

Scientific name	<i>Betula pubescens</i> – <i>Salix cinerea</i> woodland
Common name	Downy Birch – Grey Willow woodland
Community code	WL4E

Vegetation

This is a wet woodland community in which *Betula pubescens* and *Salix cinerea* form the low canopy (mean canopy height = 12.9 m, $n = 52$). *Fraxinus excelsior* is a typically present and *Ilex aquifolium* is frequent but neither are ever abundant. *Crataegus monogyna* is occasional in the understorey as is *Salix × multinervis* (note that *Salix aurita* is seldom found within woodland). *Rubus fruticosus* agg., *Molinia caerulea*, *Hedera helix*, *Dryopteris dilatata*, *Potentilla erecta* and *Galium palustre* are constants in the field layer. In some stands bramble can form extensive tangles, in others there can be a dense sward of *Molinia* tussocks. These are frequently accompanied by mesotrophic species of wet soils including *Juncus effusus*, *Filipendula ulmaria* and *Holcus lanatus*. As usual in Irish birch woods, *Thuidium tamariscinum* is a constant in the bryophyte layer growing with *Kindbergia praelonga* and *Scleropodium purum*. *Calliergonella cuspidata* is usually found on the wetter ground. *Sphagnum* species are only occasional.

Ecology

These are predominantly stands of wet, acidic basin peats and to a lesser extent gleys (mean organic content = 74.6%, $n = 59$) and occur in the lowlands on flat ground (mean slope = 0.8°, $n = 59$; mean altitude = 75 m, $n = 59$). They are commonly associated with degraded bogs, particularly smaller bogs or the lagg zone of large ones, where there is some groundwater intrusion. Soils are typically quite infertile.

Sub-communities

No sub-communities have been described for this community.

Similar communities

These stands differ from the willow woodlands of group WL3 in the greater presence of birch, occurring on more acidic and less waterlogged soils. *Molinia caerulea* also occurs in the boggy woods of community WL4C, but is there usually accompanied by a carpet of *Sphagnum* not typically found in the more mesotrophic conditions of WL4E. *Salix cinerea* is less frequent and less plentiful in most of the drier birch woodland communities (WL4A, WL4B and WL4F) although it comes close in examples of WL4D.

Records and distribution

Number of records (all)

Clearly assigned:	61
Transitional:	17
Total:	78

Number of records (mapped)

2001-2020:	70
1986-2000:	3
1971-1985:	5
Pre-1971:	0
Total:	78

Number of hectads (by most recent time period)

2001-2020:	56
1986-2000:	2
1971-1985:	3
Pre-1971:	0
Total:	61

Number of hectads (records in each time period)

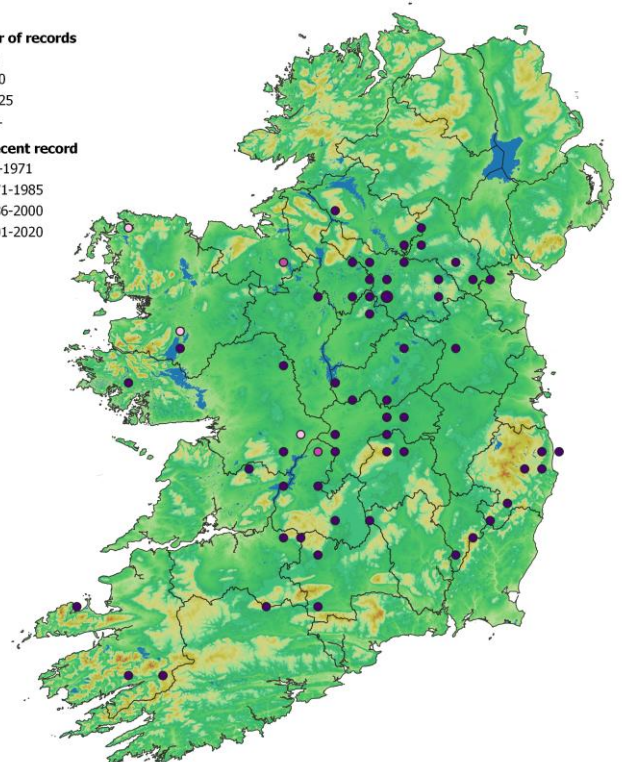
2001-2020:	56
1986-2000:	2
1971-1985:	4
Pre-1971:	0

Number of records

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

Most recent record

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



Synoptic table (n = 59)

Species	Frequency		Cover		Species	Frequency		Cover	
	(from I-V)		min	(med) max		(from I-V)		min	(med) max
<i>Betula pubescens</i>	V		3-(7)	9	<i>Agrostis canina/vinealis</i>	III		1-(3)	6
<i>Rubus fruticosus</i> agg.	V		1-(5)	8	<i>Eurhynchium striatum</i>	III		+(2)	7
<i>Salix cinerea</i>	V		2-(5)	7	<i>Ilex aquifolium</i>	III		+(2)	4
<i>Thuidium tamariscinum</i>	V		+(4)	8	<i>Frullania dilatata</i>	III		+(+)	2
<i>Molinia caerulea</i>	V		2-(4)	10	<i>Agrostis stolonifera</i>	II		1-(3)	7
<i>Kindbergia praelonga</i>	IV		+(3)	6	<i>Blechnum spicant</i>	II		1-(2)	5
<i>Hedera helix</i>	IV		1-(3)	7	<i>Crataegus monogyna</i>	II		+(1)	7
<i>Calliergonella cuspidata</i>	IV		+(3)	7	<i>Angelica sylvestris</i>	II		+(2)	3
<i>Ulota bruchii/crispa</i>	IV		+(+)	2	<i>Brachythecium rutabulum</i>	II		+(1)	2
<i>Dryopteris dilatata</i>	IV		+(2)	8	<i>Lonicera periclymenum</i>	II		1-(2)	3
<i>Lophocolea bidentata</i>	IV		+(1)	3	<i>Hypnum andoi</i>	II		+(2)	3
<i>Potentilla erecta</i>	IV		+(2)	3	<i>Salix × multinervis</i>	II		1-(4)	8
<i>Fraxinus excelsior</i>	IV		1-(2)	5	<i>Succisa pratensis</i>	II		1-(2)	3
<i>Galium palustre</i>	IV		+(2)	3	<i>Anthoxanthum odoratum</i>	II		+(2)	3
<i>Scleropodium purum</i>	III		+(2)	5	<i>Athyrium filix-femina</i>	II		+(2)	4
<i>Juncus effusus</i>	III		1-(2)	4	<i>Geranium robertianum</i>	II		+(2)	3
<i>Filipendula ulmaria</i>	III		1-(3)	6	<i>Plagiomnium undulatum</i>	II		+(1)	2
<i>Hypnum jutlandicum</i>	III		+(2)	5	<i>Polytrichum commune</i>	II		1-(2)	4
<i>Holcus lanatus</i>	III		1-(3)	5	<i>Sphagnum palustre</i>	II		1-(4)	6
<i>Hypnum cupressiforme</i>	III		+(1)	4	<i>Viola riviniana/reichenbachiana</i>	II		+(2)	3

Affinities

GHI: WN6 Wet willow-alder-ash woodland / WN7 Bog woodland

ZM: IA03A Betulion pubescentis Lohmeyer et Tx. ex Oberd. 1957

EUNIS: G1.512 Sedge sphagnum birch woods

NVC: W4a *Betula pubescens-Molinia caerulea* woodland *Dryopteris dilatata-Rubus fruticosus* sub-community (45.7%)

Annex I: 91D0 Bog woodland* / 91E0 Residual alluvial forests*

Proxy environmental data

Light: 6.4 Reaction: 4.8 Wetness: 6.9 Fertility: 4.2 Salinity: 0.0

Conservation value

This is quite a species-rich woodland community (total species/100 m² = 37.2, n = 59) with a fairly diverse bryophyte flora (bryophyte species/100 m² = 13.2, n = 59). Stands with a high cover of *Sphagnum* may qualify as EU HD Annex I habitat 91D0 Bog woodland* whilst a small proportion of stands qualify as habitat 91E0 Residual alluvial forests*.

Management

The main threats to these woodlands include changes to the hydrological regime, overgrazing by deer or livestock, woodland clearance and invasion by non-native species. Undergrazing may also occur, however, resulting in dense thickets of bramble that reduce field layer diversity.

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). National Parks and Wildlife Service, Dublin.

Synopsis version: V2.1

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Synopsis author(s): P.M. Perrin



Photo 1. WL4E *Betula pubescens* – *Salix cinerea* woodland, Ballymacmorris Wood, Westmeath
(M. Gabbett/J. Martin, July 2005)



Photo 2. WL4E *Betula pubescens* – *Salix cinerea* woodland, Graffagh, Monaghan (S. Barron/P. Perrin, September 2005)