Fig. 1. The count of signal (left) and red-listed signal species in production forests and WKHs in the Southern (Bergslagen) and Northern (Västerbotten) Sweden. The horizontal thick line gives the median value of richness, the lower and upper limit of box give 25% and 75 % quartiles. Dots are outliers.
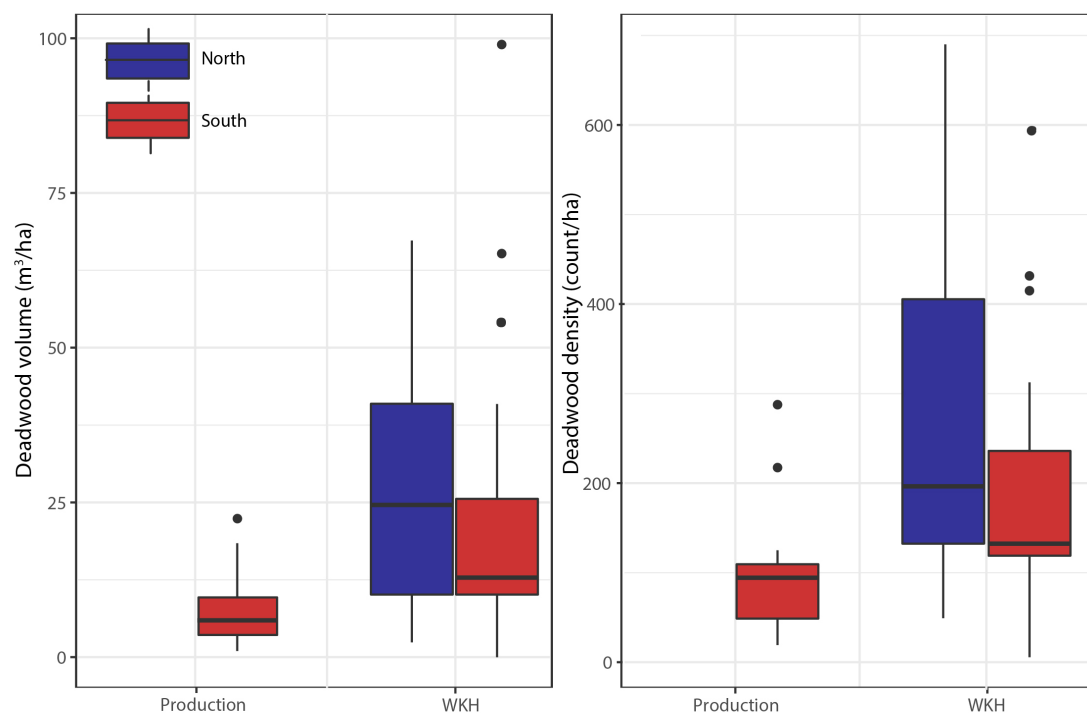

Fig 2. The volume and density of deadwood in production forests and WKHs in Southern (Bergslagen) and Northern (Västerbotten) Sweden. The horizontal thick line gives the median value of score, the lower and upper limit of box give 25% and 75 % quartiles. Dots are outliers.
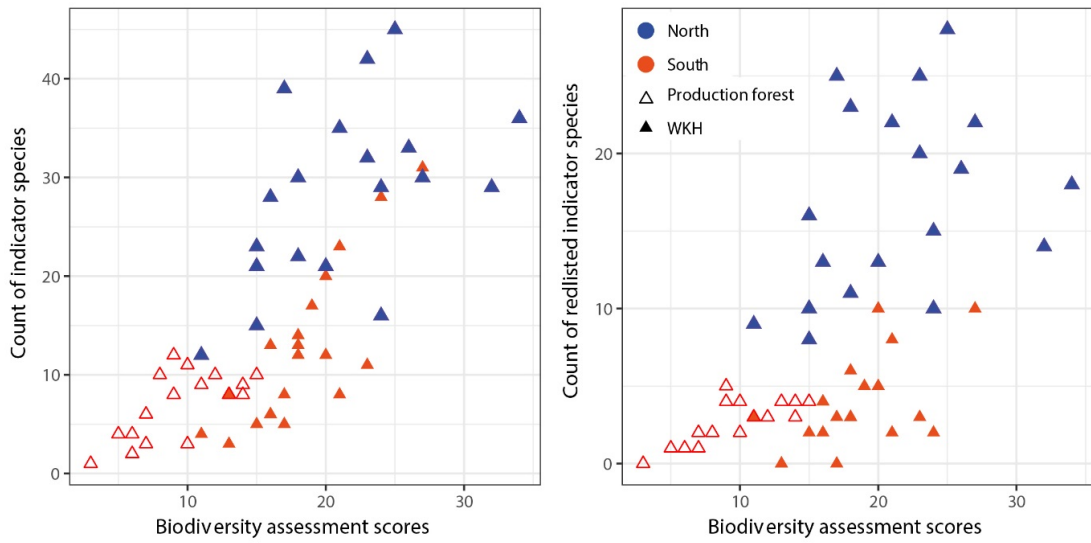
Fig. 3. The number of indicator species (left) and red-listed indicator species (right) found from each forest stand in Skogstyrelsen's invententories in relation to biodiversity assessment scores the forest stand obtained in the Skogsbiologerna's inventories.
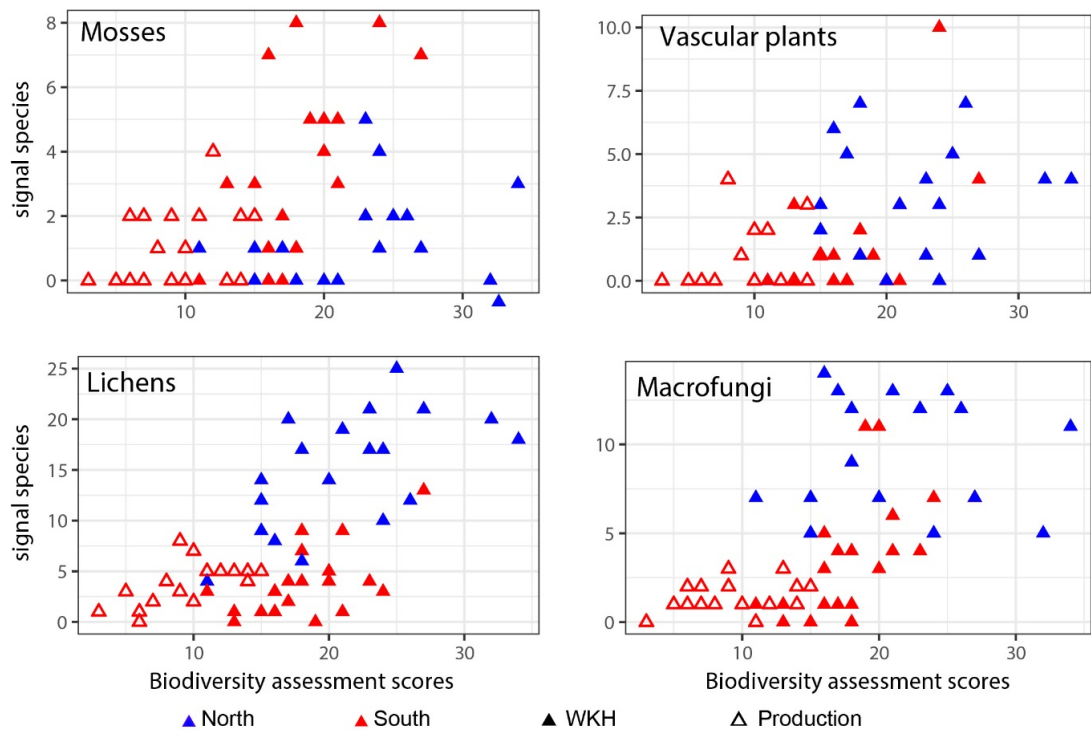

Fig. 4. The number of signal species in each taxonomic group in forest stands in in relation to biodiversity assessment scores the forest stand obtained in the Skogsbiologerna's inventories.

Table 1. Pearson correlation coefficients between biodiversity assessment scores and occurrences of signal species or red-listed signal species in all stands, and separately for WKHs and production forests. Note that red-listed signal species are included in all signal species. Significant correlations with r >0.45 are bolded.

Indicator species group	All stands		WHKs		Production forests	
	r	p	r	p	r	p
All signal species	**0.74**	**<0.001**	**0.63**	**<0.001**	**0.67**	**0.003**
Macrofungi	**0.60**	**<0.001**	0.38	0.015	0.32	0.21
Bryophytes	0.34	0.009	0.21	0.20	0.32	0.20
Vascular plants	**0.45**	**<0.001**	0.38	0.016	0.26	0.31
Lichens	**0.65**	**<0.001**	**0.59**	**<0.001**	0.32	0.21
All Redlisted Signal species	**0.61**	**<0.001**	**0.46**	**0.003**	**0.77**	**0.0003**
RL Macrofungi	0.39	0.020	0.21	0.26	-0.22	0.78
RL Bryophytes	-0.20	0.38	-0.21	0.40	-	
RL Vascular plants	-		-		-	
RL Lichens	**0.62**	**<0.001**	**0.47**	**0.006**	**0.58**	**0.002**

Table 2. Pearson correlation coefficients between biodiversity assessment scores and structural variables. Significant (p<0.05) correlation coefficients >0.45 are bolded.

Structural variables	r	p
Deadwood volume	**0.56**	**<0.001**
Deadwood density	**0.48**	**<0.001**
Living spruces BA	0.19	0.15
Living pines BA	**-0.45**	**<0.001**
Living birch BA	0.10	0.46

Table 3. The Person correlation coefficients between occurrences of signal species and deadwood variables measured in the stands. Significant (p<0.05) correlation coefficients >0.45 are bolded.

	Deadwood volume		Deadwood density	
	r	p	r	p
All indicator species	**0.50**	**<0.001**	**0.51**	**<0.001**
Macrofungi	**0.52**	**<0.001**	**0.52**	**<0.001**
Bryophytes	**0.47**	**<0.001**	0.34	0.006
Vascular plants	0.24	0.051	0.23	0.07
Lichens	0.30	0.01	0.37	0.003

Table 4. The Pearson correlation coefficients between occurrences of indicator species and living tree variables measured in the stands. Statistically significant (p<0.05) correlations are bolded.

	BA living spruce	BA Living Pine	BA Living Birch
All indicator species	0.08	**-0.38**	0.24
Macrofungi	0.08	**-0.34**	0.24
Bryophytes	**0.37**	**-0.30**	0
Vascular plants	**0.28**	**-0.32**	0.23
Lichens	-0.12	-0.24	0.19

Table 5. The results of the model selection of the generalized linear models explaining the variation in richness of signal species on inventoried production stands and WKHs. Model formulas and model selection based on AIC. The best model is bolded. Score=biodiversity assessment score.

	K	AICc	Delta_AICc	AICcWt	Cum.Wt	LL
Model 4	**3**	**443.57**	**0.00**	**0.68**	**0.68**	**-218.55**
Model 3	4	445.26	1.69	0.29	0.97	-218.24
Model 2	3	449.86	6.29	0.03	1.00	-221.70
Model 1	2	453.62	10.05	0.00	1.00	-224.69

Model 1: signal_sp rich ~ score

Model 2: signal_sp rich ~ score + DW_Vol_ha

Model 3: signal_sp rich ~ score + DW_Vol_ha + DW_Dens_ha

Model 4: signal_sp rich ~ score + DW_Dens_ha