

Table S3: PCA loadings (horizontal dimension) of habitat covariates for **a) topography and cover** (Ca = *Corylus avellana*, Cc = canopy cover, E = east, Elev = elevation, Fs = *Fagus sylvatica*, Fi = field, Frs = *Fraxinus* spp., Hc5 = hiding cover at 5 m, Hc20 = hiding cover at 20 m, N = north, Pa = *Picea abies*, Ps = *Pinus sylvestris*, S = south, Sl = slope, W = west), **b) plants** (BR = bare and rocks, c = cured, ffm = flowering/fruitleting/mature, L = litter, ML = mosses and lichens, n = newly emergent, nln = newly emergent/old alive with new leaves, ol = old alive, olb = old alive/old alive with buds, od = old dead, WD = woody debris) and **c) shrubs** (Ca = *Corylus avellana*, Eh = *Erica herbacea*, Fs = *Fagus sylvatica*, Frs = *Fraxinus* spp., Pa = *Picea abies*, Rs = *Rubus* spp., Rhs = *Rhododendron* spp., Vs = *Vaccinium* spp., c = cured, ffm = flowering/fruitleting/mature, nln = new/old alive with new leaves, od = old dead, olb = old alive/old alive with buds).

a) Topography and cover		b) Plants		c) Shrubs	
Covariate	PCA loading	Covariate	PCA loading	Covariate	PCA loading
Elev	0.01	Forb_ol	-0.45	Ca	-0.17
Sl	0.53	Forb_n	0.42	Eh	0.53
Cc	0.77	Forb_od	-0.18	Fs	-0.07
Hc5	0.13	Forb_c	0.58	Frs	-0.36
Hc20	0.26	Forb_ffm	0.14	Pa	0.07
Ca	0.05	Shrub_olb	-0.59	Rhs	0.71
Fs	0.33	Shrub_nln	0.38	Rs	-0.22
Fi	-0.74	Shrub_od	-0.24	Vs	0.60
Frs	-0.07	Shrub_c	0.45	Shrub_c	0.58
Pa	0.18	Shrub_ffm	-0.02	Shrub_ffm	0.65
Ps	0.03	Grass_ol	-0.47	Shrub_nln	0.80
E	-0.03	Grass_n	0.51	Shrub_od	0.03
N	0.07	Grass_od	0.22	Shrub_olb	0.19
S	0.07	Grass_c	0.59		
W	-0.02	Grass_ffm	0.21		
		Fern_ol	-0.19		
		Fern_n	0.15		
		Fern_od	-0.05		
		Fern_c	0.31		
		BR	0.01		
		WD	-0.35		
		ML	-0.09		
		L	-0.38		