A key to the oak species of Maryland based upon mature leaves exposed to full sunlight

Lamina margins sinuate, dentate, or shallowly to deeply lobed; lobes and apices without awns; secondary veins lacking hair tufts (domatia) …..…………...……….…………….…**White Oaks**
Lamina margins entire, or shallowly to deeply lobed; lobes and apices with awns; secondary veins with hair tufts (domatia) ………………….….…………………. **Red and Black Oaks**

White Oaks

1. Lamina margin sinuate or dentate, with a lobe or point for each parallel secondary vein reaching the margin; sinuses less than one-eighth distance to midvein …..…………..……. (2)
1. Lamina with well-defined deep lobes; each secondary vein not ending in a lobe; one or more sinuses extending more than one-quarter distance to the midvein ……………………….... (5)

2. Lamina with few secondary veins (8 or less); base cuneate, acute ……………... *Q. prinoides*
2. Lamina with many secondary veins (9 or more); base truncate, obtuse to rounded ……..... (3)

3. Lamina sinuate, with obtuse to rounded apices …….…….……………….……..... *Q. prinus*
3. Lamina dentate, with acute apices …………………………………….…....…………. (4)

4. Lamina base obtuse to truncate; yellowish-green pubescent or glabrous below . *Q. michauxii*
4. Lamina base rounded; silvery white pubescent below ……………………….. *Q. muehlenbergii*

5. Lamina glabrous below ………...…………………………………………..…………… (6)
5. Lamina tomentose below ………….………………………………………….…..……... (7)

6. Lamina with finger-like lobes and narrow sinuses; lobe apices rounded ...……..…..... *Q. alba*
6. Lamina with wide lobes and spreading sinuses; lobe apices acute to obtuse ……..… *Q. lyrata*

7. Lamina mostly elliptical; sinuses extending one-quarter to one-half distance to the midvein …………………………………………………………………………...… *Q. bicolor*
7. Lamina obovate; sinuses extending more than one-half distance to the midvein ….....…… (8)

8. Petiole mostly less than 15mm long …….....……………………………..……… *Q. stellata*
8. Petiole mostly more than 15mm long ……...…………………..……..... *Q. macrocarpa*

Red and Black Oaks

1. Petioles predominantly less than 20(-25)mm long ……………………………….…….…… (2)
1. Petioles predominantly more than (20-)25mm long …………………………….…..…..…… (6)

2. Lamina lacking lobes; apex terminating with a terminal awn ……………………..…..…… (3)
2. Lamina variously lobed; each lobe terminating in an awn …………………...………...…... (4)

3. Lamina narrowly elliptical to linear …………………………………….……...…… ***Q. phellos***
3. Lamina narrowly obovate to oblanceolate. ……………………………...……….…… ***Q. imbricaria***

4. Lamina deeply lobed throughout; obovate, ovate to narrowly ovate in outline   ***Q. ilicifolia***
4. Lamina shallowly lobed, and only distally; obovate to oblanceolate in outline ………...... (5)

5. Lamina obovate in outline, almost as wide as long …...………………..……. ***Q. marilandica***
5. Lamina narrowly obovate to oblanceolate in outline, at least twice as long as wide ….....
   …………………………………………………………………………….………..***Q. nigra***

6. Lamina usually with 1–2(–3) awn per lateral lobe ………..……….…….…….…............... (7)
6. Lamina with 3–10 awns per lateral lobe ………………………….……………...………..… (8)

7. Lamina pale rusty pubescence below; (2–)3–5 lateral lobes per side and the terminal lobe
   shorter than the lateral lobes ………………………………………...……….…… ***Q. pagoda***
7. Lamina pale gray pubescence below; 1–2(–3) lateral lobes per side and the terminal lobe
   longer than the lateral lobes ……………………………………………………... ***Q. falcata***

8. Lamina lobe sinuses less than 2/3 to the midvein ……..………………….…...... ***Q. rubra***
8. Lamina lobe sinuses more than 2/3 to the midvein …………..……………….…….….. (9)

9. Lamina margin of basal lobes somewhat recurved; middle lobes at right angles to the
   midvein …………………………………………………………………..…….…… ***Q. palustris***
9. Lamina margin of basal lobes straight to ascending; middle lobes ascending, acute to the
   midvein ………………………………………………………….……………..………… (10)

10. Petiole less than one-third the length of the lamina ……………………..….. ***Q. shumardii***
10. Petiole more than one-third the length of the lamina …………………………...………... (11)

11. Lamina light green above; glabrous except for axillary tufts below; lobes widely expanded
    distally ……………...…………………………………………………...……….... ***Q. coccinea***
11. Lamina dark green above; pubescent becoming glabrous in late summer; lobes slightly
    expanded distally ……………………………..…………………...……………..…… ***Q. velutina***