

**Scientific name** *Larix kaempferi* forest

**Common name** Japanese Larch forest

**Community code** WL5B

### Vegetation

This is a high forest community dominated by a dense canopy of *Larix kaempferi* (mean canopy height = 18.7 m,  $n = 34$ ). Other tree species are only occasional with *Ilex aquifolium* and *Sorbus aucuparia* the most likely species to be found, either in a very sparse understorey or regenerating in the field layer. That field layer is typically patchy, usually consisting of some tufts of *Agrostis capillaris* or *Agrostis canina/vinealis*, some fronds of *Dryopteris dilatata* and stems of *Rubus fruticosus*, agg. but more vigorous growth can be found where the canopy opens up. Frequently found are *Anthoxanthum odoratum*, *Holcus lanatus* and *Blechnum spicant* and the heathy species *Vaccinium myrtillus* and *Galium saxatile*. The bryophyte layer is reasonably diverse with the main species being *Thuidium tamariscinum*, *Hypnum jutandicum*, *Rhytidiadelphus loreus*, *Rhytidiadelphus squarrosus*, *Kindbergia praelonga*, *Polytrichum formosum* and *Scleropodium purum*. Some diligent searching is highly likely to yield some delicate stems of *Lophocolea bidentata*.

### Ecology

These are commercial forestry stands that were commonly planted in marginal areas in the uplands in recent decades (mean slope = 5.7°,  $n = 34$ ; mean altitude = 233 m,  $n = 34$ ). The soils, mainly podzols and podzolic brown earths, are typically acidic and of low fertility and are drained prior to afforestation (mean organic content = 38.7%,  $n = 34$ ). Included here are mainly closed-maturing and mature stands in which a dense needle layer is likely to develop.

### Sub-communities

No sub-communities have been described for this community.

### Similar communities

Due to the dominance of *Larix kaempferi*, mature stands of this type are unlikely to cause confusion. Where first rotation Japanese larch stands are still at a pre-thicket or thicket stage they may be best regarded as transitional between the present community and the previous vegetation, which is likely to be a type of wet grassland, heathland or bog.

### Records and distribution

#### Number of records (all)

Clearly assigned:	34
Transitional:	3
Total:	37

#### Number of records (mapped)

2001-2020:	37
1986-2000:	0
1971-1985:	0
Pre-1971:	0
Total:	37

#### Number of hectads (by most recent time period)

2001-2020:	9
1986-2000:	0
1971-1985:	0
Pre-1971:	0
Total:	9

#### Number of hectads (records in each time period)

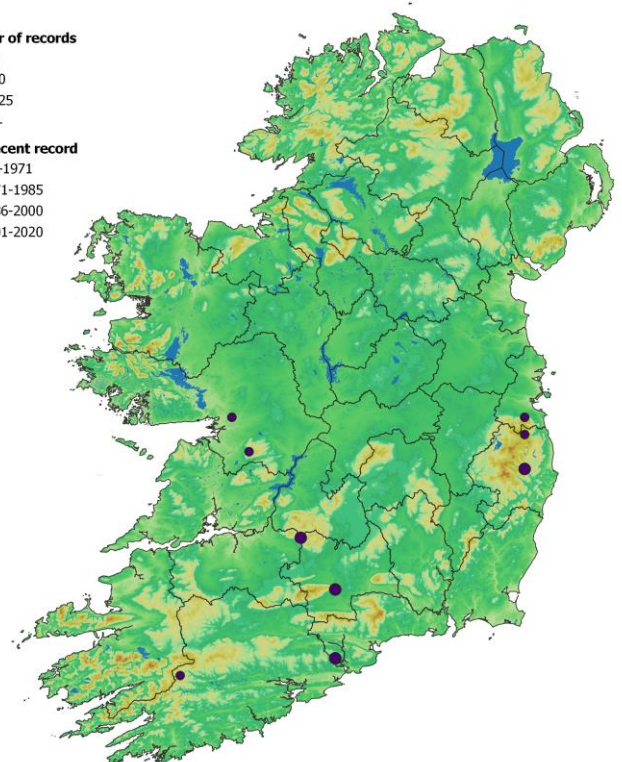
2001-2020:	9
1986-2000:	0
1971-1985:	0
Pre-1971:	0

#### Number of records

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

#### Most recent record

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



### Synoptic table (n = 34)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Larix kaempferi</i>	V	8-(9)-10	<i>Blechnum spicant</i>	III	1-(2)-3
<i>Lophocolea bidentata</i>	V	1-(2)-5	<i>Dicranella heteromalla</i>	III	1-(1)-3
<i>Thuidium tamariscinum</i>	V	1-(4)-8	<i>Dryopteris affinis</i>	II	1-(3)-3
<i>Polytrichum formosum</i>	V	1-(3)-4	<i>Eurhynchium striatum</i>	II	1-(2)-4
<i>Agrostis capillaris</i>	V	2-(4)-7	<i>Hedera helix</i>	II	1-(1)-3
<i>Hypnum jutlandicum</i>	V	2-(3)-8	<i>Ilex aquifolium</i>	II	1-(1)-2
<i>Kindbergia praelonga</i>	IV	1-(3)-7	<i>Molinia caerulea</i>	II	1-(4)-8
<i>Rhytidiadelphus loreus</i>	IV	2-(3)-5	<i>Pteridium aquilinum</i>	II	1-(3)-8
<i>Rhytidiadelphus squarrosus</i>	IV	2-(3)-5	<i>Ulota bruchii/crispa</i>	II	1-(1)-2
<i>Dryopteris dilatata</i>	IV	2-(3)-4	<i>Oxalis acetosella</i>	II	3-(4)-5
<i>Rubus fruticosus</i> agg.	IV	1-(3)-9	<i>Rhytidiadelphus triquetrus</i>	II	2-(3)-7
<i>Scleropodium purum</i>	IV	1-(3)-5	<i>Hylocomium splendens</i>	II	1-(2)-3
<i>Agrostis canina/vinealis</i>	IV	3-(4)-7	<i>Potentilla erecta</i>	II	1-(2)-3
<i>Anthoxanthum odoratum</i>	III	1-(4)-7	<i>Calluna vulgaris</i>	II	1-(2)-6
<i>Mnium hornum</i>	III	1-(2)-3	<i>Deschampsia flexuosa</i>	II	3-(4)-5
<i>Dicranum scoparium</i>	III	1-(2)-3	<i>Calypogeia muelleriana</i>	II	1-(2)-2
<i>Galium saxatile</i>	III	1-(2)-3	<i>Luzula multiflora</i>	II	1-(2)-4
<i>Plagiothecium undulatum</i>	III	1-(2)-5	<i>Poa trivialis</i>	II	3-(4)-5
<i>Holcus lanatus</i>	III	1-(3)-5	<i>Pseudotaxiphyllum elegans</i>	II	1-(3)-3
<i>Vaccinium myrtillus</i>	III	1-(3)-5	<i>Sorbus aucuparia</i>	II	1-(1)-2

#### Affinities

GHI: WD4 Conifer plantation

ZM: Not classified

EUNIS: G3.F21 Exotic spruce, fir, larch, douglas fir, deodar plantations

NVC: W17c *Quercus petraea*-*Betula pubescens*-*Dicranum majus* woodland *Anthoxanthum odoratum*-*Agrostis capillaris* sub-community (56.7%), but see also account of conifer plantations in Rodwell et al. (p. 62, 2000)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 6.4 Reaction: 4.5 Wetness: 5.9 Fertility: 3.4 Salinity: 0.0

#### Conservation value

These plantations are dominated by non-native species and are typically perceived as having a low conservation value. They are not particularly species-rich but have a reasonable bryophyte flora (total species/100 m<sup>2</sup> = 25.3, n = 34; bryophyte species/100 m<sup>2</sup> = 12.6, n = 34).

#### Management

Japanese larch stands are managed for timber production. Soon after planting, competitive native species, such as bracken, may be controlled by herbicides. Regularly thinning occurs from an early age until felling between the age of 50 and 70. Spread of the oomycete pathogen *Phytophthora ramorum* threatens existing stands and planting this species is no longer incentivised.

#### Key references

French, L.J., Smith, G.F., Kelly, D.L., Mitchell, F.J.G., O'Donoghue, S., Iremonger, S.F., McKee, A.-M. (2008) Ground flora communities in temperate oceanic plantation forests and the influence of silvicultural, geographic and edaphic factors. *Forest Ecology and Management* 255, 476–494.

**Synopsis version:** V1.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin



Photo 1. WL5B *Larix kaempferi* forest, Avondale, Wicklow (F. O'Neill, December 2020)



Photo 2. WL5B *Larix kaempferi* forest, Avondale, Wicklow (F. O'Neill, December 2020)