

Supplementary material

Figure S1. Relationships between (a) log PC1 of the distances between species and the log of their phylogenetic distances (10^6 years) and between (b) the log of the squared Mahalanobis distances between species and the log of their phylogenetic distances (10^6 years).

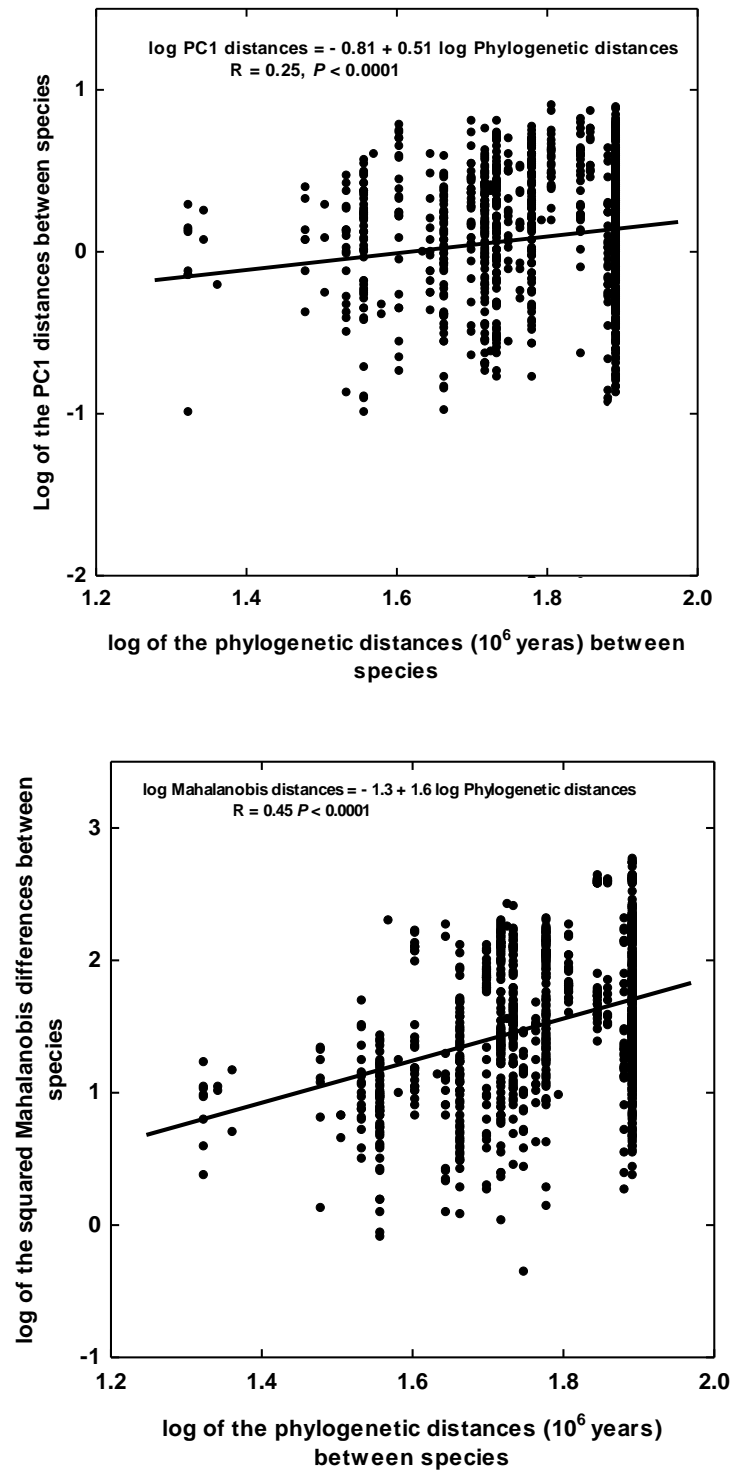


Figure S2. Regressions between the observed and species-expected (species mean) canonical scores of the first root of the DFA conducted with Non-Mediterranean species (a) and for Mediterranean species (b).

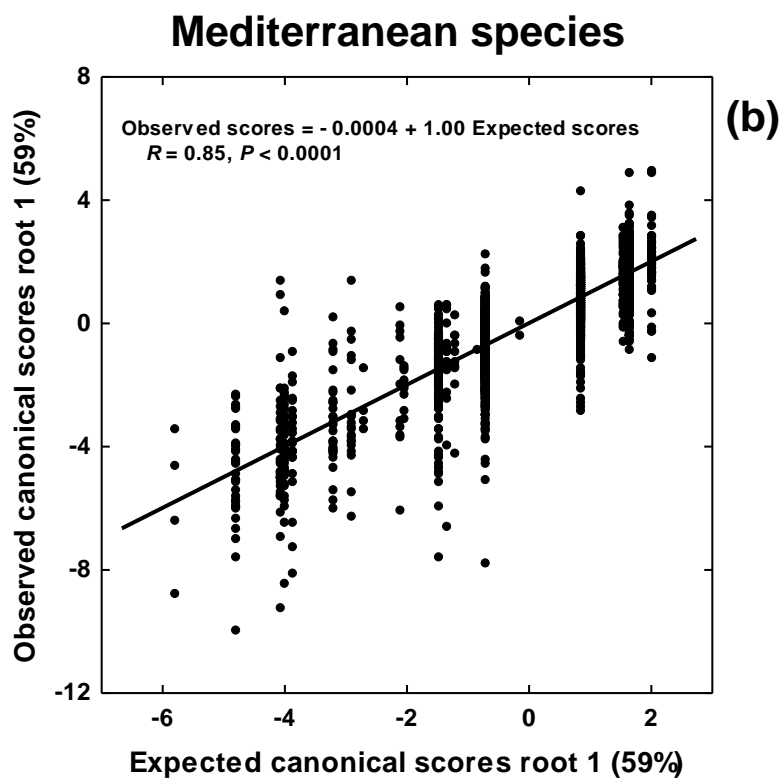
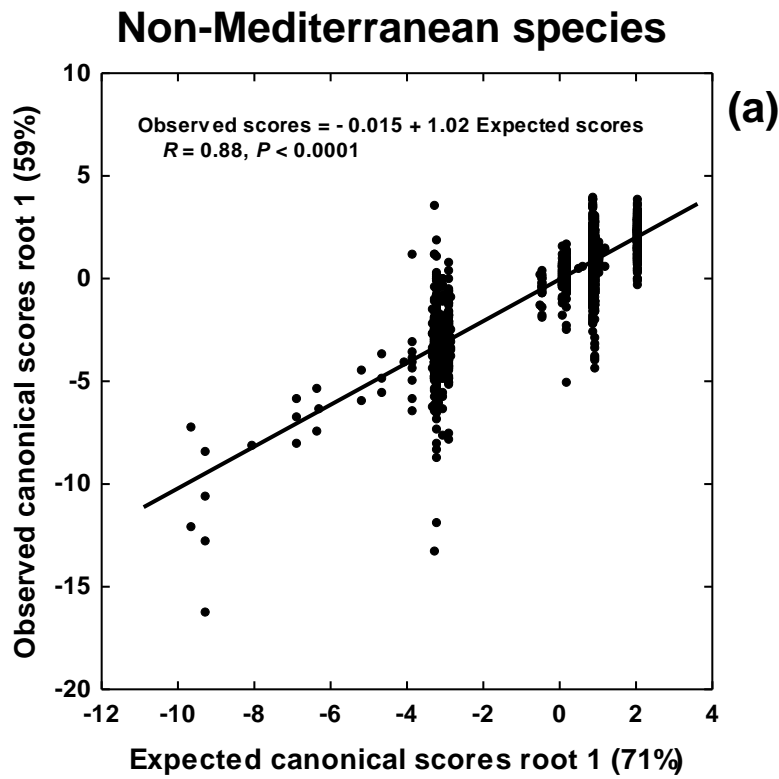


Table S1. Values (mean \pm S.D.) of the studied variables for each species obtained in the dataset of this study.

Species	Foliar variables									Climate variables			Atmospheric N deposition					Plot number for each species
	N (%DW)	P (%DW)	N:P	N:K	P:K	Ca (%DW)	Mg (%DW)	K (%DW)	Ca:Mg	MAP	MAT	Annual thermal amplitude	Dry N dep ($\text{mg m}^{-2} \text{y}^{-1}$)	Wet N dep ($\text{mg m}^{-2} \text{y}^{-1}$)	NO ₃ dep ($\text{mg m}^{-2} \text{y}^{-1}$)	NH ₄ dep ($\text{mg m}^{-2} \text{y}^{-1}$)	Total N dep ($\text{mg m}^{-2} \text{y}^{-1}$)	
<i>Abies alba</i>	1.31 \pm 0.27	0.137 \pm 0.045	10.5 \pm 3.9	2.37 \pm 0.88	0.243 \pm 0.106	0.850 \pm 0.340	0.156 \pm 0.088	0.601 \pm 0.176	5.98 \pm 2.64	888 \pm 246	9.68 \pm 3.87	25.5 \pm 2.64	431 \pm 150	913 \pm 237	549 \pm 66	795 \pm 264	1345 \pm 370	78
<i>Pinus halepensis</i>	1.06 \pm 0.26	0.082 \pm 0.026	14.6 \pm 26.0	2.97 \pm 1.57	0.227 \pm 0.131	0.888 \pm 0.278	0.238 \pm 0.052	0.409 \pm 0.131	3.90 \pm 0.16	640 \pm 131	13.77 \pm 1.56	24.3 \pm 2.6	492 \pm 131	636 \pm 260	501 \pm 182	627 \pm 208	1128 \pm 364	713
<i>Pinus nigra</i>	0.97 \pm 0.21	0.091 \pm 0.021	11.4 \pm 4.2	2.44 \pm 1.26	0.234 \pm 0.168	0.518 \pm 0.222	0.150 \pm 0.063	0.471 \pm 0.147	3.65 \pm 1.68	699 \pm 105	12.3 \pm 1.5	25.0 \pm 2.1	519 \pm 189	743 \pm 210	490 \pm 168	772 \pm 273	1262 \pm 378	483
<i>Pinus pinaster</i>	1.01 \pm 0.20	0.090 \pm 0.046	13.4 \pm 5.3	2.27 \pm 0.73	0.195 \pm 0.099	0.386 \pm 0.198	0.201 \pm 0.073	0.485 \pm 0.152	2.01 \pm 1.19	693 \pm 92	11.3 \pm 1.2	27.8 \pm 3.3	412 \pm 198	563 \pm 257	376 \pm 158	599 \pm 303	975 \pm 442	44
<i>Pinus pinea</i>	1.16 \pm 0.21	0.085 \pm 0.029	14.8 \pm 3.6	2.62 \pm 1.31	0.194 \pm 0.124	0.371 \pm 0.168	0.257 \pm 0.073	0.509 \pm 0.183	1.49 \pm 0.80	802 \pm 95	11.2 \pm 1.5	24.4 \pm 7.3	478 \pm 102	713 \pm 234	375 \pm 175	816 \pm 204	1191 \pm 321	54
<i>Pinus sylvestris</i>	1.31 \pm 0.34	0.126 \pm 0.034	10.9 \pm 3.4	2.73 \pm 1.36	0.267 \pm 0.170	0.527 \pm 0.0278	0.124 \pm 0.068	0.543 \pm 0.170	4.47 \pm 2.04	784 \pm 170	8.89 \pm 2.89	25.8 \pm 3.4	424 \pm 170	758 \pm 272	472 \pm 204	710 \pm 272	1182 \pm 408	1171
<i>Pinus uncinata</i>	0.96 \pm 0.28	0.093 \pm 0.028	10.5 \pm 2.8	2.69 \pm 1.68	0.262 \pm 0.168	0.503 \pm 0.182	0.105 \pm 0.028	0.424 \pm 0.154	5.08 \pm 2.38	1138 \pm 140	5.77 \pm 2.21	23.1 \pm 1.4	331 \pm 126	713 \pm 168	326 \pm 294	717 \pm 154	1043 \pm 252	198
<i>Quercus faginea</i>	1.94 \pm 0.59	0.141 \pm 0.130	17.1 \pm 4.9	3.09 \pm 2.05	0.255 \pm 0.367	1.260 \pm 0.475	0.254 \pm 0.108	0.749 \pm 0.254	5.94 \pm 3.51	818 \pm 232	10.01 \pm 3.02	25.1 \pm 2.7	433 \pm 173	628 \pm 270	408 \pm 211	654 \pm 254	1061 \pm 427	30
<i>Quercus ilex</i>	1.37 \pm 0.26	0.094 \pm 0.026	15.6 \pm 5.2	2.50 \pm 1.3	0.170 \pm 0.104	0.922 \pm 0.338	0.154 \pm 0.052	0.619 \pm 0.182	6.66 \pm 3.64	784 \pm 130	12.4 \pm 1.8	24.2 \pm 2.6	502 \pm 189	901 \pm 416	640 \pm 312	764 \pm 286	1404 \pm 572	671
<i>Quercus petraea</i>	2.26 \pm 0.52	0.158 \pm 0.070	16.5 \pm 7.0	2.69 \pm 1.2	0.178 \pm 0.080	0.852 \pm 0.300	0.192 \pm 0.140	0.919 \pm 0.240	4.94 \pm 1.90	714 \pm 150	12.2 \pm 2.8	26.9 \pm 4.0	411 \pm 170	772 \pm 230	459 \pm 40	723 \pm 290	1183 \pm 380	109
<i>Quercus pyrenaica</i>	2.28 \pm 0.29	0.168 \pm 0.041	14.3 \pm 3.5	2.58 \pm 0.46	0.192 \pm 0.064	0.882 \pm 0.180	0.226 \pm 0.052	0.897 \pm 0.128	4.05 \pm 0.99	737 \pm 180	10.1 \pm 2.2	28.3 \pm 3.5	200 \pm 70	278 \pm 104	204 \pm 52	274 \pm 99	477 \pm 139	34

<i>Quercus robur</i>	2.53 ± 0.44	0.164 ± 0.044	16.4 ± 4.4	2.93 ± 1.00	0.190 ± 0.077	0.755 ± 0.275	0.175 ± 0.055	0.920 ± 0.231	4.51 ± 1.41	713 ± 187	9.48 ± 1.771	26.8 ± 3.3	452 ± 220	783 ± 275	470 ± 132	766 ± 385	1235 ± 473	124
<i>Quercus suber</i>	1.65 ± 0.26	0.140 ± 0.065	13.6 ± 5.2	2.53 ± 0.78	0.206 ± 0.091	0.752 ± 0.264	0.165 ± 0.052	0.725 ± 0.286	5.00 ± 2.47	764 ± 117	13.94 ± 1.83	22.5 ± 1.29	433 ± 143	758 ± 338	600 ± 221	590 ± 260	1191 ± 481	167
<i>Arbutus unedo</i>	1.33 ± 0.24	0.101 ± 0.024	13.5 ± 2.1	2.25 ± 1.32	0.178 ± 0.092	1.099 ± 0.156	0.186 ± 0.057	0.729 ± 0.300	6.27 ± 1.89	729 ± 51	15.04 ± 0.423	22.2 ± 0.3	717 ± 36	1227 ± 96	950 ± 63	994 ± 129	1944 ± 231	10
<i>Castanea sativa</i>	2.21 ± 0.46	0.188 ± 0.089	13.1 ± 3.8	2.38 ± 0.56	0.194 ± 0.066	0.794 ± 0.266	0.367 ± 0.705	0.958 ± 0.244	2.21 ± 0.56	810 ± 89	12.13 ± 2.17	24.2 ± 3.3	568 ± 165	1120 ± 381	812 ± 244	876 ± 282	1688 ± 517	23
<i>Fagus sylvatica</i>	2.35 ± 0.34	0.148 ± 0.051	17.9 ± 6.8	2.92 ± 0.85	0.182 ± 0.068	0.954 ± 0.291	0.172 ± 0.119	0.852 ± 0.221	6.04 ± 2.21	843 ± 187	8.35 ± 2.21	25.6 ± 3.4	402 ± 204	828 ± 323	525 ± 170	705 ± 357	1231 ± 493	288
<i>Fraxinus angustifoli</i>	2.61 ± 1.79	0.133 ± 0.044	19.2 ± 7.2	3.74 ± 0.18	0.200 ± 0.067	2.973 ± 0.377	0.622 ± 0.166	0.695 ± 0.449	4.87 ± 1.91	971 ± 58	8.85 ± 1.72	22.8 ± 2.1	326 ± 51	945 ± 124	521 ± 55	750 ± 78	1271 ± 278	5
<i>Fraxinus excelsior</i>	2.54 ± 0.54	0.194 ± 0.106	15.8 ± 6.7	2.57 ± 0.90	0.193 ± 0.128	2.840 ± 1.142	0.620 ± 0.237	1.071 ± 0.288	4.86 ± 1.60	993 ± 259	7.87 ± 2.25	26.8 ± 3.2	423 ± 176	935 ± 227	531 ± 99	827 ± 282	1358 ± 378	11
<i>Juniperus phoenicea</i>	0.81 ± 0.2	0.079 ± 0.04	10.2 ± 4.4	3.43 ± 0.40	0.335 ± 0.06	3.656 ± 0.810	0.100 ± 0.132	0.237 ± 0.174	36.67 ± 0.86	968 ± 172	9.40 ± 1.78	22.5 ± 4.0	373 ± 134	602 ± 152	469 ± 108	505 ± 200	974 ± 312	4
<i>Pinus radiata</i>	1.48 ± 0.17	0.109 ± 0.014	13.6 ± 0.7	2.10 ± 0.26	0.153 ± 0.015	0.344 ± 0.134	0.136 ± 0.053	0.721 ± 0.163	2.59 ± 0.41	1035 ± 136	10.53 ± 2.75	23.4 ± 0.5	401 ± 120	794 ± 143	475 ± 170	720 ± 100	1195 ± 73	3
<i>Platanus hispanica</i>	2.39 ± 0.73	0.374 ± 0.140	6.4 ± 0.4	1.54 ± 0.64	0.242 ± 0.115	1.240 ± 1.632	0.301 ± 0.260	1.564 ± 0.167	3.68 ± 2.15	992 ± 202	8.05 ± 3.15	24.0 ± 1.1	474 ± 123	715 ± 176	312 ± 203	878 ± 102	1189 ± 322	5
<i>Populus hybrid</i>	1.92 ± 1.39	0.192 ± 0.144	9.8 ± 1.32	4.99 ± 6.75	0.529 ± 0.712	1.49 ± 1.00	0.319 ± 0.310	0.745 ± 1.29	5.01 ± 1.02	928 ± 440	5.70 ± 4.4	25.7 ± 6.0	222 ± 114	652 ± 352	314 ± 44	560 ± 194	875 ± 444	6
<i>Populus nigra</i>	1.55 ± 1.56	0.129 ± 0.22	12.0 ± 2.4	2.33 ± 4.2	0.193 ± 0.88	2.803 ± 0.64	0.640 ± 0.180	0.664 ± 0.182	4.38 ± 1.76	997 ± 426	8.00 ± 3.74	23.5 ± 6.4	171 ± 90	493 ± 86	195 ± 152	469 ± 172	663 ± 246	4
<i>Populus tremula</i>	2.90 ± 0.96	0.181 ± 0.120	19.0 ± 9.0	2.26 ± 0.32	0.129 ± 0.042	1.746 ± 1.340	0.277 ± 0.054	1.318 ± 0.554	6.89 ± 6.28	954 ± 150	8.63 ± 2.234	24.3 ± 0.8	474 ± 42	715 ± 46	312 ± 108	878 ± 110	1189 ± 222	4
<i>Pseudotsuga menziesii</i>	1.77 ± 0.29	0.124 ± 0.025	15.1 ± 4.6	2.88 ± 0.80	0.203 ± 0.096	0.470 ± 0.449	0.154 ± 0.029	0.637 ± 0.118	2.87 ± 1.84	907 ± 164	8.30 ± 1.88	23.5 ± 2.1	548 ± 223	907 ± 223	495 ± 122	960 ± 332	1455 ± 424	18

<i>Quercus canariensis</i>	2.25 ± 0.69	0.154 ± 0.090	16.5 ± 4.8	2.78 ± 0.69	0.182 ± 0.069	1.021 ± 0.315	0.230 ± 0.051	0.854 ± 0.270	4.68 ± 1.77	1042 ± 78	7.53 ± 1.60	23.6 ± 0.6	299 ± 135	581 ± 96	260 ± 87	620 ± 183	880 ± 231	10
<i>Quercus cerroides</i>	1.71 ± 0.77	0.105 ± 0.070	23.6 ± 14.4	4.75 ± 3.07	0.333 ± 0.330	1.351 ± 0.380	0.260 ± 0.080	0.449 ± 0.227	5.69 ± 2.37	1094 ± 61	6.64 ± 1.048	23.7 ± 0.7	249 ± 86	539 ± 50	207 ± 13	582 ± 125	788 ± 138	11
<i>Quercus humilis</i>	1.96 ± 0.60	0.159 ± 0.077	15.2 ± 6.9	3.29 ± 2.67	0.247 ± 0.223	1.447 ± 0.553	0.239 ± 0.069	0.857 ± 0.430	6.54 ± 3.10	1026 ± 198	7.90 ± 3.50	23.4 ± 0.86	383 ± 138	761 ± 249	409 ± 224	735 ± 155	1144 ± 344	75
<i>Acer campestre</i>	2.40 ± 0.22	0.290 ± 0.016	8.3 ± 1.8	1.25 ± 0.86	0.151 ± 0.088	2.583 ± 0.086	0.412 ± 0.020	1.922 ± 0.10	6.27 ± 1.08	581 ± 62	9.60 ± 1.34	32.6 ± 0.8	233 ± 286	680 ± 244	437 ± 242	475 ± 198	913 ± 366	4
<i>Acer pseudoplatanus</i>	1.26 ± 0.18	0.089 ± 0.026	14.2 ± 1.8	1.47 ± 1.05	0.104 ± 0.066	0.677 ± 0.104	0.085 ± 0.044	0.858 ± 0.12	7.96 ± 1.30	1283 ± 66	8.70 ± 1.56	29.1 ± 2.4	389 ± 244	809 ± 442	552 ± 198	646 ± 208	1198 ± 444	4
<i>Alnus glutinosa</i>	2.69 ± 0.17	0.172 ± 0.018	15.8 ± 2.4	3.51 ± 1.53	0.237 ± 0.143	1.128 ± 0.502	0.238 ± 0.105	0.892 ± 0.423	4.75 ± 0.78	874 ± 349	7.90 ± 1.44	28.4 ± 3.2	387 ± 274	775 ± 325	460 ± 129	702 ± 481	1162 ± 578	3
<i>Betula pendula</i>	2.38 ± 0.29	0.176 ± 0.034	13.9 ± 2.6	2.88 ± 0.49	0.212 ± 0.042	0.678 ± 0.172	0.248 ± 0.073	0.839 ± 0.117	2.86 ± 0.83	807 ± 192	7.84 ± 5.20	25.4 ± 7.3	291 ± 257	622 ± 390	323 ± 148	591 ± 478	914 ± 614	7
<i>Carpinus betulus</i>	2.35 ± 0.151	0.140 ± 0.030	17.0 ± 3.0	2.84 ± 0.66	0.172 ± 0.051	1.165 ± 0.568	0.233 ± 0.042	0.867 ± 0.279	4.94 ± 1.62	1030 ± 156	10.9 ± 2.1	28.6 ± 2.4	370 ± 105	871 ± 327	564 ± 198	677 ± 222	1240 ± 408	9
<i>Eucalyptus sp</i>	1.38 ± 0.45	0.094 ± 0.050	15.8 ± 3.7	2.07 ± 0.49	0.134 ± 0.029	1.104 ± 0.311	0.222 ± 0.062	0.704 ± 0.250	5.33 ± 2.17	866 ± 299	13.9 ± 2.3	23.6 ± 4.9	298 ± 11.5	305 ± 349	280 ± 247	323 ± 213	603 ± 422	17
<i>Olea europea</i>	1.51 ± 0.18	0.090 ± 0.008	16.7 ± 2.0	1.57 ± 0.14	0.094 ± 0.004	1.368 ± 0.262	0.120 ± 0.036	0.962 ± 0.080	12.5 ± 5.1	641 ± 78	8.50 ± 1.96	29.9 ± 1.2	230 ± 54	214 ± 90	214 ± 104	229 ± 48	443 ± 66	4
<i>Ostrya carpinifolia</i>	2.15 ± 0.06	0.096 ± 0.016	22.7 ± 3.2	2.49 ± 0.78	0.108 ± 0.026	2.119 ± 0.932	0.262 ± 0.006	0.946 ± 0.348	8.10 ± 3.64	686 ± 50	6.17 ± 2.87	28.5 ± 2.2	567 ± 398	1214 ± 808	577 ± 178	1203 ± 1032	1780 ± 1204	4
<i>Populus alba</i>	2.90 ± 0.22	0.202 ± 0.006	14.3 ± 1.7	1.98 ± 1.51	0.137 ± 0.092	3.49 ± 4.36	0.451 ± 0.266	1.566 ± 1.084	8.85 ± 14.9	590 ± 28	10.3 ± 0.7	31.2 ± 1.96	394 ± 78	805 ± 126	496 ± 120	703 ± 109	1199 ± 283	8
<i>Quercus cerris</i>	2.11 ± 0.30	0.167 ± 0.083	15.9 ± 7.7	2.87 ± 2.12	0.235 ± 0.230	1.046 ± 0.431	0.192 ± 0.065	0.923 ± 0.319	5.86 ± 2.66	692 ± 124	9.88 ± 2.88	29.1 ± 2.9	284 ± 159	655 ± 224	450 ± 124	488 ± 283	938 ± 348	35
<i>Quercus frainetto</i>	1.82 ± 0.37	0.205 ± 0.077	10.1 ± 3.7	2.57 ± 2.07	0.259 ± 0.166	0.942 ± 0.354	0.181 ± 0.041	0.913 ± 0.302	5.39 ± 2.12	744 ± 179	10.48 ± 1.40	28.6 ± 3.7	349 ± 400	664 ± 317	408 ± 41	605 ± 690	1012 ± 713	21

<i>Quercus pubescens</i>	1.83 ± 0.38	0.086 ± 0.021	22.1 ± 5.9	2.25 ± 0.83	0.102 ± 0.023	1.404 ± 0.239	0.229 ± 0.112	0.859 ± 0.185	6.91 ± 2.52	839 ± 208	8.84 ± 1.45	24.4 ± 3.9	553 ± 348	1097 ± 770	608 ± 302	1041 ± 892	1650 ± 1113	7
<i>Robinia pseudoacacia</i>	3.97 ± 0.45	0.221 ± 0.027	18.3 ± 3.7	2.41 ± 0.69	0.131 ± 0.022	1.753 ± 0.520	0.239 ± 0.030	1.720 ± 0.290	7.20 ± 1.45	818 ± 253	9.18 ± 1.59	29.2 ± 3.2	313 ± 69	747 ± 55	487 ± 32	572 ± 80	1059 ± 74	5
<i>Tilia cordata</i>	2.76 ± 0.45	0.190 ± 0.029	14.5 ± 0.2	2.09 ± 1.15	0.144 ± 0.081	1.912 ± 0.410	0.206 ± 0.054	1.447 ± 0.983	9.54 ± 4.30	653 ± 65	8.45 ± 0.131	31.8 ± 0.6	363 ± 70	781 ± 333	488 ± 69	656 ± 189	1145 ± 260	5
<i>Juniperus oxycedrus</i>	1.02 ± 0.01	0.073 ± 0.027	14.3 ± 5.4	1.93 ± 0.53	0.136 ± 0.017	1.537 ± 0.908	0.129 ± 0.122	0.535 ± 0.148	17.10 ± 22.8	1185 ± 108	7.20 ± 0.46	24.5 ± 0.4	223 ± 90	301 ± 170	242 ± 65	282 ± 19	524 ± 84	5
<i>Juniperus thurifera</i>	1.35 ± 0.24	0.119 ± 0.024	11.6 ± 1.2	2.31 ± 0.39	0.201 ± 0.033	2.093 ± 0.507	0.173 ± 0.063	0.595 ± 0.108	13.16 ± 4.92	950 ± 123	8.44 ± 0.867	26.1 ± 0.6	194 ± 21	307 ± 36	246 ± 24	255 ± 33	501 ± 48	9
<i>Larix decidua</i>	2.54 ± 0.39	0.144 ± 0.045	19.0 ± 3.6	3.43 ± 0.96	0.197 ± 0.090	0.753 ± 0.468	0.187 ± 0.060	0.793 ± 0.264	4.18 ± 2.97	875 ± 165	6.59 ± 0.924	27.9 ± 3.0	342 ± 228	1307 ± 696	591 ± 246	1058 ± 714	1649 ± 888	9
<i>Piceas abies</i>	1.32 ± 0.03	0.130 ± 0.026	10.7 ± 2.6	2.55 ± 0.79	0.251 ± 0.080	0.553 ± 0.231	0.110 ± 0.053	0.553 ± 0.160	5.52 ± 2.90	876 ± 1014	6.36 ± 2.13	27.3 ± 2.6	369 ± 186	791 ± 105	484 ± 160	676 ± 375	1161 ± 532	706
<i>Picea sitchensis</i>	1.56 ± 0.18	0.147 ± 0.036	11.1 ± 2.4	2.02 ± 0.36	0.189 ± 0.048	0.443 ± 0.156	0.095 ± 0.018	0.796 ± 0.150	4.79 ± 1.96	1088 ± 276	7.87 ± 1.81	26.9 ± 4.2	314 ± 150	521 ± 186	250 ± 54	585 ± 252	836 ± 324	37
<i>Pinus brutia</i>	1.01 ± 0.12	0.193 ± 0.034	5.3 ± 1.0	2.90 ± 1.02	0.544 ± 0.146	0.710 ± 0.104	0.218 ± 0.052	0.363 ± 0.076	3.29 ± 0.36	1132 ± 210	8.57 ± 0.066	16.8 ± 1.2	119 ± 10	178 ± 14	204 ± 12	93 ± 12	297 ± 24	4
<i>Pinus cembra</i>	1.62 ± 0.24	0.183 ± 0.024	9.0 ± 2.4	2.00 ± 0.44	0.231 ± 0.112	0.577 ± 0.170	0.167 ± 0.084	0.827 ± 0.294	3.55 ± 0.76	1225 ± 104	9.00 ± 0.800	16.4 ± 0.2	105 ± 40	444 ± 64	207 ± 104	343 ± 78	549 ± 24	4
<i>Pinus contorta</i>	1.41 ± 0.18	0.110 ± 0.018	13.0 ± 1.8	2.65 ± 1.68	0.208 ± 0.065	0.253 ± 0.065	0.111 ± 0.022	0.551 ± 0.104	2.33 ± 0.65	1052 ± 313	8.23 ± 1.07	19.0 ± 1.4	296 ± 140	428 ± 108	157 ± 25	567 ± 241	723 ± 256	13

Table S2. Main climatic variables, means (\pm S.E.), of the European sites where the five forest types were studied. Different letters indicate significant differences among forest types.

Forest types	Climatic variables						
	MAP	MAT	Thermal amplitude	Temperature, warmest month	Temperature, coldest month	Precipitation, wettest month	Precipitation, driest month
Temperate and boreal gymnosperms	856a (± 5)	7.83d (± 0.06)	26.0a (± 0.1)	22.0e (± 0.1)	-0.189d (± 0.083)	276a (± 1)	160a (± 1)
Mediterranean gymnosperms	674d (± 4)	13.0a (± 0.1)	24.7b (± 0.1)	26.5a (± 0.1)	6.05a (± 0.06)	215d (± 1)	121c (± 1)
Mediterranean deciduous	807bc (± 13)	9.96b (± 0.19)	26.4a (± 0.3)	24.4c (± 0.2)	2.03b (± 0.23)	254bc (± 3)	154ab (± 4)
Mediterranean evergreen angiosperms	781c (± 4)	12.7a (± 0.1)	23.9c (± 0.1)	25.8b (± 0.1)	5.88a (± 0.08)	242c (± 1)	149b (± 1)
Temperate and boreal deciduous	821b (± 9)	9.14c (± 0.12)	26.0a (± 0.1)	23.4d (± 0.2)	1.25c (± 0.14)	263b (± 3)	150b (± 2)

Table S3. Test statistics for squared Mahalanobis distances among the studied forest types in the discriminant functional analysis with foliar N, P, K, Ca and Mg concentrations and N:P, N:K, P:K, N:Ca, P:Ca, K:Ca, N:Mg, P:Mg, K:Mg and Ca:Mg concentration ratios as variables and the 5273 plots dominated by the five most representative forest types of Europe.

Forest type	Mediterranean needleleaf	Mediterranean broadleaf deciduous	Temperate/boreal broadleaf deciduous	Mediterranean broadleaf evergreen
Temperate/boreal needleleaf	164 <i>P</i> <0.00001	143 <i>P</i> <0.00001	615 <i>P</i> <0.00001	138 <i>P</i> <0.00001
Mediterranean needleleaf		126 <i>P</i> <0.00001	450 <i>P</i> <0.00001	111 <i>P</i> <0.00001
Mediterranean broadleaf deciduous			11.7 <i>P</i> <0.00001	60.2 <i>P</i> <0.00001
Temperate/boreal broadleaf deciduous				218 <i>P</i> <0.00001

Table S4. Statistics (Wilks' Lambda and *P*-value) of the discriminant function of foliar N, P, K, Ca and Mg concentrations and N:P, N:K, P:K, N:Ca, P:Ca, K:Ca, N:Mg, P:Mg, K:Mg and Ca:Mg concentration ratios as variables and the 5273 plots dominated by the five most representative European forest types of Europe.

Foliar variable	Partial Lambda	<i>P</i>
[N]	0.844	<0.00001
[P]	0.989	<0.00001
N:P	0.966	<0.00001
N:K	0.992	<0.00001
P:K	0.982	<0.00001
[Ca]	0.966	<0.00001
[Mg]	0.968	<0.00001
[K]	0.981	<0.00001
Ca:Mg	0.977	<0.00001
N:Ca	0.977	<0.00001
P:Ca	0.996	0.0003
K:Ca	0.989	<0.00001
N:Mg	0.994	<0.00001
P:Mg	0.982	<0.00001
K:Mg	0.998	0.013

Table S5. Test statistics for squared Mahalanobis distances among various species studied in the discriminant functional analysis with the foliar N, P, K, Ca and Mg and N:P, N:K, P:K, N:Ca, P:Ca, K:Ca, N:Mg, P:Mg, K:Mg and Ca:Mg concentration ratios as variables and the 2888 plots dominated by the 27 most representative non Mediterranean forest tree species of Europe.

	<i>P. sylvestris</i>	<i>P. uncinata</i>	<i>Q. petraea</i>	<i>Q. robur</i>	<i>F. sylvatica</i>	<i>F. angustifolia</i>	<i>F. excelsior</i>	<i>P. hispanica</i>	<i>P. hybrides</i>	<i>P. nigra</i>	<i>P. tremula</i>	<i>P. menziesii</i>	<i>Q. humilis</i>	<i>A. campestre</i>	<i>A. pseudoplatanus</i>	<i>A. glutinosa</i>	<i>B. pendula</i>	<i>C. betulus</i>	<i>Q. pubescens</i>	<i>T. cordata</i>	<i>L. decidua</i>	<i>P. abies</i>	<i>P. sitchensis</i>	<i>P. brutia</i>	<i>P. cembra</i>	<i>P. contorta</i>	<i>P. radiata</i>
<i>A. alba</i>	2.81 P=0.001	4.78 P<0.001	12.5 P<0.001	17.8 P<0.001	14.0 P<0.001	242 P<0.001	177 P<0.001	96.2 P<0.001	32.3 P<0.001	195 P<0.001	61.2 P<0.001	10.6 P<0.001	17.1 P<0.001	198 P<0.001	19.7 P<0.001	17.0 P<0.001	17.0 P<0.001	19.8 P<0.001	22.8 P<0.001	61.5 P<0.001	21.2 P<0.001	2.79 P=0.008	6.31 P<0.001	26.2 P<0.001	4.67 P<0.001	10.9 P<0.001	17.0 P<0.001
<i>P. sylvestris</i>		2.27 P=0.044	15.5 P<0.001	20.3 P<0.001	17.0 P<0.001	263 P<0.001	197 P<0.001	106 P<0.001	38.2 P<0.001	213 P<0.001	70.1 P<0.001	9.27 P<0.001	22.9 P<0.001	213 P<0.001	20.9 P<0.001	34.9 P<0.001	19.9 P<0.001	24.8 P<0.001	27.7 P<0.001	71.7 P<0.001	23.4 P<0.001	2.69 P=0.009	5.13 P<0.001	28.0 P<0.001	5.09 P<0.001	6.62 P<0.001	13.0 P<0.001
<i>P. uncinata</i>			26.3 P<0.001	31.9 P<0.001	29.0 P<0.001	289 P<0.001	226 P<0.001	131 P<0.001	53.7 P<0.001	234 P<0.001	91.0 P<0.001	14.5 P<0.001	32.9 P<0.001	245 P<0.001	20.6 P<0.001	48.6 P<0.001	30.1 P<0.001	36.8 P<0.001	37.8 P<0.001	91.3 P<0.001	34.4 P<0.001	2.32 P=0.031	9.42 P<0.001	28.9 P<0.001	11.5 P<0.001	9.16 P<0.001	16.0 P<0.001
<i>Q. petraea</i>				3.68 P=0.007	2.75 P=0.011	225 P<0.001	156 P<0.001	70.8 P<0.001	11.0 P<0.001	200 P<0.001	29.1 P<0.001	13.0 P<0.001	11.4 P<0.001	165 P<0.001	30.4 P<0.001	9.38 P<0.001	4.54 P<0.001	5.78 P<0.001	15.4 P<0.001	34.0 P<0.001	5.33 P<0.001	16.0 P<0.001	13.4 P<0.001	47.8 P<0.001	7.75 P<0.001	22.8 P<0.001	25.8 P<0.001
<i>Q. robur</i>					2.40 P=0.031	228 P<0.001	163 P<0.001	82.6 P<0.001	12.3 P<0.001	213 P<0.001	28.7 P<0.001	14.9 P<0.001	16.5 P<0.001	181 P<0.001	35.5 P<0.001	6.38 P<0.001	2.74 P=0.012	5.40 P<0.001	21.5 P<0.001	34.3 P<0.001	3.18 P<0.001	20.6 P<0.001	17.0 P<0.001	53.7 P<0.001	11.9 P<0.001	26.2 P<0.001	29.1 P<0.001
<i>F. sylvatica</i>						210 P<0.001	146 P<0.001	78.3 P<0.001	14.8 P<0.001	189 P<0.001	27.3 P<0.001	17.2 P<0.001	10.5 P<0.001	170 P<0.001	32.4 P<0.001	7.37 P<0.001	6.78 P<0.001	4.46 P<0.001	13.7 P<0.001	32.3 P<0.001	5.67 P<0.001	17.7 P<0.001	15.7 P<0.001	48.1 P<0.001	11.8 P<0.001	27.1 P<0.001	30.0 P<0.001
<i>F. angustifolia</i>							27.6 P<0.001	306 P<0.001	253 P<0.001	35.6 P<0.001	162 P<0.001	259 P<0.001	172 P<0.001	266 P<0.001	294 P<0.001	171 P<0.001	226 P<0.001	173 P<0.001	171 P<0.001	181 P<0.001	217 P<0.001	267 P<0.001	258 P<0.001	283 P<0.001	264 P<0.001	280 P<0.001	279 P<0.001
<i>F. excelsior</i>								183 P<0.001	166 P<0.001	19.6 P<0.001	98.1 P<0.001	192 P<0.001	119 P<0.001	134 P<0.001	229 P<0.001	123 P<0.001	165 P<0.001	121 P<0.001	116 P<0.001	110 P<0.001	162 P<0.001	202 P<0.001	195 P<0.001	209 P<0.001	187 P<0.001	214 P<0.001	214 P<0.001
<i>P. hispanica</i>									44.0 P<0.001	247 P<0.001	80.1 P<0.001	105 P<0.001	77.0 P<0.001	77.7 P<0.001	130 P<0.001	92.3 P<0.001	86.3 P<0.001	90.6 P<0.001	97.7 P<0.001	76.6 P<0.001	96.0 P<0.001	108 P<0.001	99.1 P<0.001	140 P<0.001	73.4 P<0.001	118 P<0.001	119 P<0.001
<i>P. hybrides</i>										226 P<0.001	30.3 P<0.001	36.5 P<0.001	26.8 P<0.001	127 P<0.001	47.5 P<0.001	19.4 P<0.001	17.7 P<0.001	20.0 P<0.001	36.6 P<0.001	22.8 P<0.001	23.5 P<0.001	37.9 P<0.001	30.3 P<0.001	75.2 P<0.001	18.8 P<0.001	50.3 P<0.001	51.9 P<0.001
<i>P. nigra</i>											162 P<0.001	221 P<0.001	153 P<0.001	188 P<0.001	252 P<0.001	173 P<0.001	211 P<0.001	164 P<0.001	149 P<0.001	170 P<0.001	210 P<0.001	219 P<0.001	219 P<0.001	216 P<0.001	218 P<0.001	231 P<0.001	234 P<0.001
<i>P. tremula</i>												59.2 P<0.001	28.3 P<0.001	113 P<0.001	94.2 P<0.001	23.6 P<0.001	37.7 P<0.001	18.4 P<0.001	25.7 P<0.001	12.5 P<0.001	30.3 P<0.001	72.4 P<0.001	65.5 P<0.001	111 P<0.001	53.9 P<0.001	78.4 P<0.001	76.2 P<0.001
<i>P. menziesii</i>													23.7 P<0.001	213 P<0.001	32.0 P<0.001	29.1 P<0.001	12.7 P<0.001	21.9 P<0.001	30.1 P<0.001	70.6 P<0.001	11.8 P<0.001	11.1 P<0.001	11.4 P<0.001	40.6 P<0.001	11.1 P<0.001	3.27 P<0.001	7.97 P<0.001

<i>Q. humilis</i>														151 <i>P</i> <0.001	40.5 <i>P</i> <0.001	14.6 <i>P</i> <0.001	19.4 <i>P</i> <0.001	9.61 <i>P</i> <0.001	10.7 <i>P</i> <0.001	33.9 <i>P</i> <0.001	15.6 <i>P</i> <0.001	24.2 <i>P</i> <0.001	22.6 <i>P</i> <0.001	59.7 <i>P</i> <0.001	20.7 <i>P</i> <0.001	32.2 <i>P</i> <0.001	34.8 <i>P</i> <0.001
<i>A. campestre</i>															247 <i>P</i> <0.001	178 <i>P</i> <0.001	197 <i>P</i> <0.001	165 <i>P</i> <0.001	153 <i>P</i> <0.001	95.3 <i>P</i> <0.001	202 <i>P</i> <0.001	219 <i>P</i> <0.001	214 <i>P</i> <0.001	253 <i>P</i> <0.001	180 <i>P</i> <0.001	232 <i>P</i> <0.001	236 <i>P</i> <0.001
<i>A. pseudoplatanus</i>																48.5 <i>P</i> <0.001	38.4 <i>P</i> <0.001	45.3 <i>P</i> <0.001	41.2 <i>P</i> <0.001	76.9 <i>P</i> <0.001	43.3 <i>P</i> <0.001	18.7 <i>P</i> <0.001	13.7 <i>P</i> <0.001	47.2 <i>P</i> <0.001	26.4 <i>P</i> <0.001	30.5 <i>P</i> <0.001	36.1 <i>P</i> <0.001
<i>A. glutinosa</i>																	7.84 <i>P</i> <0.001	3.83 <i>P</i> <0.001	23.9 <i>P</i> <0.001	29.0 <i>P</i> <0.001	7.91 <i>P</i> <0.001	35.3 <i>P</i> <0.001	29.1 <i>P</i> <0.001	64.9 <i>P</i> <0.001	25.6 <i>P</i> <0.001	44.0 <i>P</i> <0.001	45.4 <i>P</i> <0.001
<i>B.pendula</i>																		7.84 <i>P</i> <0.001	27.9 <i>P</i> <0.001	46.9 <i>P</i> <0.001	4.09 <i>P</i> <0.001	20.4 <i>P</i> <0.001	18.1 <i>P</i> <0.001	49.5 <i>P</i> <0.001	11.2 <i>P</i> <0.001	23.9 <i>P</i> <0.001	27.8 <i>P</i> <0.001
<i>C. betulus</i>																			11.4 <i>P</i> <0.001	27.1 <i>P</i> <0.001	6.80 <i>P</i> <0.001	25.9 <i>P</i> <0.001	24.3 <i>P</i> <0.001	58.6 <i>P</i> <0.001	18.3 <i>P</i> <0.001	34.3 <i>P</i> <0.001	37.1 <i>P</i> <0.001
<i>Q. pubescens</i>																				33.2 <i>P</i> <0.001	22.8 <i>P</i> <0.001	29.3 <i>P</i> <0.001	30.0 <i>P</i> <0.001	61.7 <i>P</i> <0.001	27.7 <i>P</i> <0.001	38.8 <i>P</i> <0.001	43.7 <i>P</i> <0.001
<i>T. cordata</i>																					45.7 <i>P</i> <0.001	72.5 <i>P</i> <0.001	64.5 <i>P</i> <0.001	113 <i>P</i> <0.001	55.6 <i>P</i> <0.001	88.0 <i>P</i> <0.001	90.9 <i>P</i> <0.001
<i>L. decidua</i>																						24.2 <i>P</i> <0.001	19.9 <i>P</i> <0.001	58.6 <i>P</i> <0.001	17.7 <i>P</i> <0.001	23.3 <i>P</i> <0.001	23.9 <i>P</i> <0.001
<i>P. abies</i>																							4.57 <i>P</i> <0.001	29.4 <i>P</i> <0.001	5.56 <i>P</i> <0.001	8.80 <i>P</i> <0.001	14.9 <i>P</i> <0.001
<i>P. sitchensis</i>																								38.1 <i>P</i> <0.001	6.89 <i>P</i> <0.001	10.0 <i>P</i> <0.001	10.4 <i>P</i> <0.001
<i>P. brutia</i>																									33.6 <i>P</i> <0.001	38.2 <i>P</i> <0.001	45.6 <i>P</i> <0.001
<i>P. cembra</i>																										13.5 <i>P</i> <0.001	17.5 <i>P</i> <0.001
<i>P. contorta</i>																											2.97 <i>P</i> =0.009

Table S6. Statistics (Wilks' Lambda and *P*-value) of the discriminant function of foliar N, P, K, Ca and Mg concentrations and N:P, N:K, P:K, N:Ca, P:Ca, K:Ca, N:Mg, P:Mg, K:Mg and Ca:Mg concentration ratios as variables and the 2888 plots dominated by the 27 most representative non-Mediterranean forest tree species of Europe.

Foliar variable	Partial Lambda	<i>P</i>
[N]	0.829	<0.0001
[P]	0.938	<0.0001
N:P	0.947	<0.0001
N:K	0.934	<0.0001
P:K	0.958	<0.0001
[Ca]	0.638	<0.0001
[Mg]	0.965	<0.0001
[K]	0.911	<0.0001
Ca:Mg	0.835	<0.0001
P:Ca	0.943	<0.0001
K:Ca	0.956	<0.0001
N:Mg	0.978	<0.0001
P:Mg	0.935	<0.0001
K:Mg	0.957	<0.0001
P:Ca	0.955	<0.0001

Table S7. Test statistics for squared Mahalanobis distances among various species studied in the discriminant functional analysis with the foliar N, P, K, Ca and Mg and N:P, N:K, P:K, N:Ca, P:Ca, K:Ca, N:Mg, P:Mg, K:Mg and Ca:Mg concentration ratios as variables and the 2375 plots dominated by the 21 most representative Mediterranean forest tree species of Europe.

Species	<i>P. nigra</i>	<i>P. pinaster</i>	<i>P. pinea</i>	<i>Q. faginea</i>	<i>Q. humilis</i>	<i>Q. ilex</i>	<i>Q. pyrenaica</i>	<i>Q. suber</i>	<i>A. unedo</i>	<i>C. sativa</i>	<i>J. phoenicea</i>	<i>Q. canariensis</i>	<i>Q. cerrioides</i>	<i>Eucalyptus</i> sp.	<i>O. europea</i>	<i>O. carpinifolia</i>	<i>Q. cerris</i>	<i>Q. frainetto</i>	<i>J. oxycedrus</i>	<i>J. thurifera</i>
<i>P. halepensis</i>	72.2 <i>P</i> <0.001	16.3 <i>P</i> <0.001	31.6 <i>P</i> <0.001	37.8 <i>P</i> <0.001	33.4 <i>P</i> <0.001	110 <i>P</i> <0.001	59.9 <i>P</i> <0.001	77.9 <i>P</i> <0.001	6.27 <i>P</i> <0.001	32.9 <i>P</i> <0.001	199 <i>P</i> <0.001	25.3 <i>P</i> <0.001	10.8 <i>P</i> <0.001	15.1 <i>P</i> <0.001	28.5 <i>P</i> <0.001	57.5 <i>P</i> <0.001	24.0 <i>P</i> <0.001	18.3 <i>P</i> <0.001	38.3 <i>P</i> <0.001	23.7 <i>P</i> <0.001
<i>P. nigra</i>		10.2 <i>P</i> <0.001	31.9 <i>P</i> <0.001	53.9 <i>P</i> <0.001	44.9 <i>P</i> <0.001	124 <i>P</i> <0.001	33.1 <i>P</i> <0.001	86.6 <i>P</i> <0.001	9.45 <i>P</i> <0.001	45.1 <i>P</i> <0.001	213 <i>P</i> <0.001	33.6 <i>P</i> <0.001	20.3 <i>P</i> <0.001	4.6 <i>P</i> <0.001	31.3 <i>P</i> <0.001	73.8 <i>P</i> <0.001	29.5 <i>P</i> <0.001	21.7 <i>P</i> <0.001	41.4 <i>P</i> <0.001	33.0 <i>P</i> <0.001
<i>P. pinaster</i>			5.17 <i>P</i> <0.001	26.5 <i>P</i> <0.001	71.0 <i>P</i> <0.001	33.1 <i>P</i> <0.001	31.7 <i>P</i> <0.001	35.1 <i>P</i> <0.001	11.4 <i>P</i> <0.001	38.1 <i>P</i> <0.001	223 <i>P</i> <0.001	32.5 <i>P</i> <0.001	21.0 <i>P</i> <0.001	11.8 <i>P</i> <0.001	35.2 <i>P</i> <0.001	76.6 <i>P</i> <0.001	30.7 <i>P</i> <0.001	22.9 <i>P</i> <0.001	44.0 <i>P</i> <0.001	38.0 <i>P</i> <0.001
<i>P. pinea</i>				22.8 <i>P</i> <0.001	42.2 <i>P</i> <0.001	52.9 <i>P</i> <0.001	27.8 <i>P</i> <0.001	48.2 <i>P</i> <0.001	12.0 <i>P</i> <0.001	28.4 <i>P</i> <0.001	221 <i>P</i> <0.001	28.6 <i>P</i> <0.001	18.7 <i>P</i> <0.001	10.5 <i>P</i> <0.001	32.9 <i>P</i> <0.001	72.6 <i>P</i> <0.001	28.1 <i>P</i> <0.001	23.7 <i>P</i> <0.001	42.7 <i>P</i> <0.001	40.9 <i>P</i> <0.001
<i>Q. faginea</i>					11.3 <i>P</i> <0.001	21.4 <i>P</i> <0.001	7.87 <i>P</i> <0.001	17.4 <i>P</i> <0.001	7.25 <i>P</i> <0.001	11.2 <i>P</i> <0.001	189 <i>P</i> <0.001	2.33 <i>P</i> =0.043	4.02 <i>P</i> <0.001	5.72 <i>P</i> <0.001	15.1 <i>P</i> <0.001	18.6 <i>P</i> <0.001	2.23 <i>P</i> <0.001	8.87 <i>P</i> <0.001	45.4 <i>P</i> <0.001	16.2 <i>P</i> <0.001
<i>Q. humilis</i>						49.4 <i>P</i> <0.001	9.18 <i>P</i> <0.001	16.7 <i>P</i> <0.001	16.0 <i>P</i> <0.001	15.6 <i>P</i> <0.001	204 <i>P</i> <0.001	8.36 <i>P</i> <0.001	15.7 <i>P</i> <0.001	14.7 <i>P</i> <0.001	23.6 <i>P</i> <0.001	16.3 <i>P</i> <0.001	6.39 <i>P</i> <0.001	8.24 <i>P</i> <0.001	63.4 <i>P</i> <0.001	19.3 <i>P</i> <0.001
<i>Q. ilex</i>							35.1 <i>P</i> <0.001	23.3 <i>P</i> <0.001	7.67 <i>P</i> <0.001	27.2 <i>P</i> <0.001	178 <i>P</i> <0.001	14.5 <i>P</i> <0.001	8.05 <i>P</i> <0.001	2.34 <i>P</i> <0.001	12.8 <i>P</i> <0.001	43.2 <i>P</i> <0.001	11.6 <i>P</i> <0.001	101 <i>P</i> <0.001	28.8 <i>P</i> <0.001	15.4 <i>P</i> <0.001
<i>Q. pyrenaica</i>								17.9 <i>P</i> <0.001	13.9 <i>P</i> <0.001	8.57 <i>P</i> <0.001	218 <i>P</i> <0.001	2.32 <i>P</i> =0.042	11.4 <i>P</i> <0.001	11.5 <i>P</i> <0.001	22.6 <i>P</i> <0.001	23.9 <i>P</i> <0.001	2.14 <i>P</i> <0.001	9.09 <i>P</i> <0.001	58.2 <i>P</i> <0.001	26.9 <i>P</i> <0.001
<i>Q. suber</i>									2.87 <i>P</i> <0.001	19.3 <i>P</i> <0.001	195 <i>P</i> <0.001	8.77 <i>P</i> <0.001	8.47 <i>P</i> <0.001	3.40 <i>P</i> <0.001	15.7 <i>P</i> <0.001	40.9 <i>P</i> <0.001	6.51 <i>P</i> <0.001	4.52 <i>P</i> <0.001	37.3 <i>P</i> <0.001	18.6 <i>P</i> <0.001
<i>A. unedo</i>										25.1 <i>P</i> <0.001	184 <i>P</i> <0.001	13.1 <i>P</i> <0.001	6.36 <i>P</i> <0.001	0.770 <i>P</i> =0.90	11.3 <i>P</i> <0.001	33.7 <i>P</i> <0.001	8.97 <i>P</i> <0.001	8.26 <i>P</i> <0.001	34.6 <i>P</i> <0.001	13.7 <i>P</i> <0.001
<i>C. sativa</i>											220 <i>P</i> <0.001	9.72 <i>P</i> <0.001	21.6 <i>P</i> <0.001	20.4 <i>P</i> <0.001	33.2 <i>P</i> <0.001	41.5 <i>P</i> <0.001	13.3 <i>P</i> <0.001	18.0 <i>P</i> <0.001	60.6 <i>P</i> <0.001	42.1 <i>P</i> <0.001
<i>J. phoenicea</i>												212 <i>P</i> <0.001	190 <i>P</i> <0.001	132 <i>P</i> <0.001	132 <i>P</i> <0.001	225 <i>P</i> <0.001	200 <i>P</i> <0.001	197 <i>P</i> <0.001	73.7 <i>P</i> <0.001	126 <i>P</i> <0.001
<i>Q. canariensis</i>													9.26 <i>P</i> <0.001	10.5 <i>P</i> <0.001	21.5 <i>P</i> <0.001	19.8 <i>P</i> <0.001	2.90 <i>P</i> =0.031	9.9 <i>P</i> <0.001	56.8 <i>P</i> <0.001	23.8 <i>P</i> <0.001
<i>Q. cerrioides</i>														5.04 <i>P</i> <0.001	20.9 <i>P</i> <0.001	24.3 <i>P</i> <0.001	8.94 <i>P</i> <0.001	13.5 <i>P</i> <0.001	46.1 <i>P</i> <0.001	15.4 <i>P</i> <0.001
<i>Eucalyptus</i> sp.															14.7 <i>P</i> <0.001	31.0 <i>P</i> <0.001	9.03 <i>P</i> <0.001	9.24 <i>P</i> <0.001	37.5 <i>P</i> <0.001	14.3 <i>P</i> <0.001

<i>O. europea</i>		37.8 <i>P</i> <0.001	14.3 <i>P</i> <0.001	19.6 <i>P</i> <0.001	20.0 <i>P</i> <0.001	17.3 <i>P</i> <0.001
<i>O. carpinifolia</i>			21.0 <i>P</i> <0.001	38.5 <i>P</i> <0.001	92.3 <i>P</i> <0.001	30.5 <i>P</i> <0.001
<i>Q.cerris</i>				5.68 <i>P</i> <0.001	50.6 <i>P</i> <0.001	20.3 <i>P</i> <0.001
<i>Q.frainetto</i>					46.3 <i>P</i> <0.001	18.2 <i>P</i> <0.001
<i>J. oxycedrus</i>						28.9 <i>P</i> <0.001

Table S8. Statistics (Wilks' Lambda and *P*-value) of the discriminant function of foliar N, P, K, Ca and Mg concentrations and N:P, N:K, P:K, N:Ca, P:Ca, K:Ca, N:Mg, P:Mg, K:Mg and Ca:Mg concentration ratios as variables and the 2375 plots dominated by the 20 most representative Mediterranean forest tree species of Europe.

Foliar variable	Partial Lambda	<i>P</i>
[N]	0.771	<0.0001
[P]	0.952	<0.0001
N:P	0.939	<0.0001
N:K	0.960	<0.0001
P:K	0.929	<0.0001
[Ca]	0.849	<0.0001
[Mg]	0.867	<0.0001
[K]	0.913	<0.0001
Ca:Mg	0.797	<0.0001
P:Ca	0.920	<0.0001
K:Ca	0.953	<0.0001
N:Mg	0.949	<0.0001
P:Mg	0.928	<0.0001
K:Mg	0.964	<0.0001
P:Ca	0.964	<0.0001