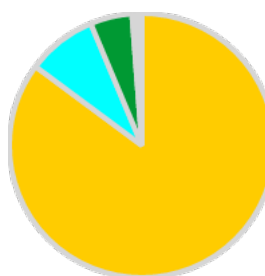


28/05/2021 Gruppo D 28mag

Site conditions

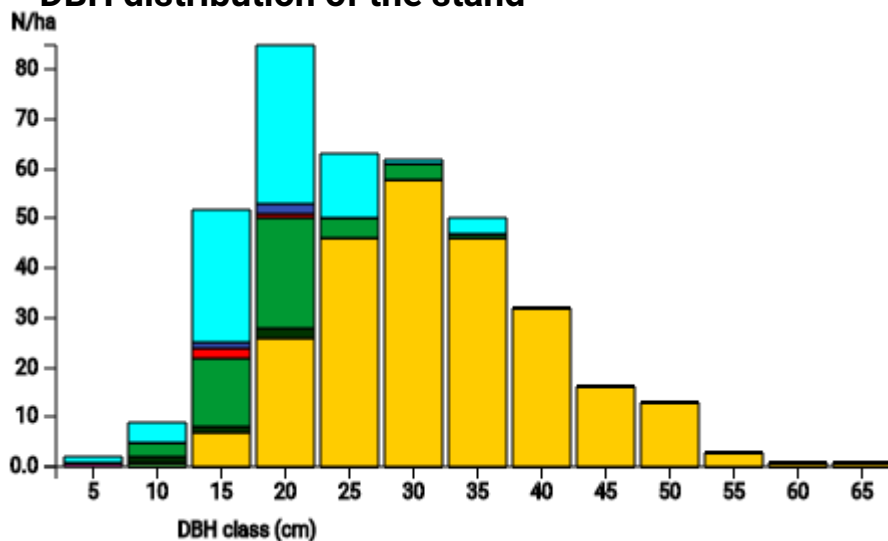
Altitude: 870 m.a.s.l.
 Geology / Bedrock: Alluvial and mixed beds
 Soil type: Cambisol – Leptosol with Luvisol of the Central Appenino Mountains.
 Natural forest community: Aceri obtusati-Quercu cerridis sigmetum
 Mean annual temperature: 12.4 C;
 Mean annual precipitation: 1154 mm; Ownership: State-owned Agency "Sala"; Establishment: 2020

Tree species distribution by volume (in %)



- Turkey oak: 85.1 %
- European hop-hornbeam: 8.5 %
- Italian maple: 5.1 %
- manna ash: 0.6 %
- field maple: 0.3 %
- hornbeam: 0.3 %
- common beech: 0 %
- downy oak: 0 %

DBH distribution of the stand



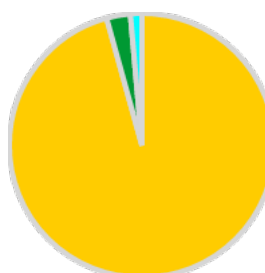
Initial stand (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	81	3	34.6	2647	1669	101
Italian maple	47	1.8	20.8	1588	917	65
Turkey oak	249	24.7	346.4	26500	7807	401
common beech	1	0	0.2	16	0	0
downy oak	1	0	0.1	10	0	0
field maple	4	0.1	1.4	104	115	6
hornbeam	3	0.1	1.3	101	24	1
manna ash	3	0.1	2.3	174	38	4
Total	389	29.9	407.1	31140	10570	578

Removed trees

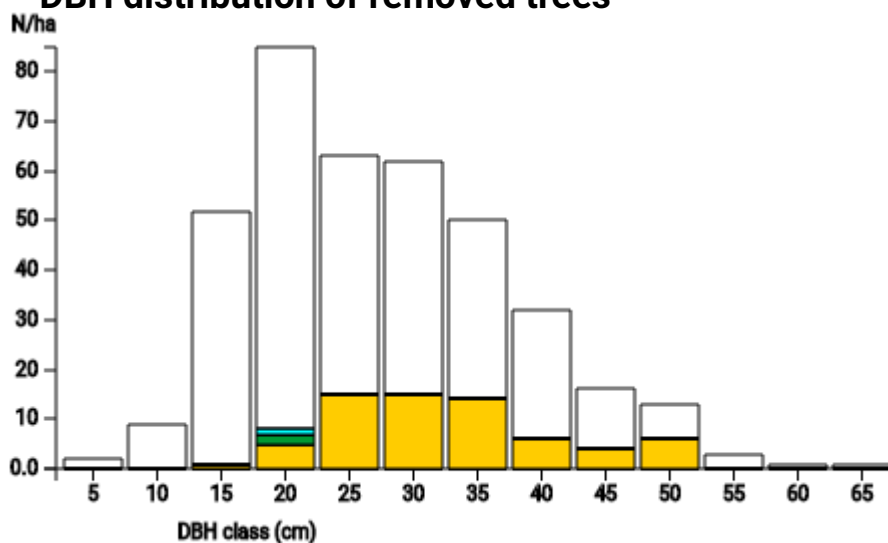
Volume: 94.9 m³
 Basal area: 6.6 m²
 Economic value: 7262 €
 Habitat value: 1945 pts.

Removed trees (N in %)



- Turkey oak: 95.7 %
- Italian maple: 2.9 %
- European hop-hornbeam: 1.4 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- manna ash: 0 %
- hornbeam: 0 %

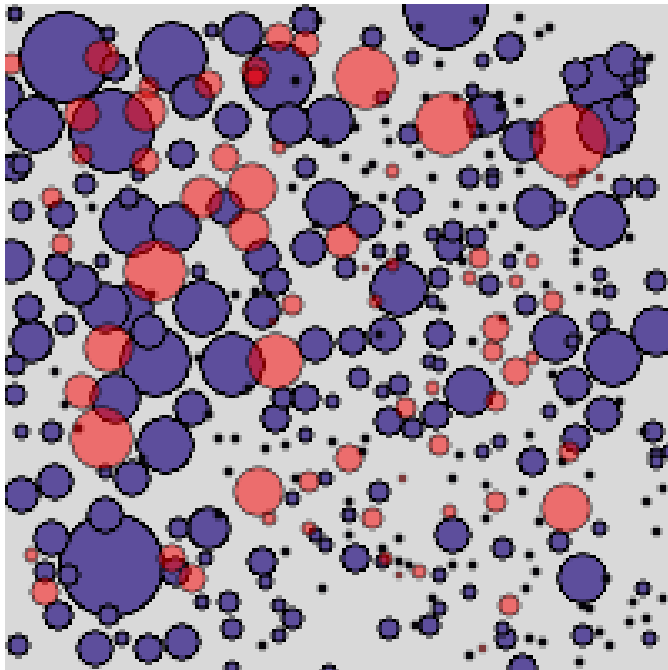
DBH distribution of removed trees



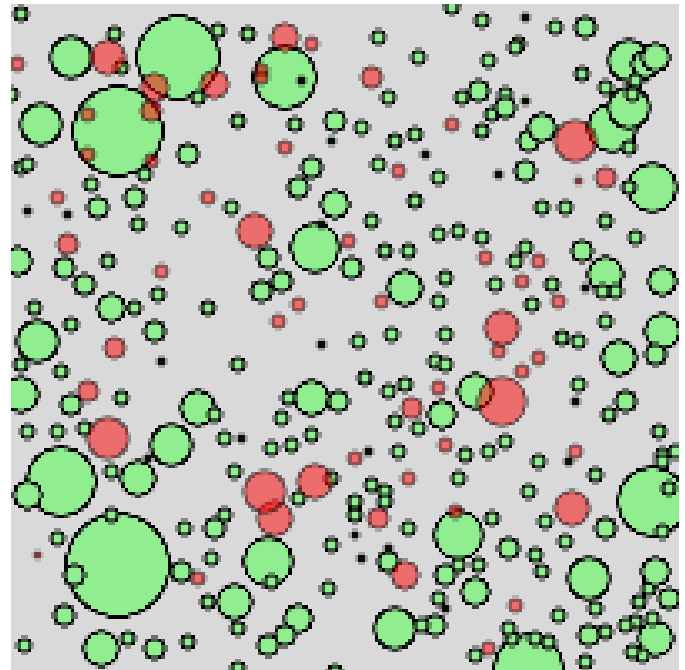
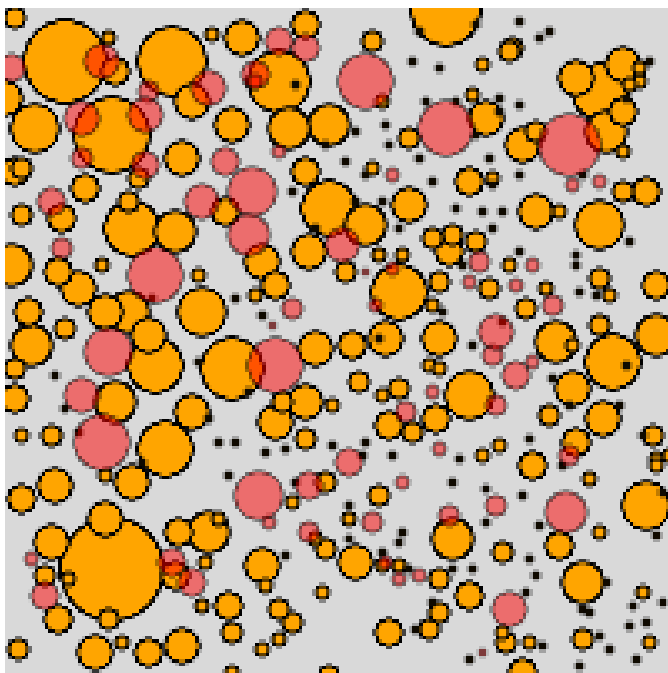
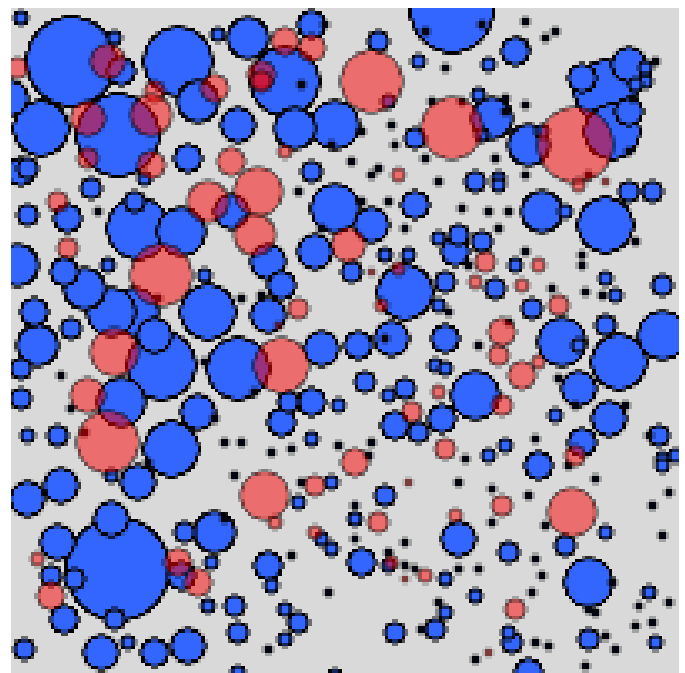
Removed trees (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	1	0	0.4	27	24	1
Italian maple	2	0.1	1.1	82	48	4
Turkey oak	66	6.5	93.5	7153	1873	90
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	0	0	0	0	0	0
hornbeam	0	0	0	0	0	0
manna ash	0	0	0	0	0	0
Total	69	6.6	94.9	7262	1945	95

Economic value [EUR]



Habitat value

Basal area [m²]Volume [m³]**Description:**

Red circles (removed trees); circle size according to numerical values (e.g. large circles mean high values); trees with very low values (e.g. habitat value "0") are not visible.

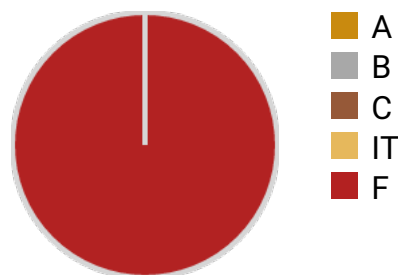
Economic values

Total value of removed trees: 7262 €
 Percentage of total stand value: 23.3 %
 Stand value after harvest: 23878 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	0	0
downy oak	0	0
Turkey oak	7153	76
field maple	0	0
Italian maple	82	77
manna ash	0	0
hornbeam	0	0
European hop-hornbeam	27	77
Total	7262	76

Wood quality distribution (m³ in %)



Quality class	m ³	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	94.9	100

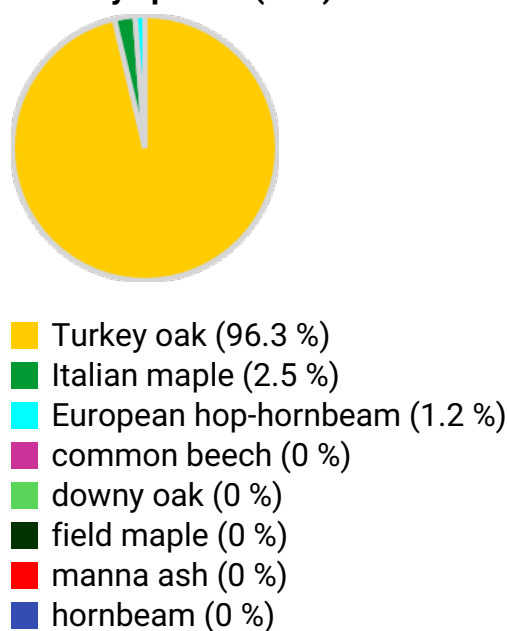
Habitat values

Total habitat value of removed trees: 1945 pts.
 Percentage of total stand value: 18.4 %
 Stand value after harvest: 8625 pts.

Habitat value by tree species [pts.]

Tree species	Total	Per m ³	Microhabitats [N]
common beech	0	0	0
downy oak	0	0	0
Turkey oak	1873	20	90
field maple	0	0	0
Italian maple	48	45	4
manna ash	0	0	0
hornbeam	0	0	0
European hop-hornbeam	24	67.2	1
Total	1945	20.5	95

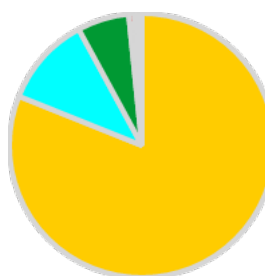
Habitat value (points) of removed trees by species (in %)



Remaining stand

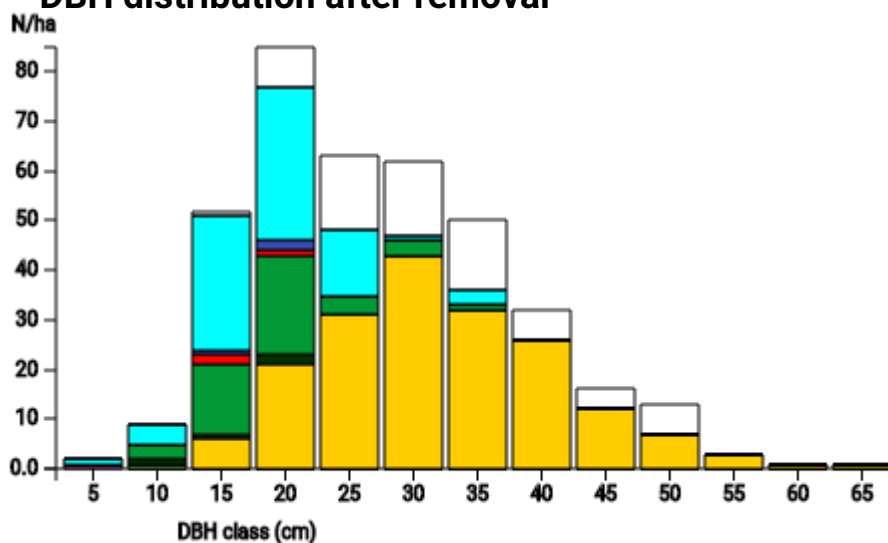
Volume: 312 m³
 Basal area: 23.2 m²
 Economic value: 23878 €
 Habitat value: 8625 pts.

Remaining trees by volume (m³ in %)



- Turkey oak: 81 %
- European hop-hornbeam: 11 %
- Italian maple: 6.3 %
- manna ash: 0.7 %
- field maple: 0.4 %
- hornbeam: 0.4 %
- common beech: 0.1 %
- downy oak: 0 %

DBH distribution after removal



Remaining stand (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	80	3	34.2	2619	1645	100
Italian maple	45	1.8	19.7	1506	869	61
Turkey oak	183	18.2	252.9	19347	5934	311
common beech	1	0	0.2	16	0	0
downy oak	1	0	0.1	10	0	0
field maple	4	0.1	1.4	104	115	6
hornbeam	3	0.1	1.3	101	24	1
manna ash	3	0.1	2.3	174	38	4
Total	320	23.2	312.1	23878	8625	483

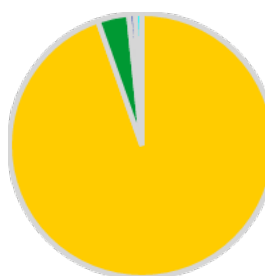
Retention treesVolume: 69.7 m³

Elite trees: 26

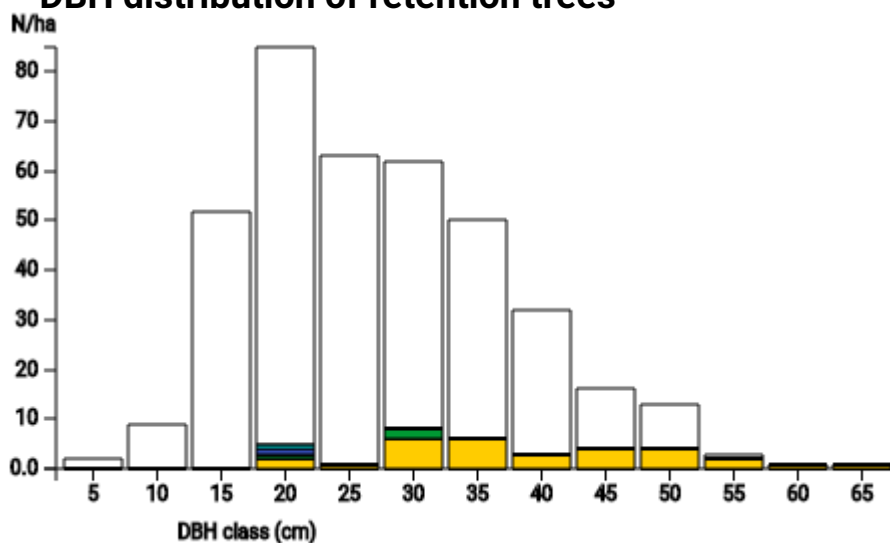
Habitat trees: 6

Economic value: 5332 €

Habitat value: 1466 pts.

Retention trees by volume (m³ in %)

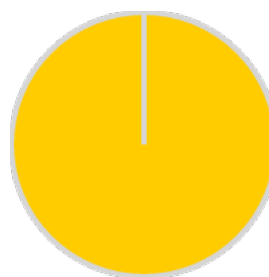
- Turkey oak: 94.7 %
- Italian maple: 3.8 %
- hornbeam: 0.8 %
- European hop-hornbeam: 0.8 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- manna ash: 0 %

DBH distribution of retention trees**Retained trees (details by tree species)**

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	1	0	0.5	41	28	2
Italian maple	3	0.2	2.6	201	95	6
Turkey oak	30	4.4	66	5049	1343	82
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	0	0	0	0	0	0
hornbeam	1	0	0.5	41	0	0
manna ash	0	0	0	0	0	0
Total	35	4.7	69.7	5332	1466	90

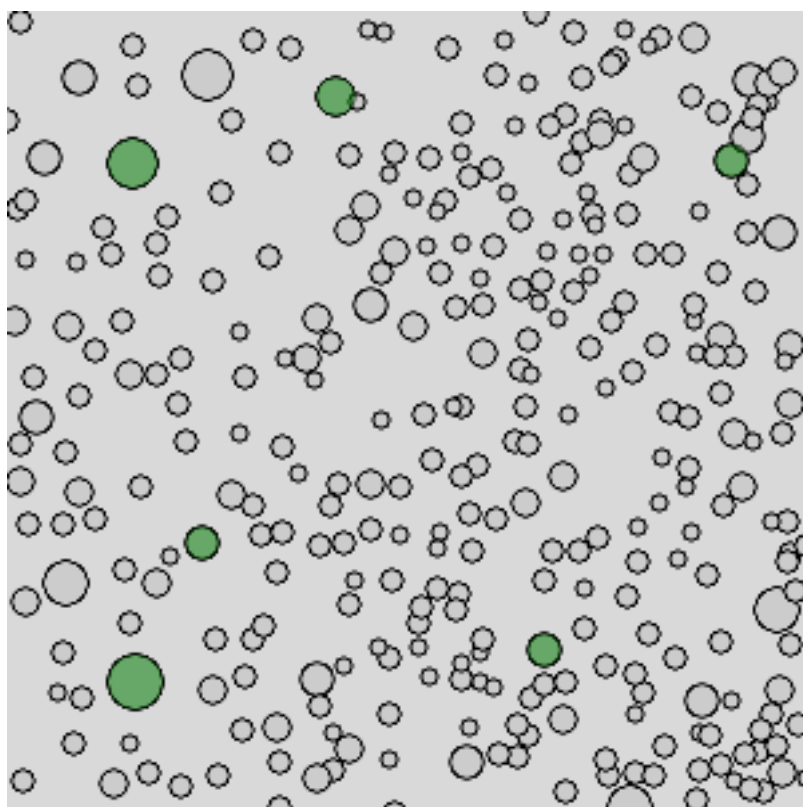
Number of habitat trees	[N]	6
Habitat value	pts.	651
	[% of total]	6.2
Economic value	[€]	1578
	[% of total]	5.1
Number of microhabitats	[N]	47
	[% of total]	8.1

Habitat tree distribution by species (N in %)

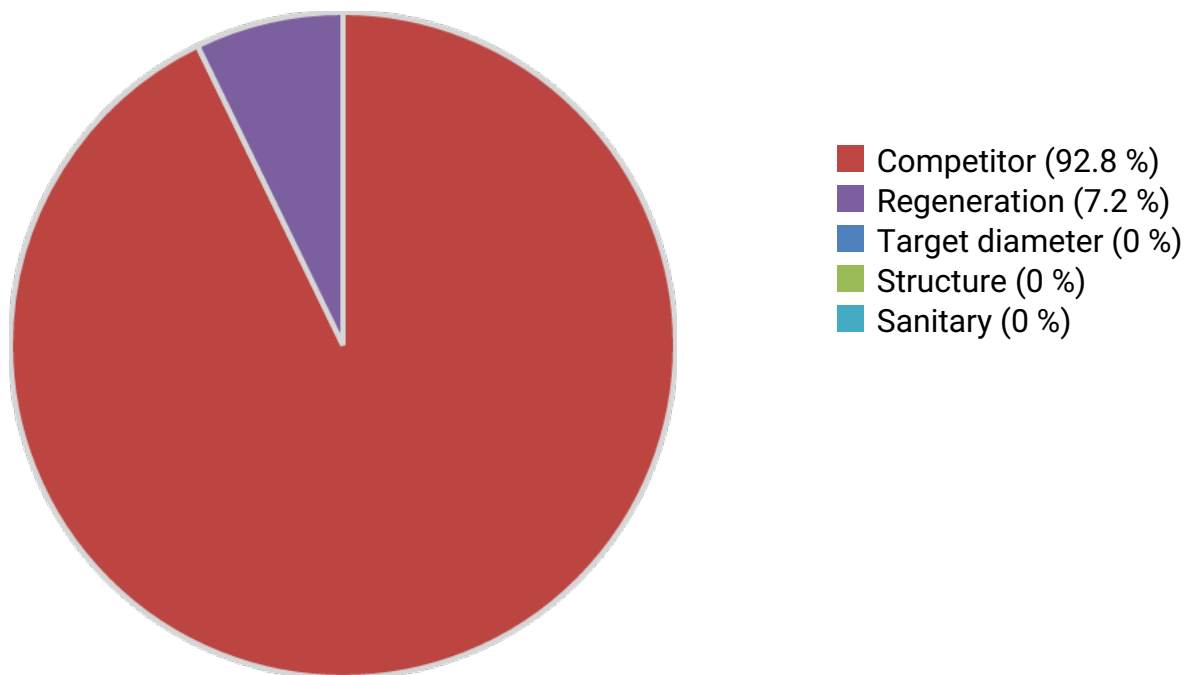


■ Turkey oak: 100 %
■ common beech: 0 %
■ downy oak: 0 %
■ field maple: 0 %
■ Italian maple: 0 %
■ manna ash: 0 %
■ hornbeam: 0 %
■ European hop-hornbeam: 0 %

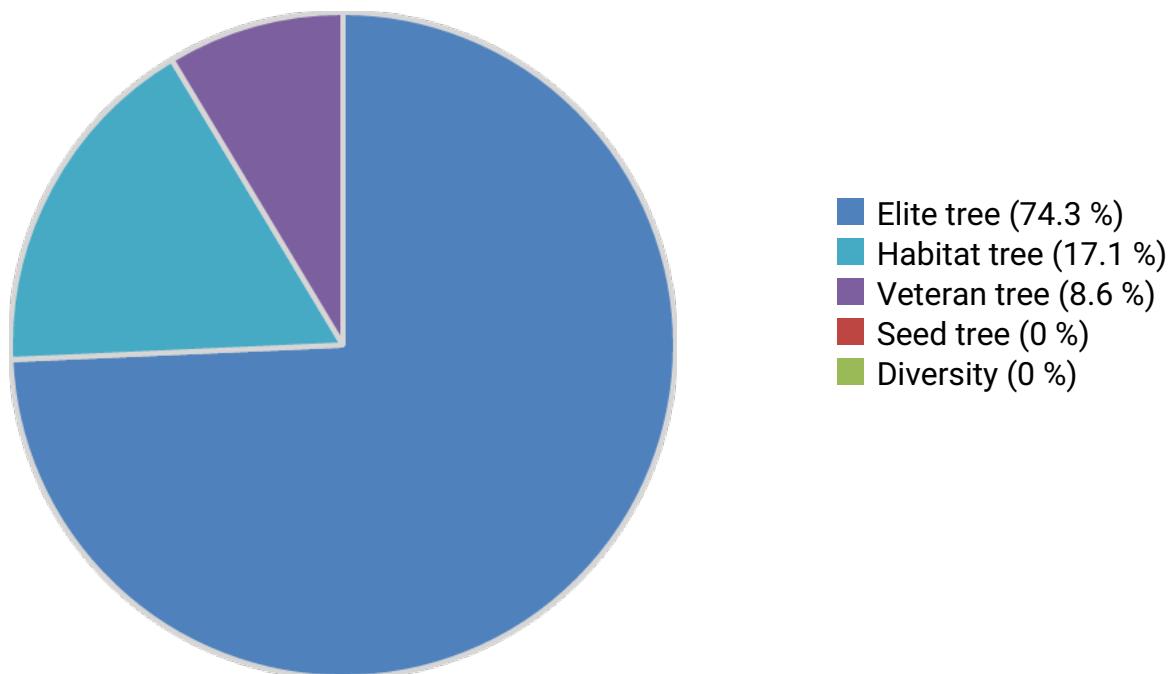
Spatial distribution of habitat trees



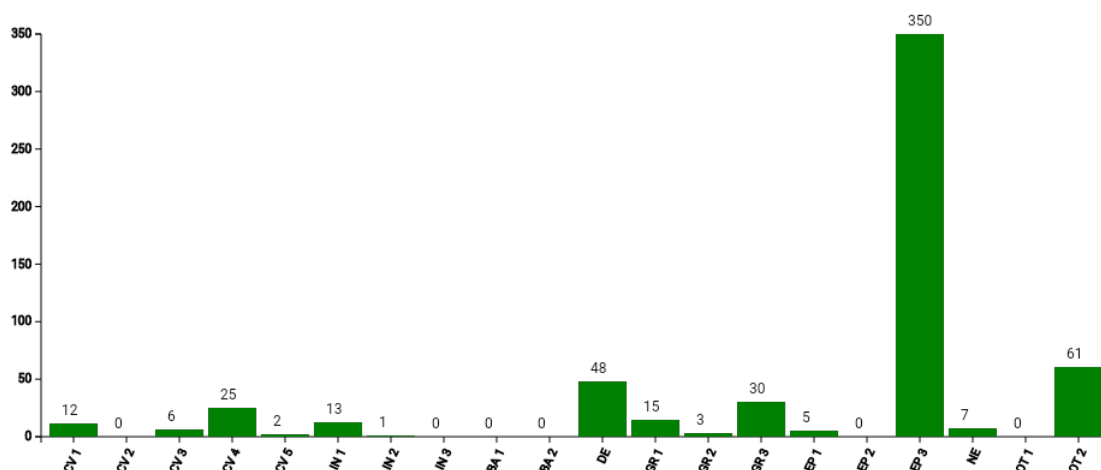
Reasons for removal



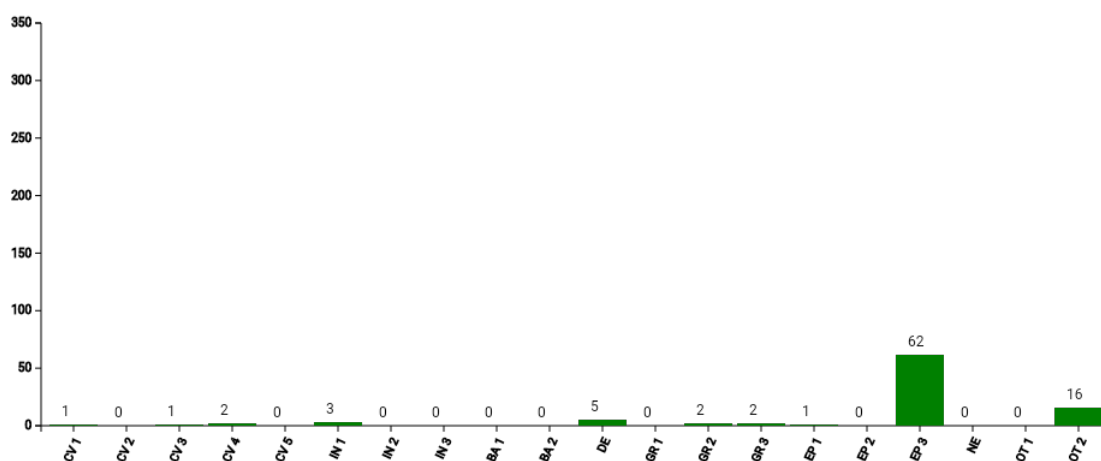
Reasons for retention



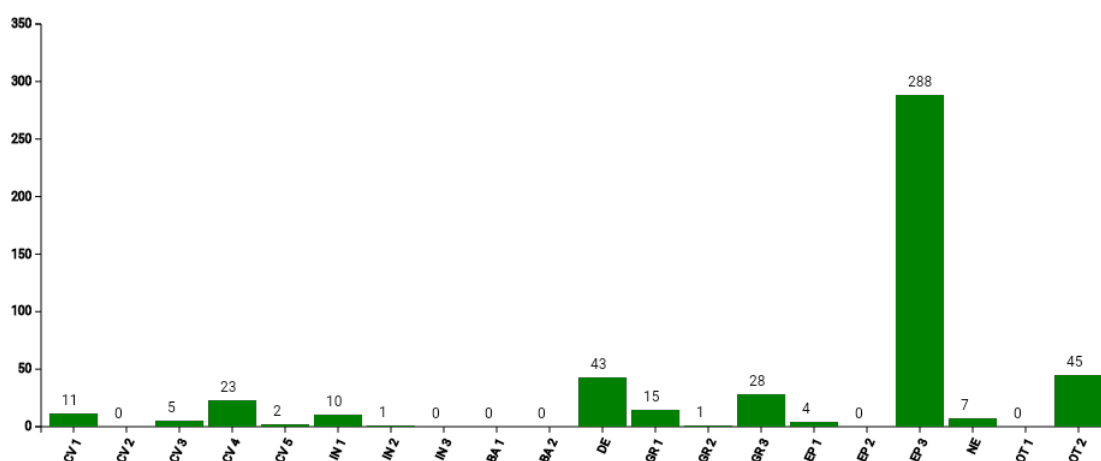
Distribution of tree microhabitats by code (N total)



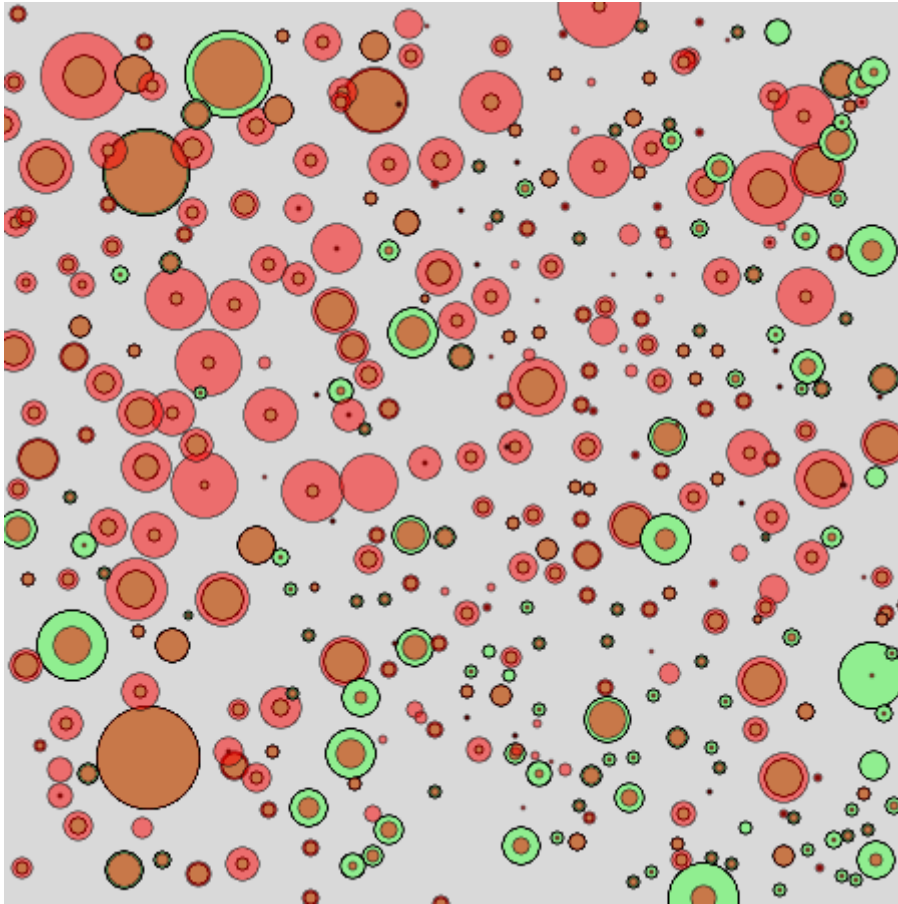
Removed tree microhabitats by code (N removed)



Remaining tree microhabitats by code (N after harvest)



For more details on codes consult the field guide "Catalogue of tree microhabitats" or the tree microhabitat app.

Conflict trees (stand data)**Description:**

Overlay of economic and habitat value: red circles (economic value), green circles (habitat value); circle size according to numerical values (e.g. large circles mean high values); trees with very low values are not visible. Trees where both values overlap considerably represent so called "conflict trees".

Removed trees

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (326) Quercus cerris	53	0.22	3.9	299	66	Competitor
Turkey oak (101) Quercus cerris	51	0.2	3.3	253	66	Competitor
Turkey oak (317) Quercus cerris	51	0.2	3.2	249	24	Competitor
Turkey oak (57) Quercus cerris	51	0.2	3.4	258	24	Competitor
Turkey oak (77) Quercus cerris	50	0.2	3	232	0	Competitor
Turkey oak (298) Quercus cerris	50	0.2	3.3	252	30	Competitor
Turkey oak (47) Quercus cerris	48.5	0.19	2.5	189	4	Competitor
Turkey oak (115) Quercus cerris	48	0.18	2.7	205	70	Competitor
Turkey oak (81) Quercus cerris	46	0.17	2.6	195	40	Competitor
Turkey oak (59) Quercus cerris	45	0.16	2.3	174	60	Competitor
Turkey oak (212) Quercus cerris	44	0.15	2.5	189	60	Competitor
Turkey oak (15) Quercus cerris	41.5	0.14	1.9	142	60	Competitor
Turkey oak (25) Quercus cerris	41.5	0.14	2.1	157	36	Competitor
Turkey oak (361) Quercus cerris	40	0.13	1.9	147	24	Competitor
Turkey oak (27) Quercus cerris	40	0.13	1.9	145	24	Competitor
Turkey oak (85) Quercus cerris	40	0.13	1.8	141	30	Competitor
Turkey oak (45) Quercus cerris	39	0.12	2	151	24	Competitor
Turkey oak (161) Quercus cerris	38	0.11	1.4	109	60	Regeneration
Turkey oak (251) Quercus cerris	38	0.11	1.2	93	24	Competitor
Turkey oak (20) Quercus cerris	38	0.11	1.6	123	50	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (130) Quercus cerris	37	0.11	1.6	119	24	Competitor
Turkey oak (33) Quercus cerris	36	0.1	1.6	122	4	Competitor
Turkey oak (221) Quercus cerris	36	0.1	1.3	103	24	Competitor
Turkey oak (31) Quercus cerris	36	0.1	1.5	115	24	Competitor
Turkey oak (132) Quercus cerris	36	0.1	1.5	111	4	Competitor
Turkey oak (8) Quercus cerris	35.5	0.1	1.3	98	24	Competitor
Turkey oak (5) Quercus cerris	35.5	0.1	1.5	118	52	Competitor
Turkey oak (11) Quercus cerris	35	0.1	1.5	116	18	Competitor
Turkey oak (39) Quercus cerris	35	0.1	1	78	18	Competitor
Turkey oak (112) Quercus cerris	34.5	0.09	1.2	95	60	Competitor
Turkey oak (136) Quercus cerris	34	0.09	1.3	103	4	Competitor
Turkey oak (17) Quercus cerris	34	0.09	1.2	90	24	Competitor
Turkey oak (182) Quercus cerris	33.5	0.09	1.2	90	81	Regeneration
Turkey oak (19) Quercus cerris	33	0.09	1.2	93	50	Competitor
Turkey oak (218) Quercus cerris	33	0.09	1.1	86	0	Competitor
Turkey oak (53) Quercus cerris	32.5	0.08	1.1	81	36	Competitor
Turkey oak (124) Quercus cerris	31.5	0.08	0.9	65	0	Competitor
Turkey oak (189) Quercus cerris	31.5	0.08	1.1	81	36	Competitor
Turkey oak (240) Quercus cerris	31.5	0.08	1	78	36	Competitor
Turkey oak (73) Quercus cerris	30	0.07	1.1	85	28	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (168) Quercus cerris	30	0.07	1	74	24	Regeneration
Turkey oak (194) Quercus cerris	30	0.07	1.1	82	24	Competitor
Turkey oak (30) Quercus cerris	30	0.07	0.9	69	24	Competitor
Turkey oak (388) Quercus cerris	30	0.07	0.9	73	24	Competitor
Turkey oak (369) Quercus cerris	29.5	0.07	1	79	24	Competitor
Turkey oak (224) Quercus cerris	29.5	0.07	0.8	63	24	Competitor
Turkey oak (206) Quercus cerris	28.5	0.06	0.9	70	24	Competitor
Turkey oak (123) Quercus cerris	28	0.06	0.7	57	60	Competitor
Turkey oak (339) Quercus cerris	28	0.06	0.8	60	24	Competitor
Turkey oak (184) Quercus cerris	28	0.06	0.8	64	24	Competitor
Turkey oak (12) Quercus cerris	27.5	0.06	1	80	24	Competitor
Turkey oak (383) Quercus cerris	27.5	0.06	0.8	60	24	Competitor
Turkey oak (371) Quercus cerris	27	0.06	0.7	56	24	Competitor
Turkey oak (254) Quercus cerris	26.5	0.06	0.6	47	0	Competitor
Turkey oak (381) Quercus cerris	26	0.05	0.7	55	0	Competitor
Turkey oak (261) Quercus cerris	26	0.05	0.6	43	0	Competitor
Turkey oak (135) Quercus cerris	26	0.05	0.7	53	14	Competitor
Turkey oak (379) Quercus cerris	25.5	0.05	0.6	45	24	Competitor
Turkey oak (34) Quercus cerris	25	0.05	0.7	53	24	Competitor
Turkey oak (219) Quercus cerris	24.5	0.05	0.5	41	24	Competitor
Turkey oak (365)	24.5	0.05	0.6	46	0	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Italian maple (331) Acer opalus	24	0.05	0.5	39	40	Competitor
Turkey oak (173) Quercus cerris	24	0.05	0.6	44	24	Regeneration
Turkey oak (260) Quercus cerris	24	0.05	0.5	41	44	Competitor
Italian maple (333) Acer opalus	23.5	0.04	0.6	42	8	Competitor
Turkey oak (280) Quercus cerris	20.5	0.03	0.3	24	24	Competitor
European hop-hornbeam (72) Ostrya carpinifolia	20	0.03	0.4	27	24	Competitor
Turkey oak (363) Quercus cerris	18.5	0.03	0.3	25	0	Competitor

Retention trees

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (133) Quercus cerris	68	0.36	5.4	409	174	Habitat tree
Turkey oak (16) Quercus cerris	60	0.28	4.6	351	72	Elite tree
Turkey oak (26) Quercus cerris	57.5	0.26	4.3	329	148	Habitat tree
Turkey oak (287) Quercus cerris	57	0.26	4.3	330	24	Elite tree
Turkey oak (10) Quercus cerris	54	0.23	3.5	269	106	Habitat tree
Turkey oak (78) Quercus cerris	52	0.21	3.1	238	24	Elite tree
Turkey oak (384) Quercus cerris	51	0.2	3	229	60	Elite tree
Turkey oak (100) Quercus cerris	50	0.2	2.9	219	69	Habitat tree
Turkey oak (52) Quercus cerris	49	0.19	3.2	244	24	Elite tree
Turkey oak (351) Quercus cerris	47	0.17	2.9	224	24	Veteran tree
Turkey oak (86) Quercus cerris	45	0.16	2.4	183	24	Elite tree
Turkey oak (327) Quercus cerris	45	0.16	2.7	208	76	Habitat tree
Turkey oak (236) Quercus cerris	43	0.15	1.9	143	78	Habitat tree
Turkey oak (128) Quercus cerris	41	0.13	1.5	115	82	Veteran tree
Turkey oak (24) Quercus cerris	40	0.13	2	153	28	Elite tree
Turkey oak (23) Quercus cerris	38	0.11	1.8	140	24	Elite tree
Turkey oak (191) Quercus cerris	37.5	0.11	1.6	123	45	Elite tree
Turkey oak (62) Quercus cerris	37.5	0.11	1.6	119	30	Elite tree
Turkey oak (131) Quercus cerris	37	0.11	1.5	116	40	Elite tree
Turkey oak (46) Quercus cerris	36.5	0.11	1.7	132	24	Elite tree
Turkey oak (5)	36	0.1	1.4	111	0	Elite tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Italian maple (36) Acer opalus	34.5	0.09	1.2	93	40	Elite tree
Turkey oak (42) Quercus cerris	34	0.09	1.3	98	12	Elite tree
Turkey oak (362) Quercus cerris	33.5	0.09	1.1	87	40	Elite tree
Turkey oak (134) Quercus cerris	33	0.09	1.2	94	0	Elite tree
Turkey oak (281) Quercus cerris	32.5	0.08	1	75	24	Elite tree
Turkey oak (223) Quercus cerris	32	0.08	1	79	24	Elite tree
Turkey oak (380) Quercus cerris	31	0.08	1.2	92	24	Elite tree
Italian maple (318) Acer opalus	30	0.07	0.9	71	27	Elite tree
Turkey oak (114) Quercus cerris	28	0.06	0.9	66	19	Elite tree
Italian maple (201) Acer opalus	24	0.05	0.5	37	28	Elite tree
European hop-hornbeam (378) Ostrya carpinifolia	24	0.05	0.5	41	28	Elite tree
Turkey oak (259) Quercus cerris	23.5	0.04	0.5	40	0	Elite tree
hornbeam (332) Carpinus betulus	23	0.04	0.5	41	0	Elite tree
Turkey oak (283) Quercus cerris	22	0.04	0.4	32	24	Veteran tree