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Cantharellus Notebook 1

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Smith, Alexander H. and Elizabeth S. Morse. The
genus *Cantharellus* in Western United States.
Mycologia 39: 497-534. 1947.

SOUTHEASTERN SPECIES OF CANTHARELLUS

aurantiacus Fr. (see CLITOCYBE)

cibarius Fr.

cinnabarinus Schw.

clavatus Fr.

floccosus Schw.

friesii Qué1.

infundibuliformis Fr.

lignatilis B. & C.

minor Pk. (=cinnabarinus Schw.)

Petersii B. & C.

purpurascens Hesler

sinuosus Fr.

umbonatus Fr.

No. 21500

No. 22195

CANTHARELLUS CIBARIUS Fr.

Syst. Myc. 1:318. 1821

Pileus 2-8 cm. broad, convex, expanding-depressed, finally broadly infundibuliform, not viscid, slightly hygrophanous, "capucine yellow," "antimony yellow" when dry, "light cadmium" when wet, disk fading to "light orange yellow," matted-fibrillose (under lens), fibrillose or velvety glabrescent, margin incurved, at times somewhat wavy and lobed. Flesh white or tinted yellowish, becoming orange-yellow where cut, moderately thick, firm; odor fragrant, taste astringent. Lamellae decurrent, rather close, narrow, thick, fold-like, dichotomously forked, "light orange yellow," "light buff" to "warm buff." Stipe 3-5 cm. x 8-15 mm., whitish or pale buff, stained orange, usually concolor to the lamellae, pruinose-tomentose, dry, equal or apex enlarged, solid.

Spores 7-10 x 4-5⁽⁶⁾₁ μ, ellipsoid, smooth, non-amyloid, "pale pinkish buff" to "pale pinkish cinnamon" in mass. Pleurocystidia and cheilocystidia none.

Habitat and Distribution. - On soil, in deciduous, conifer, or mixed woods, throughout the Southeast, June-August.



24366 - *Cantharellus cibarius* Fr.

23214 - *Cantharellus cibarius* Fr.



22963 - *Cantharellus cibarius* Fr. - $\times \frac{5}{6}$



19171 - *Cantharellus cibarius* Fr.



22077 - *Cantharellus cibarius* Fr.

CANTHARELLUS CINNABARINUS Schw.

Amer. Phil. Soc. Trans. II:4:153. 1832

Pileus 1-4 cm. broad, convex, becoming expanded-depressed, often irregular, glabrous, "scarlet" or "flame scarlet," often faded, entirely faded in dried specimens. Flesh thin, whitish or "orange-pink" toward surface; odor and taste mild. Lamellae long-decurrent, dichotomously forked, rather distant, narrow and ridge-form, intervenose, "bittersweet pink" or yellowish. Stipe 2-4 cm. x 4-6 mm., solid or subcavernous, terete or compressed at apex, equal or tapering downward, tough-fleshy, glabrous, even, "flame scarlet" or paler.

Spores 8-10 x 4-5.5 μ , smooth, "chatenay pink" in mass.

Habitat and Distribution. - On soil, in deciduous and conifer woods, throughout southeastern United States, June-August.



22999

22999 - *Cantharellus cinnabarinus* Schw.

27063 - *Cantharellus cinnabarinus* Schw.



19169. *Cantharellus cinnabarinus* Achw.

CANTHARELLUS CLAVATUS Fr.

Syst. Myc. 1:322. 1821

Illustration:

Plate

Smith & Morse, Mycologia 39, fig. 2. 1947

Pileus compound, composed of several (10-25) flabelliform lobes, 15 cm. or more across, near "honey yellow" with a faint olive tinge, dingy brownish in KOH, glabrous (appearing appressed-silky under lens). Flesh somewhat brittle, whitish, no color change in KOH, medium thick; odor and taste mild. Lamellae thick, ridged, intervenose-reticulate, "benzo brown," paler toward margin, brownish-orange in KOH.

Spores 9-12 x 4.5-5 μ , minutely rough, ellipsoidal, often apiculate, in mass: "chamois" or "warm buff."

Habitat and Distribution. - On soil, in clusters, in deciduous and conifer woods, Tennessee and North Carolina, October-December.



19465 - *Cantharellus clavatus* Fr.

CANTHARELLUS FLOCCOSUS Schw.

Amer. Phil. Soc. Trans. II. 4:153. 1832

Pileus 5-9 cm. broad, "rufous" to "orange rufous," with paler scales, infundibuliform-vase shaped, margin even, more or less wavy. Flesh medium thin, white; odor and taste mild. Lamellae ridge-like or fold-like, forking and anastomosing, deeply decurrent (often to base), "cream color," "honey yellow," "clay color," to "light buff." Stipe 1-5 cm. x 12-25 mm., not distinct from pileus, light buff, often darker below.

Spores 10-15 x 5-6.5 μ , ellipsoid, smooth, obliquely apiculate, non-amyloid, "cinnamon" in mass. Pleurocystidia and cheilocystidia not seen.

Habitat and Distribution. - On soil, in conifer and mixed woods, Tennessee, North Carolina, and Alabama, May-September.



Cantharellus floccosus Achw.

Photo by Alan Hurlman
June 1963



24371 - *Cantharellus floccosus* Schw.



24371 - *Cantharellus floccosus* Schw.

21833 - *Cantharellus floccosus* Achw.



21389 - *Cantharellus floccosus* Schw.

21358 - *Cantharellus floccosus* Schw.

CANTHARELLUS FRIESII Qué1.

Champ. Jura Vosg. 1: . 1872

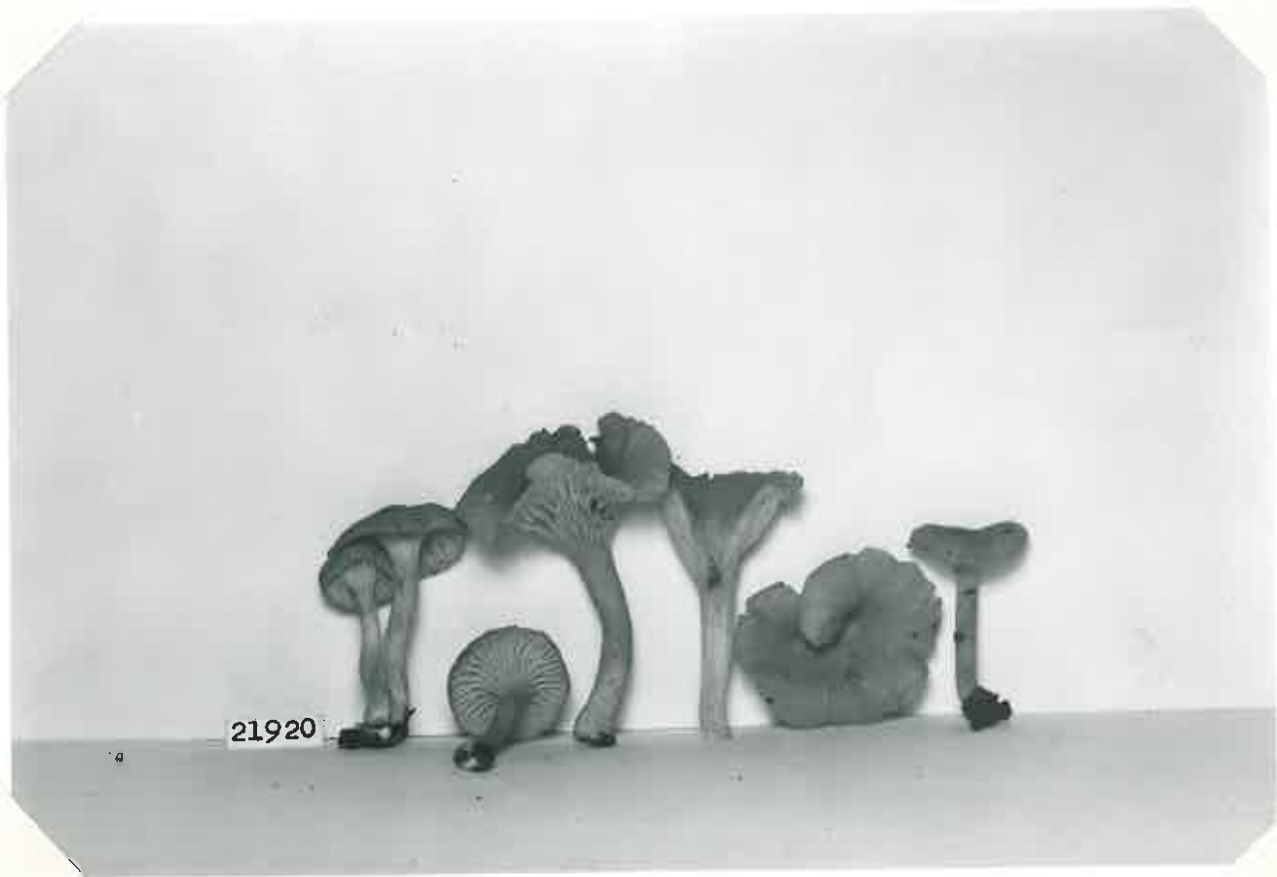
Pileus 1-4 cm., convex-plane, finally margin upturned and cup-shaped, hygrophanous, "carnelian red" when young or when moist, fading to "flesh-ocher" or "salmon-color" when mature and dry, densely appressed-fibrillose, glabrescent in rains, margin even, at times plicate. Flesh whitish or tinged reddish, thin; odor mild, taste slightly astringent then acrid. Lamellae decurrent, at first pale orange buff ("capucine buff"), finally "bittersweet orange" or paler, thick, narrow, at times ridge-form, subdistant, often forked and anastomosing, edges blunt. Stipe 1.5-4 cm. x 3-6 mm., concolor with pileus, canescent, base white-matted-fibrillose to floccose, solid, becoming hollow, equal or tapering downward.

Spores 6-8 x 3.5-5 μ , ellipsoid, "light ochraceous-salmon" or pale pinkish in mass, "amyloid (grayish-blue in Melzer's solution). Pleurocystidia clavate, 28-40 x 4-7 μ ; cheilocystidia similar.

Habitat and Distribution. - On soil, under beech and oak, Tennessee, July.



21937- *Cantharellus friesii* Quél.



21920 - *Cantharellus friesii*?

CANTHARELLUS INFUNDIBULIFORMIS Fr.

Epier. Syst. Myc., p. 366. 1838

Pileus 1.5-5 cm. broad, umbilicate-perforated into stipe, "antimony yellow," or "ochraceous buff" to "ochraceous orange," at maturity often darker ("snuff brown" to "Saccardo's umber"), pruinose (under lens), often lobed, more or less plicate-striate. Flesh thin, orange to buff; odor and taste mild. Lamellae decurrent, narrow, more or less ridge-form, strongly intervenose, dichotomously branched, distant, buff colored (like pileus), becoming pale grayish-lilac or cinereous, pruinose. Stipe 2-6 cm. x 4-8 mm., concolor to pileus, tapering downward, glabrous, hollow throughout, lightly stuffed when young, often compressed, base yellow-mycelioid.

Spores 8-11 x 6-8 μ , ellipsoidal, smooth; color in mass: "light buff" to cream color, non-amyloid (yellowish in Melzer's solution). Pleurocystidia and cheilocystidia none.

Habitat and Distribution. - On soil and humus, conifer woods, Tennessee and North Carolina, probably throughout the Southeast, June-October.

Discussion. - Smith suggests my No. 20914 may be C. lutescens. Should description separate 2 color-forms (as in notes for No. 22343)?

24878

CANTHARELLUS INFUNDIBULIFORMIS Fr.

Photo

Pileus 1-4 cm., plane then upturned, with a hole in center, "ochraceous orange". Context white.

Lamellae decurrent, "ochraceous orange", finally a dull cinereous.

Stipe "ochraceous orange", hollow.



13941 - *Cantharellus infundibuliformis* Fr.

(Photo by Milliken)



24878 - *Cantharellus infundibuliformis* Fr.



22076 - *Cantharellus infundibuliformis* Fr. ?



20914 - *Cantharellus infundibuliformis* Fr.

C. luteocanus ?

CANTHARELLUS MINOR Pk.

New York State Cab. Ann. Rept. 23:122. 1872

(N.A.F. 9:169)

"Pileus thin, fleshy, convex to expanded, irregular or depressed at times, gregarious, 1-2.5 cm. broad; surface glabrous, subrugose, ochraceous to orange; margin inrolled at first, entire or repand: context thin, pallid, mild, at length faintly peppery; lamellae decurrent, distant, very narrow, often forking, but seldom anastomosing, concolorous: spores ovoid, somewhat one-sided, smooth, hyaline with a faint yellowish tinge, 8-9 x 4-5 μ : stipe slender, cylindric, equal, glabrous, shining, slightly striate at times, concolorous, usually solid, 2-5 cm. long, 2-4 mm. thick."

Habitat and Distribution. - On soil, deciduous woods, North Carolina, Tennessee and Alabama.

CANTHARELLUS PETERSII Berk. & Curt.

Ann. Mag. Nat. Hist. III:4:294. 1859

(N.A.F. 9:168)

"Pileus small, circular, centrally stipitate, depressed, 2.5 cm. broad; surface dealbate, opaque, subzonate, glabrous; margin concolorous, involute: context thin, white; lamellae decurrent, distant, moderately broad, interveined: spores ovoid, smooth, hyaline, obliquely apiculate, 8-9 x 5-6 μ : stipe slender, 2.5 cm. long, 2 mm. thick, terete, equal, glabrous-dealbate."

Habitat and Distribution. - Among moss, base of red cedar trees, Alabama.

CANTHARELLUS PURPURASCENS Hesler

Lloydia 6:248. 1943

Illustration:

Plate

Pileus 4-12 cm. broad, plane or slightly depressed, disk "ochraceous orange," elsewhere "salmon orange," staining purplish when handled or bruised, appressed-fibrillose, dry, margin even. Flesh thick on disk, thin outward, white, tinged purplish when cut; odor and taste mild or slight. Lamellae decurrent, narrow, thin, close, dichotomously forked, white, purplish when bruised. Stipe 4-10 cm. x 8-20 mm., tapering downward, concolor to pileus, purplish when bruised or handled, dry, appressed-fibrillose, solid.

Spores (8) 9-12 (15) x 3.5-4.5 μ , ellipsoid, apiculate, brownish in iodine, color in mass near "honey yellow"; basidia 45-55 x 7-9 μ , 4-spored. Pleurocystidia brownish, clavate-subfusiform, often flexuous, 40-100 x 7-10 μ .

Habitat and Distribution. - Gregarious to scattered, on soil, in deciduous and pine-hemlock woods, *Indian Creek, near Bryson City, N.C.*

Discussion. - Type specimen collected near Bryson City, Indian Creek, Great Smoky Mountains National Park, North Carolina, August 11, 1940, L. R. Hesler, no. 12793, deposited in The University of Tennessee Herbarium. After being stored for several months, the specimens have assumed a fenugreek odor. In addition to the type, collections (nos. H-13977 and H-14337) were taken from the same station on August 24, 1941, and August 23, 1942.

Both macroscopic and microscopic characters distinguish this species. The peculiar color change and the conspicuous cystidia seem to be unique in this genus. The thin, narrow gills suggest relationship to C. aurantiacus Fr., Clearly, C. purpurascens is a clitocyboid species, and it is well known that some authors remove these forms to the genus Clitocybe. But because of the dichotomously forked gills and the cystidia, it seems best to attach it to the genus Cantharellus. No taxonomic purpose would be served by referring this species to Clitocybe.

14337 - *Cantharellus purpurascens* Hesler

CANTHARELLUS No. 8039

Pileus 1.5-2.5 cm. broad, infundibuliform, near "smoke gray" to "light drab," densely and coarsely fibrillose. Flesh concolor; odor slightly fragrant, taste unpleasant, strong, like fish. Lamellae decurrent, thick, anastomosing, concolor with a slight ochraceous tint. Stipe 2-3 cm. x 3-5 mm. (8 mm. when compressed), concolor, fibrillose, solid.

Spores

Habitat and Distribution. - On soil, A. J. Sharp's lawn, Knox County, Tennessee, June 7, 1959.

CANTHARELLUS NO. 21500

Pileus 6 cm. broad, infundibuliform, near "hair brown," surface minutely ridged and rivulose, glabrous, dry, margin wavy-lobed and uplifted. Flesh thick on disk, thin on margin, pallid ashy; dark in KOH; odor fragrant (of ripe pears), taste mild. Hymenium of anastomosing ridges, almost poroid, "hair brown" but whitish or grayish pruinose, dark brown in KOH. Stipe 6 cm. x 20 mm., clavate-enlarged below, concolor, pallid-ashy within, slightly ridged, solid.

Spores 7.5-9 x 4.5-5.5 μ , ellipsoid, smooth (spore-print failed), non-amyloid. Pleurocystidia scattered, imbedded, cylindric, 42-61 x 5.5-6.5 μ ; cheilocystidia not observed.

Habitat and Distribution. - In rhododendron thicket, North Carolina, August.

Observations. - Near C. pseudoclavatus Smith (Mycologia 39:505), which has spores 9-12 μ long, no cystidia, and pileus sordid alutaceous. *May be a form of C. infundibuliformis.*

CANTHARELLUS NO. 22195

Pileus 4-8 cm. broad, folded, lobed, and branched, giving appearance of several pilei from one stipe, tomentose-matted or fibrillose, glabrescent, hygrophanous, whitish when dry, watery-brown when wet, no change in KOH, margin rugulose, even. Flesh whitish, flaccid, no change in KOH; odor alkaline, taste alkaline, soon bitter. Lamellae decurrent, narrow, ridge-form, pale cream, moderately close, dichotomously forked. Stipe 2-3 cm. x 8-12 mm., matted-fibrillose, white, stuffed-hollow.

Spores 6-7 x 3.5-4 μ , pyriform, smooth, white in mass, non-amyloid.

Habitat and Distribution. - In deciduous woods, Kentucky, October.

Discussion. - Cf. C. Petersii B. & C.

CANTHARELLUS No. 22575

Pileus 1.5-3 cm. broad, convex, "honey-yellow" to "yellow-ochre," margin even. Flesh medium thin, concolor to pileus; odor and taste mild. Lamellae arcuate-decurrent, thin, subdistant to nearly close, medium broad, at times anastomosing and thickish. Stipe 3-4 cm. x 4-7 mm., at times compressed, concolor to pileus or paler, solid, becoming tubular, flexuous, equal.

Spores 6.5-8 x 3.5-5 μ , ovoid to ellipsoid, smooth, yellowish in Melzer's; spore-print failed.

Habitat and Distribution. - Humus, Tennessee, June.



22575 - *Cantharellus*

CANTHARELLUS No. 23111

Pileus 1-1.5 cm., convex, not depressed nor perforated, "antimony yellow," margin even. Flesh concolor, thin; odor and taste mild. Lamellae arcuate-decurrent, distant, medium broad, "light cadmium," alternately long and short, rather thick, not forked. Stipe 2-3 cm. x 1-2 mm., "antimony yellow," glabrous, equal, hollow.

Habitat and Distribution. - On soil, deciduous woods, Greenbrier, August.

Cantharellus

HYGROPHORUS

(Bigelow-7229)

Notes by Bigelow

Pileus 1-3 cms. broad, plane with a narrowly decurved margin, becoming plano-depressed, margin remaining decurved, finally infundibuliform with margin arched and undulate.

Gills long decurrent, subdistant to nearly distant, forked and anastomosing in age, 0.5-2 mm. broad, not fading with cap.

Stipe 2.5-5 cms. long, 3-9 mm. at apex, apex enlarged and tapering down to narrowed base, often curved and somewhat flexuous, compressed and fluted at times.

Notes by Hesler

Spores (7) 8-10 (11) x 4-5 μ (from deposits), ellipsoid, often somewhat inequilateral, smooth, "mustard yellow" in deposits, golden yellow in Melzer's reagent. Basidia 44-53 x 5.5-8 μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama of short-celled hyphae, 3-5 μ broad, undulating parallel. Cuticle a cutis but with scattered to numerous, septate, more or less constricted, colorless hyphae, the terminal element usually clavate-cystidioid, at times erect, more often repent. Pileus trama of hyphae which are chiefly periclinally disposed. Clamp connections present.

Color of pileus, lamellae, and stipe not given.

~~Genus Cantharellus? of Bigelow
C. wrightii (no 7)~~

Genus
HYGROPHORUS (cf. [^]Cantharellus also)

Bigelow-#7015

Notes by Bigelow

Pileus 5-10 mm., convex, becoming plane with a narrowly decurved margin, not striate, slightly depressed at times, glabrous, hygrophorous, "orange" moist, orange-buff faded, not viscid, flesh thin, concolor with cap moist and faded. No odor and taste.

Lamellae decurrent, subdistant, forked very narrow, not intervenose, "orange", edges even, somewhat obtuse, straight.

Stipe 1.5-2 cms. long, 3 mm. at apex, base slightly narrowed, central, hollow, dry, glabrous, "deep chrome."

Notes by Hesler

Microscopic characters as in Bigelow-7229.

Cantharellus No. 24365

Photo

Hesler's woods under beech July 9-'61

Pileus "ochraceous orange", wavy-upturned, perforated.
Lamellae "ochraceous salmon", thick, more or less ridge-like,
forked, anastomosed.

Stipe "ochraceous orange."



24365 - *Cantharellus*

Cantharellus No. 24483

on spruce log, Indian Gap, Aug. 8-'61

Pileus hygrophanous, dingy yellow, with minute dark fibrils, the ends of which may recurve (scale-like), dull when dry, depressed-umbilicate, faintly striate. Context thin, pallid; odor and taste mild.

Lamellae arcuate-decurrent, "primuline yellow", subdistant, medium broad, rather thick and blunt, none forked, many lamellulae.

Stipe more or less yellowish to dingy, curved, glabrous, base white-strigose, hollow, equal.

(Spore deposit failed)



Cantharellus

Photo by A. R. Shields
Cades Cove
Aug. 1961