

Supplementary material of 'New annotated checklist of the Portuguese oaks (*Quercus*,  
Fagaceae)', by Carlos Vila-Viçosa et al. *Mediterr. Bot.* 44, e79286.

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Appendix S1. Taxonomic scheme  
(\* cultivated):

**Quercus** Linnaeus (1753: 994)

**I. *Quercus* subgen. *Cerris* Oersted** (1866: 74)

**i. Section *Cerris* Dumortier** (1829: 15)

1. \**Quercus acutissima* Carruthers (1862: 33)
2. \**Quercus afares* Pomel (1875: 391)
3. \**Quercus castaneifolia* C.A. Meyer (1831: 44)
4. \**Quercus cerris* Linnaeus (1753: 997)
5. \**Quercus* ×*crenata* Lamarck (1785: 724)
6. \**Quercus ithaburensis* Decaisne (1835: 348)
7. \**Quercus* ×*libanerris* Boom (1959: 157)
8. \**Quercus macrolepis* Kotschy (1860: 16)
9. *Quercus suber* Linnaeus (1753: 995)
10. \**Quercus variabilis* Blume (1851: 297)
11. \**Quercus libani* G.Olivier (1801: 290)

**ii. Section *Cyclobalanopsis* (Oerst.) Bentham & Hooker** (1880: 408)

12. \**Quercus glauca* Thunberg (1784: 858)
13. \**Quercus lamellosa* Sm. (1814: 29)
14. \**Quercus lineata* Blume (1826: 523)
15. \**Quercus morii* Hayata (1911: 293)
16. \**Quercus myrsinifolia* Blume (1851: 305)
17. \**Quercus schottkyana* Rehder & E.H.Wilson (1916: 237) Sargent (1916)
18. \**Quercus sessilifolia* Blume (1851: 305)
19. \**Quercus stenophylloides* Hayata (1914: 21)

**iii. Section *Ilex* Loudon** (1838: 1899)

20. \**Quercus floribunda* Lindl. ex A.Camus (1935: 131)
21. \**Quercus franchetii* Skan (1899: 513)
22. \**Quercus lanata* Sm. (1814: 29)
23. \**Quercus leucotrichophora* A.Camus (1935: 66)
24. \**Quercus phillyreoides* A. Gray (1859: 406)

**iii.i Subsection *Ilex* Oerst** (1866: 69)

25. \**Quercus ilex* Linnaeus (1753: 995)
26. *Quercus rotundifolia* Lam. (1785: 723)

**iii.ii Subsection *Cocciferae* (Spach) Gürke** (1897: 70)

27. \**Quercus alnifolia* Poech (1842: 12)
28. \**Quercus aucherii* Jaub. & Spach (1843: 113)
29. *Quercus airensis* Franco & Vasconcellos (1954: 119) prop. hybr.
30. \**Quercus calliprinos* Webb (1838: 15)

31. *Quercus coccifera* L. (1753: 995)
32. *Quercus pseudococcifera* Desfontaines (1798: 349)
33. *Quercus pseudococcifera* subsp. *rivasmartinezii* (Capelo & J.C. Costa) Capelo & al. *comb. nov.*

**II. *Quercus* subgen. *Quercus* Hicke I & Camus (1921: 379)**

**iv. Section *Lobatae* Loudon (1830: 385)**

34. \**Quercus alapensis* Bonplant (1809: 24) Humboldt & Bonplant (1809)
35. \**Quercus* × *benderi* Baenitz (1903: 85) Kneucker (1904)
36. \**Quercus benthamii* A. De Candolle (1864: 29)
37. \**Quercus brenesii* Trelease (1924: 186)
38. \**Quercus calophylla* Schltdl. & Cham. (1830:79)
39. \**Quercus canbyi* Trel. (1924: 188)
40. \**Quercus cupreata* Trel. (1936: 152)
41. \**Quercus emoryi* Torr. (1848: 152)
42. \**Quercus* × *exacta* Trel. (1917: 49)
43. \**Quercus frutex* Trelease (1924: 82)
44. \**Quercus georgiana* M.A.Curtis (1849: 408)
45. \**Quercus gravesii* Sudw. (1927: 86)
46. \**Quercus humboldtii* Bonplant (1809: 155)
47. \**Quercus imbricaria* Michaux (1801: 16)
48. \**Quercus laurifolia* Michaux (1801: 17)
49. \**Quercus laurina* Bonplant (1809: 32)
50. \**Quercus* × *leana* Nuttall (Michaux & Nuttall 1842: 13)
51. \**Quercus mexicana* Bonplant (1809: 35)
52. \**Quercus palustris* Münchhausen (1770: 253)
53. \**Quercus phellos* Linnaeus (1753: 994)
54. \**Quercus pinnativenulosa* C.H.Muller (1936: 171)
55. \**Quercus* × *rehderi* Trel. (1917: 51)
56. \**Quercus* × *richteri* Baenitz. (1903: 85) Kneucker (1904)
57. \**Quercus* × *robusta* C.H.Mull. (1934: 119)
58. \**Quercus texana* Buckley (1860: 444)

**iv.i) Subsection *Agrifoliae* (Trel.) A. Camus (1952 : 46)**

59. \**Quercus agrifolia* Née (1801: 271)
60. \**Quercus agrifolia* (Torr.) J.T.Howell var. *oxyadenia* (1931: 38)
61. \**Quercus kelloggii* Newb. (1857: 89)
62. \**Quercus wislizeni* A. DC. (1864: 67)

**iv.ii) Subsection *Coccineae* (Trel.) A. Camus (1952 : 286)**

63. \**Quercus acerifolia* (E.J.Palmer) Stoyhoff & Hess (1990: 268)
64. \**Quercus buckleyi* Dorr & Nixon #1985: 225(-226)\$
65. \**Quercus coccinea* Münchhausen (1770: 254)
66. \**Quercus ellipsoidalis* E.J.Hill (1899: 204)
67. \**Quercus rubra* Linnaeus (1753: 996)
68. \**Quercus shumardii* Buckley (1861: 444)
69. \**Quercus velutina* Lamarck (1785: 721)

**iv. iii) Subsection *Palustres* (Trel.) A. Camus (1952 : 360)**

70. \**Quercus palustris* Münch. (1770: 253)

71. \**Quercus texana* Buckley (1860: 444)

**iv. iv) Subsection *Phellos* (G. Don) A. Camus (1952 : 293)**

- 72. \**Quercus falcata* Michx. (1801: 28)
- 73. \**Quercus georgiana* M.A.Curtis (1849: 408)
- 74. \**Quercus hemisphaerica* Hort. ex Endl. (1848: 25)
- 75. \**Quercus ilicifolia* Salisb. (1796: 392)
- 76. \**Quercus imbricaria* Michx. (1801: 16)
- 77. \**Quercus laevis* Walter (1788: 234)
- 78. \**Quercus laurifolia* Michx. (1801: 17)
- 79. \**Quercus* ×*ludoviciana* Sarg. (1913: 223)
- 80. \**Quercus nigra* ×*georgiana*
- 81. \**Quercus nigra* L. (1753: 995-996)
- 82. \**Quercus phellos* L. (1753: 994)

**v. Section *Ponticae***

83. \**Quercus pontica* K.Koch (1849: 319)

**vi. Section *Protobalanus***

- 84. \**Quercus chrysolepis* Liebm. (1854: 173)
- 85. \**Quercus tomentella* Engelm. (1877: 393)

**vii. Section *Quercus* Nixon & Muller (1997); Denk et. al. (2017: 13) (≡Section *Robur* Loudon (1838: 1731))**

- 86. \**Quercus arizonica* Sarg. (1895: 92)
- 87. \**Quercus* ×*bebbiana* C.K.Schneid. (1904: 201)
- 88. \**Quercus copeyensis* C.H. Muller (1942: 30)
- 89. \**Quercus engelmannii* Greene (1889: 33)
- 90. \**Quercus* ×*fernowii* Trel. (1917: 49)
- 91. \**Quercus germana* Schlechtendal. & Chamisso (1830: 78) Schlechtendal (1830)
- 92. \**Quercus* ×*haynaldiana* Simonk. (1883: 63)
- 93. \**Quercus* ×*hillii* Trel. (1917: 49)
- 94. \**Quercus insignis* M.Martens & Galeotti (1843: 219)
- 95. \**Quercus invaginata* Trel. (1924: 138)
- 96. \**Quercus* ×*jackiana* C.K.Schneid. (1904: 202)
- 97. \**Quercus mongolica* Fisch. ex Turcz. (1838: 101)
- 98. \**Quercus obtusata* Bonpl. (1809: 76)
- 99. \**Quercus porphyrogenita* Trel. (1924: 51)
- 100. \**Quercus rugosa* Née (1801: 275)
- 101. \**Quercus* ×*saulii* C.K.Schneid. (1904: 203)
- 102. \**Quercus serrata* Murray (1784: 858)
- 103. \**Quercus stellata* × *Quercus muehlenbergii*
- 104. \**Quercus* ×*substellata* Trel. (1924: 105)
- 105. \**Quercus turbinella* Greene (1889: 37)
- 106. \**Quercus* ×*vilmoriniana* A.Camus (1935: 62)

**vii.i) Subsection *Albae* (G. Don) A. Camus (1936 : 728)**

- 107. \**Quercus alba* L. (1753: 996)
- 108. \**Quercus michauxii* Nuttall (1818: 215)

**vii. ii) Subsection *Dumosae* (Trel.) A. Camus (1936 : 462)**

- 109. \**Quercus berberidifolia* Liebmann (1854: 172)
- 110. \**Quercus douglasii* Hook. & Arn. (1840: 391)
- 111. \**Quercus durata* Jeps. (1909: 356)
- 112. \**Quercus ×eplingii* C.H.Mull. (1938: 585)
- 113. \**Quercus gambelii* Nutt. (1847: 179)
- 114. \**Quercus garryana* Douglas ex Hooker (1838: 159)
- 115. \**Quercus garryana* (Engelm.) Jeps. var. *breweri* (1909: 354)
- 116. \**Quercus lobata* Née (1801: 277)

**vii. iii) Subsection *Macrantherae* (Stef.) Maleev (1935: 163)**

- 117. *Quercus ×alentejana* C. Pinto-Gomes & F.M.Vázquez (Vázquez *et al.* 2015: 49)
- 118. *Quercus ×aruciencis* C. Vicioso (1950: 139)
- 119. \**Quercus boissieri* Reuter (1853: 119)
- 120. *Quercus canariensis* Willd. (1809: 975)
- 121. \**Quercus ×cerrioides* Willk. & Costa (1859: 123)
- 122. *Quercus ×diegoi* F.M. Vázquez, *et al.* (Vinagre *et al.* 2014: 95)
- 123. *Quercus faginea* Lam. (1785: 725)
- 124. \**Quercus frainetto* Tenore (1813: 72 (lxxii))
- 125. *Quercus ×fontquerii* O.Schwarz (1936: 85)
- 126. *Quercus lusitanica* Lam. (1785: 719)
- 127. \**Quercus macranthera* Fisch. & C.A.Mey. ex Hohen. (1838: 259)
- 128. \**Quercus pubescens* Willd. (1796: 279)
- 129. *Quercus pyrenaica* Willd. (1805: 451)
- 130. *Quercus ×tlemcenensis* Trab. (Battandier & Trabut 1905: 308)
- 131. \**Quercus virgiliana* (Ten.) Tenore (1838: 262)
- 132. \**Quercus vulcanica* Boiss. ex Kotschy (1860: 18)

**vii. iv) Subsection *Hartwissianae* (Maleev) Vila-Viçosa, Capelo, Alves, Almeida & F.M. Vázquez *comb. & stat. nov.***

- 133. *Quercus estremadurensis* O. Schwarz (1935: 463)
- 134. \**Quercus hartwissiana* Steven (1857: 387)
- 135. \**Quercus huguetiana* (Franco & G.López) Rivas Mart. & Sáenz de Rivas (1991: 102)
- 136. *Quercus orocantabrica* Rivas-Martínez (2002: 706)
- 137. \**Quercus petraea* (Matt.) Lieblein (1784: 403)
- 138. \**Quercus robur* L. (1785: 725)
- 139. \**Quercus robur* L. 'Fastigiata' Lamarck (1785: 725)
- 140. \**Quercus robur* L. 'Alnarp'
- 141. \**Quercus robur* L. 'Salicifolia' Hort. ex Loud. (1838)
- 142. \**Quercus robur* subsp. *pedunculiflora* (K.Koch) Menitsky (1967: 129)

**vii. vi) Subsection *Polymorphae***

- 143. \**Quercus laceyi* Small (1901: 358)
- 144. \**Quercus mohriana* Buckley ex Rydb. (1901: 219)
- 145. \**Quercus polymorpha* Schltld. & Cham. (1830: 78)
- 146. \**Quercus pungens* Liebm. (1854: 171)
- 147. \**Quercus vaseyana* Buckley (1883: 91)

**vii. vii) Subsection *Prinoideae* (Trel.) A. Camus (1936 : 434)**

- 148. \**Quercus bicolor* Willd. (1801: 396)
- 149. \**Quercus* ×*humidicola* E.J.Palmer (1937: 140)
- 150. \**Quercus* ×*introgressa* P.M.Thomson (1977: 453)
- 151. \**Quercus lyrata* Walter (1788: 235)
- 152. \**Quercus macrocarpa* Michx. (1801: 2-3)
- 153. \**Quercus* ×*megaleia* Laughlin (1962: 154)
- 154. \**Quercus muehlenbergii* Engelm. (1877: 391)
- 155. \**Quercus* ×*schuettei* Trel . (1917: 51)

**v.vi) Subsection *Stellatae* (Trel.) A. Camus**

- 156. \**Quercus sinuata* Walter (1788: 235)
- 157. \**Quercus sinuata* (Torr.) C.H.Muller var. *breviloba* (1944: 439)
- 158. \**Quercus stellata* Wangenh. (1787: 78)

**vii. section *Virentes* Loudon, (1838: 1918)**

- 159. \**Quercus oleoides* Schlechtendal. & Chamisso (1830: 79) Schlechtendal (1830)
- 160. \**Quercus virginiana* Mill. (1768: 16)

**IV. Interseccional Hybrids**

- 161. *Quercus* ×*almeidae* Vila-Viçosa et. al. nothosp. nov.
- 162. *Quercus* ×*alvesii* Vila-Viçosa et. al. nothosp. nov.
- 163. *Quercus* ×*auzandri* Grenier & Godron (1855: 119)
- 164. *Quercus* ×*avellaniformis* Colmeiro & E. Boutelou (1854: 9)
- 165. *Quercus* ×*capeloana* Vila-Viçosa, Alves, P. Lemos, R. Almeida & F.M. Vázquez nothosp. nov.
- 166. \**Quercus* ×*caroppoi* Medagli, Turco, Albano & Accogli (2019:
- 167. *Quercus* ×*celtica* F.M. Vázquez et al. (2003: 52)
- 168. *Quercus* ×*coscojosuberiformis* Baonza (2007: 365)
- 169. *Quercus* ×*couthoi* Sampaio (1910a: 123)
- 170. \**Quercus* ×*diosdadoi* F.M. Vázques, Coombes, Rodr.-Coombes, Ramos & Doncel (2003: 50)
- 171. *Quercus* ×*duriensis* Franco & Vasconcellos (1954: 33)
- 172. *Quercus* ×*eborense* Vila-Viçosa et. al. nothosp. nov
- 173. *Quercus* ×*gallaecica* F. Llamas et al. (2003: 87)
- 174. \**Quercus* ×*kernerii* Simkovics (1883: 69)
- 175. *Quercus* ×*lousae* Vila-Viçosa et al. (2014: 145)
- 176. \**Quercus* ×*morisii* Borzı (1881: 10)
- 177. *Quercus* ×*pacensis* F.M.Vázquez (1996: 249)
- 178. *Quercus* ×*prasina* Bosc ex Endlicher (Bosc 1807: 330)
- 179. *Quercus* ×*sampaioana* Vila-Viçosa et al. nothosp. nov.
- 180. *Quercus* ×*tavaresii* Samp. (1910a: 123)
- 181. *Quercus* ×*tentudaica* (F.M.Vázquez) F. M.Vázquez (Vázquez et al. 2015: 45)
- 182. \**Quercus* ×*turneri* Willdenow (1809: 975)
- 183. *Quercus* ×*welwitschii* Samp. (1910a: 123)

Appendix S2. Cultivated taxa

1. *Quercus acerifolia* (E.J.Palmer) Stoyeff & W.J.Hess (1997: 465)  
Notes: Nursery of Botanical Garden of the University of Porto
2. *Quercus acutissima* Carruth . (1862: 33)  
Notes: Cultivated in the Crystal Palace gardens in Porto.
3. *Quercus afares* Pomel (1875: 391)  
Notes: Cultivated in Lisbon.
4. *Quercus agrifolia* (Torr.) J.T.Howell var. *oxyadenia* (1931: 38)  
Notes: Nursery of Botanical Garden of the University of Porto
5. *Quercus agrifolia* Née (1801: 271)  
Notes: Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
6. *Quercus xalapensis* Bonpl. (1809: 24)  
Notes: Nursery of Botanical Garden of the University of Porto
7. *Quercus alba* L. (1753: 996)  
Notes: Nursery of Botanical Garden of the University of Porto
8. *Quercus alnifolia* Poech (1842: 12)  
Notes: Cultivated in the University of Lisbon botanical garden (Lisbon).
9. *Quercus arizonica* Sarg. (1895: 92)  
Notes: Cultivated in Botanical Garden of the University of Porto
10. *Quercus aucheri* Jaub. & Spach (1843: 113)  
Notes: Cultivated in Botanical Garden of the University of Porto
11. *Quercus xbebbiana* C.K.Schneid. (1904: 201)  
Parents: *Q. alba* × *Q. macrocarpa*  
Notes: Nursery of Botanical Garden of the University of Porto
12. *Quercus xbenderi* Baen. (1903: 85)  
Parental: *Q. coccinea* × *Q. rubra*  
Notes: Cultivated in the street in Maia (Porto) and the nursery of the Botanical Garden of the University of Porto
13. *Quercus benthamii* A.DC. (1864: 29)  
Notes: Nursery of Botanical Garden of the University of Porto
14. *Quercus berberidifolia* Liebm. (1854: 172)  
Notes: Nursery of Botanical Garden of the University of Porto
15. *Quercus bicolor* Willd. (1801: 396)  
Notes: Nursery of Botanical Garden of the University of Porto
16. *Quercus boissieri* Reut. (1853: 119)  
Notes: Nursery of Botanical Garden of the University of Porto
17. *Quercus brenesii* Trel. (1924: 186)  
Notes: Nursery of Botanical Garden of the University of Porto
18. *Quercus buckleyi* Dorr & Nixon #1985: 225(-226)\$  
Notes: Nursery of Botanical Garden of the University of Porto
19. *Quercus xbushii* Sarg. 81918: 453)  
Parental: *Q. marilandica* × *Q. velutina*  
Notes: Nursery of Botanical Garden of the University of Porto
20. *Quercus calliprinos* Webb (1838: 15)  
Notes: Nursery of Botanical Garden of the University of Porto
21. *Quercus calophylla* Schldl. & Cham. (1830:79)  
Notes: Cultivated in the Parque da Lagoa das Furnas (Azores).
22. *Quercus canbyi* Trel. (1924: 188)  
Notes: Nursery of Botanical Garden of the University of Porto
23. *Quercus xcaroppi* Medagli, Turco, Albano & Accogli (2012: ?)  
Parental: *Q. cerris* × *Q. coccifera*  
Notes: Nursery of Botanical Garden of the University of Porto
24. *Quercus castaneifolia* C.A. Mey. (1831: 44)

- Notes:** Cultivated in the UTAD botanical garden (Vila Real).
25. *Quercus* ×*catalaunica* Sennen & Pau (1933: 172)  
**Parental:** *Q. coccifera* × *Q. rotundifolia*  
**Notes:** Nursery of Botanical Garden of the University of Porto
26. *Quercus* ×*cerrioides* Willk. & Costa (1859: 123)  
**Parental:** *Q. canariensis* × *Q. pubescens*  
**Notes:** Nursery of Botanical Garden of the University of Porto
27. *Quercus cerris* L. (1753: 997)  
**Notes:** Cultivated in several botanical gardens and in some private gardens.
28. *Quercus chrysolepis* Liebm. (1854: 173)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
29. *Quercus coccinea* Münchh. (1770: 254)  
**Notes:** Used in gardens and street plantings in Portugal, is sometimes confused with most common *Q. palustris*.
30. *Quercus copeyensis* C.H.Mull. (1942: 30)  
**Notes:** Nursery of Botanical Garden of the University of Porto
31. *Quercus* ×*crenata* Lam. (1785: 724)  
**Parental:** *Q. cerris* × *Q. suber*  
**Notes:** Cultivated in Lisbon.
32. *Quercus cupreata* Trel. (1936: 152)  
**Notes:** Nursery of Botanical Garden of the University of Porto
33. *Quercus* ×*diosdadoi* F.M.Vázquez, Coombes, Rodr.-Coombes, Ramos & Doncel (2003: 50)  
**Parental:** *Q. pyrenaica* × *Q. rotundifolia*  
**Notes:** In spite of being potentially spontaneous in Portugal, materials retrieved from Spain are cultivated in the nursery of Botanical Garden of the University of Porto
34. *Quercus douglasii* Hook. & Arn. (1840: 391)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
35. *Quercus durata* Jeps. (1909: 356)  
**Notes:** Cultivated in Botanical Garden of the University of Porto
36. *Quercus ellipsoidalis* E.J.Hill (1899: 204)  
**Notes:** Nursery of Botanical Garden of the University of Porto
37. *Quercus emoryi* Torr. (1848: 152)  
**Notes:** Nursery of Botanical Garden of the University of Porto
38. *Quercus engelmannii* Greene (1889: 33)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
39. *Quercus* ×*eplingii* C.H.Mull. (1938: 585)  
**Parental:** *Q. douglasii* × *Q. garryana*  
**Notes:** Cultivated in Botanical Garden of the University of Porto
40. *Quercus estremadurensis* O.Schwarz (1935: 463)  
**Notes:** Nursery of Botanical Garden of the University of Porto
41. *Quercus* ×*exacta* Trel. (1917: 49)  
**Parental:** *Q. imbricaria* × *Q. palustris*  
**Notes:** Nursery of Botanical Garden of the University of Porto
42. *Quercus faginea* Lam. (1785: 725)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
43. *Quercus falcata* Michx. (1801: 28)  
**Notes:** Nursery of Botanical Garden of the University of Porto
44. *Quercus* ×*fernowii* Trel. (1917: 49)  
**Parental:** *Q. alba* × *Q. stellata*  
**Notes:** Nursery of Botanical Garden of the University of Porto

45. *Quercus floribunda* Lindl. ex A.Camus (1935: 131)  
Notes: Nursery of Botanical Garden of the University of Porto
46. *Quercus frainetto* Ten. (1813: 72 (lxxii))  
Notes: Cultivated in the UTAD botanical garden (Vila Real), some public gardens in Lisbon and Botanical Garden of the University of Porto nursery.
47. *Quercus franchetii* Skan (1899: 513)  
Notes: Nursery of Botanical Garden of the University of Porto
48. *Quercus frutex* Trel. (1924: 82)  
Notes: Cultivated in the Ajuda botanical garden (Lisbon).
49. *Quercus gambelii* Nutt. (1847: 179)  
Notes: Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
50. *Quercus garryana* Douglas ex Hook. (1838: 159)  
Notes: Cultivated in the Ajuda botanical garden (Lisbon).
51. *Quercus garryana* (Engelm.) Jeps. var. *breweri* (1909: 354)  
Notes: Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
52. *Quercus georgiana* M.A.Curtis (1849: 408)  
Notes: Nursery of Botanical Garden of the University of Porto
53. *Quercus germana* Schltdl. & Cham. (1830: 78)  
Notes: Nursery of Botanical Garden of the University of Porto
54. *Quercus glauca* Thunb. (1784: 858)  
Notes: Nursery of Botanical Garden of the University of Porto
55. *Quercus gravesii* Sudw. (1927: 86)  
Notes: Nursery of Botanical Garden of the University of Porto
56. *Quercus griffithii* Hook.f. & Thomson ex Miq. (1863: 104)  
Notes: Nursery of Botanical Garden of the University of Porto
57. *Quercus hartwissiana* Steven (1857: 387)  
Notes: Nursery of Botanical Garden of the University of Porto
58. *Quercus ×haynaldiana* Simonk. (1883: 63)  
Parental: *Q. frainetto* × *Q. robur*  
Notes: Nursery of Botanical Garden of the University of Porto
59. *Quercus hemisphaerica* Hort. ex Endl. (1848: 25)  
Notes: Nursery of Botanical Garden of the University of Porto
60. *Quercus ×hickelii* A.Camus (1935: 60)  
Parental: *Q. pontica* × *Q. robur*  
Notes: Nursery of Botanical Garden of the University of Porto
61. *Quercus ×hillii* Trel. (1917: 49)  
Parental: *Q. alba* × *Q. muehlenbergii*  
Notes: Nursery of Botanical Garden of the University of Porto
62. *Quercus huguetiana* (Franco & G.López) Rivas Mart. & Sáenz de Rivas (1991: 102)  
Notes: Nursery of Botanical Garden of the University of Porto
63. *Quercus humboldtii* Bonpl. (1809: 155)  
Notes: Nursery of Botanical Garden of the University of Porto
64. *Quercus ×humidicola* E.J.Palmer (1937: 140)  
Parental: *Q. bicolor* × *Q. lyrata*  
Notes: Nursery of Botanical Garden of the University of Porto
65. *Quercus ilex* L. (1753: 995)  
Notes: Cultivated in several botanical gardens and in some public and private gardens
66. *Quercus ilicifolia* Salisb. (1796: 392)  
Notes: Nursery of Botanical Garden of the University of Porto
67. *Quercus imbricaria* Michx. (1801: 16)  
Notes: Cultivated in several botanical gardens and in some public and private gardens.
68. *Quercus insignis* M.Martens & Galeotti (1843: 219)  
Notes: Nursery of Botanical Garden of the University of Porto



69. *Quercus* ×*introgressa* P.M.Thomson (1977: 453)  
**Parental:** *Q. bicolor* × (*muehlenbergii* × *prinoides*)  
**Notes:** Nursery of Botanical Garden of the University of Porto
70. *Quercus invaginata* Trel. (1924: 138)  
**Notes:** Nursery of Botanical Garden of the University of Porto
71. *Quercus ithaburensis* Decne. (1835: 348)  
**Notes:** Cultivated in the Parque da Lagoa das Furnas (Azores).
72. *Quercus* ×*jackiana* C.K.Schneid. (1904: 202)  
**Parental:** *Q. alba* × *Q. bicolor*  
**Notes:** Nursery of Botanical Garden of the University of Porto
73. *Quercus kelloggii* Newb. (1857: 89)  
**Notes:** Nursery of Botanical Garden of the University of Porto
74. *Quercus* ×*kernerii* Simonk. (1883: 69)  
**Parental:** *Q. pubescens* × *Q. rotundifolia*  
**Notes:** Nursery of Botanical Garden of the University of Porto.
75. *Quercus laceyi* Small (1901: 358)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
76. *Quercus laevis* Walter (1788: 234)  
**Notes:** Nursery of Botanical Garden of the University of Porto
77. *Quercus lamellosa* Sm. (1814: 29)  
**Notes:** Cultivated in Botanical Garden of the University of Porto
78. *Quercus lanata* Sm. (1814: 29)  
**Notes:** Nursery of Botanical Garden of the University of Porto
79. *Quercus laurifolia* Michx. (1801: 17)  
**Notes:** Cultivated in Lisbon.
80. *Quercus laurina* Bonpl. (1809: 32)  
**Notes:** Nursery of Botanical Garden of the University of Porto
81. *Quercus* ×*leana* Nutt. (Michaux & Nuttall 1842: 13)  
**Parental:** *Q. imbricaria* × *Quercus velutina* Lamarck (1785:721)  
**Notes:** Cultivated in the garden of La Sallet park (Oliveira de Azeméis).
82. *Quercus leucotrichophora* A.Camus (1935: 66)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
83. *Quercus* ×*libanerris* Boom (1959: 157)  
**Parental:** *Q. cerris* × *Q. libani*  
**Notes:** Nursery of Botanical Garden of the University of Porto
84. *Quercus libani* G.Olivier (1804: 290)  
**Notes:** Nursery of Botanical Garden of the University of Porto
85. *Quercus lineata* Blume (1826: 523)  
**Notes:** Nursery of Botanical Garden of the University of Porto
86. *Quercus lobata* Née (1801: 277)  
**Notes:** Nursery of Botanical Garden of the University of Porto
87. *Quercus* ×*ludoviciana* Sarg. (1913: 223)  
**Parental:** *Q. pagoda* × *Q. phellos*  
**Notes:** Nursery of Botanical Garden of the University of Porto
88. *Quercus lyrata* Walter (1788: 235)  
**Notes:** Nursery of Botanical Garden of the University of Porto
89. *Quercus macranthera* Fisch. & C.A.Mey. (1838: 259)  
**Notes:** Nursery of Botanical Garden of the University of Porto
90. *Quercus macrocarpa* Michx. (1801: 2-3)  
**Notes:** Cultivated in the University of Coimbra botanical garden.
91. *Quercus macrolepis* Kotschy (1859: 16)  
**Notes:** Nursery of Botanical Garden of the University of Porto
92. *Quercus* ×*megaleia* Laughlin (1962: 154)

- Parental:** *Q. lyrata* × *Q. macrocarpa*  
**Notes:** Nursery of Botanical Garden of the University of Porto
93. ***Quercus mexicana*** Bonpl. (1809: 35)  
**Notes:** Nursery of Botanical Garden of the University of Porto
94. ***Quercus michauxii*** Nutt. (1818: 215)  
**Notes:** Cultivated in the Parque José do Canto (Azores).
95. ***Quercus mohriana*** Buckley ex Rydb. (1901: 219)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
96. ***Quercus mongolica*** Fisch. ex Turcz. (1838: 101)  
**Notes:** Nursery of Botanical Garden of the University of Porto
97. ***Quercus morii*** Hayata (1911: 293)  
**Notes:** Nursery of Botanical Garden of the University of Porto
98. ***Quercus* × *morisii*** Borzí (1881: 10)  
**Parental:** *Q. ilex* × *Q. suber*  
**Notes:** Cultivated in Parque da Penha (Guimarães).
99. ***Quercus muehlenbergii*** Engelm. (1877: 391)  
**Notes:** Nursery of Botanical Garden of the University of Porto
100. ***Quercus myrsinifolia*** Blume (1851: 305)  
**Notes:** Cultivated in Botanical Garden of the University of Porto (Porto).
101. ***Quercus nigra*** L. (1753: 995-996)  
**Notes:** Cultivated in the Parque da Lagoa das Furnas (Azores).
102. ***Quercus nigra* × *georgiana***  
**Notes:** Nursery of Botanical Garden of the University of Porto
103. ***Quercus obtusata*** Bonpl. (1809: 76)  
**Notes:** Nursery of Botanical Garden of the University of Porto
104. ***Quercus oleoides*** Schltld. & Cham. (1830: 79) Schlechtendal (1830)  
**Notes:** Nursery of Botanical Garden of the University of Porto
105. ***Quercus palustris*** Münch. (1770: 253)  
**Notes:** Very common in gardens and street plantings in Portugal, being sometimes confused with *Q. coccinea*. Both are easily distinguished by the terminal buds, which are completely glabrous in *Q. palustris* and hairy in the upper part in *Q. coccinea*. *Q. palustris* has a quite distinctive branching pattern (drooping lower branches, horizontal middle branches and ascending upper branches).
106. ***Quercus petraea*** (Matt.) Lieblein (1784: 403)  
**Notes:** Cultivated across the country
107. ***Quercus phellos*** L. (1753: 994)  
**Notes:** Cultivated in UTAD botanical garden (Vila Real) and in the Parque José do Canto (Azores).
108. ***Quercus phillyreoides*** A. Gray (1858: 406)  
**Notes:** Cultivated in the Ajuda botanical garden (Lisbon).
109. ***Quercus pinnativenulosa*** C.H.Mull. (1936: 171)  
**Notes:** Nursery of Botanical Garden of the University of Porto.
110. ***Quercus polymorpha*** Schltld. & Cham. (1830: 78)  
**Notes:** Nursery of Botanical Garden of the University of Porto
111. ***Quercus pontica*** K.Koch (1849: 319)  
**Notes:** Nursery of Botanical Garden of the University of Porto
112. ***Quercus porphyrogenita*** Trel. (1924: 51)  
**Notes:** Nursery of Botanical Garden of the University of Porto
113. ***Quercus pubescens*** Willd. (1796: 279)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
114. ***Quercus pungens*** Liebm. (1854: 171)  
**Notes:** Cultivated in Botanical Garden of the University of Porto
115. ***Quercus* × *rehderi*** Trel. (1917: 51)

- Parental:** *Q. ilicifolia* × *Q. velutina*  
**Notes:** Nursery of Botanical Garden of the University of Porto
116. *Quercus* × *richteri* Baenitz. (1903: 85)  
**Parental:** *Q. palustris* × *Q. rubra*  
**Notes:** In gardens in Porto city.
117. *Quercus robur* L. (1785: 725)  
**Notes:** Cultivated in Botanical Garden of the University of Porto and Nursery of Botanical Garden of the University of Porto
118. *Quercus robur* L. 'Fastigiata' Lam (1785: 725)  
**Notes:** Cultivated in several public gardens.
119. *Quercus robur* L. 'Alnarp' Unpublished  
**Notes:** Nursery of Botanical Garden of the University of Porto
120. *Quercus robur* L. 'Salicifolia'  
**Notes:** Nursery of Botanical Garden of the University of Porto
121. *Quercus robur* subsp. *pedunculiflora* (K.Koch) Menitsky (1967: 129)  
**Notes:** Cultivated in Botanical Garden of the University of Porto
122. *Quercus* × *robusta* C.H.Mull. (1934: 119)  
**Parental:** *Q. emoryi* × *Q. gravesii*  
**Notes:** Nursery of Botanical Garden of the University of Porto
123. *Quercus rubra* L. (1753: 996)  
**Notes:** *Quercus rubra* is the most common non-native oak in Portugal, used in forest production, parks, gardens and streets.
124. *Quercus rugosa* Née (1801: 275)  
**Notes:** Cultivated in the Botanical Garden of the University of Porto (Porto).
125. *Quercus* × *saulii* C.K.Schneid. (1904: 203)  
**Parental:** *Q. alba* × *Q. prinus*  
**Notes:** Nursery of Botanical Garden of the University of Porto
126. *Quercus schottkyana* Rehder & E.H.Wilson (1916: 237)  
**Notes:** Nursery of Botanical Garden of the University of Porto.
127. *Quercus* × *schuettei* Trel. (1917: 51)  
**Parental:** *Q. bicolor* × *Q. macrocarpa*  
**Notes:** Nursery of Botanical Garden of the University of Porto
128. *Quercus serrata* Murray (1784: 858)  
**Notes:** Nursery of Botanical Garden of the University of Porto
129. *Quercus sessilifolia* Blume (1851: 305)  
**Notes:** Nursery of Botanical Garden of the University of Porto.
130. *Quercus shumardii* Buckley (1860: 444)  
**Notes:** Nursery of Botanical Garden of the University of Porto
131. *Quercus sinuata* (Torr.) C.H.Muller var. *breviloba* (1944: 439)  
**Notes:** Cultivated in Botanical Garden of the University of Porto
132. *Quercus sinuata* Walter (1788: 235)  
**Notes:** Nursery of Botanical Garden of the University of Porto
133. *Quercus stellata* × *muehlenbergii*  
**Notes:** Nursery of Botanical Garden of the University of Porto
134. *Quercus stellata* Wangenh. (1787: 78)  
**Notes:** Nursery of Botanical Garden of the University of Porto
135. *Quercus stenophylloides* Hayata (1914: 21)  
**Notes:** Nursery of Botanical Garden of the University of Porto
136. *Quercus* × *substellata* Trel. (1924: 105)  
**Parental:** *Q. bicolor* × *Q. stellata*  
**Notes:** Nursery of Botanical Garden of the University of Porto
137. *Quercus texana* Buckley (1860: 444)  
**Notes:** Cultivated in the University of Coimbra botanical garden (Coimbra).
138. *Quercus tomentella* Engelm. (1877: 393)  
**Notes:** Cultivated in Botanical Garden of the University of Porto

139. *Quercus turbinella* Greene (1889: 37)  
Notes: Cultivated in Botanical Garden of the University of Porto
140. *Quercus ×turneri* Willd. (1809: 975) *non sensu* A. Candolle (1871: 43)  
Parental: *Q. ilex* × *Q. robur*  
Notes: Cultivated in Campo Grande (Lisbon).
141. *Quercus variabilis* Blume (1851: 297)  
Notes: Nursery of Botanical Garden of the University of Porto
142. *Quercus vaseyana* Buckley (1883: 91)  
Notes: Nursery of Botanical Garden of the University of Porto
143. *Quercus velutina* Lam. (1785:721)  
Notes: Cultivated in a Municipal Garden in Vila da Feira (Santa Maria da Feira, Porto) and Botanical Garden of the University of Porto.
144. *Quercus ×vilmoriniana* A.Camus (1935: 62)  
Parental: *Q. dentata* × *Q. petraea*  
Notes: Nursery of Botanical Garden of the University of Porto
145. *Quercus virgiliana* (Ten.) Ten. (1838: 262)  
Notes: Cultivated in parquet de Monsanto (Lisbon).
146. *Quercus virginiana* Mill. (1768: 16)  
Notes: Nursery of Botanical Garden of the University of Porto
147. *Quercus vulcanica* Boiss. ex Kotschy (1859: 18)  
Notes: Nursery of Botanical Garden of the University of Porto
148. *Quercus wislizeni* A.DC. (1864: 67)  
Notes: Nursery of Botanical Garden of the University of Porto.