

Field Key to Southern Appalachian Species of *Lactarius*

- 1. Latex blue, purple-red, yellowish-brown or orange2
- 1. Latex watery, white, cream color, pale yellow or pale brown on exposure7
 - 2. Latex purple-red, yellowish-brown or orange on exposure3
 - 2. Latex blue on exposure; basidiomata blue *L. indigo*
- 3. Latex orange on exposure4
- 3. Latex purple-red or yellowish-brown on exposure5
 - 4. Pileus and stipe subvelutinous, dry, white *L. salmoneus*
 - 4. Pileus and stipe glabrous, viscid, orange; latex drying and staining burgundy red *L. deterrimus*
- 5. Latex purple-red 6
- 5. Latex yellow-brown; pileus grayish blue with orange-brown Discoloration; context blue *L. chelidonium*
 - 6. Lamellae close to crowded; pileus and stipe grayish-blue *L. paradoxus*
 - 6. Lamellae subdistant; pileus and stipe pinkish-red when moist *L. subpurpureus*
- 7. Pileus and stipe subvelutinous to velutinous, appearing suede-like 8
- 7. Pileus and stipe glabrous to tomentose 29
 - 8. Pileus tan, grayish-brown, olive-brown or brown; latex white or pale brown on exposure, often changing to or staining lamellae and flesh pink to red 9
 - 8. Pileus white, yellow, orange or reddish-brown; latex white, not changing to or staining lamellae and flesh pink to red 18
- 9. Latex white on exposure, not staining flesh brown 10
- 9. Latex pale brown on exposure, staining flesh brown; pileus and stipe brown; lamellae close *L. petersenii*
 - 10. Latex staining lamellae and flesh pink to red 11
 - 10. Latex not staining lamellae and flesh pink to red 16
- 11. Lamellae subdistant to distant 12
- 11. Lamellae close to crowded 15
 - 12. Latex staining lamellae and flesh red; pileus and stipe olive brown *L. ruginosus*
 - 12. Latex staining lamellae and flesh pink 13
- 13. Pileus and stipe olive-brown to blackish brown 14
- 13. Pileus and stipe tan to pale grayish-brown *L. subplinthogalus*

14. Pileus and stipe olive-brown	<i>L. gerardii</i>
14. Pileus and stipe blackish-brown	<i>L. lignyotus</i>
15. Pileus and stipe tan to pale grayish-brown	<i>L. subvernalis</i> var. <i>cokeri</i>
15. Pileus and stipe brown	<i>L. fumosus</i>
16. Lamellae subdistant to distant	17
16. Lamellae close to crowded; pileus and stipe pinkish-tan	<i>L. subisabellinus</i>
17. Pileus and stipe olive-brown; lamellae not marginate	<i>L. gerardii</i>
17. Pileus and stipe blackish-brown; lamellae with brown margins	<i>L. lignyotellus</i>
18. Pileus white in button stages	19
18. Pileus colored in button stages	24
19. Margin of pileus covered with a thick, cottony roll of tissue	20
19. Margin of pileus glabrous	21
20. Lamellae close to subdistant, not forked repeatedly, staining pinkish brown	<i>L. deceptivus</i>
20. Lamellae crowded, forked repeatedly	<i>L. tomentos-marginatus</i>
21. Latex white, not changing to or staining yellow; lamellae not staining pinkish-brown	22
21. Latex pale yellow on exposure, drying yellow; lamellae staining pinkish brown	23
22. Latex drying blue-green to gray-green	<i>L. glaucescens</i>
22. Latex not drying blue-green to gray-green	<i>L. piperatus</i>
23. Lamellae subdistant to distant	<i>L. subvellereus</i> var. <i>subdistans</i>
23. Lamellae crowded	<i>L. subvellereus</i> var. <i>subvellereus</i>
24. Pileus pinkish-cinnamon to reddish-brown	25
24. Pileus yellow to orange	27
25. Pileus, stipe, and lamellae not brick red; pileus azonate	26
25. Pileus, stipe, and lamellae brick red to reddish-brown; pileus zonate	<i>L. peckii</i>
26. Latex drying grayish-green, not staining lamellae and flesh brown; pileus smooth, initially pinkish-cinnamon, then cinnamon-brown overall	<i>L. allardii</i>
26. Latex not drying grayish-green, staining lamellae and flesh brown; pileus wrinkled to corrugated, dark reddish-brown	<i>L. corrugis</i>
27. Pileus and stipe orange	28
27. Pileus and stipe pale yellow; lamellae staining brown	<i>L. luteolus</i>

28. Lamellae close; latex staining lamellae and flesh brown	<i>L. volemus</i>	
28. Lamellae distant; latex not staining lamellae and flesh brown	<i>L. hygrophoroides</i>	
29. Pileus and stipe tan, gray or brown; pileus typically viscid		30
29. Pileus and stipe white, yellow, orange or red; pileus not typically viscid		37
30. Latex staining lamellae and flesh violet or brown		31
30. Latex not staining lamellae or flesh violet or brown		33
31. Latex staining lamellae and flesh violet		32
31. Latex staining lamellae and flesh brown; pileus grayish-violet	<i>L. argillaceifolius</i>	
32. Pileus 10-20 cm broad, spotted, yellow-brown to dingy gray	<i>L. subpalustris</i>	
32. Pileus 3-10 cm broad, not spotted, grayish-lavender	<i>L. uvidus</i>	
33. Stipe dry, not viscid		34
33. Stipe viscid; pileus chocolate brown to pinkish brown; latex drying blue-green to gray green	<i>L. mucidus</i>	
34. Pileus squamulose		35
34. Pileus not squamulose		36
35. Pileus purplish-brown; latex unchanging; on soil	<i>L. purpureo-echinatus</i>	
35. Pileus yellowish-brown; latex drying pale yellow; often on decaying wood	<i>L. griseus</i>	
36. Lamellae distant; pileus zonate, yellow-brown to grayish-brown with purplish tones; latex drying grayish-green	<i>L. pyrogalus</i>	
36. Lamellae close; pileus azonate, pale gray; latex white, unchanging	<i>L. cinereus</i>	
37. Pileus tomentose to fibrillose, white, yellow, orange or green; pileus margin pubescent to tomentose; stipe more than 10 mm broad, spotted		38
37. Pileus glabrous, red to reddish-brown; pileus margin glabrous; stipe 2-10 mm broad, not spotted		51
38. Pileus and stipe olive-brown or green		39
38. Pileus and stipe, white, yellow or orange		40
39. Pileus and stipe yellow-brown to olive brown; under conifers and birch	<i>L. sordidus</i>	
39. Pileus and stipe dull to dark green; under oak	<i>L. atrovirdis</i>	
40. Latex staining lamellae and flesh lilac to violet		41
40. Latex not staining flesh and lamellae lilac to violet		42

41. Pileus azonate, pale yellow; stipe not spotted	<i>L. aspideoides</i>
41. Pileus zonate, dingy tan; stipe spotted	<i>L. speciosus</i>
42. Latex changing to or staining lamellae and flesh yellow	43
42. Latex not changing to or staining lamellae and flesh yellow	48
43. Stipe viscid	44
43. Stipe dry	45
44. Pileus zonate, with tan and dark yellow-brown zones	<i>L. carolinensis</i>
44. Pileus zonate, with pale yellow and dark yellow zones	<i>L. maculatipes</i>
45. Pileus and stipe white to pinkish yellow	46
45. Pileus and stipe bright orange	<i>L. croceus</i>
46. Pileus 2.5-5 cm broad, white, stained reddish-brown in age	<i>L. colorascens</i>
46. Pileus 4-10 cm broad, pinkish yellow	47
47. Lamellae white to pinkish-yellow, not stained reddish-brown in age; under oak	<i>L. chrysorheus</i>
47. Lamellae pinkish-yellow, stained reddish-brown in age; under pine	<i>L. vinaceorufescens</i>
48. Pileus pale yellow or pale pink	49
48. Pileus orange or orange-brown	50
49. Pileus pale pink; pileus surface and margin tomentose; latex not drying gray-green to blue-green; lamellae not forked repeatedly	<i>L. torminosus</i>
49. Pileus pale yellow; pileus surface and margin pubescent; latex drying gray-green to blue-green; lamellae forked repeatedly	<i>L. furcatus</i>
50. Pileus azonate, squamulose, orange	<i>L. agglutinatus</i>
50. Pileus zonate, pubescent, orange-brown	<i>L. psammicola</i>
51. Pileus viscid	52
51. Pileus moist to dry	53
52. Stipe viscid; pileus reddish-brown	<i>L. hysginus</i>
52. Stipe moist to dry; pileus pinkish-brown	<i>L. imperceptus</i>
53. Pileus and stipe pinkish-brown to reddish-brown	54
53. Pileus and stipe pale yellow	<i>L. pseudoaffinis</i>
54. Pileus glabrous	55
54. Pileus densely fibrillose to squamulose	<i>L. aquifluus</i>

55. Pileus becoming areolate at maturity	56
55. Pileus not becoming areolate at maturity	57
56. Pileus and stipe pink to pinkish-cinnamon; under pine	<i>L. rimosellus</i>
56. Pileus and stipe reddish-brown to brown; under oak	<i>L. areolatus</i>
57. Odor of maple syrup	58
57. Odor not distinctive	59
58. Lamellae close to crowded, pale pinkish-brown; pileus reddish-brown	<i>L. camphoratus</i>
58. Lamellae subdistant, pale yellow; pileus dull brown	<i>L. fragilis</i>
59. Latex white, turning yellow or staining white paper yellow	60
59. Latex white, not turning yellow or staining white paper yellow	62
60. Pileus yellowish-brown; stipe darkening from base upward	<i>L. frustrates</i>
60. Pileus pinkish-brown; stipe not darkening from base upward	61
61. Lamellae subdistant; pileus disk dark reddish-brown; taste mild; under spruce in sphagnum	<i>L. oculatus</i>
61. Lamellae close to crowded; pileus disk pinkish-brown; taste acrid; under birch	<i>L. thejogalus</i>
62. Pileus more than 5 cm broad; stipe 5-10 mm broad	63
62. Pileus 2-5 cm broad, pinkish-brown; stipe 3-5 mm broad	<i>L. subserifluus</i>
63. Taste acrid	64
63. Taste not distinctive	65
64. Pileus dark reddish-brown; under pine or in sphagnum	<i>L. rufus</i>
64. Pileus pinkish-tan to pale brown; under oak	<i>L.alachuanus</i>
65. Pileus dark reddish-brown; stipe darkening from base upward; lamellae pinkish-cinnamon; odor of maple sugar	<i>L. quietus</i> var. <i>incanus</i>
65. Pileus dull brown; stipe not darkening from base upward; lamellae pale yellow; odor not distinctive	<i>L. mutabilis</i>