Appendix A: Supplementary material

Additional Supplementary tables associated with this article are listed below.

Table A.1 Environmental variable means in each region and stand type. GLMMs were applied with region and stand type used as fixed effects. Different lower case letters indicate a significant difference between stand types within a region and different upper case letters indicate a significant difference between regions within stand type

Table A.2 Summary characteristics of stands in the three study regions and three stand types

Table A.3 List of the total number of ground-vegetation species identified in 2 x 2-m survey plots in the three study regions and three forest stand types (SP= Scots pine monocultures, OK = oak monocultures, OK/SP = Oak and Scots pine mixtures)

Table A.4 Mean (standard error) of vascular plant total species richness (TSR), mean species richness (S), mean Shannon diversity Index (H') and mean Pielou Equitability Index (J') in each region x stand type. GLMMs were applied with region and stand type used as fixed effects

Table A.5 Median (interquartile range) observed and expected values for mixed stands in each region. Different letters indicate significant differences in the observed and expected values for each taxonomic diversity metric in each region analysed using paired Wilcoxon signed rank tests ($P<0.05$)

Table A.6 Percentage of oak (OK) and Scots pine (SP) in each mixed stand, the corresponding observed (Obs) and expected (Exp) values of taxonomic diversity metrics in each mixed stand, and the observed minus expected (Obs-Exp) for each taxonomic diversity metric in each mixed stand. SR = species richness, H′ = Shannon Diversity Index, J′ = Pielou's Equitability Index. These values were used to analyse the difference between the observed vs expected values presented in Table A.5

Table A.7 Descriptions of nine plant functional response trait groups and associated additional references

Table A.8 Median of ordinal and continuous response traits and the difference between observed and expected frequencies of each class of nominal response traits (separated by slashes) for each RG. Chi square and Kruskal-Wallis tests were applied with adjusted p-values for multiple comparisons. Different letters indicate significant differences ($p<0.05$-0.001) between RG's

Table A.9 Descriptions of seven plant functional effect trait groups and associated additional references

Table A.10 Median of ordinal effect traits and the difference between observed and expected frequencies of each class of nominal effect traits (separated by slashes) for each EG. Chi square and Kruskal-Wallis tests were applied with adjusted p-values for multiple comparisons. Different letters indicate significant differences ($p<0.05$-0.001) between EGs.

Table A.1 Environmental variable means in each region and stand type. GLMMs were applied with region and stand type used as fixed effects. Different lower case letters indicate a significant difference between stand types within a region and different upper case letters indicate a significant difference between regions within stand type

	Ireland			**New Forest**			**Thetford Forest**		
Mean annual precipitation (mm)[a]	750-1400			455-1232			391-833		
Mean annual temperature (˚C)[a]	9.3-9.6			6.3			9.2		
Total N deposition (kg ha^{-1} year^{-1}) [b]	2.4			8.2			18.3		
	Oak	**Scots pine**	**Mix**	**Oak**	**Scots pine**	**Mix**	**Oak**	**Scots pine**	**Mix**
Epicormic shoot browsing[c]	**1.00**^{A}	**1.00**^{AB}	**1.25**^{A}	**4.08**^{aB}	**1.86**^{bA}	**3.87**^{aB}	**3.53**^{aB}	**0.33**^{bB}	**1.73**^{cA}
p	AB<0.001		AB<0.001	ab<0.001	AB<0.01	ab<0.001	ab<0.01 ac<0.001	bc<0.05	AB<0.001
Seedling grazing[c]	**1.08**^{A}	**1.27**^{A}	**1.75**^{A}	**3.33**^{B}	**4.14**^{B}	**4.53**^{B}	**3.20**^{C}	**2.33**^{C}	**3.33**^{C}
p	AB<0.001 AC<0.001	AB<0.001 AC<0.001	AB<0.001 AC<0.001	BC<0.01	BC<0.001	BC<0.001			
Sward grazing[c]	**1.00**^{A}	**1.07**^{A}	**1.00**^{A}	**3.92**^{aB}	**2.86**^{bB}	**2.20**^{bB}	**2.33**^{aC}	**1.53**^{bB}	**1.40**^{bAB}
p	AB<0.001 AC<0.01	AB<0.01	AB<0.05	ab<0.001 BC<0.01	ab<0.05	AB<0.001	ab<0.001	ab<0.001	
Ground disturbance[c]	**0.17**^{A}	**0.27**^{A}	**0.25** ^{A}	**1.08**^{aB}	**0.14**^{bA}	**0.93**^{aB}	**2.60**^{aC}	**1.73**^{bB}	**1.27**^{B}
p	AB<0.001 AC<0.001	AB<0.001	AB<0.001	ab<0.01 BC<0.001		ab<0.05		ab<0.001 AB<0.001	ab<0.05
Canopy openness[d]	**2.67**	**6.42**	**2.88**	**5.65**	**6.13**	**2.87**	**1.30**	**3.01**	**4.59**
Ellenberg light[e]	**5.23**^{bA}	**5.89**^{aA}	**5.58**^{bA}	**5.97**^{bB}	**6.14**^{aB}	**5.99**^{bB}	**5.74**^{bA}	**5.94**^{aA}	**5.45**^{bA}
p	ab<0.01 AB<0.001	AB<0.001	ab<0.01 AB<0.001				AB<0.01		
Soil moisture (m3/m3)[f]	**NA**	**NA**	**NA**	**0.26**	**0.21**	**0.20**	**0.19**	**0.16**	**0.24**
Ellenberg moisture[e]	**5.52**^{abAB}	**5.83**^{aAB}	**5.54**^{bAB}	**5.71**^{abA}	**5.89**^{aA}	**5.60**^{bA}	**5.65**^{abB}	**5.63**^{aB}	**5.40**^{bB}
p		ab<0.001		AB<0.05	AB<0.05	AB<0.05			
pH mineral layer[g]	**4.84**^{aAB}	**4.61**^{abA}	**3.83**^{bA}	**4.52**^{aA}	**4.17**^{bA}	**4.34**^{bA}	**5.64**^{aB}	**4.35**^{bA}	**5.15**^{bB}
p	ab<0.05		AB<0.001	ab<0.05 AB<0.01		ab<0.05 AB<0.05	ab<0.001		ab<0.01
Ellenberg soil acidity[e]	**5.45**^{aA}	**4.70**^{abA}	**4.26**^{bA}	**4.83**^{aA}	**4.71**^{bA}	**4.83**^{aAB}	**6.50**^{aB}	**5.27**^{bB}	**5.39**^{bB}
p	ab<0.01 AB<0.01	AB<0.01	AB<0.001	ab<0.05 AB<0.001				ab<0.01	ab<0.001 AB<0.01
Litter depth (cm)[h]	**4.45**^{A}	**4.32**^{A}	**5.13**^{A}	**1.81**^{B}	**1.61**^{B}	**1.42**^{B}	**1.23**^{aB}	**4.36**^{bA}	**3.57**^{bA}
p		AB<0.05		AB<0.05		AB<0.001	AB<0.01	ab<0.01	ab<0.05

									AB<0.05
OMC (%)[i]	**15.19^{aA}**	**53.89^{bA}**	**33.68^{bA}**	**3.73^{aB}**	**7.99^{bB}**	**5.30^{abB}**	**2.96^{aB}**	**3.42^{bC}**	**3.49^{bB}**
p		ab<0.001 AB<0.001 AC<0.001	ab<0.001	ab<0.01 AB<0.001	BC<0.001	AB<0.001	ab>0.05 AB<0.001		AB<0.001
Available P (mg/L)[j]	**1.32^{a}**	**5.98^{b}**	**4.85^{b}**	**4.57^{aA}**	**26.84^{bA}**	**4.22^{aA}**	**13.71^{aB}**	**15.80^{bB}**	**17.09^{bB}**
p	ab<0.01			ab<0.001 AB>0.001	AB>0.001	AB>0.001		ab<0.05	ab<0.01
Available K (mg/L)[j]	**63.07**	**64.92**	**70.99**	**88.00^{aA}**	**129.03^{bA}**	**132.20^{bA}**	**50.83^{aB}**	**63.43^{bB}**	**61.49^{bB}**
p				ab<0.001 AB<0.01	AB<0.001	AB<0.001	ab<0.01		
Total N (%) [k]	**0.30^{aA}**	**0.83^{bA}**	**0.46^{abA}**	**0.12^{aB}**	**0.27^{bB}**	**0.18^{abB}**	**0.12^{aB}**	**0.18^{bB}**	**0.14^{abB}**
p	ab<0.01 AB<0.001	AB<0.001	AB<0.001	ab<0.01			ab<0.05 AB>0.001		
Ellenberg soil fertility[e]	**5.18^{aA}**	**4.44^{bA}**	**4.20^{bA}**	**4.46^{aA}**	**4.42^{bA}**	**4.39^{bA}**	**6.29^{aB}**	**5.41^{bB}**	**5.40^{bB}**
p	AB<0.001 ab<0.01	AB<0.001 ab<0.05	AB<0.001	AB<0.01 ab<0.05	AB<0.001	AB<0.001	ab<0.05		

[a] Annual precipitation/ temperature 30 year average (Harris *et al*. 2012; Walsh 2012).

[b] Total N deposition levels estimates based on NEGTAP 2001 for Great Britain and EMEP-based IDEM models for Ireland (Pieterse *et al.* 2007).

[c] Grazing/browsing pressure was assessed in a 10 x 10-m sampling plot surrounding each 2 x 2-m ground vegetation quadrat and followed the Woodland Grazing Toolbox methodology (Forestry Commission Scotland 2016).

[d] Canopy openness was recorded at the corners of a 10 x 10-m sampling plot surrounding each 2 x 2-m ground vegetation quadrat using a canopy scope (Brown *et al.* 2000).

[e] Ellenberg indicator values for light, soil moisture, soil acidity and soil fertility were assessed using Ellenberg's indicator values for British plants (Hill *et al.* 1999).

[f] Soil moisture readings were collected within each of the ground vegetation quadrats at the Thetford Forest and New Forest stands from June to Sept 2011 using an ML3 ThetaProbe (Delta-T Devices).

[g] pH of surface mineral layers (depth of 0-10cm) was assessed using a substrate:distilled water suspension on bulked soil samples collected at the corners of a 10 x 10-m sampling plot surrounding each 2 x 2-m ground vegetation quadrat.

[h] Litter depth was recorded at the corners of a 10 x 10-m sampling plot surrounding each 2 x 2-m ground vegetation quadrat.

[i] Organic matter content (OMC) was measured as percent loss on ignition at 550˚C for five hours on bulked surface mineral soil (depth of 0-10cm) samples collected at the corners of a 10 x 10-m sampling plot surrounding each 2 x 2-m ground vegetation quadrat.

[j] Available P and K were obtained by extraction using 1M NH4NO3 (1:5) for the English samples using bulked surface mineral soil (depth of 0-10cm) samples collected at the corners of a 10 x 10-m sampling plot surrounding each 2 x 2-m ground vegetation quadrat. The Irish samples were extracted with Morgan's reagent, filtered and then analysed by Colorimetry. Regional effects are not tested between the English and Irish stands because of these inter-regional differences in methodology.

[k] Total N was obtained by combustion using a CN analyser.

References:

Brown, N., Jennings, S., Wheeler, P. and Nabe-Nielsen, J. (2000) An improved method for the rapid assessment of forest understorey light environments. *Journal of Applied Ecology*, **37**, 1044-1053.

Harris, I., Jones, P.D., Osborn, T.J. & Lister, D.H. (2013) Updated high resolution grids of monthly climatic observations—the CRU TS3.10 dataset. International Journal of Climatology doi:10.1002/joc.3711

Hill, M.O., Mountford, J.O., Roy, D.B. & Bunce, R.G.H. (1999) Ellenberg's Indicator Values for British Plants. ECOFACT Volume 2 Technical Annex. Institute of Terrestrial Ecology, Huntingdon.

NEGTAP (2001) Transboundary air pollution: acidification, eutrophication and ground-level ozone in the UK. Edinburgh (UK): CEH.

Pieterse, G., Bleeker, A., Vermeulen, A.T., Wu, Y. et al.. (2007) High resolution modeling of atmosphere–canopy exchange of acidifying and eutrophying components and carbon dioxide for European forests. *Tellus*, 59, 12–24.

Walsh, S. (2012) A Summary of Climate Averages for Ireland 1981-2000. Climatological Note No. 14. Met Éireann, Glasnevin Hill, Dublin.

Table A.2 Summary characteristics of stands in the three study regions and three stand types

Region*	Forest stand	Site history**		Current stand type+ (% Oak)	Planting year	Stand Area (ha)	Altitude (m a.s.l.)	Soil type
		Landcover 1870's	Landcover 1905 -1910					
NF	Denny Lodge	C	C/B mix	SP	1930	3.9	20	Surface Water Gley - Clay Texture
NF	Burley (2512)	C/B mix	C/B mix	SP	1927	6.4	45	Surface Water Gley - Clay Texture
NF	Burley (2520a)	Bare	C/B mix	SP	1948	6.6	35	Surface Water Gley - Clay Texture
NF	Milkham (2135)	C	C	SP	1953	5.3	90	Surface Water Gley - Clay Texture
NF	Milkham (2136)	C	C	SP	1953	3.7	80	Surface Water Gley - Clay Texture
NF	Denny Wood	Bare	C/B mix	OK	1900	3.3	20	Surface Water Gley - Clay Texture
NF	Denny Lodge	C	C/B mix	OK	1928	2.7	20	Surface Water Gley - Clay Texture
NF	Ladycross	C/B mix	C/B mix	OK	1940	4.8	25	Surface Water Gley - Clay Texture
NF	Rhinefield	B	B	OK	1951	2.7	35	Brown Earth
NF	Holidays Hill	B	C/B mix	OK	1923	1.5	40	Brown Earth
NF	Parkhill (4311a)	C	C/B mix	SP/OK (30)	1950	12.1	40	Surface Water Gley - Clay Texture
NF	Parkhill (4309b)	C	C/B mix	SP/OK (20)	1952	5.5	30	Surface Water Gley - Clay Texture
NF	Wootton Coppice	C/B mix	C/B mix	SP/OK (28)	1930	5.5	35	Surface Water Gley - Clay Texture
NF	Burley	C/B mix	C/B mix	SP/OK (30)	1929	3.6	35	Surface Water Gley - Clay Texture
NF	Bramshaw	B	C/B mix	SP/OK (60)	1936	5.3	85	Surface Water Gley - Clay Texture
TF	Scotch Plantation	Bare	Bare	SP	1937	7.1	35	Calcareous Brown Earth
TF	Hockham (3345)	Bare	Bare	SP	1932	5.2	40	Brown Earth
TF	West Harling (4751)	C/B mix	C/B mix	SP	1967	3.6	30	Brown Earth
TF	Roundham Heath	Bare	Bare	SP	1956	1.6	30	Typical Podzol
TF	Big Wood	Bare	Bare	SP	1930	1.7	30	Brown Earth
TF	West Harling (4714a)	Bare	Bare	OK	1934	4.9	25	Calcareous Brown Earth
TF	Bridgham (3548b)	Bare	Bare	OK	1934	2.4	35	Brown Earth
TF	West Harling (4722)	Bare	Bare	OK	1933	2.9	20	Brown Earth
TF	Hockham (3335)	Bare	Bare	OK	1932	6.8	40	Brown Earth
TF	Didlington	Bare	Bare	OK	1954	4.7	10	Loamy Texture
TF	West Harling (4716a)	C/B mix	C/B mix	SP/OK (50)	1934	5.2	20	Calcareous Brown Earth
TF	Bridgham (3548a)	Bare	Bare	SP/OK (60)	1934	4.5	30	Brown Earth
TF	Hockham (3324a)	Bare	Bare	SP/OK (50)	1935	5.2	40	Ground Water Gley
TF	Mundford (3021a)	C/B mix	C/B mix	SP/OK (50)	1941	4.9	25	Brown Earth
TF	Mundford (3009b)	C/B mix	C/B mix	SP/OK (20)	1932	3.4	15	Brown Earth
EIRE	Bansha West	-	W	OK	1939	12.0	122	Brown earth
EIRE	Demesne (Donadea)	-	Bare	OK	1938	8.6	88	Brown earth
EIRE	Grangemockler	-	W	OK	1936	6.2	155	Brown podzolic

EIRE	Jenkinstown	-	W	OK	1860	7.2	82	Brown earth
EIRE	Ballydrehid	-	Bare	SP	1946	29.1	163	Podzol
EIRE	Ballard	-	Bare	SP	1946	15.1	139	Brown earth
EIRE	Durrow Abbey	-	Bare	SP	1949	12.5	57	Gley
EIRE	Killeagh	-	Bare	SP	1948	19.8	147	Brown podzolic
EIRE	Ballymanus	-	W	SP/OK (10)	1932	5.5	234	Brown podzolic
EIRE	Brittas	-	W	SP/OK (20)	1940	8.8	131	Brown earth
EIRE	Carrick	-	W	SP/OK (10)	1946	9.8	166	Podzol
EIRE	Kilshane	-	W	SP/OK (15)	1940	13.3	192	Podzol

*Three study regions: NF=New Forest, TF= Thetford Forest, Eire=central and eastern Ireland.
** Land cover classes include conifer woodland (C), broadleaf woodland (B), conifer and broadleaf mixed woodland (C/B mix), undefined woodland (W) and non-wooded areas (Bare) that could in some cases be areas of heathland.
+ Three stand types: SP=Scots pine monoculture, SP/OK = Scots pine and oak mixtures, OK= oak monoculture. The proportional percentage of oak in mixtures was obtained by recording all canopy tree species in three 10m x 10m quadrats positioned within each study stand ≥50m from the stand edge and ≥30m apart from one another.

Table A.3 List of the total number of ground-vegetation species identified in 2 x 2-m survey plots in the three study regions and three forest stand types (SP= Scots pine monocultures, OK = oak monocultures, OK/SP = Oak and Scots pine mixtures)

	Forest Region and Stand Type								
	Ireland			New Forest			Thetford Forest		
Species	OK (*n*= 4)	SP (*n*= 5)	OK/SP (*n*= 4)	OK (*n*= 5)	SP (*n*= 5)	OK/SP (*n*= 5)	OK (*n*= 5)	SP (*n*= 5)	OK/SP (*n*= 5)
Acer pseudoplatanus							X	X	X
Agrostis canina sensu lato		X							
Agrostis capillaris	X	X		X	X	X			
Agrostis curtisii				X					
Agrostis stolonifera		X		X	X	X	X	X	X
Alliaria petiolata							X		
Anthoxanthum odoratum		X		X					
Arrhenatherum elatius							X	X	X
Arum maculatum	X	X							
Athyrium filix-femina		X							
Betula pendula				X	X	X			
Betula pubescens		X							
Blechnum spicant	X		X	X	X				
Brachypodium sylvaticum		X		X	X	X	X	X	X
Bryonia dioica									X
Calamagrostis epigeijos				X	X	X			
Calluna vulgaris		X	X						
Cardamine flexuosa		X							
Cardamine pratensis								X	
Carex flaca		X							
Carex hirta		X							
Carex pilulifera		X	X						
Carex sylvatica				X		X			
Ceratocapnos claviculata								X	X
Circaea lutetiana	X	X					X		
Cirsium vulgare				X		X			
Corylus avellana	X								
Crataegus monogyna						X	X		X
Dactylis glomerata		X		X		X	X		X
Deschampsia cespitosa		X			X	X	X		
Digitalis purpurea		X							
Deschampsia flexuosa				X		X			
Dryopteris affinis ssp borreri		X							
Dryopteris dilatata x filix-mas	X	X	X		X		X	X	X
Euphorbia amygdaloides				X					
Fagussylvatica						X			
Festuca ovina		X	X						
Festuca rubra		X				X			
Fraxinus excelsior	X	X				X	X		X
Galeopsis tetrahit							X		X
Galium aparine							X	X	X
Galium saxatile		X		X				X	
Geranium robertianum	X						X	X	X
Geum urbanum	X						X		X
Glechoma hederacea							X	X	X
Hedera helix (c)	X	X	X	X	X	X	X		X

Holcus lanatus		X		X		X	X	X	X
Humulus lupulus								X	
Hyacinthoides nonscripta	X		X						
Hypericum perforatum				X					
Hypericum pulchrum		X			X	X			
Ilex aquifolium	X	X	X	X	X	X			X
Juncus conglomeratus						X			
Juncus effusus		X		X		X	X		
Juncus inflexus		X							
Lapsana communis							X		X
Ligustrum vulgare									X
Lonicera periclymenum	X		X		X	X			X
Lotus pedunculatus				X					
Luzula campestris/multiflora	X	X	X	X		X			
Luzula sylvatica	X		X	X		X			
Lysimachia nemorum					X				
Melampyrum pratense						X			
Moehringia trinervia							X	X	X
Molinia caerulea		X		X		X			
Myosotis arvensis								X	
Oxalis acetosella	X	X	X	X	X				
Phragmites australis		X							
Pinus sylvestris					X	X		X	
Poa nemoralis				X				X	
Poa trivialis	X						X	X	
Potentilla erecta		X		X	X	X			
Potentilla sterilis		X							
Prunus spinosa						X	X		
Pseudotsuga menziesii				X		X			X
Pteridium aquilinum	X	X	X	X	X	X	X	X	X
Quercus robur	X	X	X	X	X	X	X		
Ranunculus repens							X	X	X
Rosa canina						X	X		
Rubus fruticosus agg	X	X	X	X	X	X	X	X	X
Rubus idaeus	X	X					X		
Sonchus asper								X	
Sorbus aucuparia		X	X						
Stachys sylvatica							X	X	X
Stellaria holostea	X								
Stellaria media							X	X	
Teucrium scorodonia	X					X		X	
Urtica dioica		X					X	X	X
Vaccinium myrtillus	X	X	X			X			
Veronica chamaedrys							X	X	X
Viola riviniana/reichenbachiana		X		X	X	X			
Total number of species	24	43	17	31	20	36	33	27	29

Table A.4 Mean (standard error) of vascular plant total species richness (TSR), mean species richness (S), mean Shannon Diversity Index (H′) and mean Pielou Equitability Index (J′) in each region x stand type. GLMMs were applied with region and stand type used as fixed effects

		Vascular plants			
Region	Stand type	TSR	S	H′	J′
Ireland	Oak	9.21 (2.00)	5.28 (1.09)	0.67 (0.17)	0.39 (0.10)
	Scots pine	12.45 (2.12)	6.85 (1.21)	0.90 (0.15)	0.43 (0.09)
	Mix	8.81 (1.95)	5.52 (1.13)	0.87 (0.17)	0.50 (0.10)
New Forest	Oak	11.31 (2.00)	5.49 (1.00)	0.68 (0.15)	0.37 (0.09)
	Scots pine	7.95 (1.67)	4.60 (0.87)	0.63 (0.15)	0.47 (0.09)
	Mix	14.16 (2.23)	7.24 (1.27)	1.02 (0.15)	0.49 (0.09)
Thetford Forest	Oak	11.46 (2.01)	5.64 (1.03)	1.04 (0.15)	0.69 (0.09)
	Scots pine	10.78 (1.96)	6.24 (1.12)	1.06 (0.15)	0.60 (0.09)
	Mix	7.67 (1.66)	4.44 (0.85)	0.59 (0.15)	0.44 (0.09)

Table A.5 Median (interquartile range) observed and expected values for mixed stands in each region. Different letters indicate significant differences in the observed and expected values for each taxonomic diversity metric in each region analysed using paired Wilcoxon signed rank tests (P<0.05)

		Species richness	Shannon Diversity Index (H′)	Pielou's Equitability Index (J′)
Ireland	Observed	5.00 (2.25)[b]	0.86 (0.74)	0.49 (0.31)
	Expected	6.97 (0.12)[a]	0.87 (0.01)	0.43 (0.00)
New Forest	Observed	7.00 (3.50)[a]	1.15 (1.78)[a]	0.66 (0.54)[a]
	Expected	4.97 (0.02)[b]	0.64 (0.00)[b]	0.44 (0.00)[b]
Thetford Forest	Observed	4.00 (3.50)	1.05 (0.00)	0.40 (0.35)[b]
	Expected	6.10 (0.00)	0.60 (0.36)	0.65 (0.00)[a]

Table A.6 Percentage of oak (OK) and Scots pine (SP) in each mixed stand, the corresponding observed (Obs) and expected (Exp) values of taxonomic diversity metrics in each mixed stand, and the observed minus expected (Obs-Exp) for each taxonomic diversity metric in each mixed stand. SR = species richness, H′ = Shannon Diversity Index, J′ = Pielou's Equitability Index. These values were used to analyse the difference between the observed vs expected values presented in Table A.5

Region/ Stand/ Quadrat	OK%	SP%	Obs SR	Exp SR	Obs-Exp SR	ObsH	ExpH	Obs-ExpH	ObsJ	ExpJ	Obs-ExpJ
IE.12.1	15	85	5	6.92	-1.92	0.53	0.86	-0.34	0.33	0.43	-0.10
IE.12.2	15	85	6	6.92	-0.92	1.15	0.86	0.29	0.64	0.43	0.22
IE.12.3	15	85	8	6.92	1.08	1.33	0.86	0.47	0.64	0.43	0.21
IE.3.1	10	90	7	7.01	-0.01	1.59	0.87	0.72	0.82	0.43	0.39
IE.3.2	10	90	8	7.01	0.99	1.30	0.87	0.42	0.62	0.43	0.19
IE.3.3	10	90	7	7.01	-0.01	0.69	0.87	-0.18	0.36	0.43	-0.07
IE.5.1	20	80	5	6.83	-1.83	0.53	0.85	-0.33	0.33	0.43	-0.10
IE.5.2	20	80	5	6.83	-1.83	1.22	0.85	0.37	0.76	0.43	0.33
IE.5.3	20	80	4	6.83	-2.83	0.29	0.85	-0.56	0.21	0.43	-0.22
IE.6.1	10	90	5	7.01	-2.01	1.03	0.87	0.16	0.64	0.43	0.21
IE.6.2	10	90	3	7.01	-4.01	0.37	0.87	-0.51	0.34	0.43	-0.09
IE.6.3	10	90	4	7.01	-3.01	0.43	0.87	-0.44	0.31	0.43	-0.12
NF.15.4	60	40	6	5.21	0.79	1.18	0.66	0.52	0.66	0.41	0.25
NF.15.6	60	40	4	5.21	-1.21	1.14	0.66	0.49	0.83	0.41	0.41
NF.15.8	60	40	7	5.21	1.79	1.30	0.66	0.64	0.67	0.41	0.26
NF.2.2	30	70	9	4.97	4.03	1.44	0.64	0.80	0.66	0.44	0.21
NF.2.7	30	70	8	4.97	3.03	0.33	0.64	-0.31	0.16	0.44	-0.28
NF.2.8	30	70	5	4.97	0.03	0.23	0.64	-0.41	0.14	0.44	-0.30
NF.3.1	20	80	8	4.89	3.11	1.81	0.64	1.18	0.87	0.45	0.42
NF.3.4	20	80	1	4.89	-3.89	0.00	0.64	-0.64	0.00	0.45	-0.45
NF.3.6	20	80	5	4.89	0.11	0.23	0.64	-0.40	0.14	0.45	-0.31
NF.7.4	28	72	9	4.96	4.04	1.47	0.64	0.83	0.67	0.44	0.23
NF.7.5	28	72	10	4.96	5.04	1.65	0.64	1.01	0.72	0.44	0.27
NF.7.6	28	72	6	4.96	1.04	0.73	0.64	0.09	0.41	0.44	-0.04
NF.9.1	30	70	13	4.97	8.03	1.15	0.64	0.50	0.45	0.44	0.00
NF.9.5	30	70	7	4.97	2.03	0.21	0.64	-0.43	0.11	0.44	-0.33
NF.9.8	30	70	13	4.97	8.03	2.36	0.64	1.72	0.92	0.44	0.48
TH.10.4	50	50	3	6.10	-3.10	1.10	1.05	0.05	1.00	0.65	0.35
TH.10.6	50	50	2	6.10	-4.10	0.38	1.05	-0.66	0.55	0.65	-0.09
TH.10.8	50	50	1	6.10	-5.10	0.00	1.05	-1.05	0.00	0.65	-0.65
TH.11.1	20	80	1	6.28	-5.28	0.00	1.05	-1.05	0.00	0.62	-0.62
TH.11.5	20	80	5	6.28	-1.28	0.51	1.05	-0.55	0.31	0.62	-0.31
TH.11.6	20	80	4	6.28	-2.28	0.19	1.05	-0.86	0.14	0.62	-0.48
TH.2.4	50	50	3	6.10	-3.10	0.71	1.05	-0.33	0.65	0.65	0.00
TH.2.5	50	50	3	6.10	-3.10	1.10	1.05	0.05	1.00	0.65	0.35
TH.2.8	50	50	2	6.10	-4.10	0.60	1.05	-0.44	0.87	0.65	0.23

TH.3.1	60	40	12	6.04	5.96	1.14	1.05	0.10	0.46	0.65	-0.19
TH.3.5	60	40	6	6.04	-0.04	0.75	1.05	-0.29	0.42	0.65	-0.23
TH.3.6	60	40	4	6.04	-2.04	0.37	1.05	-0.68	0.27	0.65	-0.39
TH.9.2	50	50	10	6.10	3.90	0.52	1.05	-0.53	0.23	0.65	-0.42
TH.9.3	50	50	6	6.10	-0.10	0.71	1.05	-0.34	0.40	0.65	-0.25
TH.9.8	50	50	8	6.10	1.90	0.72	1.05	-0.33	0.35	0.65	-0.30

Table A.7 Descriptions of nine plant functional response trait groups and associated additional references

RG	Short description	General description
RG1	Tree saplings	Early flowering, tall woody perennials that have comparatively large, short-lived barochorous or zoochorous seeds and foliage with very low Specific Leaf Areas (SLA), indicating a relatively high investment in foliage persistence.
RG2	Tall zoochorous perennials	Tall to medium height, late flowering, zoochorous non-woody perennials with generally high SLA's and the capacity for clonal propagation. Many of these species are light-demanding and nitrophilous (e.g. *Urtica dioica*, *Arrhenatherum elatius*) (Hill *et al.* 1999).
RG3	Woody shrubs/ climbers	Tall perennials tending to have large, short-lived seeds dispersed by animals and low SLA's.
RG4	Wind-pollinated, zoochorous graminoids	Evergreen perennial, wind-pollinated graminoids that are late flowering and zoochorous, with a persistent seedbank (e.g. *Juncus* spp., *Deschampsia cespitosa*).
RG5	Short barochorous, creeping/clump-forming herbs and graminoids	Short, barochorous, creeping/ clump-forming, evergreen herbs and graminoids that have a persistent seedbank and the capacity to undergo clonal propagation (e.g. *Agrostis capillaris*, *Poa trivialis*).
RG6	Tufted graminoids and upright, clump-forming herbs	Tufted graminoids and upright, clump-forming herbs that are mostly barochorous, although some species depend on ants for seed dispersal. Most species form a seedbank and some of the sedges and grasses are typically associated with woodland (e.g. *Carex sylvatica*, *Luzula sylvatica*, *Poa nemoralis*; Hermy *et al*. 1999; Grime, Hodgson & Hunt 1988).
RG7	Tall anemochorous perennials	Tall anemochorous perennials that produce high numbers of small diaspores which germinate easily and, for many of the species, can form a persistent seedbank (e.g. ferns, *Digitalis purpurea*, *Cirsium vulgare*).
RG8	Spring-flowering, shade tolerant herbs	Evergreen, spring-flowering, shade tolerant herbs mostly with large, heavy short-lived seeds and specific germination requirements. A number of herbs in this RG are typically associated with woodlands (e.g. *Oxalis acetosella*, *Stellaria holostea*) (Hermy *et al*. 1999; Grime, Hodgson & Hunt 1988).
RG9	Annuals	Annuals with no capacity to regenerate clonally, but a persistent seedbank and high SLAs. *Ceratocapnos claviculata* and *Moehringia trinervia* are the only two species in this RG that are typically associated with woodlands. Most of the species in this RG can otherwise be classified as ruderals or competitors (Grime, Hodgson & Hunt 1988).

Additional reference:

Swank, W.T., Waide, J., Crossley, D.A. Jr & Todd, R.L. (1981) Insect defoliation enhances nitrate export from forest ecosystems. *Oecologia*, **51**, 297-299.

Table A.8 Median of ordinal and continuous response traits and the difference between observed and expected frequencies of each class of nominal response traits (separated by slashes) for each RG. Chi square and Kruskal-Wallis tests were applied with adjusted p-values for multiple comparisons. Different letters indicate significant differences (p<0.05-0.001) between RG's

	RG1	RG2	RG3	RG4	RG5	RG6	RG7	RG8	RG9
N	10	7	10	10	9	10	12	11	10
Seed weight (mg)	7^{a}	5^{ab}	6^{a}	3^{ab}	3^{bc}	4^{ab}	2^{b}	6^{ac}	4^{ab}
Seed size (mm)	9.05^{a}	1.75^{ab}	2.93^{ab}	1.65^{ab}	1.30^{b}	1.35^{ab}	0.68^{bc}	$2.^{10ac}$	1.63^{ab}
Seed shape	2^{a}	1^{a}	2^{a}	3^{a}	2^{a}	2^{a}	2^{a}	1^{a}	1^{a}
Seed production	5^{a}	3^{ab}	4^{ab}	4^{ab}	3^{ab}	3^{ab}	5^{a}	3^{b}	4^{ab}
Seed longevity	0.00^{a}	0.32^{ab}	0.00^{ab}	0.32^{ab}	0.54^{ab}	0.49^{ab}	0.80^{ab}	0.30^{ab}	0.65^{b}
Age 1st flowering (yr)	3^{a}	1^{ab}	2^{ab}	2^{ab}	2^{ab}	2^{ab}	2^{ab}	2^{ab}	1^{a}
Height (m)	6^{a}	5^{acd}	6^{ac}	3^{bcd}	1^{b}	2^{bd}	5^{acd}	2^{bd}	3^{bc}
SLA (mm^2/ mg)	1^{a}	5^{bc}	1^{a}	2^{ab}	4^{b}	3^{ab}	2^{ac}	5^{b}	5^{b}
Leaf Dry Matter (%)	5^{a}	3^{ab}	5^{a}	5^{a}	3^{ab}	5^{ac}	4^{ab}	2^{bc}	1^{b}
Growth form	-0.3/-2.5/4.7/-0.3/-0.4/-0.7/-0.4 **Leafy**	-0.2/-2.0/3.7/-0.2/-0.3/-0.6/-0.3 **Leafy**	-0.3/-2.8/5.2/-0.3/-0.5/-0.8/-0.5 **Leafy**	-0.3/3.2/-4.8/2.7/0.5/-0.8/-0.5 **Semi-basal**	-0.3/-2.2/0.2/-0.3/1.6/-0.7/1.6 **Leafy**	-0.3/5.3/-4.8/-0.3/-0.5/-0.8/1.5 **Semi-basal**	0.6/-2.3/-1.7/-0.4/-0.6/5.0/-0.6 **Large basal**	1.7/2.2/-3.8/-0.3/0.5/0.2/-0.5 **Semi-basal**	-0.3/1.2/1.2/-0.3/-0.5/-0.8/-0.5 **Leafy**
Leaf phenology+	6.1/-0.3/-4.2/-1.4/-0.2 **A**	2.7/-0.2/-3.3/-0.9/-0.2 **A**	0.7/-0.3/5.3/-1.5/-0.2 **A/ PE**	-3.3/-0.3/5.3/-1.5/-0.2 **AE**	-2.9/-0.3/-0.3/2.3/-1.5/-0.2 **AE**	-0.3/-0.3/2.3/-1.5/-0.2 **AE**	-0.6/-0.4/-0.1/1.3/-0.3 **AE**	-3.3/0.7/2.3/-1.5/1.8 **AE**	0.7/1.7/-3.7/1.5/-0.2 **A/ PE**
Germination requirements ++	-1.9/2.5/-0.6 **D**	0.1/0.2/-0.3 **D/ I**	-0.9/-2.5/3.4 **D/ I/ V**	3.1/-2.5/-0.6 **I**	4.9/-4.4/-0.5 **I**	-2.9/3.5/-0.6 **D**	3.1/-2.5/-0.6 **I**	-3.9/3.5/0.4 **D**	-1.9/2.5/-0.6 **D**
Dispersal type	-2.7/1.7/0.7/1.0/-0.7 **Anemo/ Endo-exozoochory**	-0.9/-0.6/-0.2/2.2/-0.5 **Endo-exozoochory**	-1.7/-2.3/-0.3/5.0/-0.7 **Endo-exozoochory**	-2.7/-2.3/-0.3/6.0/-0.7 **Endo-exozoochory**	4.5/-2.0/-0.3/-2.6/0.4 **Barochory**	4.3/-1.3/-0.3/-4.0/1.3 **Barochory**	-3.3/9.3/-0.4/-4.8/-0.8 **Anemochory**	1.3/-2.3/1.7/-1.0/0.3 **Baro/ Endo-exozoochory**	1.3/-0.3/-0.3/-2.0/1.3 **Barochory**
Clonal propagation	-4.3/4.3 **No**	2.6/-2.6 **Yes**	1.7/-1.7 **Yes**	1.7/-1.7 **Yes**	2.3/-2.3 **Yes**	0.7/-0.7 **Yes**	0.4/-0.4 **Yes**	1.1/-1.1 **Yes**	-6.3/6.3 **No**
Life form	-1.0/-0.4/-5.4/-1.1/8.2/-0.2 **Phanerophyte**	0.3/0.7/1.2/-0.8/-1.3/-0.2 **Hemicryptophyte**	2.0/-0.4/-4.4/-1.1/4.2/-0.2 **Phanerophyte**	-1.0/-0.4/3.6/-1.1/-1.8/0.8 **Hemicryptophyte**	0.1/-0.4/3.1/-1.0/-1.6/-0.2 **Hemicryptophyte**	-1.0/-0.4/4.6/-1.1/-1.8/-0.2 **Hemicryptophyte**	-0.2/0.5/2.5/-1.3/-2.2/0.7 **Hemicryptophyte**	1.9./1.5/-0.9/-0.2/-2.0/-0.2 **Hemicryptophyte**	-1.0/-0.4/-4.4/7.9/-1.8/-0.2 **Therophyte**
Life cycle	-1.1/1.1 **Perennial**	-0.8/0.8 **Perennial**	-1.1/1.1 **Perennial**	-1.1/1.1 **Perennial**	-1.0/1.0 **Perennial**	-1.1/1.1 **Perennial**	-1.3/1.3 **Perennial**	-1.2/1.2 **Perennial**	8.9/-8.9 **Annual**
Pollination vector	-1.0/2.7/-1.7 **Anemogamy**	-0.7/-0.0/0.7 **Ent/Anemogamy**	-0.0/-4.3/4.3 **Entomogamy**	-0.0/3.7/-3.7 **Anemogamy**	-0.9/2.2/-1.2 **Anemogamy**	-1.0/3.7/-2.7 **Anemogamy**	0.8/0.9/-1.7 **Anemogamy**	-0.1/-4.7/4.8 **Entomogamy**	3.0/-4.3/1.3 **Entomogamy**
Mycorrhiza	-1.8/1.8 **>75**	1.5/-1.5 **>75/ <74**	-2.2/2.2 **>75**	-1.0/1.0 **>75**	-1.0/1.0 **>75**	4.8/-4.8 **<74**	-2.4/2.4 **>75**	-0.2/0.2 **>75**	2.2/-2.2 **>75/ <74**
Flowering period	-0.9/6.4/-4.5/-1.0 **Spring**	0.4/-2.5/2.9/-0.7 **Summer**	-0.9/-1.6/1.5/1.0 **Summer**	-0.9/-3.6/5.5/-1.0 **Summer**	-0.8/0.8/1.0/-0.9 **Summer**	-0.9/1.4/0.5/-1.0 **Spring/ Summer**	-1.1/-4.3/1.6/3.8 **Summer**	1.0/5.0/-4.9/-1.1 **Spring**	4.1/-1.6/-0.5/1.0 **+4 months**

+Leaf phenology: A- Aestival; PE - Partially evergreen; AE – Always evergreen; **++ Germination requirements**: D – Disturbance; I – Immediate; V –Various disturbances

Table A.9 Descriptions of seven plant functional effect trait groups and associated additional references

EG	Short description	General description
EG1	Tree saplings	Leafy growth form, high leaf dry matter and very low SLAs, the latter two traits indicating a significant investment in leaf structure, defences and leaf longevity. Among the broadleaves, they are in leaf from spring to autumn and thus, have the potential to provide regular pulses of light and nutrient resources to the forest floor following leaf fall. Herbivores feeding on the generally palatable foliage or sap of species in this EG can further contribute to significant nutrient pulses and cycling (e.g. production of honeydew by aphids on *Acer pseudoplatanus* and 'frass' by arthropods) (Swank *et al*. 1981; Leslie 2005).
EG2	Medium to tall non-woody ruderals and competitors	Medium to tall (i.e. at least 30cm) non-woody ruderals and competitors with a leafy growth form, high leaf dry weight and an aestival or partially evergreen leaf phenology (e.g. *Uritica dioica*, *Galeopsis tetrahit*, *Phragmites australis*). Most of the recorded species are not insect-pollinated and thus, do not provide nectar. Many are also not palatable and even toxic to herbivores. The majority have a periodic seasonal dieback of tall shoots, so that buds in the 'harsh season' are close to the ground, thus contributing pulses of light and nutrient resources to the forest floor. Depending on the species, non-fleshy fruit ranges from large (2-10mg) to very small (<0.2mg).
EG3	Ferns and rushes	These species have a periodic seasonal dieback of shoots. The rhizomes of taller ferns (e.g. *Pteridium aquilinum*, *Dryopteris* spp.) grow under the roots of herbs and tree or shrub seedlings, competing effectively for soil moisture and nutrients; when the fronds emerge, they can shade smaller plants and the seasonal dieback of dense foliage can continue to stifle regeneration and growth of other species (Humphrey & Swaine 1997; George & Bazzaz 2003). Fruit and nectar are not provided by these species, although nectaries on the base of fern fronds can attract ants and the seed of rushes are a source of food for wildlife (Heads & Lawton 1984; Grime, Hodgson & Hunt 1988). The foliage of only a few of the fern species (e.g. *Dryopteris* spp.) in this EG are palatable. Deep fibrous root systems, in the case of rushes, and dense rhizomatous root systems, in the case of ferns, facilitate the stabilisation and oxidation of soils and nutrient cycling (e.g. *P. aquilinum* is known to be effective at mobilizing phosphorus from inorganic sources into a plant available form) (Mitchell 1973).
EG4	Grasses and sedges	Short, perennial graminoids that are mostly evergreen, with a hemicryptophyte growth form and medium to high leaf dry weights. The root systems of the sedges and some of the grasses in this EG contribute to the control of soil erosion (Grime, Hodgson & Hunt 1988). Medium to small sized non-fleshy fruit are produced, but no nectar as the species are predominantly wind-pollinated. Most species have highly palatable foliage.
EG5	Annual herbs	Short to tall species with very high SLA's and very low leaf dry weights. Most species in this EG have foliage that is not palatable, but provide medium to large seeds or non-fleshy fruit. As the majority of species are insect-pollinated, most are likely to provide additional food resources for wildlife in the form of nectar, pollen and/or flowers.

EG6	Short to medium height (10-30cm) perennial herbs	Perennial herbs that are mostly 10-30cm tall, have a periodic dieback of shoots and have medium to high SLA's. Most supply medium to very large seeds or fruit and are insect-pollinated and are, therefore, likely to also provide nectar, pollen and/or flowers as a source of food.
EG7	Shrubs/climbers	These species have a leafy growth form, very low SLA's and very high leaf dry weights. Most provide very large fleshy or non-fleshy fruit and also supply nectar, pollen and/or flowers as insect-pollinated species. Foliage ranges from unpalatable to highly palatable. Half of the species in this EG are evergreen or partially evergreen, while the remainder have an aestival leaf phenology.
RG8	Spring-flowering, shade tolerant herbs	Evergreen, spring-flowering, shade tolerant herbs mostly with large, heavy short-lived seeds and specific germination requirements. A number of herbs in this RG are typically associated with woodlands (e.g. *Oxalis acetosella*, *Stellaria holostea*) (Hermy *et al*. 1999; Grime, Hodgson & Hunt 1988).
RG9	Annuals	Annuals with no capacity to regenerate clonally, but a persistent seedbank and high SLAs. *Ceratocapnos claviculata* and *Moehringia trinervia* are the only two species in this RG that are typically associated with woodlands. Most of the species in this RG can otherwise be classified as ruderals or competitors (Grime, Hodgson & Hunt 1988).

Additional references:

George, L.O. & Bazzaz, F.A. (2003) The herbaceous layer as a filter determining spatial pattern in forest tree regeneration. The Herbaceous Layer in Forests of Eastern North America (eds F.S. Gilliam & M.R. Roberts), pp. 265–282. New York: Oxford University Press.

Heads, P.A. & Lawton, J.H. (1984) Bracken, ants and extrafloral nectaries. II. The effects of ants on the insect herbivores of bracken. *Journal of Animal Ecology*, **53**, 1015-1031.

Hill, M.O., Mountford, J.O., Roy, D.B. & Bunce, R.G.H. (1999) Ellenberg's Indicator Values for British Plants. ECOFACT Volume 2 Technical Annex. Institute of Terrestrial Ecology, Huntingdon.

Humphrey, J. W. & Swaine, M.D. (1997) Factors affecting the natural regeneration of *Quercus* in Scottish oakwoods. I. Competition from *Pteridium aquilinum*. *Journal of Applied Ecology*, **34**, 577-584.

Leslie, A. (2005) The ecology and biodiversity value of sycamore (*Acer pseudoplatanus* L.) with particular reference to Great Britain. *Scottish Forestry*, **59**, 19-26.

Mitchell, J. (1973) Mobilization of phosphorus by *Pteridium aquilinum*. *Plant and Soil*, **38**, 489-491.

Table A.10 Median of ordinal effect traits and the difference between observed and expected frequencies of each class of nominal effect traits (separated by slashes) for each EG. Chi square and Kruskal-Wallis tests were applied with adjusted p-values for multiple comparisons. Different letters indicate significant differences (p<0.05-0.001) between EGs

	EG1	**EG2**	**EG3**	**EG4**	**EG5**	**EG6**	**EG7**
N	8	8	8	22	9	22	12
Dispersule and germinule form	Dispersule; germinule a fruit 3.3/-2.1/-0.5/-0.6/-0.1	Dispersule; germinule a fruit 1.3/-0.1/-0.5/-0.6/-0.1	Dispersule; germinule a spore/seed -4.7/0.9/4.5/-0.6/-0.1	Dispersule; germinule a fruit 7.0/-3.8/-1.3/-1.8/-0.3	Dispersule; germinule a seed -1.3/1.6/-0.5/-0.7/0.9	Dispersule; germinule a seed -4.4/5.5/-1.2/0.3/-0.2	Dispersule a fruit; germinule a seed -1.1/-2.1/-0.7/4.0/-0.1
Palatability of foliage	1^{ab}	0^{ab}	1^{ab}	2^{a}	0^{ab}	1^{b}	2^{ab}
Insect-pollinated	No -2.9/2.9	No -3.9/3.9	No -2.9/2.9	No -10.6/10.6	Yes 2.7/-2.7	Yes 11.4/-11.4	Yes 6.2/-6.2
Growth form/ Canopy structure	Leafy -0.3/-2.2/4.2/-0.3/-0.4/-0.6/-0.5	Leafy -0.3/-1.2/3.2/-0.3/-0.4/-0.6/-0.5	Large-leaved semi-basal or basal 0.7/-2.2/-3.8/2.7/-0.4/3.4/-0.5	Semi-basal -0.8/7.0/-6.5/-0.8/0.0/-1.8/2.8	Semi-basal -0.3/1.5/0.7/-0.3/-0.4/-0.7/-0.5	Small leafy 1.3/0.3/-4.0/-0.7/2.0/1.3/-0.2	Leafy -0.4/-3.3/6.3/-0.4/-0.5/-1.0/-0.7
Specific Leaf Area (mm2/ mg)	1^{a}	2.5^{abc}	1^{ab}	3^{bc}	5^{c}	3^{bc}	1^{a}
Leaf Dry Matter (% of fresh weight)	5^{a}	4.5^{ab}	4^{ab}	4^{ac}	1^{b}	2^{bc}	5^{s}
Leaf phenology	Aestival 4.4/-0.3/-2.8/-1.2/-0.2	Partially evergreen 0.4/0.7/-3.8/2.8/-0.2	Partially evergreen -0.6/-0.3/0.2/0.8/-0.2	Always evergreen -4.2/-0.7/7.6/-2.2/-0.5	Hibernal / Partially evergreen 0.1/1.7/-3.2/1.7/-0.2	Always evergreen -2.2/-0.7/4.6/-3.2/1.5	Aestival 2.1/-0.4/-2.7/1.2/-0.3
Mean shoot height (m)	6^{a}	5^{acd}	5^{acd}	2^{bd}	3^{bcd}	2.5^{bd}	6^{ac}
Life form	Phanerophyte -08/-0.4/-4.1/-0.9/6.6/-0.4	Hemicryptophyte 0.2/-0.4/0.9/0.1/-1.4/0.6	Helophyte -0.8/0.6/-0.1/-0.9/-1.4/2.6	Hemicryptophyte -2.2/-1.0/10.6/-2.5/-4.0/-1.0	Therophyte -0.9/-0.4/-4.7/8.0/-1.6/-0.4	Hemicryptophyte 1.8/2.0/3.6/-2.5/-4.0/-1.0	Phanerophyte 2.8/-0.5/-6.2/-1.3/5.8/-0.5

Dispersule and germinule form differed by EG (X-squared = 106.61, df = 24, p-value <0.0001).
Palatability differed by EG (Kruskal-Wallis chi-squared = 21.28, df = 6, p-value = 0.002).
Growth form differed by EG (X-squared = 115.95, df = 36, p-value <0.0001).
Specific Leaf Area differed between EG (Kruskal-Wallis chi-squared = 40.34, df = 6, p-value <0.0001).
Leaf dry matter differed between EG (Kruskal-Wallis chi-squared = 45.45, df = 6, p-value <0.0001).
Mean shoot height differed by EG (Kruskal-Wallis chi-squared = 57.66, df = 6, p-value <0.0001).
Life form differed by EG (X-squared = 199.96, df = 30, p-value <0.0001).
Leaf phenology differed by EG (X-squared = 65.40, df = 24, p-value <0.0001