not as highly acidic and oligotrophic as WL4F, so *Sphagnum* and most of the other indicators of bogs are infrequent.

Records and distribution

Number of records (all)

Clearly assigned:	35
Transitional:	8
Total:	43

Number of records (mapped)

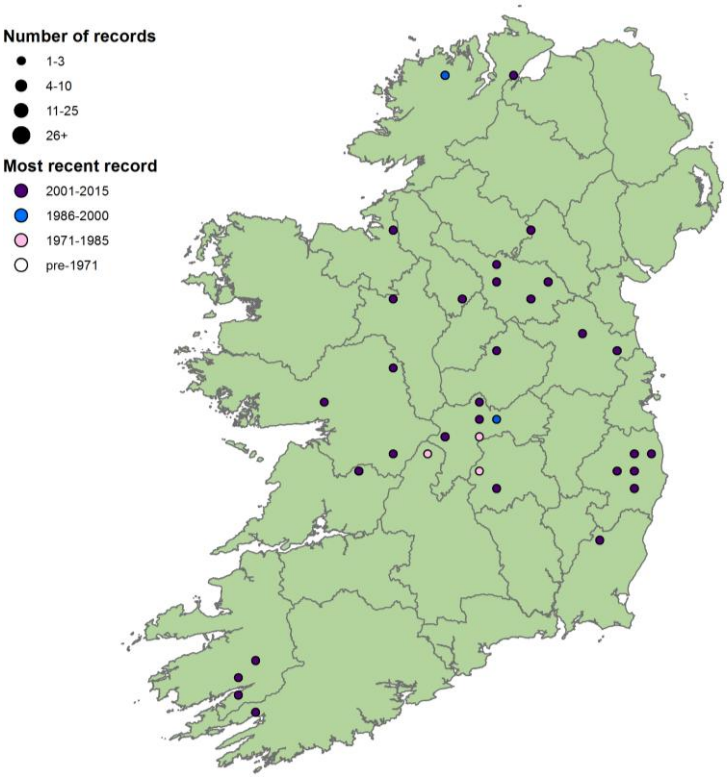
2001-2015:	34
1986-2000:	2
1971-1985:	7
Pre-1971:	0
Total:	43

Number of hectads (most recent records)

2001-2015:	30
1986-2000:	2
1971-1985	3
Pre-1971:	0
Total:	35

Number of hectads (all mapped records)

2001-2015:	30
1986-2000:	2
1971-1985	6
Pre-1971:	0



Synoptic table (*n* = 33)					
Species	**Frequency** (from I-V)	**Cover** min (med) max	**Species**	**Frequency** (from I-V)	**Cover** min (med) max
Betula pubescens	V	4-(8)-10	*Agrostis canina/vinealis*	II	2-(2)-5
Sphagnum palustre	V	+-(5)-8	*Hylocomium splendens*	II	+-(2)-4
Molinia caerulea	V	+-(8)-9	*Sphagnum fimbriatum*	II	+-(4)-5
Polytrichum commune	IV	1-(4)-8	*Holcus lanatus*	II	1-(3)-5
Thuidium tamariscinum	IV	+-(3)-7	*Hypnum andoi*	II	+-(1)-3
Dryopteris dilatata	IV	1-(2)-5	*Sphagnum capillifolium*	II	+-(5)-7
Scleropodium purum	IV	+-(3)-4	*Sphagnum recurvum* agg.	II	2-(4)-8
Ulota bruchii/crispa	IV	+-(+)-3	*Blechnum spicant*	II	+-(2)-3
Rubus fruticosus agg.	IV	+-(3)-7	*Vaccinium myrtillus*	II	2-(3)-6
Juncus effusus	IV	1-(3)-5	*Aulacomnium palustre*	II	+-(3)-7
Hypnum cupressiforme	IV	+-(2)-4	*Eriophorum vaginatum*	II	2-(3)-7
Potentilla erecta	III	+-(2)-3	*Agrostis stolonifera*	II	+-(3)-5
Kindbergia praelonga	III	+-(2)-5	*Isothecium myosuroides*	II	+-(1)-2
Hypnum jutlandicum	III	1-(3)-5	*Frullania dilatata*	II	+-(1)-3
Lophocolea bidentata	III	+-(1)-3	*Carex rostrata*	II	1-(3)-5
Dicranum scoparium	III	+-(2)-5	*Erica tetralix*	II	2-(2)-3
Salix cinerea	III	2-(3)-7	*Frullania tamarisci*	II	+-(1)-3
Calluna vulgaris	III	+-(3)-5	*Pleurozium schreberi*	II	2-(4)-5
Rhytidiadelphus squarrosus	III	+-(2)-4	*Sphagnum squarrosum*	II	1-(3)-7
Anthoxanthum odoratum	II	+-(3)-5	*Polytrichum formosum*	II	+-(2)-4

Affinities

GHI: WN7 Bog woodland (100.0%) (*n* = 27)

ZM: Piceion excelsae / Salicion cinereae

EUNIS: G1.512 Sedge sphagnum birch woods

NVC: W4 *Betula pubescens-Molinia caerulea* woodland (52.8%)

Annex I:91D0 Bog woodland* (77.8%) (*n* = 27)

Proxy environmental data

Light: 6.6 Reaction: 3.4 Wetness: 7.0 Fertility: 2.9 Salinity: 0.0

Conservation value

This is not a particularly species-rich woodland community (total species/100 m^2 = 26.9, *n* = 27) but it has a fairly diverse bryophyte flora (bryophyte species/100 m^2 = 13.3, *n* = 27). Many stands have a high *Sphagnum* cover and qualify as EU Annex I habitat 91D0 Bog woodland*.

Management

These stands are threatened by any impacts that may alter the hydrological regime. Stands on intact raised bog are particularly vulnerable to the impacts on the water table that result from nearby turf-cutting. Other threats include overgrazing by deer or livestock, woodland clearance and invasion by non-native species such as *Rhododendron ponticum*.

Key references

Perrin, P.M., Martin, J.R., Barron, S.J., O'Neill, F.H., McNutt, K.E., Delaney, A. (2008) National Survey of Native Woodlands 2003-2008. Unpublished report submitted to National Parks & Wildlife Service

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Photo 1. WL4C *Betula pubescens* – *Sphagnum palustre* woodland, Barrany, Galway (P. Moran/P. Perrin, May 2007)

Photo 2. WL4C *Betula pubescens* – *Sphagnum palustre* woodland, Gortacarnaun Wood, Galway
(P. Perrin/G. Smith, July 2006)