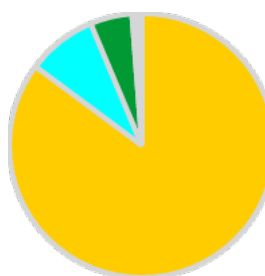


15/12/2021 Gr A lazio

Site conditions

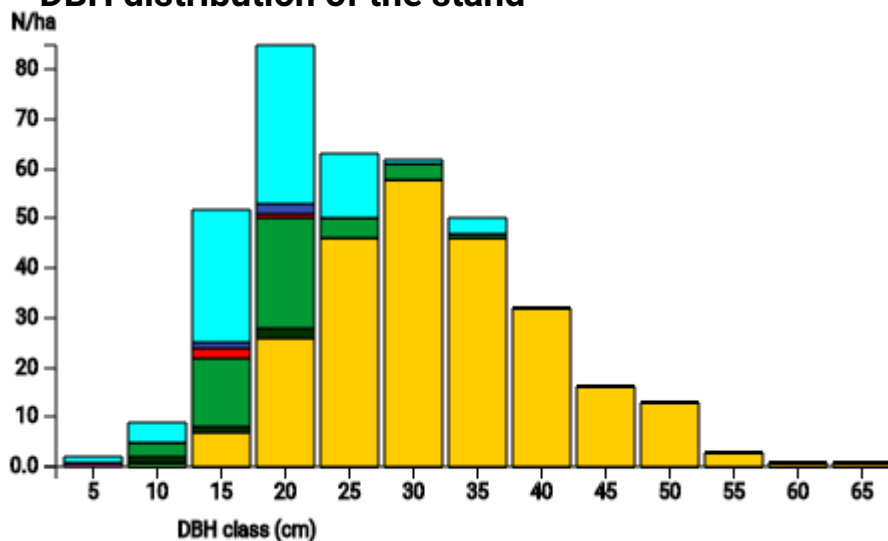
Altitude: 870 m.a.s.l.
 Geology / Bedrock: Alluvial and mixed beds
 Soil type: Cambisol – Leptosol with Luvisol of the Central Appenino Mountains.
 Natural forest community: Aceri obtusati-Quercu cerridis sigmetum
 Mean annual temperature: 12.4 C;
 Mean annual precipitation: 1154 mm; Ownership: State-owned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



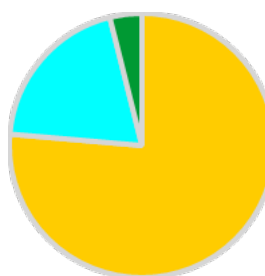
Initial stand (details by tree species)

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

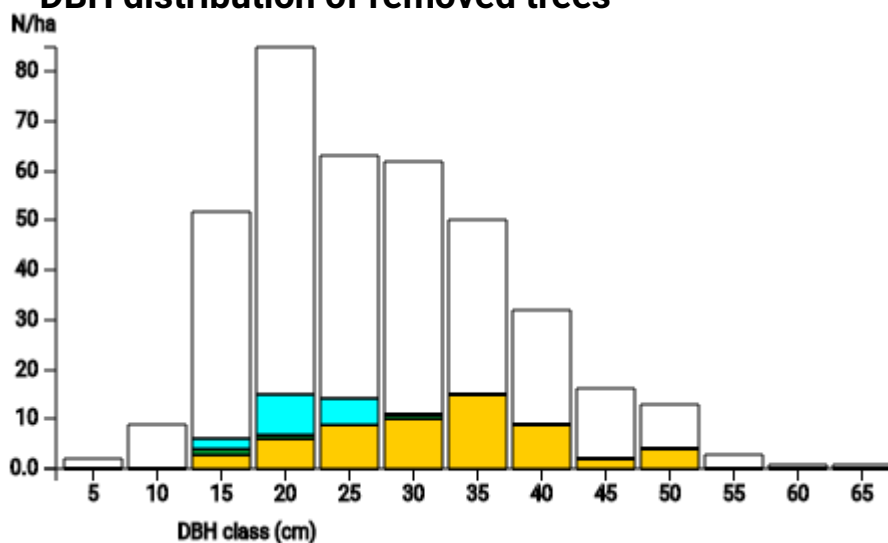
Volume: 88.1 m³
 Basal area: 6.3 m²
 Economic value: 6737 €
 Habitat value: 2135 pts.

Removed trees (N in %)



- Turkey oak: 76.3 %
- European hop-hornbeam: 19.7 %
- Italian maple: 3.9 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- manna ash: 0 %
- hornbeam: 0 %

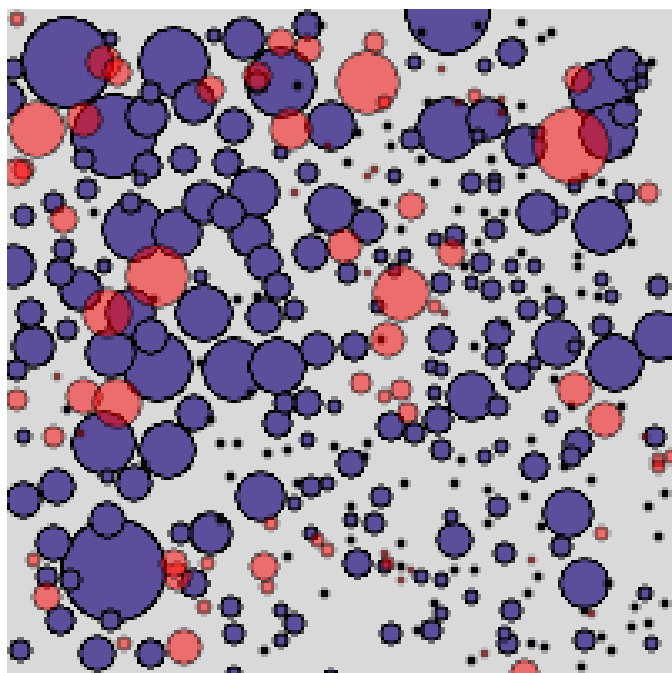
DBH distribution of removed trees



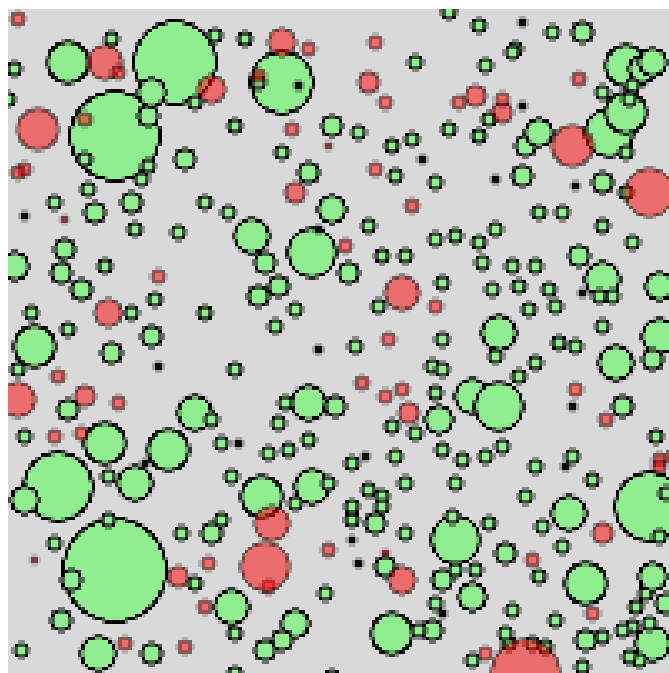
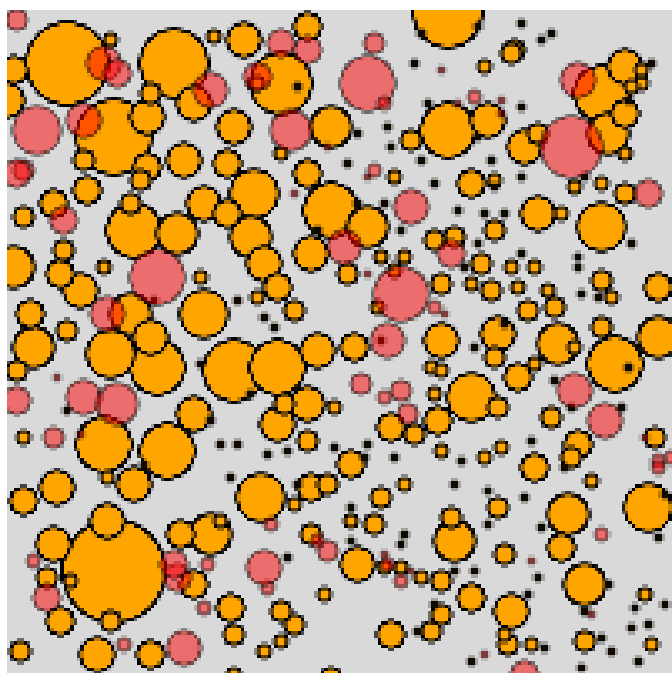
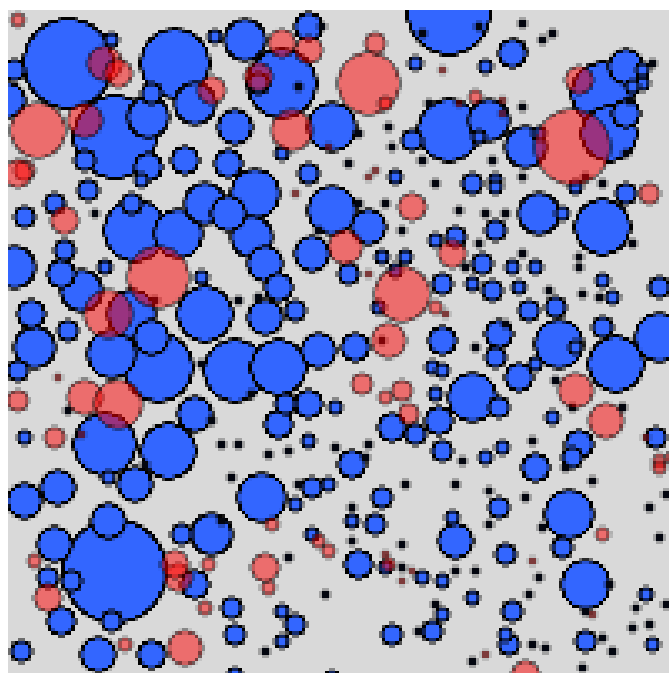
Removed trees (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	15	0.6	7.9	606	337	18
Italian maple	3	0.2	1.9	142	108	4
Turkey oak	58	5.5	78.3	5989	1690	80
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	76	6.3	88.1	6737	2135	102

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.

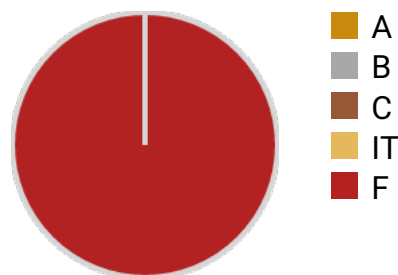
Economic values

Total value of removed trees: 6737 €
 Percentage of total stand value: 21.6 %
 Stand value after harvest: 24403 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	0	0
downy oak	0	0
Turkey oak	5989	76
field maple	0	0
Italian maple	142	77
manna ash	0	0
hornbeam	0	0
European hop-hornbeam	606	77
Total	6737	76

Wood quality distribution (m³ in %)



Quality class	m ³	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	88.1	100

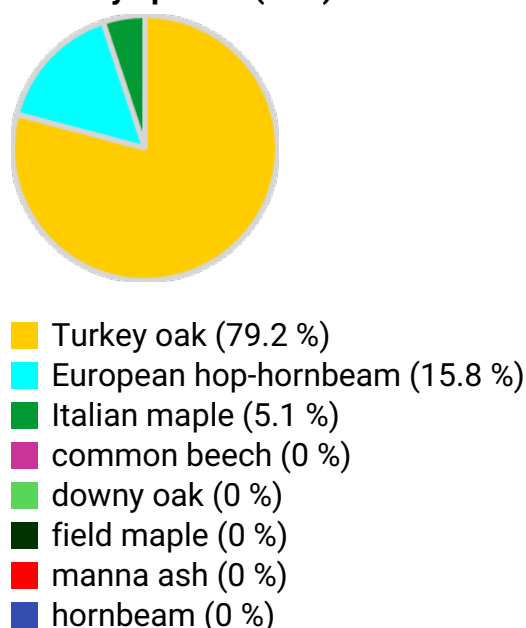
Habitat values

Total habitat value of removed trees: 2135 pts.
 Percentage of total stand value: 20.2 %
 Stand value after harvest: 8435 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	1690	21.6	80
field maple	0	0	0
Italian maple	108	58.3	4
manna ash	0	0	0
hornbeam	0	0	0
European hop-hornbeam	337	42.6	18
Total	2135	24.2	102

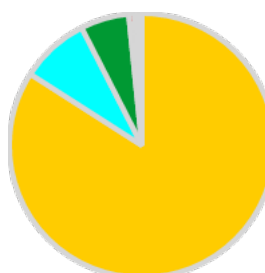
Habitat value (points) of removed trees by species (in %)



Remaining stand

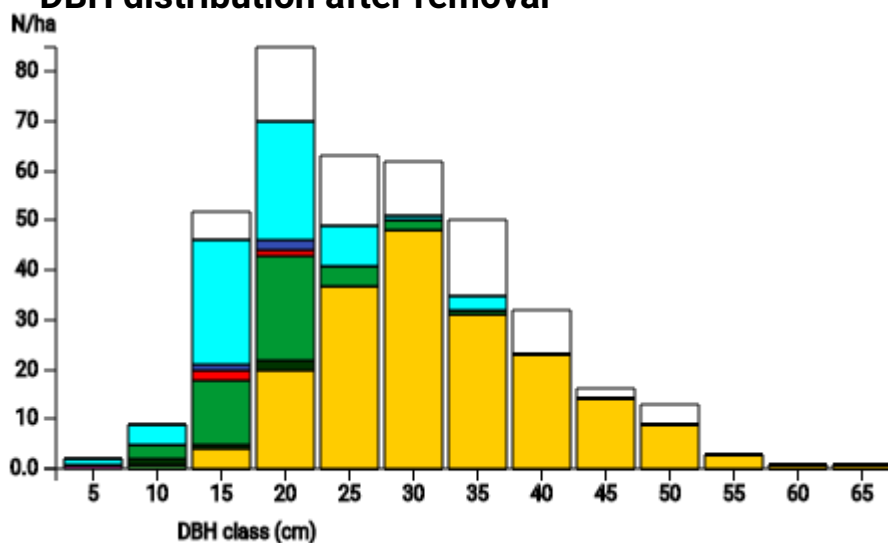
Volume: 319.2 m³
 Basal area: 23.8 m²
 Economic value: 24403 €
 Habitat value: 8435 pts.

Remaining trees by volume (m³ in %)



- Turkey oak: 84 %
- European hop-hornbeam: 8.4 %
- Italian maple: 5.9 %
- 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	66	2.4	26.7	2041	1332	83
Italian maple	44	1.7	18.9	1446	809	61
Turkey oak	191	19.2	268.1	20510	6117	321
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	313	23.6	319	24403	8435	476

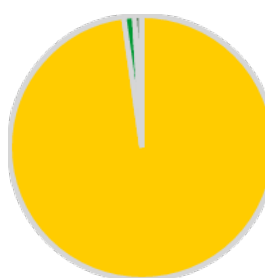
Retention treesVolume: 65.1 m³

Elite trees: 30

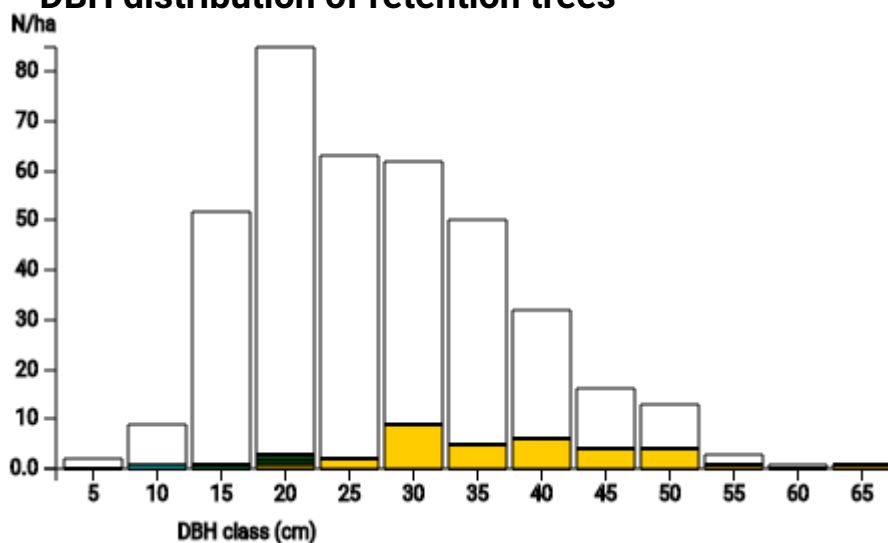
Habitat trees: 3

Economic value: 4978 €

Habitat value: 1465 pts.

Retention trees by volume (m³ in %)

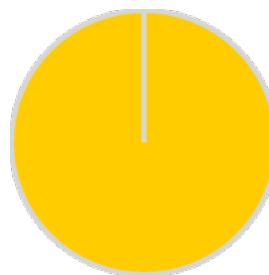
- Turkey oak: 97.7 %
- Italian maple: 1.3 %
- field maple: 0.8 %
- European hop-hornbeam: 0.1 %
- common beech: 0 %
- downy oak: 0 %
- manna ash: 0 %
- hornbeam: 0 %

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	0.1	6	0	0
Italian maple	2	0.1	0.9	66	36	2
Turkey oak	33	4.4	63.6	4864	1405	79
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	1	0	0.6	42	24	1
hornbeam	0	0	0	0	0	0
manna ash	0	0	0	0	0	0
Total	37	4.5	65.1	4978	1465	82

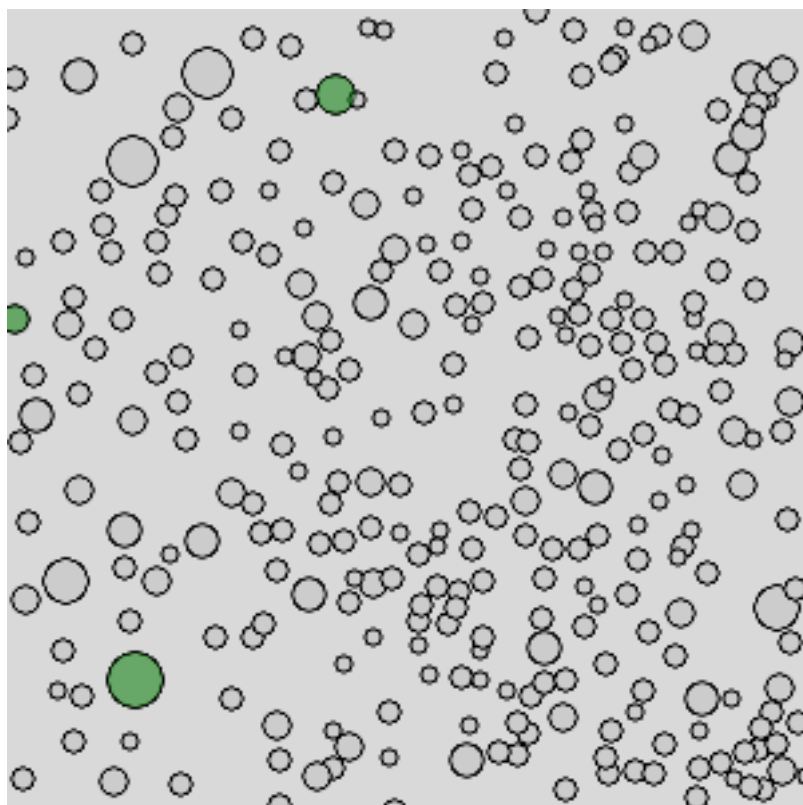
Number of habitat trees	[N]	3
Habitat value	pts.	326
	[% of total]	3.1
Economic value	[€]	838
	[% of total]	2.7
Number of microhabitats	[N]	24
	[% of total]	4.2

Habitat tree distribution by species (N in %)

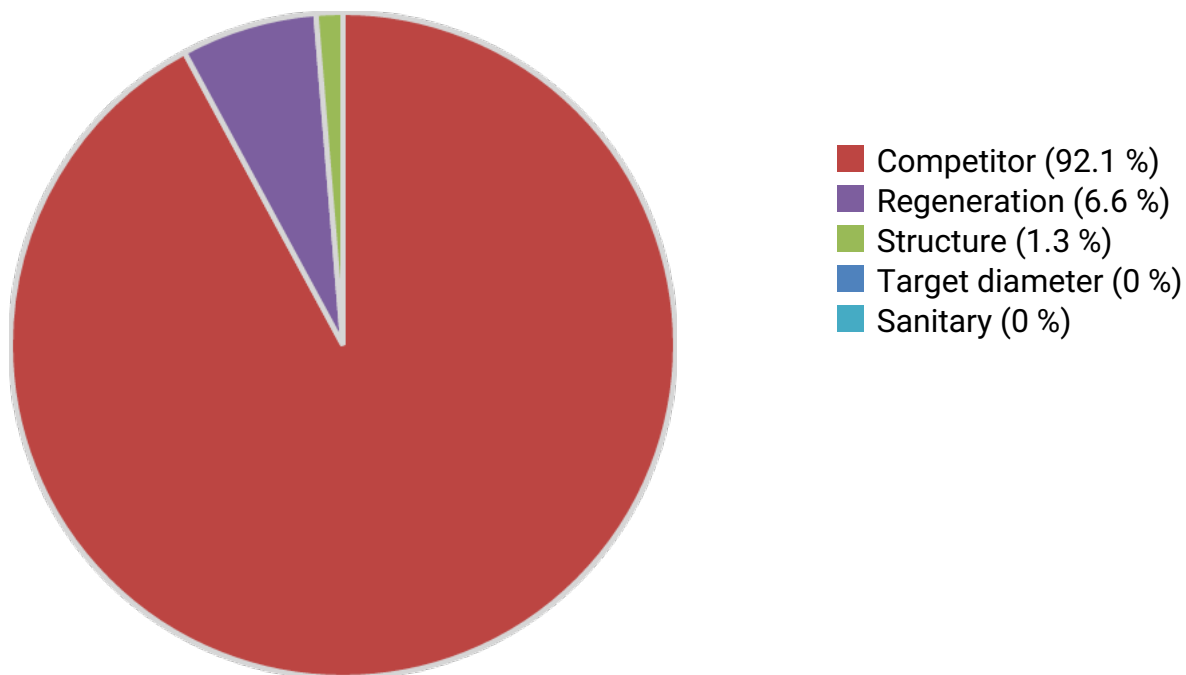


■ Turkey oak: 100 %
■ common beech: 0 %
■ downy oak: 0 %
■ field maple: 0 %
■ Italian maple: 0 %
■ manna ash: 0 %
■ hornbeam: 0 %
■ European hop-hornbeam: 0 %

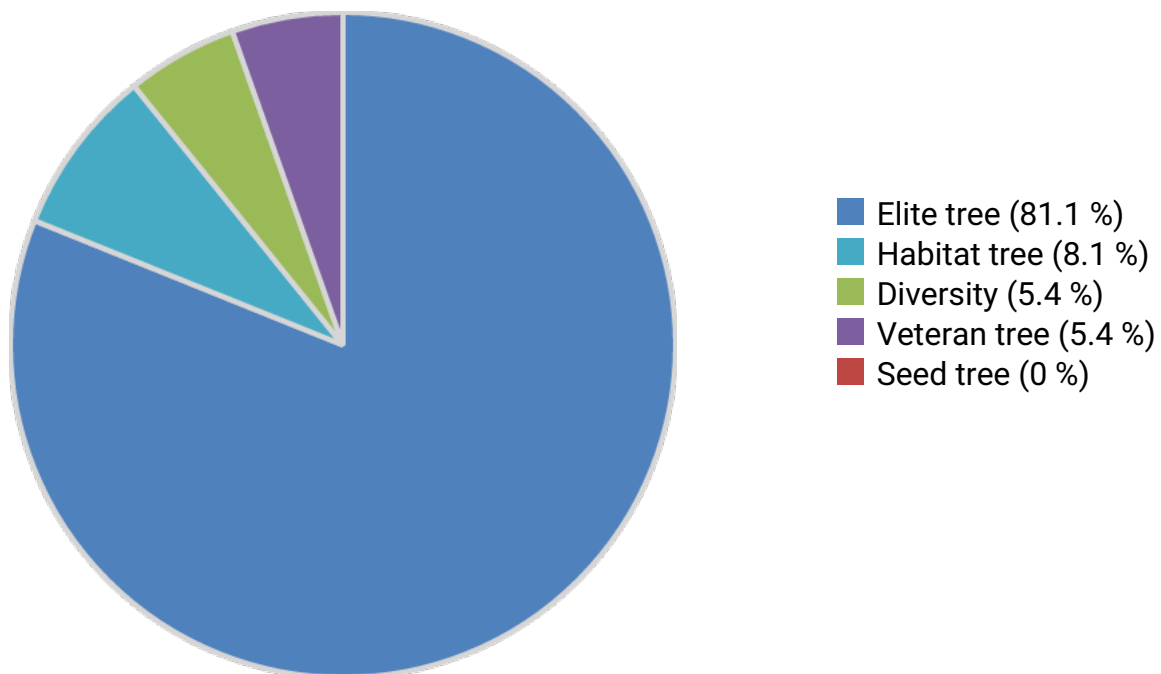
Spatial distribution of habitat trees



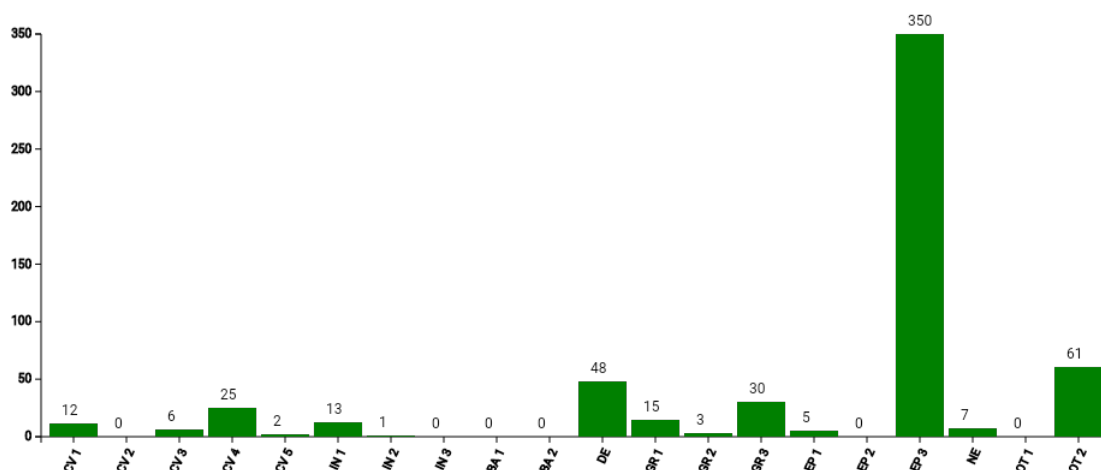
Reasons for removal



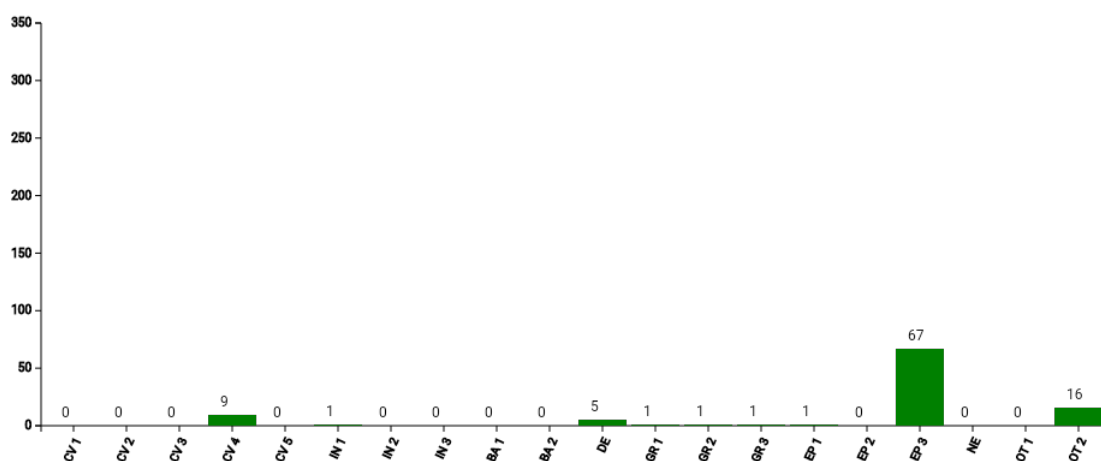
Reasons for retention



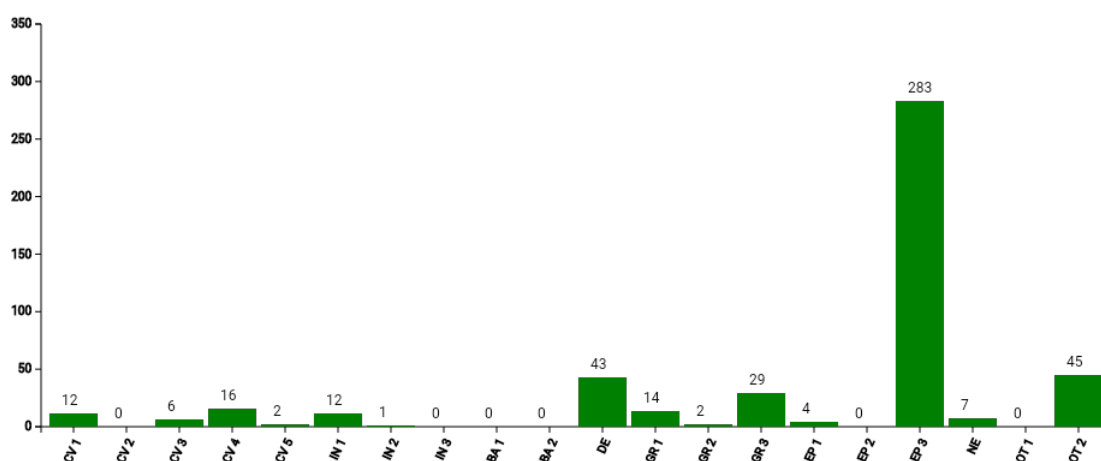
Distribution of tree microhabitats by code (N total)



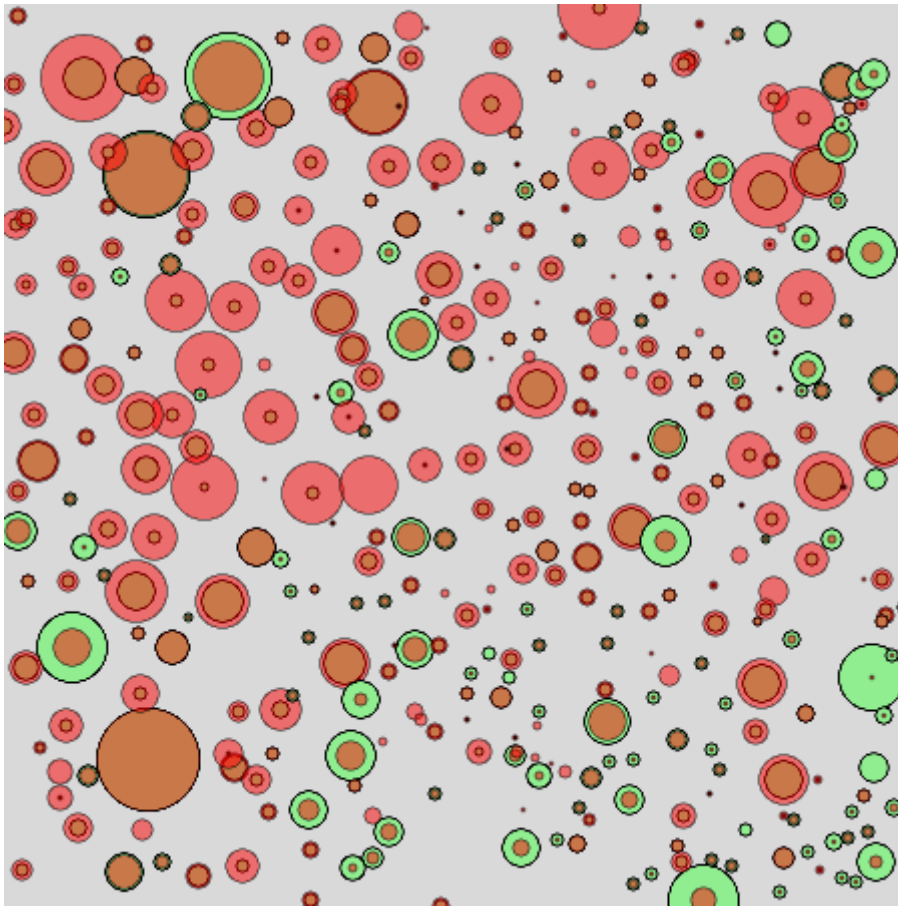
Removed tree microhabitats by code (N removed)



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 (384) Quercus cerris	51	0.2	3	229	60	Competitor
Turkey oak (57) Quercus cerris	51	0.2	3.4	258	24	Competitor
Turkey oak (298) Quercus cerris	50	0.2	3.3	252	30	Competitor
Turkey oak (28) Quercus cerris	46.5	0.17	2.7	205	66	Competitor
Turkey oak (86) Quercus cerris	45	0.16	2.4	183	24	Regeneration
Turkey oak (22) Quercus cerris	42	0.14	2.1	163	24	Competitor
Turkey oak (179) Quercus cerris	41.5	0.14	1.7	131	24	Competitor
Turkey oak (15) Quercus cerris	41.5	0.14	1.9	142	60	Competitor
Turkey oak (128) Quercus cerris	41	0.13	1.5	115	82	Competitor
Turkey oak (68) Quercus cerris	40.5	0.13	2.3	178	52	Competitor
Turkey oak (361) Quercus cerris	40	0.13	1.9	147	24	Competitor
Turkey oak (158) Quercus cerris	40	0.13	1.7	126	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	Regeneration
Turkey oak (148) Quercus cerris	39	0.12	1.8	137	24	Competitor
Turkey oak (175) Quercus cerris	38.5	0.12	1.7	127	24	Competitor
Turkey oak (345) Quercus cerris	38	0.11	1.3	101	24	Competitor
Turkey oak (305) Quercus cerris	38	0.11	1.6	123	24	Competitor
Turkey oak (20) Quercus cerris	38	0.11	1.6	123	50	Competitor
Turkey oak (131)	37	0.11	1.5	116	40	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (104) Quercus cerris	36.5	0.11	1.2	94	60	Competitor
Turkey oak (367) Quercus cerris	36	0.1	1.5	113	0	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 (14) Quercus cerris	35.5	0.1	1.6	122	24	Competitor
Turkey oak (282) Quercus cerris	35.5	0.1	1.3	99	116	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 (40) Quercus cerris	35	0.1	1.5	114	24	Competitor
Turkey oak (136) Quercus cerris	34	0.09	1.3	103	4	Competitor
Italian maple (329) Acer opalus	34	0.09	1.1	85	84	Competitor
Turkey oak (42) Quercus cerris	34	0.09	1.3	98	12	Competitor
Turkey oak (187) Quercus cerris	32.5	0.08	1	80	24	Competitor
Turkey oak (106) Quercus cerris	32	0.08	1.1	81	24	Regeneration
Turkey oak (29) Quercus cerris	32	0.08	1	79	24	Competitor
Turkey oak (189) Quercus cerris	31.5	0.08	1.1	81	36	Competitor
Turkey oak (1) Quercus cerris	31	0.08	0.8	60	24	Regeneration
Turkey oak (285) Quercus cerris	31	0.08	1.2	89	24	Competitor
Turkey oak (185) Quercus cerris	31	0.08	1	75	24	Competitor
Turkey oak (126) Quercus cerris	30.5	0.07	0.8	60	24	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (123) Quercus cerris	28	0.06	0.7	57	60	Competitor
European hop-hornbeam (216) Ostrya carpinifolia	28	0.06	0.8	61	30	Competitor
Turkey oak (385) Quercus cerris	28	0.06	0.8	62	24	Competitor
European hop-hornbeam (302) Ostrya carpinifolia	27.5	0.06	0.8	59	30	Competitor
Turkey oak (143) Quercus cerris	27	0.06	0.6	48	24	Competitor
Turkey oak (141) Quercus cerris	27	0.06	0.8	59	24	Competitor
Turkey oak (129) Quercus cerris	27	0.06	0.7	52	24	Competitor
Turkey oak (254) Quercus cerris	26.5	0.06	0.6	47	0	Competitor
European hop-hornbeam (199) Ostrya carpinifolia	26.5	0.06	0.8	61	24	Competitor
Turkey oak (135) Quercus cerris	26	0.05	0.7	53	14	Competitor
Turkey oak (125) Quercus cerris	26	0.05	0.7	53	0	Competitor
Turkey oak (186) Quercus cerris	25	0.05	0.6	46	24	Competitor
European hop-hornbeam (299) Ostrya carpinifolia	25	0.05	0.7	51	24	Competitor
European hop-hornbeam (198) Ostrya carpinifolia	25	0.05	0.7	51	24	Competitor
Turkey oak (139) Quercus cerris	24	0.05	0.6	46	28	Competitor
Turkey oak (260) Quercus cerris	24	0.05	0.5	41	44	Competitor
European hop-hornbeam (200) Ostrya carpinifolia	24	0.05	0.7	51	24	Competitor
European hop-hornbeam (340) Ostrya carpinifolia	23.5	0.04	0.5	38	24	Competitor
Turkey oak (84) Quercus cerris	23	0.04	0.5	36	24	Competitor
Turkey oak (102) Quercus cerris	23	0.04	0.5	38	24	Regeneration
European hop-hornbeam (48)	22	0.04	0.5	35	38	Structure

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Ostrya carpinifolia						
European hop-hornbeam (246) Ostrya carpinifolia	21.5	0.04	0.5	35	24	Competitor
European hop-hornbeam (35) Ostrya carpinifolia	21.5	0.04	0.5	41	6	Competitor
Turkey oak (386) Quercus cerris	21	0.04	0.4	29	4	Competitor
Italian maple (303) Acer opalus	21	0.04	0.4	31	24	Competitor
European hop-hornbeam (301) Ostrya carpinifolia	20.5	0.03	0.4	28	24	Competitor
European hop-hornbeam (314) Ostrya carpinifolia	20.5	0.03	0.3	26	38	Competitor
Turkey oak (280) Quercus cerris	20.5	0.03	0.3	24	24	Competitor
European hop-hornbeam (341) Ostrya carpinifolia	20	0.03	0.3	27	3	Competitor
Turkey oak (255) Quercus cerris	19.5	0.03	0.3	20	6	Competitor
Italian maple (296) Acer opalus	19	0.03	0.3	26	0	Competitor
European hop-hornbeam (234) Ostrya carpinifolia	19	0.03	0.3	23	24	Competitor
Turkey oak (363) Quercus cerris	18.5	0.03	0.3	25	0	Competitor
Turkey oak (253) Quercus cerris	18	0.03	0.2	17	0	Competitor
European hop-hornbeam (196) Ostrya carpinifolia	17	0.02	0.3	20	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 (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 (101) Quercus cerris	51	0.2	3.3	253	66	Diversity
Turkey oak (306) Quercus cerris	50	0.2	3.2	246	24	Elite tree
Turkey oak (100) Quercus cerris	50	0.2	2.9	219	69	Elite tree
Turkey oak (115) Quercus cerris	48	0.18	2.7	205	70	Elite tree
Turkey oak (213) [REPLACE_DEAD]Quercus cerris	47.5	0.18	0.3	22	114	Veteran tree
Turkey oak (183) Quercus cerris	46	0.17	2.3	179	60	Veteran tree
Turkey oak (232) Quercus cerris	45	0.16	2.5	192	64	Elite tree
Turkey oak (54) Quercus cerris	44	0.15	2.1	160	46	Habitat tree
Turkey oak (21) Quercus cerris	43	0.15	2.3	179	30	Elite tree
Turkey oak (69) Quercus cerris	43	0.15	2.4	184	24	Elite tree
Turkey oak (315) Quercus cerris	41	0.13	2	152	24	Elite tree
Turkey oak (117) Quercus cerris	41	0.13	1.9	147	121	Elite tree
Turkey oak (324) Quercus cerris	40	0.13	2	151	36	Elite tree
Turkey oak (4) Quercus cerris	38.5	0.12	2	155	24	Elite tree
Turkey oak (191) Quercus cerris	37.5	0.11	1.6	123	45	Elite tree
Turkey oak (130) Quercus cerris	37	0.11	1.6	119	24	Elite tree
Turkey oak (33) Quercus cerris	36	0.1	1.6	122	4	Elite tree
Turkey oak (169) Quercus cerris	35	0.1	1.6	122	24	Elite tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (149) Quercus cerris	34	0.09	1.4	106	36	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 (53) Quercus cerris	32.5	0.08	1.1	81	36	Elite tree
Turkey oak (83) Quercus cerris	32	0.08	1.1	87	24	Elite tree
Turkey oak (197) Quercus cerris	32	0.08	1.2	90	24	Elite tree
Turkey oak (124) Quercus cerris	31.5	0.08	0.9	65	0	Elite tree
Turkey oak (382) Quercus cerris	30	0.07	0.9	70	24	Elite tree
Turkey oak (145) Quercus cerris	30	0.07	0.9	66	0	Elite tree
Turkey oak (339) Quercus cerris	28	0.06	0.8	60	24	Elite tree
Turkey oak (12) Quercus cerris	27.5	0.06	1	80	24	Diversity
Turkey oak (259) Quercus cerris	23.5	0.04	0.5	40	0	Elite tree
Italian maple (316) Acer opalus	23	0.04	0.6	45	24	Elite tree
field maple (297) Acer campestre	22.5	0.04	0.6	42	24	Elite tree
Italian maple (180) Acer opalus	18.5	0.03	0.3	22	12	Elite tree
European hop-hornbeam (155) Ostrya carpinifolia	11.5	0.01	0.1	6	0	Elite tree