

## NOTES ON SOUTHEASTERN AGARICALES, I<sup>1</sup>

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Those species which are marked with an asterisk (\*) have been found in The Great Smoky Mountains National Park.

***Collybia agricola*** Murrill. *Pileus* 1-3 cm. broad, convex, finally plano-convex, at times somewhat depressed, hygrophanous, "pale pinkish buff" when dry, "orange cinnamon" to "cinnamon" or "mikado brown" when wet (Smith says darker when fresh), greenish in 15% KOH, glabrous but appearing slightly velvety and atomate under lens, drying to leave a dark zone near margin and a darker disk, margin even when dry, striatulate when wet. *Flesh* thin, pliant, "pinkish buff" or paler, greenish olive in 15% KOH; *odor* and *taste* mild. *Lamellae* rounded and narrowly adnate, finally emarginate, whitish when young, finally "pale pinkish buff," close, narrow, edges slightly fimbriate. *Stipe* 2-3.5 cm. x 2-3 mm., apex whitish or pale, elsewhere "cinnamon brown" to "verona brown," with a few scattered, white fibrils, somewhat striate, tubular, equal or at times tapering slightly downward. *Spores* 5-6 (6.5) x 2.5-3.5 microns, somewhat pip-shaped to sub-ellipsoid, non-amyloid, smooth, white in mass. *Pleurocystidia* none; *cheilocystidia* 18-32 x 8-15 microns, clavate to globose-pedicellate, minutely echinulate, buried and not conspicuous.

On lawn, Knox County, Tennessee, April. Identified by Dr. A. H. Smith.

Notes on the type: *spores* 5.5-6.5 x 2.4-3 microns, pip-shaped, smooth, non-amyloid; *pleurocystidia* none; *cheilocystidia* few, inconspicuous clavate to sub-globose-pedicellate, 18-22 x 5-7 microns, head sometimes minutely echinulate; *cuticle of pileus* is composed of interwoven hyphae, 5-7 microns broad.

***Collybia badiialba*** Murr. (*Gymnopus badiialbus* Murr.) (Fig. 1). *Pileus* 2-7 (10) cm. broad, convex to somewhat conic or campanulate, more or less umbonate, at times umbo prominent and acute, expanding convex, moist, not viscid, hygrophanous or sub-hygrophanous, glabrous, rivulose to silky under lens, color variable: "vinaceous buff," "cinnamon," "saya brown," "Roods brown" or "walnut brown," when wet, "pinkish buff" when dry, surface at times reddish-brown-spotted, margin inrolled, canescent, even or rarely striate (wet). *Flesh* white or dingy, thick on disk, thin on margin; *odor* and *taste* mild-fungoid to slightly bitter. *Lamellae* adnexed to nearly free, white at first, then reddish-brown-spotted, close or crowded, medium broad, edges dentate or serrate. *Stipe* 4-10 cm. x 3-10 mm., fibrous, not cartilaginous, pallid, somewhat reddish-brown-spotted especially below, more or less twisted, fibrillose-striate, equal or tapering either way, base often curved, spongy, dry, subradicate, hollow. *Spores* 4-5 x 3-4 microns, ovoid to globose, non-amyloid (yellowish in Melzer's reagent), smooth, white in mass. *Pleurocystidia* and *cheilocystidia* none. *Cuticle of pileus* of more or less erect, interwoven hyphae,

<sup>1</sup> Contributions from the Botanical Laboratory, The University of Tennessee, N. Ser. No. 180.

5-13 microns broad; hyphae are tangled but tend to stand as a turf at an erect and uniform height.

In humus, pine woods, Tennessee (Knox County) and Florida, December. Identification by Dr. A. H. Smith. This species was first described from near Seattle, Washington, in 1911 (Murrill, 1916).

***Collybia expallens* Pk.** *Pileus* 1-3.5 cm. broad, hemispheric-convex, finally expanding plane or nearly so, hygrophanous, near "olive buff" when dry, "hair brown" to "olive brown" when wet, disk remaining blackish, glabrous, even when dry, striatulate when wet. *Flesh* pallid to watery brown, thick on disk, thin on margin; *odor* mild or farinaceous, *taste* strongly farinaceous. *Lamellae* adnexed, seceding, at first pallid, finally smoky-olive



Fig. 1. *Collybia badiialba* Murr. x 1

(not matched), medium broad, subdistant to moderately close, edges even. *Stipe* 2-4 cm. x 2-4 mm., dingy olive brown, tapering slightly downward, at times slightly compressed, apex white-mealy to pruinose, elsewhere glabrous, stuffed then hollow. *Spores* 5-6 x 2-3 microns, ellipsoid to subellipsoid, smooth, non-amyloid. *Pleurocystidia* and *cheilocystidia* none. *Cuticle* of *pileus* of slender, appressed hyphae.

On soil, often in humus, in pine woods, Tennessee, Anderson and Knox Counties, December-January.

Notes on the type: *spores* 5.5-6.5 x 3-3.5 microns, ellipsoid, smooth, non-amyloid; *pleurocystidia* and *cheilocystidia* none; *cuticle* of the *pileus* composed of appressed, narrow hyphae.

**Collybia iocephala** (B. & C.) Singer. *Pileus* 1-2.5 cm. broad, submembranous, convex, violet, grayish-violet when old, gregarious, striate to disk. *Flesh* thin; *odor* and *taste* unpleasant, suggesting old cabbage. *Lamellae* adnate, narrow, distant, pale violet to brownish, edges pale and fimbriate. *Stipe* 3-5 cm. x (1) 2-4 mm., tapering upward, clavate-enlarged at base, densely tomentose above, strigose below, pallid, whitish or dingy brownish, hollow. *Spores* 6.5-7 x 3-3.5 microns, pip-shaped to ellipsoid-ovoid, smooth, non-amyloid. *Pleurocystidia* none; *cheilocystidia* few, clavate, 18-24 x 4-5.5 microns. *Cuticle* of pileus composed of interwoven hyphae, some erect or semi-erect, 3.5-5 microns diameter. All parts become greenish-violaceous in 2% KOH.

On humus, in deciduous and mixed woods, South Carolina, Florida, and Alabama, July-August.

\***Collybia myosura** (Fr.) Quel. *Pileus* 3-10 mm. broad, convex, becoming almost plane, delicately fibrillose, glabrescent, buff to pale cinnamon (not matched), margin incurved. *Flesh* thin; *odor* and *taste* not recorded (Smith says not distinctive). *Lamellae* narrowly adnate by a line, medium broad, close, pallid or pale buff, edges fimbriate. *Stipe* 1-3 (6) cm. x 0.5-0.7 mm., white pruinose or pubescent, equal, base tomentose, at times prolonged. *Spores* 2.3-3.5 x 1.7-2.3 microns, ellipsoid, smooth, grayish-blue in Melzer's reagent, — amyloid. *Pleurocystidia* numerous, fusoid to bottle-shaped, often with a long neck, projecting prominently, 20-37 x 5-9 (base) x 2-2.5 (neck) microns; *cheilocystidia* few, similar, usually more slender. *Cuticle* of pileus composed of appressed hyphae, with scattered *pileocystidia* 20-60 x 4-10 microns, often with a long.

On pine cones, Tennessee (Blount County) and Alabama, September and December.

\***Cortinarius brevipes** Pk. *Pileus* 2-5 cm. broad, convex, finally plane, scarcely viscid, white to pale steel gray, tinged violaceous from lamellae showing through, appressed-fibrillose or silky, rimose along the even margin. *Flesh* white, thick on disk, thin on margin; *odor* and *taste* mild or of radish. *Lamellae* adnexed by a line, at first violaceous to caesius to "pallid brownish drab," finally "buckthorn brown" to "sayaal brown," unchanging, rather close, narrow, edges rough. *Stipe* 2-4 cm. x 5-12 mm., white, dry, fibrillose, emarginate-bulbous, bulb 18-22 mm. diameter, not depressed, spongy. *Cortina* white, webby. *Spores* 7.5-9.5 x 4-6 microns, ellipsoid-subfusoid to sub-amygdaliform, minutely wrinkled with incomplete reticulations, color in mass: "sayaal brown."

On soil, in pine and deciduous woods, Tennessee (Blount County) and Florida, October and December. Identified by Dr. A. H. Smith.

\***Cortinarius brunneofulvus** Fries. *Pileus* 3-8 cm. broad, convex, expanding plane, obtusely or broadly umbonate, often slightly depressed around the disk, disk "cinnamon" to "chestnut," margin paler, hoary-canescens or appressed silky-white, glabrescent, hygrophanous, margin sub-striate or even. *Flesh* thick on the disk, pallid or nearly concolor to pileus; *odor* mild or faintly fragrant, *taste* mild. *Lamellae* adnate, becoming emarginate-adnexed, close to subdistant, broad, broadest behind, at first smoky-brown, and then "ferruginous," "tawny," "cinnamon" to "verona brown," edges paler, eroded. *Stipe* (4) 8-12 cm. x 8-15 mm., concolor to pileus or paler, clavate to clavate-bulbous, scattered-fibrillose, tomentose below, with a median or inferior white zone, dry, solid. *Cortina* copious. *Spores* 9-12 x 6-7.5 microns, ellipsoid to sub-amygdaliform, coarsely tuberculate, color in mass: "raw sienna" to "ochraceous-tawny."

On soil, in conifer woods, Tennessee (Sevier County, 1300 ft.) and North Carolina (Macon County, 4000 ft.), August-September. Identification confirmed by Dr. A. H. Smith.

\***Cortinarius camphoratus** Fr. (*sensu* Kauffman) (Fig. 2). *Pileus* (3) 5-8 cm. broad, convex-hemispheric, then convex, sub-umbonate, moist, not viscid, silvery-violaceous, in age and when dry tinged "clay color," matted-fibrillose, in age the fibrils often aggregated into scales, margin incurved, even. *Flesh* thick and compact on disk, abruptly thin on margin, "dull bluish violet (3)" when young, fading to whitish at maturity, unchanging when bruised; *odor* and *taste* strong of raw potatoes, *odor* strong, offensive as it is being dried. *Lamellae* adnate becoming deeply emarginate, at first "dull bluish violet (3)," then "light brownish drab," finally "avellaneous" or darker, nearly subdistant, rather broad, narrowed in front, faces at times slightly rugulose, edges fimbriate. *Stipe* 6-12 cm. x 10-18 mm., dry, deep violet then silvery-violaceous, fading "dull bluish violet (3)" within, matted-fibrillose,

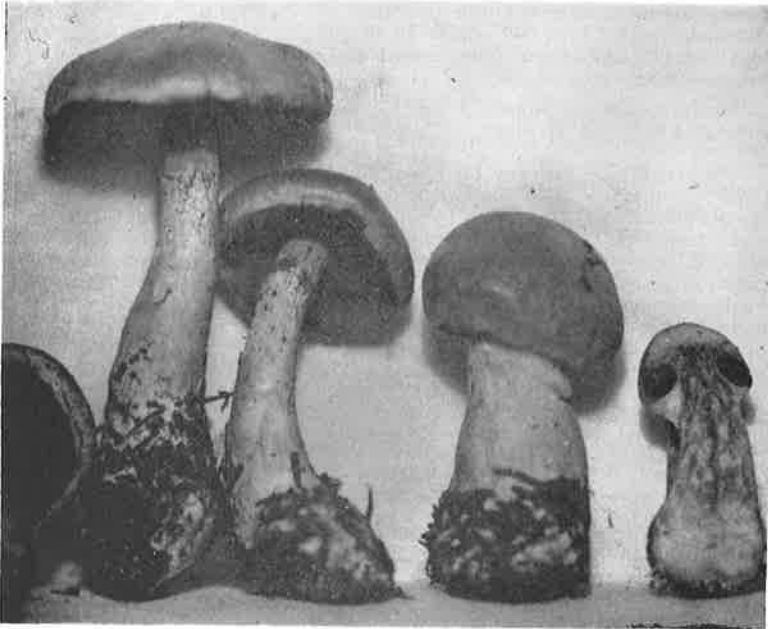


Fig. 2. *Cortinarius camphoratus* Fr. x 2/3

often with an inconspicuous, white, median band, clavate-bulbous, bulb 2-3 cm. diameter, stuffed becoming hollow. *Cortina* violaceous to pale-lavender, soon whitish, copious, leaving a fugaceous, apical *annulus*. *Spores* 9-11 x 5-6.5 microns, ovoid-ellipsoid to ellipsoid-subfusoid, ends subacute, punctate-rough. *Pleurocystidia* none; *cheilocystidia* clustered, clavate, fusoid to bottle-shaped, 28-35 x 9-13 microns.

On soil, in spruce woods, North Carolina (Swain County, 6000 ft.), September. Identified by Dr. A. H. Smith.

\***Cortinarius croceoceruleus** Fr. *Pileus* 4-6 cm. broad, convex, glutinous-viscid, pellicle separate, at first light bluish-violet, soon grayish brown, finally somewhat mottled "sage brown" or darker, with violaceous tints showing through, appressed-fibrillose, margin even but at first appendiculate from *cortina*. *Flesh* thick, firm, violaceous; *odor* slight, *taste* mild

or earthy. *Lamellae* adnate, at first caesius, near "light vinaceous gray," finally brownish, narrow, close or crowded, edges even. *Stipe* 7-9 cm. x 12-15 mm., clavate-bulbous, bulb ovoid and 25 mm. diameter, flesh white or whitish, surface not viscid, pale violaceous, with brownish stains downward, solid. *Cortina* webby, ample, leaving a temporary ring on stipe and appendiculate for a time. *Spores* ovoid-ellipsoidal, inequilateral, coarsely tuberculate, 8-10 (11) x 4.5-5 microns.

In deep humus, in deciduous woods, Tennessee (Blount County, 1800 ft.), and North Carolina (Swain County, 2500 ft.), August-September. Identification confirmed by Dr. A. H. Smith.

\***Cortinarius cyanites** Fr. (*sensu* Kuh. & Rom.). *Pileus* 6-8 cm. broad, convex, "deep violet plumbeous," fibrillose, with dingy clay-colored patch-like scales on disk, dry. *Flesh* pallid, tinged bluish; *odor* and *taste* mild. *Lamellae* adnate, at first bluish then dark olive at maturity (not matched), crowded, broad. *Stipe* 4-7 cm. x 10-15 mm., concolor to the pileus, dry, fibrillose, clavate-bulbous, bulb stained dark. *Cortina* bluish. *Spores* 8-10 x 5-6 microns, rough.

In humus, mixed woods, Tennessee (Blount County, 1800 ft.), August. Identified by Dr. A. H. Smith.

\***Cortinarius laniger** Fr. *Pileus* 5-6 (10) cm. broad, convex-expanded, broadly umbonate, and somewhat depressed around disk, hygrophanous, "sayaal brown" to "cinnamon brown" (wet), "cinnamon" (dry), margin paler from fine white fibers, canescent, margin densely fibrillose, even. *Flesh* thick on disk, thin on margin, whitish; *odor* and *taste* slightly of radish or at times alkaline. *Lamellae* emarginate-adnexed, brownish at first, finally "cinnamon brown," broad (5-9 (13) mm.), broadest behind, narrowed in front, transversely rugulose, close to crowded, edges even. *Stipe* 7-12 (15) cm. x 5-10 (17) mm., moist, not viscid, streaked brownish and white, silky-fibrillose, at times with whitish zones below, clavate, bulbous (bulb ovoid, up to 2 cm. diameter), hollow-stuffed. *Cortina* copious. *Spores* 8.5-10 x 5.5-6.5 microns (up to 14 microns long in No. 19309,—a pale form), ellipsoidal, minutely tuberculate to wrinkled.

In humus, in mixed woods, Tennessee (Blount County, 1800 ft.), September.

\***Cortinarius nigroespudatus** Kauff. *Pileus* 2-3 cm., convex, expanded, broadly umbonate, upturned-wavy, hygrophanous, "cinnamon brown," disk much darker ("bister"), with white scattered fibrils (often cirrhate), margin even. *Flesh* watery brown, thin; *odor* and *taste* mild or like green grass. *Lamellae* adnate with decurrent tooth, "clay color," close, medium broad. *Stipe* 4-5 cm. x 4-6 mm., dingy, dry, fibrillose; *veil* leaving 3 or 4 white fibrillose scattered bands, stuffed. *Spores* 6.5-7.5 x 4.5-5.5 microns, ellipsoidal, punctate.

On soil, deciduous woods, Tennessee (Blount County, 1800 ft.), September. Identification confirmed by Dr. A. H. Smith. The spores are slightly smaller than reported by Kauffman (1932).

\***Cortinarius rusticus** Karst. *Pileus* 5-10 cm. broad, convex, expanding, finally wavy-upturned, water-soaked, scarcely hygrophanous, "avellaneous" to "pinkish buff" with a drab or brownish tint, paler in age, drying darker, densely grayish appressed-fibrillose, margin even or sub-plicate. *Flesh* whitish or water-soaked and brownish-gray, thick on disk, thin on margin; *odor* slight but pleasant, *taste* slight or none. *Lamellae* adnexed-subdecurent, at first "avellaneous," finally "warm sepia," broad (up to 15 mm.), ventricose, nearly subdistant, edges even. *Stipe* (3) 6-12 cm. x 10-15 (20) mm., dingy brown, white-fibrillose, *veil* white, leaving patches (annular and otherwise) on lower portion, clavate, solid becoming hollow. *Spores* 9-12 x 6-7.5 microns, sub-amygdaliform, somewhat tuberculate.

On soil, under hemlock, Tennessee (Blount County, 1800 ft.), August. This species is reported also from Idaho (Smith, 1944: 224) and Colorado (Overholts, 1919:252). Identified by Dr. A. H. Smith.

**Cortinarius virentophyllus** Kauff. *Pileus* 5-8 cm. broad, viscid, pellicle separable, grayish olive (not matched) at first, becoming yellowish with olive tints, often streaked brownish, margin even. *Flesh* pallid, watery-green along lamellae, thick on disk, abruptly thin on margin; *odor* slight, *taste* slightly bitter. *Lamellae* adnate, slightly adnexed, at first "citrine," finally brownish-olive (not matched), close, moderately narrow, edges even. *Stipe* 3-5 cm. x 10-15 mm., "pallid quaker drab," fading downward, bluish within, fading, silky-appressed striate, dry, stuffed then hollow, bulbous the bulb more or less emarginate. *Spores* 9-11 x 6.5-7.5 microns, ellipsoid to sub-amygdaliform, warty-reticulate.

On soil, in deciduous woods, Kentucky, Cumberland Falls State Park, October. Identification confirmed by Dr. A. H. Smith.

\***Entoloma luteum** Pk. *Pileus* 1.5-2.5 cm. broad, "colonial buff," marginal portion "primuline yellow" campanulate, obtusely conic, disk blunt, glabrous, margin even or falsely striate. *Flesh* thin, pale yellow; *odor* mild, *taste* slight. *Lamellae* narrowly-adnate, "primuline yellow," nearly close, broad, edges nearly even to fimbriate. *Stipe* 4-7 cm. x 3-5 mm., "colonial buff," fibrillose-striate, equal, base slightly white-mycelioid, solid. *Spores* 9-12 microns, subquadrate to quadrate. *Pleurocystidia* none; *cheilocystidia* clustered, cylindrical to clavate, 51-88 x 10-15 microns. *Gill trama* parallel.

On soil, in deciduous woods, Tennessee (Blount County, 1800 ft.), September.

Notes on the type: *spores* 9-12 x 9-11 microns, quadrate or subquadrate. *Pleurocystidia* none; *cheilocystidia* clustered, numerous, hyaline, clavate to cylindrical, 50-82 x (7) 9-18 microns. *Basidia* 33-40 (45) x 10-13 microns, 4-spored. *Gill trama* parallel or undulating-parallel. Except for paler colors, my No. 22397 agrees with the type in essential characters.

**Marasmius alachuanus** Murrill, *Lloydia* 5:140. 1942 (synonym: *Marasmius multivenosus* Murrill, *Lloydia* 9:320. 1946). Both of Murrill's types were taken in Florida. Notes on the type of *M. alachuanus*: *spores* 6-7 x 3.5-4 microns, ellipsoid, often obliquely apiculate, smooth, non-amyloid; *pleurocystidia* and *cheilocystidia* none; *epicutis* composed of a palisade of pyriform to cuneate or cubical, smooth cells, 15-20 x 10-17 microns; *stipe* hollow, not clearly differentiated into *cortex* and *rind*, surface of the stipe bearing scattered *caulocystidia* which are bottle-shaped, fusoid, or irregular.

The type of *M. multivenosus* Murr. is identical, both macroscopically and microscopically, with that of *M. alachuanus*. Murrill's description indicates that the lamellae are more narrow in *M. multivenosus* than in *M. alachuanus*, but the types do not show such a difference.

\***Marasmius elongatipes** Peck. *Pileus* 8-12 mm. broad, convex, "cinnamon buff" to "tawny," disk "cinnamon," glabrous, striate. *Flesh* thin, white; *odor* and *taste* mild. *Lamellae* adnexed, narrow, subdistant, white, edges fimbriate. *Stipe* 5-14 x 0.5-1.5 mm., equal, brown or yellowish-brown, apex white, pruinose to white-tomentose at the apex, tawny-hairy downward, radicate, hollow. *Spores* 6-8 x 3-4 microns, pip-shaped, smooth, non-amyloid, white in mass. *Pleurocystidia* scattered, projecting, fusoid-ventricose, more or less capitate, 33-55 x 5-7 microns; *cheilocystidia* more numerous, similar. *Epicutis* of the pileus composed of one or two brownish layers of cells which are subglobose, cuneate, loaf-shaped, or epidermoid, surfaces smooth.

The trama of the pileus and lamellae is unchanged in KOH, and non-amyloid. The stipe *cortex* is composed of colorless, closely-packed, more or

less angular cells; *rind* thick, blackish-brown, with numerous yellowish-brown surface tomentose hairs, 75-175 x 4-6 microns.

On humus, in deciduous and mixed woods, Tennessee (Anderson and Sevier Counties), North Carolina (Macon County), and Virginia, May-October.

Notes on the type: *spores* 7-8 (9) x 3-3.5 microns, pip-shaped, smooth, non-amyloid; *pleurocystidia* and *cheilocystidia* similar, fusoid-ventricose, at times subcapitate, 32-42 x 6-8 microns; *epicutis* composed of one or two layers of cuneate to epidermoid brown, smooth cells; *stipe* hollow.

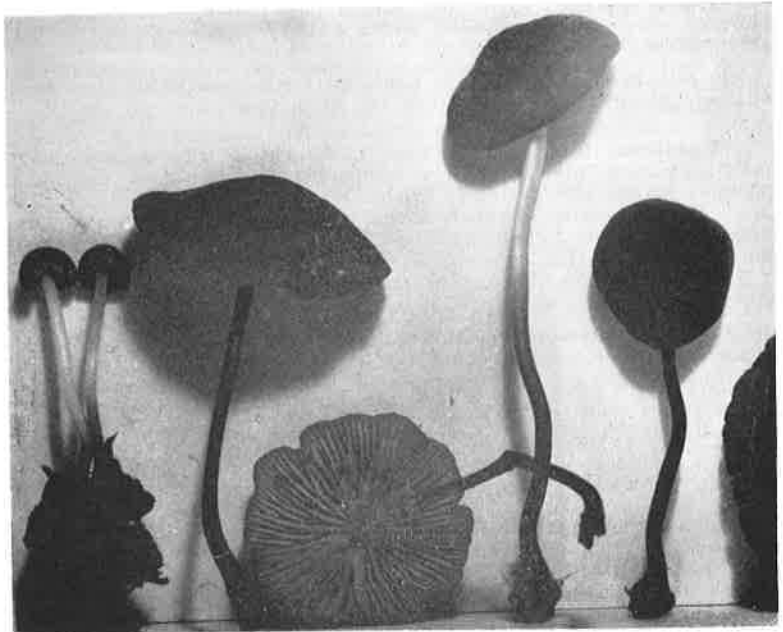


Fig. 3 *Marasmius floridanus* Murr. x 4/3

\****Marasmius floridanus*** Murrill (*M. Balansae* Speg.) (Fig. 3). *Pileus* 2-5 cm. broad, hemispheric-convex, finally expanded more or less plane, "zinc orange," "Kaiser brown" or "auburn," velvety (under lens), margin even. *Flesh* thin, white; *odor* and *taste* mild or sub-alkaline. *Lamellae* narrowly adnate, rather close to sub-distant, medium broad, white, in age rusty, edges even or nearly so. *Stipe* 2-5 cm. x 0.5-2 mm., pallid or reddish-brown, apex pulverulent, glabrous below, twisted, hollow, equal. *Spores* 8-12 x 2.5-3.0 microns, pip-shaped to subfusoid, smooth, non-amyloid, in mass: white with a tinge of cream. *Pleurocystidia* irregularly subfusoid to subcylindric, buried, inconspicuous, apex often capitate to appendiculate, 25-30 (40) x 5-6 microns; *cheilocystidia* similar. *Epicutis* of pileus with conspicuous broom-cells, 15-18 x 7-9 microns.

On dead wood and fallen leaves, Florida and Tennessee (Campbell, Knox, and Sevier Counties, 1000-2500 ft.), June-August.

Notes on the type: *spores* 8-11 (12) x 2.3-2.8 microns, slender pip-shaped, smooth, non-amyloid (Murrill (1940) says the spores are 6-8 x 2.5-3 microns);

*pleurocystidia* 33-40 x 4-6 microns, cylindric, subfusoid, at times appendiculate, often not conspicuous; *cheilocystidia* similar, 25-30 x 4-6 microns; *epicutis* of small broom-cells with rather long (8-10 microns) bristles; *stipe* hollow.

*Marasmius floridanus* Murrill seems related to *M. plicatulus* Pk., to which it has a general resemblance. It differs from *plicatulus* in its even margin, smaller spores (in *plicatulus* the spores are given by Smith (1949) as 11-14.8 x 5-6.5 microns), in the presence of pleurocystidia, and smooth cheilocystidia.

\***Marasmius insititius** Fr. *Pileus* 6-15 mm. broad, submembranous, convex, pallid buff to "light buff," plush-like, even. *Flesh* thin; *odor* and *taste* mild. *Lamellae* adnate, distant, medium broad, whitish or pallid, finally buff, venose at cap, edges slightly fimbriate. *Stipe* 15-25 mm. x 0.5 mm., brownish downward, pallid upward, short-tomentose, tomentum pale yellowish-brown, hollow. *Spores* 7-10.5 x 2.5-4.5 microns, pip-shaped to subcylindric, smooth, non-amyloid. *Pleurocystidia* subfusoid to slightly awl-shaped, 15-25 x 5-6 microns, inconspicuous, projecting slightly or none; *cheilocystidia* similar. *Cuticle* of the pileus composed of appressed, narrow hyphae.

On fallen twigs and leaves of deciduous trees and rhododendron, Tennessee (Blount, Carter, and Sevier Counties, 2250-5500 ft.) and North Carolina (Macon County, 4000-4500 ft.), May-August.

Notes on authentic collections from Virginia: *spores* are 8-9 x 3.5-4.5 microns, subellipsoid, smooth, non-amyloid; *pleurocystidia* and *cheilocystidia* at times scarce, again rather numerous, buried, inconspicuous, subfusoid, 23-28 x 4-6 microns; *epicutis* of appressed-interwoven hyphae; *stipe* hollow.

\***Marasmius pseudoimpudicus** Murrill. *Pileus* 1-3 cm. broad, convex, expanding, "tawny" to "russet," glabrous but with a velvety appearance, margin even. *Flesh* thin, pliant, white or faintly brownish; *odor* and *taste* mild. *Lamellae* adnexed, nearly free, crowded, sinuous to crisped, white, drying "zinc orange," many short (of 7 ranks), narrow, broadest behind, scarcely reaching margin. *Stipe* 3-4 cm. x 2-3 mm., whitish, densely white-tomentose-velvety, basal half with cottony envelop, enlarged clavate below, spongy, hollow. *Spores* 5-6 (7) x 2.5-3 microns, pip-shaped, non-amyloid, smooth. *Pleurocystidia* and *cheilocystidia* none. *Epicutis* of the pileus of closely interwoven hyphae.

On soil, open woods and lawns, Tennessee (Knox and Sevier Counties, 1000-2500 ft.) and Florida, July-August.

My No. 12706, from Knoxville, and No. 13984, from near Mt. LeConte, agree well within the type. Notes on the type: *spores* 5-6.5 x 2.3-3 microns, pip-shaped, smooth, non-amyloid, white in mass; *pleurocystidia* and *cheilocystidia* none; *epicutis* of interwoven hyphae; *stipe* hollow.

**Marasmius tageticolor** Berk., Jour. Bot. & Kew Misc. 8:136, 1856 (synonym: *Marasmius atropurpureus* Murrill, N. A. Flora 9:262, 1915). *Pileus* 4-10 mm. broad, hemispheric then campanulate, plicate to disk, glabrous, velvety under lens, "maroon" to "garnet brown," margin even, except for plications. *Flesh* membranous, dingy-brownish, *odor* and *taste* slight or none. *Lamellae* adnate to a collar, distant, about 12 reaching the collar, narrow to medium broad, whitish, then pale brown, edges "maroon." *Stipe* 1.5-2 cm. x 0.2-0.5 mm., filiform, usually tinged maroon, paler at apex and below, glabrous, hollow. *Spores* 15-19 x 3.5-4.5 microns, lanceolate, curved, smooth, non-amyloid. *Pleurocystidia* clavate-fusoid, 35-50 x 7-10 microns; *cheilocystidia* of two types: (a) diverticulate, 9-14 x 4-7 microns, numerous, (b) slender-ventricose to clavate, at times nodulose, 30-51 x 7-12 microns, sometimes absent. *Epicutis* of loaf-shaped broom-cells.

On humus and cow-dung, Louisiana, October, communicated by Dr. B. Lowy. Murrill (1951) reports it on trash, from Florida, as *M. atropurpureus*. Although the type of *M. atropurpureus* shows no spores, other



material from Florida and the Bahamas, named by Murrill, bears spores, and it agrees with the Louisiana collections in essential details. Professor R. W. G. Dennis has studied Murrill's type, and in a note filed with it suggests that *M. atropurpureus* is the same as *M. tageticolor*.

\***Pleurotus porrigens** Fr. *Pileus* 1-8 cm. broad, sessile, white, dry, cuticle slightly separable on margin only, covered by dense, white fibrils, glabrescent, not hygrophanous, flabelliform to slightly cuneate, margin wavy, incurved, even (dry), substrate (wet). *Flesh* thin, pliant, white; *odor* and *taste* mild fungoid. *Lamellae* decurrent, radiating, white becoming cream colored, narrow, linear, close or crowded, more or less forked, at times dichotomous, often anastomosing, edges even. *Stipe* none. *Spores* elliptical, 6-8 (9) x 5-6 (7) microns, ellipsoid-ovoid to subglobose, smooth, pale yellow in Melzer's reagent. *Basidia* 28-36 x 8-9 microns, 4-spored; sterigmata extremely long, 12-18 microns. *Pleurocystidia* and *cheilocystidia* none. *Pileus flesh* of interwoven hyphae below; surface layer of parallel hyphae which extend outward to form fibrils (tomentum) on the surface.

On spruce and fir logs and birch trunk, Tennessee (Sevier County, 4000 ft.) and North Carolina (Swain County, 5000-6000 ft.), August-October.

\***Pleurotus striatulus** (Fr.) Gill. *Pileus* 1-2.5 mm. broad, at first grayish, finally brown ("warm sepia"), cupulate-pendulous, expanding convex, basal half white-pubescent (when moist), marginal half glabrous, sulcate-riate to disk or often for about 1 mm. *Flesh* thin, soft, waxy. *Lamellae* radiating around a central or eccentric point, of several ranks, 3-5 long ones, 12-17 short, grayish at first, finally brownish to nearly black, white-pruinose, rather broad, rather thick, edges even. *Stipe* none; attached at disk or laterally by white fibrils. *Spores* subglobose (rarely globose), 5-6.5 x 4.5-5 microns, smooth, white in mass. *Pleurocystidia* and *cheilocystidia* none.

On decorticated pine log, Tennessee (Knox, Blount, and Sevier Counties, 1000-3500 ft.) and North Carolina (Haywood County, 4000 ft.), May, August, and December.

**Plicatura lateritia** (B. & C.) Murrill. *Pileus* 8-20 mm. broad, at first resupinate, then conchate-shelving, sessile, glabrous to slightly fibrillose (under lens), in dried state "vinaceous-cinnamon," to pale cinnamon-brown (not exactly matched), becoming fuliginous in age (color when fresh not observed), apparently reviving promptly in water, not viscid, margin at first even, in age sulcate. *Flesh* thin, pliant. *Lamellae* radiating from an eccentric point, rounded and broad behind, narrowed in front, distant, some short, some forked, brick-red to "Kaiser brown," drying reddish-brown or blackish, venose at cap, edges even. *Stipe* none, attachment lateral. *Veil* none. *Spores* 10-15 x 5-7 microns (from deposit), ellipsoid to slightly subfusoid, smooth, non-amyloid, apparently imbedded in a mucilaginous substance, color in mass: "dark olive buff." *Pleurocystidia* and *cheilocystidia* (pseudoparaphyses) numerous, similar, projecting somewhat or none, clavate-fusoid, at times subcapitate, colorless, 30-42 x 5-7 microns. *Basidia* 2-spored, dactyomycetous. *Pileus* surface of appressed, narrow hyphae with scattered erect, hyphoid elements; pileus and gill trama tissues green in 2% KOH.

On dead limbs of deciduous trees, Louisiana, March. Collected by Dr. Bernard Lowy.

This agaric has also been reported under the following names: *Xerotus lateritius* B. & C., and *Anthracoephyllum lateritium* (B. & C.) Singer. The types of *X. lateritius*, *X. viticola*, and *X. fuliginosus* have been studied and found to agree with each other and with Lowy's Louisiana collections.

Although Murrill (1910) describes the spores as globose and 4-5 microns in diameter, spores of the type of *X. lateritia* are ellipsoid, 10-15 x 5-8 microns. The type also shows 2-spored, dactyomycetous basidia; in a few instances

spores were found attached to the basidia. It also shows pleurocystidia and cheilocystidia (pseudo-paraphyses) like those described above for the Louisiana collection; and finally the tissues of the type turn green in 2% KOH.

\**Russula polyphylla* Pk. (*R. magnifica* Pk.). *Pileus* 7-16 cm. broad, convex-umbilicate, expanding, finally upturned and infundibuliform, basically pale cartridge buff or ivory-white, soon "pale ochraceous buff" surface soon cracking and peeling to form somewhat concentrically arranged reddish-brown scales, marginal third with watery spots, fibrillose-matted when young, essentially glabrous when mature, margin even. *Flesh* white, brittle; *odor* strong, disagreeable (as in *R. compacta*), *taste* earthy, unpleasant, sub-acrid. *Lamellae* adnate, crowded, narrow, broadest in front, at first "light buff," then "pinkish buff" to "light ochraceous buff," changing to "pecan brown" when bruised, "grayish lavender" to "light brownish drab," when dried, rarely forked, many short (more or less 8 ranks), edges fimbriate. *Stipe* 5-8 cm. x 15-35 mm., appressed white-tomentose, dingy to pale pinkish brown when handled or wounded, solid, becoming spongy, equal, dry. *Spores* 8-10 x 6.5-8 microns, slightly rough, ellipsoidal, white in mass. *Pleurocystidia* numerous, brownish, apex rounded, at times awl-shaped, 90-112 x 7-10 microns, deeply buried; *cheilocystidia* similar, shorter.

On soil, in mixed woods, Tennessee (Knox and Sevier Counties, 1000-3000 ft.), North Carolina (Macon County, 4800 ft.), and Alabama, June-October.

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#### NEWS OF TENNESSEE SCIENCE

(Continued from Page 197)

of 86.93. For these students the average grade during the first six quarters of the medical course was 79.89. This represents a difference of 7.04 grade points between the pre-medical school average and the average in medical school. Figures compiled by Dr. Nash for the 10 year period from 1946 to 1956, show an improvement in both pre-medical and medical school grades. Thus, during that decade, the pre-medical school average of 1,660 students was 89.44. The average grade of the same students during the first three quarters of medical school was 83.49. This is a difference of 5.95 in the two grade averages as compared with 7.04 during the decade from 1936 to 1946. During the decade from 1936 to 1946, 87 students out of 1,104 admitted were not promoted beyond the third quarter, for failure or other reasons. This is 7.8%. Only 40 students out of 1,660 students admitted during the 10 year period from 1946 to 1956, did not progress beyond the third quarter. This represents a failure rate during the first year of the medical

(Continued on Page 227)