

Electronic Supplementary material 2 for the article:

Forest inventory-based assessments of the invasion risk of *Pseudotsuga menziesii* (Mirb.) Franco and *Quercus rubra* L. in Germany

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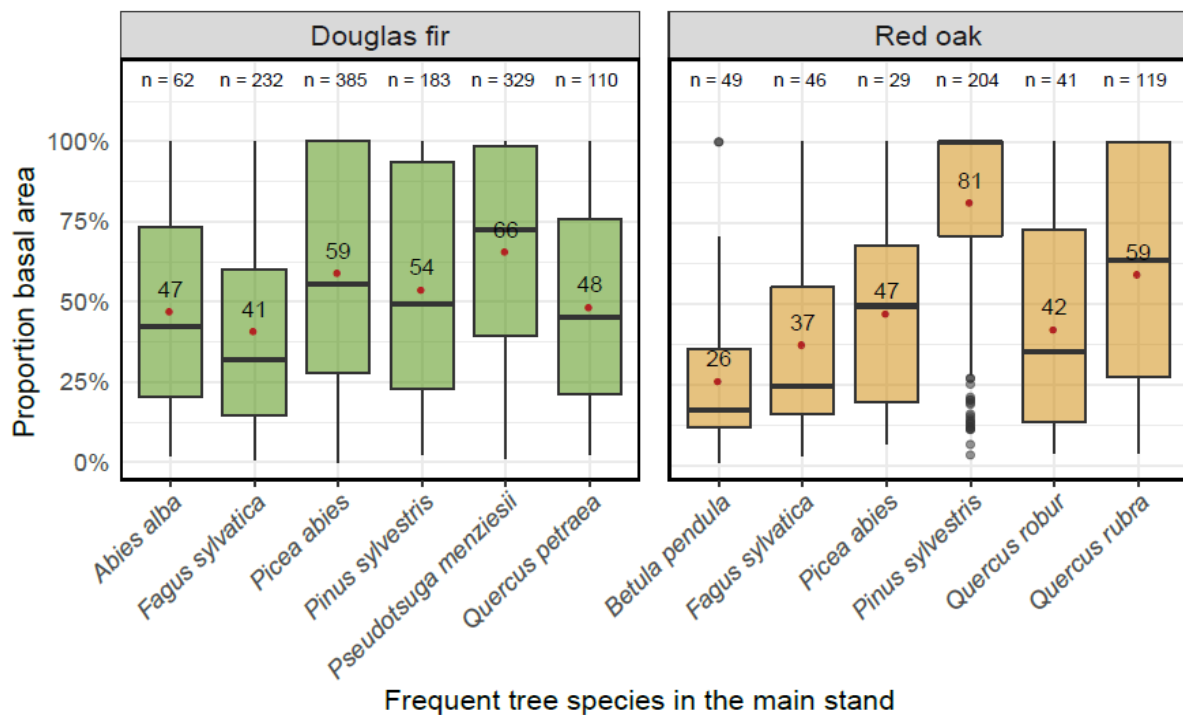


Fig. S1 Share of the total basal area of major tree species found in the main stand of inventory plots where Douglas fir and red oak were naturally regenerating in Germany (proportions of basal area of the six most frequent tree species are shown). Labels: red dot=mean, n= number of inventory plots (NFI₂₀₀₂ and NFI₂₀₁₂).

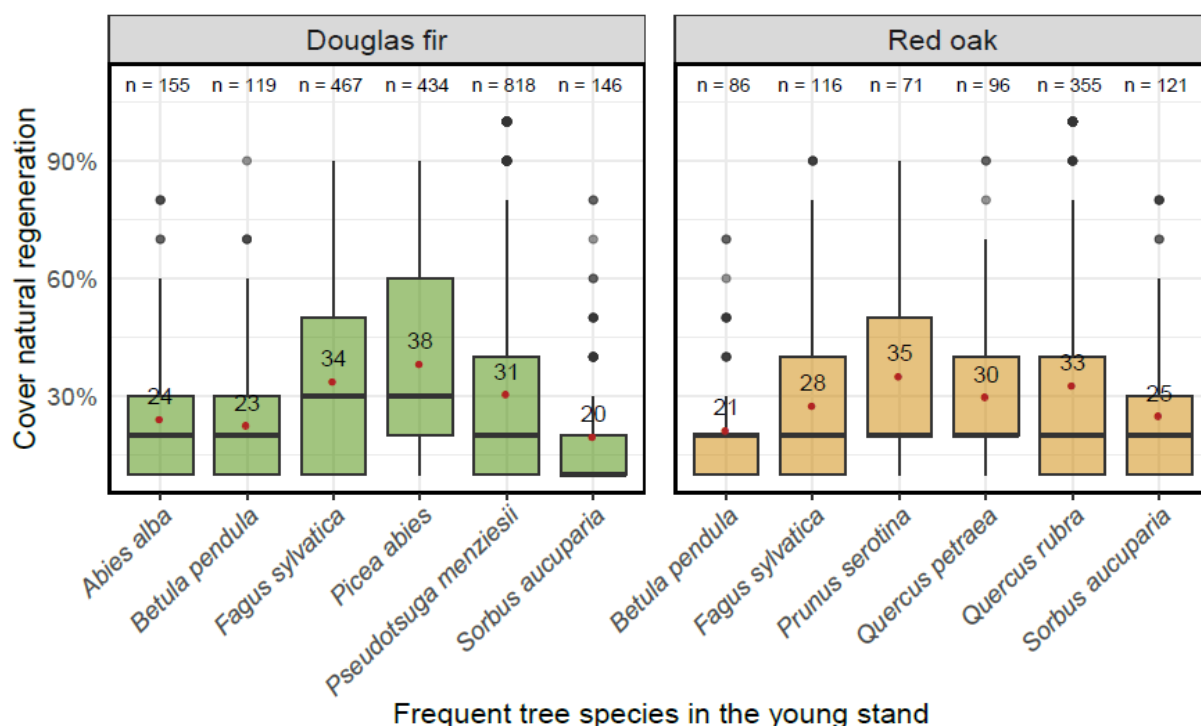


Fig. S2 Share of natural regeneration of major tree species found in inventory plots where Douglas fir and red oak were naturally regenerating in Germany (proportions of natural regeneration of the six most frequent tree species are shown). Labels: red dot=mean, n= number of inventory plots (NFI₂₀₀₂ and NFI₂₀₁₂).

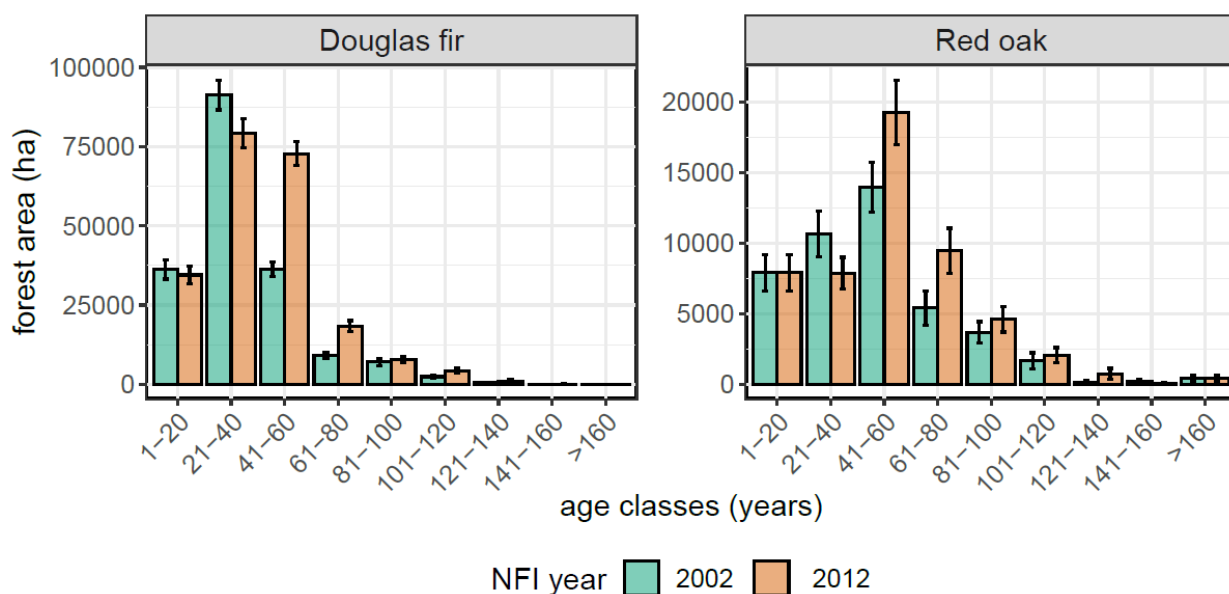


Fig. S3 Forest area (ha) with Douglas fir and red oak in age classes in Germany. Error bars show standard error of the mean (<https://bwi.info>; 77Z1JI_L638oa_2002; 77Z1JI_L235of_2012_bi) (NFI₂₀₀₂ and NFI₂₀₁₂).

Table S1 Number of inventory plots with natural regeneration Douglas fir (*Pseudotsuga menziesii*) and red oak (*Quercus rubra*) in the different potential natural forest communities in Germany (NFI₂₀₀₂ and NFI₂₀₁₂).

Potential natural forest community		Number of inventory plots	
Douglas fir	Red oak	Douglas fir	Red oak
Luzulo-Fagetum	Luzulo-Fagetum	537	90
Galio odorati-Fagetum	Querco-Tilietum	104	59
Deschampsio-Fagetum	Galio odorati-Fagetum	81	41
Fago-Quercetum	Deschampsio-Fagetum	18	32
Hordelymo-Fagetum	Fago-Quercetum	14	32
Luzulo-Quercetum	Stellario holostea-Carpinetum	9	31
Vaccinio-Abietetum	Galio sylvatici-Carpinetum	9	20
other	other	46	70

Table S2 Number of inventory plots and mean values of regeneration cover of Douglas fir (*Pseudotsuga menziesii*) and red oak (*Quercus rubra*) in Germany in the different categories of forest type aggregations. Different letters indicate significant differences among aggregation categories ($p < 0.05$) (NFI₂₀₀₂ and NFI₂₀₁₂).

Forest type aggregation	Category		Number of inventory plots		Mean, sd	
	Douglas fir	Red oak	Douglas fir	Red oak	Douglas fir	Red oak
Stand types	Beech	Beech	85	16	0.19 ± 0.14 a	0.21 ± 0.23 a
	Douglas fir	Oak	230	28	0.46 ± 0.33 b	0.24 ± 0.21 a
	Oak	Other conifers	63	36	0.26 ± 0.22 a	0.24 ± 0.25 a
	Other conifers	Other deciduous trees	66	15	0.23 ± 0.19 a	0.34 ± 0.31 b
	Other deciduous trees	Red oak	30	76	0.25 ± 0.20 a	0.58 ± 0.36 b
	Scots pine	Silver birch	94	7	0.20 ± 0.18 a	0.26 ± 0.26 b
	Spruce	Scots pine	235	170	0.28 ± 0.22 a	0.25 ± 0.25 a
Presence/absence of NNT	Absent		348	192	0.21 ± 0.17 a	0.21 ± 0.22 a
	Present		194	75	0.29 ± 0.24 b	0.36 ± 0.29 b
	Main tree		265	85	0.45 ± 0.32 c	0.56 ± 0.36 c
Light availability	Low		120	177	0.21 ± 0.17 a	0.25 ± 0.24 a
	Medium		386	48	0.26 ± 0.22 b	0.34 ± 0.33 ab
	High		297	123	0.40 ± 0.32 c	0.42 ± 0.35 b

Table S3 Natural regeneration of Douglas fir and red oak in protected forest habitat types in the State of Baden-Württemberg (SFHM 2019).

Habitat type	Total habitat area (ha)	Habitat area with Douglas fir natural regeneration (ha)	Proportion of habitat area with Douglas fir (%)	Habitat area with red oak natural regeneration (ha)	Proportion of habitat area with red oak (%)
Rare near-natural forest types	2,6616.9	145.22	0.55	193.74	0.73
Arid biotopes	3,315.2	0.17	0.01	-	-
Marsh and wetland biotopes	4,734.7	0.45	0.01	31.56	0.67
Standing water bodies	1,727.1	0.00	0.00	0.10	0.01
Running water	8,030.8	0.42	0.01	3.33	0.04
Forest with animals worthy of protection	4,769.5	11.88	0.25	3.15	0.07
Forest with plants worthy of protection	4,254.6	0.71	0.02	3.83	0.09
Structurally rich forests	1,1342.6	30.48	0.27	6.93	0.06
Rests of historical cultivation	901.3	2.83	0.31	2.42	0.27
Succession areas	5,552.5	1.61	0.03	-	-
Natural formations	8,963.8	51.21	0.57	29.81	0.33
Sum	80,209	244.98	0.31	274.87	0.34