



**Figure S1.** Species-specific diameter distribution over the observed period (specified years) in the multispecies uneven-aged forest located in the Unieszów Forestry Range.



**Figure S2.** Variation of Shannon species diversity index (SSP) on measurement plots in 1993, 2006 and 2017 inventories (from top to the bottom) in the multispecies uneven-aged forest located in the Unieszów Forestry Range.



**Figure S3.** Variation of Gini size inequality index (GI) on measurement plots in 1993, 2006 and 2017 inventories (from top to the bottom) in the multispecies uneven-aged forest located in the Unieszów Forestry Range.



**Figure S4.** Mean spatial positioning (CE), spatial mingling (SM) and spatial differentiation of tree diameter (TD)—tree species pooled—at the neighborhood spatial scale over the investigated period.











**Figure S5.** Mean values of CE, SM and TD indices and standard errors of the means calculated for tree species in 1993 (**a**), 2006 (**b**) and 2017 (**c**).



**Figure S6.** Growth dominance curves for conifers present in the multispecies uneven-aged forest in two analyzed periods.



**Figure S7.** Growth dominance curves for broadleaved tree species present in the multispecies unevenaged forest in two analyzed periods.

Table S1.	Spatially	inexplicit an	d spatially	explicit	indices	describing	the	structural	aspects	of t	he
forest.											

Index	Formulation	Explanations					
Spatial Indices							
Spatial positioning CE	$CE = \frac{r_A}{r_E} = \frac{\frac{1}{N} \sum_{i=1}^{N} r_i}{0.5 \cdot \left(\frac{A}{N}\right)^{1/2} + 0.0514 \cdot \frac{P}{N} + 0.041 \cdot \frac{P}{N^{3/2}}}$	r <sub>A</sub> – observed mean distances between trees A—area (m <sup>2</sup> ) N—total number of trees P—circumference of the plot					
Spatial diameter differentiation TD <sub>ij</sub> Spatial mingling	$TD_{ij} = 1 - \frac{1}{n} \sum_{j=1}^{n} (\frac{\min(si, sj)}{\max(si, sj)})$ $SM = \frac{1}{k} \sum_{i=1}^{k} v_{ij}$	$s_i$ —size of <i>i</i> -th tree $s_j$ —size of <i>j</i> -th tree n—number of neighbors (n = 3) <i>k</i> -numbers of nearest neighbors $v_{ii}$ = 1 if reference tree and					
index SM		neighbor are different species, otherwise $v_{ij} = 0$					
Non-spatial indices							
Shannon species diversity index SSP	$SSP = -\sum_{i=1}^{s} p_i \cdot ln \cdot p_i$	p <sub>i</sub> —share of species i ln—natural logarithm					

Gini index GI	$GI = 1 - \sum_{i=1}^{k} (ba_{i-1}ba_i) \cdot (n_i + n_{i-1})$	k−number of diameter classes ba (ba <sub>i-1</sub> )−cumulative fraction of basal area of trees with dbh ≤ ith (i−1) diameter class (for i = 1, ba = 0) $n_i(n_{i-1})$ −cumulative fraction of number of trees area of trees with dbh ≤ ith (i−1) diameter class (for I = 1, n = 0)
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**Table S2.** Species-specific GI index (±standard deviation) describing the inequality in trees diameter over the 24-year period.

Smanias	1993		2006	5	2017		
Species	GI (±sd)	cv (%)	GI (±sd)	cv (%)	GI (±sd)	cv (%)	
Abies alba	0.22 (0.09)	40	0.21 (0.08)	40	0.19 (0.08)	43	
Pinus sylvestris	0.06 (0.03)	63	0.05 (0.04)	79	0.05 (0.04)	75	
Picea abies	0.13 (0.12)	95	0.08 (0.11)	129	0.11 (0.12)	111	
Larix decidua	0.12 (0.13)	106	0.12 (0.15)	126	0.11 (0.13)	116	
Betula pendula	0.11 (0.11)	101	0.07 (0.10)	141	0.05 (0.08)	167	
Quercus robur	0.07 (0.12)	174	0.08 (0.14)	183	0.08 (0.14)	169	
Fagus sylvatica	0.14 (0.15)	73	0.15 (0.13)	82	0.14 (0.12)	83	
Carpinus betulus	0.03 (0.03)	165	0.07 (0.08)	123	0.11 (0.09)	83	