



November 2013

Stropharia Notebook 2

L. R. Hesler

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Tenn-9111

STROPHARIA HARDII *Atkinson*

On deep humus, under beech, Newfound Gap, August 2, 1936

Jour Mycol 12: 194. 1906

Pileus 4.5-7 cm, convex becoming expanded, "warm buff" to "naples yellow," glabrous, becoming areolate with yellowish patches, white flesh becoming exposed, cuticle separable to disc, margin even and appendiculate. Context firm, white, with a water-soaked zone next to gills, thick on disc, thin at margin, taste mild.

Lamellae grayish, then umber and finally purple brown, adnexed, edges serrulate, crowded, linear (about 4 mm broad).

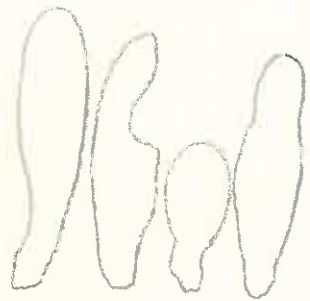
Stipe 7-11 cm x 9-14 mm, very rigid, somewhat flexuous or strict, deeply immersed in humus, with a whitish pith, scaly or fibrilllose-rimose, pale ochraceous, apex whitish, base white with white rhizomorphs; annulus persistent, whitish, tinged yellowish, superior.

Spores 5-6 x 3.5-4 μ , ellipsoid in face view, obscurely inequilateral in profile, smooth, no germ-pore, brown in KOH. Basidia 22-26 x 5-7 μ , 4-spored. Pleurocystidia 20-37 x 7-9 μ , clavate or subventricose, usually buried, often the apical portion irregularly shaped (puzzling!); cheilocystidia 17-34 x 6-12 μ , vesiculose-pyriform to subventricose. Gill trama slightly interwoven, hyphae 4-9 μ broad. Pileus trama radial. Cuticle of repent hyphae, usually with a brownish tint. Pileus and gill trama yellowish brown in KOH; reddish brown in Melzer's reagent. Clamp connections present. Caulocystidia none.

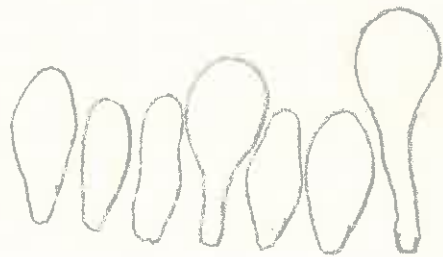
~~STROPHARIA HARDII Atkinson. All the pleurocystidia do not agree.~~

~~Stropharia~~ *Stropharia hardii* Atk.

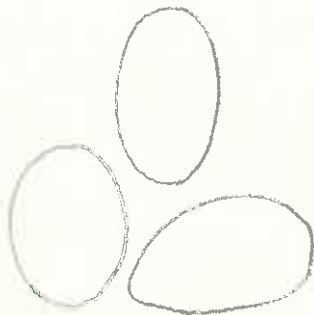
Term - 9111



Pl - x 1000



Ch - x 1000



Spores - x 4000

Tenn-10754

STROPHARIA HARDII Atk.

On humus, in beech woods, Flat Creek, Swain Co., N.C., Aug. 1, 1937

(Same as Tenn-9111)

Pileus 4-9 cm broad, dry, convex then expanded, broadly umbonate, hygrophanous, pallid, with yellowish stains especially on disc (when dry), smoky and with dingy-greenish tinge (when wet), fibrillose, fibrils appressed, margin even. Context white, with a watersoaked band next to gills, thick on disc, thin on margin, odor fragrant.

Lamellae narrowly adnexed, rather broad, linear, "deep brownish drab" (color not seen when young), close.

Stipe 6-8 cm x 7-12 mm, tapering upward, white, rivulose, innately fibrillose. Annulus superior, delicate and more or less evanescent.

Spores short-elliptical, 5.4-6.5 x 3.6-4.3 μ . Other characters as in Tenn-9111.

10989

STROPHARIA HARDII Atk.
Jour. Mycology 12:194. 1906
on soil, deciduous woods, New Hopewell, Knox Co.,
Tenn., leg@det LRH, July 13, 1939

Photo

Pileus 2.5-8 cm broad, convex, more or less expanding, at first "yellow ochre", finally "honey yellow", to "Naples yellow", disc slightly darker, slightly viscid, glabrous, but with scattered darker patch-like spots, margin/ even. Context white, thick on disc, compact; odor mild, taste of green grass or none.

Lamellae adnate to adnexed, seceding somewhat, crowded, rather narrow, whitish then "pallid mouse gray" to "pale smoke gray", finally "buffy brown" to "drab" or "ecru drab", edges white fimbriate-eroded.

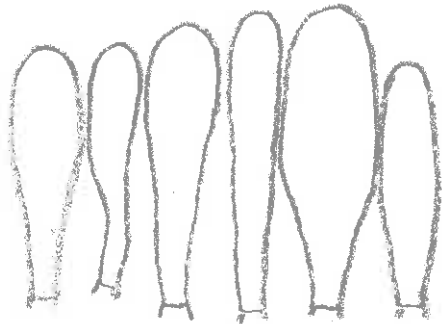
Stipe 4-8 cm long, 8-11mm thick, white, ~~silky~~ silky-fibrillose, equal or base sub-bulbous, rigid, solid or spongy within, with a long white rhizomorph at basal end. Annulus white, ~~membranous~~ membranous, adhering to the gills (much as in A. chlorinosma), breaking away from the stipe early and leaving a narrow remnant(ring) near the base of the stipe.

Spores 5-6 x 3.5-4 μ , ellipsoid to ovoid-ellipsoid, smooth. Pleurocystidia not found(Smith found them in the ~~typical~~ type, as chrysocystidia: few, scattered, inconspicuous, ventricose, mucronate or with an elongated neck, 38-40 x 9-15 μ); cheilocystidia 32-~~40~~⁵⁰ x ~~6-8~~^{(6)10-16 μ} , clavate to sub-cylindric, at times rather abundant. Pileus cuticle a very thin ixocutis, sometimes onscure or apparently missing.

S. caesiopora Kauff. is the same.

Stropharia hardii Atk.

10989



ch x 1000



10989 - *Stropharia Hurdii* Atk.

12277

HARDII Atk.
STROPHARIA ~~CAESIOSTROPHARIA~~

on soil, woods, New Hopewell, Knox County, near Knoxville,
Tenn., leg LRH, det AHSmith, Aug. 9, 1939

Pileus 4-5 cm broad, convex then nearly plane, dry(?)
not hygrophanous, "cream buff", "chamois", to "honey yellow",
glabrous, margin even. Context white; thick on disc, thin
on margin; odor and taste none.

Lamellae rounded-adenate then emarginate, "pallid
mouse gray", then "snuff brown" with a purplish tint, close
to crowded, medium broad, edges fimbriate.

Stipe 5 cm long, 7 mm thick, white, fibrillose-
striate, base bulbous, with a long white rhizomorph.
Annulus ample, membranous, superior.

Spores 5.5-6.5 x 3.5-3.8 μ , ellipsoid to subovoid,
in deposit purplish-brown. Pl none; ch cylindrical-clavate.

12333

HARDII Atk.
~~STROPHARIA CAESTOSEBOLA Kauff.~~

Photo

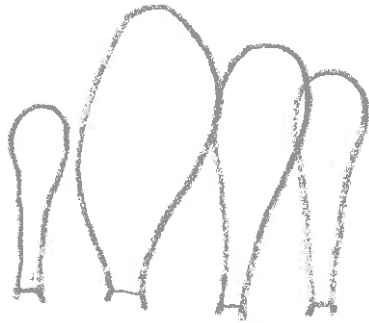
on soil, deciduous woods, Highlands, N.C., leg LRH,
det A H Smith, Sept. 7, 1939

Spores 5-6 x 3.5-4 μ , obscurely inequilateral in profile, ellipsoid to ~~na~~ subovoid in face view, smooth, no germ pore found. Pl. none; ch 25-38 x 7-18 μ , clavate, not abundant but conspicuous when found. Gill trama subparallel. Pileus trama interwoven. Pileus cuticle of repent, dry hyphae (no gelatinous zone observed). Hypodermium hyphoid. Stipe cuticle of dry repent hyphae. Caulocystidia none found.

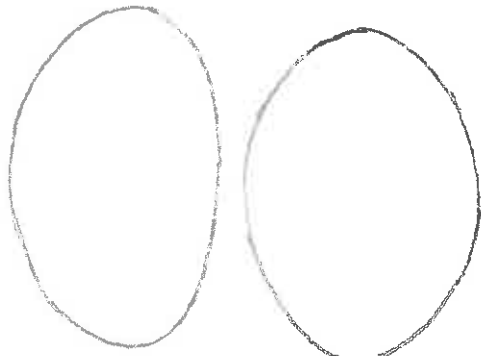
~~@fxxxSxxhardiixAtkxx~~

Stropharia hardii Atk.
~~*caerospora* Kauff.~~

12333



Ch x 1000



Profile

Face

Spores
x 8000



12333 - *Stropharia Hardii* Atk.

13845

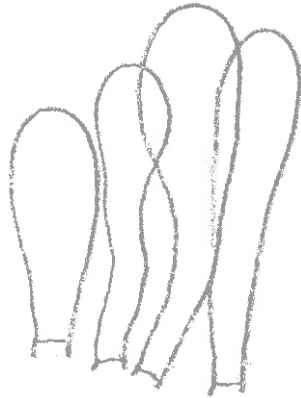
SEROPHARIA HARDII Atk.

on oak stump, Mt. LeConte, leg-det LRH,
July 20, 1941

Spores 4.5-5.5 x 3.5-4 μ , ellipsoid to subovoid,
smooth, germ pore (if any) not observed. Pl not found;
ch 30-48 x 9-12 μ , clavate, conspicuous, although not
always abundant. Pileus cuticle a thin ixocutis, often
obscure,

Stropharia hardii Atk.

13845



Oh x 1000

14458

STROPHARIA HARDII Atk.

(not found)
Kodachrome

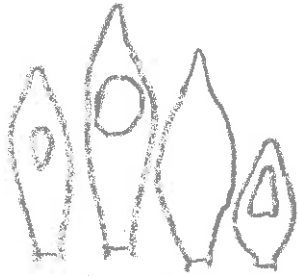
on soil, under red spruce, Mt. Mingus, GSMNP,
leg A. J. Sharp, det. LRH, July 23, 1942

Spores 4.5-6 x 3.5-5 μ , smooth, no germ pore found.

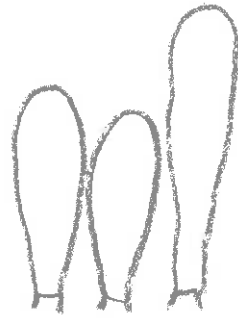
Pl 16-32 x 7-10 μ , of the chrysocystidia type, widely
buried and easily overlooked
scattered, ~~being~~ (protruding only slightly, very few found);
ch 27-40 x 9-10 μ , clavate, not abundant. Other characters
as usual.

Stropharia hardii Atk.

14458



Pl (chryso)
x 1000



Ch x 1000

14459

STROPHARIA HARDII Atk.

on soil, under beech, Indian Gap, GSMNP, leg-det
LRH, July 22, 1942

All structures as usual; but, no pleurosporeidia found.

17973

STROPHARIA HARDII Atk.

on soil, in woods, Greenbrier, Tenn., GSMNP, leg-det
LRH, Sept. 17, 1947

5,5

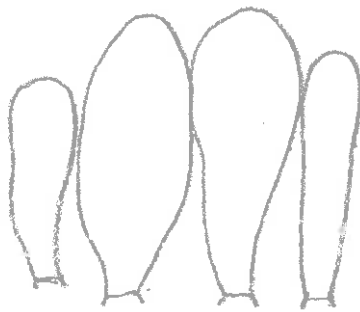
Spores ~~4-5.5~~ x 3.5 -4.5 μ , ellipsoid to subovoid, smooth,
no germ pore seen. Pl rare, inconspicuous, 27-32 x 8-11 μ ,
of the chrysocystidia type; ch 27-38 x 7-16 μ , clavate,
none on some sections, rather abundant on others. Other
features as usual.

Stropharia hardii Atk.

17973



Chysocephala
x 1000



Ch - x 1000

19663

STROPHARIA HARDII Atkinson

on soil, wet bank, Maloney Heights, Knox
County, Tenn., July 24, 1950.

Pileus 8 cm broad, disc near "chamois", elsewhere
paler and often yellow-areolate or spotted, matted-fibrillose,
viscid. Context white, thick over disc, elsewhere thin.;
odor slight, taste like green grass.

Lamellae emarginate or slightly so, at maturity
"Saccardo's umber", crowded, narrow, edges whitish-fimbriate.

Stipe 6.5 cm long, 15 mm thick, white, base
subbulbous. Annulus thick-membranous, persistent, superior.

Spores 4.5-6.5 x 3.5-4.5 μ , smooth. Pl and ch
not found (probably present).

20175

STROPHARIA HARDII Atk.

on lawn, Timberlake Rd. (Boarts'), Knox County,
Tenn., leg. Mrs. R.M.Boarts, det LRH, Sept 18, 1951

Pileus 5-8 cm broad, at first "yellow/ochre",
finally "honey yellow", glabrous becoming areolate in age,
subviscid. Context thick on disc, thin on margin, compact;
odor mild, taste like green grass and slightly unpleasant.

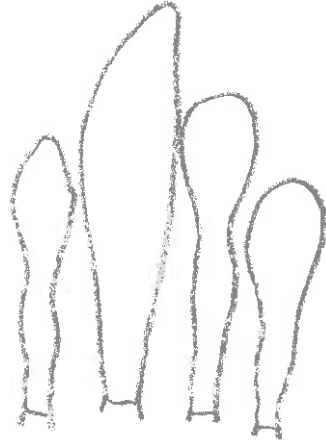
Lamellae adnexed, "pallid mouse gray" to "drab", finally
"buffy brown" (as spores mature), narrow, crowded.

Stipe 4-7cm long, 10-13mm thick, white, base sub-bulbous.
Annulus white, membranous, evanescent.

Spores 5-6 x 3.2-4 μ , ellipsoid to subovoid, smooth,
germ pore not seen. Pleurocystidia none found; ch³²⁻⁵³
x 8-13 μ , clavate or at times ventricose, abundant on some
sections. Pileus cuticle a thin ixocutis, especially
in younger pilei.

Stropharia hardii Atk.

20175



Ch x 1000

20508

STROPHARIA HARDII Atk.

in humus, in woods, Heintooga Overlook, North Carolina,
GSMNP, leg-det LRH, Aug. 19, 1952

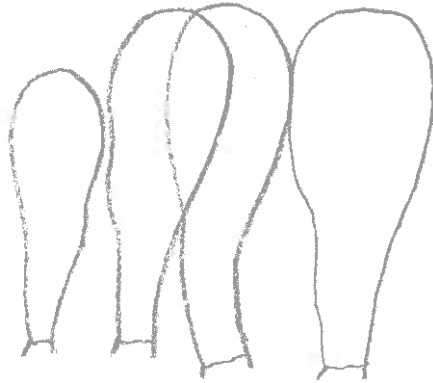
Spores 5-6 x 3.8-4.5 μ , smooth, germ pore not found.

Pl not found; ch 35-48 x 12-18 μ , clavate, conspicuous.

Pileus cuticle a thin ixocutis. Gill trama of relatively short hyphal cells, arranged in a subparallel manner. Pileus trama interwoven.

Stropharia hardii Atk.

20508



Ch x 1000



20508 - *Stropharia hardii* Atk.

[approx. - x 1]

20534

STROPHARIA HARDII Atk.

Photo

soil, oak woods, Highlands, N.C., leg-det LRH, Aug 30, 1952

Spores 4-5.5 x 3.5-4 μ , smooth, no germ
pore found. Pl rare, only a few found, 26-38 x 7-10 μ ,
as chrysocystidia; ch clavate, conspicuous. ~~Rizans~~
Pileus cuticle a thin ixocutis.

20575

STROPHARIA HARDII Atk.

on soil, Norton Rd., Highlands, N.C., Aug 26, 1952

All characters as usual, including a few, very widely scattered pleurocystidia of the chrysocystidia type.

22108

SMROPHARIA HARDII Atk.

on soil, in deciduous woods, Lindsay Olive's place,
Highlands, N.C., leg-det LRH, Aug 26, 1955

Spores 4-6 x 3.5-4.5 μ , ellipsoid to subovoid,
smooth, no germ pore seen. Pl not found; ch 33-42 x 12-17 μ ,
clavate, or occasionally cylindric-capitate, conspicuous.
Other features as usual.

22325

STROPHARIA HARDII Atk.

Photo

on soil, under hemlock, Highlands, N.C., leg-det LRH,
July 20, 1956

Pileus 4-12 cm broad. Stipe 5-8 cm long, 8-12 mm
thick.

Spores 4.5-6.5 x 3.3-~~3.6~~ 4.0 μ , smooth, germ pore
not seen, color in deposit "bister". Pl ~~never~~^{not} found ;

Ch clavate. Other characters usual.



22325 - *Atropharia Hurdii* Atk.

30189

STROPHARIA HARDII Atk.

on soil, in pine woods, Metcalf Bottoms, between
Elkmont & Twonsend, Tenn., GSMNP, leg-det
LRH, June 20, 1968

Spores 4.5-5.5 x 3.4-4.5 μ , ellipsoid to subovoid, smooth,
no germ pore found. Pl. not found; ch clavate, usual. Gill
trama of rather broad, subparallel relatively short-celled
hyphae. Pileus trama interwoven.

25170

STROPHARIA HORNEMANNII (Fr.) Lund. & Nannfeldt

leg-det Moser, on decaying wood, Pitztal, Austria,
Sept. 13, 1962

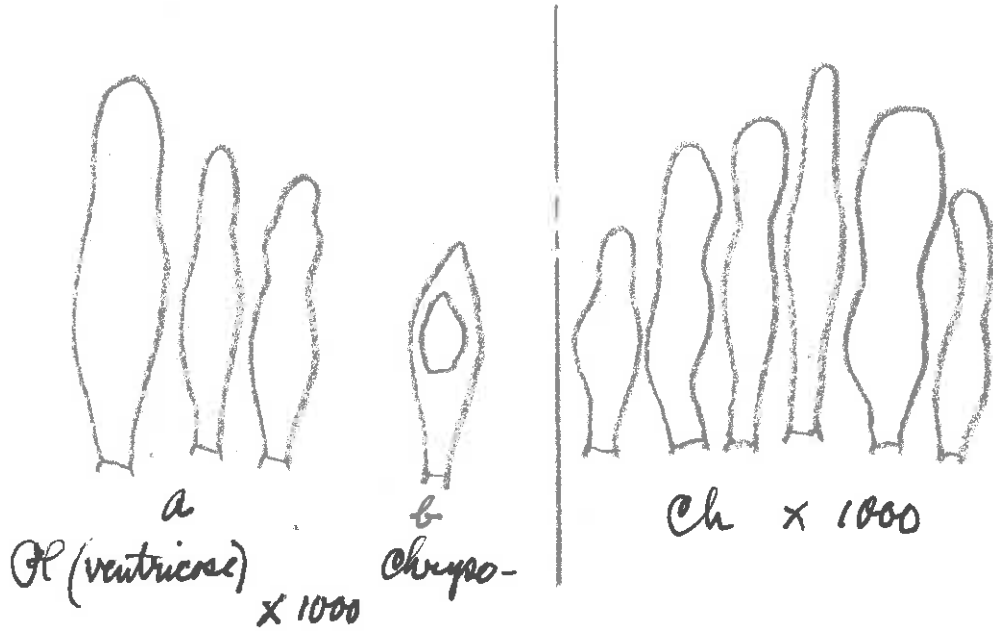
Notes by Hesler

Spores 10-13 x 5.5-7.5 μ , slightly inequilateral in profile, ellipsoid to ovoid in face view, smooth, truncate. Pl of two types: (a) ventricose, 38-50 x 8-12 μ , conspicuous especially on lower portion of gill, (b) chryso-tyoe, 32x10 μ , few; cheilocystidia 30-48 x 6-12 μ , ventricose, abundant. Pileus cuticle an ixocutis. Hypodermium of brownish hyphae.

Singer (Agar. 3rd ed. 1975) lists S. depilata
(Pers. ex Fr.) Karst. as a synonym.

Stropharia rosemannii (Fr.) Fund. & Kann.

25170



25518

STROPHARIA HORNEMANNII (Fr. ex Fr.)
Lundell & Nannfeldt

around decayed stump, in mixed woods of Picea, Betula,
Sorbus, Rhamnus, Oslo, Norway, leg-det R.A. Maas
Geesteranus, Sept. 8, 1961

Notes by Maas G.

Pileus up to 15 cm broad, convex then expanded, without
or with a conspicuous umbo, margin dingy ochraceous or
greyish ochraceous, center flesh-colored yellow brown or
yellow brown, glabrous, glutinous. Context white.

Lamellae adnate, decurrent by a tooth, violet-grey,
citrine near the stipe, edges irregularly white, crowded,
up to 9 mm broad.

Annulus

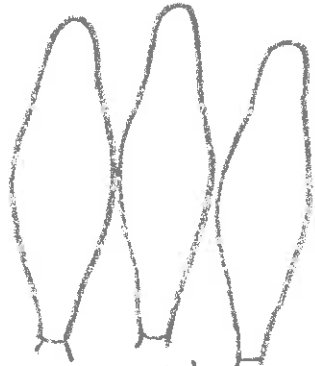
~~Stipe~~ up to 7 mm thick, patent-pendulous, grooved
above, floccose below, whitish. Stipe 11-14 cm long. 10-18mm
thick, apex pale citrine, white below, pale salmon or pale
orange above the ring, apex white quamulose, passing into
fibrillose scales below, scales curving out from the stipe.

Notes by Hesler

Spores 10-12 x 5.5-7.5 μ , slightly inequilateral
in profile, ellipsoid to ovoid in face view, smooth, truncate.
Pl of two types: (a) ventricose, 38-42 x 11-15 μ , (b) chryso-
type, 32-36 x 9-10 μ , rare ~~xxx~~ but conspicuous when found.
Pileus cuticle an ixocutis. Hypodermium of hyphae.

Stropharia hornemannii (Fr. ex Fr.) Fund. & Nann.

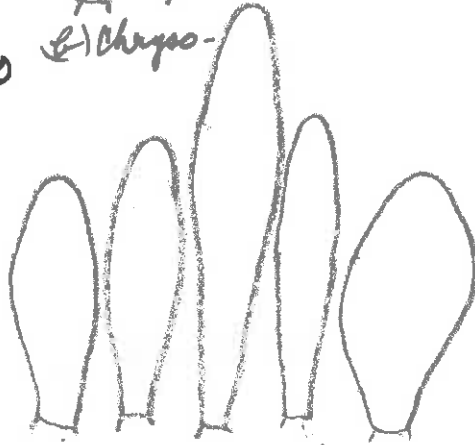
75518



Pl (a) ventricose x 1000



Pl (b) chryso-



Ch - ventricosa
x 1000

on conifer log, Payette Lakes, Idaho, leg-det Smith
(no date given)

(Description for Smith: Mushrooms in Their Nat. Hab.)

Pileis (4)6-12(15)cm broad, obtuse to convex, becoming convex to plane, at times with an obscure umbo, sordid purplish brown to sordid/^{smoky}reddish brown, becoming sordid olive or olive-brown~~over~~ the marginal area, and sordid yellowish brown over the disc, ~~Context~~ viscid to glutinous, with scattered superficial white floccose scales along the margin, soon glabrous, margin at times translucent~~at~~ striate. Context pallid or pale watery-olive buff becoming sordid yellowish tan in age; odor faint but not distinctive, taste slightly disagreeable.

Lamellae adnate, developing a decurrent tooth, at first pallid to pallid-gray, in age dull purple brown, ~~rimmed~~ close to subdistant.

Stipe 6-12 cm long, 8-20mm thick, covered with white scales or zones~~from~~ the ruptured sheath which terminates in the well-formed, membranous, apical or distant annulus, glabrous and silky above, glabrescent below, annulus at first spreading but soon drooping, sometimes torn ~~or~~ ragged.

Notes by Hesler

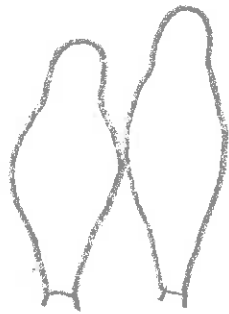
9.5-12 x 5.5-7(8) μ , slightly inequilateral in profile, ellipsoid to subovoid in face view smooth, brownish in KOH, apex truncate. Pleurocystidia of two types: (a) 34-37 x 16-18 μ (Agrocybe-like), few, (b) 24-30 x 8-11 μ , chryso-type;

cheilocystidia 30-40 x 7-13 μ , ventricose (Agrocybe-like).

Gill trama subparallel. Pileus trama interwoven. Pileus cuticle an ixocutis. Hypodermium brown, hyphoid, distinct.

Stropharia hornemannii (Fr.) Rindell + Hamfeldt

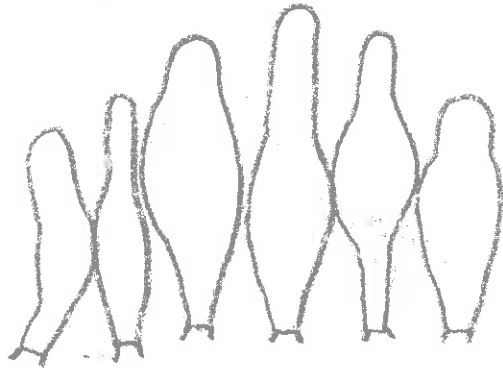
28889



(a)

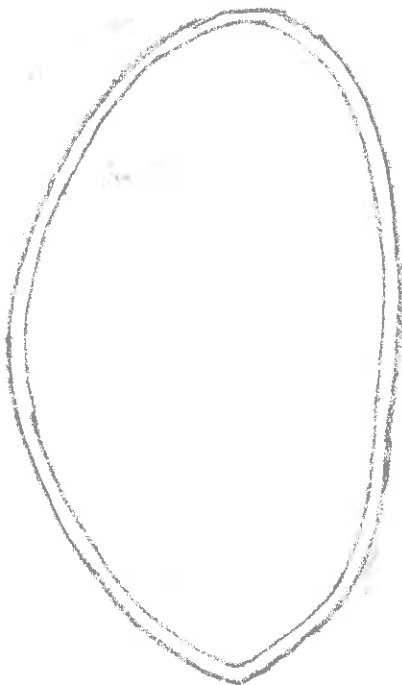


(b)

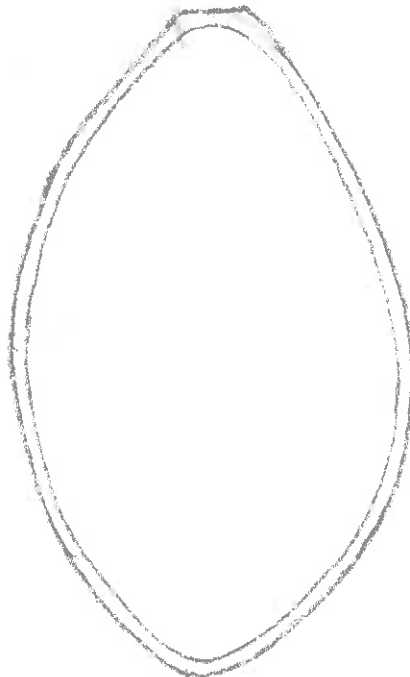


Ch x 1000

Pl: (a) reticulose;
(b) chryso - X 1000



Profile



Face

Spores x 8000

Stropharia irregularis PK.

Echlin?

Journey Bot. Club Bull. 27: 16. 1900

[Murrill, Mycol. 14, says it is a form of
Drosophila appendiculata]

28890

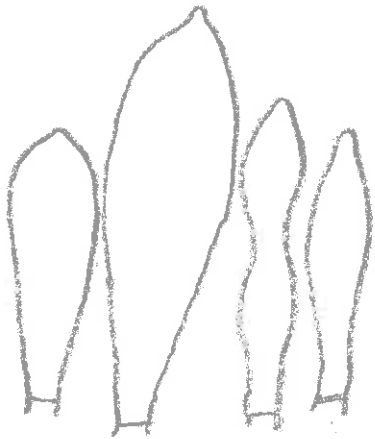
STROPHARIA KAUFFMANII Smith

in grass, under spruce, San Juan, Colorado, leg-det
A. H. Smith, July 28, 1956

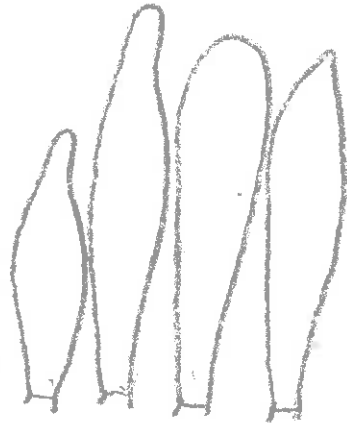
Spores (5.5)6-7 x 4-5 μ , ellipsoid, obscurely
inequilateral, smooth, no germ pore. Pl 35-53 x 8-17 μ ,
subclavate, at times with a mucro, or apex obtuse to
subacute, scattered, ~~placodes~~ absent from some sections,
rather abundant in others; ch 36-52 x 9-12 μ , more or less
similar to pl. Pileus cuticle of dry repent hyphae.
Stipe cuticle of repent dry hyphae. Caulo none.

Stropharia Kauffmanii Smith

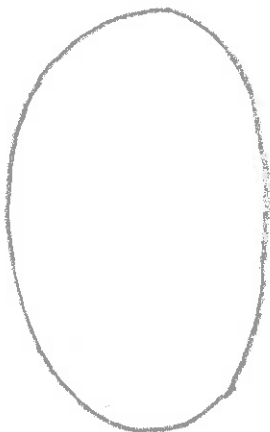
28890



Sp $\times 1000$



Ch $\times 1000$



Profile



Face

Spores $\times 8000$

Stropharia Kauffmanii Smith

Ann. Mich. Herb. Contr. 5 : 63. 1941. Plate 23.

Illus. See: Smith, Field Guide to Western Mushrooms, p. 217. 1945. ^{Sp color}

Pileus 6-15 cm broad, broadly convex, remaining convex or becoming plane, ground color "warm buff", densely imbricately fibulose scaly, scales \pm squarrose over the disc + merely recurved toward the fringed margin, scales "wood brown", "tawny olive", "ochraceous tawny" or "cinnamon brown", dry. Context 15 mm \pm over disc, abruptly tapering toward the margin, white, soft; odor + taste subnauseous.

Famellae depressed adnate, often attached only by a tooth, pallid, soon "drab", very narrow, crowded, thin + breaking transversely, often crisped, edges often eroded.

Stipe 6-10 cm long, 15-30 mm thick, whitish but strongly tinged "cream color" toward the base, \pm equal, often compressed, squarrose above and below the annulus, ^{the} scales above the ring formed by the broken cuticle, those below of

over

lacerated stipe tissue + veil tissue combined,
base with numerous white rhizomorphs.
Annulus superior, submembranous, evanescent.

Spores $6-7 \times 4-4.5 \mu$, ellipsoid,
no germ pore, "army brown" (or near) in mass,
dull reddish brown (under scope). Ch $50-60 \times$
 $10-12 \mu$, cylindrical to subfusoid, apices acute or
obtus. Fibroid bundles producing the scales.

On soil, in woods of alder, maple +
cottonwood; Type (No. 13256), Clearwater River,
Olympic Mts., Washington, May 9, 1939, by
Kauffman (who recognized it as new, but did
not publish).

A most distinctive species: fibrous
pileus. Has no relationship with the Spinigeraceae,
& does not belong with S. squamosa or S.
depilata.

STROPHARIA KAUFFMANII A. H. Smith

PHOTO

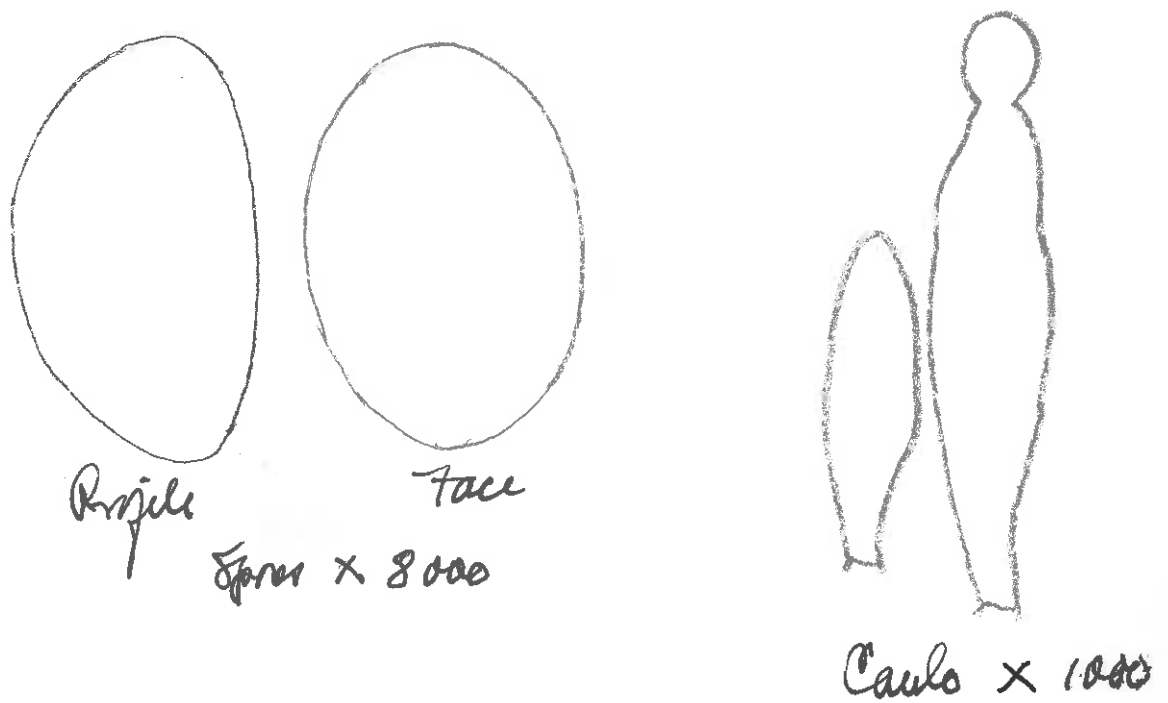
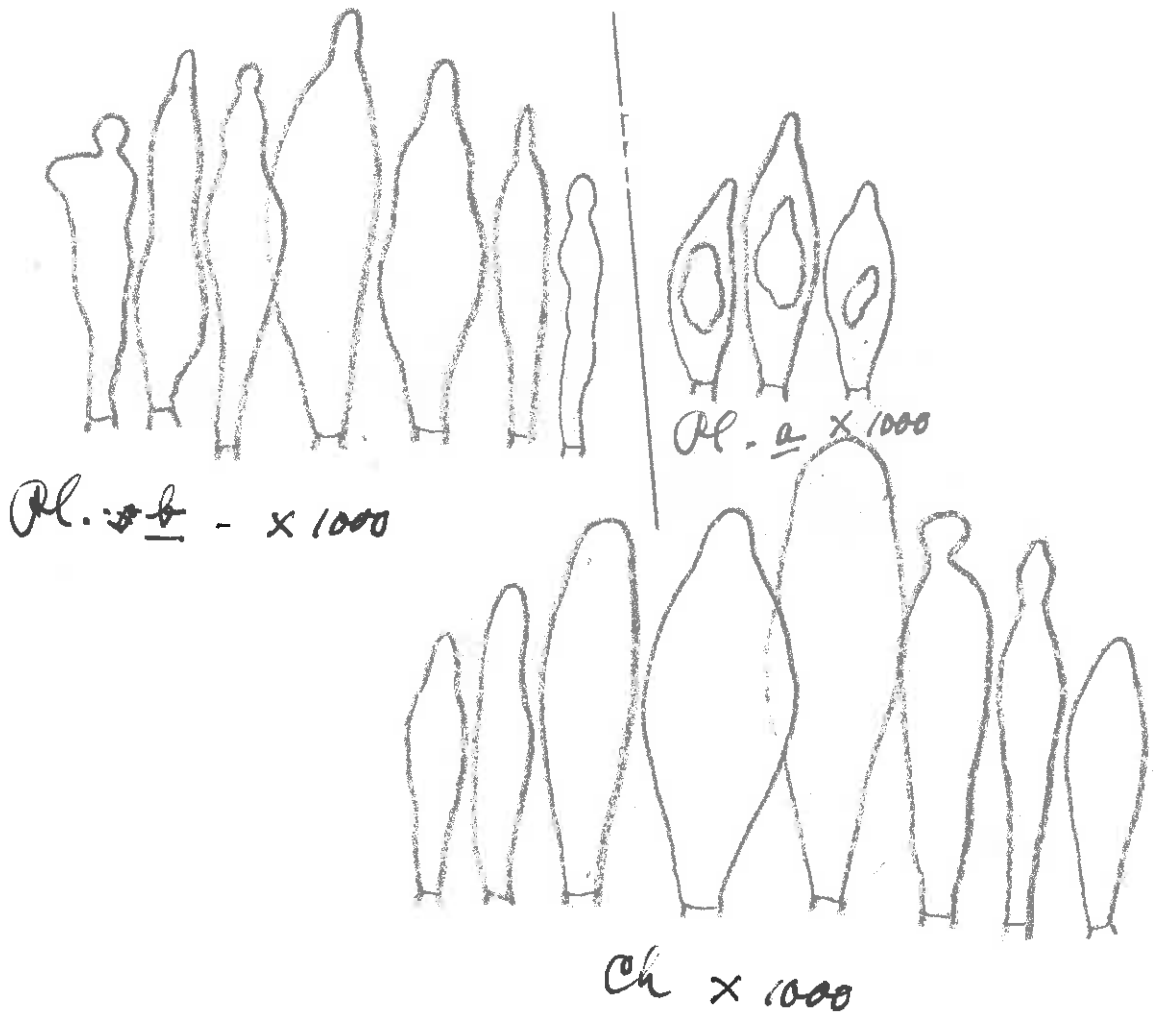
on debris of alder and cottonwood, Clearwater River, Olympic
Mts., Jefferson County, Washington, leg-det A.H. Smith
May 9, 1939

Helotype: Notes by L. R. Hesler (Smith No. 13256)

Spores 6-8 x 4-45(5.5) μ , obscurely inequilateral
in profile, ellipsoid, ^{or some} ~~to~~ subovoid in face view, wall thin,
smooth, no germ-pore found. Pl of two types: (a) chryso-
type, 26-35 x 9-11 μ , scattered, usually rare, buried,
inconspicuous; (b) ventricose to subclavate, often constricted
and either capitate or appendiculate, 36-56 x 5-15 μ , scattered
but very conspicuous; ch similar to type b of pl, often
abundant, very conspicuous. Pileus cuticle of repent,
dry hyphae, surface bearing bundles of hyphae which are
6-12 μ broad, forming the scales. Stipe cuticle of dry,
repent hyphae, surface with hyphal bundles (scales), and
with widely scattered (rare) caulocystidia, 54-80 x 12-15 μ ,
ventricose, some capitate.

It is a bit unusual to find 2 kinds of
pl (chryso-cystidia, + ventricose type), with only one
kind of cheilocystidia; if 2 types are present,
they are usually found on the edges of gills.

Stropharia Kauffmanii Smith
from part of Holotype



Smith-14585 STROPHARIA KAUFFMANII Smith

on humus, Elwha River Valley, Olympics, Washington,
leg-det A.H.Smith, May 23, 1939

Paratype: Notes by L. R. Hesler

Spores 6-8x4-5 μ , slightly inequilateral in profile, ellipsoid to subovoid in face view, smooth, no pore found, pale yellowish brown in KOH. Pl of 2 types: (a) chryso-type, 20-38 x 7-12 μ , (b) as in Holotype; ch similar to holotype, 30-52 x 7-15 μ . Pileus cuticle of dry repent hyphae, with bundles of hyphae forming scales. Stipe cuticle of repent, dry hyphae, with hyphal bundles forming scales. Caulocystidia few, similar to ch.

30437

STROPHARIA KAUFFMANII Smith

leg. R.H.Petersen, Upper Priest River, Idaho,
October 1, 1968

Spores (5)5.5-8 x 4-5 μ , ellipsoid, thin walled,
no germ pore found, not truncate, brownish in KOH. Pl
of two types: (a) chryso; ~~xxxxxxxx~~; (b) ventricose; ch
of chryso-type. Otherwise similar to holotype, at least
so far as I can make out without notes.

Stropharia longistriata Murr. = Psathyrella

Mycologia 4: 301. 1912

Stropharia fragilis Kauff., Mich. Acad. Sci. Papers 5: 144. 1926.

Pileus 2.5-5 cm broad, conic to convex, more or less umbonate, isabelline to dark cream on umbo, whitish to dull-brown on the long-striate margin. Context thin.

Lamellae adnate, pallid to purplish-brown, edges ^{often} whitish, narrow, plane, not crowded.

Stipe 6 cm long, 5 mm thick, milk-white, throughout, glabrous, tapering upward, hollow. Annulus very large, persistent, median, fixed, funnel-shaped.

Spores $7 \times 3.5 \mu$, ellipsoid, smooth, pale-purplish (under scope).

On earth & decayed chips, in woods, near Seattle, Washington, Oct. 20 - Nov. 1, 1911, Merrill 233 (type). Also coll. in Oregon, Murr-1074.

Similar in ^{general} appearance to Hypoholoma appendiculatum, but always with a conspicuous annulus.

This is Psathyrella longistriata (Murr.) Sm., in Mushrooms in their Natural Habitats, p. 552. 1949.

STROPHARIA MAGNIVELARIS Pk.

(Exclude?)

Leg. W. Trelease, Yakutat Bay, Alaska, June, 22, 1904

Type: Notes by L. R. Hesler

Material reduced to small fragments, and entirely
worthless for study.

Stropharia magnivelaris PK.

Harriman Alaska Expedition 5: 44. 1904

[from Nellis + Kempton: Mycologia 60: 899-900. 1968]

Pileus 2-5 (6) cm broad, convex to subovate, becoming plane, usually with a small umbo, light to medium golden ochre, disc slightly darker, margin grayish ochre as spores mature, dry, or sometimes lubricious, ^(see other side, this sheet) when young, subpolished to polished, glabrous or finely appressed-fibrillose, slightly radially rugulose. Context pale ochraceous 3-9 mm thick on disc; odor and taste none to slightly earthy.

Gamellae adnate to subadnexed, whitish, becoming lavender-gray, finally blackish-purple, close, moderately broad to broad (6-8 mm), edges white crenulate.

Stipe 4-10 (13) cm long, 2-8 (10) mm thick, whitish above the annulus, light to medium ochre below, base sometimes brown in age, dry, glabrous to pruinose-punctate above, fibrillose to scurfy below, base white-strigose, with white rhizomorphs. over

Partial veil white to pale ochraceous, fibrillose-to floccose to ~~scabrous~~ submembranous, scurfy to floccose-sealy on underside, usually breaking to form a more or less flaring annulus, sometimes fragments appendiculate on pileus margin.

Spores in deposit: purple-brown ^{when} ~~when~~ fresh, black when dry; spores $14-18 (19.7) \times 7.5-9.5 (10.5) \mu$, ellipsoid, pore oblique on dorsal side, smooth, thick-walled. - Pl none; ch (fig. 17) abundant, $30-75 \times 3.7-5.5 \mu$, narrowly clavate, often flexuous smooth, thin-walled. Gill trama parallel. Pileus trama subradial, interwoven. Hypodermium hyphoid. Epicutis a scanty pellicle of gelatinous hyphae, $1.5-3 \mu$ broad. Clamps present.

In frondose woods, May-June. Peck's original descr. base on Alaskan collection (in 1899, by the Harriman Alaska Expedition, Smith (personal commun.) points out close relationship of it to S. squamosa, but S. magnivelaris is dry to nearly dry, glabrous; ~~still~~ less scabrous stipe, smaller size, larger spores.

Smith (U. of W. Herb. Contr. 5: 68-69, 1941) gives a description + a photo (Plate 24) of material from Washington (Olympic Mts.)

Stropharia melanosperma (Bull. ex Fr.) Karsten

~~Bull.~~ Bidr. Finl. Nat. Fölk 32: 489, 1879

Agaricus melaspermus Fr., Epicr. Myc., p. 219, 1838.

Pileus 3.5-4.5 cm broad, convex to plane, white, disc straw-colored, slightly viscid, glabrous, often areolate. Contact fleshy, soft.

~~Flan violet~~ Lamellae slightly adnexed, pallid to ~~black~~ ^{cinereous}, crowded, ventricose.

Stipe 4-6 cm long, 6-7 mm thick, white, glabrous, equal, hollow. Annulus white, membranous.

Spores $10 \times 6 \mu$, ovoid, fuscous.

On manure, or manured soil, New England, New York, Texas, Costa Rica, etc.; also Europe.

Bresadola thinks Fries confused it with A. coronilla Bull. The original spelling was A. melanospermus, but, ^(since) most authors have shortened ~~it~~ it to A. melaspermus.

STROPHARIA MELANOSPERMA (Fr. ex Bull.) Quel.
ex-Herb. Stehhelm, leg-det. Henri Romagnesi, May 29, 1950

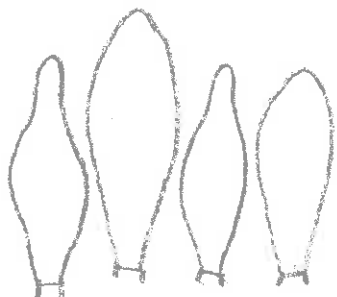
Notes by Hesler

Spores (9) 10-12 x 6.5-8 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, wall rather thick, truncate, brown with a purplish tint in 2% KOH. Pl and ch similar, chrysecystidia-type, 28-35 x 8-13 μ , somewhat erratic in occurrence (at times rather rare).

²₁ Pileus trama interwoven. Gill trama of subparallel hyphae. (Stipe net studied microscopically).

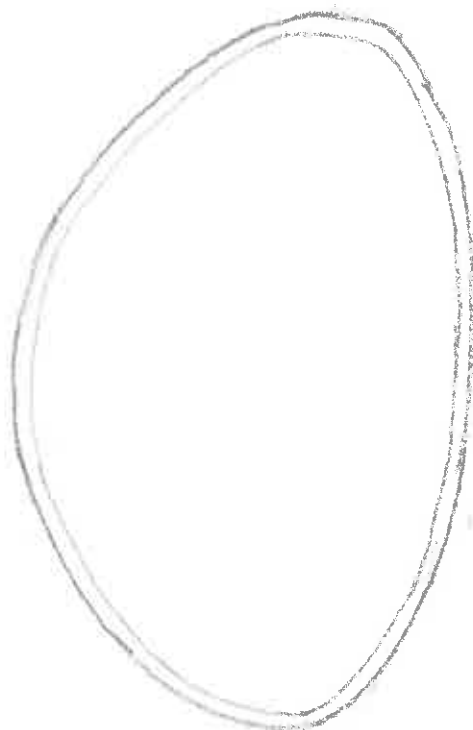
Stropharia melasperma (Fr. ex Bull.) Oenl.

ex-Herb. Stockholm, leg. + det. Hevri Romagnesi,
May 29, 1950

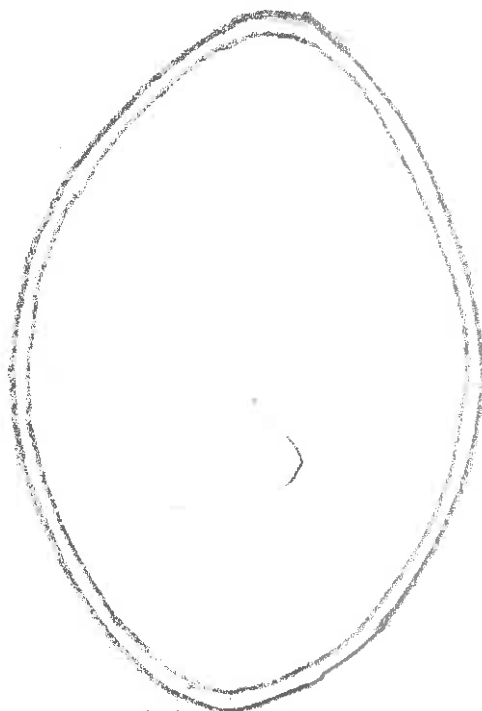


Pl (Chryso-type)

x 1000



Profile



Face

Face x 8000

cf. merdaria (angular spores)

Stropharia melasperma ~~Bull.~~ (Fr.) P. Karst.

Bidr. Fuml. Nat. Folk 32:489. 1879

Pileus 2-3 cm. broad, ivory-whitish, shining, glabrous, slightly viscid.

Flesh firm, white.

Lamellae adnate with a decurrent line, broad, close, "lilac gray" then "aniline black."

Stipe 3-4 cm. x 3-5 mm., ivory, sub-clavate, annulus ^{superior,} ~~apical,~~ ^{subpersistent to} evanescent, hollow, dry.

Spores 11-15 x 7-8 μ , ellipsoid to key-stone shaped, ends pointed, color in mass: "aniline black."

Pleurocystidia none; cheilocystidia short, clavate, 32-38 x 11-13 μ .

On lawns (one collection, No. 10152, attached to corn-stalk), Knox County, Tennessee, ^{Florida} June-August.

12473

STROPHARIA MELANOSPERMA (Bull. ex) Qué1.

on humus, in mixed woods, Elkmont, Tenn., GSMNP,
leg LRH, (at first det by Smith as S. coronilla),
later as S. melanosperma by LRH.

Pileus 4-6 cm broad, convex, tawny olive ~~wikwx~~
with a purplish tint, glabrous, lubricous (not viscid).

Lamellae adnate, "deep violet gray", edges
whitish fimbriate, close, medium broad, narrowed at either
end.

Stipe 10 - 12 cm long, 10 mm thick, whitish, dry,
glabrous, equal, base sub-bulbous, curved somewhat.
Annulus ample, superior.

Spores $9\text{-}\overset{12}{\cancel{11}} \times 6\text{-}7.5\mu$, slightly inequilateral in
profile, ellipsoid/in face view, smooth, truncate (at times
obscurely so). Pl. $25\text{-}38 \times 7\text{-}9\mu$, of the chrysocystidia
type, relatively abundant (more so than in S. coronilla)
and more conspicuous than in S. coronilla; ch of two
types: (a) of the chrysocystidia type, $27\text{-}30 \times 7\text{-}10\mu$;
(b) clavate, $25\text{-}28 \times 8\text{-}10\mu$. Pileus cuticle of repent
dry hyphae.

This is close to S. coronilla, but has distinctly
larger spores, which are more or less truncate, stipe longer,
and the pleurocystidia (chrysocystidia) are more abundant
than I have found in specimens of S. coronilla.

Stropharia melanosperma (Bull. ex) Quel.

12473



Pl (chryso)
X 1000



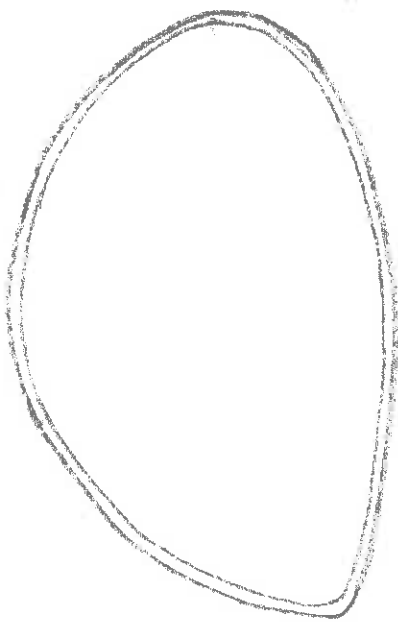
a

Ch

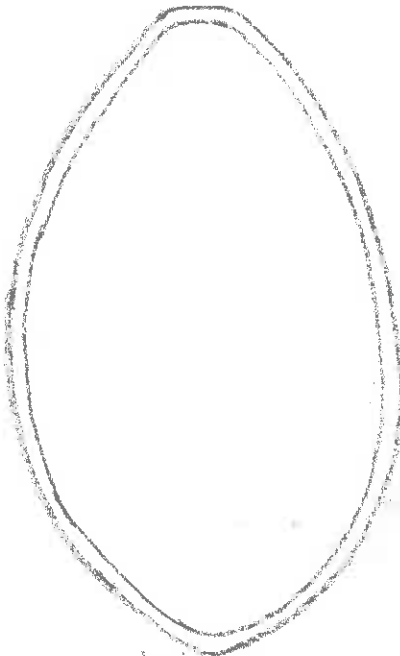


b

(a) Chryso-type; (b) clavate
X 1000



Profile



Face

Spores X 8000

14234

STROPHARIA MELANOSPERMA (Bull. ex) Quél.

on lawn, Hesler's place, Timberlake Rd., Knox Co.,
Tenn., leg. LRH, det. A. H. Smith, June 15, 1942

Pileus 2-3 cm broad, ivory whitish, shining,
glabrous, slightly viscid(?), Context white, firm.

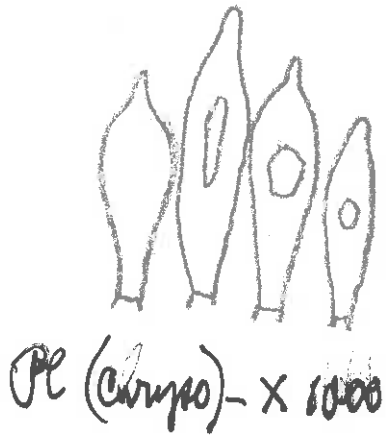
Lamellae adnate with a decurrent line, "lilac
gray", then "aniline black", broad, close.

Stipe 3-4 cm long, 3-5 mm thick, ivory, dry, hollow,
subclavate. Annulus apical, evanescent.

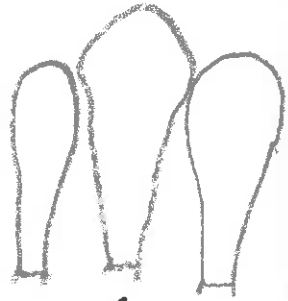
in descript: "aniline black"
Spores $10-13.5(14) \times 7-8\mu$, slightly inequilateral
several rather slender, keystone-shaped,
in profile, subellipsoid to subovoid, in face view, often
obscurely to rather distinctly keystone-~~shaped~~ *or 6-sided,* shaped, or
obscurely flat-sided usually at or toward the base, smooth,
wall rather *germ pore present and apices at times ± truncate,* thick (double), brown in KOH. Pl of the
chrysocystidia type, $26-38 \times 7-10\mu$, scattered, buried and
inconspicuous; ch of two types: (a) chrysotype, ~~$30 \times 7 \mu$~~
 ~~$33 \times 8 \mu$~~ *loosely*
 ~~$30 \times 8 \mu$~~ , (b) clavate, $30-36 \times 12-15\mu$, not abundant.
Gill trama of subparallel hyphae. Pileus trama of interwoven
hyphae. Pileus cuticle of dry, repent hyphae. Stipe
cuticle of dry relent hyphae. Caulo none.

Stropharia mdanosperma (Bull. ex) Quel.

14234



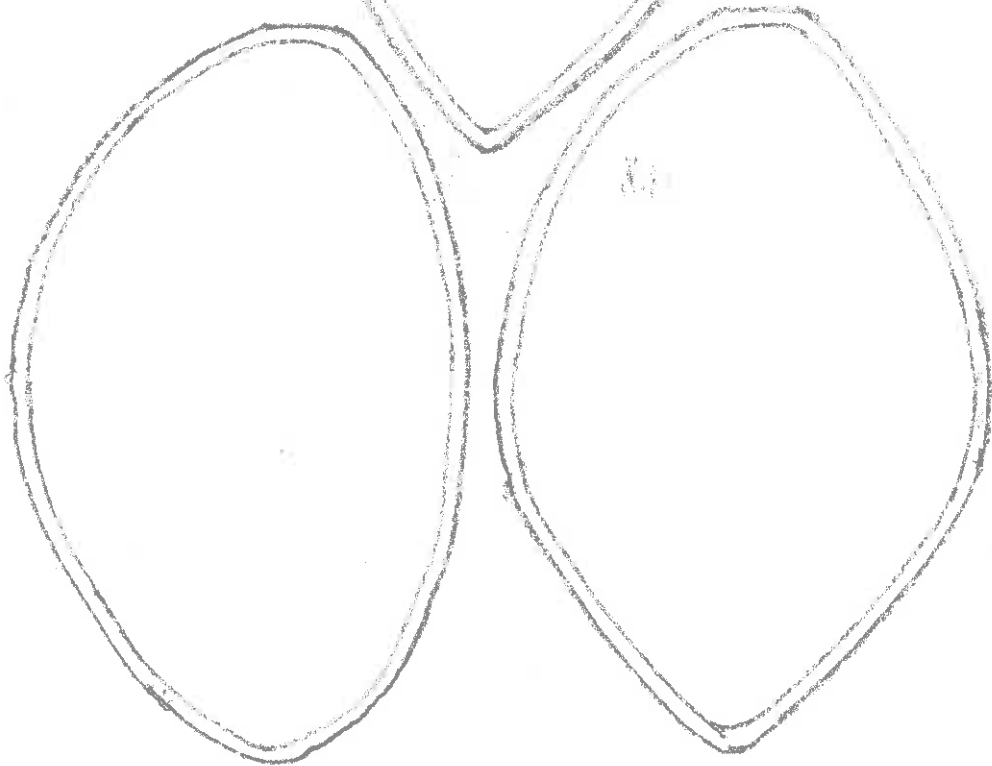
a
Ch X 1000



f



← Face



Profile

Spores X 3000

Face

15770

SEROPHARIA MELANOSPERMA (Bull. ex) Quel.

on lawn, Hesler's place, Knox Co., Aug. 2, 1943

Spores 10-12 x 7-8 μ , faintly inequilateral in profile, ellipsoid to subovoid on face view, at times obscurely keystone-shaped, smooth, truncate, ~~xxxx~~ brown in KOH. P. not found; ch 22-35 x 7-9 μ , clavate, not abundant. Pileus cuticle of dry repent hyphae. Stipe cuticle of dry repent hyphae. Caulo not found.

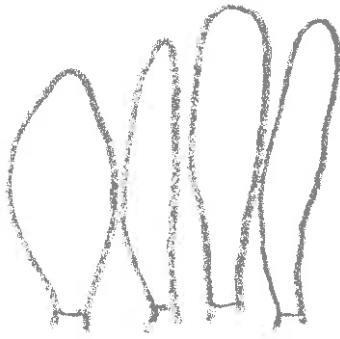
15793

STROPHARIA MELANOSPERMA (Bull. ex) Qué1.

on lawn, Knox Co., Hesler's place, June 27, 1943

Spores 10-12 x 7-8 μ , faintly inequilateral in profile, ellipsoid to subvoid, or more rarely irregular in shape, occasionally keystone-shaped, smooth, truncate (at times obscurely so), brown in KOH. Pl of the chryso-cystidia type, widely scattered, rare, inconspicuous, 32-36 x 7-9 μ ; ch both chryso-type and clavate found, not abundant. Pileus cuticle of repent, ~~X~~ hyphae, a few surface hyphae appear to be subgelatinous (surface lubricous?). Stipe cuticle of dry repent hyphae. Caulocystidia in small, widely scattered tufts, subcylindric, subfusoid, or sub-ventricose, 30-40 x 7-14 μ (found only after considerable searching).

Stropharia melanosperma (Bull. ex) Quel.
15793



Spore x 1000

19137

STROPHARIA MELANOSPERMA (Bull. ex) Quel.

on lawn, Knoxville, Tenn., leg. Madeline Kneberg,
det LRH, July 14, 1949

Spores $10-14 \times 6-8.5\mu$, slightly inequilateral
in profile, ellipsoid, subovoid, to somewhat irregular in
face view, sometimes with a "snout", smooth, wall thick,
brown in KOH. Pl not found; ch clavate, usual. Pileus
cuticle of dry, repent hyphae.



19137 - *Stropharia melaspermata* ^{no} (Bull. ex) Quel.

19674

(Ball. ex)
STROPHARIA MELANOSPERMA (Fr.) Quel.

on lawn, P. B. Stockdale's place, Knoxville, leg.
Stockdale, det LRH, July 30, 1950

Spores 10-14 x 6.5-8.5 μ , ~~slk~~ slightly inequi-
lateral in profile, ellipsoid to subovoid in face view,
smooth, truncate in most spores. ^{inconspicuous,} Pl/as chryso-cystidia
type; ch ~~with~~ with a few clavate and few chryso-type.
Pileus cuticle of dry repent hyphae.

on soil, lawn, Timberlake Rd., Knox Co., Hesler's
place, leg-det LRH, July 5, 1951

Spores 9.5-12 x 6-8.5 μ , inequilateral in profile,
ellipsoid to subovoid in face view, smooth, truncate, brown
with a purplish tint in KOH. Pl very few, scattered, of the
chryso-type; ch not abundant, with a few of each type: clavate
~~axochryso-cystidia~~ and chrysocystidia types. Pileus cuticle dry,
hyphae repent.

20109

20109 - *Stropharia melasperma* (Bull. ex) Quel.

on soil, in pasture, Tallahassee, Florida, leg-det
LRH, July 30, 1954

Spores 9-12.5 x 6-8 μ , slightly inequilateral in profile, ellipsoid to subovoid in face view, smooth, truncate, brown with a faint purplish tint. P₁ of the chryso-type, 27-33 x 6-8 μ ; ch clavate, 25-46 x 8-12(18) μ . Gill trama subparallel, moderately broad hyphae. Pileus cuticle of repent, dry hyphae.

28899

STROPHARIA MELANOSPERMA (Bull. ex) Qué1.

on soil, Ottawa County, Kansas, leg C.T. Rogerson,
det A. H. Smith, July 4, 1954

Spores 9-11 x 6.5-8 μ , only slightly inequilateral
in profile, ellipsoid to subovoid (at times slender ovoid)
rarely obscurely keystone-shaped,
in face view, wall thick, smooth, brownish in KOH.

Pl 26-30 x 6-7 μ , of the chrysocytidia type; ch 32-35 x 10-12 μ ,
clavate, not abundant. Pileus cuticle of repent, dry
hyphae. Stipe cuticle of dry repent hyphae. ~~Cap~~ Caulo
none found.

29161

STROPHARIA MELANOSPERMA (Bull.ex)Qué1.

on lawn, Hesler's place, Knox Co., Tenn., June 21, 1966

Spores 10-13 x 7-9 μ , slightly inequilateral in profile, ellipsoid to subvoid, or often more or less keystone-shaped in face view, wall smooth, thick, brown with a purplish tint in KOH. P. as chrysocystidia, few, widely scattered, 22-27 x 5-7 μ ; ch clavate, 32-37 x 9-11 μ , not abundant, no chrysocystidia found. Pileus cuticle of dry repent hyphae.

29614

STROPHARIA MELANOSPERMA (Bull. ex) Qué1. PHOTO

on soil, on lawn, under trees, Cherokee Park, Morristown,
Tennessee, leg. Robt. Sprinkle (student), det. LRH,
May 23, 1967

Spores 9.5-12 x 6.5-8 μ , slightly inequilateral
in profile, ellipsoid to subovoid in face view, at times
obscurely flat-sided (keystone-shaped) especially on lower half,
smooth, brownish with a purplish tint. Pl none found; ch
both clavate and chryso-types present: chryso 20-32 x 5-7 μ ,
clavate 26-32 x 7-9 μ . Pileus cuticle of dry repent hyphae.

Gills white when young.



29614

29614 - *Stropharia melasperma* (Bull. ex) QuéL.

STROPHARIA MERDARIA (Fr.) Ricken

leg. Romell, No. 10504, Stockholm, July 26, 1917

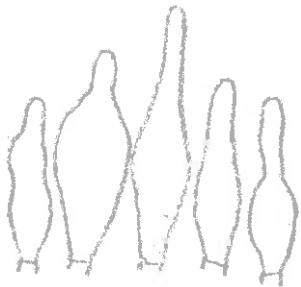
Notes by Hesler

Spores 10-14.5 x 6.5-8 μ , obscurely inequilateral in profile, ellipsoid in face view and often subtly about 6-angled, or key-stone shaped, smooth, wall medium thick, brown with a purplish tint in 2% KOH, slightly truncate. Pl not found; cheilocystidia not abundant, of the chrysocystidia type, 24-35 x 5-10 μ . Gill trama subparallel. Pileus trama of broad, loosely interwoven hyphae. Pileus cuticle a distinct ixocutis. Hypodermium of brown hyphae. Stipe cuticle of repent dry hyphae. Caulocystidia 42-56 x 5-7 μ , cylindric with a slight ventricose enlargement at the base.

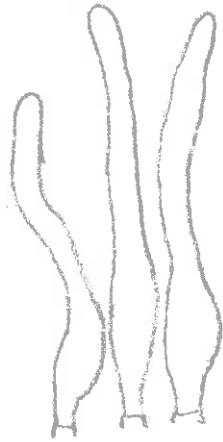
Stropharia merdaria (Fr.) Rickau

No. 10504,

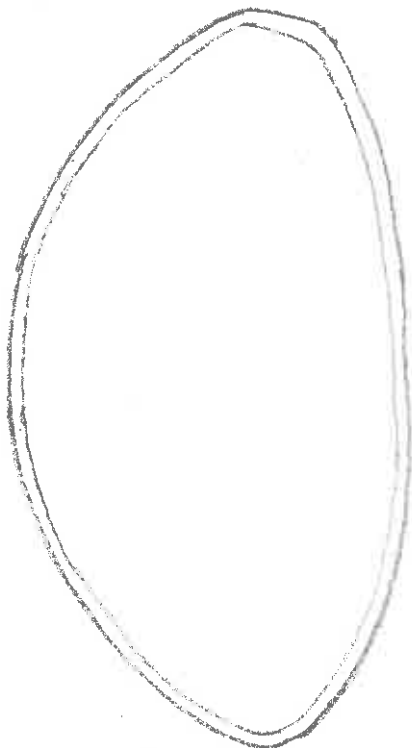
leg. Romell, ex-Romell Herb., Stockholm, July 26, 1917



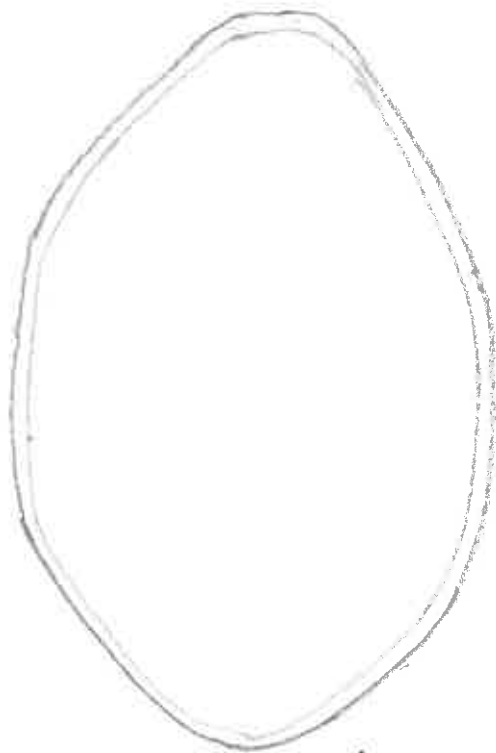
Ch (Chryso)
x 1000



Caulo x 1000



Profile
Spore x 8000



Face View

STROPHARIA MERDARIA (Fr.) Ricken

Leg. L. Romell, ex-Herb. Lars Romell, Stockholm,
Sweden, No. 10506, August 19, 1917.

Notes by Hesler

Speres 10-14 x 6-8 μ , obscurely inequilateral in profile, ellipsoid in face view and many obscurely 6-angled, truncate, smooth, ~~thin-walled~~, brown with a purplish tint in 2% KOH. Pl and ch not found. Gill trama subparallel to slightly interwoven. Pileus trama of loosely interwoven hyphae. Pileus cuticle an ~~axo~~cutis. Hypodermium brown and composed of hyphae. Caulocystidia not found.

Stropharia merdaria (Fr.) Quél.

Champ. Jura Vasq., p. 111. 1872

Agaricus merdarius Fr., Syst. Myc. 1: 291. 1821.

[from Murrill, Mycol. 14: 138]

Pileus 3-4 cm broad, convex to plane, hygrophanous, sub-annular colored when moist, ochraceous when dry, becoming striatulate, glabrous.

Lamellae adnate, yellowish to unbrinous, broad.

Stipe 2.5 cm or more long, ^{tough,} pallid, dry, flocculose, stuffed or hollow. Annulus lacerate, fugacious; veil often appendiculate.

Spores 12-17 x 6-9 μ , globose to ellipsoid, brownish black.

On manure, Sweden & North Central U.S.

Kauffman, following ~~the~~ Karsten, places it in Psilocybe since the stipe is tough.

STROPHARIA MACROPODA Morgan

Re; The Type

In a letter, dated Mach. 7, 1977, to me, written by Dr. Robt. W. Embree, Assec. Prof. Botany, The University of Iowa, Dept. of Botany, it was stated that Stropharia macrospora specimens are not in the Morgan Collection there. In addition, Embree stated that there are no specimens of Stropharia at all in Morgan's collections, at Iowa City. He did not indicate what might have happened to them.

-L. R. Hesler

Stropharia obturata Fr.

(Notes from Harper (1914: 1019-1020).

Harper received a photo from Dr. W. S. Moffatt, Wheaton, Ill., but ~~the~~ Moffatt discarded the specimens. Harper 'thinks' the plants (photo) agree well with S. obturata, but suggests it needs further observation. Harper suggests the following are closely related but their differences not well known: S. drymonia, S. melasperma et al. Saccardo doubted whether S. obturata is distinct from S. coronilla.

Harper also gives notes on S. melasperma (+ cites Peck, Bulletin 105: 28), which he thinks is different from S. obturata; on S. drymonia Morgan; and on S. caesifolia Fr. (Torr. Bull. 1845: 489).

Stropharia psathyroides ^{f. [= Psathyrella sphagnicola (Maire) Favre]} _^ Range

Dansk Botanisk Arkiv 4(4): 36. 1923

[Describ. by Smith, Mycologia 30:39, * 1938.]

Pileus 1-2 (3) cm broad, obtusely conic, campanulate or expanded umbonate, hygrophanous, chocolate-brown when moist, fading to "cinnamon buff" or pale livid buff, disc glabrous remaining tawny, atomate and somewhat rugulose, when faded, at first with delicate fibrillose patches on or near the margin, soon glabrous. Context thin, very fragile; odor + taste not distinctive.

Lamellae ascending adnate, pallid, becoming dull purplish brown, edges white fimbriate, thin, moderately close, broad.

Stipe 8-11 cm long, 2-5 mm thick, pale cinnamon buff or whitish, becoming darker below, sparsely fibrillose or glabrous in age. Annulus submembranous, superior, flaring, whitish.

Spores 8-10 x 4-5. $\text{R} \times \text{ch}$ scattered, 42-60 x 10-20 μ , broadly fusoid reniform. Pileus trama corticated by a palisade of pyriform pedicellate

over

cells (as in species of Gonocyste).

On sphagnum, New York, Ontario, Michigan,
Aug. + Oct. Apparently a rare but widely
distributed species. Fänge reported it from
Oregon. Pileus cuticle several cells deep.

Type in tufts of Sphagnum and Polytrichum
under Betula, in a bog, Sept. 1909, J. Fänge.

This is Psathyrella sphagnicola (Maire)
Favre, Bull. Soc. Myc. France 26: 192.
53: 282. 1937. [Smith, N.A. Species of
Psathyrella, p. 66, lists Stropharia sphagnicola
Maire as a synonym.]

Medicine Bow Mountains, Wyoming, leg-det
A.H. Smith, June 30, 1950

Notes by Hesler

Spores 11-15.5 x 6.5-7.5 μ , slender, slightly ~~xxx~~
inequilateral in profile, slender ellipsoid in face view,
many or most showing a small truncate apical end, wall
rather thick, smooth, brownish with a purplish tint in KOH.
Pl 25-52 x 4-6 μ , widely scattered, rare, slender subventricose;
ch 23-40 x 3-5 μ , cylindric, subcylindric, or subclavate,
indistinct in outline or distinct, appearing slightly
agglutinated, at times tufted and numerous. ~~Bileus~~ cuticle
~~afxxpantxydry~~ a thin ixocutis, hyphae radial. Hypodermium
not distinct. Stipe cuticle of repent dry hyphae. Caulo
in tufts, numerous in apical region, similar to pleurocystidia,
23-60 x 4-8 μ , in tufts to slightly scattered.

Strapharia riparia
28900 (ex. AHS)



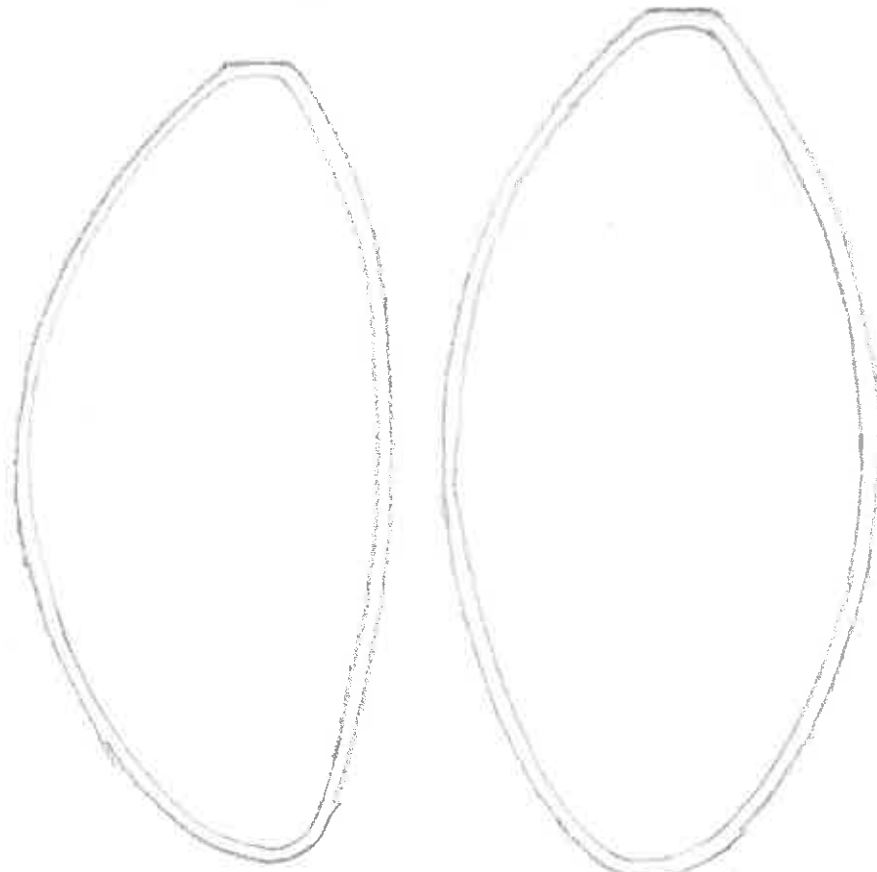
R x 1000



Ch x 1000



Canlo x 1000



Profile

Spores x 8000

Frontal

Agrocybe

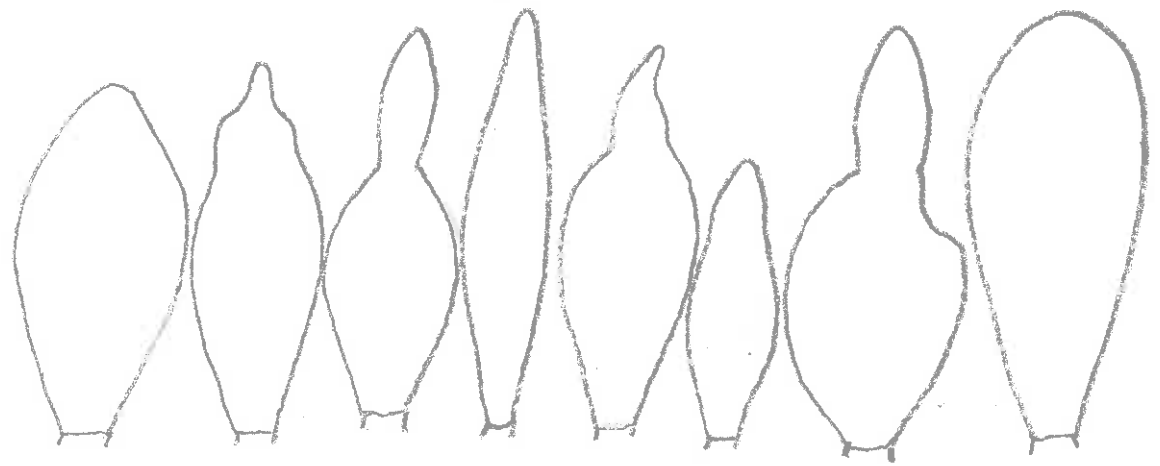
STROPHARIA RUGOMARGINATA Zeller & Epling - Type

under pines, Oregon Agr. College Campus, Corvallis,
Dec. 10, 1921; ex-Herb. Zeller at N.Y. Bot. Garden.

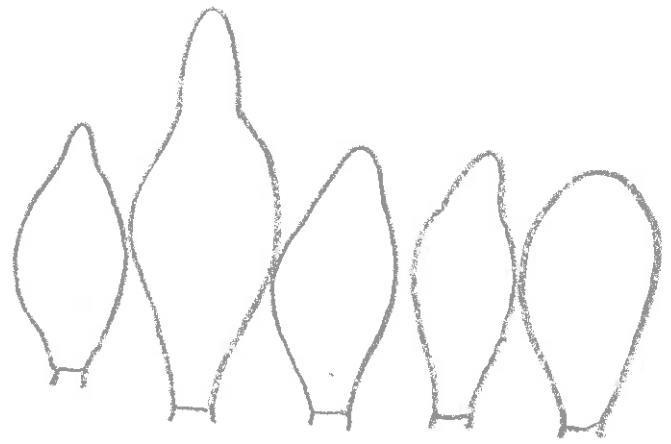
Notes by Hesler

Spores (7.5) 8-9.5 x 5-6(7) μ , very obscurely inequilateral in profile, ellipsoid to subvoid in face view, smooth, truncate, brown in 2% KOH, wall rather thick. Pleurocystidia 36-54 x 10-22 μ , broadly ventricose (Agrocybe-like), scattered but conspicuous; cheilocystidia 33-53 x 14-20 μ , similar to pl, sparse. Gill trama of subparallel hyphae. Pileus trama of broad, loosely interwoven hyphae. Pileus cuticle of a zone of irregularly shaped cells, which apparently are pushed out of position in mature pilei. Stipe cuticle of dry, repent hyphae. Caulis not found.

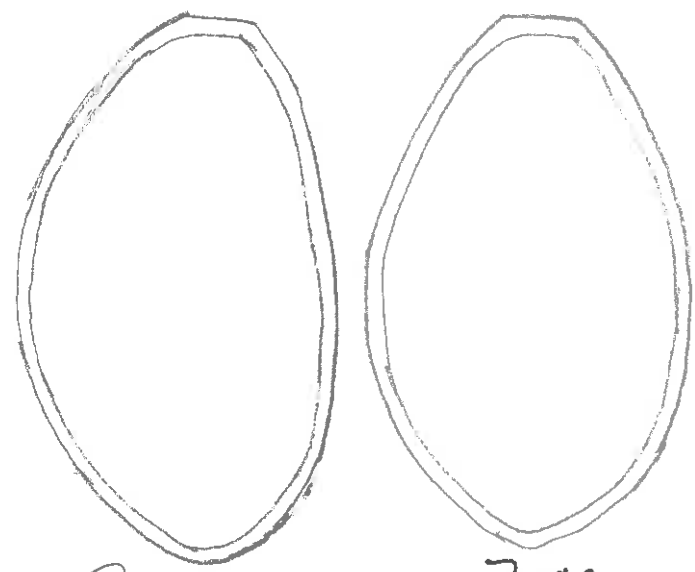
Stropharia rugomarginata Zeller + Epling
Type Agrocybe



Sp x 1000



Ch x 1000



Profile

Face

Spore x 8000

STROPHARIA RUGOMARGINATA Zeller & Epling

Agaricus

Corvallis, Oregon, leg-det Carl Epling, Dec. 21, 1921
labelled CO-type.

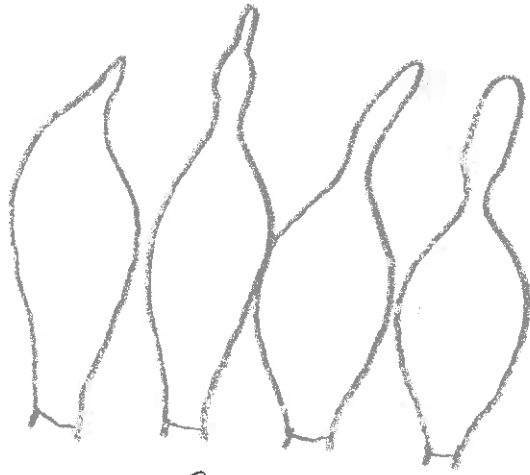
(Material not very good: appears young, and no spores found; both pleurocystidia and cheilecystidia weremostly mature, and pl very abundant [much more abundant than in the type])

Spores not found. Pl 48-54 x 16-22 μ , abundant; ch 33-45 x 7-18 μ , many similar to pl, but also present were some of different shapes(see drawings). Pileus cuticle oa cell zpne. Pileus trama of interwoven hyphae.

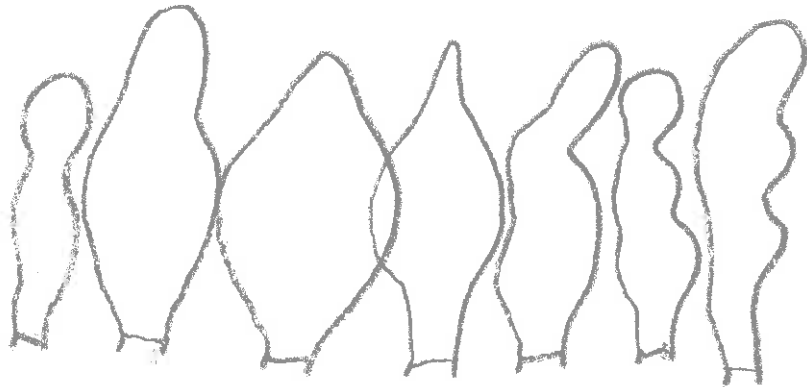
Stropharia rugomarginata Zeller + Epling

Co-type

Agrocystis



Pl x 1000



Ch x 1000

Stropharia rugomarginata Zeller + Epling, sp. nov.

Mycologia 14: 190. 1922

Pileus 6-12 cm broad, convex or broadly conic, becoming expanded to plane, pinkish buff or cinnamon on the disc, drying cinnamon-buff to tawny-olive, glabrous, margin reticulate-rugose (pitted).
Context thin, whitish; odor & taste not distinctive.

Gills broadly adnate or slightly decurrent, concolorous becoming cinnamon, in age tawny-olive, drying cinnamon brown, crowded, edges minutely serrate.

Stipe 6-12 cm long, 12-15 mm thick, concolorous or whitish + shining above, glabrous, subequal, tapering slightly either way, solid or stuffed. Annulus ample, persisting but sometimes disappearing at maturity, whitish.
Spores, $8-9.5 \times 4.5 \mu$, sordid-ellipsoid, germ pore present + truncate.
In deposit: cinnamon brown (moist), mummy brown (wet)

Type, Zeller-2180, ^{in lawns, under} ~~on dead wood (both~~ ~~conifers + deciduous)~~, Coquille, Oregon, October to first December.

Parsons's number (draw)

11

Stropharia rugosoannulata Farlow, n. sp.

Icones Farlowianae, p. 71. 1929

(A copy of the original description)

Fructification large, 10 to 15 cm high, , with the pileus 6-15 cm broad, somewhat conical at first, soon expanded and convex, obtuse, firm, not viscid, even, pecan brown to chestnut, streaked with innate fibrils or glabrous, barely squamulose at the apex when old, the margin inrolled; flesh about 1 cm thick, white. Gills adnate, separating from the stem, crowded, at first pale olive, then deep quaker drab, drying fuscous in the herbarium, the edge uneven; spores snuff brown under the microscope, even, slightly truncate at one end, 11-13 x 8-9 μ ; no cystidia; stem 9-14 cm long, 10-16mm thick, slightly tapering upward, solid but soft within and slightly yellowish, olive buff and striate below the ring, more deeply striate above it/ and bearing floccose masses; annulus superior, thick, ~~thick, xanthic~~ composed of two layers - the lower layer greatly thickened, split radially and extending beyond and outside the margin of the pileus in about 12 horns or claws which ~~curve about and clasp~~ curve about and clasp the pileus, upper layer or upper side of annulus rugosely or reticulately grooved, floccose membranaceous, and breaking away from the margin of the pileus so as to leave some fragments attached to the latter.

Gregarious. On cultivated ground in a cornfield.

Waban, Massachusetts. September. Rare.

This species is noteworthy because of its chestnut pileus, snuff brown, slightly truncate, large spores, and unique ~~xxxxxxx~~ annulus with horns extending from the under

side outward and upward so as to clasp the pileus ~~with~~
like the settings of a jewel, as shown by the young
fructification at the left (Plate 65). The highly
developed double ring is comparable with that of Agaricus
arvensis and A. rodmani.

~~Trichomyces~~

The description was first published in Murrill
(Mycologia 14:139. 1922); consequently, this
citation should be used as the place of original publication
of the type, instead of Farkow's Icones, thus:

~~Mycologia 14:139, 1922, xxxxxx~~

Apud Murrill, Mycologia 14:139. 1922.

STROPHARIA RUGOSOANNULATA Farlow apud Murrill

Type

Legit: Mrs. Page; det. W. G. Farlow, Waban, Massachusetts,
September, 1905

Notes by Hesler

Spores $9.5 - 13 \times (5.5) 6.5-8 (8.5)\mu$, inequi-
lateral in profile, ellipsoid in face view, brown (near
"sayaal brown") in 2% KOH, but with a slight purplish
tint, smooth, truncate, wall double. Pleurocystidia
of the chrysoecystidia type, $23-30 \times 5-7\mu$, scattered and
inconspicuous; cheilocystidia as chrysoecystidia,
23-28 \times 5-8 μ , a few with ^{yellowish} ~~yellowish~~ content (in KOH).
Pileus cuticle of repent, dry hyphae, not viscid
(no ixocutis). Stipe cuticle of repent, dry hyphae.
Caulocystidia not found.

The type collection consists of one basidio-
carp; about one-half of the ~~parts~~ pileus is badly
fragmented. The material is difficult to section,
and not in good condition.

Stropharia rugoso-annulata Farlow

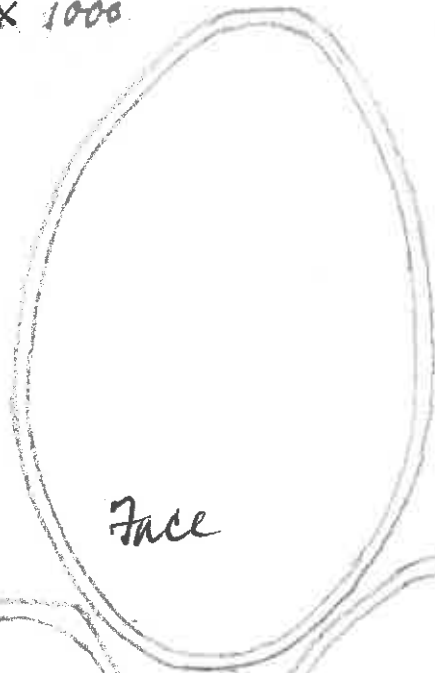
Type



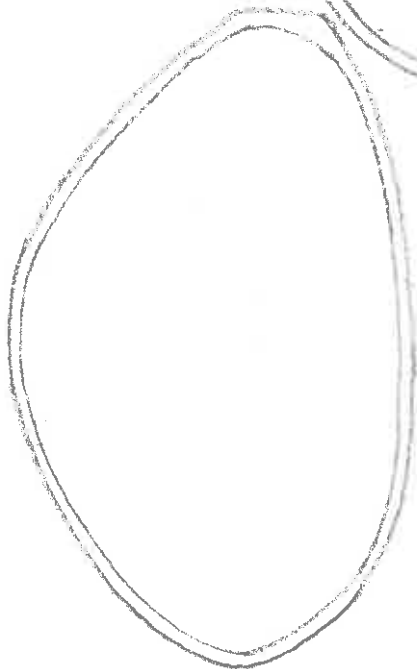
Pl (chryso)
x 1000



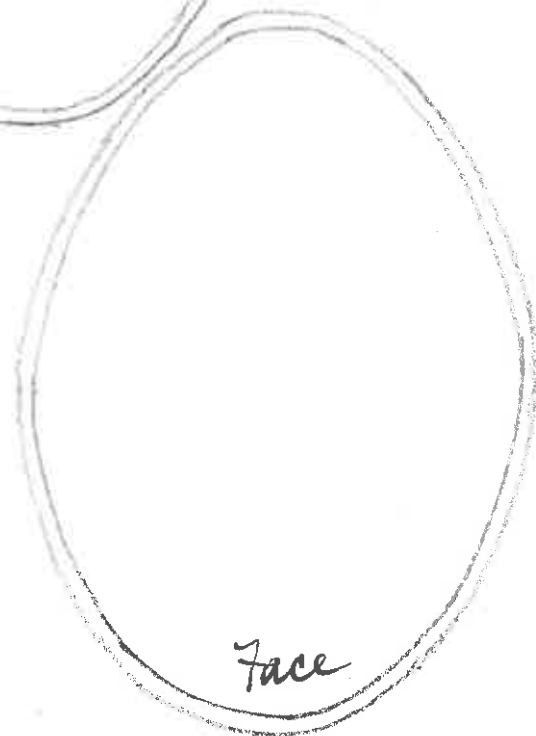
Ch (chryso)
x 1000



Face



Profile



Face

Spores x 8000

Stropharia rugoso-annulata Farlow (ms.) ^{in Murvell}

Mycologia 14: 139. 1922

Stropharia ferris Bres. in G. Ferris Riv. di Scienza
Naturale "Natura" 19: 17. 1928. [According to Singer]

Pileus 5-15 cm* broad, hemispheric to convex,
chestnut-colored, paler on drying, glabrous, or
at times slightly & minutely fibrillose. Context
firm, thin, whitish; taste mild.

Famellae adnate, whitish, ~~then~~ ^{in age} dark brown or
almost black, ~~in age~~ crowded, wider than the
thickness of the pileus.

Stipe 5-8 cm long, 10-12 mm thick,
^{equal or slightly tapering upward,}
whitish, silky-fibrillose, at times with mycelium
at the base, spongy, sometimes hollow with age.
Annulus whitish, appearing double, the lower
membrane radially splitting on the margin.

Spores 10-12 x 6-8 μ , ellipsoid, dark-brown.

On rich, cultivated soil. Type from Newton,
Mass.

The descriptive notes were supplied to Murvell by
Dr. House.

* In Michigan Botanist, 1964, p. 86, Bartelli + Smith ^{state that}
this is our largest Stropharia, at times the pilei reach ^{in diameter} 15 cm
in breadth. It is close to S. hornemannii, but in (over)

rugoso-annulata the annulus is double, the lower part splits radially into segments.

~~*Stropharia eximia* Benedix, *Zeit.*~~

~~Plze 26:107 1961~~

Stropharia imaiana Benedix, *nom. nom.*

Zeitschr. Pilze ~~26~~ 26:104. 1961.

Offered as a new name for *S. rugoso-annulata* Farlow *sensu* Imai, 1938.

Latin diag. given.

Stropharia rugoso-annulata Farlow
f. lutea Hongo, *Jour. Japanese Bot.* 27:
371. 1952 (from Japan).

S. rugoso-annulata reported from
England by A.A. Pearson, *New records and
observations. II.* *Trans. Brit. Myc. Soc.* 29:
201-2. 1946

Stropharia rugoso-annulata Farlow in Merrill.

Mycologia 14:139. 1922

[Full descr. by Stuntz & Isaacs, ^{Northwestern Fungi - I,} Mycologia 54:294-296.
fig. 45. 1962, as given below.]

Pileus 4-13 cm diam. convex to obtusely campanulate, expanding + becoming shallowly depressed, margin incurved + ~~ex~~ exceeding the lamellae by 2-3 mm, + often split, brownish purple to reddish vinaceous brown ("vinaceous russet", "russet vinaceous", sometimes "deep livid brown"), fading then straw-color to brownish ("cinnamon buff", "clay color", "tawny olive", "sage brown"). Context white or pallid, unchanging; odor and taste oily-farinaceous and fungoid, not disagreeable.

Lamellae adnexed to adnate, rounded-depressed at stipe, seeding, white soon pale neutral gray to "pale purplish gray", finally "purplish gray", "deep slaty brown", edges white.

Stipe 8-10 cm long, 10-20 mm thick white, fading "baryta yellow" to "straw yellow" in age, especially where banded, sparsely floccose-punctate above annulus, fibrillose to slightly scaly below, sometimes longitudinally striate or rugulose, equal

or tapering slightly upward from the clavate to abruptly bulbous base (up to 30 mm thick). Annulus superior, very thick, floccose-felty, forming a conspicuous collar, upper surface deeply grooved from contact with the lamellae, lower surface splitting radially into several tooth-like points that curve outward and upward.

Spores "light seal brown" to "blackish brown⁽³⁾", $13.5-15 \times 8-9 \mu$, inequilaterally ellipsoid, appearing truncate, wall smooth + double, germ-pore large. OP $42-51 \times 12-21 \mu$ clavate with mucronate apices; ch $(25) 32-41$ $(5) \times (11) 13-20$ $(22) \mu$, abundant, napiform to ~~with long~~ clavate with long pedicels. Plans cuticle of radial hyphae. Clamps abundant. Gill trama (central) interwoven.

On soil, June to Nov., Washington.

Stropharia rugoso-annulata Farlow

Pileus 5-12 cm. broad, hemispherical then convex, finally plane, "cinnamon drab" to "vinaceous drab" or "sayaal brown" with a vinaceous tint, disk at times paler, fibrillose-appressed-rivulose (under lens), polished, subviscid to sub-lubricous when wet, pellicle separable to disk, margin incurved and appendiculate at first, even.

Flesh thick on disk, thin on margin, white; odor and taste like green grass.

Lamellae adnate, seceding, crowded, narrow to broad, "violet gray" to "quaker drab" to "dark gull gray" at maturity (young gills not seen), edge fimbriate to denticulate and paler.

Stipe 9-14 cm. x 8-20 mm., often compressed, tapering upward, apex white and floccose-squarrose, elsewhere dingy brown ^{or yellowish} with scattered fibrils, equal to subbulbous, stuffed.

Annulus ample, superior, usually deciduous.

Spores 10-16 x 6-8 μ , ellipsoidal, smooth, color in mass: "deep purplish gray."

Pleurocystidia and cheilocystidia similar, clavate, 23-30 x 8-12 μ .

On rich soil, in gardens and woods, Knox and Sevier (Park) Counties, Tennessee, April-May.

14216

STROPHARIA RUGOSOANNULATA Farlow apud Murrill

on soil, Chimney Camp Ground, GSMNP, Tenn., leg.
Martha Meyer, det. A. H. Smith, May 24, 1942

Pileus 7 cm broad, convex, "cinnamon drab" to "vinaceous drab", margin brownish, dry, ~~un~~polished, appressed-fibrillose, margin even, pellicle separable to disc. Context white, tinted yellowish, firm, medium thick; odor and taste mild.

Lamellae adnate, seceding, "dark gull gray", crowded, broad, edges fimbriate.

Stipe 10 cm long 10 mm thick, ~~stuffed~~ white above, yellow below, stuffed, subbulbous, firm, Annulus ample, apical.

Spores 10-13 x 6-7 μ , ellipsoid, in deposit: "deep purplish gray". Pl and ch similar, clavate, 25-30x10-12 μ .

Smith holds specimen.

16362

STROPHARIA RUGOSOANNULATA Farlow apud Merrill

on soli, in woods, Knoxville, Tenn., leg.
R. M. Boarts, det. LRH, Apr. 30, 1944

Pileus 5-7 cm broad, convex, appressed-fibrillose (under lens), "Sabal brown" with a vinaceous tint, or "cinnamon drab" to "vinaceous drab", dry, polished, margin even. Context white, firm; odor mild, taste similar to green grass.

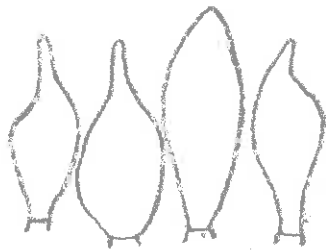
Lamellae adnate, seceding, "quaker drab" to "dark dull gray", broad, crowded, arcuate, edges whitish, fimbriate.

Stipe 9-10 cm long, 8-10 mm thick, apex white, yellowish ~~dunniward~~ downward, tapering upward, slightly subbulbous, shining, stuffed. Annulus superior, ample.

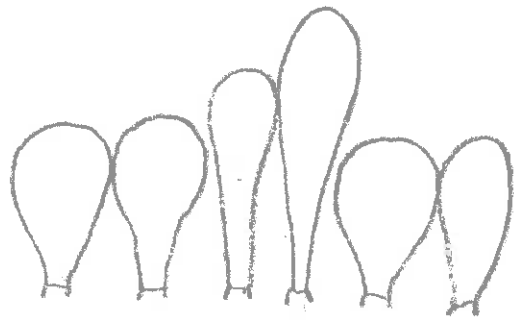
Spores 9.5 - 12(15) x 6-8(9) μ , slightly inequilateral in profile, ellipsoid to slightly subvoid in face view, smooth, truncate, brown with a purplish tint in KOH, "deep purplish gray" in deposits. Pl of the chrysocystidia type, 25-28 x 10-12, often rostrate; ch 20-30(38) x 8-15 μ , napiform to subpyriform or subclavate. Pileus cuticle of repent, dry hyphae, often bearing abundant aerial hyphae (trichodermium). Stipe cuticle of dry, repent hyphae. No caulo found.

Stropharia rugosoannulata Farlow apud Murr.

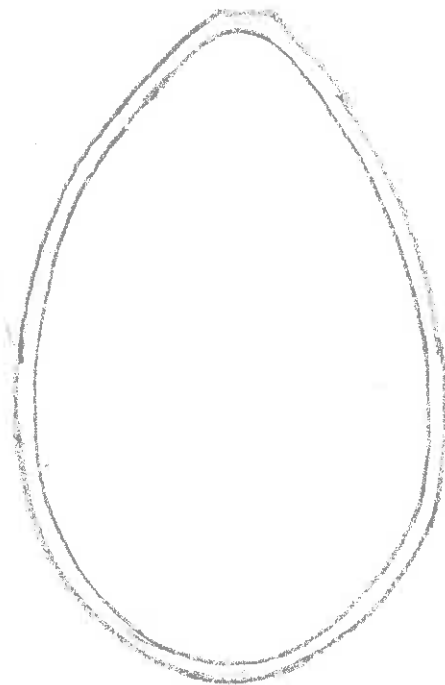
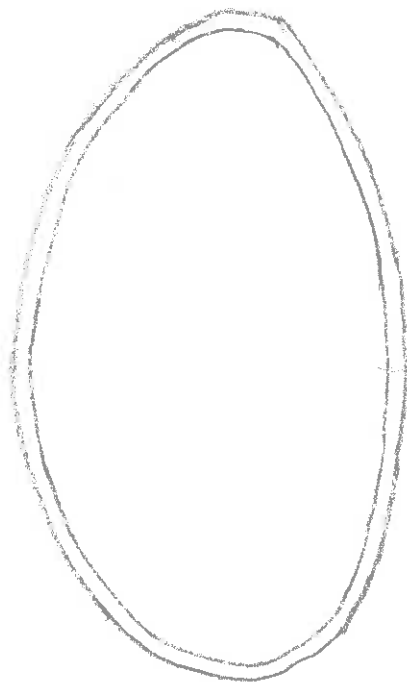
16362



gl (chryso) x 1000



ch x 1000



19632

STROPHARIA RUGOSOANNULATA Farlow apud Murr.

on low rich soil, Woodson Drive, Knoxville, legdet LKH,
May 11, 1950

Pileus 5-12 cm broad, hemispherical then convex, finally plane, "cinnamon drab" to "vinaceous drab", or "sageal brown" with a vinaceous tint, disc at times paler, fibrillose-appressed-rivulose (under lens), polished, moist to lubricous, cuticle separable to disc, margin ~~even~~, appendiculate at first, even. Context thick on disc, thin on margin, white; odor and taste like green grass.

Lamellae adnate, seceding, "violet gray" to "dark gull gray" (young gills not seen), edges fimbriate to denticulate, paler than elsewhere.

Stipe 9-14 cm long, 8-20mm thick, white above, dingy brown below, apex floccose-aquarrose, lower portion with scattered fibrillose equal or subbulbous, often compressed, apex tapering upward, ~~elsewhere equal or subbulbous~~, stuffed. Annulus ample, superior, usually more or less deciduous.

Spores 9.5 - 12 x 6.5-7.5 μ , slightly inequilateral in profile, ellipsoid in frontal view, smooth, truncate, brown with a purplish tint in KOH, in deposits "deep purplish gray". Pl of the chrysocystidia type, \times 23-32 x 8-12 μ , scattered, not abundant, rather inconspicuous; ch subclavate to vesiculose. Pileus cuticle dry. Stipe cuticle dry. Caulo not found.



19632 - *Stropharia rugoso-annulata* Farlow

apud Merrill

21375

STROPHARIA RUGOSOANNULATA Farlow apud Murr.

on soil, roadside, near Cherokee, N.C., leg-det LRM,
May 21, 1954

Spores 9.5-12 x 6.5-7.5(8) μ , slightly inequilateral
in profile, ellipsoid to subvoid in frontal view, smooth,
truncate, brown with a slight purplish tint in KOH.

Pl of the chryso type, 25-28 x 6-8 μ , scattered, inconspicuous;
ch of two types: (a) ~~sh~~ subclavate ~~xxxxxxxxxxxxxxxx~~, 26-32 x
to subpyriform,

~~xxxxxxxxxxxxxxxx~~
9-12 μ ; (b) chryso type, ~~sh~~ 24-28 x 8-10 μ , scarce.

Gill trama slightly interwoven. Pileus cuticle of repent,
dry hyphae.

on vegetable manure heap, leg-det Hongo, Seta-Châ,
Shiga-Pref., Japan, Dec 12, 1954

Notes by Hesler

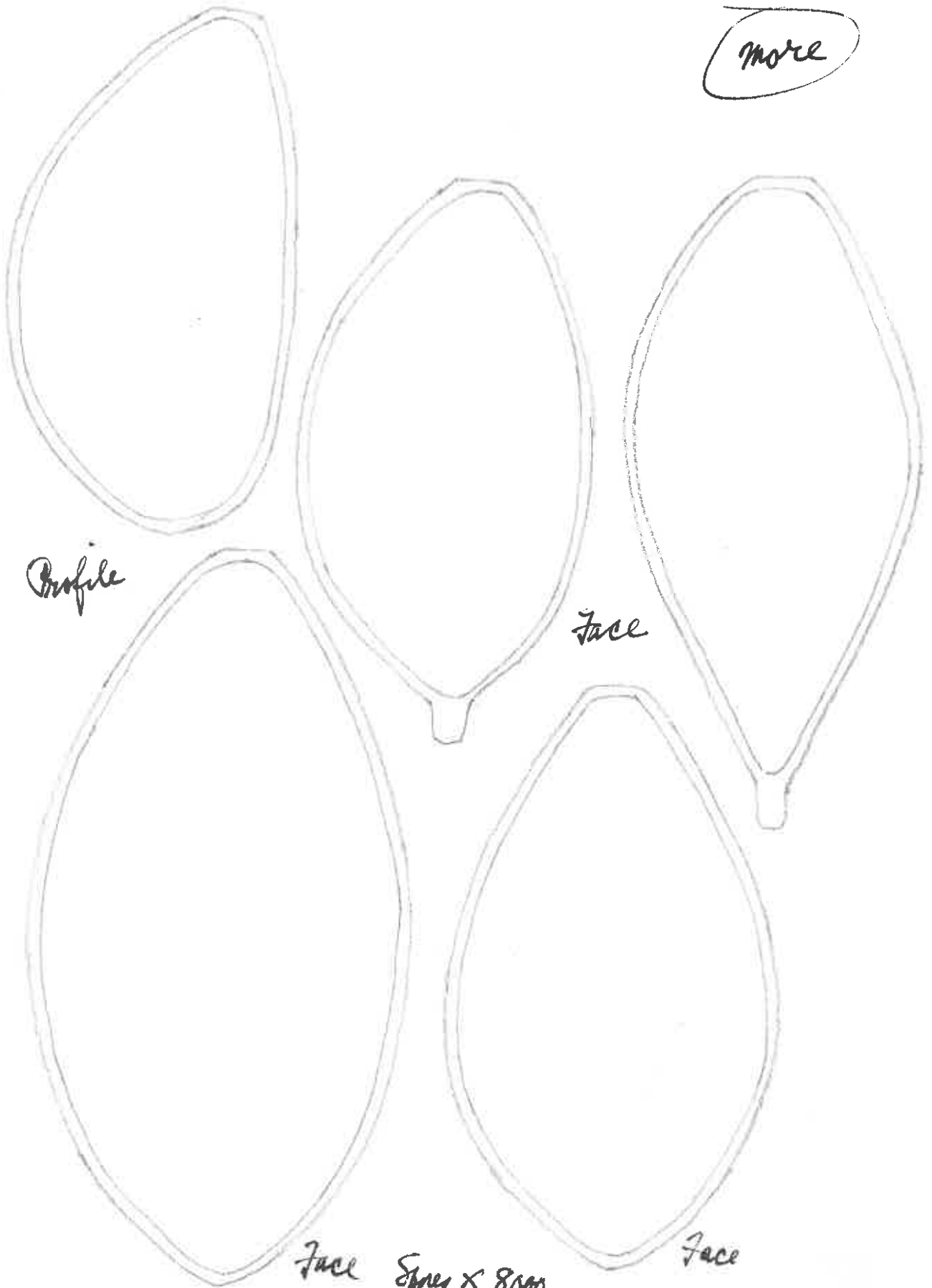
Spores 12-15(17) x (6)7-8.5 μ , slightly inequilateral in profile, ellipsoid to subellipsoid or subpyriform in face view, several with a short basal projection(stalk), truncate, wall smooth, thick, variable in size and shape in a single field, brown with a purplish tint in KOH. Pl of the chryso-type, 20-40 x 8-12 μ , rostrate, sometimes the rostrate projection long and conspicuous, buried but projecting enough to be seen easily; ch of two types: (a) chryso 22-26 x 6-8 μ ; (b) subpyriform to subspathulate or clavate, 20-34 x 9-12 μ , not abundant. Pileus of repent dry hyphae, extending in a radial direction, ~~often~~ bearing a trichodermium of colorless hyphae. Stipe cuticle of repent, dry hyphae. Caulo not found.

This seems to agree well with American material except that on observing the spores under the microscope ^{they are} ~~a much greater~~ ^{variation} in size and shape are plainly seen, ^{larger and a} ~~Several~~ [^] spores show ~~an~~ a basal appendage. ~~on~~
The spores average larger than in American collection I have seen hitherto.

Stropharia rugosoannulata Farlow apud Merrill

25225 (Hongo - 1131)

more

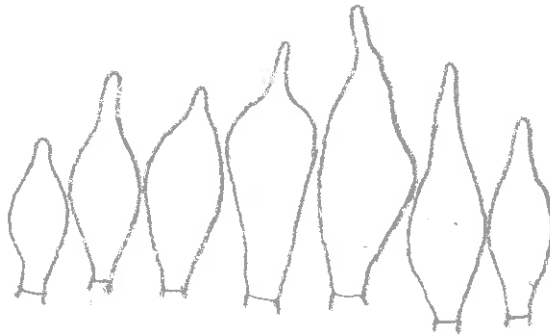


Face Spores x 8000

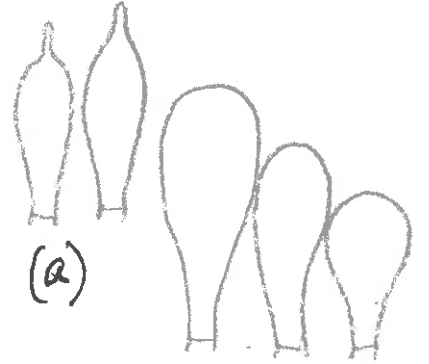
Stropharia rugosoannulata Farlow apud Merrill

25225 (Hongo - 1131)

more



Pl (Chyso) - x 1000



(a)

Ch x 1000⁽⁺⁾

28878

STROPHARIA RUGOSOANNULATA Farlow apud Murr.

leg. Lois Long, New Jersey, det. A.H. Smith, May 10, 1960

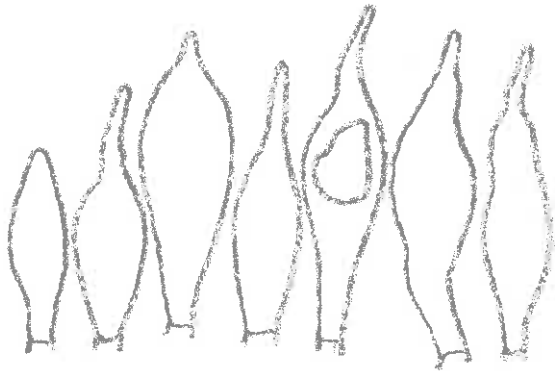
Notes by Hesler

Spores (9) 10-12 x 6-8 μ , slightly inequilateral in profile, ellipsoid to subvoid in face view, smooth, truncate, brownish with a purplish tint in KOH. Pl abundant, of the chryso type, 26-44 x 8-13 μ ; ch of two types: (a) of the chryso type, 25-30 x 8-10 μ , few, (b) ~~akxkxk~~ clavate, 25-37 x 7-8 μ , few. Gill ~~xxxxx~~ trama slightly interwoven. Pileus cuticle of radial hyphae, repent, dry, bearing a trichodermium.

The pleurocystidia of the chrysocystidia type are more abundant in this collection than in any I have seen.

Stropharia rugosoannulata Farlow
apud Murr.

28878



Pl (Chrysa) x 1000
Abundant



a



b

Ch x 1000

leg. John Cage, New Jersey, det. A. H. Smith; no other collection data.

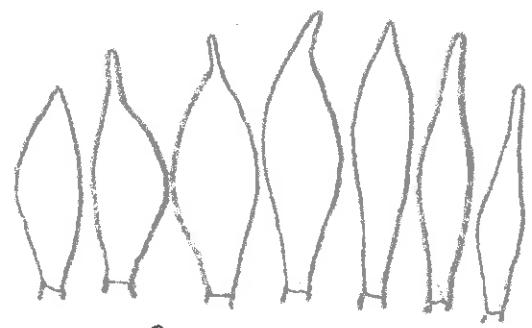
Notes by Hesler

Spores 10-12 x 6-7.5(8) μ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, brownish with a purplish tint in KOH. Pl 25-36 x 6-12 μ , of the chryse-type, buried, scattered; ch of two types: (a) chryso-type, 23-30 x 5-8 μ , only moderately abundant (absent in many sections); (b) broadly clavate to subsaccate, 24-30 x 9-12 μ , few. Gill trama of slightly interwoven hyphae. Pileus cuticle of dry, repent hyphae. Stipe cuticle of dry, repent hyphae. Caulocystidia not found.

Stropharia rugosa Farlow

Stropharia rugosa ~~Farlow~~ *annulata* Farlow apud Murv.

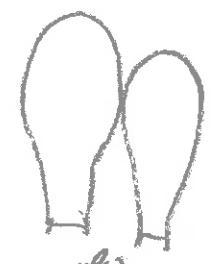
28879



Pl (Chyzo) x 1000

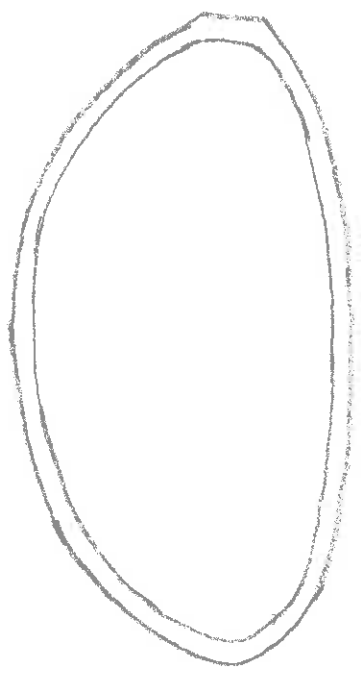


(a)

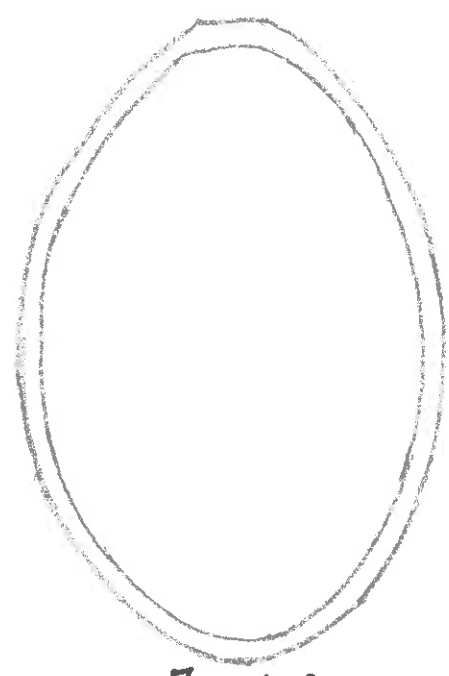


(b)

Ch x 1000



Profile



Frontal

Spores x 8000

8542

STROPHARIA SEMIGLOBATA (Fr.) Quel.

on horse dung, Bear Island, Ontario, leg-det Jackson,
Sept. 10, 1935

Spores 14 - 18 x 8 - 9.5 μ , truncate, smooth. Pl of
the chryso-type, few; ch 43-57 x 4-5 μ , ventricose below,
with a long slender neck, rather abundant.

12692

STROPHARIA SEMIGLOBATA (Fr.) Quel.

on horse dung, Rocky Mt. Nat. Park, ^{Colorado,} July 10, 1940
leg. LRH, det. AHSmith (Smith holds specimen)

Pileus 10-15 mm broad, conic-hemispheric, tawny-orange, glabrous, viscid. Context pallid, thick on disc, thin on margin; odor and taste mild or none.

Lamellae emarginate, pallid then greenish, very broad, close to subdistant, edges denticulate.

Stipe 3.5 - 5 cm long, 2-3 mm thick, pallid brownish, glabrous, hollow, equal. Annulus apical, more or less evanescent.

18007

STROPHARIA SEMIGLOBATA (Fr.) Qué1.

on horse dung, Indian Gap, N.C. (GSMNP), leg S.L. Meyer,
Aug. 30, 1947

Spores (11) 14-20 x 8-9.5 μ , truncate, smooth. Pl, ch,
and pileus cuticle typical of S. semiglobata.

23 25171 STROPHARIA SEMIGLOBATA (Fr.) Quél.
leg-det M. Moser, Famsjo, Sweded, July 16, 1961

Notes by Hesler

Spores 11-18 x 8-9.5 μ , ellipsoid, truncate, ~~smooth~~
smooth, brown, wall rather thick. Pl of the chryso-type,
28-34 x 8-10 μ ; ch 26-42 x 4-6 μ , slightly ventricose below,
with a long slender neck. Pileus cuticle an ixocutis.
Hypodermium hyphoid.

Stropharia semiglobata (Fr.) Quel.

25171



Pl (Chryso)
x 1000



Ch
x 1000

leg Gruber, Det. Smith, Mt. Rainier Nat. Park,
Washington, Aug. 22, 1948

(Notes from Smith: Mushrooms in Nat. Hab.)

Pileus ~~shows~~ 1-4 cm broad, obtuse to hemispheric, broadly convex to nearly plane in age, evenly "antimony yellow", fading to "pinkish buff" ~~or~~ or nearly white, or sometimes "honey yellow", glabrous, glutinous, pellicle separable. Context very pale yellowish, thick on disc, thin on margin; odor and taste not distinctive.

Lamellae adnate with a slightly decurrent tooth, grayish when young, sordid purplish brown in age, edges white fimbriate, close to subdistant, lamellulae present.

Stipe 5-8 cm long, 3-5 mm thick, surface below the annulus either ~~concolorous~~ concolorous with the pileus or whitish, sometimes equal or with a slightly bulbous base, viscid over the lower two-thirds, stuffed becoming hollow. Veil an apical evanescent/^{fibrillose}zone, annulus seldom well-formed .

Notes by Hesler

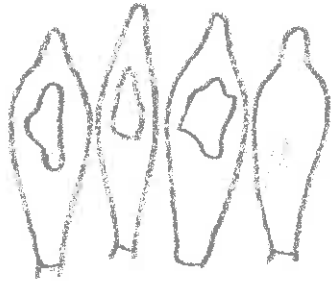
Spores 10-17 x 7.5-9.5 μ , only slightly inequilateral in profile, ellipsoid in face view, dull yellowish brown in KOH, smooth, germ pore small and the apical end often more or less truncate, wall thick. Pleurocystidia of the chryso-type, 30-34 x 7-11 μ , at times rather conspicuous; ch of two types: (a) chryso-type, 34-37 x 7-8 μ , few, (b) slender ventricose with a long very slender neck, rather abundant and conspicuous, 28-43 x 4-7 μ . Pileus cuticle an ixocutis. Hypodermium of brown hyphae. Caulocystidia 43-66(or more) x

3-4 μ , filamentous, abundant and in small tufts. Stipe cuticle
an ixocutis in the lower two-thirds area (as Smith says above).

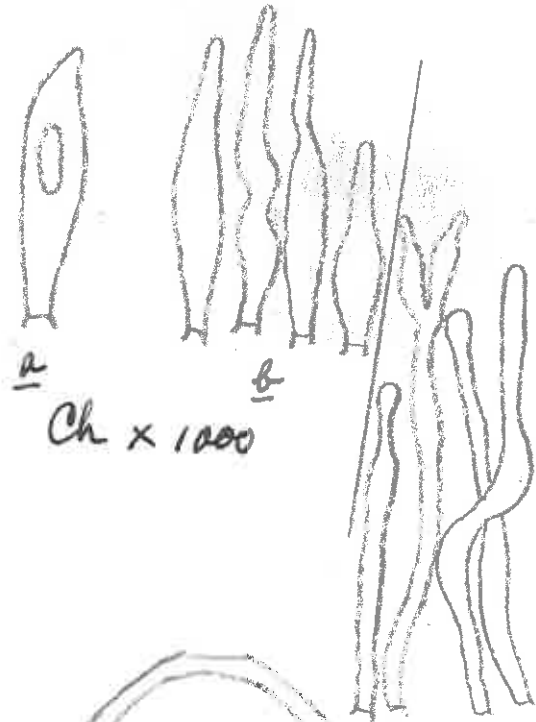
Smith gives the spores slightly larger: 15-19(20)
x 7-9(11) μ ; and reports clamp connections.

Stropharia semiglobata (Fr.) Quel.

28894 (leg. Gruber, det Smith, Washington)

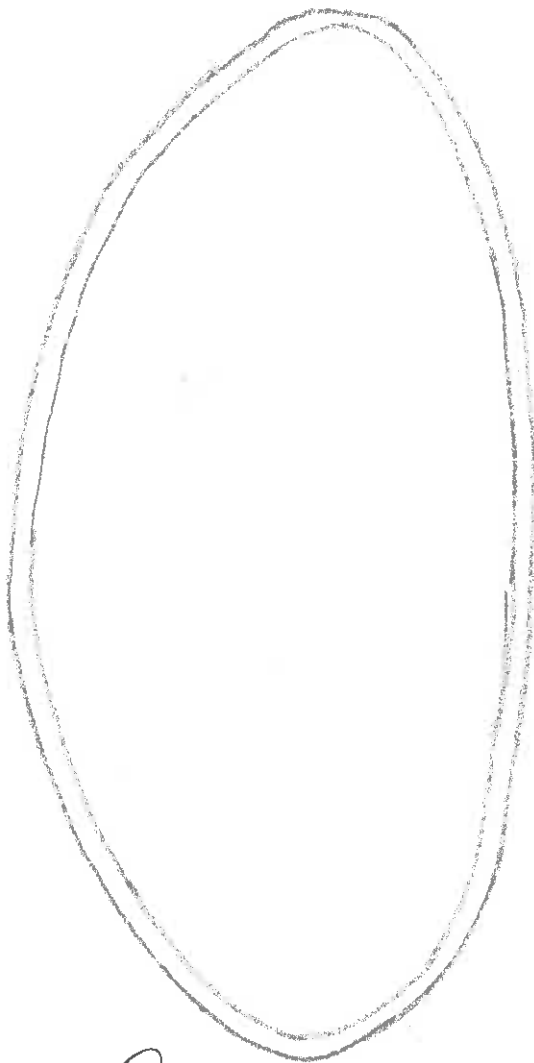


Sp (Chryso) x 1000



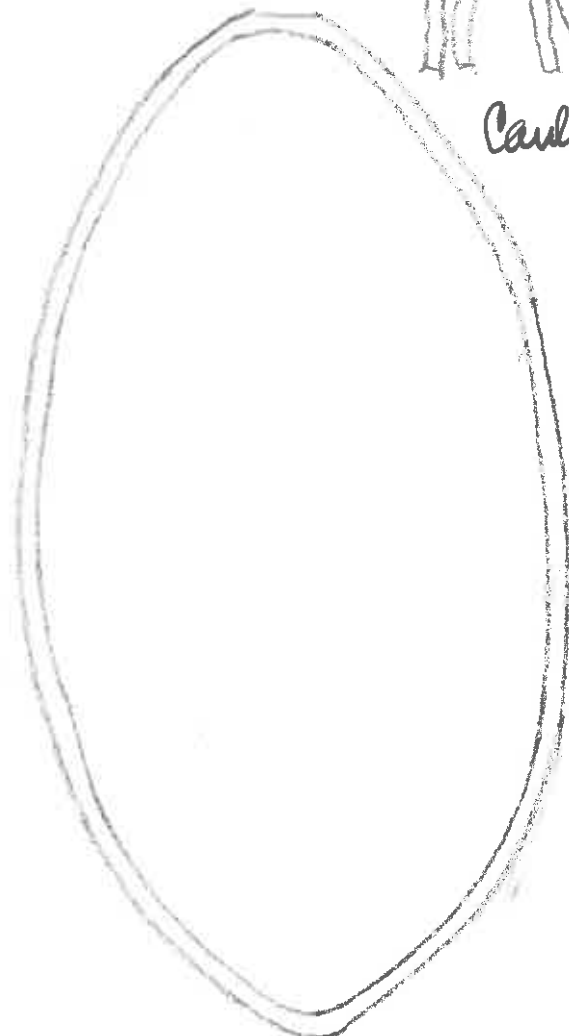
a
Ch x 1000

b
Caulo x 1000



Profile

Spores x 8000



Face

Stropharia semiglobata (Batsch ex Fr.) Snel.

Champ. Jour. Vag., p. 112. 1872

Agaricus semiglobatus Fr., Syst. Myc., p. 237. 1821.

gregarium to subcepitose,
Pileus, 1-4 cm broad, subglobose to
hemispheric, not expanding, light yellow, glabrous, very
viscid when moist, glabrous. Context pallid,
soft.

Lamellae adnate, white or olive-gray, soon
clouded with the ripening spores, very broad.

Stipe 6-9 cm long, 2-4 mm thick,
light-yellow, viscid, cylindric, smooth. ~~Annulus~~
Veil glutinous when moist, leaving an incomplete,
superior ring.

Spores 12-18 x 7-10 μ , ellipsoid, smooth,
purplish brown. Cheilocystidia 30-45 x 3-4 μ .

On manure or manured soil, in fields
or open woods. Throughout temperate N. A. and
Europe, and at high elevations in the tropics.

Saper illustrates a sterile form, which, lacking
spores, has white gills.

Stropharia semiglobosa Murr
Mycologia 4: 301. 1912

Pileus 1.5 cm broad, convex, creamous, center ochraceous, glabrous, somewhat viscid when young, shining. Context thin.

Lamellae adnate, pale grayish to fumous, edges white, plane, distant.

Stipe 10 cm long, 5-8 mm thick, ^{radiate, tapering upward,} white, glabrous, tinted slightly with yellow at the base. Veil ample, white, fixed, persistent, margin fimbriate, colored above with purplish spores.

Spores $8 \times 4 \mu$, oblong-ellipsoid, smooth, subhyaline with a faint yellowish-brown tint (under scope).

Type, among leaves in woods, near Seattle, Washington, Oct. ~~20~~²⁰ - Nov. 1, 1911, W.A. Murrill 435.

Resembling S. semiglobata, but differing in habitat, with much paler gills, and different spore characters.

Smith (Torrey Club Bull. 64: 484, 1937) gives a rather full description + illus. (pl. 11, fig. a). See next page.

Stropharia semigloboides Murr.

[From Smith: Bull. Torr. Club 64: 484]

Stems 2-4.5 cm broad, obtusely conic, becoming convex to ^{or first} "plane", "honey yellow" to "olive", ochre, becoming "reed yellow" to "primrose yellow" in age, glabrous, margin ^{faintly} striatulate. without fibrils or fibrillose patches, glutinous. Context 3-4 mm thick on disc, tapering toward margin, ~~with~~ ~~the~~ dull sordid olive ochre; odor + taste mild or not distinctive.

pale greenish yellow when dried

Famellae adnate, soon receding, at first white, soon "drab", close, moderately broad, equal, edges even.

Stipe 8-11 cm long, 3-4.5 mm, with a long vermiform pseudorhiza which is 4-10 cm x 2-3 mm, equal above, tubular, flesh "citron yellow" to "barium yellow", covered by a gelatinous sheath to near apex, terminating in an evanescent ~~annulus~~ annulus which is floccose above + glutinous below, apex ~~yellow~~ yellow + pruinose, lower portions appearing whitish or pallid from white fibrils beneath the gluten.

(over)

Spores 8-10 x 4-5 μ , ellipsoid, dull purple brown under 'scope, dark purplish brown in mass. ~~On~~ ~~36-40~~ ~~x~~ ~~8-10~~ ~~μ~~ , clavate, scarcely differentiated. Pileus trama with a thick gelatinous pellicle, beneath it a poorly defined cell-region, elsewhere floccose.

On humus, under spruce, Lake Zahnentah, Oregon, Nov. 18, 1935.

See: Plate 11, fig. a.

Apparently has an hypodermium.

In his comments under S. ~~silvatica~~, (U. Mich. Herb. Contr. 5:66), Smith reports that he earlier had overlooked pleurocystidia in S.

semigloboides, that they are present, inconspicuous, + 33-38 x 10-12 μ , & when dried, the pileus of S. silvatica is ~~to~~ pale brown, + that of S. semigloboides is pale greenish yellow.

Q 33-38 x 10-12 μ (see comments below);

Leg. Murrill, Seattle, Washington, in woods, October
20-Nov. 1, 1911. (Specimens from NY Bot. Garden
Herb.)

TYPE Notes by Hesler

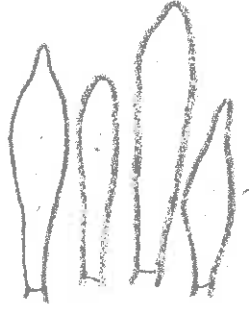
Spores 7.5-8.5 x 4-5(6) μ , slightly inequilateral in profile, ellipsoid in face view, smooth, obscurely truncate (at least in many), wall rather thin, pale yellowish brown in KOH. Pl 23-33 x 5-8 μ , buried and inconspicuous, apices protruding only slightly, insignificant; ~~xxxxxx~~ ch 25-32 x 4-6 μ , slightly variable in shape: clavate to chrysotype very few, scattered, inconspicuous. Gill trama of slender, interwoven hyphae. Pileus cuticle a conspicuous ixocutis.

Hypodermium present, brown, hyphoid, not always very conspicuous. Stipe cuticle of repent dry hyphae.? Caule abundant, 38073 x 5-8 μ , clavate-capitate, often more or less constricted.

We found the spores to be pale yellowish brown in KOH, as did Murrill. Smith (Torrey Club Bull. 64:484) reports the spores of his collection to be a dull purple brown under the microscope.

The type material very meager, and scarcely adequate for critical study.

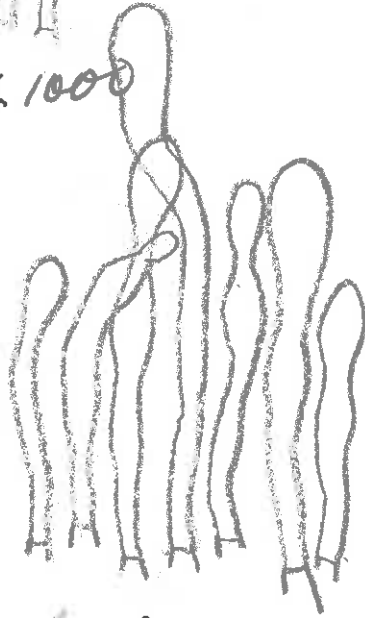
Stropharia semigloboides Murr
Type



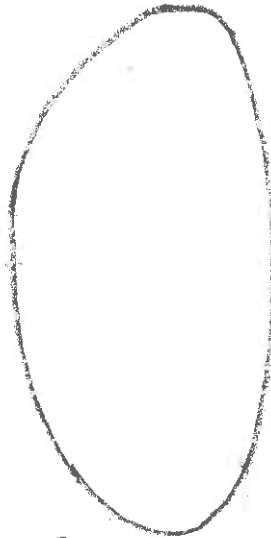
Pl x 1000



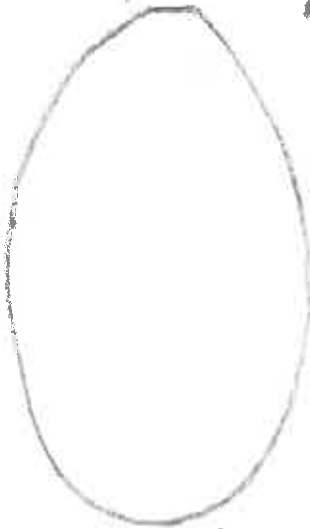
Ch x 1000



Caulo - x 1000



Profile



Face

Spores x 8000

Stropharia siccipes P. Karst.

Medd. Soc. Faun Fl. Fenn. 9: 46. 1882

Pileus 2-3 cm ~~+~~ broad, hemispheric to expanded, clay-white, yellowish on drying, glabrous, viscid,? even or pellucid-strate on the margin.

lamellae adnate-subdecurrent, clay-color to fuscous.

Stipe 4-7 cm long, 2 mm thick, pallid, subfibrillose, flocculose above the annulus, stuffed or hollow. Annulus incomplete, dry, distant, subfloccose or pruinose.

Spores 12-15 x 7-9 μ , ellipsoid, pellucid-brown.

On manure or manured soil, Northeastern U.S. westward to Minnesota; also Europe.

Peck described a variety as S. siccipes var. radicata in his Bulletin 67: 37. 1903. - Karsten considered it a form of Stropharia semiglobata.

(over)

Harper (1914) says it is between semiglobata and
+ stereocaria, differing from latter in its
shorter, dry stipe, and from former in
stuffed, dry, flocculose stipe

17234

SEROPHARIA SICCIPES Karsten var. *siccipes*

on wet soil, in pasture, Wartburg, Tenn., leg.
M. Bearts, det. A.H. Smith Nov. 4, 1945

Pileus 1-2 cm broad, conic then conic-campanulate,
"antimony yellow" to "ochraceous buff", silky (under lens),
viscid, margin incurved, appendiculate (from veil), even.
Context thin, white; odor mild.

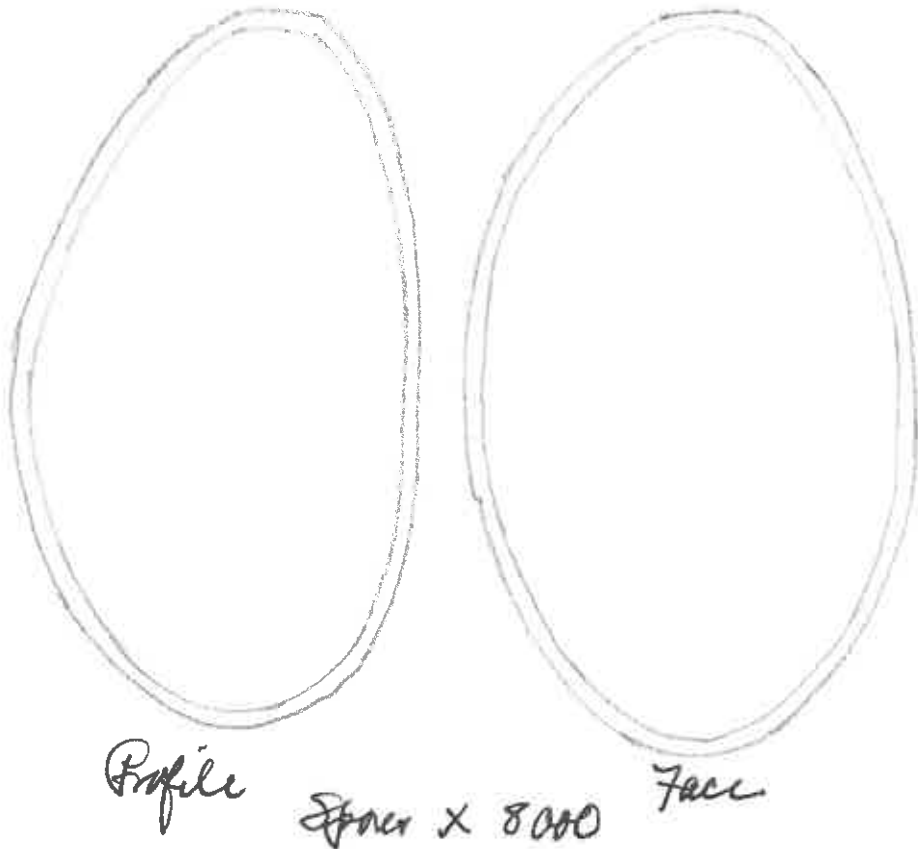
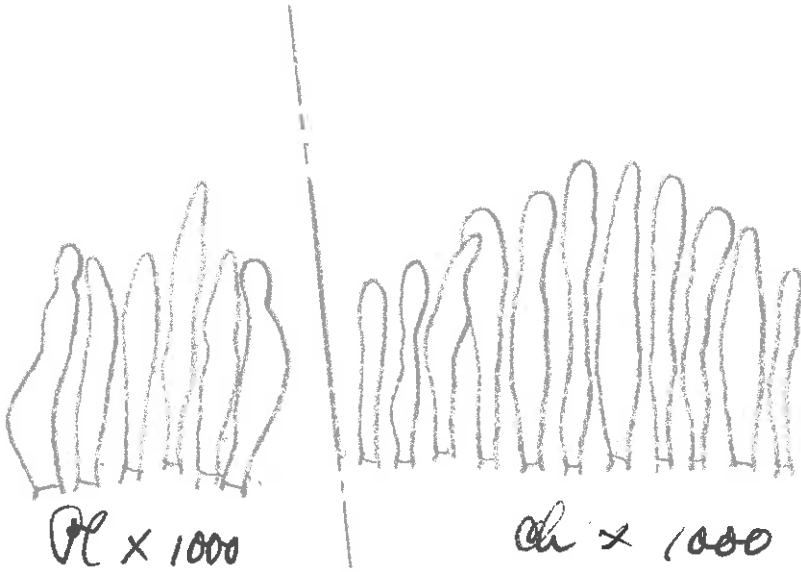
Lamellae adnexed, seceding, at first "pale neutral
gray," ~~then~~ finally "mouse gray", broad, close, edges fimbriate.

Stipe 5-7 cm long, 2-3 mm thick, pallid and mealy
above, dingy and fibrillose below, dry, tubular. Veil white,
copious, evanescent.

Spores 10-13(14) x 6-7.5(8) μ , slightly inequilateral
in profile, ellipsoid in face view, smooth, truncate, brown with
a slight purplish tint in KOH. Pl 28-38 x 4-5 μ , ~~rather~~
~~rather~~ slender, subventricose, apical portion usually tapering
slightly, buried and inconspicuous, scattered, easily overlooked;
slightly variable in shape:
ch 23-40 x ~~rather~~ 3-6 μ , in dense tufts, /subventricose, often
slightly constricted, clavate, cylindric-subcapitate. Gill
trama subparallel. Pileus cuticle of ^{repent,} radially arranged hyphae,
and forming a brownish, distinct zone, dry, > Stipe cuticle
of repent, dry hyphae. Cause not found.

Stropharia sicipes Karsten

17234



STROPHARIA SICCIPES var. RADICATA Pk.

Leg. F. S. Earle, N.Y. Botanical Garden, NY City,
Bronx Park, May 29, 1902

Type: Notes by L. R. Hesler

Spores 10-13.5 x 7-8 μ , slightly inequilateral (at times obscurely so) in profile, ellipsoid in face view, smooth, wall thick(double), truncate, germ-pore often rather conspicuous, brownish with a faint purplish tint in KOH. Pl of the chryso-type, widely scattered, buried, inconspicuous, 22-30 x 6-7 μ ; ch of two types: (a) chryso-type, 24-27 x 5-6 μ , few; (b) flask-shaped, 20-30 x 3-8 μ , in scattered tufts on edges. Gill trama slightly interwoven. Pileus trama interwoven. Pileus cuticle an ixocutis. Hypodermium present, at times obscure. Stipe cuticle of dry, repent hyphae, fibrillose.

Notes by F.S.Earle, in Specimen Box

(Labelled Hypholoma by Earle)

Pileus 2-5 cm broad, subconic ~~km~~ ^{or} hemispheric to subexpanded, bright ochraceous fading to pallid when dry, moist, subviscid when young, hygrophanous, margin appendiculate when young. Context whitish, unchanging; odor and taste mild, adnate,

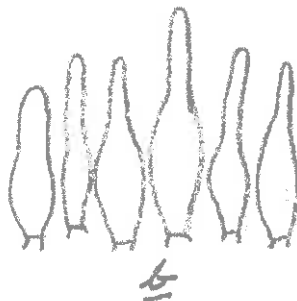
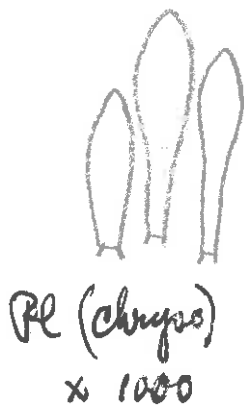
Lamellae ~~xxxxxxxx~~ with decurrent tooth, grayish white then purplish brown, broad, plane, subcrowded.

Stipe 6-10 cm long, 4-6 mm thick, 2/3 of its length below ground(radicata), subequal, floccose-fibrous, subconcolorous, brownish within, tough, tubular, stuffed with a white pith. Veil white, thick, fugaceous, appendiculate (on pileus margin).

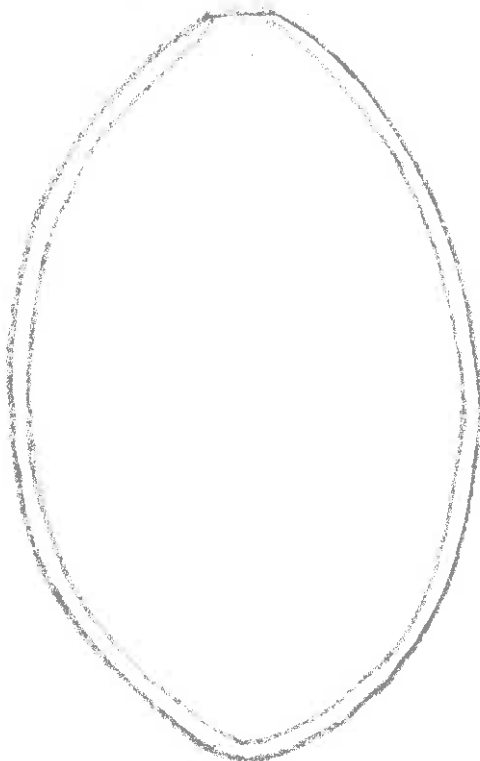
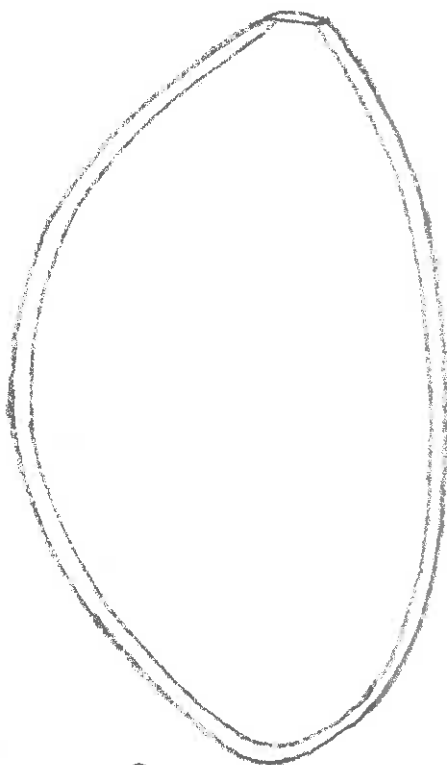
Spores 12-14 x 6-7 μ , elliptic to sublemon-shaped.

Stropharia sicces var. radicata PK.

Type



ch x 1000



Spores x 8000

STROPHARIA SICCIPIES var. RADICATA Pk.

marked "2nd Type"; from Menands, N.Y, leg. Chas. H. Peck,
July, 1902.

2nd. Type: Notes by L.R.Hesler

Material not in condition for complete critical study.
Spores 15-20 x 7.5-10 μ , obscurely inequilateral in profile,
ellipsoid in face view, slightly truncate in some, smooth,
wall thick, brownish with a purplish tint in KOH. Sections
of the material (pileus) ~~xxxxxx~~ proved ~~xxxxxx~~ entirely
unsatisfactory for study.

Spore-size would seem to ~~xxxxxx~~ exclude it from the
material marked "Type", collected at N.Y. Bot. Garden by Earle.

Streptaria siccipes var. radicata GK.
New York State Mus. Bull. ~~#7~~⁶⁷: 37, 1903

"Differs from the species in having a long
radiating base to the stem. This probably depends
on and is due to the fact that it grows from
manure buried in the earth. New York Botanical
Garden. June. F. S. Earle. Menands. June".

[The above is all of the notes; no formal
description.]

STROPHARIA SIENNA Kauffman = Pholiota

Takilma, Josephine County, Oregon, leg. Kauffman &
G.A. Brown, det. Kauffman, Dec. 2, 1925

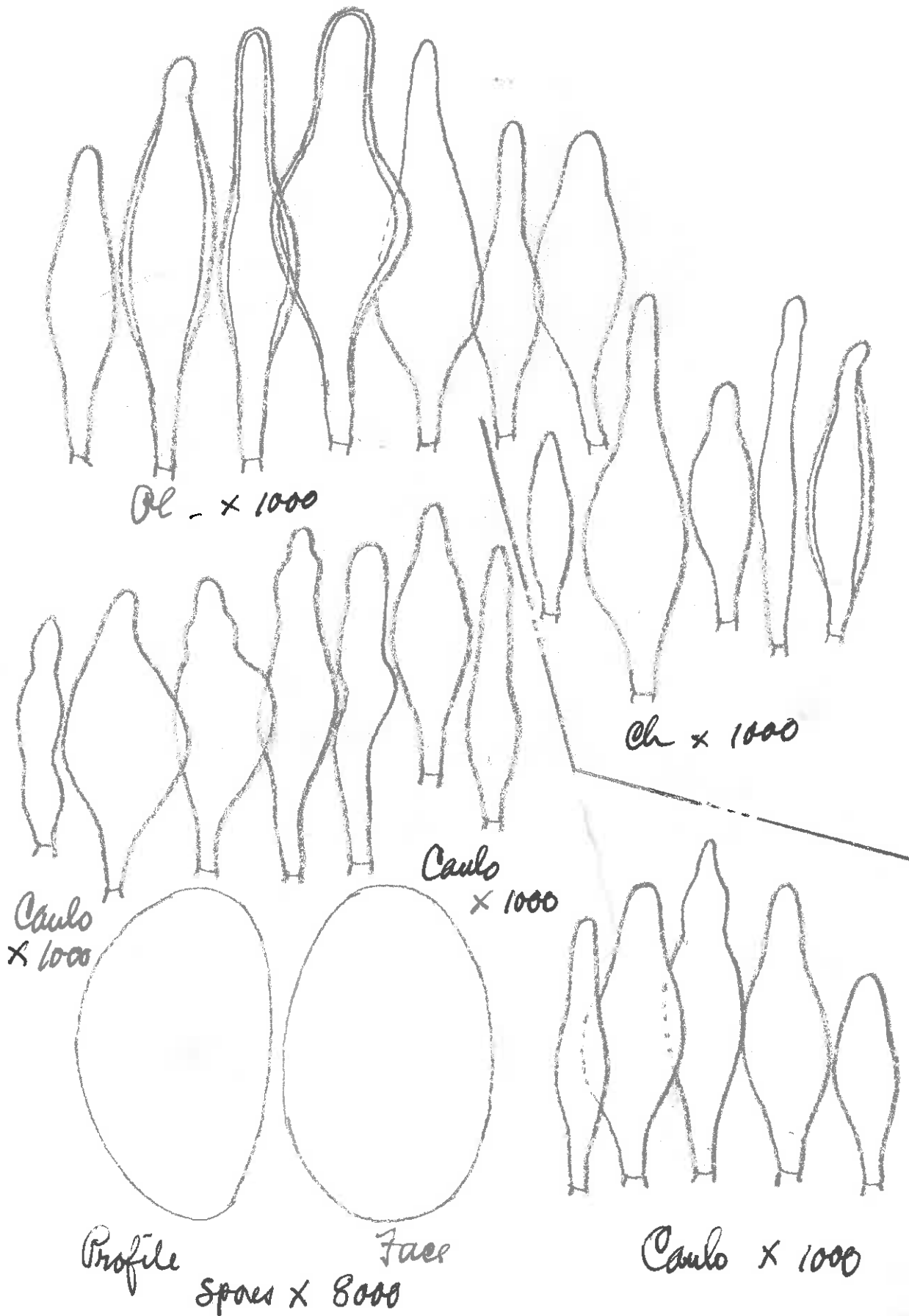
Part of Holotype: Notes by L. R. Hesler

Spores 6-8 x 4-4.5 μ , slightly inequilateral in profile, ellipsoid to ~~slightly~~ subovoid in face view, wall thin, smooth, no germ pore found, pale yellowish brown in KOH.

Pl 55-78 x 13-23 μ , ventricose with a prominent neck and stalky
(flask-shaped), ^{thick (double) walled at mid-portion + sometimes the neck (but not the stalk)} numerous, very conspicuous; ch ~~warty~~ similar,
33-72 x 6-24 μ , not abundant, but prominent. Pileus cuticle an ixocutis. Hypodermium not differentiated. Stipe cuticle of dry, repent hyphae. Caulocystidia 42-62 x 8-23 μ , similar to pl, found in scattered groups along apex of stipe, very conspicuous.

This is Pholiota sienna (Kauff.) Sm. & Hes.
(See: N.A. Species of Pholiota, p. 259, 1968)

Stropharia sienna Kauffman
Part of Holotype



Smith-19358

STROPHARIA SIENNA Kauffman

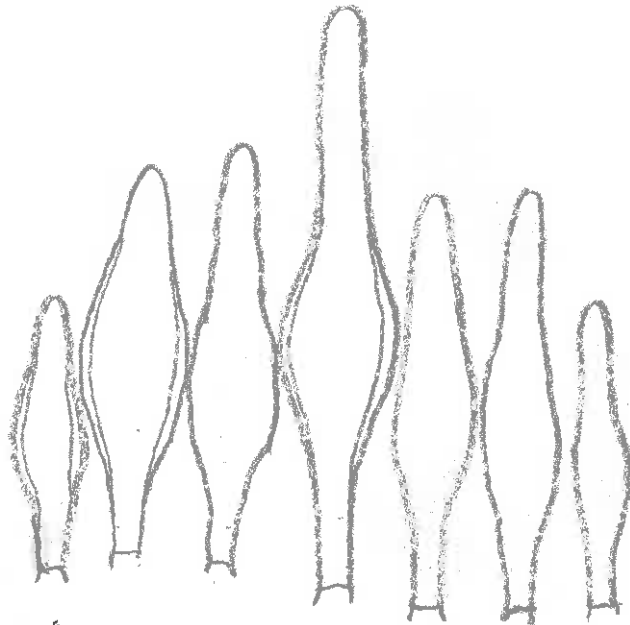
near P. ponderosa pine log, Mud Creek, McCloud, 4000ft.,
leg. Wm. B. Cooke, det. A. H. Smith, April 8, 1947
(I assume this is from Michigan)

Notes by L. R. Hesler

Spores 7-9 x 4.5-5.5 μ , slightly inequilateral in profile,
ellipsoid or some subovoid in face view, wall thin, smooth,
no germ pore found, pale yellowish brown in KOH. Pl 65-82
numerous, *wall thickened especially in the mid-portion.*
x 9-16 μ ,/ventricose, [^]flask-shaped, with a slender stalk and a long
slender neck, occasionally the neck constricted *somewhat*; ch similar
to pl in shape, 34-78 x 7-15 μ . In both pl and ch the wall of the
ventricose(central) portion double(thick). Gill trama subparallel,
subhymenium a conspicuous gelatinous zone(as in Pholiotas).
Pileus trama of loosely interwoven hyphae. Pileus cuticle an
ixocutis. Stipe cuticle of repent, dry hyphae. Caulo-
cystidia not found.

Stropharia sienna Kauff.

Sm - 19358

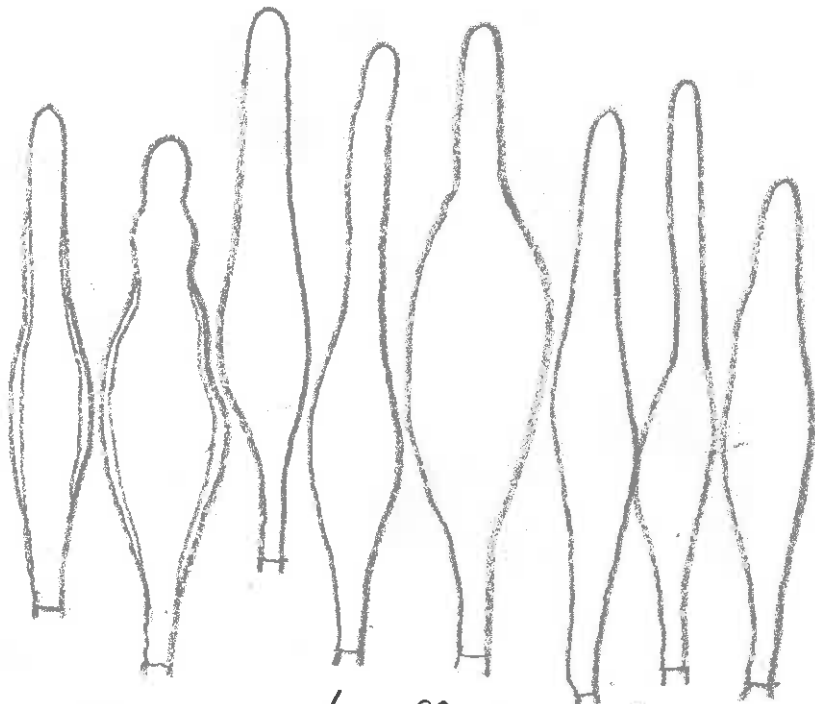


more

Chr - x 1000 (wall double in all)

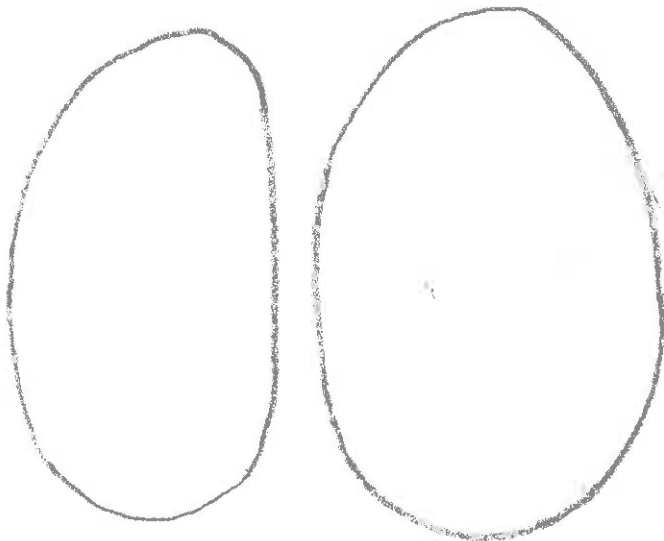
Stropharia sienna Kauff.

Sm - 19358



more

Pl x 1000 (wall double in all individuals)



Stropharia sienna Kauff.

Michigan Acad. Sci., Arts, and Letters 11: 207. #1930

~~Stipe~~ Pileus 4-8 cm broad, campanulate-expanded to almost plane, obtuse or absolutely umbonate, "tawny olive" or paler on margin, disc "burnt sienna", glutinous, margin even, with veil remnants. Context avellaneous, 2-4 mm thick. odor strong, penetrating, Smocye-like, taste or of isidiform, taste amellae adnate with a decurrent tooth, in age becoming slightly decurrent, "clay color" with fuscous tints at maturity, edges concolorous, broad, subventricose, narrowed in front, close to crowded.

Stipe 5-7 cm long, 5-8 mm thick, apex yellowish, peronate by an appressed, fibrillose, rufescent-tinged veil to near apex, ^{not rigid} curved or flexuous, equal or only slightly enlarged ^{at} base, stuffed then hollow. Annulus evanescently fibrillose.

^{fuscous in mass}
Spores, 6-7 (8) x 4-5 μ , ellipsoid to oval. (almost corn-kernal-shaped in one view), pale fuscous purplish under 'scope, smooth. Pl + ch abundant, lanceolate, subventricose below, neck tapering to an obtuse apex, 60-65 x 9-16 μ .

(over)

tardily disintegrable.

Type leg. Kauffman, on soil under oak +
Douglas fir, Takilma, Oregon, Dec 2, 1975.

Belongs to subsect. with S. aeruginosa, but is
of different color, has lanceolate cystidia, a
fibrillose sheath on stipe, + a penetrating odor.

[this is a Proloba]

Stropharia silvatica Smith

Univ. Mich. Herb. Contr. 5: 64, 1941. Plate 22.

Pileus 2-4 cm broad, obtuse, becoming plane or with an obtuse umbo, "amber brown" or "argus brown" in buttons, soon fading to "amber yellow" along margin, in age only, the disc remaining ~~to~~ amber brown, the remainder "chamois", not translucent striate, glabrous but margin with veil fragments, viscid to glutinous. Context concolorous with surface, watery; odor and taste mild.

Lamellae adnate with a tooth + readily seceding, white when young, becoming deep olive buff, finally "Sarcodon's amber" in age, broad, close, lamellulae present, edges even.

Stipe ^{but looking like "marguerite"} "8-16 cm long, 3-5 mm thick, whitish above, ^{yellow,} sordid "honey yellow" ~~over~~ + viscid over lower two-thirds, equal above ~~the~~ a long (4-6 cm) pseudorhiza, solid or tubular, often concentrically zoned from the drying gluten. Annulus apical, evanescent; an inner veil beneath the glutinous veil over.

Spores $10-12.5 \times 5.5-7.5 \mu$, ovoid, greenish yellow (under 'scope) when fresh, ochraceous tawny in revived mounts in KOH, with a germ pore. \wedge ~~abundant~~ abundant, $28-36 \times 10-14 \mu$, obtuse, clavate, smooth. $\text{Pl } 34-42 \times 10-12 \mu$, broadly fusoid ventricose to obtuse, often brownish + metallic. ~~Enter~~ Pileus cuticle of ~~the~~ cells, their walls brownish + pitted, or with annular rings; hypodermis none.

Type (No. 13059), under cedar + hemlock, Kalaloch, Wash., May 2, 1939.

Close to S. semigloboides, but readily distinguished by its spores and brown color; it lacks ~~the~~ ^{an} hypodermis of S. semigloboides.

STROPHARIA SQUAMOSA (Fr.) Quel.

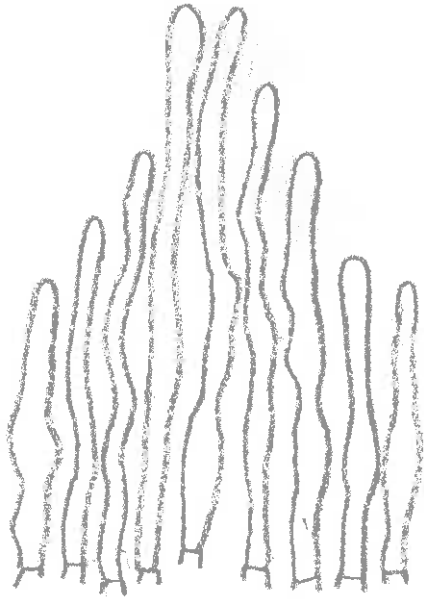
Leg Ragnar Rydberg, ex-Herb. Stockholm, October 20, 1947

Notes by Hesler

Spores 11-15 x 6.5-8 μ , slightly inequilateral in profile, elongate-ellipsoid in face view, smooth, truncate, brown with a tint of purplish in 2% KOH. Pl none; cheilocystidia 38-77 x 2-7 μ , filamentous, often crooked and at times constricted below, in rather large and numerous tufts. Gill trama subparallel hyphae. Pileus trama of radial ~~hyphae~~ very broad hyphae. Pileus cuticle an ixecutis. Hypodermium of hyphae, radially arranged. Stipe cuticle of repent, dry hyphae. Caulocystidia similar to cheilocystidia, but usually longer (up to 150 μ long).

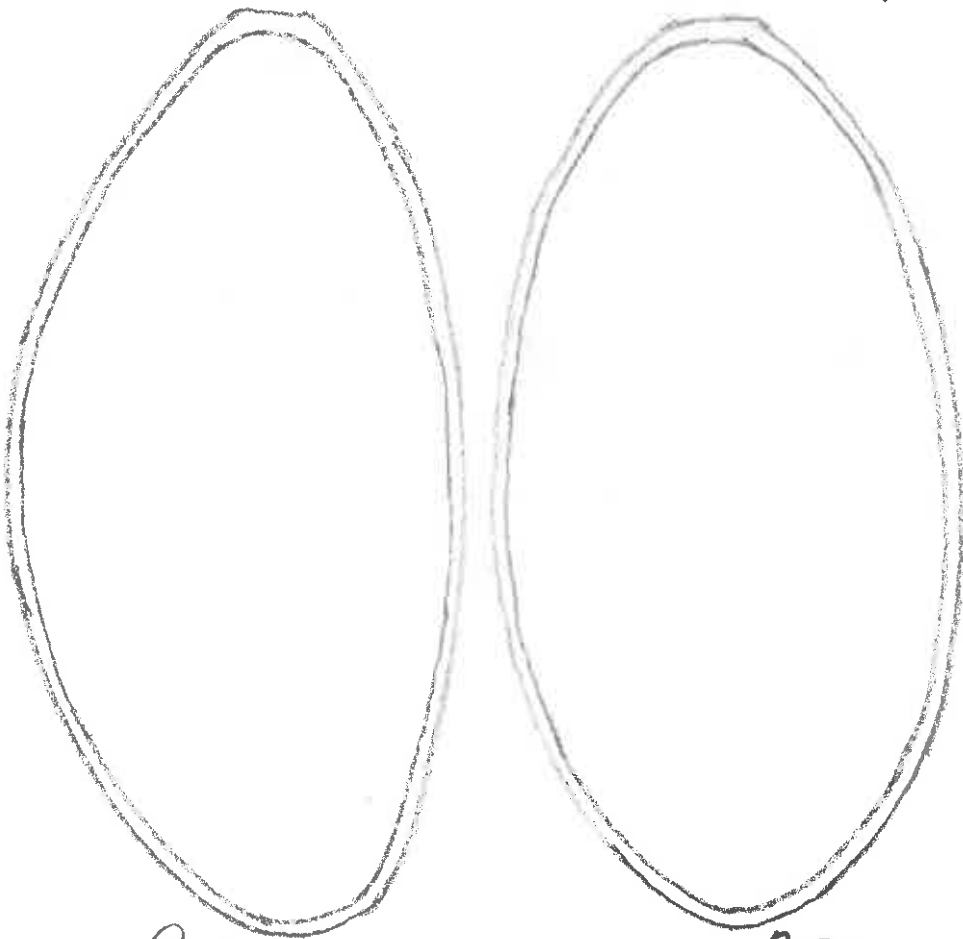
Stropharia squamosa

ex - Herb. Stockholm, leg. Ragnar Rydberg, Oct 20, 1949



Ch x 1000

[Carls similar, often longer -
up to 150 μ]



Profile

Spores x 8000

Face

STROPHARIA SQUAMOSA (Fr.) Quel.

ex-Herb. Lars Remell, Stockholm, Sweden, No. 10493,
Femsjo, October 16, 1911.

Notes by Hesler

Spores 11-16 x 6.5-8 μ , slightly inequilateral
in profile, long-ellipsoid in face view, smooth, germ-pore
present, at times truncate, brown with a purplish tint in
2%KOH. Pl none; ch filamentous, as in Rydberg coll. of
Oct. 20, 1947. Other characters as in Rydberg collection.

on soil, under alder, aspen, et al, Rocky Mt. Nat.
Park, Colorado, leg. LRH, det. A. H. Smith, July 10, 1940

~~XX~~

Pileus 2.5-6(8) cm broad, conic-convex, then convex, finally expanded or campanulate, at first "ochraceous ~~kw~~ tawny", then tawny buff or paler, or at times "chestnut", viscid, with buff to pale tawny scales, glabrous in age, margin occasionally striatulate when wet. Context watery brownish, fading to pale buff; odor slight or pungent, taste mild.

Lamellae adnate to slightly emarginate with a ~~XXXXXX~~ decurrent tooth, when young grayish to bluish gray, then dark grayish ("Quaker drab"), edges slightly fimbriate, close to subdistant, moderately broad.

Stipe 5-10 cm long, (3)5-10mm thick, concolorous with the pileus, or whitish above and brownish below, covered with brownish recurved scales, dry. Annulus superior, membranous, pallid~~ed~~ and striate on upper surface, with brownish fibrillose patches on lower surface.

Spores 12-15 x 6.5 - 8 μ , slightly inequilateral in profile, ellipsoid, distinctly to obscurely truncate, smooth, dark yellowish brown in KOH. Pl not found; ch 27-53 x 2.5-5 μ , filamentous, apices more or less acute, at times ~~just~~ slightly ventricose below, sometimes flexuous. Gill trama slightly interwoven. Pileus trama interwoven. Pileus cuticle a thin ixocutis. Hypodermium hyphoid (Smith ^{same} ~~type~~ of inflated cells). Stipe cuticle of repent, dry hyphae. Caulocystidia not found.

Smith says an orange-red to brick colored variety is also found in North America.

Murrill (Mycologia 14: 126. 1922) gives
name + synonymy, as follows:

Stropharia distans (Pers.) Morgan, Jour.
Myc. 14: 75. 1908.

~~Ag. Agaricus distans Pers., Syn. Fung.,
p. 409. 1801. (non. A. ag.
Newes Mag. Bot. 1: 103. 1794~~

Agaricus squamosus Pers., Syn. Fung.
p. 409. 1801, non A. squamosus
Schaeff. 1794.

Agaricus subcervinus Schum.,
Enum. Pl. Saell. 2: 255. 1803.

* Stropharia squamosa Quel., Champ.
Jura Vog., p. 337. 1872.

* Agaricus (Flammula) squamosus Fr., Syst. Myc.
1: 252. 1821.

varieties found listed

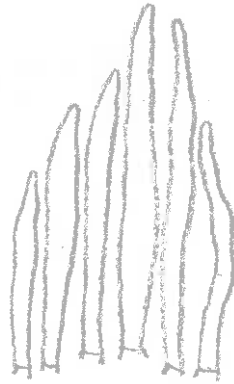
var. aurantiaca Cke. (see Rea)

var. fricana (Kalchbr.) Cke. (see Rea)

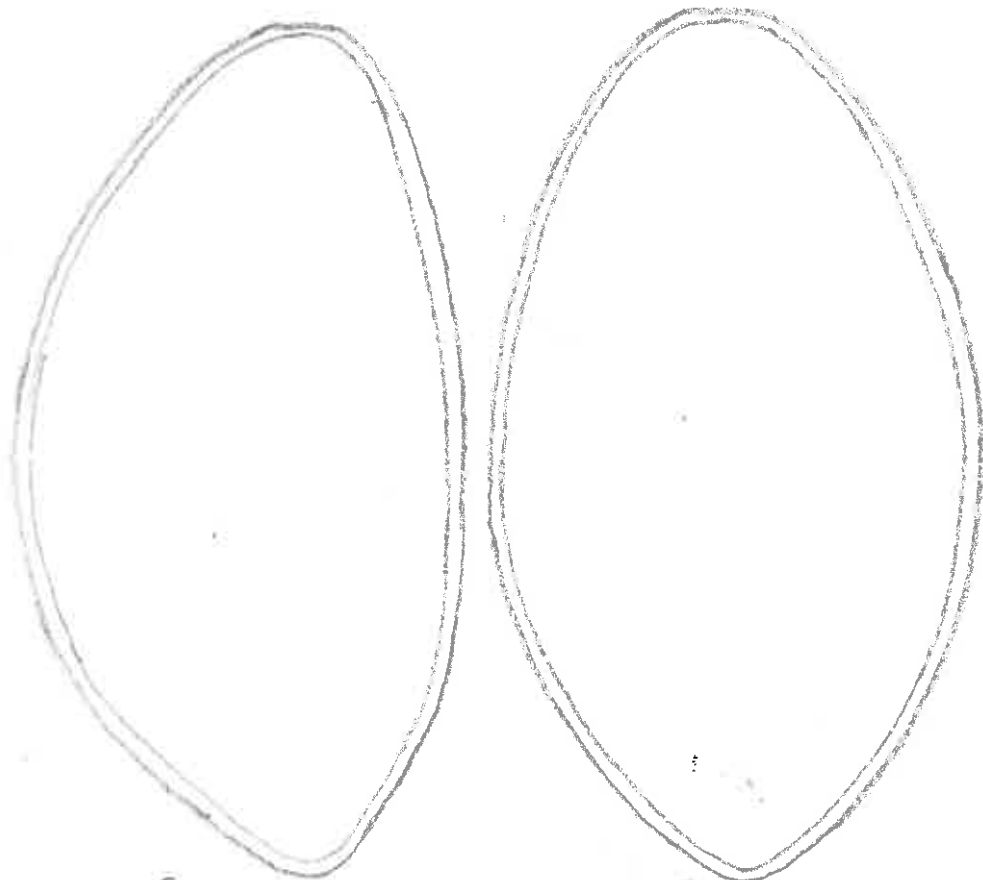
var. subalpina Kauff.

Stropharia squamosa (Fr.) Quel.

12690



Ch x 1000



Profile

Spores x 8000

Face

leg-det: C. Bas, Apeldoorn, Gelderland, The Netherlands,
on fallen branches and leaves of Fagus, Oct 8 '60.

Notes by Bas

Pileus 2-7 cm broad, hygrophanous, when wet dingy greenish yellow-brown with a dingy ochraceous brown center and not striate (wet), when dry pale yellowish with rusty ochraceous center, uniformly pale yellowish in older specimens, with scattered isabella scales, glutinous, often with dark concentric zone when drying. Context white to pale brownish, becoming reddish brown in the stipe. Odor weak, slightly metallic, taste bitter.

Lamellae ~~very~~ pale yellowish brown with a yellowish tinge when young, purplish grey with dingy greenish tinge near edge and near cap margin, with yellowish white granular edge.

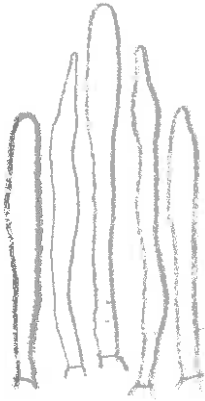
Stipe 6-16 cm long, ~~3~~ 3-6 mm thick, yellowish greenish near apex and pale brownish near base when young, becoming darker brown from the base upwards and then becoming more clearly pale scaly to scaly-zonate, with a narrow patent ring which is grooved on upper surface

Notes by Hesler

Spores 10-16 x 7-9.5 μ , truncate, ellipsoid, smooth/
Pl not seen; ch 34-46 x 3-4 μ , filamentous, apices slightly acute or slightly rounded, appearing agglutinated. Pileus cuticle an ixocutis. Hypodermium hyphoid.

Stropharia squamosa (Fr.) Quel. var. *squamosa*

23864



Ch x 1000

28898

Stropharia squamosa (Fr.) Quel. var. *squamosa*

Mt. Rainier Nat. Park, Wash., leg-det A. H. Smith Sept 20, 1952

Spores 11-13 x 7-8.5 μ , truncate, smooth, ellipsoid.
Pl none seen; ch 37-58 x 2.5-5 μ , filamentous, appearing
agglutinated. Pileus cuticle a thin ixocutis. Hypodermium
hyphoid. Caulocystidia in tufts, similar to cheilocystidia
but usually much longer (up to 160 μ).

Stropharia squamosa (Fr.) Quel. var. *squamosa*

18898



Ch x 1000

37006

STROPHARIA SQUAMOSA (Fr.) Quel. var *SQUAMOSA*

leg-det M. Moser (Austria), Natioan Park, Bialowieza, Poland,
Sept. 5, 1966

Spores 12-15 x 6.5-7.5(8) μ , truncate, ellipsoid, brown
in KOH. Pl not found; ch 33-52 x 2.5 - 5|, filamentous,
abundant, and appearing agglutinated. Other characters as
usual.

Stropharia squamosa Fr.

Discussion + descr. in Mich Acad. Sci. 5: 146-147.
1925. With plate 13.

Spores silky, scaly, "ochraceous olive", umbos "chestnut",
dries to yellow ochre. Spores 12-14 x 6-7.5 μ ,
Ql none; ch 50-60 x 3-4(5) μ . Annulus
distant, coronillate above.

On humus, or very rotten wood in conifer forest,
Mt. Hood, type.

Also, Harper (1914:1020) discusses the squamosa-group,
including var. strawta + var. aurantiaca.

Q 11. M56

Stropharia squamosa var. subalpina Karff.
Michigan Acad. Sci., Arts, & Letters, Papers 1: 149. 1923.

Mich. Acad. Sci. Papers 1:148. 1923

Leg. D. V. Baxter, det. C. H. Kauffman, Tolland, Colorado,
 Sept. 11, 1920
 Sept.

Notes on Holotype by Heslér

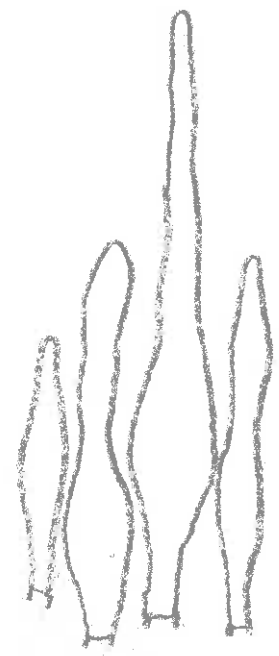
Spores 11-13 x 7-8 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, wall thick(double), brown with a purplish tint in KOH. Pl none; ch ~~flxxx~~ 38-46 x 6-9 μ , flask-shaped, often their outlines rather indistinct, often accompanied by aerial hyphae, possibly with slight gelatinization. Gill trama of subparallel hyphae. Pileus cuticle ^a ~~an~~ ~~in~~ ~~cutis~~, rather thin, ^{isocutis.} rather thick, ^{of} Hypodermium ~~of~~ brownish, circumferential hyphae, distinct. ~~xxxxxxxxxxxxxxxx~~ Stipe cuticle of dry, repent hyphae. the apical region with tufts of a mixture of hyphae, and caulocystidia somewhat similar in shape to the cheilocystidia.

Stropharia squamosa var. *subalpina* Kauff.

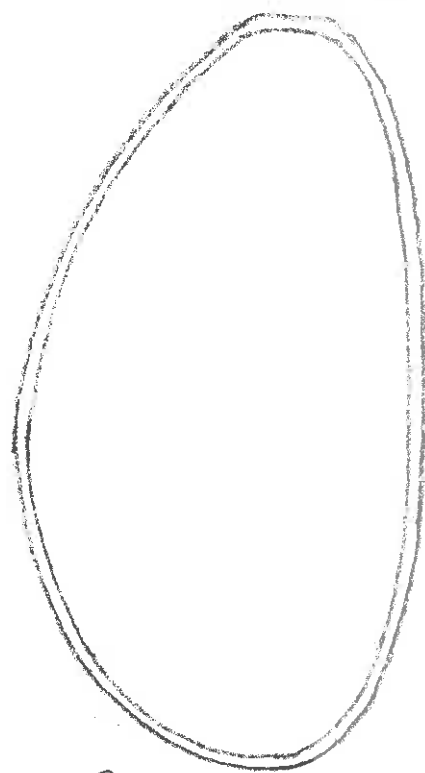
Part of Holotype



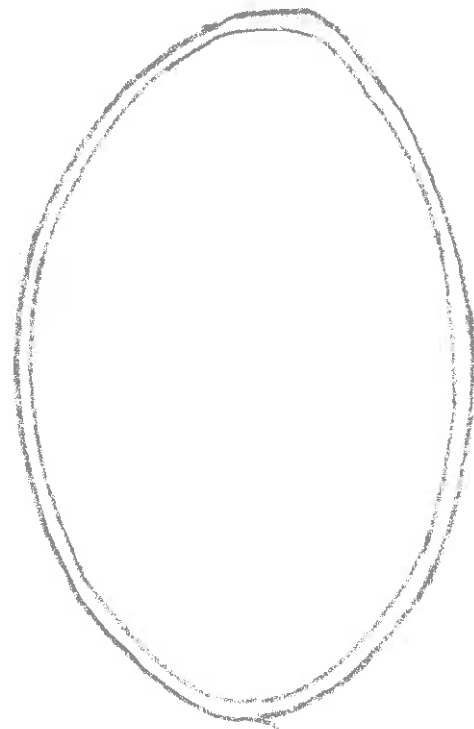
Ch x 1000



Caulo x 1000



Profile



Face

Spore x 8000

Trocharia stereoraria Fr.

[Notes from descr. + discussion by Harper (1914)]

Pileus whitish or yellowish. Lamellae adnate, broad, white then purple black. Stipes equal or somewhat bulbous, white or cream. Annulus slight, translucent, near middle.

Distinguished from semiglobata by more expanded pileus, larger size, + larger spores ($16 \times 10 \mu$). But, Harper found that these distinctions do not always hold.

STROPHARIA STERCORARIA

Leg. Miss V. White, Bar Harbor, Maine, 1901.

Apparently identified by Murrill. ex-Herb. NY Bot. Garden.

Notes by Hesler

Spores 13-19 x 8-10.5 μ . Other spore character usual. The collection(material) is reduced to powder, and unfit for further study. It is probably S. stercoraria.

Underwood - 13

STROPHARIA STERCORARIA

ON dung, near Greencastle, Indiana, Oct. 1891
Material ex-herb. NY Bot. Garden.

Notes by Hesler

Spores 13-17 x 8.5-11 μ , otherwise as usual.

Other essential characters usual.

STROPHARIA STERCOREA (Schum. ex) Quel.

No. 191: Cryptogamae ~~Ferneticium~~ Formationum Coloraddensium
F.E. and E.S. Clements. Minnehaha, Colo. Sept. 2, 1905
(Material from NY Bot. Garden Herb.)

Notes by Hesler

Spores 14-20 x 9-11 μ , otherwise usual. Material does
section satisfactorily. It is probably correctly identified.

No. 40

STROPHARIA STERCORARIA (Schum. ex) Quel.

ex-Dudley Herb., leg. S. Nohara, det. Peck, Feb. 18, 1907
(Material ex-Herb. NY Bot. Garden)

Notes by Hesler

Spores 11-15 x 7.5-9 μ , otherwise as usual. Material, for some reason, does not section well. The pileus cuticle ~~XXXXXX~~ achieve is a distinct ixocutis, but I was unable to ~~XXXXXX~~/sections which showed the gill cystidia.

STROPHARIA STERCORARIA

Leg. Bresadola, ex-Herb. NY Bot. Garden, May. 1905 (Labelled
S. adnata by Murrill)

Notes by Hesler

Spores 12-20 x 8.5-11 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, with a germ-pore and occasionally more or less truncate, brownish in KOH. Basidia somewhat clavate, 2-spored (no 4-spored found). Pl of *chryso-type*. 23-30 x 9-11 μ , widely scattered, inconspicuous (buried); ch 26-35 x 4-8 μ , more or less flask-shaped, scattered and not abundant. Pileus cuticle an ixocutis. Hypodermium brown and usually very distinct. Gill trama of subparallel hyphae. Stipe cuticle of repent, dry hyphae, with scattered tufts of ~~xxx~~ caulocystidia, of somewhat variable shape (clavate, flask-shaped), 28-36 x 5-10 μ .

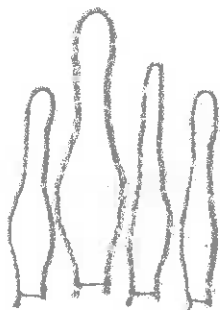
Stropharia stercoraria

(= *S. adnata*?)

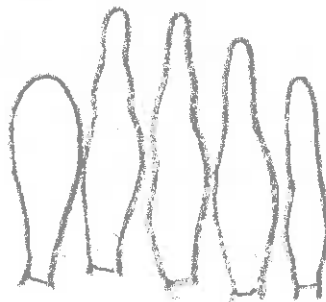
leg. *Boerhaavia* (labeled *S. adnata* by Merrill)



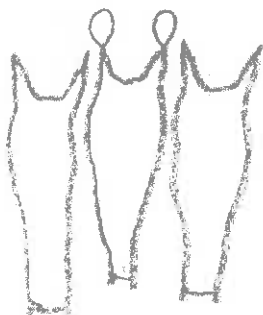
Sp (chryso)
x 1000



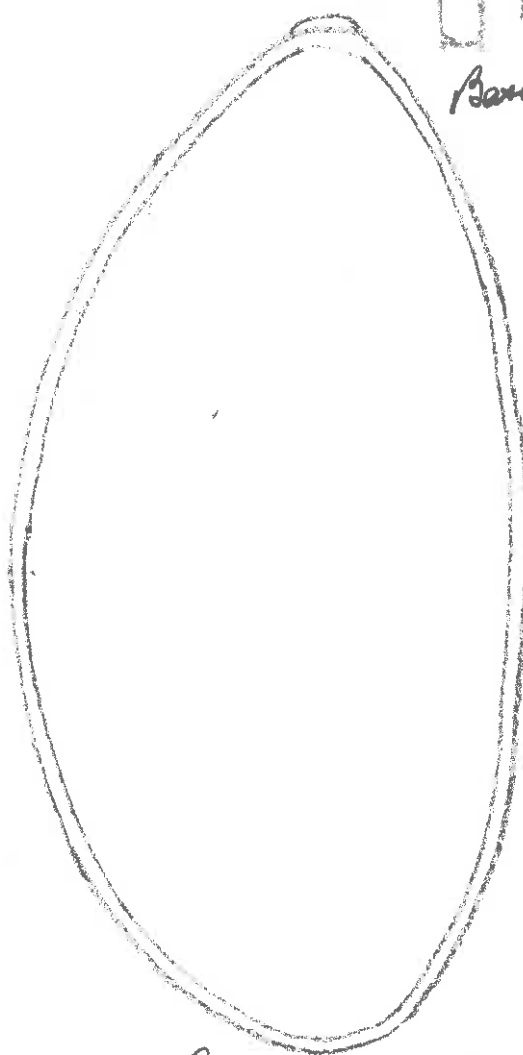
Ch x 1000



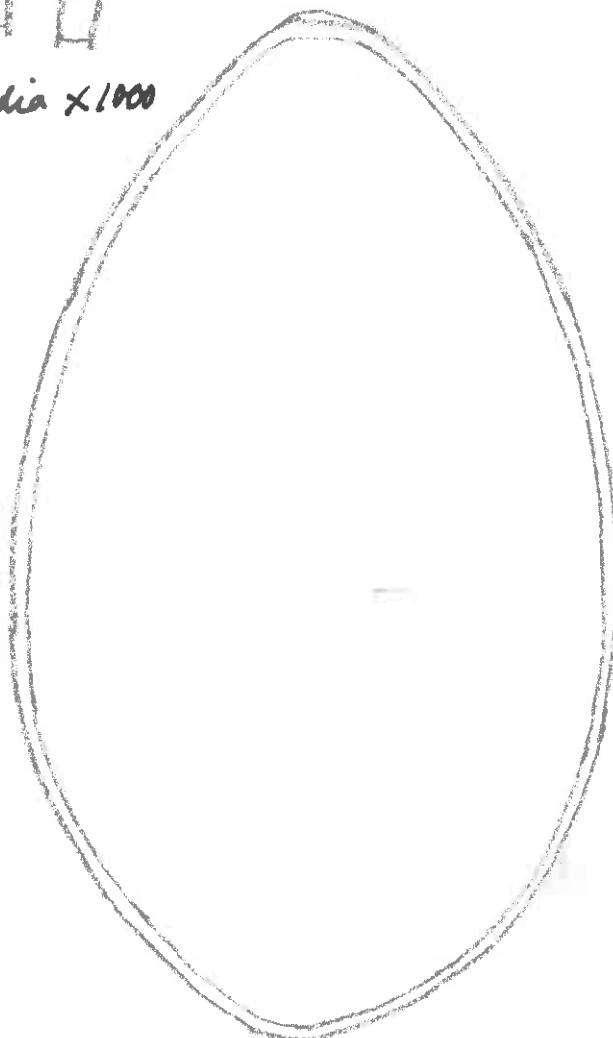
Caals x 1000



Bandia x 1000



Profile



Face

Spam x 8000

STROPHARIA STERCORARIA

Leg. R. A. Harper, Feb 13, 1911, Berkeley, Calif., ex-Herb.
N Y Botanical Garden.

Spores 11-15 x 7.5-9 μ , otherwise usual. Other micro
characters (pileus cuticle, pl & ch as in other material
studied).

12284

look
STROPHARIA STERCORARIA (Bull. ex Fr.) Quel.

on Horse dung, near Indian Gap, GSMNP, N.C.,
leg. LRH, det. A H Smith, July 22, 1939

Pileus 1-1.5 cm diam., hemispheric, slightly unbonate, not expanding, viscid, yellowish ("cream color"), disc slightly darker, glabrous, margin even, surface not micaceous.

Context white, thin, firm.

Lamellae emarginate-uncinate, broad, subdistant, dusted blackish, edges white-fimbriate.

Stipe 4-6 cm long, 2-2.5mm thick, dingy below, white above, ~~wavy~~, glabrous, base slightly bulbous, hollow.

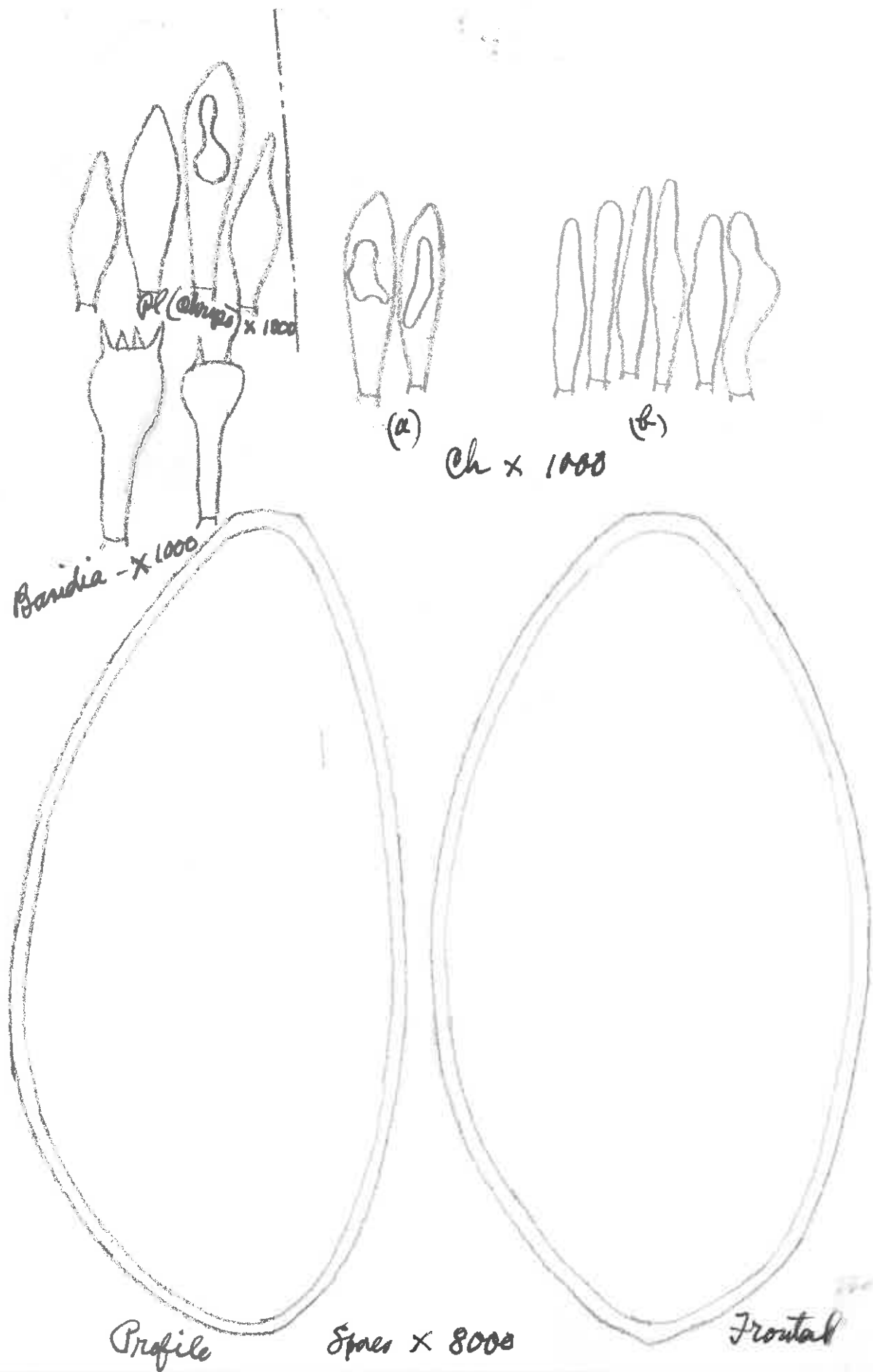
Spores in deposit "deep slaty brown", 17-22 x 9-11 μ , ellipsoid, slightly pointed at both ends, smooth. Pl 48-54 x 12-18(21) μ , clavate to pyriform; ch similar, sometimes smaller.

on dung, leg.-det. A. H. Smith, 7-Devils,
 Idaho, Sept. 3, 1954. In a note, Smith
 suggests this might be called S. semiglobata var.
stercoraria

Notes by Healer

Spores (12) 15-20 x (8) 9-10 μ , slightly inequi-
 lateral in profile, ellipsoid in frontal view, truncate,
 smooth, wall thick, brownish with a purplish tint in KOH.
 of the chryso type,
 Pl 26-40 x 9-11 μ , widely scattered and scarce, buried
 and inconspicuous, some with distinct, amorphous, pallid or
 obscurely yellowish material in the broad portion of the
 chrysecystidium; ch of two types: (a) chryso type, 32-38
 x 8-10 μ , very few, (b) 30-37 x 4-7 μ , cylindric, sub-
 cylindric, or often subventricose, abundant, in tufts.
 Basidia 32-38 x 10-14 μ , 2-4-spored, more or less enlarged-
 capitate. Gill trama of subparallel hyphae. Pileus
 cuticle a distinct ixecutis, hyphae circumferential.
 Hypodermium brownish, hyphoid, hyphae circumferential.
 Stipe cuticle of dry, repent hyphae. Caulo not found.

Stropharia stercoraria (Fr.) Quel.
[Req. Smith who suggests: *S. semiglobata* var. *stercoraria*]



Stropharia sub-badia Murrill

Mycologia 14: 139. 1922

when young covered with an evanescent yellowish tomentum,
Pileus 1-2 cm broad, convex to nearly plane, ^{even +} margin, reddish brown, paler, dry, smooth.

Famellae sinuate, whitish to dark-cinereous, finally purplish brown, edges whitish, not crowded, rather broad.

Stipe 2-3 cm long, 2-3 mm thick, tawny-white, fibrillose-scaly, especially below, equal. Veil slight, white, mostly becoming distributed along the stipe instead of forming a definite annulus.

Spores about $7.5-8.5 \times 5.5 \mu$, ellipsoid, smooth, pale purplish brown (under scope).

Type: Auburn, Alabama, on soil in dry pastures. It may belong to ~~Drosia~~ Dryophila. Reg. F. S. Earle, Oct. 16, 1900.

SEROPHARIA SUBBADIA Murrill

on soil, dry pasture, leg. F. S. Earle, Auburn, Alabama,
October 16, 1900 (ex-Herb. NY Bot. Garden)

Type: Notes by Hesler

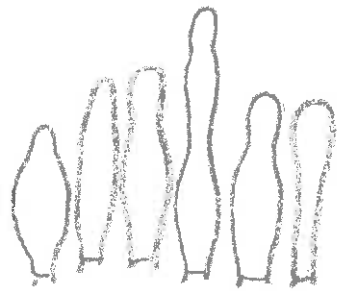
Spores 7.5-8.5 x 4.5-5 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, no germ pore, wall thin brown in KOH. Pl none; ch ~~2-3~~ 20-34 x 5-8 μ , somewhat variable in shape: ventricose, clavate, at times slightly constricted. Gill trama interwoven. Pileus cuticle of dry, repent hyphae. Stipe cuticle of dry, repent hyphae. No caulocystidia found.

NOTE: On one herbarium sheet from NY Bot. Garden Herbarium are mounted two packets, each with good material, one collected on October 14, 1900, the other October 16, 1900. Both are stamped "TYPE". But, in his description, Murrill states that "The types were collected by F.S.Earle on October 16, 1900. Also collected by him on October 14, 1900, near the type locality in a close-cropped pasture of Bermuda grass".

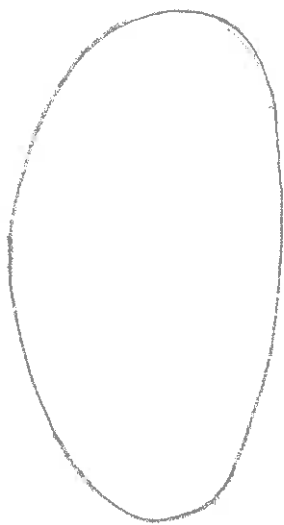
Thus, the collection by Earle on October 16, 1900 is the TYPE.

Stropharia subbadia Murr.

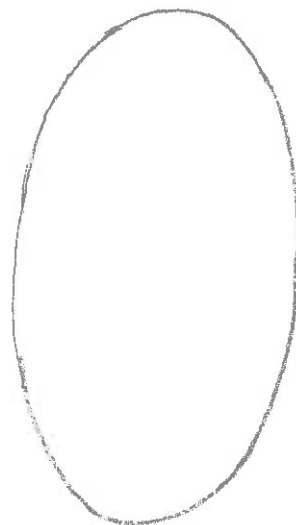
Type



Ch x 1000



Profile



Face

Spores x 8000

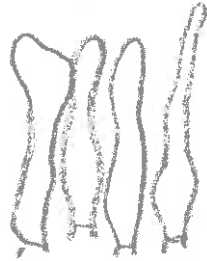
STROPHARIA SUBBADIA Murrill

leg. F. S. Earle, Auburn, Alabama, Oct. 14, 1900
Not the type. ex-Herb. NY Bot. Garden

Notes by Hesler

Spores 7.5-8.5 x 4.5-5.5 μ , s@bscurely inequilateral in profile, ellipsoid in face view, smooth, wall thin, no germ pore, brownish in KOH. Pl none found; ch 27-33 x 5-7 μ , ~~subflask~~ sub-flask-shaped, or more rarely clavate. Gill trama of interwoven hyphae. Pileus cuticle of dry, repent hyphae. Stipe cuticle of dry, repent hyphae. Caulocystidia 16-28 x 4-6 μ , ventricose or clavate.

Stropharia subbadia Murr.
leg. Earle, Oct 14, 1900 (not type)



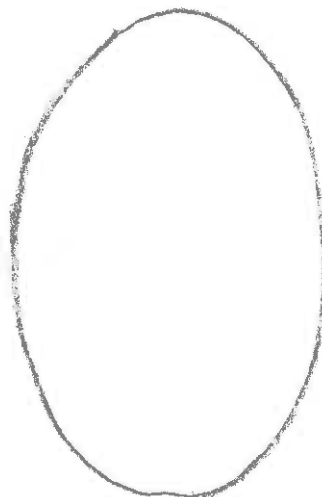
Ch x 1000



Capit x 1000



Profile



Face

Spores x 8000

STROPHARIA SUBCAPERATA Farlow & Burt - TYPE

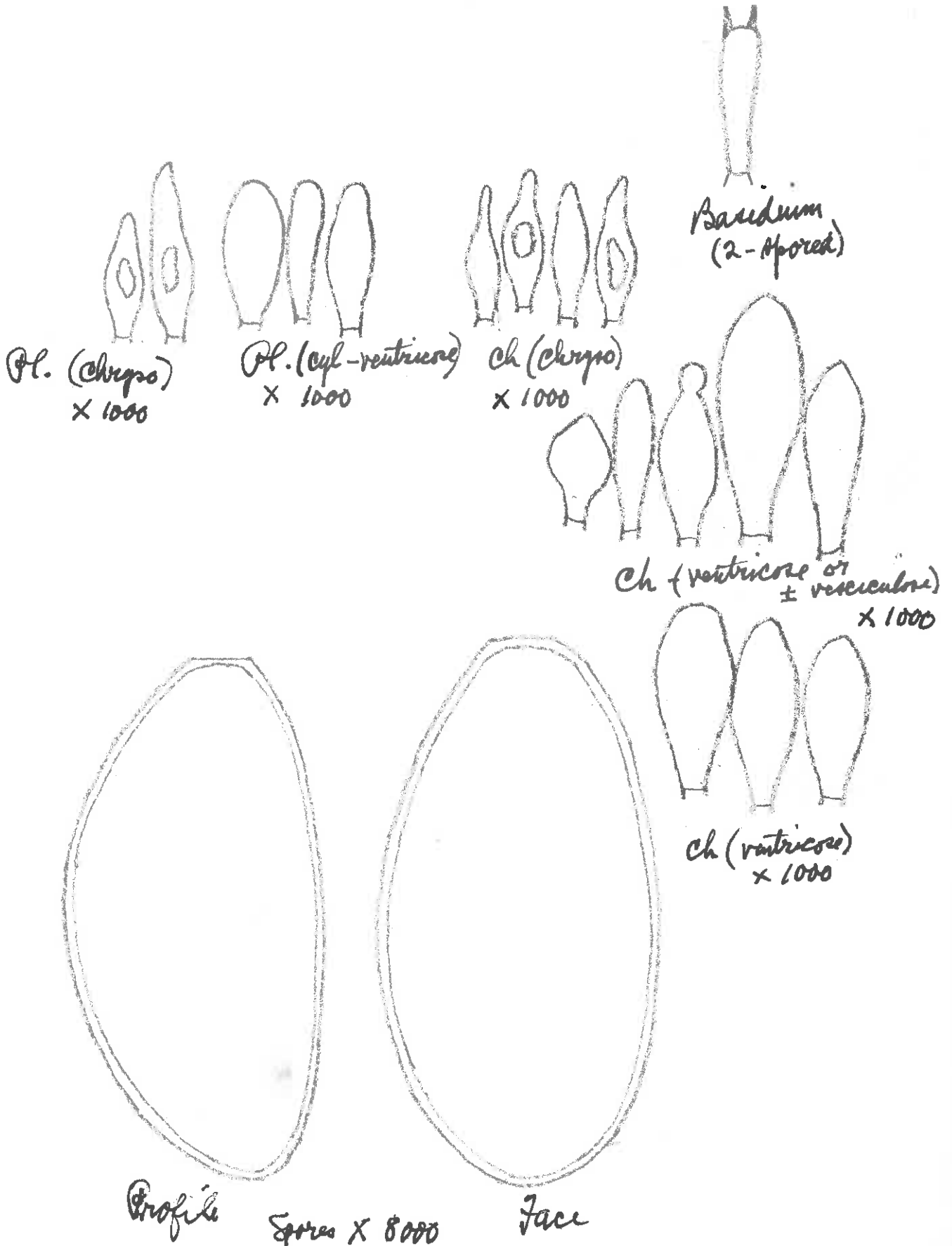
on ground under beech tree on wooded hillside, Ripton,
Vermont, October 17, 1896

Notes by Hesler

Spores 11-14.5 x (5.5) 6-7.5 μ , slightly inequi-
lateral in profile, slender ellipsoid in face view,
truncate, smooth, about "sage brown" in 2% KOH. Basidia
24-27 x 6-8 μ , 2(4)-spored. Pleurocystidia of two types:
(a) chrysocystidia, 28-33 x 7-9 μ , (b) ventricose, 24-27 x
6-11 μ , widely scattered, more or less buried and incon-
spicuous, sparse, ^{ventricose} ~~xxxxxxxx~~ to vesiculose, 20-46 x
7-16 μ , scattered but (when found) rather conspicuous. Gill
trama of subparallel hyphae. Pileus cuticle an ixocutis,
often rather thin. Hypodermium of brown hyphae, occasionally
not well differentiated. Stipe cuticle of repent, dry
hyphae. Caulocystidia not found.

Stropharia subcapitata Farlow + Burt

Type



subcaperata Farlow + Burt
~~Stropharia rugosoannulata Farlow & Burt, Type~~

A Handwritten Note^v attached to outside of packet

This note reads as follows:

Stropharia depilata Fr. teste Kauffman, Science 71:
70-71., Jan. 17, 1930, and agrees well with the description
of American specimens under this name by Kauffman and
Harper. However, ^{which Singer lists as a synonym of S. Hornemannii,}
S. depilata of Europe has stem solid,
spores only 7-8x 4-5 μ (Rea) and not stated as truncata.
Examination of European specimens may give other differences.

S. subcaperata is for present, at least, but to
retain ~~xxxxxxxxxxxx~~ for American spec.

- E. & B.

Stropharia subcaperata Farlow & Burt, sp. nov. Type

With the type specimens, the following notes were found. The notes were (are) unsigned.

Pileus fleshy, firm, viscid, smooth, even, convex, pale cremeous. Lamellae broad, moderately close, broad, 13 mm, ventricose, adnate, with a slight decurrent tooth, grayish at first, becoming brownish purple/ and somewhat spotted with the spores, margin entire and not lighter colored. Spores brownish/purple, isabelline under the microscope, 12-13 x 7 μ , even, truncate at one end; stem long, nearly uniform, but slightly larger at the base, solid and firm but rather more crust-likenear the outside, slightly fibrillose squamulose throughout its entire length, concolous with the pileus, bearing a small membranous ~~ring~~ ~~ring~~ ring in its upper part; flesh white, firm, with no special or disagreeable taste.

Pileus 8 cm broad,/ and 15 mm thick/ in the largest specimen; stem 10cm long, by 13mm ~~thick~~ thick above, and 15 mm at the base.

Two specimens were found growing on the ground~~under~~ under a beech tree in wooded hillside toward L. Pleiod Rd., Ripton. Vt. Oct. 17, 1896.

Color of plants is something like that of S. coronilla ~~in~~ in Cooke's Illus. p. 538, but they are much larger and stem is firm within. There are no greenish tints and squamulose as in S. aeruginosa. Is it S. magna, Frost?

Stropharia subcaperata Farlow & Burt

Icones Farlowianae, p. 72. 1929

(A copy of the original description)

Fructification 8-12 cm high, with pileus 5-12 cm broad, becoming expanded, broadly umbonate, fleshy, firm, viscid when moist, even, glabrous, cream buff to cream color, the margin decurved; flesh thin at the margin but rather thick at the disk, white, firm, with no especial taste nor odor; gills close, ~~with~~ adnate with a decurrent tooth, 10-13 mm broad, ventricose, garyish at first, soon clouded brownish purple, and purple black with spores; spores fuscous in the mass, even, truncate at one end, 10-13 x 7 μ ; no cystidia; stem 7-10 cm long, 12-18 mm thick, cylindric, stuffed, colored like the pileus, squamulose with slightly ~~dark~~ darker ~~xxxxxxxxxxxx~~ floccose scales; annulus superior, membranaceous, colored like the stem on the under side, but purple black with the spores on the upper side so as to resemble a narrow black purple band around the stem.

Solitary or two together. On leaf humus under beech trees in mountain forests usually. Cabot Mt., ^{chocorua} ~~xxxxxx~~ and Shelburne, New Hampshire, near Lost Pleiad Pond, Breadloaf, Vermont, Purgatory Swamp, Dedham, Massachusetts. September and October. Rare. In stature and color, it ~~resembles~~ resembles Pholiota caperata,* from which it differs by purple black gills and spores, and scaly stem. Peck regarded it as new.

* also the spores of this (now Rozites caperata [Pers. ex Fr.] Karsten) species are warty.

Stropharia submerdaria Britz.

Revis. Hymenomyce, III: 13.

[This species is discussed, without formal description,
by Harper (1914: 1020-1021)]

Harper states that Morgan reports a form of
S. merdaria which seems to be submerdaria, &
that he (Harper) found it in Illinois + Wisconsin.

~~Harper~~
Karsten places it in Parloeybe.

= Naematoloma ericaeum (Fr.) Smith

Stropharia subumbonatescens Murrill

Murrill's description (Mycologia 33:280. 1941):

"Pileus conic-convex to expanded-umbonate, gregarious, 2.5-5 cm. broad; surface smooth, glabrous, slightly viscid, uniformly melleous or isabelline, umbo conic, margin even, entire; lamellae adnate, broad, distant, uneven, soon colored by the spores, edges entire, whitish; spores ellipsoid, smooth, purplish-brown, about $11 \times 6.5 \mu$; stipe long and slender, slightly tapering upward, smooth, subglabrous, white or pallid, 6-10 cm. long, 2-3 mm. thick; veil slight, whitish, evanescent.

"Type collected by W. A. Murrill in sandy soil on a road through pines at Gainesville, Fla., February 24, 1929 (No. F10095). Near S. umbonatescens Peck."

This is a synonym of Naematoloma ericaeum
(Con. ex Fr.) Sm., published ^{by Smith} in Mycologia 43:485. 1951.

Stropharia tenuis Murrill

Now :
Psathyrella membranacea Sm.
p. 79.

Mycologia 14:137. 1922

Pileus 2.5 cm broad, convex, sub-umbonate, brown with delicate white floccose patches, margin faintly striate. Context thin.

Lamellae adnexed, subconcolorous, crowded, medium broad.

Stipe 7 cm long, 2-3 mm thick, concolorous but slightly paler, tapering upward, enlarged at base, fragile, glabrous, silky, hollow. Annulus distant (2.5 cm from pileus), ample, persistent.

Spores 7 x 5 μ , broadly ellipsoid, obtuse at both ends, smooth, dark purplish brown (under 'scope).

Type: New Orleans, La., on soil in wet woods, leg. Earle, No. 116 Sept. 8, 1908.

This is Psathyrella membranacea Smith, nom. nov.
(see: n. a. species of Psathyrella, p. 79 $\frac{1}{2}$, 1972)

37116

STROPHARIA THRAUSTA (Schulz. apud Kalchbr.) Sacc.

leg. M. Moser, det. Moser, Poland, Sept. 30, 1967

Notes by Hesler

Spores (9)10 - 11(12) x (5.5)6-7 μ , slightly inequi-
lateral in profile, ellipsoid in frontal view, smooth,
truncate, brownish with slight ^{purplish} ~~purplish~~ tint in KOH,
wall medium thick. Pl none found; ch 34-45 x 2-5 μ ,
filamentous, apices usually ^l tapering but at times obscurely
to slightly enlarged, abundant; Gill trama subparallel.
surface bearing tufts of filamentous pileo forming scales,
Pileus cuticle a thin ixocutis, / Hypodermium cellular, the
(10-35 x 8-20 μ)
cells rather large and conspicuous, the layer 4-6 cells
deep. Stipe cuticle of dry repent hyphae, bearing on
the apex tufts of caulo which are filamentous, abundant.

This is placed under S. squamosa as a variety by
some authors: by Kuhner & Romagnesi, Rea: Stropharia squamosa
var. thrausta Kalchbr., S. squamosa var. thrausta (Kalchbr.) Cke.
the latter by Rea.

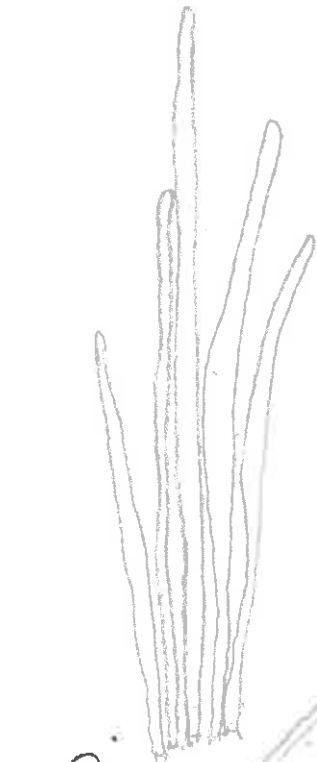
55-115 x 3-6 μ .

Stropharia thrausta (Schudz. apud Kaldchr.) Sacc.

37116 (Moser)



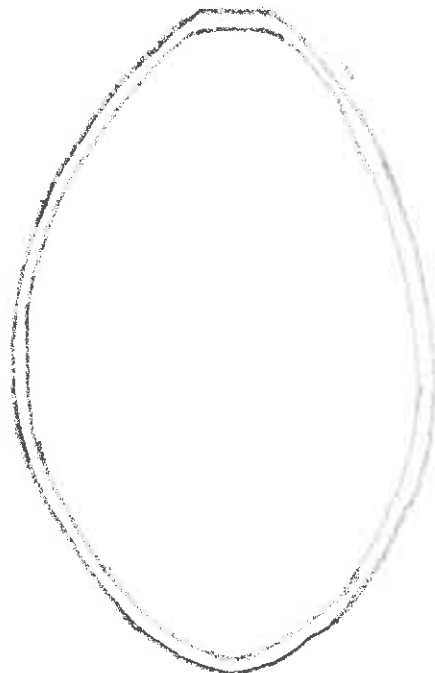
Pilus ixocutis and
cellular hypodermium
x 1000



Pilus-scale
x 1000



Profile



Spores x 6000

Frontal



caulis

Stropharia trojana Murr.

Mycologia 10:70. 1918

Pileus 4 cm broad, convex to depressed,
isabelle, fulvous at the center, dry, glabrous,
cuticle cracking on the margin. Context about
10 mm thick.

Lamellae slightly sinuate, dull white to
umbrinous, close, medium broad.

Stipe 4 cm long, 10 mm thick, ^{base white,} ~~crimson~~,
glabrous, fleshy, equal, striate above, hollow.
Annulus large, persistent, sheathing, fixed below,
white to discolored, ~~seriate~~ ^{seriate} above from contact
with the lamellae, nearly median.

~~ellipsoid~~ Spores 7-9 x 4-4.5 μ , oblong-ovoid, or
ellipsoid, smooth, murinous-umbrinous (under scope).

Type, Murrill + Harris 953, on soil, in
Joy and Fyre, Jamaica, Jan. 12-14, 1909. It
resembles a Pholiota, but the spore characters place it
in Stropharia.

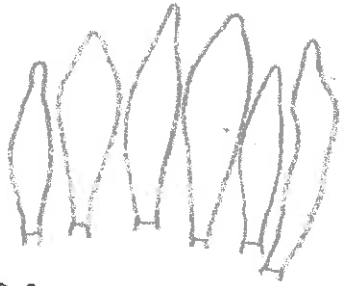
STROPHARIA TROYANA Murrill

In yam patch, under vine, Troy & Tyre country, 2000 ft.,
wet, wooded, limestone region, Jamaica, leg. Murrill
& W. Harris No. 953.

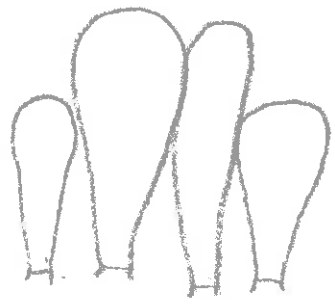
Type: Notes by Hesler

Spores (6) 7-9 x (4)4.5-5.5(6) μ , slightly ~~in~~
inequilateral in profile, variable ^{size and} in shape in face view:
ellipsoid, elongate~~xxxxix~~ to medium length and ovoid,
wall medium thick, smooth, many slightly truncate, brownish
with a purplish tint. Pl 23-30 x 5-8 μ , of the chryso-type,
buried and inconspicuous, scattered; ch 23-35 x 8-15 μ ,
clavate to subpyriform, scattered, rather conspicuous when
present in sections. Gill trama slightly interwoven. Pileus
cuticle of dry, repent hyphae. Stipe cuticle of dry, repent
hyphae. Caulocystidia not found.

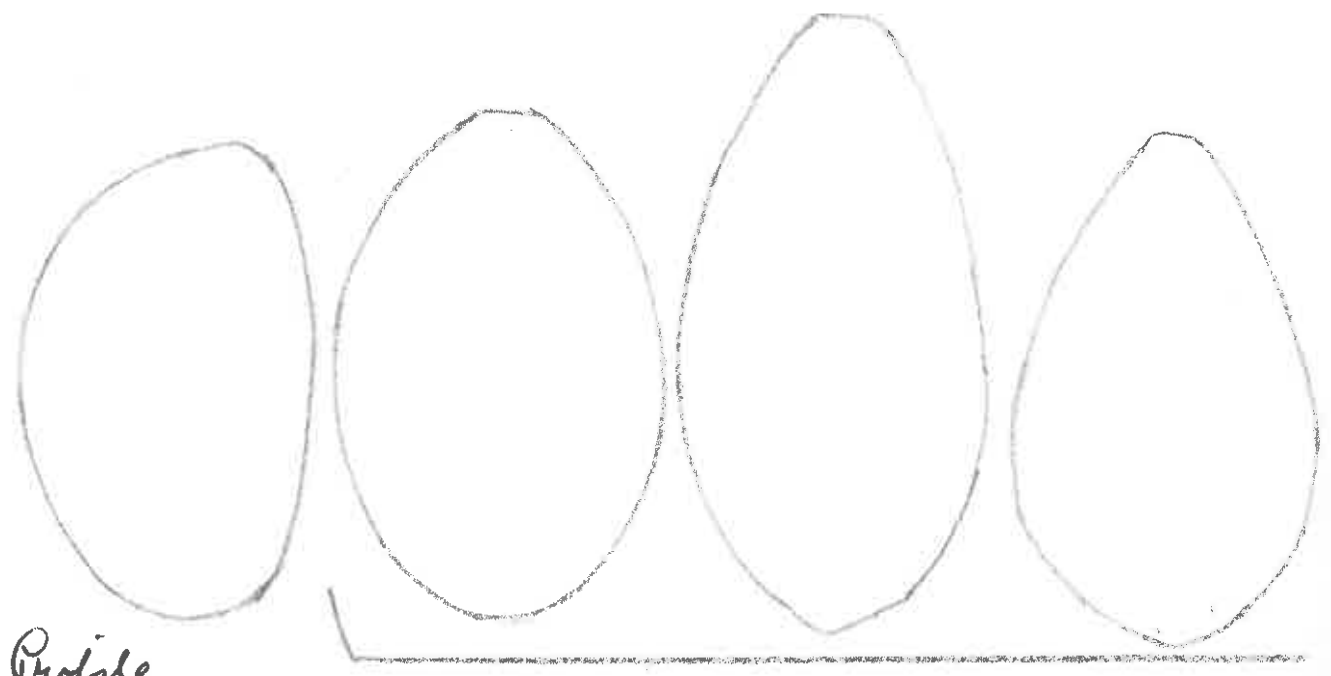
Stropharia trojana Murr.
Type



Sp x 1000



Ch x 1000



Profile

Face

Spores x 8000

STROPHARIA UMBILICATA Pk.

Beautiful

Leg. Dr. Munger, Communicated by Mrs. M. S. Whetstone,
1911, Minnesota.

Type: Notes by L. R. Hesler

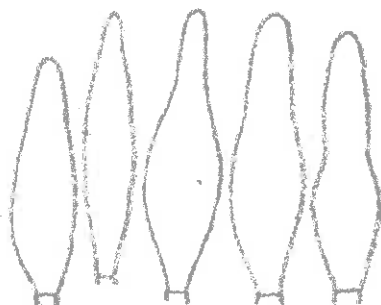
Spores 6-8(9) x 4-4.5(5) μ , obscurely inequi-
lateral in profile, ellipsoid in face view, wall smooth,
rather thin (but double), with an obscure germ-pore
(evident in many spores), pale yellowish with a brown
often flask-shaped,
tint (in KOH). Pl ventricose, /at times obclavate, 32-36
x 6-11 μ , scattered, several and conspicuous on some gills
(in sections) and absent or nearly so on other gills (in
section); ch similar in shape, 27-42 x 6-11 μ , not abundant.
Pileus cuticle an ixocutis, often with numerous ~~hyp~~ aerial
slender hyphae (scales). Hypodermium undifferentiated.
Stipe cuticle of repent, dry hyphae. Caulo not found.

Gill trama with a brownish mediostrate.

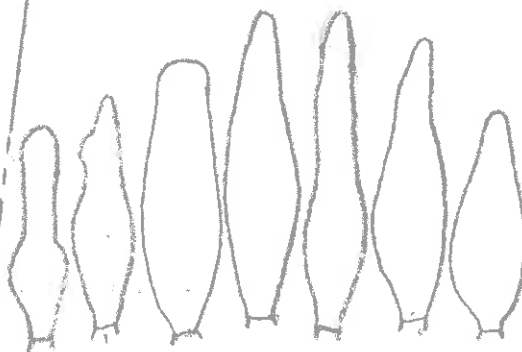
*The pl + ch are distinctive, and
so far I have not found similar ones in other
Stropharias I have studied.*

Stropharia umbilicata PK.

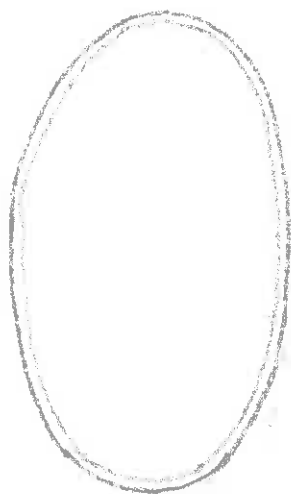
Type



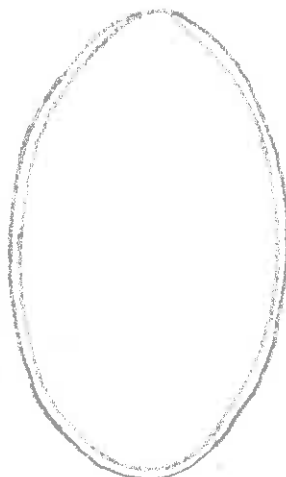
As - x 1000



Ch x 1000



Profile



Face

Spores x 8000

Stropharia umbilicata PK.

New York State Mus. Bull. 167: 49. 1913

^{caespitose,}
Pileus, 4-5 cm broad, convex, deeply
umbilicate under brown, tinged olive green when dry.
squamose with appressed brownish scales, margin with veil fragments.
Context yellowish.

lamellae adnexed or almost free, sinuate,
becoming sooty brown, edges white, close, 2-3 mm
broad.

Stipe 2.5-4 cm long, 4-6 mm thick,
whitish above, rusty brown below, fibrillose scaly,
subequal, slightly broader at the top, stuffed or
hollow. Annulus superior, membranaceous.

Spores 7-8 x 4-5 μ , ellipsoid.

On chips & sawdust, leg. Dr. Minger,
Comm. by Mrs. M. S. Whetstone, September, Minnesota.

AGARICUS (STROPHARIA) UMBONATESCENS Pk.

Leg. C. H. Peck, Schenevus, N.Y. (date not given on label; published in 1878)

Notes: on Type: L. R. Hesler

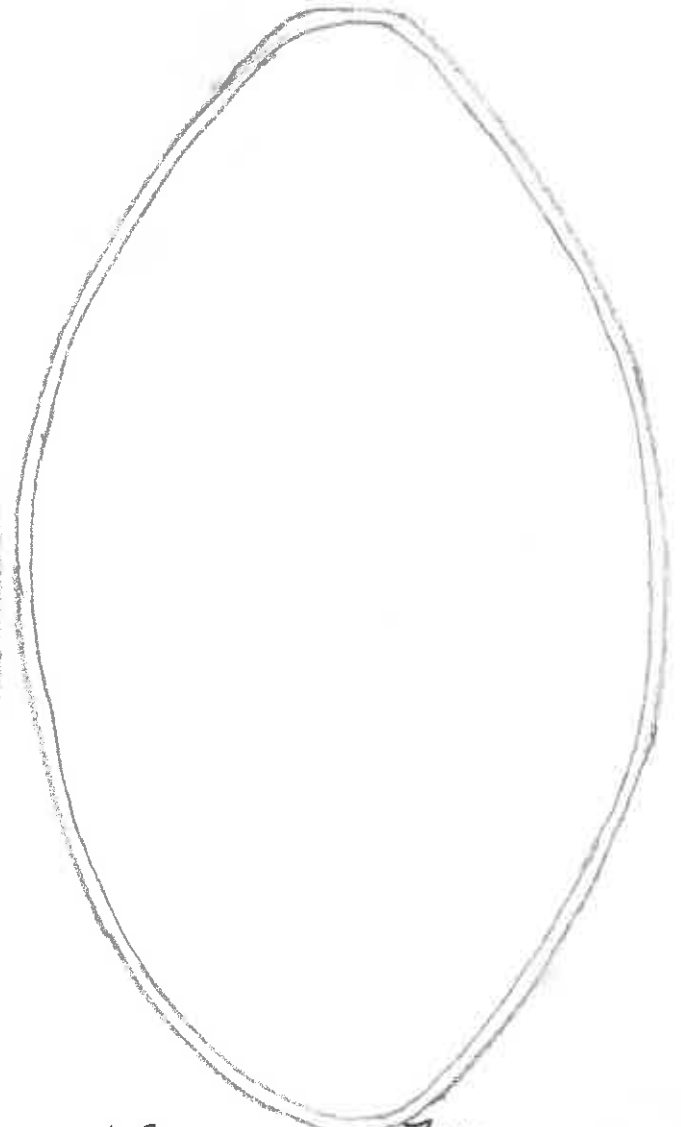
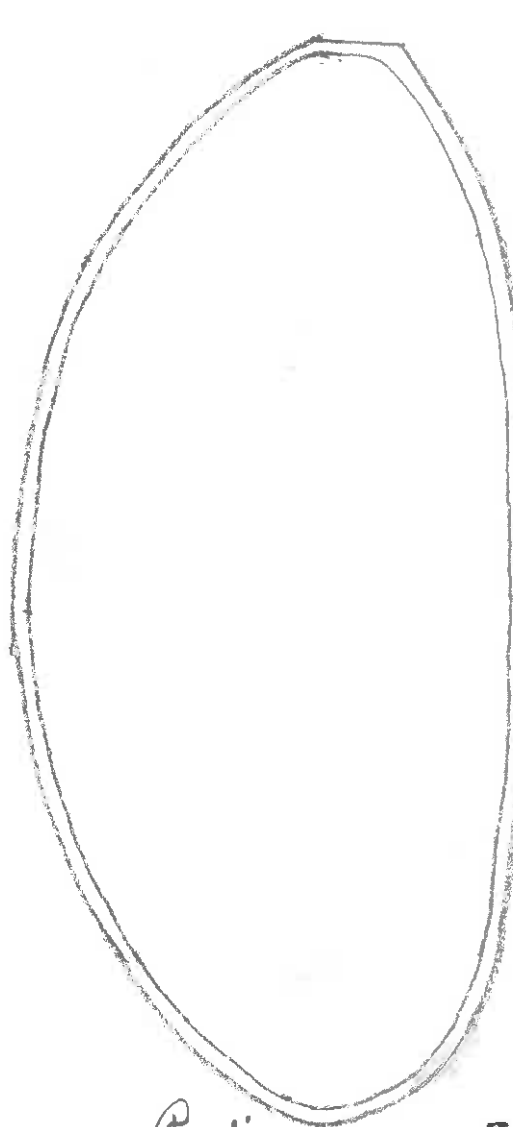
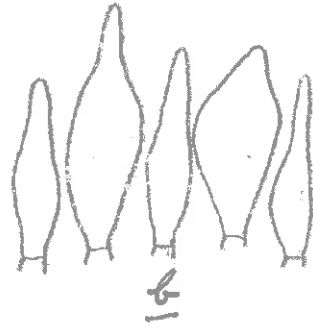
Spores 16-20 x 8-11 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate (at times somewhat obscure), brown with a purplish tint in KOH. Pl 22-30 x 6-9 μ , widely scattered, buried and inconspicuous, of the chryso-type; ch of chryso-type, 22-32 x 5-12 μ , rarely of ventricose-type. few, not conspicuous at all times; Gill trama of very slender, subparallel hyphae. Pileus trama of interwoven hyphae. Pileus cuticle a sharply defined ixocutis. Hypodermium of brownish hyphae. Stipe cuticle of repent, dry hyphae. Caulo not seen.

~~Stropharia umbonatescens (Pk.) Sacc.~~

How: ~~Stropharia umbonatescens (Pk.) Sacc.~~

Agaricus (*Stropharia*) *umbonaticens* PK.

Type



Profile

Spores x 8000

Face

Stropharia umbonaterescens (Pk.) Sacc.

Syll. Fung. 5: 1021. 1887

Agaricus umbonaterescens Pk., New York State Mus.

Ann. Rept 30: 41. 1878.

Pileus 1-2.5 cm broad, conic, subacute, then expanded + umbonate, yellow, umbo inclining to reddish, viscid, glabrous. Context thin, pallid; odor foetid.

Famellae adnate or slightly decurrent, whitish or gray to blackish-brown with a slight olivaceous tint, crowded, broad, finally ventricose.

Stipe 5-10 cm long, slender, pallid with a yellowish tint, equal, hollow. Annulus scanty, ^{fuscescens}.

Spores 15-19 x 10 μ , ellipsoid, smooth, purplish-brown (under 'scope).

Type: on manure, pastures, Schoharus, N.Y. Also in Michigan. [Other specimens so labelled, at Albany, are distinct.]

Singer (3rd Ed., Agar. p. 533) lists S. umbonaterescens (Pk.) Sacc. ~~Genus~~ K + R., as a synonym of S. luteonitens (Fr.) Gmel.

Stropharia venenata Imai nom. nov.

Jour. Fac. Agr. Hokkaido Univ. 43: 270. 1938

A new name for S. ~~caerulescens~~^{caerulescens} Imai [nom (Pat.) Sing].

Stropharia ventricosa Massee

British Fungus Flora 1: 400 1892

[Kauffman's Deser.]

Pileus 3-5 cm broad, parabolic then
convex-expanded, at first shining pale amber,
then tawny-alutaceous, very viscid,
glabrescent, margin for a long time decurved.
Context white thick on disc, thin on margin.
(The odor was not noted.)
Lamellae adnate, at length decurrent by
a tooth, at first pallid, then mouse-gray
with a purplish tinge, finally purplish-brown,
close, rather narrow.

Stipe 8-12 cm ^{or more} long, up to 15 mm ^{thinner above} thick,
ventricose-radicating, white becoming dingy
yellowish, dry, covered by squarrose scales up
to annulus, markedly striate above, stuffed,
base rooting-attenuate, sometimes unequal.
Annulus white, large, persistent, striate above.

Spores 9-12 x 5-6 μ , elliptical, smooth,
brown in mass, with a purple tinge under 'scope.

(over)

Cystidia oval or short ventricose, obtuse at apex,
about $45 \times 24 \mu$.

Cespitose on very decayed debris about
stumps + roots, in hemlock, maple woods,
Bay View, Michigan. Rare. September.

Kauffmann says it has the stature of
Cooke's figure of Pholiota radicata (Ill. Pl. 361),
but the pileus of Kauffmann's collection is
glabrous, viscid, + the spores purple tinged.

on lawn, Hesler's place, Timberlake Rd., Knox
County, Tenn., leg. LRH June 6, 1962

Pileus 7 -10 mm broad, near "chamois" with a tint
of olive, viscid or slightly so, glabrous, even.

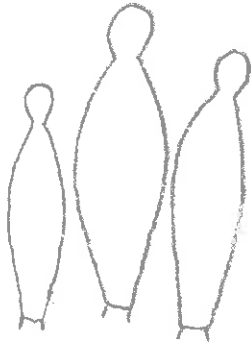
Veil none.

Spores in deposit: "fuscous" (purplish brown tint).
12-15.5 x (8) 9-11 μ , slightly inequilateral in profile,
ellipsoid in face view, at times nearly subglobose,
smooth, many spores truncate or obscurely so. Pl 30-40 x
7-12 μ , lecythiform, widely scattered, but conspicuous
when found; ch 23-28 x 6-8 μ , similar to pl, a bit
more abundant (but not seen on every section). Pileus
cuticle a thin ixocutis, hyphoid. Gill trama nearly parallel
or only slightly interwoven. Pileus trama of loosely
interwoven hyphae. Stipe cuticle of dry repent hyphae,
Caulo not found.

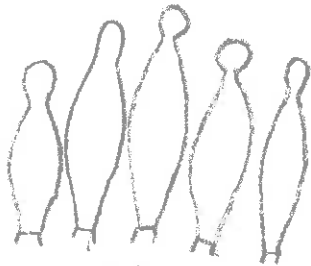
*Pl + ch not typical of Stropharia, and
no veil found!*

Stropharia ?

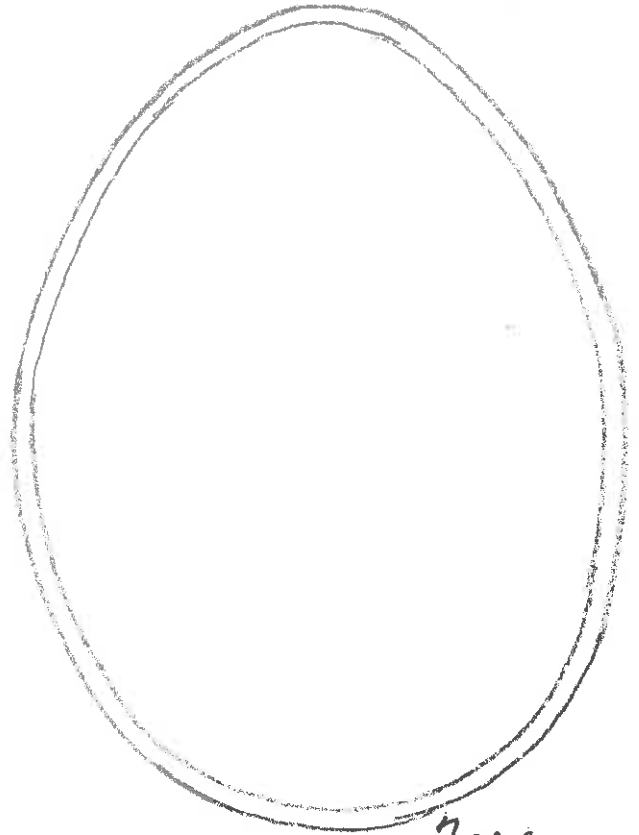
5022



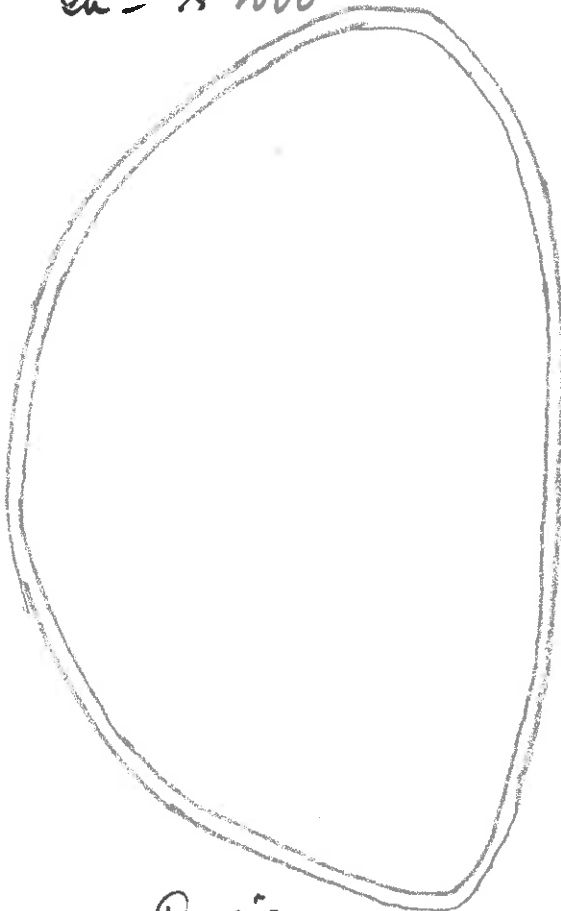
Sp $\times 1000$



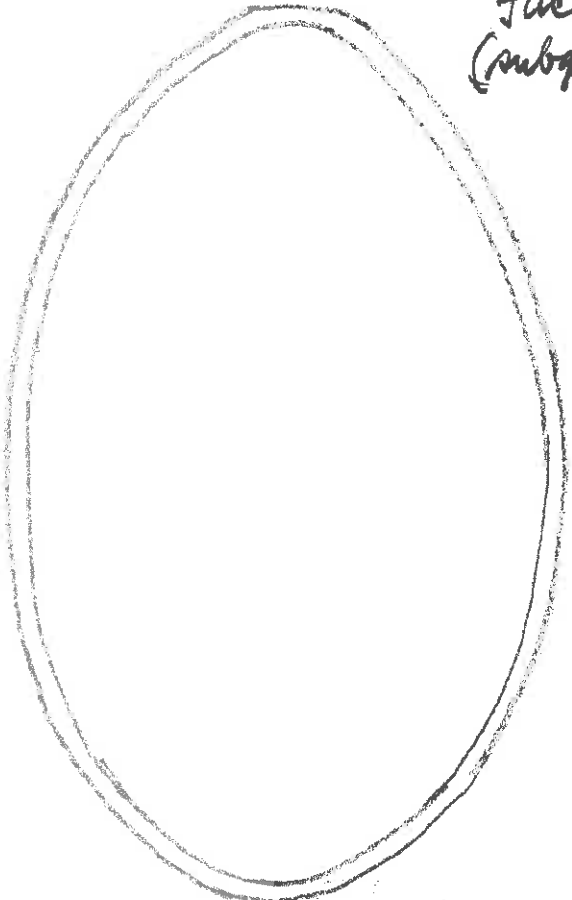
Sp $\times 1000$



Face
(subglobose)



Profile



Sp $\times 8000$

Face (ellipsoid)

6617

Stropharia

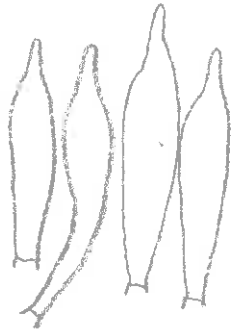
on soil, in grassy woods, Knoxville, Oct 9, 1934

Spores (6) $7-9 \times 4.5-5\mu$, faintly inequilateral in profile, ovoid to ellipsoid in face view, smooth, no visible germ-pore, wall medium thin, brown in 2% KOH ^{micronate}. Ph $28-37 \times 6-8\mu$, Chrysocystidia-type, ~~appressed~~, subclavate to subventricose, scattered, buried, inconspicuous; ch $27-37 \times 8-15\mu$, clavate-capitate, not abundant. Pileus cuticle a dry trichodermium. ~~Stipe~~ Pileus trama interwoven.

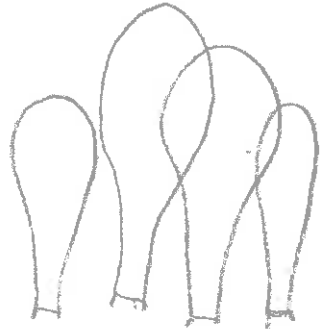
Gill trama of slender, subparallel hyphae. Stipe cuticle of dry, repent hyphae. Caulocystidia none.

Originally identified as S. albo-nitens sensu Kauff.

Stropharia
No. 6617



Sp (long) x 1000



Sp x 1000



Profile



Face

Spores x 8000

10150

Stropharia - near *hardii*

on soil, woods, Woodson Drive, Knox County, Tenn.,
leg. S.A.Cain, October 20, ~~1934~~ 1936

Pileus 8-10 cm broad, convex then expanded
plane to slightly concave, "ochraceous tawny", radiately
fibrillose, fibrils finally disposed in appressed scale-
like patches, viscid, pellicle deparable, margin even.
Context white, rather compact, thick, abruptly thin in
front. Odor and ^{taste} ~~texture~~ not noted.

Lamellae emarginate-adnate, grayish then
purplish-brown, crowded, narrow, ^{linear,} lamellulae numerous, edges
fimbriate.

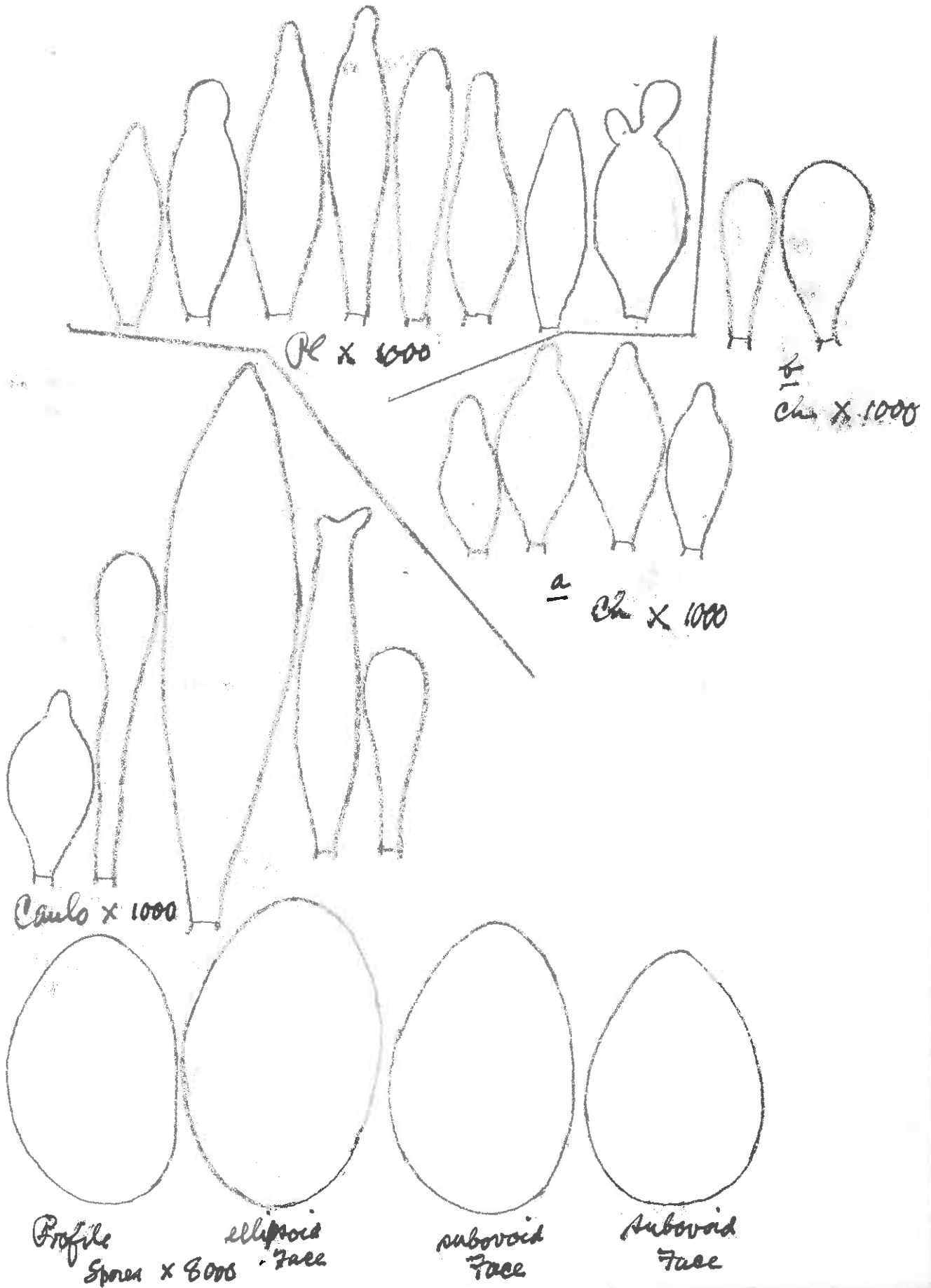
Stipe 5-6 cm long. 9-15 mm thick, white,
becoming brownish below, base with a white rhizomorph ~~equal~~
equal, fibrillose-scaly, solid then spongy. Annulus ample,
subpersistent, attached 1.5-2 cm below the top of the stipe.

Spores purplish in deposit, (5.5)6-7.5 x 4-5 μ ,
obscurely inequilateral in profile, varying from ellipsoid
to subvoid (some spores ovoid with a broad base), wall smooth,
thin, no germ pore observed. Pl 38-58 x 11-15 μ , ventricose,
rarely subclavate, more or less capitate ~~inxxxx~~ or rostrate in
most, frequent, conspicuous; ch of two types: (a) 28-36 x
11-15 μ , similar to pl, (b) 30-34 x 12-15 μ , clavate to
subpyriform. Gill trama of slightly interwoven hyphae.
Pileus cuticle an ixcutis. Hypodermium not differentiated.
Stipe cuticle of repent, dry hyphae. Caulo near apex, rather
scattered. ~~xxxxi~~ variable in size and shape: 33-105 x 11-25 μ ,
clavate, ventricose, apices very variable, rather abundant
when found.

over

The habit, spores, rhizomorph, suggest S. hardii,
but the fl. are different.

10150



12183

STROPHARIA

on sandy soil, under whitepine, Highlands,
North Carolina, July 2, 1939

Pileus 3-6 cm broad, "Naples yellow", glabrous,
viscid. Context white; thick on the disc. Odor
and taste not noted.

Lamellae adnate with a decurrent tooth, "deep
olive buff", then deep purplish black, subdistant,
medium broad, edges white fimbriate.

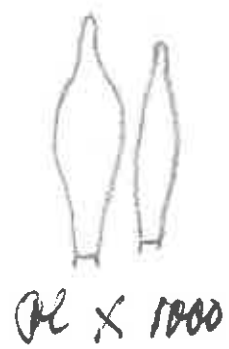
Stipe 7-10 cm long, 5-9 mm thick, concolorous
with the pileus, long-radiating, slightly viscid, stuffed.
Annulus membranous, fugacious.

Spores purplish in deposit, 13-16(18) x 8-9.5 μ ,
slightly inequilateral in profile, ellipsoid in frontal
view, obscurely truncate or more rarely distinctly so,
brownish with a purplish tint in KOH. Pl of the
chryso type, very rare, inconspicuous, 26-32 x 5-9 μ ;
ch 22-32 x 7-13 μ , clavate to subpyriform, sparse.
Gill trama subparallel. Pileus cuticle a thin ixocutis.
Hypodermium not differentiated or ^{very} ~~quite~~ obscure.
Stipe cuticle a thin ixocutis. Caulo not found.

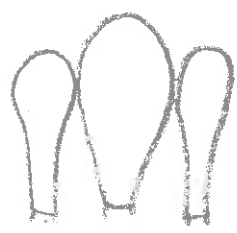
Smith suggested that this is close to
Stropharia ventricosa Masee.

Stropharia ventricosa Mance?

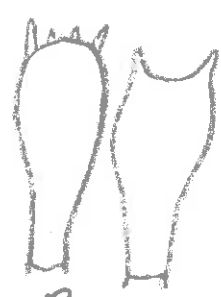
1783



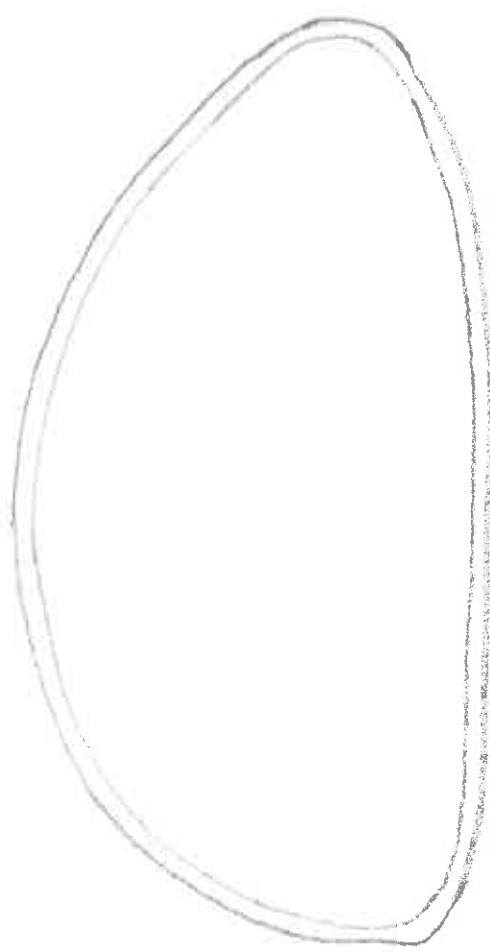
Pl x 1000



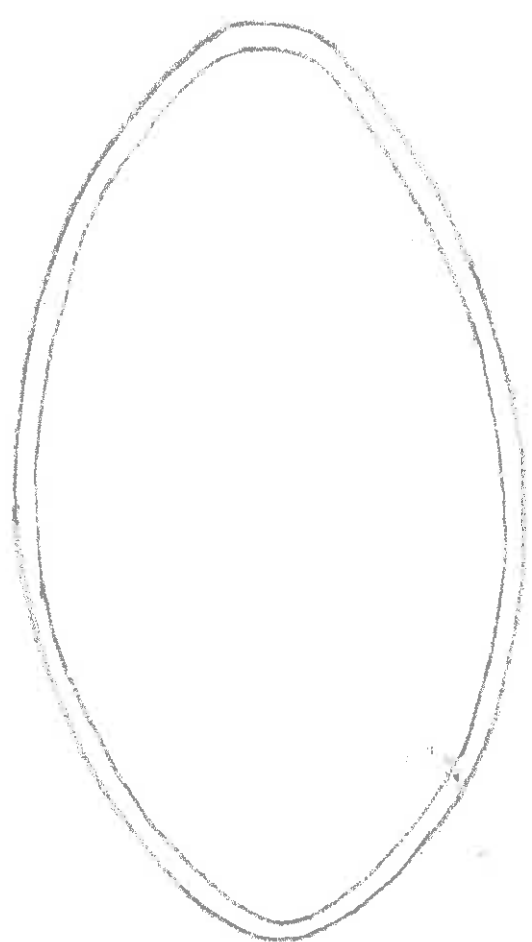
Ch x 1000



Basidia x 1000



Profile



Face

Spores x 8000

on lawn, Gatlinburg, Tenn., June 14, 1944

Pileus 4-6 cm broad, "light ochraceous buff", viscid, shining when dry, glabrous, margin even. Context white, firm, medium thick; odor and taste mild.

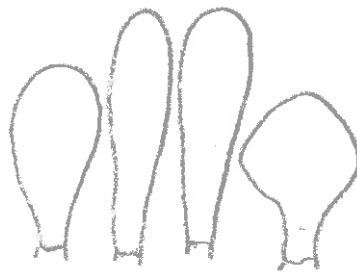
^{finally}
~~usually~~ Lamellae emarginate, at first "pallid brownish drab", "brownish drab", edges whitish, broad, close or crowded, edges serrulate.

Stipe 4-6 cm long, 6-8 mm thick, dingy, dry, solid. Annulus conspicuous, but soon and easily deciduous.

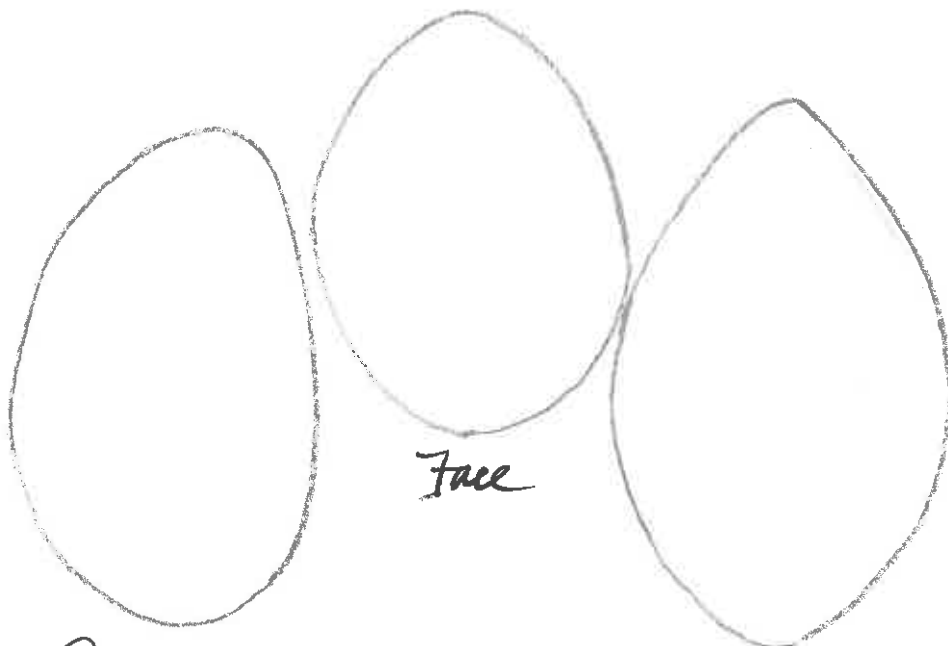
Spores 7-9 x 4.5 - 5.5(6) μ , slightly inequilateral in profile, ellipsoid or more often ovoid in face view, variable in size in a given field, wall thin, smooth, no germ-pore. Gill trama slightly interwoven. Pileus trama of ~~the~~ loosely interwoven hyphae. Pileus cuticle a thin ixocutis. Hypodermium ~~not differentiated~~ not differentiated. Pl not found; ch 23-33 x 7-17 μ , subcylindric to subclavate, or vesiculose with a short stem, not abundant, inconspicuous. Stipe cuticle of dry, repent hyphae. Caulo not found.

Superficially, this resembles an Agrocybe, but the "brownish drab" gills, and the thin-walled spores suggest otherwise.

Stropharia
16406



Ch x 1000



Profile

Face

Face

Spores x 8000

Stropharia No. 19663

lost?

Pileus 8 cm., plane, scarcely viscid (wet), matted-fibrillose, disk yellow (near "chamois"), elsewhere paler yellow (often yellow-areolate).

Flesh white, thick on disk, elsewhere thin; odor slight, taste like green grass.

Lamellae slightly emarginate, crowded, narrow, near "Saccardo's umber" at maturity, edge rough to white-fimbriate.

Stipe 6.5 x 1.5 cm., white, base sub-bulbous.

Annulus thick-membranous, persistent, superior.

Spores 4.5-6.5 x 3.5-4 μ , smooth.

Cystidia (none found).

On wet, road bank, Knox County, Tennessee, July.

Pileus 6 cm. broad, convex-flattened, slightly viscid, densely covered with "zinc orange" fibrils which form scales over central portion, white between fibrils, more or less rimose. Flesh thick, white, abruptly thin on margin; odor and taste slight or none. Lamellae adnexed, close, broad, "light drab," thin, many short, edges fimbriate. Stipe 7 cm. x 10 mm., equal above the pointed, curved base, surface like pileus, dry, solid. Annulus apical, membranous, collapsing.

Spores 6-7.5 (9) x 4-5 (5.5) μ , smooth, ovoid, pale brown under 'scope. Pleurocystidia ventricose, with "shoulders," 50-62 x 12-16 μ ; cheilocystidia similar, slightly smaller.

Habitat and Distribution. - In woods, under beech, Kentucky, October.

23797

STROPHARIA

ON SOIL, IN OAK WOODS, Oak Ridge, Tenn., Oct. 21, 1960

Pileus 3 cm broad, "chamois", margin whitish, not viscid, minutely fibrillose under a lens, disc slightly velvety, margin even. Context ~~white~~; odor and taste not distinctive.

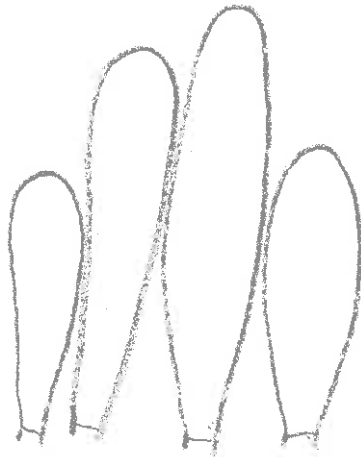
Lamellae emarginate, pallid, finally "drab", rather narrow, close, edges fimbriate.

Stipe 4.5 cm long, 8 mm thick, white, appressed-fibrillose, equal above the slight bulb, solid. Veil white, membranous, leaving a fugaceous annulus.

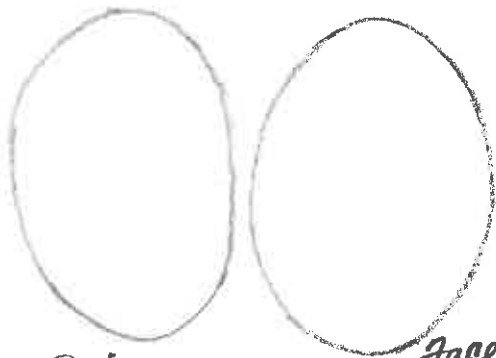
Spores in deposit: "brownish drab", 4.5-6 x 3.5-4.5 μ . obscurely anequilateral in profile, ellipsoid in face view, not truncate, no germ pore observed, smooth, brownish with a faint purplish tint in KOH. Pl ~~not~~ found; ch ^{conspicuous} 34-56 x 10-14, clavate to ventricose, rare but [^]when found, ~~conspicuous~~. Pileus cuticle of dry, repent hyphae. Stipe cuticle of dry repent hyphae, Caulo ~~not~~ found.

Stropharia

23797



Ch x 1000



Profile
Spores x 8000

Face

on lawn, Timberlake Rd., Knox Co., Tennessee,
October 5, 1976

Pileus 4.5 cm
~~Pileus 4.5 cm~~ broad, convex, "light ochraceous buff", glabrous, not viscid, margin even. Context firm, white; odor and taste mild or slight(not distinctive).

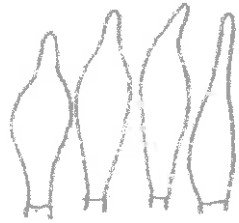
Lamellae emarginate, dark brown, close, medium broad, lamellulae alternating.

Stipe 6 cm long, 6 mm thick, white, with a few fibrils, base subbulbous, solid, dry. Veil white, fibrillose, appendiculate, not forming a ring.

Spores in deposit "dark violet gray", 7-8.5 x 4.5-5.5 μ , slightly inequilateral in profile, ellipsoid or more often ovoid in face view, wall moderately thick, smooth, no germ pore found, brown with a purplish tint in KOH. Pl. of the chryso-type, 23-27 x 6-8 μ , widely scattered and inconspicuous; ch of two types: (a) chryso-type, 18-24 x 5-7 μ , few, (b) clavate, 22-28 x 8-10 μ , few. Gill trama of slightly interwoven hyphae. Pileus trama of loosely interwoven hyphae. Pileus cuticle of dry, repent hyphae. Stipe cuticle of dry repent hyphae. Caulo not found.

Stropharia

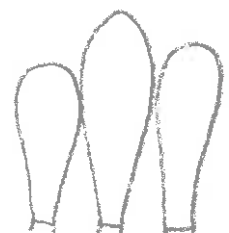
40288



Ph (Phragmospore)
x 1000

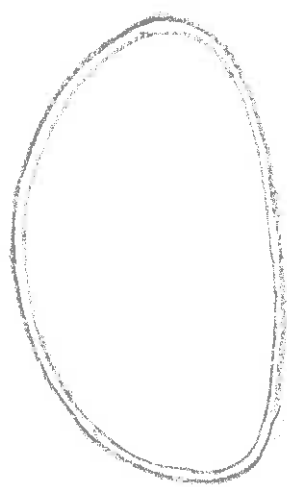


a

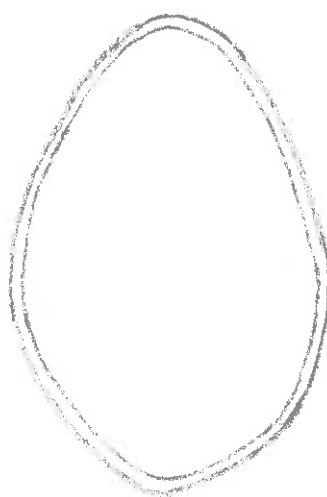


b

Ch x 1000



Profile



Face

Spores x 8000

STROPHARIA

Doubtful and Excluded Species

(Prepared February 14, 1977)

Stropharia aerugineomaculans v. Höhnelt, Sitzungsber K. Akad. Wiss. Wein 123(1): 78. 1914. This is Psilocybe aerugineomaculans (v. Höhnelt) Sing. & Smith, Mycologia 50: 273. 1958.

Stropharia albocrenulata (Pk.) Kreisel, Fedes Repertorium 3: 212. 1964. This is Pholiota albocrenulata (Pk.) Sacc., Syll. Fung. 5: 760. 1887.

Stropharia albocyanea (Desmaz.) Quélet, Champ. Jura Vosg., p. 236, 1972. Harper, in a note, says that this species occurs in North America, but he does not describe it. He does state that it is distinguished from S. aeruginosa by its small size and white, dry stem. Morgan (1908) referred to it as S. pseudocyanea (Letell). Peck's specimens so named, from New York, and Davis' from New Hampshire, differ from each other and from Bresadola's specimens (acc. to Murrill, 1922).

Stropharia caeruleascens Imai, Trans. Sapp. Nat. Hist. Soc. 12: 148. 1932. This is Psilocybe subaeruginascens von Höhnelt, Sitzungsber K. Akad. Wiss. Wein 123(1): 78. 1914.

Stropharia caerulescens (Pat.) Sing., Ann. Myc. 34: 340. 1936.

This is Psilocybe cubensis var. caerulescens (Pat.) Sing. & Smith, Mycologia 50: 269. 1958.

Stropharia caespitosa Murr., Mycologia 10: 71. 1918. (non

Psathyrella caespitosa Pk.) This is Psathyrella vanhermanii Smith nom. nov., North American Species of Psathyrella, p. 79. 1972.

Stropharia caput-medusae (Fr.) Karst., Bidr. Finl. Nat. Folk,

p. 493. 1879. Smith (1972) places this under Psathyrella caputmedusae (Fr.) Konrad & Maublanc, Encyc. Mycol. 14: 127. 1949.

Stropharia coprinophila Atk., Jour. Mycology 8: 118. 1902.

This is Psathyrella epimyces (Pk.) A. H. Smith, N. A. Species of Psathyrella, p. 60. 1972.

Stropharia cubensis Earle, Est. Agron. Cuba 1: 240. 1906.

This is Psilocybe cubensis (Earle) Sing., Sydowia 2: 37. 1848., and is so recognized by Smith (Mycologia 50: 267. 1958).

Stropharia cyanescens Murrill, Mycologia 33: 279. 1941. This

is Psilocybe cubensis var. cyanescens (Murr.) Sing. & Smith, Mycologia 50: 269. 1958.

Stropharia epimyces (Pk.) Atk., Plant World 10: 128. 1907.

Smith (1972) transfers it to Psathyrella epimyces (Pk.) Smith, N. A. Species of Psathyrella, p. 60. 1972.

Stropharia floccosa Earle, Inf. Estac. Centr. Agron. Cuba
1: 241. 1906. This is Psathyrella floccosa (Earle) Smith, N. A.
Species of Psathyrella, p. 80. 1972.

Stropharia fragilis Kauff., Michigan Acad. Sci., Arts, and
Letters Papers 5: 144. 1925. Plate XII. This is Psathyrella
longistriata (Murr.) Smith, Mushrooms in Their Natural Habitats,
p. 552. 1949. The latter was originally described as Stropharia
longistriata Murr., Mycologia 4: 301. 1912.

Stropharia howeana (Pk.) Sacc., Syll. Fung. 5: 1026. 1887;
Agaricus howeana Pk., Buffalo Soc. Nat. Sci. Bull. 1: 53. 1873;
Pholiota howeana (Pk.) Pk., New York State Mus. Bull. 122: 147. 1908.
This is Agrocybe howeana (Pk.) Sing.

Stropharia irregularis Pk., Torrey Bot. Club. Bull. 27: 16.
1900. Murrill (1922) says that this is Drosophila (Hypholoma)
appendiculata.

Stropharia johnsoniana (Pk.) Pk., New York State Mus. Ann.
Rept. 41: 84. 1888; Agaricus johnsonianus Pk., New York State Cab.
Ann. Rept. 23: 98. 1872. This is Pholiota johnsoniana (Pk.) Atk.,
Studies Amer. Fungi, p. 153. 1900. Singer also places it in
Stropharia; Smith & Hesler retain it in Pholiota.

Stropharia longistriata Murr., Mycologia 4: 301. 1912. This
is Psathyrella longistriata (Murr.) Smith, Mushrooms in Their Natural
Habitats, p. 552. 1949. Stropharia fragilis is same (see above).

Stropharia micropoda Morgan, Jour. Myc. 14: 73. 1908. Stover suggests that this might be Gymnopilus polychrous (now, Pholiota polychroa (Berk.) Smith & Brodie). ~~A study of the type might clarify its taxonomic position.~~

In the Morgan collection at the University of Iowa, there are no Stropharias, including S. micropoda.

Stropharia obturata (Fr.) Quél., Champ. Jura Vosg., p. 110.

1872; Agaricus obturatus Fr., Syst. Myc. 1: 283. 1821. According to some, this might be the same as S. coronilla.

Stropharia psathyroides J. Lange, Dansk Botanisk Arkiv.

4(4): 36. 1923; Stropharia sphagnicola Maire, Bull. Soc. Myc. France 26: 192. 1910. This is Psathyrella sphagnicola (Maire) Favre, Bull. Soc. Myc. France 53: 282. 1937.

Stropharia schraderi Pk., Torrey Bot. Club Bull. 32: 80. 1905.

This is Pholiota schraderi (Pk.) Overholts, North Amer. Flora 10: 271. 1924.

Stropharia separata f. vernalis J. Lange [Stuntz & Isaacs,

Mycologia 54: 290. 1962, appear to believe this to be Panaeolus semiovatus (Fr.) Lundell].

Stropharia sienna Kauffman, Michigan Acad. Sci., Arts, and

Letters Papers 11: 207. 1930. This has been shown to be Pholiota sienna (Kauff.) Smith & Hes., North American Species of Pholiota, p. 259. 1968.

Stropharia silvatica Smith, Contr. Univ. Mich. Herb. No. 5: 65.

1941. This is Pholiota silvatica (Smith) Sm. & Hes., N. A. Species of Pholiota, p. 139. 1968.

(Letter, Mar. 7, 1977, from Dr. R. W. Embree, Assoc. Prof. at the University of Iowa)

Stropharia sphagnicola Maire, Bull. Soc. Myc. France 26: 192.

1910. This is Psathyrella sphagnicola (Maire) Fauve, loc. cit. (above).

Stropharia subumbonatescens Murrill, Mycologia 33: 280. 1941.

This is Naematoloma ericaeum (Fr.) Smith, Mycologia 43: 485. 1951.

Singer (1975: 536) calls it Naematoloma subumbonatescens (Murr.) Sing.

(unless too close to N. ericaeum).

Stropharia tenuis Murrill, Mycologia 14: 137. 1922. (non

Drosophila tenuis Murr., Mycologia 10: 65. 1918.) This is

Psathyrella membranacea Smith, nom. nov., North Amer. Species of

Psathyrella, p. 79. 1972.

Stropharia tuberculata Morgan, Jour. Mycology 14: 70. 1908.

This is Psathyrella tuberculata (Patouillard) A. H. Smith, N. A.

Species of Psathyrella, p. 78. 1972.

Stropharia umbilicata Pk., New York State Mus. Bull. 167: 49.

1913. Murrill (1922) thinks this is probably Gymnopilus polychrous

(Berk.) Murr. (properly Pholiota polychroa).

Stropharia venenata Imai nom. nov. (a new name for S. caerulescens

Imai [non Pat.] Sing.), Jour. Fac. Agr. Hokk. Imper. Univ. 43(2): 270.

1938. This is Psilocybe subaeruginascens von Höhnelt (cited above).