Irish Vegetation Classification (IVC)

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Community Synopsis

Scientific name	*Picea sitchensis* forest
Common name	Sitka Spruce forest
Community code	WL5A

Vegetation

This is a forest community dominated by a dense canopy of *Picea sitchensis* (mean canopy height = 13.9 m, *n* = 68). Other tree species are typically absent, although occasionally one might find some suppressed growth of *Ilex aquifolium*. Due to the heavy canopy and dense needle layer, the field layer is very poor; *Hedera helix* is a constant here whilst *Dryopteris dilatata* and *Rubus fruticosus* agg. are frequent, but cover of these species is typically dismal. Rarely, where the canopy has opened up, bramble can be abundant. Occasionally, there are some clumps of *Blechnum spicant*, some grassy cover provided by *Agrostis capillaris*, *Agrostis stolonifera* or *Holcus lanatus*, or some heathland elements in the form of *Potentilla erecta* or *Galium saxatile*. The main bryophytes are *Kindbergia praelonga*, *Thuidium tamariscinum* and *Lophocolea bidentata*, frequently accompanied by *Hypnum jutlandicum*, *Brachythecium rutabulum* or the pale threads of *Plagiothecium undulatum*, but again these usually are not abundant.

Ecology

These are commercial forestry stands that are commonly planted in marginal areas in the uplands (mean slope = 8.0°, *n* = 68; mean altitude = 204 m, *n* = 68). The soils, mainly podzols, gleys and peats, are typically acidic and of low fertility and are drained prior to afforestation (mean organic content = 32.3%, *n* = 68). 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 *Picea sitchensis*, mature stands of this type are unlikely to cause confusion. Where first rotation Sitka spruce 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:	78
Transitional:	0
Total:	78

Number of records (mapped)

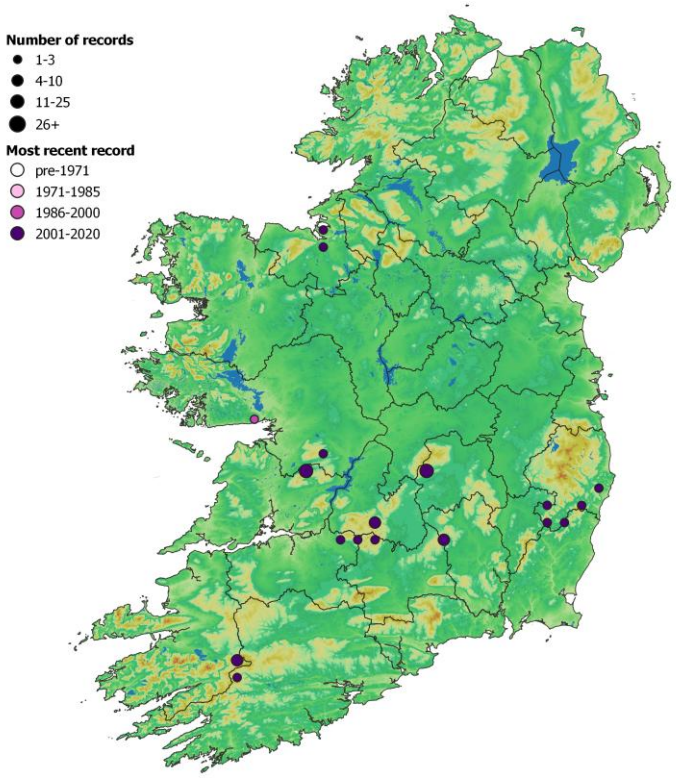
2001-2020:	77
1986-2000:	1
1971-1985:	0
Pre-1971:	0
Total:	78

Number of hectads (by most recent time period)

2001-2020:	17
1986-2000:	1
1971-1985	0
Pre-1971:	0
Total:	18

Number of hectads (records in each time period)

2001-2020:	17
1986-2000:	1
1971-1985	0
Pre-1971:	0



Synoptic table (*n* = 75)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
Picea sitchensis	V	7-(9)-10	*Rhytidiadelphus loreus*	II	1-(2)-5
Kindbergia praelonga	V	1-(3)-8	*Scleropodium purum*	II	1-(1)-3
Lophocolea bidentata	IV	1-(2)-5	*Campylopus flexuosus*	II	1-(2)-3
Thuidium tamariscinum	IV	1-(3)-9	*Hypnum andoi*	II	1-(2)-3
Hedera helix	IV	1-(1)-3	*Ilex aquifolium*	II	1-(1)-2
Dryopteris dilatata	III	1-(2)-5	*Hylocomium splendens*	II	1-(1)-7
Hypnum jutlandicum	III	1-(3)-7	*Mnium hornum*	II	1-(2)-3
Plagiothecium undulatum	III	1-(1)-7	*Rumex acetosa*	II	1-(2)-3
Brachythecium rutabulum	III	1-(1)-3	*Agrostis stolonifera*	II	1-(5)-7
Rubus fruticosus agg.	III	1-(2)-10	*Dicranum scoparium*	II	1-(1)-5
Polytrichum formosum	II	1-(2)-3	*Galium saxatile*	II	1-(2)-4
Rhytidiadelphus squarrosus	II	1-(2)-4	*Anthoxanthum odoratum*	I	1-(3)-5
Agrostis capillaris	II	1-(3)-6	*Athyrium filix-femina*	I	1-(1)-4
Atrichum undulatum	II	1-(1)-3	*Agrostis canina/vinealis*	I	1-(3)-7
Potentilla erecta	II	1-(1)-3	*Digitalis purpurea*	I	1-(2)-3
Calypogeia muelleriana	II	1-(1)-2	*Dryopteris affinis*	I	1-(2)-3
Plagiomnium undulatum	II	1-(1)-2	*Luzula multiflora*	I	1-(1)-3
Polytrichum commune	II	1-(1)-3	*Poa trivialis*	I	1-(2)-4
Blechnum spicant	II	1-(2)-2	*Pellia epiphylla*	I	1-(1)-3
Holcus lanatus	II	1-(3)-7	*Vaccinium myrtillus*	I	1-(1)-4

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 (43.2%), but see also account of conifer plantations in Rodwell et al. (p. 62, 2000)

Annex I: No significant correspondence

Proxy environmental data

Light: 6.6 Reaction: 2.9 Wetness: 6.6 Fertility: 2.7 Salinity: 0.1

Conservation value

These plantations are dominated by non-native species and are typically perceived as having a low conservation value. They are fairly species-poor overall but with a reasonable bryophyte flora (total species/100 m^2 = 22.0, *n* = 68; bryophyte species/100 m^2 = 10.7, *n* = 68).

Management

Sitka spruce stands are managed for timber production. They are typically thinned and pruned when the trees are between 15 and 22 years old. Thinning continues every few years until felling beween the age of 35 and 45.

Key references

Smith, G., Gittings, T., Wilson, M., French, L., Oxbrough, A., O'Donoghue, S., Pithon, J., O'Donnell, V., McKee, A-M., Iremonger, S., O'Halloran, J., Kelly, J., Mitchell, F., Giller, P., Kelly, T. (2005) Assessment of biodiversity at different stages of the forest cycle. BIOFOREST Project 3.1.2. Final report. Department of Botany, TCD, Department of Zoology, Ecology and Plant Science, UCC, and Coastal and Marine Resources Centre, UCC.

Synopsis version: V1.0 **Synopsis date:** April 2021 **Synopsis author(s):** P.M. Perrin

Photo 1. WL5A *Picea sitchensis* forest, Ticknock, Dublin (O. Daly, April 2020)

Photo 2. WL5A *Picea sitchensis* forest, Ticknock, Dublin (O. Daly, April 2020)