Table 1. Environmental variables depicted in the ordination (shown in Fig. 2) and community and individual species models (in Table 3). R^2 (indicated by * if greater than 0.20) with non-metric multidimensional scaling (NMS) ordination axes. Synthetic climate variables are derived from the principal component analysis (PCA); the equation for PCA1 can be found in Supplementary Table S1. We interpret PCA dimensions with directionality of relationship with the strongest combination of climate variables, for example a plot scoring high on PCA1 has low precipitation and cold winters and temperature minima.

Variable	**Acronym**	**Units**	**R^2 with NMS axis 1**	**R^2 with NMS axis 2**
Conifer basal area	ConiBA	$Log_{10}(m^2/ha + 1)$	0.25*	0.02
Hardwood basal area	HdwdBA	$Log_{10}(m^2/ha + 1)$	0.40*	0.00
Betula papyrifera basal area	Betpap	$Log_{10}(m^2/ha + 1)$	0.41*	0.04
Picea glauca basal area	Picgla	$Log_{10}(m^2/ha + 1)$	0.32*	0.01
Picea mariana basal area	Picmar	$Log_{10}(m^2/ha + 1)$	0.27*	0.06
Picea sitchensis basal area	Picsit	$Log_{10}(m^2/ha + 1)$	0.06	0.24*
Populus balsamifera basal area	Popbal	$Log_{10}(m^2/ha + 1)$	0.10	0.02
Tsuga heterophylla basal area	Tsuhet	$Log_{10}(m^2/ha + 1)$	0.33*	0.01
Latitude	Lat	dd.ddd	0.51*	0.00
Longitude	Long	dd.ddd	0.60*	0.00
Synthetic climate variables (percent of climate variation represented)				
PCA1 ↓ precip. ↓ winter and min temps. (60.3)			0.71*	0.02
PCA2 ↑ precip. ↓ summer max temps. (26.1)			0.02	0.01
PCA3 ↓summer temp. ↑ winter temp. ↓ precip. (6.4)			0.00	0.10
PCA4 ↓summer min temp ↑ spring max temp. ↓summer precip. (2.4)			0.01	0.01