



November 2013

## Galerina Notebook 2

L. R. Hesler

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Smith, A. H. & Ringess, R. The genus *Galerina*:  
An outline of its classification.  
*Sydowia* 11: 446 - 453. 1957.

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*Galerina* Earle. A Monograph of the Genus  
1964. Hafner Pub. Co. pp. 384.

GALERINA AUTUMNALIS (Pk.) ~~S. & S.~~ <sup>Sm. + Sing.</sup>

(see synonymy in Sm. + Sing. p. 246)

Pileus 2-5 cm., convex, expanding-convex, glabrous, viscid, hygrophanous, "chamois" to "cream buff" (dry), "ochraceous tawny" to "cinnamon brown" (wet), margin striatulate when wet, even when dry. Flesh thin, concolor to pileus; odor and taste farinaceous. Lamellae adnate, at times with a decurrent tooth, rather close, medium broad, edges even, "clay color" to "sandal brown," scarcely reaching the margin. Stipe 2-7 cm. x 3-8 mm., often compressed, watery brown, fibrillose-striate, hollow. Veil leaving an apical band.

Spores ellipsoidal, faintly rough, 7-9.5 x 4-5  $\mu$ , "snuff brown" in mass. Pleurocystidia rare, protruding 30  $\mu$ , 40-77 x 4-8  $\mu$ , bottle-shaped; cheilocystidia few, cylindrical, ~~35-48 x~~ 35-48 x 5-7  $\mu$ .

Habitat and Distribution. - On deciduous log, Tennessee, January.

This is Pholiota discolor sensu Overholts.



20782 - *Galerina autumnalis* (Pk.) S. + S.  
~~*Holista muscicola* Pk.~~

*Galerina*

NAUCORIA BRUNNEOMARGINATA Murr.

North Amer. Flora 10:180. 1917

Galerina brunneomarginata (Murr.) Sm. & Sing., A Monograph  
on the genus Galerina Earle, p. 43. 1964.

Type

Pileus 1.5-2.5 cm broad, campanulate to subexpanded, gibbous, pale-yellowish-gray or dark-cream-colored, margin with a brownish zone, not striate, incurved when young, glabrous. Context cream-colored; odor and taste not characteristic.

Lamellae sinuate, yellowish, edges concolorous, narrow, rather distant.

Stipe 3-5 cm long, 1-2 mm thick, cream-colored, glabrous, cartiliginous, hollow.

Notes by Hesler

Spores 7.5-9.5 x 5-5.5  $\mu$ , obscurely inequilateral in profile, ellipsoid in profile, minutely rugulose (under oil lens), germ pore none. Pleurocystidia none; cheilocystidia 32-43 x 6-8  $\mu$ , ventricose, usually more or less capitate. Pileus cuticle of repent, dry hyphae. Stipe cuticle of dry, repent hyphae; caulocystidia scattered, 35-42 x 4-8  $\mu$ , similar to cheilocystidia, scattered or in small clusters.

Type (No. 52) collected by James McMurphey, in soil, among leaves and grass, under trees, Stanford University, California, December 21, 1902.

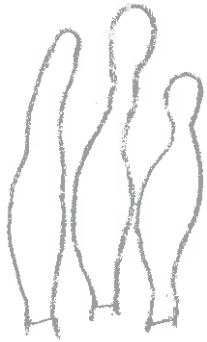
This is Galerina brunneomarginata (Murr.) Sm. & Sing.

*Nauvoia brunneomarginata* Murr.

*Galerina*

Type -

[ *Galerina brunneomarginata* (Murr.)  
Sm. + Sing. ]



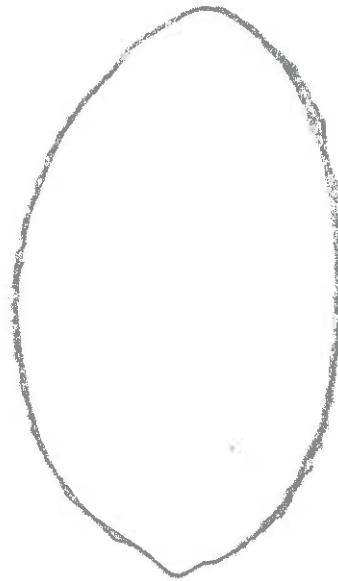
Ch x 1000



Con x 1000



Profile



Face

Spores x 8000

GALERA BRYOPHILA Pk. [= Gabrina]

Westport, New York, leg. Chas. H. Peck, Oct. 5.

Type ~~Gabrina semilanceata~~

Spores 8-10 x 5.5-6  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, wall slightly ~~warty~~ warty to warty-rugulose, yellowish brown in 2% KOH.  $\sigma$  none;  $\sigma h$  24-34 x 5-8  $\mu$ , ventricose, often somewhat capitate. Pleura cuticle a slight, thin ixocutis. (PKc)

this is a synonym of Galerina semilanceata, Sm. + Sing. 5

Monograph, p. ~~37~~ 39, 1964.

Rev 54: 149.



18046 - *Galerina clavata* (Vel.) Kuhner



NAUCORIA HEPATICICOLA MURR.

Mycologia 4:78. 1912

Galerina hepaticicola (Murr.) Sm. & Sing., Monogr. of the  
Genus Galerina Earle, p. 287. 1964.

Type

Pileus 1 cm broad, hemispheric to convex, fulvous,  
dry, glabrous, margin not striate.

Lamellae adnate, melleous to fulvous, plane or  
slightly arcuate, broad, distant, inserted.

Stipe 1.5 cm long, 2 mm thick above, glabrous,  
cartilaginous, tapering upward, curved. Veil very slight,  
fibrillose, evanescent.

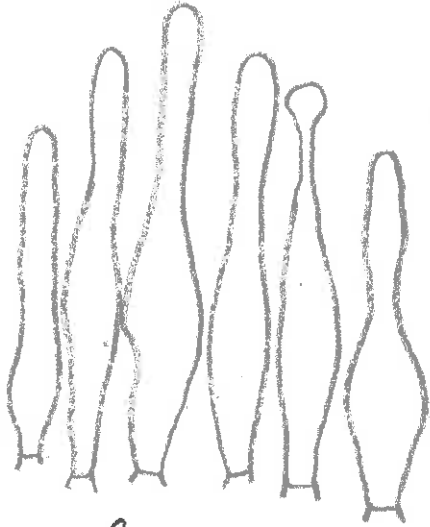
Notes by Hesler

Spores 7-9 x 4.5-5.5  $\mu$ , rusty brown in KOH, obscurely  
inequilateral in profile, subovoid to subellipsoid in face  
view, wall rugulose, calyptrate, no germ-pore. Pleurocystidia  
(not found, collapsed? Reported by Smith and Singer as rare,  
similar to cheilocystidia); cheilocystidia 43-62 x 6-12  $\mu$ ,  
ventricose with a neck. Pileus cuticle of dry, repent  
hyphae. Stipe material sparse, not studied.

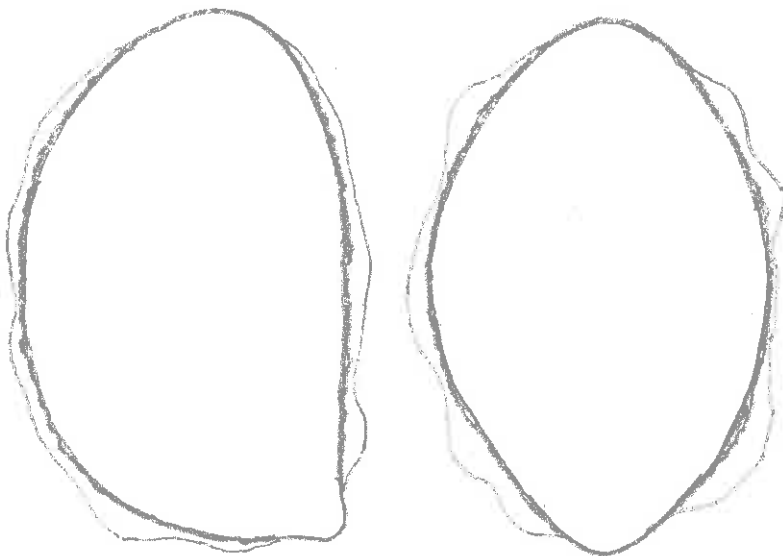
The spores indicate Galerina.

*Naucoria hepaticicola* Murv.

Type [= *Galerina hepaticicola* (Murv.)  
Sm. + Sing.]



Ch x 1000



Profile

Face

Spores x 8000

NAUCORIA LATERITIA Murr.

North Amer. Flora 10:173. 1917

Galerina lateritia (Murr.) Singer, Trudy Bot. Inst. Akad. Nauk. S.S.S.R. Ser. 2(6):466. 1950. (See: Smith and Singer, A Monograph of the Genus Galerina Earle, p. 204. 1964).

Type

The type collected on dead wood, Lake Placid, Adirondack Mts., New York, October 3-14, 1912, Murrill-559. Material limited, but some study made of it by me (Hesler).

Spores 6-8 x 4-5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, not truncate but a small germ pore present, pale yellow brown in H<sub>2</sub>O, scarcely darker, in 2% KOH, pinkish brown in Melzer's reagent. Pleurocystidia none; cheilocystidia 23-35 x 5-9  $\mu$ , ventricose, more or less capitate. Pileus cuticle of dry, repent hyphae. Stipe cuticle similar.

NAUCORIA MAMMILLATA Murr.

North Amer. Flora 10:180. 1917

Galerina mammillata (Murr.) Sm. & Sing., Sydowia 11:449.  
1957.

Type

Spores 5.5-8 x 3.5-4.5  $\mu$ , ellipsoid, scarcely inequilateral in profile, smooth, germ pore minute, not truncate, yellowish brown in 2% KOH. Pleurocystidia none; cheilocystidia 23-34 x 4-6  $\mu$ , ventricose, capitate. Gill trama of subparallel, slender hyphae, 3-5  $\mu$  broad. Subhymenium a somewhat gelatinous zone. Pileus cuticle a rather thin ixocutis, 35-50  $\mu$  thick. Hypodermium not differentiated. Stipe cuticle of dry, ~~to~~ repent hyphae, surface bearing (especially on the apical region) tufts of caulocystidia, similar to the cheilocystidia.

Type (Murrill-694) on fallen, much decayed wood, Seattle, Washington, October 20-November 1, 1911.

Tenn-20760

GALERINA MARGINATA (Fr.) Kühner

On sawdust, Claxton School, December 28, 1952

Spores 8-10 x 4-5.5  $\mu$ . Pleurocystidia 48-64 x 9-12  $\mu$ ,  
ventricose, long-necked; cheilocystidia 42-53 x 7-9  $\mu$ , similar.

Tenn-21301

GALERINA MARGINATA (Fr.) Kühner

PHOTO

On sawdust and pine chips, New Hopewell, Knox County,  
March 28, 1954

Pileus usually compactly caespitose, 2-4 cm broad, hemispheric-convex, finally expanding wavy-convex to plane, disc rarely depressed, hygrophanous, scarcely viscid, "honey yellow" to "chamois" (dry), "sage brown" to "snuff brown" (wet), glabrous, margin even. Flesh moderately thick on disc, thin on margin, pale yellowish (dry); odor and taste slightly more or less farinaceous. Lamellae adnexed, pale "clay color" (when young), finally "tawny olive" to "buckthorn brown," medium close, rather broad, not reaching margin of pileus, edges even. Stipe 3-5 cm x 3-6(10) mm, usually compressed, pallid above, dingy downward, fibrillose-striate, often expanded at apex, at times ventricose, bases usually connate, stuffed, then hollow, base often white-tomentose. Veil arachnoid, leaving a narrow apical, evanescent annulus.

Spores 8-9(10) x 4.8-5.5  $\mu$ , ovoidal, not truncate, smooth (under oil), color in mass: "buckthorn brown." Pleurocystidia scattered, flask-shaped with a long neck or hair-shaped with a bulbous base, 45-56 x 4-5  $\mu$ ; cheilocystidia not abundant, similar to pleurocystidia, only slightly smaller.



21301 - *Pholiotia marginata* <sup>(Fr.)</sup> Quelch  
Salvinia marginata (Fr.) Kihner



22559 - ~~Boletia~~ ~~marginata~~ (Fr.) ~~Querc.~~  
Galerina marginata (Fr.) Kühner



NAUCORIA MONTANA Murr.

Mycologia 4:78. 1912

→ Galerina nana (Petri) Kühner, Ency. Myc. 7:219. 1935

Type

Pileus 1-2 cm broad, hemispheric-umbonate, light brown, umbo dark brown, glabrous, striate (viscid).

Lamellae adnate, broad, medium distant, heterophyllous.

Stipe 3-4 cm long, 1-2 mm thick, brown above, fuliginous below, glabrous, crooked (dry).

Notes by Hesler

Spores 7-9 x 4.5-5  $\mu$ , ellipsoid, obscurely inequilateral, brown in KOH, no germ pore, wall faintly rugulose, medium thick, not calyptrate. Pleurocystidia 40-72 x 7-14  $\mu$ , flask-shaped, with a stalk and a rather long neck, thick-walled, apex at times crystallate, conspicuous; cheilocystidia 26-42 x 7-15  $\mu$ , somewhat similar to pleurocystidia, often subfusoid-ventricose, occasionally the apex crystallate, ~~a~~ wall thick. Pileus cuticle an ixocutis. Stipe cuticle of dry, repent hyphae.

In some sections the gill trama appears to have a mediostrate with subgelatinous subhymenial zones on either side. The metuloid-type of lamellar cystidia suggest Inocybe, and the subhymenium suggests Pholiota. But the spores are rough and lack a germ-pore.

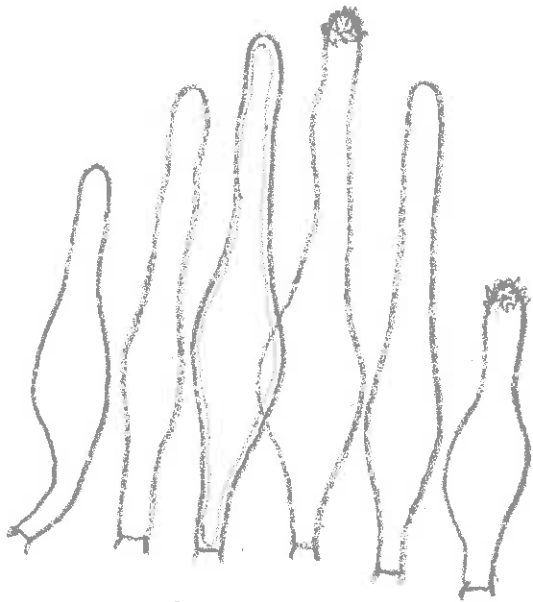
N. montana - 2

Placed in Galerina nana (Petri) Kühner by Smith & Singer, p. 340.

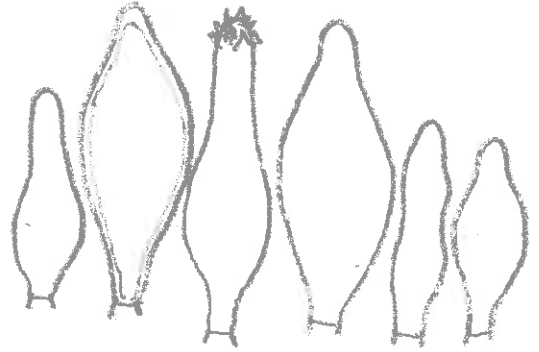
Type collected by Murrill, No. 621, Cinchona, Jamaica, December 25-January 8, 1908-9.

*Naucoria montana* Murr.

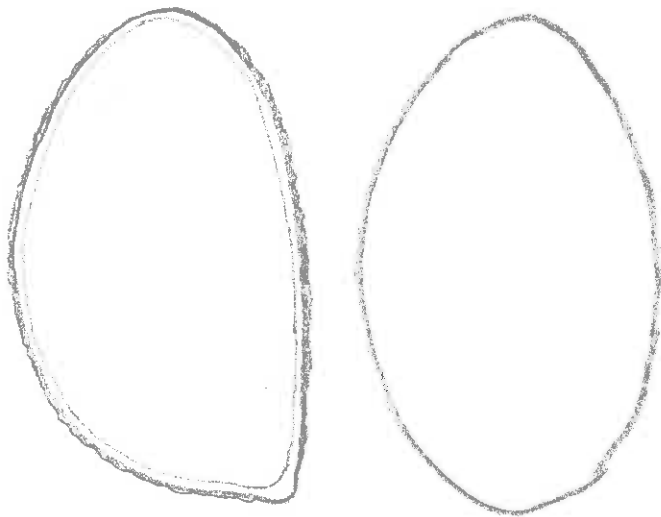
Type (= *Galerina nana* (Petri) Kühner)



Pl x 1000



Ch x 1000



Spores x 8000

GALERINA OINODES (B. & C.) comb. nov.

Agaricus oinodes B. & C., Jour. Linn. Soc. 10:291. 1868.

Naucoria oinodes (B. & C.) Sacc., Syll. Fung. 5:842. 1887.

Murrill's Description

Pileus 6-8 mm broad, hemispheric, umbonate, vinosus, glabrous, striate.

Lamellae adnate, ferruginous-reddish, distant.

Stipe short, 12 mm long, brownish.

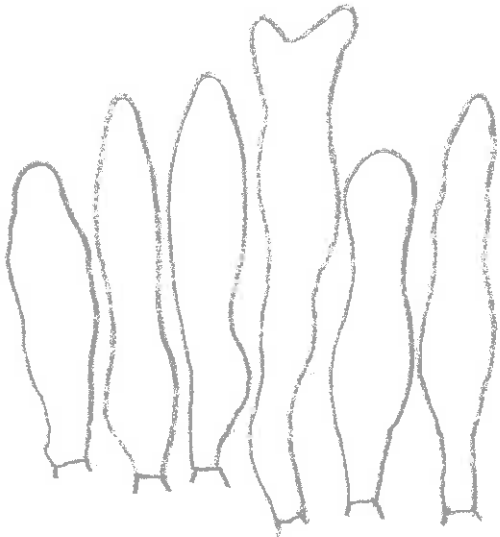
Notes by Hesler (Type)

Spores 8-10 x 5-5.5 (6)  $\mu$ , slightly inequilateral in profile, ellipsoid to subovoid in face view, rugulose, often more or less calyptrate, brown in 2% KOH, apparently with a plage. Pleurocystidia 38-66 x 6-12  $\mu$ , subclavate, often slightly ventricose downward, apices obtuse to subacute; cheilocystidia 32-48 x 6-10  $\mu$ , somewhat similar. Pileus cuticle of repent, dry hyphae. Clamp connections on tramal hyphae. (Stipe not studied).

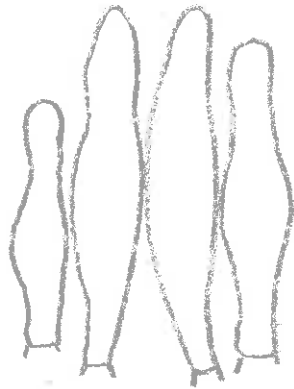
Type (Kew) on rotten wood, Cuba, Wright (Curtis).

Agar. (*Haucozia*) *cinodes* B. & C.

Type [= *Galvina* o. (B & C) comb. nov.]



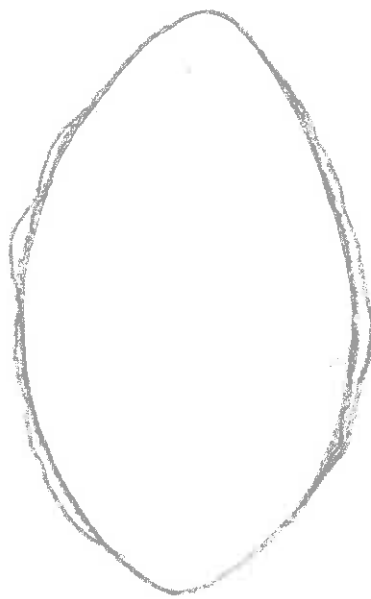
H x 1000



Ch x 1000



Profile



Face

Spores x 8000

NAUCORIA PELLUCIDA Murr.

Mycologia 4:78. 1912

Galerina pellucida (Murr.) Smith & Singer, Sydowia 11:449.  
1957.

Type

Pileus 7 mm broad, conic to plane, umbonate, umbo bay to latericeous, elsewhere testaceous, surface dotted with translucent, gelatinous, pearly-white droplets or specks, striate.

Lamellae adnexed, pale-testaceous, ventricose, distant, with droplets similar to those on pileus.

Stipe 1 cm long, 0.5 mm thick, pallid above, bay below, guttate, cylindric, equal, smooth, dry.

Notes by Hesler

Spores 6-8 x 4.5-5.5  $\mu$ , some obscurely inequilateral in profile, ellipsoid to subfusoid in face-view, cinnamon brown in KOH, minutely rugulose, wall slightly thick, no germ pore. Pleurocystidia and cheilocystidia not found (see notes below).

Material too sparse for critical microscopic study.

Type on dead wood, New Haven Gap, near Cinchona, Jamaica, leg. Murrill, No. 763, January 4, 1909.

The type too fragmentary and sparse for full study.

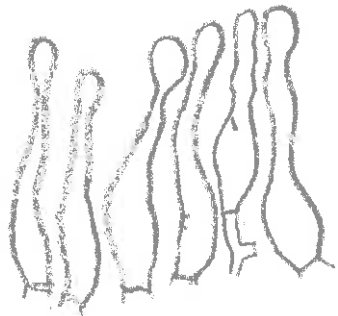
Smith & Singer place it in Galerina, with a full account

N. pellucida - 2

of microscopic structures. They found no pleurocystidia, but describe and figure cheilocystidia, 24-36(50) x 4-7  $\mu$ , ventricose below, with a neck and apex more or less capitate (somewhat "gymnopiloid").

*Naucoria pellucida* Murr.

Type [= *Galvina pellucida* (Murr.) Em. & Sing.



Ch. - [Traced from Smith  
& Singer, Fig. 53,  
p. 95, in Monograph]



Face view      Profile  
Faces x 8000



*Galerina?*

*Type spore*

NAUCORIA PUBESCENS Murr.

North Amer. Flora 10:179. 1917

Type

The box in a packet marked "Type," showed only gill fragments, and I was able to observe 3 spores, 7-8 x 4.5-5  $\mu$ , ellipsoid, no germ pore, apparently smooth, brown in KOH. I was unable to study other micro structures.

It might be a Galerina.

The  $\neq$  Type from Seattle, Wash., collected by Murrill, No. 450, October 20-November 1, 1920.

GALERINA REFLEXA (Murrill) Smith & Singer  
Galerula reflexa Murr., N. A. Flora 10:169. 1917

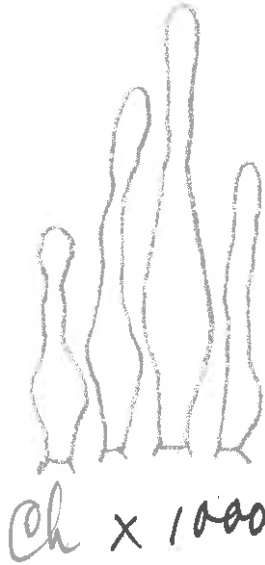
Type

Spores 8-10 x 5-6  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, rugulose-warty, brown in 2% KOH, no germ-pore. Pleurocystidia and cheilocystidia similar: ventricose below and with a long neck, 30-56 x 5-10  $\mu$  (Smith and Singer give pleurocystidia 50-70 x 8-12  $\mu$ ). Pileus cuticle a thin gelatinous zone.

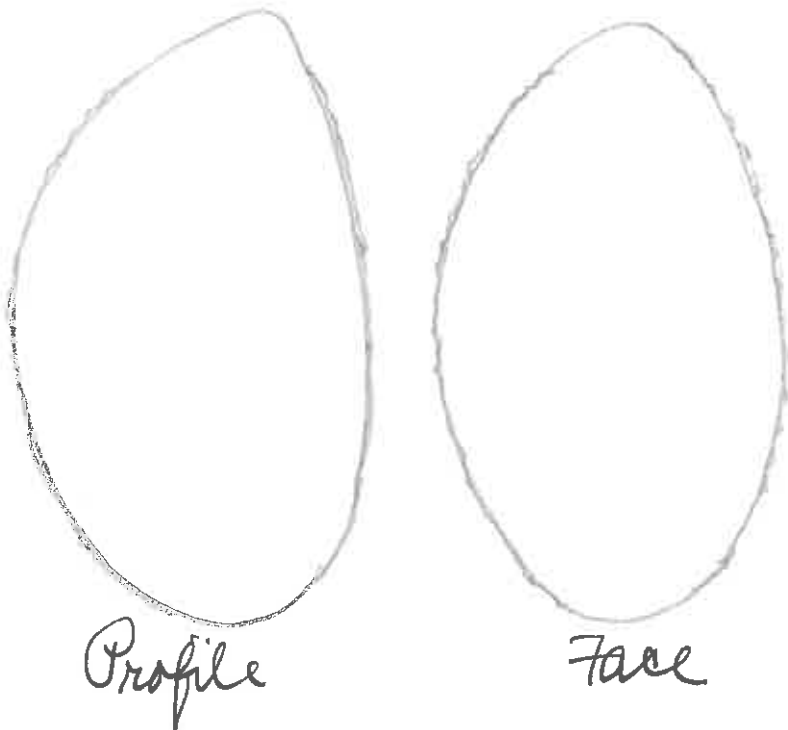
Type on soil, in humus, Tepeite Valley, near Cuernavaca, Mexico, December 28, 1909, Murrill No. 488.

*Galerina reflexa* (Murr.) Sm. + Sing.

[*Galerula reflexa* Murr.] - Type  
(Murrill No. 488)



[Pl. similar]



Spores x 8000

GALERINA RUFIPES (Pk.) Watling (in ed.)

Galera rufipes Pk., New York State Mus. Ann. Rept. 42:20. 1889.

Galerula rufipes (Pk.) Murr., N. A. Flora 10:164. 1917.

Pileus 8-16 mm broad, campanulate or convex, hygrophanous, reddish-tawny and striatulate when moist, pale ochraceous when dry, margin whitened by remains of the fibrillose veil.

Lamellae emarginate, yellowish or subochraceous, broad, distant, slightly crenulate on the whitish edge.

Stipe 2.5 cm long, 1 mm thick, reddish brown, pruinose at apex, slightly fibrillose below, hollow.

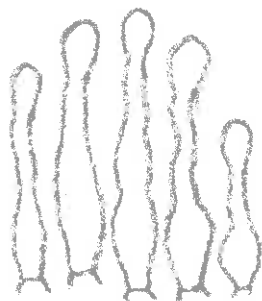
Notes on Type (by Hesler)

Spores 7-8 x 4-5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, wall rather thin, minutely rugulose, with an obscure germ pore (observed only in some), yellowish to pale yellowish brown in 2% KOH. Pleurocystidia none; cheilocystidia 20-36 x 3-7  $\mu$ , abundant, sub-ampullaceous, often more or less capitate. Pileus cuticle definitely appears to be an ixocutis.

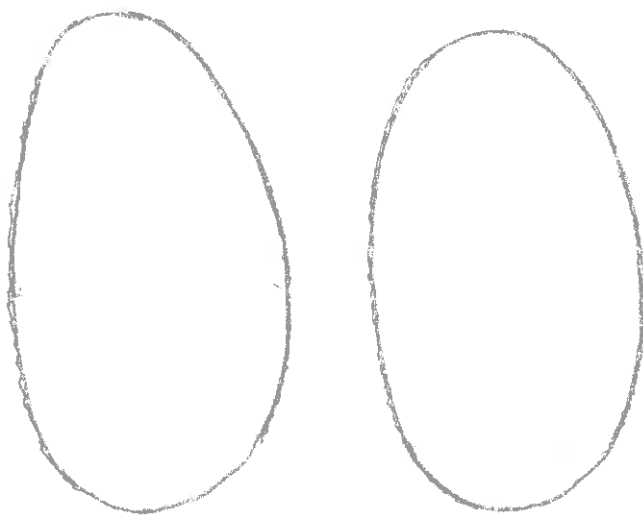
Type on mossy soil, in woods, leg. Peck, North Elba, New York, September.

A note by Watling, in the specimen box, says that this is a Galerina sp., but is not in Smith & Singer.

*Galera rufipes* Pt.  
Type [= Galerna]



Ch x 1000



Spore

Face

Spores x 8000

Pholista sabulosa K. ??

Trocy Bot. Club. Bul. 23: 414. 1896.

Overholtz says spines rough,  $85-95 \times 5-6\mu$ .

Perhaps a Gymnophylus? Harding lists it

a synonym of Galerina marginata.

Hab + Distr. - Type from Alabama.

See: N.A. Species of Pholista, p. 385: may be  
a Galerina; overlooked in Smith's + Singer's Monograph

GALERINA SEMILANCEATA (Pk.) Sm. & Sing.

Monogr. of Genus Galerina, p. 39. 1964.

Galera semilanceata Pk., Torrey Bot. Club Bull. 23:415. 1896.

Galera bryophila Pk., N. Y. State Mus. Ann. Rept. 54:149. 1901.

Galerula bryophila (Pk.) Atk., Amer. Phil. Soc. Proc. 57:364. 1918.

Galerula semilanceata (Pk.) Atk., Amer. Phil. Soc. Proc. 57:365. 1918.

Pileus 8-12 mm broad, acutely conical or campanulate, often sharply umbonate, pale yellow or buff, glabrous, sulcate-striate. Context membranous.

Lamellae adnate ascending, tawny-ferruginous when mature, rather broad, distant.

Stipe 4-5 cm long, 1-2 mm thick, pallid, glabrous, hollow.

Spores 10-12.5 x 5-6  $\mu$ , ellipsoid, ferruginous.

Type, among fallen leaves, sticks, mosses, etc., leg. Yeomans, Camas, Washington, December.

It is now Galerina semilanceata (Pk.) Sm. & Sing. (see their monogr., p. 39). See Tenn-10162, 16381.

Gabruina sphagnorum (Murr.) Kihner

NAUCORIA SPHAGNORUM Murr.

North Amer. Flora 10:181. 1917

Type

Pileus 2-2.5 cm broad, conic to campanulate, umbonate, bay, paler on the margin, glabrous, margin striate.

Lamellae adnexed, fulvous-isabelline, edges concolorous, rather crowded, rather broad.

Stipe 6 cm long, 3 mm thick, lateritious, fibrillose, equal, cartilaginous.

Notes by Hesler

Spores 8-9 x (4)4.5-5.5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, minutely punctate, wall medium thin, germ pore none, pale yellowish brown in water, darker brown in 2% KOH, medium yellowish brown in Melzer's reagent. Pleurocystidia none; cheilocystidia 25-36 x 6-7  $\mu$ , subventricose, sparse, inconspicuous. Gill trama of subparallel hyphae, 4-9  $\mu$  broad. Pileus cuticle of dry repent hyphae; pileocystidia none. Stipe cuticle of dry repent hyphae; caulocystidia none.

Type collected by Murrill, No. 482, in sphagnum, in a peat bog, Seattle, Washington, October 20-November 1, 1911.



GALERINA SPHAGNORUM (Fr.) Kühner

Pileus 10-15 mm. broad, conic-convex, expanding somewhat, moist, "sageal brown," glabrous, pellucid-striate. Lamellae adnate-decurrent, nearly subdistant, medium broad, concolor to pileus. Stipe attached to sphagnum, glabrous.

Habitat and Distribution. - On sphagnum, North Carolina, October.

Smith says (4-6-56) many abnormal <sup>spores;</sup> ~~spores~~ and the cheilocystidia are more capitate than usual.

*Galerina*

NAUCORIA SPINULIFER Murr.

Mycologia 4:79. 1912  
Naucoria montana Murr., Mycologia 4:78. 1912.  
Galerina nana (Petri) Kühner, Ency. Myc. 7:219. 1935

Type

Pileus 2 cm broad, hemispheric-umbonate, isabelline, umbo testaceous, margin cremeous, innate-fibrillose.

Lamellae adnate, dull-purplish-isabelline, of medium breadth and distance, arcuate.

Stipe 2.5 cm long, 2.5 mm thick, stramineous above, fulvous below, subglabrous, cylindrical, curved.

Notes by Hesler

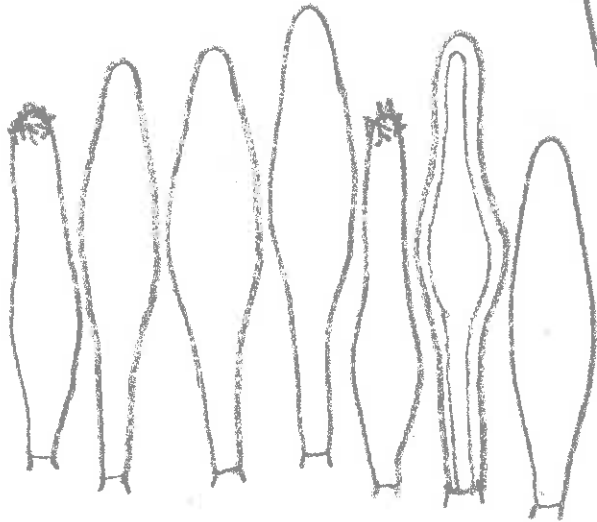
Spores 7.5-10(11) x (4.5)5-5.5(6)  $\mu$ , slightly inequilateral in profile, and more or less amygdaliform, subvoid, subfusoid, to subellipsoid in face view, wall 0.3-0.4  $\mu$  thick, rugulose, no germ pore, ferruginous brown in KOH. Pleurocystidia 48-60 x 9-13  $\mu$ , ventricose, often with a short or long stalk and a slight neck, apices sometimes crystallate, wall thick; cheilocystidia 38-53 x 9-12(14)  $\mu$ , similar. Gill trama with a medistrata, flanked on either side by a gelatinous subhymenium. Pileus cuticle a thin ixocutis. (Stipe material sparse; not studied.)

Type on dead wood, Morce's Gap, near Cinchona, Jamaica, leg. Merrill, No. 705, Dec. 29-30, Jan. 2, 1908-9.

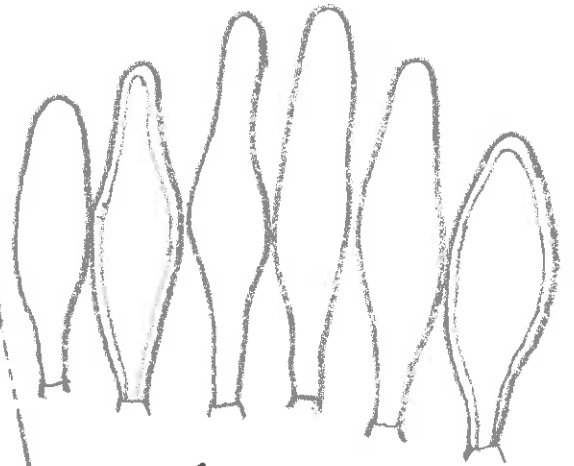
Dennis (in note on packet) says it is near Galera nana (observed Feb. 27, 1952).

*Naucoria spinulifer* Murr.

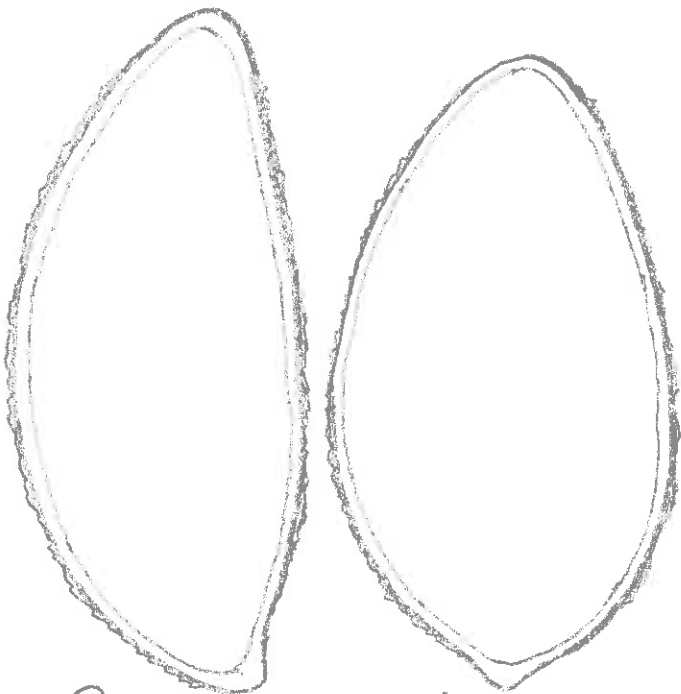
Type [= *Galerina nana* (Petri) Kühner ?]



Pl x 1000



Ch x 1000



Profile

Face

Spores x 8000

GALERINA TRISCOPA (Fr.) Kühner

Encyc. Myc. 7: 206. 1935

Galerula ciniferarum Murr., N. A. Flora 10:162. 1917.

Galerula parvula Murr., N. A. Flora 10:162. 1917.

Murrill Description of G. coniferarum

Pileus reaching 1 cm broad, conic to campanulate, umbonate, dull-fulvous, glabrous, somewhat striate but not striate on drying, margin straight.

Lamellae sinuate, rounded behind, becoming fulvous, distant.

Stipe 1-2 cm long, less than 1 mm thick, pale-bay, equal, glabrous.

Notes by Hesler (on G. coniferarum)

Spores 6.5-8.5(9) x (3.5)4.5-5  $\mu$ , slightly inequilateral in profile, ellipsoid to subovoid in face view, rugulose to nearly smooth, pore none, wall rather thin, brown in 2% KOH. Pleurocystidia none; cheilocystidia 25-40 x 4-6  $\mu$ , ventricose, with a neck which is sometimes constricted. Pileus cuticle of repent hyphae.

Smith and Singer (--- the Genus Galerina) list G. coniferarum as a synonym of G. triscopa.

GALERINA TRISCOPA (Fr.) Kühner

Galerula parvula Murr., N. A. Flora 10:162. 1917

[= Galerula coniferarum Murr. N.A.F. 10:162. 1917.]

Type

Spores 7-9 x 4-5  $\mu$ , slightly inequilateral in profile, ellipsoid to subvoid in face view, rugulose, no germ-pore, brown in 2% KOH. Pleurocystidia 28-43 x ~~4~~ 5-7  $\mu$ , ventricose, with a neck.

Material very sparse, and only a small gill-fragment available; it was prepared as a crushed mount (too small for sections). Cystidia found, and since some were among the basidia (of the hymenium), I assumed they were pleurocystidia.

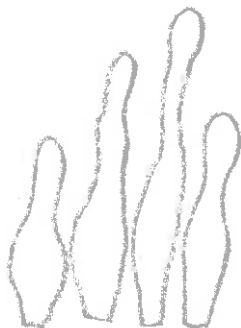
Type, No. 786, Murrill, in mixed woods, Unaka Springs, Tenn., August 18-24, 1904.

*Galerina triscopa* (Fr.) Kühner  
~~*Galerina parvula* (Murr.) comb. not.~~

[*Galerula parvula* Murr.] - Type  
(Murrill No. 786)



Basidia x 1000



Sp x 1000



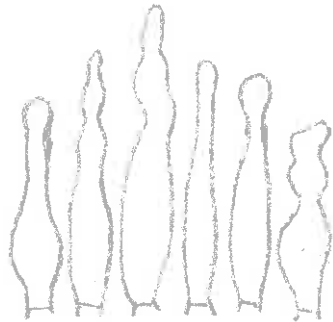
Profile



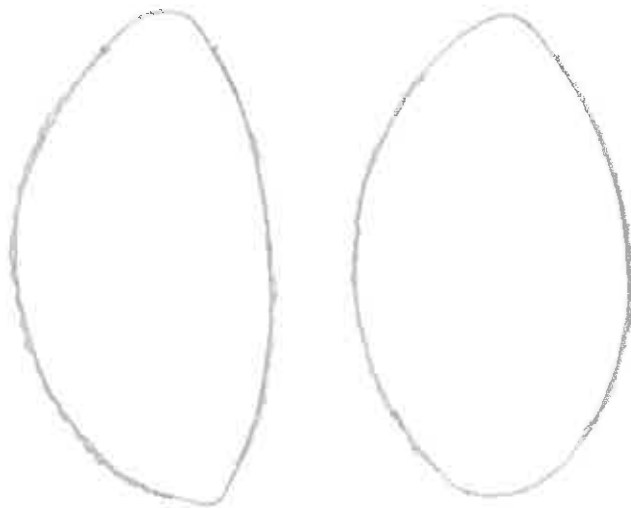
Face

Spores x 8000

*Galerina triseopa* (Fr.) Kühner  
[*Galerula* *coniferarum* Murr.] - Type



Ch x 1000



Profile

Face

Face x 8000

Kowalski - 1036

GALERINA

On wood, Butte Co., Calif., leg. D. T. Kowalski (det. as Gymnopilus),  
Jan. 9, 1965.

The spores, large pleurocystidia, large cheilocystidia, and  
gelatinous cuticle of the pileus all suggest Galerina, not Gymnopilus.



*Galerina*

Tenn-3872

~~PHOLIOTA DISCOLOR (Ph.) Sacc.~~

On log, Knoxville, April 26, 1934

Spores 7-9.5 x 4.5-5.5  $\mu$ . Other characters as in Tenn-15904.

Tenn-8349

GALERINA (?)

On soil, under beech-hemlock, Cataloochee, N.C., GSMNP, July 28, 1935

Spores 6.5-8.5 x 5.5-6.5  $\mu$ , ovoid to ellipsoid, exosporium more or less loosened-calyptate. Otherwise as in Tenn-8281.

(1935)

Some 30 years ago<sup>^</sup> I sent this to Overholts, suggesting it was Pholiota trachyspora C. & C. His reply was, then, as follows:

"I am so filing it. The agreement was a specimen collected in Nova Scotia by Smith is not so good. The spores are just right but there are inconspicuous cystidia. However, as I compare slides with the type, the two are certainly very similar."

Gabrerina

Pholiota No. 8349

(also Nos. 8281, 9185, and 10854)

These have been identified as Pholiota trachyspora Clements and Clements. No. 8349 was examined by Overholts who states (Letter):

(No. 8349)  
"I am so filing it. The agreement with a specimen collected in Nova Scotia by Smith is not so good. The spores are just right but there are inconspicuous cystidia. However, as I compare slides with the type, the two are certainly very similar."

On soil, in frondose and conifer woods, Knox, Carter, and Sevier (Park) Counties, Tennessee, and Haywood County, North Carolina, July-August.

Thiers - 8505

GALERINA

Gregarious in moss, log, near Mendocino, Calif., Nov. 26, 1960.

Spores warty, calyptrate; cuticle a gelatinous zone, cheilocystidia and pleurocystidia large, ampullaceous—all characters suggesting Galerina.

It is not a Gymnopilus.

Thiers - 8532

GALERINA

On hardwood log, Marin Co., Calif., Dec. 3, 1960.

Spores 7-9 x 4.5-5  $\mu$ , some calyptrate. Pleurocystidia and cheilocystidia large, ampullaceous. Not a Gymnopilus.

*Galerina*

Tenn-9587

~~PHOLIOTA DISCOLOR (Ph.) Sacc.~~

On log, Greenbrier, GSMNP, October 18, 1936

Spores 7-9 x 4-5  $\mu$ . Other characters as in Tenn-15904.

Tenn-9697

GALERINA

On soil, among mosses, Elkmont, GSMNP, Tennessee, leg.

Hesler, November 15, 1936

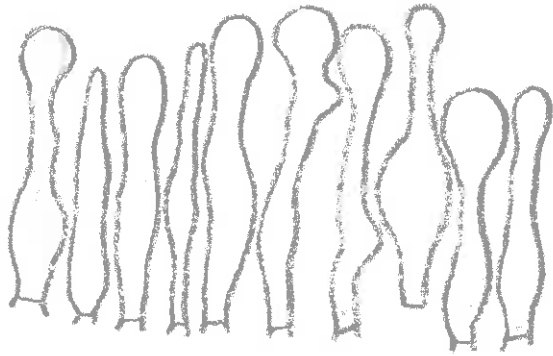
(No notes on fresh state; it was then thought to be a Naucoria, near pallidomarginata. But, it is not a Naucoria. It might be a Galerina.)

Notes on Microscopic Characters

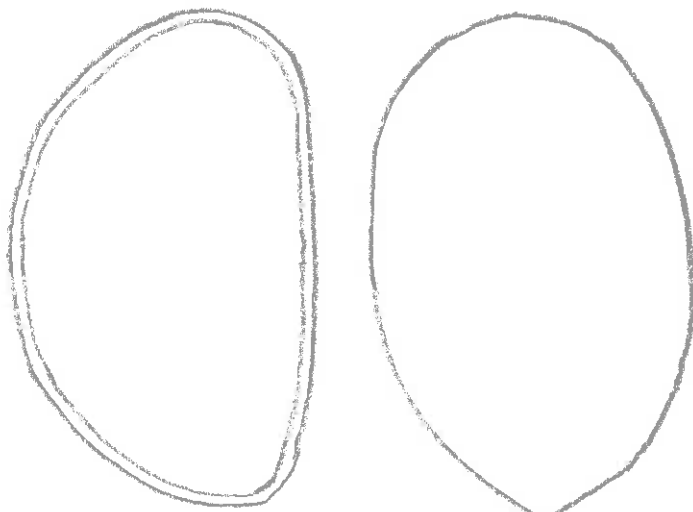
Spores 7-9.5 x 5-6  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, wall about 0.25  $\mu$  thick, no germ pore, not calyptrate, yellowish in KOH. Pleurocystidia none; cheilocystidia 32-42 x 5-8  $\mu$ , somewhat variable: ampullaceous, dumb-bell-shaped, subcylindric, almost always capitate to subcapitate. Pileus cuticle a trichodermium. Stipe cuticle of repent, dry hyphae, with a few small hyphal strands, the terminal elements caulocystidioid, cylindrical to clavate, with clamp connections.

Galerina (?)

Term - 9697



Ch x 1000



Profile

Face

Spores x 8000



Tenn-10120

*Galerina*

~~PHOLIOTA DISCOLOR (Pk.) Sacc.~~

On oak log, Knoxville, January 16, 1937

Spores 7-9 x 4-5  $\mu$ . Cuticle a gelatinous zone 50-80  $\mu$   
thick. Other characters as in Tenn-15904.

Tenn-10958

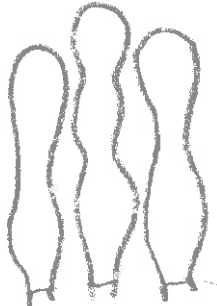
GALERINA (?)

On wet soil, Cades Cove, GSMNP, January 23, 1938

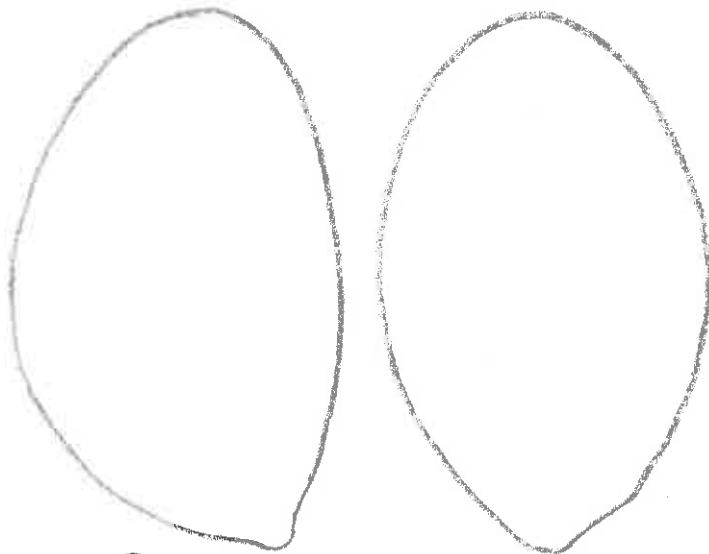
Spores 7-9 x 5-5.5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, wall rather thin, smooth, no germ pore, yellowish in KOH. Pleurocystidia none; cheilocystidia 32-38 x 7-9  $\mu$ , ventricose to dumb-bell shaped. Pileus cuticle a trichodermium. Stipe cuticle of dry, repent hyphae.

Galerina (?)

Term - 10958



ch x 1000



Profile

Face

Spores x 8000

Tenn-14129

*Galerina*

~~PHOLIOTA DISCOLOR (Pk.) Sacc.~~

(Tenn-14129)

On pine log, Claxton School, Anderson Co., Dec. 27, 1941

Pileus 1-3 cm, ochraceous yellow (dry), darker brownish (wet) and striatulate, glabrous, viscid.

Lamellae adnate-subdecurrent, close, narrow.

Stipe 4-10 cm x 3-6 mm (broadest when compressed), pallid, equal or enlarged below. Annulus superior, membranous.

Spores 7-9 x 4-5  $\mu$ , ellipsoid, slightly inequilateral, slightly wrinkled-rough. Pleurocystidia and cheilocystidia, caulocystidia, trama, and other characters as in Tenn-15904.

GALERINA No. 14455

Pileus 4-7 mm. broad, conic, not expanding, glabrous, hygrophanous, "warm buff" to "ochraceous-buff" (dry), "tawny" (wet), striate to disk. Flesh thin, fragile, concolor to pileus; odor and taste mild. Lamellae narrowly adnate, pallid at first, finally "ochraceous tawny," moderately broad, nearly subdistant, edges even. Stipe 2.5-3.5 cm. x 1-2 mm., uniformly "ochraceous buff," glabrous or nearly so, shining, more or less diaphanous, equal, hollow, base white-mycelioid. Veil none.

Spores 10-14.5 x 6-7.5  $\mu$ , ellipsoid, somewhat limoniform, many with "ears," smooth. Pleurocystidia none; cheilocystidia few, clavate or ventricose, 20-43 x 5-9  $\mu$ . Clamps present.

Habitat and Distribution. - On Polytrichum, near DeSoto State Park, DeKalb County, Alabama, April 4, 1959.

Galerina

Tenn-15904

~~PHOLIOTA DISCOLOR (Pk.) Sacc.~~

On sawdust, Claxton School, Anderson Co., det. & coll. L.R.H.,  
confirmed A.H.S., Oct. 31, 1943

Pileus 1.5-3 cm broad, convex, expanding, slightly depressed, viscid, hygrophanous, cinnamon-brown and striatulate when moist, ochraceous and even when dry, glabrous. Context thin, whitish; odor and taste mild.

Lamellae adnate-decurrent, close, narrow, at first white, finally cinnamon-brown, edges fimbriate.

Stipe 3-6 cm x 3-5 mm, pallid, somewhat fibrillose, hollow, slightly clavate-enlarged below. Annulus superior, membranous, rather persistent.

Spores 7-9 x 4-5.2  $\mu$ , ellipsoid in face view, slightly inequilateral in profile, germ pore small, slightly wrinkled-rough, <sup>the spores often  $\pm$  calyptrate,</sup> "ochraceous-tawny" in deposit, Basidia 23-28 x 5-6  $\mu$ , 4-spored. Pleurocystidia 48-62 x 6-10  $\mu$ , flask-shaped, with a slender neck, apices subcapitate, projecting 25-45  $\mu$ , scattered; cheilocystidia 36-50 x 6-9  $\mu$ , clavate, ventricose, or flask-shaped. Gill trama parallel or subparallel, hyphae 5-9  $\mu$  broad. Pileus trama interwoven. Cuticle a narrow (25-50  $\mu$ ) gelatinous zone, bearing scattered more or less erect hyphae. Hypodermium not differentiated. Clamp connections present. Caulocystidia on the stipe above the annulus, 40-54 x 8-12  $\mu$ , clavate or flask-shaped, similar to pleurocystidia and cheilocystidia.

Pileus trama and gill trama yellowish-brown in KOH, brownish in Melzer's reagent.

The surface of the spores in the type should be checked for smoothness or roughness. Overholts says rough; Kauffman, smooth.

Tenn-15080

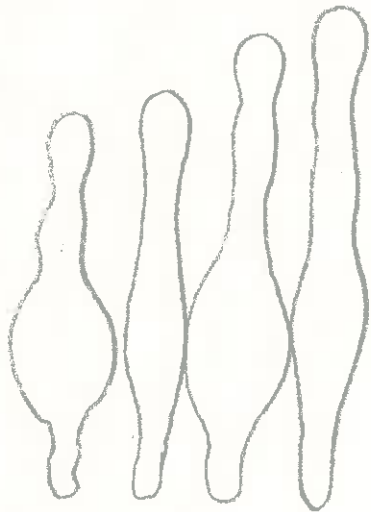
GALERINA

On soil and sawdust, Anderson Co., Tenn., Nov. 26, 1942

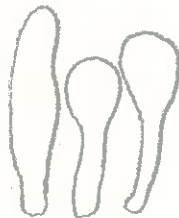
Spores 8-11(12) x 5.5-7  $\mu$ , ellipsoid in face view, inequilateral in profile, exosporium loosened-wrinkled, often distinctly calyptrate, no germ-pore, a plage faintly seen at times. Basidia 21-26 x 5-7  $\mu$ , 4-spored. Pleurocystidia 50-65 x 8-14  $\mu$ , ventricose, with a long neck, subcapitate; cheilocystidia 20-27 x 7-8  $\mu$ , clavate-subcapitate, or subventricose. Gill trama parallel, hyphae 6-10  $\mu$  broad, frequently septate. Pileus trama radial. Cuticle a narrow gelatinous zone.

Galerina

Teru-15080



Pl - x 1000



Ch - x 1000

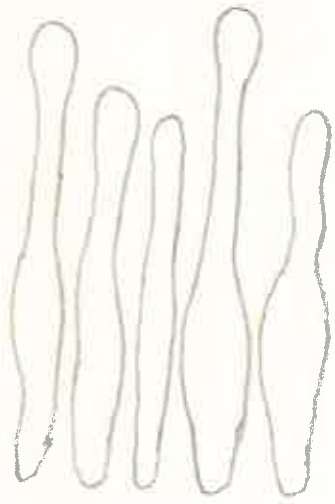


Spores - x 4000



*Pholiota discolor* Galerina

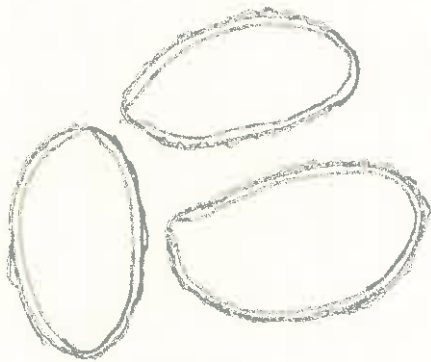
Teuu-15904



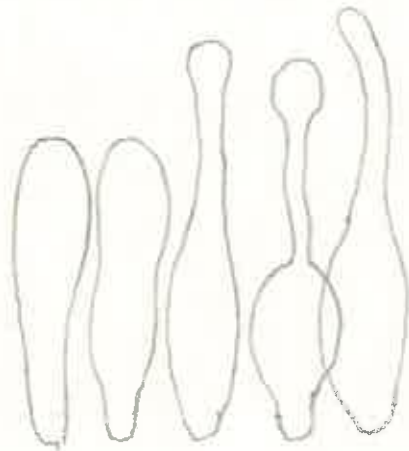
H - x 1000



Ch - x 1000



Spores - x 4000



Caulo - x 1000

GALERINA No. 18570

Pileus 12-20 mm. broad, conic, apex obtuse, hygrophanous, "pinkish buff" when dry, "buffy brown" when wet. Flesh thin, pallid; odor slight, taste slight but unpleasant. Lamellae adnate, close, narrow, linear, pallid becoming "buffy brown," edges minutely fimbriate. Stipe 4-7 cm. x 1.5-2 mm., whitish, shining, finally dingy brownish, apex mealy, sparsely fibrillose, striate, equal above the sub-bulbous base, hollow.

Spores 8-9.5 x 4.5-6.5  $\mu$  (deposits), "cinnamon brown" in mass, ellipsoid to ovoid, smooth, slightly truncate, germ pore present, no plage. Pleurocystidia none; cheilo-  
cystidia 13-21 x 4-7  $\mu$ , ventricose-capitate. Epicutis of of large, globose to ellipsoid cells, 25-30 x 20-28  $\mu$ , and broadly ventricose to pyriform cells 50-60 x 30-40  $\mu$ . Gill trama vesiculose.

Habitat and Distribution. - On compost heap (soil and peat), Tennessee, June.

Discussion. - Same as No. 10452.

GALERINA NO. 20492

Pileus 10-15 mm. broad, conic, glabrous, micaceous, "cartridge buff" to "cream buff," disk darker, minutely striatulate to disk. Flesh thin, fragile, marcescent; odor and taste mild. Lamellae narrowly adnate, "clay color," medium broad, close, edges even. Stipe 4-6 cm. x 1 mm., white throughout, apex mealy, elsewhere glabrous, collapsing, hollow, equal.

Spores 12-17 x 7-9  $\mu$ , smooth (under oil), ovoid, brown, plage not evident or small and slight. Pleurocystidia none; cheilocystidia few, vesiculose, short-stipitate, capitate, 25-30 x 10-12  $\mu$  (head 5-6  $\mu$ ). Epicutis of 2-3 layers of large cells; no pilocystidia.

Habitat and Distribution. - On lawn, Tennessee, June.

22020 Galerina

on mossy hemlock log  
Cades Cove, June 22-61

Pileus 10-14 mm., convex, umbonate, disk "syal brown", elsewhere "tawny olive", pruinose, striate. Context thin, brown; odor and taste slightly farinaceous.

Lamellae adnexed, brown, broad behind, narrowed in front, subdistant, with alternate lamellulae, edges even, at time paler.

Stipe 2.5-4 cm. x 1-1.5 mm., pale brown, pruinose above, glabrous below, equally hollow.

Tenn-22289

GALERINA

On soil, Tunica Hills, La., leg. B. Lowy, Feb. 11, 1956

Pileus 1-2 cm broad, caespitose or subcaespitose, convex, apparently dry, slightly fibrillose, glabrescent, "warm buff" to "cinnamon buff" (dried). Context medium thick on disc; odor and taste not recorded.

Lamellae adnate-decurrent, brown, medium broad, subdistant, thin, edges slightly rough.

Stipe 4-6 cm x 3-5(6) mm, dry, striate, glabrous, hollow, tapering upward. Veil and annulus<sup>none</sup>/observed.

Spores 7-10 x 4.5-5.5  $\mu$ , ellipsoid or ovoid, inequilateral, verruculose-wrinkled, exosporium calyptrate, pore none. Basidia 23-26 x 5-6  $\mu$ , 2-4-spored. Pleurocystidia 57-71 x 9-14  $\mu$ , ventricose, neck long; cheilocystidia 46-54 x 10-15  $\mu$ , ventricose or fusoid. Gill trama subparallel, hyphae 6-18  $\mu$  broad. Pileus trama radial-interwoven. Cuticle dry, repent. Clamps present.

Pileus 5-12 mm. broad, convex-hemispheric, expanding-convex, at times conic, disk rarely depressed, hygrophanous, disk "cartridge buff," elsewhere "olive-ocher" when dry, uniformly "snuff brown" when wet, atomate, minutely fibrillose, margin subplicate-striate. Flesh thin, fragile, "olive-ocher"; odor mild, not distinctive, taste farinaceous-bitter. Lamellae adnate, more or less seceding, broad, subdistant, at first "olive-ocher," unchanging, edges minutely fimbriate or nearly even. Stipe 2-3 cm. x 1-1.5 mm., dry, dingy brown, sparsely fibrillose, equal, hollow, base at times sub-bulbous. Veil (material not in good condition for veil study. Veil remnants were doubtfully present on stipe-apex and pileus-margin.)

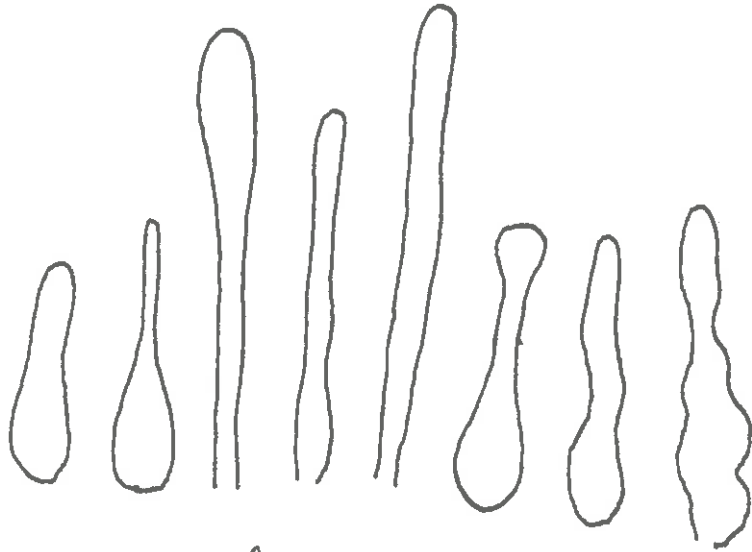
Spores 9-11 x 5.5-7  $\mu$ , ellipsoid to sub-amygdaliform, smooth, plage usually indistinct, perisporium often loosened to form one or two "ears," color in mass pale brown (print not heavy). Pleurocystidia none, or rarely extending a short distance up the sides, clavate to capitate, 30-34 x 10-17  $\mu$ ; cheilocystidia versiform: flask-shaped, cylindric, clavate, at times sub-capitate, 30-50 x 3-9  $\mu$ . Gill-trama parallel. Epicutis of repent hyphae, most of them with "spiral thickening" (as in *Tricholoma*), also hyphae ("pilocystidia") more or less erect. Clamps present in pileus hyphae.

Habitat and Distribution. - On or among moss (*Polytrichum*), Alabama, April.

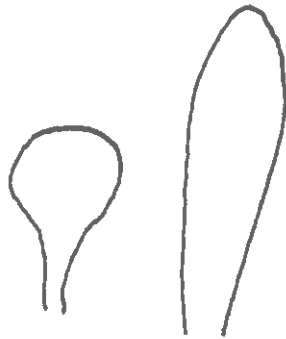
Discussion. - Near G. farinacea.

(sketches, next sheet)

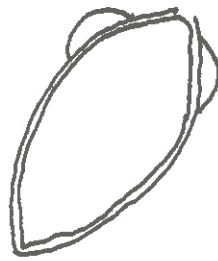
Galerina No. 22656



Ch.



Pl. (very near edge  
of gill)



Spore

Tenn-23298

*Galerina*  
~~GYMNOPILUS~~

On peat soil, Footprint Lake, Barrow, Alaska, leg. A. J. Sharp,  
July 24, 1958

± *umbonate*,

Pileus 10-15 mm broad, reddish brown, at first, then black-  
brown (Munsell 5YR 2/2), sometimes paler toward the margin,  
smooth, glabrous, even.

Lamellae attached, brown with a yellow tinge, broad, ven-  
tricose, subdistant.

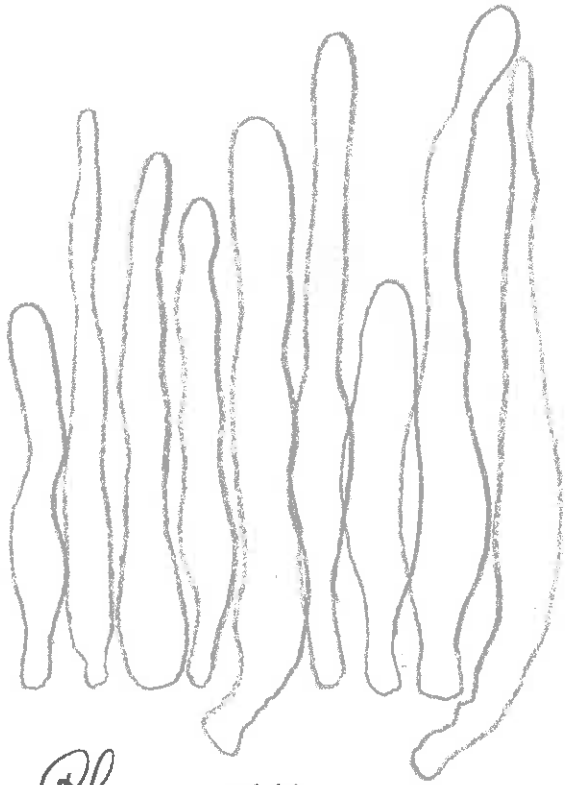
Stipe 1.5-3 cm long, 1.5-2.5 mm thick, yellow to brown,  
sparsely yellow-fibrillose, apex pruinose. Veil submembranous,  
often remaining as a flaring collar (annulus).

Spores 10.5-15 x 6.5-8.5  $\mu$ , ellipsoid, minutely wrinkled-  
verruculose to nearly smooth, germ pore none, often apiculate,  
basidia 35-44 x 7-10  $\mu$ , 4-spored. Pleurocystidia 50-94 x 6-10  $\mu$ ,  
ventricose or cylindric-flask-shaped, widely scattered; cheilo-  
cystidia 43-88 x 6-8  $\mu$ , similar. Gill trama of subparallel hyphae,  
of short cells, 7-15  $\mu$  broad; subhymenium not distinctive.  
Pileus trama radial-interwoven. Cuticle repent; no pileocystidia.  
Caulocystidia 50-96 x 5-12  $\mu$ , mostly ventricose or flask-shaped,  
scattered to gregarious. Clamp connections present.

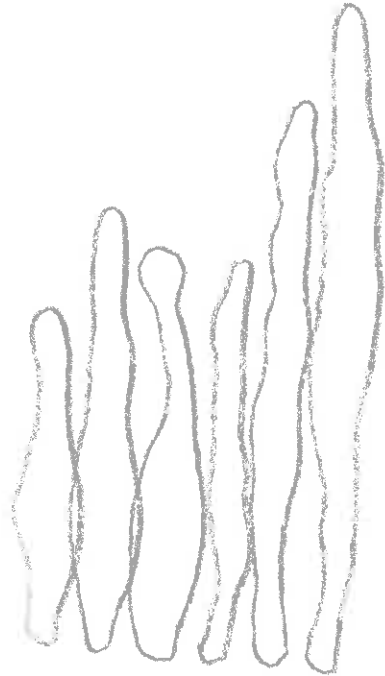


*Gymnopilus Gaberina*

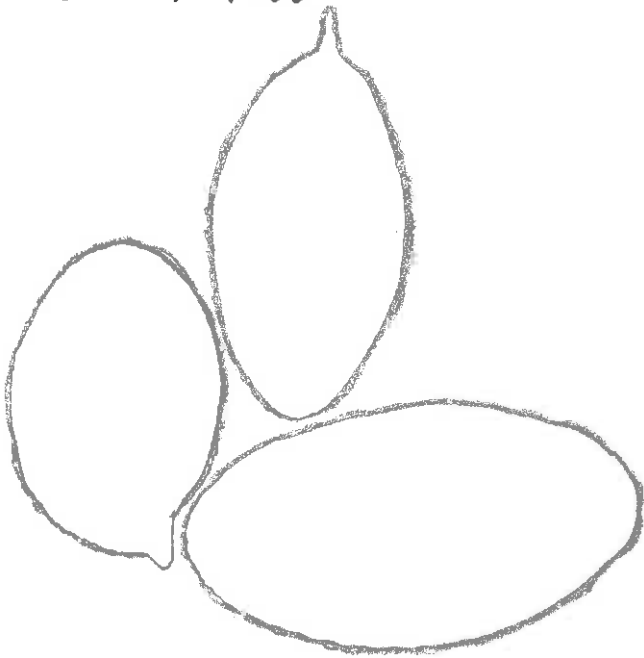
Tam-23298



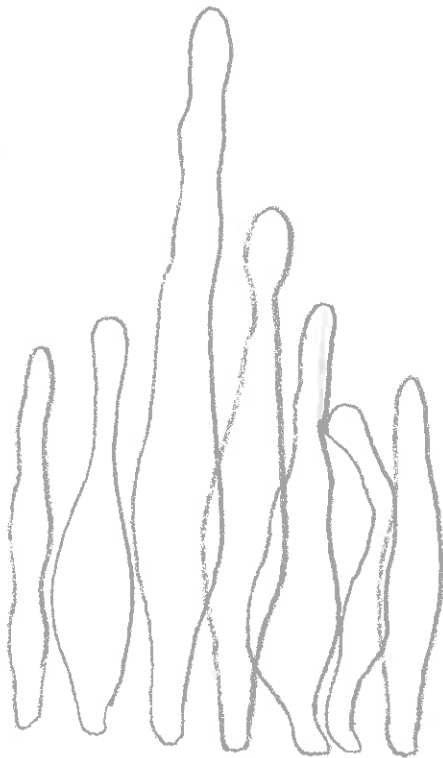
Ph - x 1000



Ch - x 1000



Spores - x 4000



Con - x 1000

GALERINA No. 24337

on mossy hemlock log  
Flat Mt. Road, June 14-61

Pileus pallid buff then "cinnamon buff" to "tawny  
olive", striate, glabrous. No odor. Lamellae white, then  
buff. Stipe pellucid white.

GALERINA No. 24334

on mossy hemlock log  
Chimneys, June 17-61

Pileus near "warm buff", glabrous, striate. Gills  
pale buff, medium close, lemellulae of two ranks. Stipe  
2-2.5 cm. x 1.0 mm., whitish, glabrous.

24621

GALERINA

Photo

on moss, Walland, Jan. 30-'62

Pileus 7-16 mm. broad, hemispheric-convex, not expanding, slightly umbonate, hygrophanous, "warm buff" when dry, "snuff brown" when wet, margin paler, glabrous, plush-like under lens, margin striate half way. Context thin, fragile, concolorous; odor mild or none, taste farinaceous-bitter.

Lamellae emarginate, pallid, soon "clay color," broad, subdistant, edges denticulate, alternately long and short.

Stipe 3-6 cm. x 1.5-3 mm., pallid above, dingy brownish downward, often undulate-rough, shining, equal, fragile, soft, hollow; veil very sparse, white.

Spores in deposit: "tawny olive."



24621

24621 - *Galerina*

28582

GALERINA (?)

On gravelly soil, Chilhowee Mt., leg. Sharp, Sept. 16, 1965

Pileus 6-12 mm broad, moist, hygrophanous, disc blackish, elsewhere brown, pellucid-striate. Context thin, fragile, more or less waxy; odor mild, taste slightly unpleasant.

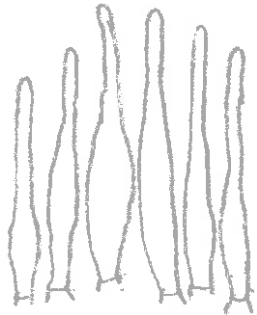
Lamellae emarginate, brown, broad, ventricose, rather close.

Stipe 1.5-2.5 cm long, 0.7-1.5 mm thick, brown, glabrous, equal, hollow.

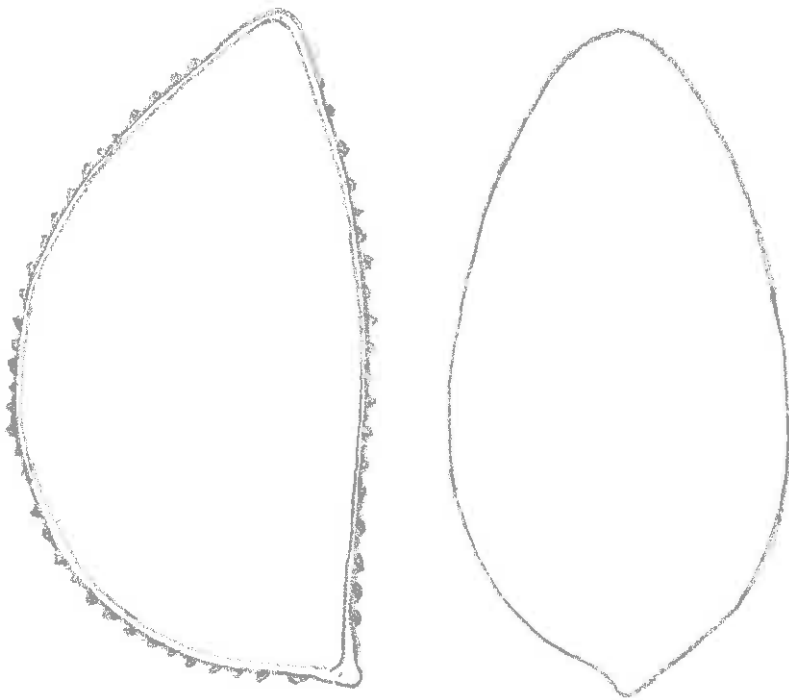
Spores 9-11(13-14) x 4.5-5.5  $\mu$ , inequilateral-amygdaliform in profile, subvoid to subfusoid in face view, wall medium thin and warty, no germ pore, yellowish brown in KOH. Basidia 28-32 x 7-8  $\mu$ , 2(4)-spored. Pleurocystidia none; cheilocystidia 30-37 x 3-6  $\mu$ , slightly ventricose below, with a rather long neck (not capitate). Gill trama of subparallel, narrow (3-4  $\mu$ ) hyphae. Pileus cuticle of dry, repent hyphae. Stipe cuticle of repent hyphae, bearing scattered caulocystidia, more or less similar to cheilocystidia.

*Galerina* ?

28582



Ch x 1000



Profile

Face

Spores x 8000