

NOTES ON SOUTHERN APPALACHIAN FUNGI, IX¹

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In this paper thirty-eight species of fungi are reported. Those which have been found in the Great Smoky Mountains National Park are marked by an (*). As usual, the color names within quotation marks are from Ridgway's *Color Standards and Color Nomenclature*, 1912.

DISCOMYCETES

ALEURIA RHENANA Fckl. No. 19406, on soil, under hemlock, Wayah Bald, Swain County, North Carolina, September 12, 1949; determined by Miss Edith K. Cash. This is the only collection of this species we have made to date.

GEOPYXIS VULCANALIS (Pk.) Sacc. No. 18846, on soil, Wartburg, Morgan County, November 14, 1948; determined by Miss Edith K. Cash. First collection for Tennessee. Reported previously from northern United States and west to Colorado.

LAMPROSPORA SPINULOSA Seaver. No. 19458, among moss (*Cryphaea glomerata* Schimper), on red cedar trunk, Jackson County, Alabama; collected by Dr. A. J. Sharp; determined by Miss Edith K. Cash, April 3, 1949. Previously known from New York, New Jersey, and Iowa.

*PAXINA ACETABULUM (L.) Kuntze. No. 11975, Knoxville, April 30, 1939; No. 17044, Indian Gap, the Park, July 22, 1945; No. 19014, on soil, under red spruce, Indian Gap, the Park, July 9, 1949; No. 19457, Marion County, Tennessee, collected by Dr. A. J. Sharp, April 2, 1949.

*PAXINA FUSICARPA (Ger.) Seaver. No. 13004, on soil, Indian Creek, the Park, August 11, 1940; No. 17722, Carter County, August 28, 1946. Identified by Miss Edith K. Cash.

*PAXINA HISPIDA (Schaeff.) Seaver. Several collections, on soil, from Knox County, from the Park, and from Highlands, North Carolina, May-October.

*PAXINA MACROPUS (Clements) Seaver. No. 11393, Greenbrier, the Park, May 7, 1938. This species is reported from northern and western United States.

*PAXINA SULCATA (Pers.) Kuntze. No. 3865, Knox County, May 1, 1934; No. 14188, near Mt. LeConte, the Park, May 24, 1942; collected and determined by Dr. S. L. Meyer. No. 18942, Marion County, Tennessee, April 2, 1949; collected by Dr. A. J. Sharp; determined by Miss Edith K. Cash. Reported range: New Jersey to Iowa and California; also Canada and Europe.

SMUTS AND RUSTS

CINTRACTIA TAUBERTIANA (P. Henning) Clinton. No. 19558, on *Rhynchospora* sp., Bledsoe County, Tennessee, July 19, 1935; collected by Dr. A. J. Sharp, determined by Dr. J. A. Stevenson.

SOROSPORIUM EVERHARTII Ellis and Galloway. No. 19503, on *Andropogon virginicus* L., Rhea County, October 14, 1949; determined by Dr. J. A. Stevenson. This is the first record for this smut from Tennessee.

¹Contributions from the Botanical Laboratory, The University of Tennessee, N. Ser. No. 123. Preceding numbers of this series have appeared in this JOURNAL, as follows: I—11:107-122; II—12:239-254; III—16:161-173; IV—17:242-249; V—18:290-297; VI—20:233-238; VII—20:63-372; VIII—24:81-93.

**UROCYSTIS KMETIANA* Magn. No. 11379, on *Viola Rafinesquii* Greene, Greenbrier, the Park, April 24, 1938; determined by Dr. G. L. Zundel; No. 12532, same host, Fountain City, Knox County, Tennessee, May 16, 1940; No. 19643, same host, Knoxville, March 30, 1950. This appears to be a rare smut in North America.

Puccinia jussiaeae Speg. No. 16624, on *Ludwigia palustris* (L.) Ell., Carroll County; collected by Dr. A. J. Sharp, July 7, 1948; determined by Dr. G. B. Cummins. First record of this rust from Tennessee.

**Puccinia pimpinellae* (Str.) Mart. No. 16752, on *Osmorrhiza Claytoni* (Michx.) Clarke, Greenbrier, the Park, April 14, 1945; this is the first record of the rust on this host in Tennessee. No. 18984, same, Roan Mountain; collected by Dr. A. J. Sharp, July 21, 1948. We have three collections of this fungus on *Chaerophyllum tainturieri* Hook, near Knoxville, April.

Pucciniastrum hydrangeae (B. & C.) Arthur. No. 19428, on *Hydrangea radiata* Walt., Chattahoochee National Forest, Rabun County, Georgia, September, 1949. This seems to be the first record for this host, which was determined by Dr. Wilbur Duncan, University of Georgia; also first record of the rust in Georgia.

Uromyces bicolor Ellis. No. 19000, on *Allium canadense* L., Tipton County, Tennessee; collected April 27, 1949, by Dr. A. J. Sharp, determined by Dr. G. B. Cummins; No. 19528, same, Montgomery County; collected by Alfred Clebsch, April 16, 1949. First report of this rust from the state.

Uromyces caladii (Schw.) Farl. No. 18927 on *Peltandra virginica* (L.) Kunth., McMinn County, Tennessee; collected by Dr. A. J. Sharp. According to Dr. G. B. Cummins, this is the first record of this rust on this host from Tennessee.

BOLETACEAE

**Boletus fraternus* Pk. No. 18637, Cades Cove, the Park, August 14, 1948; No. 19018 on lawn, Knoxville, July 4, 1949; collected by Dr. A. J. Sharp. Identifications confirmed by Dr. W. C. Coker and Dr. W. H. Snell. *Pileus* 2-4.5 cm. broad, convex, dry, velvety-tomentose, "claret brown" (young), later "madder brown," "cacao brown," "brick red," or "prussian red," with a rosy tint, margin paler and rimose. *Flesh* "mustard yellow," blue when cut, changing back to yellow, firm, thick; *odor* mild, *taste* mild to sub-acid. *Tubes* stuffed at first, depressed around stipe, extending down stipe in lines, up to 8 mm. long, mouths irregular angular to daedaloid, at first "primuline yellow" to "olive-ocher," finally "citrine" to "light yellowish olive," blue when bruised. *Stipe* 2-5 (7) cm. x 4-8 (10) mm., more or less curved, not reticulated, ridged at top, minutely granulated, dingy brownish with a tint of red, or "etruscan red," apex greenish, base yellow, firm, equal, solid. *Spores* 9.5-12.8 x 4-6.4 microns, ellipsoidal, smooth. *Cystidia* ventricose, with long narrow apex, projecting 28-35 microns, 8-9 microns, diam. Singer (1947), who attaches this to *B. rubellus* Krombh, as a subspecies, states that it is common in the southern states.

Boletus parvulus Coker and Beers. No. 18561, near Knoxville; collected by Mrs. A. J. Sharp; identification confirmed by Dr. W. C. Coker. *Pileus* 1-3 cm. broad, dry, velvety, "antique brown" when young, becoming "Kaiser brown" to "Hay's russet." *Flesh* pale yellow, changing slightly to blue-green when cut, finally rosy-tinted, thick, soft; *odor* and *taste* mild. *Tubes* adnate by a line, depressed around stipe, up to 4 mm. long, yellow then olive-greenish to greenish-yellow, blue then reddish when rubbed. *Stipe* 2-3 cm. x 4-6 mm., pallid all over or pallid above and dingy downward, often crooked, solid. *Spores* 9-11.2 x 4-4.8 microns, brownish under microscope. This species was recently described by Coker and Beers (1943), who found it in both North Carolina and South Carolina. Singer (1947) regards this species name as a synonym of *B. communis* subspecies *fraternus* (Pk.) Singer.

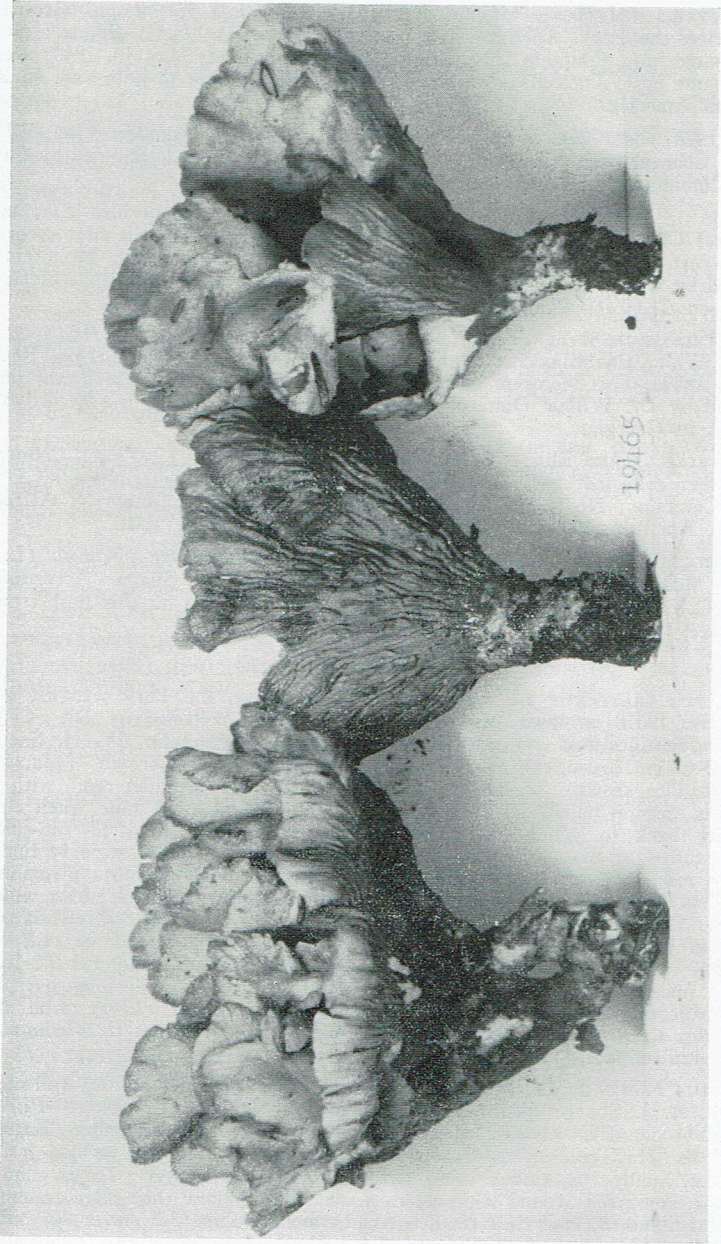


Fig. 1. *Cantharellus clavatus* Fr. x 3/4

AGARICACEAE

**CANTHARELLUS CLAVATUS* Fr. (Fig. 1) No. 10094, Mcigs Creek, the Park, December 6, 1936; No. 19465, in deep humus, under rhododendron, Rhea County, Tennessee, October 14, 1949. *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 microns, minutely rough, ellipsoidal, often apiculate, color in mass: "chamois" or "warm buff." Excellent description and illustrations are presented by Smith and Morse (1947).

CLITOCYBE ALBIDULA Pk. No. 14096, soil, in pine woods, Anderson County, Tennessee, December 14, 1941; No. 17251, same, November 25, 1945; No. 18864, same, December 5, 1948. *Pileus* 2-4 cm. broad, convex, finally expanded and somewhat depressed, disk subumbilicate, lubricous when wet, hygrophanous, glabrous, pallid with an olive tinge (not matched), striatulate (wet). *Flesh* thin, pliant, pallid; *odor* and *taste* farinaceous. *Lamellae* slightly decurrent, whitish, close, not broad, tapering either end, edge even. *Stipe* 2.5-4.5 cm. x 3-6 mm., equal, at times compressed, dingy, glabrous, shining, moist, not viscid, tubular. *Spores* short-ellipsoidal, 4-5 x 2-3 microns, white in mass. *Cystidia*: none observed. My collections have been examined by Dr. A. H. Smith who confirms the identification. Previously known from New York and Michigan.

**CLITOCYBE CERUSSATA* Fr. (Fig. 2.) No. 19285, on wet roadbank, Cades Cove, the Park, September 3, 1949. *Pileus* 4-7 cm. broad, at first plano-convex, finally expanded but margin uplifted-incurved, undulate, white to faintly creamy white, densely fibrillose, dry, margin ridged. *Flesh* white, firm, thick on disk, thin on margin; *odor* and *taste* strongly fungoid. *Lamellae* adnate-decurrent, very crowded, narrow (1-1.5 mm.), white, edge even. *Stipe* 5-8 cm. x 10-15 mm., white, densely fibrillose, equal or more often clavate at base, spongy-solid. *Spores* 4-5 x 3-3.2 microns, smooth, color in mass: white with a pale pinkish tint. This is the first report of this species for Tennessee. Coker and Beardlee (1922) have collected it in North Carolina, at Asheville, and apparently Peck found it in New York.

**COLLYBIA ACERVATA* Fr. No. 8035, Roan Mountain, July 21, 1935; No. 17053, on spruce log, Indian Gap, the Park, July 22, 1945; No. 18992, on humus, in spruce woods, Indian Gap, the Park, June 26, 1949. *Pileus* 3-5 cm., convex, expanding, obtusely umbonate, marginal half "cinnamon buff," disk "sayaal brown," hygrophanous, not viscid, margin faintly striatulate. *Flesh* thin, pale brownish, *odor*, and *taste* mild. *Lamellae* rounded-adnate, white, narrow, crowded, edge even. *Stipe* 5-8 cm. x 2-7 mm., at times compressed, "verona brown" to "natal brown," glabrous, hollow, connate at base, white-strigose. *Spores* 5.0-6.5 x 3.5-4.5 microns, ellipsoidal, smooth. *Cystidia* none.

**COLLYBIA GLATFELTERI* Murrill. (Fig. 3.) No. 10198, near Mt. LeConte, the Park, July 5, 1934; No. 11315, Elkmont, the Park, September 3, 1937; No. 12722, Elkmont, the Park, July 26, 1940; No. 17089, Cades Cove, the Park, August 8, 1945; No. 17624, Anderson County, July 4, 1946; No. 17676, Cades Cove, the Park, August 11, 1946; No. 17804, Cades Cove, the Park, September 10, 1947; No. 17995, Cades Cove, the Park, September 3, 1947; No. 18577, Gatlinburg, the Park, August 19, 1948; No. 19013, near Chimneys, the Park, July 9, 1949; No. 19190, Hampton, Carter County, July 24, 1949; No. 19268, Anderson County, August 29, 1949. *Pileus* 3-11 cm. broad, often umbonate, hemispheric-conic, then convex-conic, finally expanded, often wavy and upturned, dry, hygrophanous, "light buff" to "ivory yellow" (dry), "sayaal brown" or "tawny olive" (young, wet) to "cartridge buff" (mature, wet), disk darker ("clay color" to "warm sepia"), surface plush-like and more or less rugose, margin striatulate to coarsely striate (at ma-

turity); surface of pileus with palisade of clavate, hyaline cells, 16-40 x 8-16 microns. *Flesh* thin, white; *odor* none, *taste* slightly bitter. *Lamellae* adnate to rounded-adnate or sinuate-adnexed, usually seceding, white then "cartridge buff" to "light buff," many short, nearly close, broad, venose at pileus, sub-ventricose or broadest behind, edge fimbriate to serrulate. *Stipe* 4-13 cm. x (3) 7-15 mm., cartilaginous, dry, plush-like or chalky, apex pulverulent, strict,



Fig. 2. *Clitocybe cerussata* Fr. x 1

becoming twisted, often curved at base, equal, striate, hollow. *Spores* (5.5) 7.5-9.5 x (3.5) 4.5-5.5 microns, sub-ellipsoidal, ovoid or pyriform, smooth, non-amyloid, color in mass varying with intensity of print: "deep olive-buff," "olive lake," "ecru-olive," "dark olive-buff." *Pleurocystidia* hyaline, numerous, prominent, base curved and deeply buried, fusoid-lanceolate, tapering at base

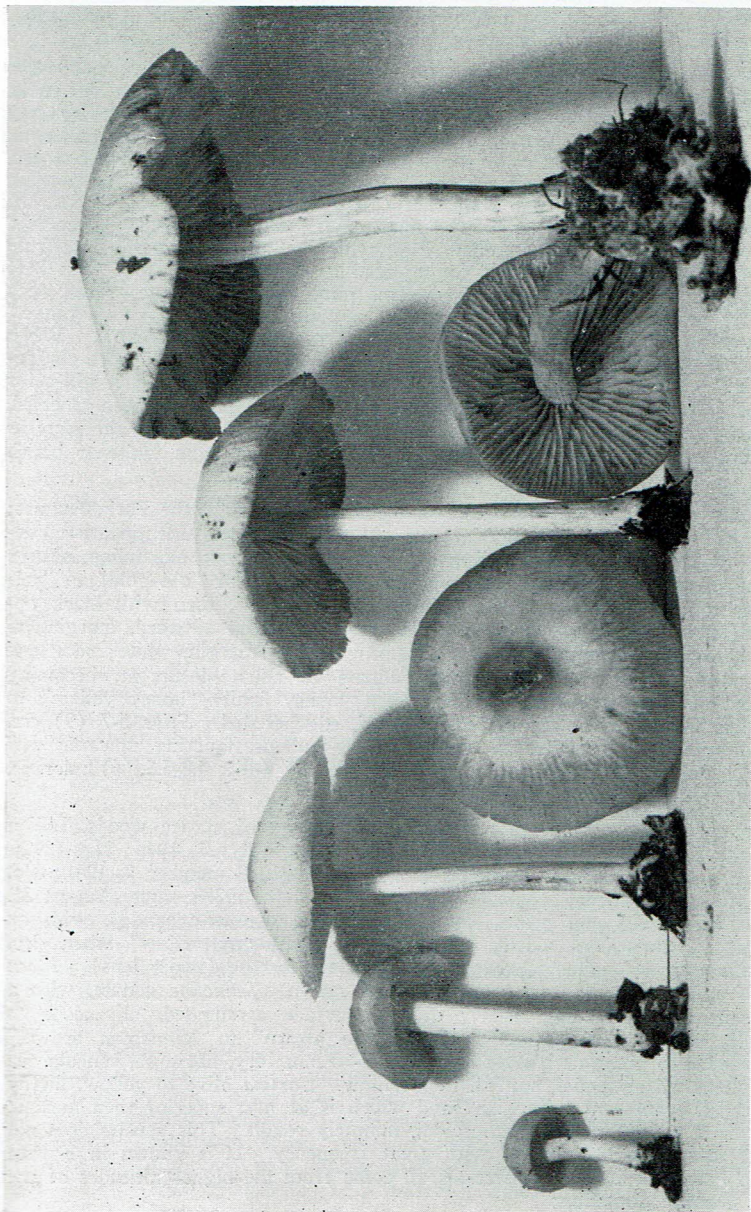


Fig. 3. *Collybia Glatfelteri* Murr. x 2/3

and apex, 70-115 x (7) 10-14 microns; *cheilocystidia* similar, shorter, 65 x 12 microns. This species was originally described by Murrill (1916), and the type has been studied by Smith (1938). Both authors characterize the spores as hyaline. Under the microscope they indeed appear hyaline, but in mass they are olive. Colored spores in *Collybia* species have been only rarely reported: *C. coracina* Fr., greenish (Quelet); *C. extuberans* (Batt.) Fr., yellowish (Quelet); *C. nitellina* Fr., brownish red (Rea), or pale lilac (Bresadola). Previously, *C. Glatfelteri* has been reported from Missouri and Ohio.

COLLYBIA RADICATA Fr. (*form with rufescent gills*). On May 8, 1944, a collection of this species (No. 18342) was taken from a lawn, at Knoxville. It did not then seem unusual, was given routine attention, and, when dry, was filed in the herbarium. Early in 1949, attention was drawn to this collection, by the striking orange-red color which the gills had assumed after being stored. The gill color of these specimens varies from "dragon's-blood red" to "apricot orange." A portion of this collection (No. 18342) was sent to Dr. A. H. Smith, University of Michigan, who finally concluded that it is an unreported form of *C. radicata*. A subsequent examination of all material of *C. radicata* in the herbarium here revealed an interesting situation. In more than half the sixteen collections the gills had become some shade of orange or red, such as "orange-cinnamon," "English red," "xanthine orange," "zinc orange," "orange rufous." In the others, the gills were pale orange yellow. When additional collections can be made, attention will be paid to sporophore characters in an effort to determine the taxonomic significance of this gill-color change. Change in color of gills in other species of *Collybia* has been reported, but none so striking as this. Those who have collected *Lepiota caeruleascens* Pk. will recall change in color of the gills and pileus from white to bluish green on drying.

**CORTINARIUS ANNULATUS* Pk. No. 12863 and No. 17091, the Park, August; No. 18655, Highlands, North Carolina, August 31, 1948. Identification confirmed by Dr. A. H. Smith. *Pileus* 3-4.5 cm. broad, convex, expanding, obtuse, dry, not hygrophanous, brownish with an olive tint, near "old gold" to "yellow ochre," at first with minute, erect, floccose scales, then with black appressed fibers which are dense on disk, more scattered outward, margin incurved, even. *Flesh* medium thick, abruptly thin on margin, white; *odor* and *taste* mild or of radish. *Lamellae* adnate to adnate-decurrent, becoming adnexed-emarginate, "isabella color" when young, finally "honey yellow" to "dresden brown" when mature, close, broad, edge eroded. *Stipe* 5-7 (9) cm. x 7-10 mm., dry, concolor to pileus, clavate-bulbous, tapering upward; *veil* white, leaving a fibrous, apical *ring*. *Spores* (6.5) 7-8 x 4.8-5.5 (6) microns, ovoid-ellipsoid, apiculate, rough.

**CORTINARIUS GENTILIS* Fr. No. 17683, on soil, red spruce woods, Indian Gap, the Park, August 16, 1946; No. 17664, same, July 27, 1946; No. 13995, in deep moss, fir woods, Clingmans Dome, the Park, September 7, 1941; No. 19005, in spruce woods, Indian Gap, July 2, 1949; No. 19278, same, August 31, 1949. *Pileus* 2-5 cm. broad, convex-conic then convex-expanded, with or without an umbo, not viscid, hygrophanous, "antimony yellow" when dry, "cinnamon brown" when wet, appressed-fibrillose, rimose (under lens). *Flesh* thin, fragile, yellowish; *odor* and *taste* of radish. *Lamellae* adnate, with a decurrent tooth, seceding, nearly distant, surface corrugated, olivaceous to "isabella color" when young, finally "sudan brown" to "cinnamon brown," edge eroded to fimbriate. *Stipe* 3-5 cm. x 5-10 mm., dry, fibrillose, concolorous with pileus, nearly equal, stuffed, then hollow. *Cortina* olive to yellow, finally leaving an evanescent, yellowish band which is at first superior then median. *Spores* 8-9 x 5-6.5 microns, ellipsoidal, minutely rough. This species does not appear to have been collected with great frequency. It is known in Europe and in Colorado, and our collections all come from the higher altitudes of the Great Smoky Mountains.

**CORTINARIUS HINNULEUS* Fr. No. 18584, on soil, spruce woods, Indian Gap, the Park, August 20, 1948; determined by Dr. A. H. Smith. *Pileus* 2.5-4.5 cm., convex, then convex-conic and umbonate, finally expanding-wavy, silky-fibrillose-appressed, shining, hygrophanous, not viscid, "honey yellow" to "yellow ochre" ("sudan brown," wet), substriate and splitting (dry), margin even when wet. *Flesh* thin, brittle, "yellow ochre"; *odor* and *taste* slight (of raw potatoes or radish). *Lamellae* emarginate, seceding, at first "buckthorn brown," finally "raw sienna" to "sudan brown," transversely rugulose, edge even, very broad (10 mm.), close or nearly subdistant. *Stipe* 3-4 cm. x 5-8 mm., concolor to pileus, fibrillose-appressed, dry, equal or tapering downward, stuffed to hollow. *Cortina* webby, sparse, leaving a sub-apical or median, whitish, evanescent ring-zone. *Spores* 7-8 x 4-5 (6) microns, smooth, ellipsoidal. Southern records of the occurrence of this species seem lacking. We have found it once only.

**CORTINARIUS MALACHIUS* Fr. No. 18583, on soil, under fir, Clingmans Dome, the Park, August 20, 1948; determined by Dr. A. H. Smith. *Pileus* 4-8 cm. hemispheric in buttonstage, expanding convex then plane, dry, not hygrophanous, with a silvery sheen of white appressed fibers over a violaceous base (color of base: "french gray," "pallid quaker drab," "vinaceous gray"), disk usually rusty, margin even. *Flesh* firm, thick on disk, elsewhere thin, at first "deep plumbago gray," fading to "pallid quaker drab"; *odor* and *taste* slight. *Lamellae* rounded-adenate, finally emarginate-uncinate, transversely rivulose, at first "dark heliotrope gray," finally "verona brown," medium broad, narrowed somewhat in front, ventricose, close, edge fimbriate. *Stipe* 7-9 cm. x 8-12 mm., clavate-bulbous, bulb up to 2.5 cm. diam., concolor to pileus, flesh "dark heliotrope gray," dry, solid then stuffed or hollow, fibrillose. *Cortina* webby, whitish, tinged violaceous. *Spores* 9-12 x 5.5-6.5 microns, ellipsoidal, rough. This appears to be the first report of *C. malachus* in North America. Our collection agrees with the description and illustration in Lange (1935-1939).

HYGROPHORUS RUBROPUNCTUS Pk. (Fig. 4.) No. 19398, in deep humus, in woods under beech, New Hopewell, Knox County, Tennessee, September 29, 1949. *Pileus* 4-5 cm. (not fully expanded), convex-hemispheric then convex, obtusely umbonate, glabrous, glutinous, the glutin colorless, disk "cream buff," elsewhere "ivory yellow," when dry bright "primuline yellow," margin at first involute, even. *Flesh* white, thick on disk, thin on margin; *odor* and *taste* none. *Lamellae* adnate to rounded-adenate, scarcely emarginate, at first white, then "ivory yellow," broad behind, abruptly narrowed in front, close, alternately long and short, short ones of four ranks, edge even. *Stipe* 7 cm. x 15 mm. (apex), white, rough, floccose-tomentose and glutinous-viscid up to an apical collar, enlarged (up to 22 mm. diam.) below collar (subventricose), glutin leaving pale yellowish-brown stains or spots (simulating reticulations), apex dotted with watery-drops (fresh) which on drying form reddish, glandular dots, solid. *Spores* 8-10 (11.5) x 5-6.5 (7) microns, smooth, ellipsoidal. *Cystidia* none. *Basidia* (48) 56-60 x 8-10 microns. *Gill trama* composed of divergent hyphae, 7-9 microns diam. This is the first time I have seen this species in the fresh condition. On being dried, the pileus becomes "pale orange-yellow" to "light orange-yellow," with a decided varnished appearance. The dried glutin, in all our specimens, forms an amber-colored reticulation on the disk. First record for Tennessee.

HYGROPHORUS SCIOPHANUS Fr. No. 19637, on humus, open pine woods, Anderson County, Tennessee, June 11, 1950. *Pileus* 1.5-2.5 cm. broad, glabrous, hygrophanous, "zinc orange," glutinous, umbonate, umbo red, fading, translucent striate to disk. *Flesh* thin, fragile, "zinc orange"; *odor* and *taste* none. *Lamellae* emarginate-uncinate, "orange buff" to "cadmium orange," or "bitter-sweet orange," subdistant, broad, ventricose, edge even. *Stipe* fragile, splitting longitudinally, glutinous, pale orange above, "zinc orange" below, glabrous, equal hollow. *Spores* 6-8 x 3.5-5 microns, variable, ellipsoidal, smooth.

Basidia 4-spored, sterigmata 7-10 microns long. *Cystidia* none. *Gill trama* composed of interwoven hyphae, 9-20 microns broad. The whole sporophore dries "ochraceous-salmon." Previously this species has been reported from North Carolina (Coker, 1929).

PHOLIOTA EREBIA Fr. No. 19403, in low woods, New Hopewell, Knox County, September 25, 1949. *Pileus* 1.5-4 cm., slightly viscid when wet, glabrous but appearing plush-like under lens, pale umber-brown or darker (not matched), disk brown to blackish, at times rugose, margin obscurely striatulate. *Flesh* thin, white. *Lamellae* adnate-decurrent, pallid then "sayaal brown," narrow, close, edge fimbriate. *Stipe* 3-6.5 cm. x 2-5 mm., dingy below, white above, fibrillose, apex subscabrous, equal, solid. *Annulus* membranous, persistent, apical. *Spores* 12-15 x 5-6.5 microns, smooth, ellipsoidal, base apiculate. *Pleurocystidia* scattered, projecting 30-40 microns, slender-flask-shaped, 48-64 x 8-9 microns; *cheilocystidia* few, cylindrical, 32 x 7 microns. The surface of pileus is composed of a palisade of obclavate to pyriform cells, 24-35 x 7-11 microns. After being dried, the pileus color is a peculiar umber-brown (not matched, but near "Prout's brown").

PHOLIOTA OMBROPHILA Fr. No. 18654, on lawn, Highlands, North Carolina, August 27, 1948. Identified by Dr. A. H. Smith. *Pileus* 3-4 cm. broad, convex, dry, glabrous, marginal portion "cinnamon-buff," disk somewhat darker, finally "bister," margin even and decorated with a white band (veil-remnants). *Flesh* thin, white; *odor* and *taste* mild. *Lamellae* adnate-decurrent, "pinkish buff" at first, finally "buckthorn brown," close, broad, edge fimbriate. *Stipe* 3.5-4 cm. x 6-9 mm., glabrous, dry, shining, equal. *Annulus* membranous, superior to median, persistent. *Spores* 10-14 x 5.5-7 microns, ellipsoidal, smooth, color in mass: near "buffy brown." *Pleurocystidia* scattered, ventricose, 50-70 x 9-16 microns; *cheilocystidia* clustered, similar, smaller, 27-35 x 10-13 microns. This species is known from Europe, and has been reported at widely-separated points in northern United States.

OTHER BASIDIOMYCETES

**CYPHELLA MELLEA* Burt. No. 19236, on trash, Rich Mountain, the Park; collected by Dr. A. J. Sharp; determined by Dr. William Bridges Cooke, August 19, 1949. The type was described from Louisiana, by Burt (1914). It seems not to have been collected elsewhere.

**SOLENIA CANDIDA* Pers. No. 19493, on hemlock log, Chimneys, the Park, October 22, 1949; determined by Dr. William Bridges Cooke. This is apparently a rare species, and is the first collection from Tennessee.

POLYPORUS ELLISII Berk. No. 18698, on soil, Highlands, North Carolina, October 23, 1948. Collected by Dr. S. L. Meyer; identified by Dr. J. L. Lowe. *Pileus* 9 cm. broad, somewhat flabelliform or nearly circular, slightly depressed, dry, matted-fibrillose or tomentose, "mustard yellow," margin thin and inrolled, sterile. *Flesh* white, tinted yellow, fleshy-firm, about 5 mm. thick; *odor* slightly pungent. *Tubes* slightly decurrent, about 1 mm. long, variable in shape and size, often 1 mm. or less in diam., again elongated radially and 4 mm. diam., rounded or angular, dissepiments thin, mouths fringed-denticulate, "cream color" to "yellow ocher." *Stipe* 6 x 3 cm., solid, hard, excentric, single, tubercular, matted-tomentose, "yellow ocher," not black below, not rooting. *Spores* 8-9 x 4.8-6.5 microns, hyaline smooth. The type was discovered in New Jersey in 1878. Since that time, this species has been collected rarely in Alabama, North Carolina, South Carolina. Excellent illustrations will be found in Coker (1948).

**POLYPORUS TOMENTOSUS* Fr. No. 19359, on soil, under white pine, Highlands, North Carolina, September 14, 1949; No. 19604, Rich Mountain, the Park, Tennessee, August 19, 1949; determined by Dr. J. L. Lowe. *Pileus* up to 20 cm. broad; *spores* white in mass, 4.5-6 x 3-3.5 microns.

SARCODON RETICULATUS Banker. No. 3138, on soil, pine woods, New Hope-well, Knox County, November 15, 1932; No. 18867, on soil, in young pine woods, Knoxville, December 23, 1948. Identification confirmed by Mrs. Alma Beers and Dr. W. H. Snell. *Pileus* 7-15 cm. broad, expanding, depressed, at times umbilicate, circular, "wood brown" (dry), "warm sepia" (wet), with coarse appressed and variously disposed fibers, margin wavy and more or less uplifted. *Flesh* thick, abruptly thin at margin, homogeneous, medium firm, brownish, not zonate; *odor* of fenugreek, *taste* mild. *Teeth* slightly or not decurrent, ashy-white, up to 10 mm. long, apex sharp-pointed. *Stipe* 2-3.5 cm. x 15-30 mm., brownish, equal, base blunt, glabrous, solid central. *Spores* 3.5-4.5 x 3.2-3.5 microns, minutely warty, globose to subglobose, white in mass. When teeth are broken away, reticulations are evident. This appears to be a rarely-collected species in the United States. Earlier reports of it come from New Jersey and North Carolina.

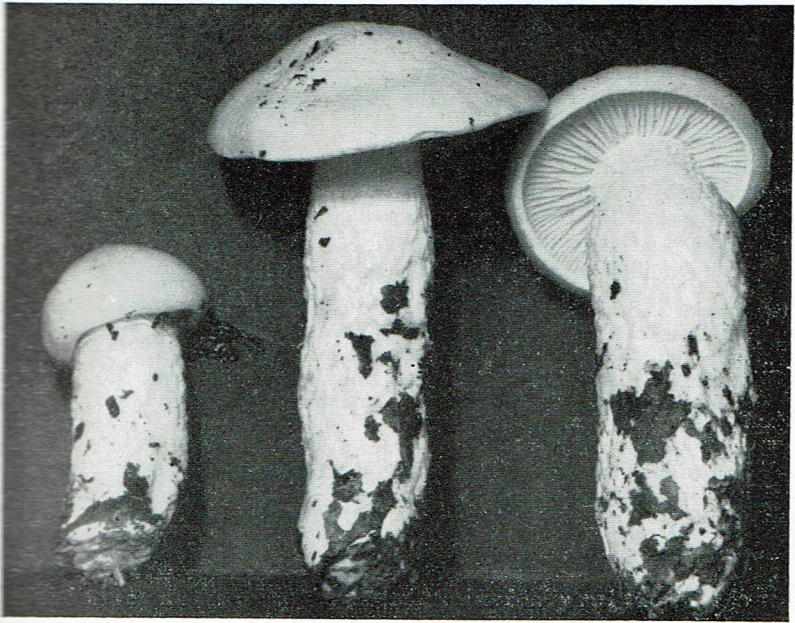


Fig. 4. *Hygrophorus rubropunctus* Pk. x 3/4

STEREUM DIAPHANUM (Schw.) Cke. No. 12438, near Knoxville, August 15, 1937; No. 18616, Lauderdale County, Tennessee; collected by Dr. A. J. Sharp, June 28, 1948; No. 19462, on soil, under gum and cypress, Tipton County, Tennessee; collected by Dr. A. J. Sharp, August 18, 1947; determined by Dr. H. S. Jackson.

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