

Key to Waxcap Mushrooms of Eastern North America

by Alan Bessette

- 1a Cap white, ivory, creamy white, buff to yellowish buff, pale gray, pale brownish gray or pale tan to grayish tan, sometimes tinged yellowish, salmon, tawny, or brown on the disc.....2
- 1b Cap more richly colored, yellow, orange, pink, red, dark gray, brown, purplish, etc.....31
- 2a Odor distinctive and strong, like cedarwood, Russian leather, almond extract, cherry pits, or raw potatoes.....3
- 2b Odor not distinctive or not as in the above choices.....7
- 3a Odor of cedarwood or Russian leather, cap translucent-striate, ivory-white to pale buff or yellowish buff, growing among mosses in conifer woods..... *Hygrocybe russocoriacea*
- 3b Odor of almond extract, cherry pits, or raw potatoes.....4
- 4a Odor of raw potatoes, taste of the flesh bitter, taste of the cap cuticle sour, cap cream to white with a tawny brown center, immature caps may be tawny brown nearly overall.....*Hygrophorus tennesseensis*
- 4b Odor of almond extract or cherry pits.....5
- 5a Cap ashy gray to brownish gray or grayish tan, darker on the disc, surface glutinous to viscid when fresh.....*Hygrophorus agathosmus*
- 5b Cap lacking grayish tones.....6
- 6a Cap glutinous, whitish to cream with a yellow-brown to cinnamon-brown or tawny-brown disc, immature caps may be tawny brown nearly overall, margin incurved and cottony when young, gills not conspicuously intervenose.....*Hygrophorus bakerensis*
- 6b Cap moist or dry but not glutinous, cinnamon-buff with salmon to vinaceous tinges, margin incurved but not cottony when young, gills conspicuously intervenose, typically growing at higher elevations.....*Hygrophorus monticola*
- 7a Stalk white with golden yellow granules at the apex.....*Hygrophorus chrysodon*
- 7b Stalk variously colored but lacking yellow granules at the apex.....8

8a Cap white, ivory or creamy white nearly overall, sometimes more richly colored on the disc.....	9
8b Cap buff to pinkish buff, yellowish buff, grayish, pale brownish gray or pale tan to grayish tan.....	25
9a Cap moist or dry, not viscid or glutinous.....	10
9b Cap viscid or glutinous.....	15
10a Cap margin translucent-striate, cap hygrophanous.....	<i>Hygrocybe virginea</i>
10b Cap margin not translucent-striate.....	11
11a Taste of the flesh distinctly bitter.....	<i>Hygrocybe subaustralis</i>
11b Taste of the flesh mild or not distinctive.....	12
12a Cap hygrophanous.....	13
12b Cap not hygrophanous.....	14
13a Gills yellow, distant, narrow.....	<i>Hygrophorus cremicolor</i>
13b Gills white, close to subdistant, broad.....	<i>Hygrophorus obconicus</i>
14a Cap 2-5 cm wide; spores 3.5-6 x 3-4.5 µm.....	<i>Hygrocybe angustifolia</i>
14b Cap 2-7 cm wide; spores 5-8 x 3-5 µm.....	<i>Hygrocybe pratensis v. pallida</i>
15a Cap margin translucent-striate.....	<i>Hygrocybe huronensis</i>
15b Cap margin not translucent-striate.....	16
16a Cap surface stains pinkish to red when bruised.....	<i>Hygrocybe pura</i>
16b Cap surface not staining when bruised.....	17
17a Flesh odor distinctive, strong and unpleasant or aromatic and fruity or anise-like.....	18
17b Flesh odor not distinctive.....	19
18a Odor strong and unpleasant.....	<i>Hygrophorus cossus</i>
18b Odor aromatic and fruity or anise-like.....	<i>Hygrophorus pusillus</i>
19a Cap white then pale pinkish buff; gills white, becoming yellow and staining yellow when bruised; stalk apex pruinose and beaded with yellowish droplets.....	<i>Hygrophorus chrysaspis</i>
19b Cap, gills and stalk lacking the above combination of characters.....	20
20a Cap glutinous.....	21

20b Cap viscid but not glutinous.....	22
21a Cap mostly creamy white with a pale yellow to pale golden yellow or pale brownish yellow disc, paler near the margin.....	<i>Hygrophorus gliocyclus</i>
21b Cap pure white overall or slightly duller over the disc.....	<i>Hygrophorus eburneus</i>
22a Stalk apex scaly to fibrillose; growing with spruce.....	<i>Hygrophorus piceae</i>
22b Stalk apex not scaly to fibrillose; growing with oak or pine.....	23
23a Collected in the Northeast from Canada south to North Carolina; cap white overall or yellowish over the disc; growing with hardwoods, especially oak.....	<i>Hygrophorus sordidus</i>
23b Collected in the Southeast.....	24
24a Cap white with a yellowish or brownish disc; stalk pruinose at the apex and fibrillose below, moist or dry but not viscid; gills attached to subdecurrent, subdistant, sometimes forking midway.....	<i>Hygrophorus subsordidus</i>
24b Cap white overall; stalk smooth, viscid when fresh, with a white, cortina-like partial veil when very young that soon disappears; gills decurrent, moderately close.....	<i>Hygrophorus ponderatus</i>
25a Cap dry, pale bluish gray to pale gray with paler grayish white areas; flesh pale gray, thin; gills decurrent, subdistant to distant, sometimes forking.....	<i>Hygrocybe canescens</i>
25b Cap viscid or glutinous, not bluish gray to pale gray.....	26
26a Cap viscid, not glutinous.....	27
26b Cap glutinous.....	28
27a Cap pale grayish brown to brownish ashy, sometimes blackish on the disc, gills creamy white, intervenose.....	<i>Hygrophorus albofuscus</i>
27b cap pinkish buff to pale flesh-colored, sometimes with pale pinkish salmon or pale tan tints; gills white to whitish, sometimes with pinkish tints.....	<i>Hygrophorus pudorinus</i>
28a Cap mostly whitish to very pale grayish with a darker disc.....	29
28b Cap more richly colored overall.....	30
29a Cap white to whitish with a pale yellow or reddish yellow disc; stalk glutinous,	

fibrillose beneath the gluten; growing with pine.....	<i>Hygrophorus flavodiscus</i>
29b Cap white to whitish or very pale grayish with a brownish, fuscous, grayish or dark yellow disc.....	<i>Hygrocybe occidentalis</i> or <i>Hygrocybe paludosus</i>
30a Gills white at first, becoming yellowish in age.....	<i>Hgrophorus glutinosus</i>
30b Gill white at first, becoming tinged pinkish.....	<i>Hygrophorus laurae</i>
31a Cap some shade of green, often mixed with yellow or orange, cap and stalk exceedingly viscid to glutinous.....	<i>Hygrocybe psittacina</i>
31b Cap color not green.....	32
32a Cap pink to vinaceous pink, pinkish red to coral red or purplish red.....	33
32b Cap some shade of yellow, orange, red but not with pink or purplish tones, brown, gray to blackish or violet.....	40
33a Cap conical, umbonate and sharply pointed, margin often split at maturity, stalk pinkish to lavender on the upper two-thirds.....	<i>Hygrocybe calyptriformis</i>
33b Cap obtuse to convex, not umbonate or broadly umbonate, lacking the above combination of features.....	34
34a Mature cap small, 1-5 cm wide.....	35
34b Mature cap larger, 3-12 cm wide.....	36
35a Cap viscid, often depressed at the center; stalk viscid to glutinous; odor of the flesh skunk-like to sweetish or not distinctive.....	<i>Hygrocybe laeta</i>
35b Cap dry, sometimes umbonate; stalk dry; odor of the flesh not distinctive; growing on the ground in deciduous woods, especially with oak.....	<i>Hygrophorus subrufescens</i>
36a Cap pinkish buff to pale pinkish salmon; growing on the ground with conifers, especially spruce; flesh odor fragrant, sometimes of turpentine, or not distinctive.....	<i>Hygrophorus pudorinus</i>
36b Cap more vinaceous-pink to purplish; growing on the ground with deciduous or conifer trees; odor not distinctive.....	37
37a Growing in association with deciduous trees, especially oak.....	<i>Hygrophorus russula</i>
37b Growing in association with conifers, especially pine or spruce.....	38

38a	Partial veil present, white, cottony to fibrillose, leaving a sparse fibrillose ring near the apex, which becomes purplish red at maturity.....	<i>Hygrophorus purpurascens</i>	
38b	Partial veil absent.....		39
39a	Flesh white, staining yellow when cut or bruised; stalk sometimes yellow, especially at the base, in age or when bruised.....	<i>Hygrophorus erubescens</i>	
39b	Flesh whitish to pinkish, not staining when cut or bruised; stalk not yellow at the base, quickly staining yellow with KOH.....	<i>Hygrocybe capreolarius</i>	
40a	Cap mostly some shade of yellow, sometimes with brown or gray fibers, scales or tinges, especially over the disc.....		41
40b	Cap some shade of orange to red, brown, gray to blackish or violet.....		51
41a	Cap dry, with tiny yellow or brownish fibrillose scales.....		42
41b	Cap moist and lubricous or viscid, lacking scales.....		43
42a	Cap covered with small brownish olive scales with darker brown tips over a whitish to yellowish ground color.....	<i>Hygrophorus caespitosa</i>	
42b	Cap smooth when very young but soon developing minute and often distinct fibrillose scales except on the margin, sometimes depressed over the center.....	<i>Hygrocybe squammulosa</i>	
43a	Cap translucent-striate or striate, at least over the margin.....		46
43b	Cap lacking striations.....		44
44a	Cap small, 0.6-2.5 cm wide; margin lobed or crenate; gills decurrent, distant, yellowish to whitish at first, soon brown; taste of flesh unpleasant.....	<i>Hygrophorus subfuscescens</i>	
44b	Cap larger, 2-6 cm wide; gills not becoming brown.....		45
45a	Cap with brownish tinges over the disc, margin slowly staining black when bruised; flesh odor and taste pungent and unpleasant; stalk staining brownish when handled or bruised.....	<i>Hygrocybe tahquamenonensis</i>	
45b	Cap lacking brownish tinges over the disc, margin not staining black; flesh odor and taste not distinctive.....	<i>Hygrocybe marginata v. concolor</i>	

46a Cap very small, 6-12 mm wide.....	<i>Hygrocybe mycenoides</i>	
46b Cap larger, 1-7.5 cm wide.....		47
47a Cap conspicuously depressed to funnel-shaped; gills long-decurrent; stalk viscid, 3-5 cm long.....	<i>Hygrocybe nitida</i>	
47b Cap not conspicuously depressed over the center.....		48
48a Cap 2-7 cm wide, lemon-yellow to orange-yellow, sometimes orange; gills attached, close to subdistant, not intervenose; stalk 4-15 mm thick, often with one or two longitudinal grooves, yellow, yellow-orange or orange down to a whitish base.....	<i>Hygrocybe flavescens</i> complex	
48b Cap smaller, 1-5 cm wide.....		49
49a Stalk viscid; cap variously colored, often with green, olive or orange tinges; often growing in groups.....	<i>Hygrocybe psittacina</i>	
49b Stalk moist or dry but not viscid.....		50
50a Gills distant, intervenose.....	<i>Hygrocybe parvula</i>	
50b Gills subdistant, not intervenose.....	<i>Hygrocybe ceracea</i>	
51a Cap some shade of orange to red, sometimes brown over the disc.....		52
51b Cap some shade of brown, gray to blackish or violet.....		93
52a Cap some shade of orange, lacking reddish tones.....		53
52b Cap some shade of red, sometimes with orange tones.....		76
53a Some part of the fruitbody staining black when bruised or in age.....		54
53b Fruitbody not staining black when bruised or in age.....		55
54a Stalk slimy-viscid; cap not translucent-striate.....	<i>Hygrocybe singeri</i>	
54b Stalk moist or dry but not viscid, longitudinally striate or twisted- striate; cap translucent-striate.....	<i>Hygrocybe conica</i> v. <i>conica</i>	
55a Fruitbody collected in the Gulf States from Florida west to Texas.....		56
55b Fruitbody collected in a more northern location.....		57
56a Gill edges jagged or toothed like a saw blade; some caps may be dark red to reddish brown or with olive or grayish tints; reported		

from Mississippi and Texas.....	<i>Hygrocybe chamaeleon</i>	
56b Gill edges entire; some caps may be orange-red to red then reddish brown to nearly black in age; growing in clusters in sand near Florida Rosemary (<i>Ceratiola ericoides</i>) in coastal areas and barrier islands from Florida to Texas.....	<i>Hygrocybe andersonii</i>	
57a Cap very small or small, 6-30 mm wide.....		58
57b Cap larger, 2-12 cm wide.....		59
58a Cap 6-12 mm wide; translucent-striate to the disc, moist and lubricous but not viscid; gills bright yellow; reported from Tennessee.....	<i>Hygrocybe mycenoides</i>	
58b Cap 6-20 mm wide, often with a depressed center; sometimes crenate and translucent-striate, moist or dry; gills whitish to pale yellow; growing among sphagnum mosses; widespread in the Northeast.....	<i>Hygrocybe coccineocrenata</i>	
59a Cap 10-30 mm wide.....		60
59b Cap 2-12 cm wide.....		61
60a Cap viscid to slimy-viscid, translucent-striate.....	<i>Hygrocybe psittacina</i>	
60b Cap moist or dry but not viscid, not translucent-striate, tomentose to finely scurfy; gills typically strongly decurrent.....	<i>Hygrocybe cantharellus</i>	
61a Cap viscid to glutinous.....		62
61b Cap moist or dry but not viscid to glutinous.....		69
62a Cap translucent-striate, at least over the margin.....		63
62b Cap not translucent-striate.....		66
63a Cap 2-7 cm wide, lemon-yellow to orange-yellow, sometimes orange; gills attached, close to subdistant, not intervenose; stalk 4-15 mm thick, often with one or two longitudinal grooves, yellow, yellow-orange or orange down to a whitish base.....	<i>Hygrocybe flavescens</i> complex	
63b Cap 1-5 cm wide, not with the above combination of characters.....		64
64a Cap conspicuously depressed to funnel-shaped; gills long-decurrent; stalk viscid, 3-5 cm long.....	<i>Hygrocybe nitida</i>	
64b Cap not conspicuously depressed to funnel-shaped.....		65
65a Stalk 1.5-6 mm thick; cap variously colored, sometimes pink to peach, orange to		

olive-orange, or shade of gray, yellow or cream; flesh often skunk-like; growing in sphagnum bogs or on the ground in mixed woods, often among mosses.....	<i>Hygrocybe laeta</i>
65b Stalk 5-18 mm thick; cap variously colored, sometimes scarlet to orange-red, or orange to orange-yellow; flesh odor not distinctive.....	<i>Hygrocybe aurantiosplendens</i>
66a Cap very large, 6-12 cm wide, depressed over the center in age, disc with reddish brown or orange-brown tints; stalk 5-20 mm thick; growing on the ground under deciduous trees, especially oak or hickory.....	<i>Hygrophorus subsalmonius</i>
66b Cap smaller, 2-8(-10) cm wide, not depressed over the center in age.....	67
67a Cap obtusely to sharply conic when young, becoming campanulate in age, orange to ochraceous-orange usually mixed with orange-red; margin often upturned, wavy, and splitting radially at maturity.....	<i>Hygrocybe acutoconica</i> v. <i>acutoconica</i>
67b Cap broadly conic, convex to broadly convex, campanulate or nearly flat, sometimes splitting radially at the margin, with or without an umbo.....	68
68a Cap broadly conic to convex, becoming campanulate in age, bright to dull orange; gills yellow; stalk yellow, at times whitish at the base.....	<i>Hygrocybe auratocephala</i>
68b Cap convex to broadly convex, becoming nearly flat, sometimes with an acute umbo, orange to orange-yellow with an orange red disc or umbo, usually orange-red when young; gills white to very pale yellowish; stalk mostly white to whitish; growing on the ground or among sphagnum mosses under conifers.....	<i>Hygrophorus speciosus</i>
69a Gills lavender to purple.....	<i>Hygrocybe purpureofolia</i>
69b Gill not lavender to purple.....	70
70a Cap translucent-striate.....	71
70b Cap not translucent-striate.....	73
71a Cap orange to yellow-orange, fading to yellowish or whitish in age; disc concolorous, lacking brown tones; gills brilliant orange and remaining so after the cap has faded; flesh mild-tasting.....	<i>Hygrocybe marginata</i> v. <i>marginata</i>
71b Cap orange with an olive-brown to deep olive disc and mild-tasting flesh, or cap brilliant orange-red to reddish orange or bright orange and bitter-tasting flesh.....	72

72a Cap 2.5-6 cm wide, orange with an olive-brown to deep olive disc; flesh mild-tasting.....	<i>Hygrocybe marginata</i> v. <i>olivacea</i>
72b Cap 1-3.5 cm wide, brilliant orange-red to reddish orange or bright orange with a concolorous disc; flesh very bitter-tasting.....	<i>Hygrocybe mucronella</i>
73a Gills decurrent, salmon-buff to pale orange, often intervenose; cap 2-7 cm wide, salmon-orange to dull orange, orange-yellow or tawny, typically with a low, broad umbo; stalk 5-20(-30) mm thick, whitish to pale salmon-buff.....	<i>Hygrocybe pratensis</i>
73b Gills attached, not decurrent.....	74
74a Gills distant, edges typically paler than the faces; cap smooth, not scurfy or developing fibrillose scales at maturity, sometimes cracking as it dries; flesh odor sweet, resembling honey, sometimes weak or only noticeable when rubbed or when drying.....	<i>Hygrocybe reidii</i>
74b Gills close to subdistant; cap becoming scurfy or developing fibrillose scales at maturity; flesh odor not distinctive.....	75
75a Cap smooth when very young but soon developing minute and often distinct fibrillose scales except on the margin; spores primarily binucleate.....	<i>Hygrocybe squamulosa</i>
75b Cap smooth, becoming fibrillose-scurfy at maturity but not forming scales; stalk up to 7 cm long when growing among mosses; spores primarily uninucleate.....	<i>Hygrocybe miniata</i>
76a Cap diameter very small to small, 5-33 mm wide.....	77
76b Cap diameter medium to large, 2-12 cm wide.....	82
77a Growing in clusters in sand near Florida Rosemary (<i>Ceratiola ericoides</i>) in coastal areas and barrier islands from Florida to Texas; caps may be orange-red to red then reddish brown to nearly black in age.....	<i>Hygrocybe andersonii</i>
77b Growing solitary or groups but not in clusters.....	78
78a Cap viscid to glutinous.....	79
78b Cap moist or dry but not viscid to glutinous.....	80
79a Stalk reddish nearly overall or at least on the upper portion, yellowish to whitish below, fading to yellow overall in age; cap scarlet to reddish orange; gills attached	

- with a decurrent tooth; in grassy areas or deciduous woods; widely distributed.....*Hygrocybe minutula* and *Hygrocybe subminutula*
- 79b Stalk lemon-yellow to deep yellow; cap red or sometimes yellowish; gills subdecurrent; on soil; reported from Florida and Michigan; rare.....*Hygrocybe hondurensis*
- 80a Collected along the Gulf Coast from Florida to Texas, growing on leaf litter, soil, and decaying stumps in mixed bottomland forests.....*Hygrocybe mississippiensis*
- 80b Collected in the Northeast.....81
- 81a Cap margin translucent-striate, bright red to orange-red, often developing brownish tones in age; gills decurrent, subdistant to distant; growing in moist habitats, often among sphagnum mosses in bogs and fens.....*Hygrocybe coccineocrenata*
- 81b Cap margin not translucent-striate, orange-red, often with a yellow margin, fading to dull orange, not developing brownish tones in age; gills attached, close to subdistant; growing in grassy areas and woodlands.....*Hygrocybe calciphila*
- 82a Cap, stalk, gills or flesh staining black in age or when bruised.....83
- 82b Cap, stalk, gills or flesh not staining black in age or when bruised.....85
- 83a Growing in sand dunes, often buried up to the cap in sand; cap scarlet to cherry-red, slowly turning black in age; flesh slowly staining black on exposure; gills close, yellow at first, soon infused with salmon then slowly becoming black.....*Hygrocybe conicoides*
- 83b Growing in grassy areas, bogs, fens, or woodlands but not in sand dunes.....84
- 84a Cap obtusely conical to broadly conical, usually with a distinct umbo, strawberry-red with violet-brown tones, staining black when handled or bruised or soon after picking;; margin radially streaked and translucent-striate, becoming deeply incised or lobed; flesh odor usually strongly aromatic; gills, stalk and flesh slowly staining black when bruised or in age.....*Hygrocybe conica* v. *atrosanguinea*
- 84b Cap sharply conical then campanulate, usually with a distinct umbo, orange-red to red or orange, slowly staining black when bruised or in age; margin not radially streaked, translucent-striate; flesh odor not distinctive; gills, stalk and flesh slowly staining black when bruised or in age.....*Hygrocybe conica* v. *conica*

85a Cap sharply conic, viscid to glutinous, margin split in age.....	86
85b Cap obtusely conic, convex or nearly flat, sometimes depressed and funnel-like.....	87
86a Cap shiny and brilliant red.....	<i>Hygrocybe acutoconica</i> v. <i>cuspidata</i>
86b Cap dull, orange-red to orange.....	<i>Hygrocybe acutoconica</i> v. <i>acutoconica</i>
87a Cap large, 3-12(-15) cm wide.....	88
87b Cap medium, 1-5 cm wide.....	90
88a Cap viscid to lubricous, 3-12(-15) cm wide, deep red; flesh pale yellow to whitish; gills narrowly attached to nearly free; stalk fibrillose-striate; widely distributed throughout eastern North America.....	<i>Hygrocybe punicea</i>
88b Cap moist or dry but not viscid, 3-8 cm wide.....	89
89a Cap convex to nearly flat and not depressed at maturity, smooth, bright red; flesh red to reddish orange; gills attached, close to subdistant; stalk base often coated with white mycelium; widely distributed in eastern North America.....	<i>Hygrocybe coccinea</i>
89b Cap convex, becoming depressed to funnel-shaped, fibrillose to fibrillose-scaly, bright red, fading to reddish orange, margin uplifted and wavy in age; gills attached to decurrent, subdistant to distant; stalk base not coated with white mycelium; collected in Ohio and West Virginea south to South Carolina and Tennessee.....	<i>Hygrocybe appalachianensis</i>
90a Gills distant, attached; flesh odor sweet, resembling honey, sometimes weak and only noticeable when rubbed; cap scarlet with a narrow yellow-orange margin at first; collected in the Northeast.....	<i>Hygrocybe reidii</i>
90b Gills close to subdistant, or rarely distant and not with the above combination of characters.....	91
91a Collected along the Gulf Coast from Florida to Texas.....	<i>Hygrocybe chamaeleon</i>
91b Collected in the Northeast or throughout eastern North America.....	92
92a Cap smooth when very young but soon developing minute and often distinct fibrillose scales except on the margin; spores primarily binucleate; collected in the Northeast.....	<i>Hygrocybe squamulosa</i>
92b Cap smooth when moist, becoming fibrillose-scurfy when dry; spores uninucleate;	

widely distributed throughout eastern North America.....	<i>Hygrocybe minata</i>
93a Mature cap large, 6-13 cm wide.....	94
93b Mature cap small to medium, 1-9 cm wide.....	100
94a Cap moist or dry, not viscid or glutinous, pale brown to grayish brown, often umbonate; margin often split at maturity; growing under deciduous trees; reported from New York.....	<i>Hygrocybe fornicata</i>
94b Cap viscid or glutinous.....	95
95a Cap glutinous.....	96
95b Cap viscid, not glutinous.....	98
96a Cap pinkish buff with a pale brown to grayish brown disc at first, becoming darker grayish overall in age; gills white, usually greenish spotted at maturity; stalk whitish to grayish with grayish bands on the lower portion when dry; widely distributed and growing in mixed woods.....	<i>Hygrophorus paludosus</i>
96b Cap pale brown to rusty brown or olive-brown to blackish brown; margin paler.....	97
97a Cap pale brown to rusty brown over the disc, dull orange to salmon-buff along the margin; growing in deciduous woods, especially with oak or hickory.....	<i>Hygrophorus subsalmonius</i>
97b Cap olive-brown to blackish brown; margin paler; growing on the ground under conifers, especially white pine.....	<i>Hygrophorus fuliginous</i>
98a Flesh odor unpleasant, resembling coal tar.....	<i>Hygrophorus camarophyllus</i>
98b Flesh odor not distinctive.....	99
99a Flesh pinkish cinnamon or darker brown; gills pinkish when young, becoming dark reddish brown to orange-brown at maturity; cap chestnut-brown to pecan-brown; stalk brown; growing with oaks; reported from Michigan and Tennessee.....	<i>Hygrophorus kauffmanii</i>
99b Flesh white; gills white to very pale yellow; cap dark pinkish brown to pinkish cinnamon, paler and often with rosy pink tints toward the margin at maturity, paler overall in age; stalk white; growing with conifers or deciduous trees, especially oak; widely distributed in eastern North America.....	<i>Hygrophorus roseibrunneus</i>
100a Mature cap small, 1-3.5 cm wide.....	101

100b	Mature cap medium, 4-9 cm wide.....	104
101a	Cap margin faintly to distinctly translucent-striate and often crenate; cap cinnamon-brown to pinkish brown, darker in age; gills distant and colored like the cap; stalk colored like the cap or blackish.....	<i>Hygrocybe hymenocephala</i>
101b	Cap margin not translucent-striate, not crenate, and not with the above combination of characters.....	102
102a	Flesh odor strong of bitter almonds, almond extract, or cherry pits; cap viscid, fibrous, grayish brown to brown, gills attached to slightly decurrent, distant, alternately long and short; stalk 5-15 cm long, 4-6 mm thick, colored like the cap or somewhat paler, especially toward the base, minutely scurfy-squamulose, crooked, base pointed, gregarious on the ground in pine woods.....	<i>Hygrophorus amygdalinus</i>
102b	Flesh odor not distinctive.....	103
103a	Gills attached to subdecurrent; stalk 5-12 mm thick, cap surface roughened with tiny scales and more so near the margin; reported from Michigan.....	<i>Hygrocybe atro-olivacea</i>
103b	Gills decurrent; stalk 3-6 mm thick; cap surface typically smooth, sometimes with small scales; collected in conifer woods; widely distributed.....	<i>Hygrocybe recurvata</i>
104a	Growing in sand dunes, often buried up to the cap in sand; cap scarlet to cherry-red, slowly turning black in age; flesh slowly staining black on exposure; gills close, yellow at first, soon infused with salmon then slowly becoming black.....	<i>Hygrocybe conicoides</i>
104b	Growing in grassy areas, bogs, fens, conifer, deciduous, or mixed woodlands, but not in sand dunes.....	105
105a	Cap obtusely conical to broadly conical, usually with a distinct umbo, strawberry-red with violet-brown tones, staining black when handled or bruised or soon after picking; margin radially streaked and translucent-striate, becoming deeply incised or lobed; flesh odor usually strongly aromatic; gills, stalk and flesh slowly staining black when bruised or in age.....	<i>Hygrocybe conica v. atosanguinea</i>
105b	Cap not as above and not with the above combination of characters.....	106
106a	Cap bluish gray to violet-gray or grayish violet, often becoming brownish violaceous	

over the disc as specimens mature, surface viscid to lubricous, smooth, translucent-striate along the margin or halfway up to the center; gills pale gray to bluish gray or dull violaceous gray.....	<i>Hygrocybe lacmus</i>
106b Cap not bluish gray to violet, not becoming brownish violaceous over the disc, and not with the above combination of characters.....	107
107a Growing in burned areas including blueberry fields and deciduous woodlands, sometimes with staghorn sumac; flesh pale greenish yellow, odor radish-like or not distinctive; gills close, yellow, edges sometimes serrate or eroded; cap conic, olive-brown, margin often split at maturity.....	<i>Hygrocybe spadicea</i>
107b Growing in various habitats but not in burned areas and not with the above combination of characters.....	108
108a Cap broadly convex with a sharp conic umbo and a somewhat flaring margin, viscid, smooth, dull lead gray over the umbo, pale brownish toward the margin; cuticle separable in shreds; close to subdistant, intervenose; stalk white; growing on the ground under conifers; reported from Michigan.....	<i>Hygrocybe americana</i>
108b Cap not as above and not with the above combination of characters.....	109
109a Cap viscid or glutinous.....	110
109b Cap moist or dry but not viscid or glutinous.....	116
110a Cap translucent-striate at least over the margin, surface glutinous when fresh, shiny when dry, dark brown to grayish brown; gills attached, subdistant, intervenose, white to grayish white.....	<i>Hygrocybe irrigata</i>
110b Cap not translucent-striate.....	111
111a Stalk coated with fine dark gray to brown punctations overall, white to pale brown; cap gray to grayish brown or brown over the center, paler toward the margin; growing with conifers, especially spruce and fir.....	<i>Hygrophorus pustulatus</i>
111b Stalk lacking punctations.....	112
112a Stalk dry, gills decurrent, subdistant, intervenose; cap dark gray-brown when young, becoming pale cream in age; growing on the ground with hemlock and white birch,	

reported only from Nova Scotia.....	<i>Hygrocybe murina</i>
112b Stalk viscid or glutinous and not with the above combination of characters.....	113
113a Cap reddish brown to brown only over the disc and buff outward to the margin; gills attached to subdecurrent, close to subdistant, white; stalk white to very pale ochraceous; growing under conifers, especially spruce and among sphagnum mosses in bogs; reported from Ontario and Michigan.....	<i>Hygrophorus discoideus</i>
113b Cap not reddish brown to brown only over the disc and buff outward.....	114
114a Cap olive-brown to red-brown when young, fading to pale olive-brown to yellow-brown with dull yellow along the margin when mature; gills decurrent, subdistant, yellow, typically venose on the faces and sometimes intervenose; stalk glutinous, yellowish to pale ochraceous orange; growing under conifers, especially pine.....	<i>Hygrophorus hypothejus</i>
114b Cap blackish brown to dark olive-brown; gills attached to subdecurrent, white to cream.....	115
115a Cap 3-6.5 cm wide, dark brown to black and ashy gray at the margin; growing on the ground under spruce or hemlock; stalk covered from the base nearly to the apex by a double sheath; outer sheath glutinous; inner sheath composed of appressed blackish fibers that break into ragged zones encircling the stalk, often with an evanescent glutinous annular zone.....	<i>Hygrophorus olivaceoalbus</i>
115b Cap 4-13 cm wide, blackish brown at first, becoming olivaceous brown with a paler margin; growing on the ground under pine; stalk glutinous below the apex from a slime veil.....	<i>Hygrophorus fuliginus</i>
116a Flesh odor distinctive, like brown sugar, fruity, faintly or strongly pungent and unpleasant, ammonia-like or medicinal, sheep-like, or skunk-like.....	117
116b Flesh odor not distinctive.....	120
117a Flesh odor pungent and unpleasant like ammonia or medicinal, taste acidic; cap grayish brown and darkening in age; stalk pale brown to ivory-brown; gills attached to nearly free, subdistant, typically intervenose, ivory.....	<i>Hygrophorus nitratius</i>

- 117b Flesh odor not as above or not with the above combination of characters.....118
- 118a Flesh odor skunk-like; cap yellowish brown to ochraceous, sometimes tinged green, margin somewhat translucent-striate; gills attached, distant, sometimes intervenose, grayish violaceous or grayish purple; stalk colored like the cap; growing among sphagnum mosses in swamps, bogs and fens.....*Hygrocybe mephitica*
- 118b Flesh odor not skunk-like, not with the above combination of characters.....119
- 119a Flesh odor like brown sugar, taste slightly alkaline; cap dark gray-brown to nearly black, fibrillose; gills attached, distant, whitish to grayish brown, bruising reddish; stalk colored like the cap or darker; growing in deciduous woods, especially with oak; spores globose to subglobose.....*Hygrocybe subovina*
- 119b Flesh odor fruity, faintly like ammonia, or sheep-like, taste acidic; cap dark brown to dark grayish brown or sometimes paler, radially appressed-fibrillose; gills attached to nearly free, subdistant, whitish to pale grayish brown, slowly staining reddish when exposed; stalk colored like the cap or pale brown with a whitish base; growing in deciduous woods; spores elliptical to subovoid.....*Hygrocybe ovina*
- 120a Cap margin translucent-striate.....121
- 120b Cap margin not translucent-striate.....122
- 121a Gills orange; cap olive-brown to deep olive in the center, usually with dull orange tones near the margin.....*Hygrocybe marginata*
- 121b Gills pale brown or whitish with a pinkish brown tint, distinctly decurrent, strongly intervenose; cap reddish brown to orange-brown, cinnamon-brown or date brown, paler toward the margin; growing with beech or oak.....*Hygrocybe colemanniana*
- 122a Cap dark gray to gray-brown, distinctly broadly umbonate, surface appressed-fibrillose to appressed-scaly; gills subdecurrent, subdistant to distant, sometimes intervenose, white to pale grayish; stalk apex silky white above the fibrillose ring zone, streaked with dark gray-brown fibrils below.....*Hygrophorus inocybiformis*
- 122b Cap not as above, not with the above combination of characters.....123
- 123a Gills pale buff, close to subdistant, intervenose; cap tawny brown to cinnamon-brown,

darker when wet; stalk whitish to pale brown; collected in deciduous or mixed woods in the Southeast.....*Hygrocybe deceptiva*

123b Gills pale gray to dull gray, subdistant, not intervenose; cap grayish brown to pale gray; stalk white; collected in woods, swamps, and sphagnum bogs; widespread in the Northeast.....*Hygrocybe basidiosa*