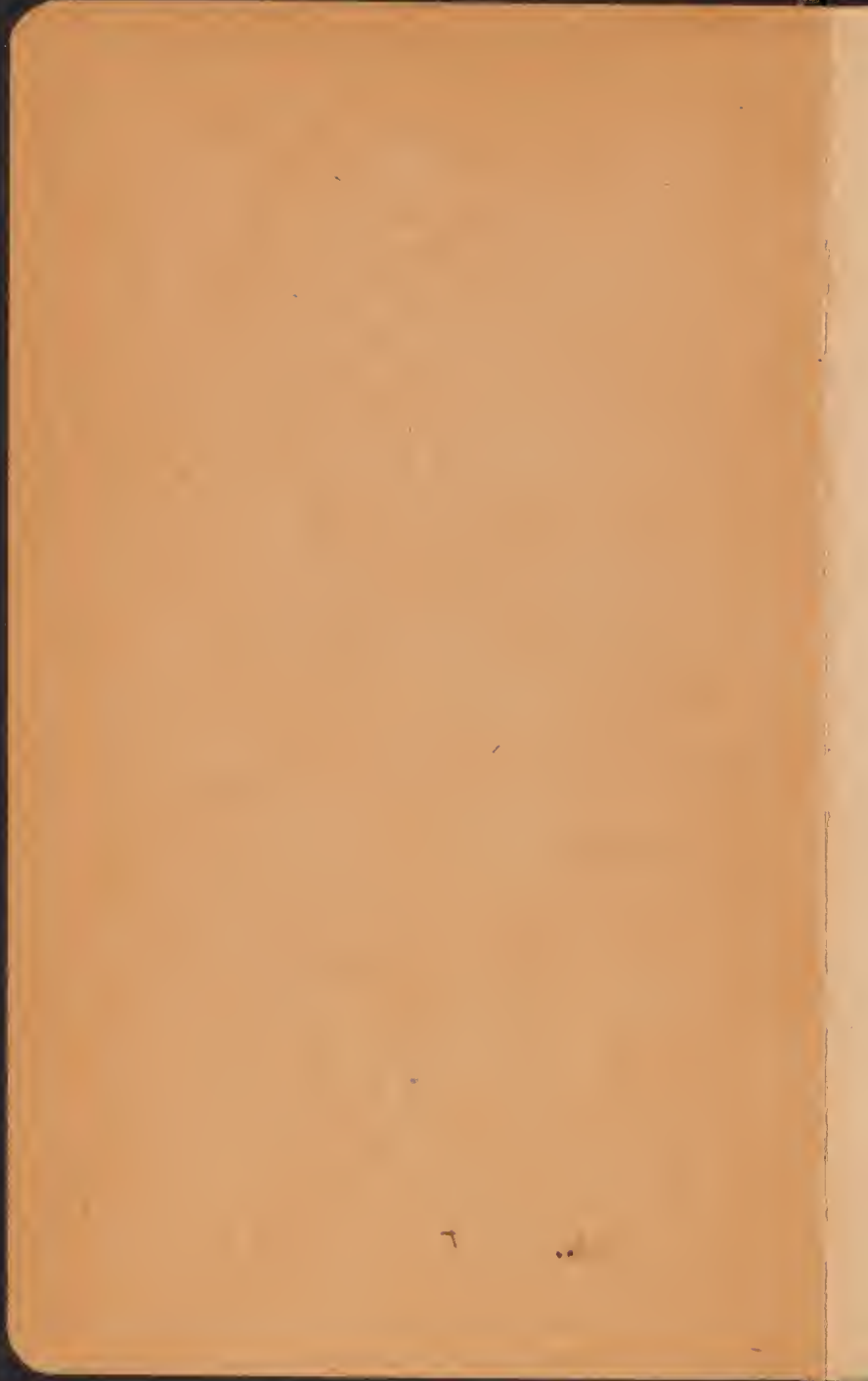


Record





Mycological Notebook

consisting of field notes, observations etc.
discussions of the literature of species
collected as well as tables, keys, etc col-
lected from sundry sources.

by

Carroll William Dodge AM. Ph.D

Volume Two

April 1, 1920 to June 30, 1921.

April 1, 1920. Farlow Herbarium.


Hymenogaster Klotzschii Tul det Farlow & S.M. G.
 On pots in greenhouse Bot garden
 Cambridge Dec 29, 99 [Thaxter Herb]

Fructifications drying 1 X 1.5 white
 spotted with antimony yellow or ^{the whole} cream colored.
 fibrils not present; peridium much wrinkled
 in drying [difficult to cut - becomes very soft on
 the first drop of alcohol, sections deeper brown
 on adding potash.] duplex, the outer layer
 170-180 μ of large thin walled, ^{much branched} hyphae
 very ~~loosely~~ interwoven; inner layer

Hysterangium pompholyx Tul Tul
 [7 Baxter] B3 H

Burbank E. Tenn Aug 7, 1896

Under beech trees beneath leaves
 White with reddish stains, hard tough
 gleba dull choc. brown rind reddish

Fructifications globose or ovoid
 0.8 x 1.5 cm in diam in alc. drying to
 1 cm in diam, flakey, and dirty in
 alc. drying cinnamon to sayal brown
 gleba drying buffy due to light brownish
 olive; columella  extending
 3/4 the way up, branched
 at the top; peridium separable.

Dendrogaster foetidus (Coker + Couch) 3 + D
[Thaxter] B I H in alcohol also mount

larges less than 1/2 in diam O - O

^{See Bottle VIII}
Hymenogaster Burbank, Tenn '96


Covered w. white mycel. to wh. dirt
Perid. firmly adherent, brownish. gleba
dr white almost black tough (lend) Underabies
Mycel. strands several.

Fructifications 0.5 cm in diam or less,
white at first becoming light ochraceous
buff on drying, fibrils not evident, radi-
cate mycelium at the base with pale
ochraceous buff fibres 1 cm and more
long; columella reaching the center of
the fructification ending in an ir-
regular head
at least shrinking
in alcohol



cartilaginous
on preservation

Peridium simplex appearing duplex
by the outgrowth of mycelial threads which
bind humus particles to the surface
simulating patches. True peridium of

olivaceous yellow, thick walled
 roughwalled hyphae $5-7\mu$ in diam
 peridium $100 - 175\mu$ mostly $100-130\mu$
 gleba brownish olive; cavities irregular
 partially filled; septa $45-60\mu$ thick
 of thinwalled slender closely woven
 hyaline hyphae; basidia pyriform
 4-spored $5 \times 7\mu$; sterigmata
 short, spores smooth oval, surrounded
 by a gelatinous sheath  slightly
 longitudinally sulcate or irregular

~~Dindrogaster~~ *Hysterangium strobillus* ^{3rd}

7. [Thaxter] B4H



Under beech $\frac{1}{2}$ in or less in diam
 Peridium white easily separable thin
 gleba rubber like soft tough chocolate
 brown Bottle & formalin see mount. basidia
 2-spored Hymenogaster No 5.

Fructification subsolitary under 1 cm
 in diam, ~~at~~ clay color in alcohol

nearly white dry; columella large
dendroid resembling a *Pinus strobus*
habit when seen in section percur-
rent. mycelial base but no other fibrils

Peridium simplex $\times 190-320 \mu$ of ~~thin~~
slender ^{2-3 μ in diam} compactly woven hyphae
with the outer portion running \perp to surface
growing out & enfolding particles of humus
~~2-3~~ gleba rubbery & chocolate brown
when fresh drying olive; cavities irregular
partially filled with spores; septa
somewhat scissile 50 or more μ thick
of the large hyaline hyphae with gelatin-
ous walls; basidia ^{12-15 \times 2-3} 4 spored linear?
or collapsing sterigmata long 4-5 μ
spores 1 \times 5 subfusiform with ~~plasma~~
~~no sheath~~

Octaviania mutabilis Roumequiere
 [Thaxter] B2H' Hymenogaster or
 Octaviania like that under log at
 Cranberry]. Burbank [E. Tenn] Aug
 13, [18] 96.

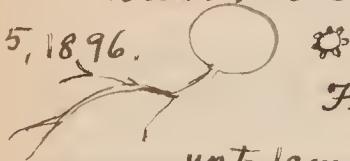
Fructifications small 1cm dry
 depressed globose, dirty white to mummy brown dry
 sterile base present but no
 trace of columella; peridium
 simplex separable 450-600 μ thick,
 of thinwalled much branched loosely
 interwoven hyaline hyphae 5 μ in diam
 gleba mar brown dry, cavities irregular
 empty; septa 140-160 μ sessile, of
 loosely woven hyaline ~~type~~ hyphae 3 μ
 in diam; ~~basidia~~ ^{paraphyses} clavate to subpiri-
 form 12 x 7 μ ; basidia linear 15 x 4
 mostly 4-spored; spores globose
 with prominent conical projections
 12-15 μ in diameter.

Octaviania mutabilis Roumeguère.

[Zaxter] B2H buried under rotten log

Pure chalk white Cranberry N.C. Aug

5, 1896.



Fructifications 0.7 in alc

up to 1 cm greatest diam

chalk white when fresh, drying dirty

sterile base present inconspicuous

peridium mostly rubbed off.

Hymenogaster tener Berk

Kittery Point. Me April 18, 1903 R.J.

In cult. ground under raspberries

Fructification flat, irregular dirty white about 2 cm in diameter gibbous sterile ^{base + columella} not eoident; fibrils none; peridium not separable 300-400 μ thick, colorless, composed of thin walled anastomosing hyphae 2-5 μ in diam very variable in size, much branched; gleba white cavities empty irregular; septa not scissile of the same texture as the peridium 50-100 μ ~~wide~~ thick, basidia projecting beyond the hymenial layer ^{15 μ} densely guttulate 20 x 10 μ clavate 4 spored; paraphyses or immature basidia 20 x 5 μ ; spores slightly ovoid yellow, inner spore minutely roughened or granular, outer covering hyaline gelatinous reticulate



fulvius (1)

~~Hyphogymnia Thaxteri g + D. n. sp.~~

Rhizogogon Thaxteri g + D. n. sp. . . .

Dirty white with reddish stains thick tough
 peridium dirty olive gleba Riley Place
 Kittery Pt. Me Sub Pinus strobus stains
 alcohol with bright red. [Thaxter 1902y
 R. Thaxter 1902y.

Fructification 1 cm in diam
 dirty white with reddish stains when
 fresh, becoming in alc carob brown to
 chestnut brown, fibrils scanty free
 but flattened against underside black
 in alc; ^{columella none} peridium 6-40 μ thick simplex
 yellowish brown, composed of large
~~to~~ thinwalled hyphae upto 5 μ in
 diam; gleba dirty olive when fresh
 Prout's brown in alcohol, cavities irregular
 empty; septa 60-70 μ thick, scissile, of
 of loosely woven (thickwalled) ^{hyaline} pellicle walled hyphae
 bandia cylindrical 18 x 4; sterigmata short
 spores oblong hyaline \odot truncate ends, with
 equatorially placed lens shaped nucleus
 5 x 2 μ .

Hymenogaster tener Berk.

Sept 15, 1902 Cornfield road Kittery Pt.

Mr R Thaxter 1902s ? same as 1902x

Fructifications $\frac{1}{2}$ cm + smaller
dirty white in alc, no fibrils, no columella
pendium

plba white

Hysterangium ~~*calcaratum*~~ *clathroides* var. *crassum*

[Thaxter] 1902a Kittery Point Me Sept 11, 1902,

R Thaxter Riley place sub *Fagus*

Color white, gleba olive roan color.

Fructifications about 1 cm in diam.
between isabelle color + light brownish
olive; peridium simplex, 300 μ of
^{septate} thin walled // hyphae, 4.5 μ in diam
gleba olive citrine; septa 110+ μ
thick of thin walled gelatinizing
hyphae; basidia

spores ellipsoidal, 11-13 x 4-5, brownish
in mass.

Hysterangium clathroides

July 10, 1897. Under hemlock, Kittery Pt. Me
 Gerrish I. R. J. [harster]

2 Fructifications globose 0.8 + 1.0 cm in
 diameter, mummy brown, fibulae absent
 peridium separable, rubbed off, in place
 duplex 450 μ thick; outer layer pseudo
 parenchymatous, 300 μ of ^{brongniart} polygonal cells
 15-30 μ in diameter; inner fibrous 150 μ of
 colorless, small gelatinized hyphae.

gleba ; septa hyaline up to 230 μ
 thick of gelatinizing hyphae; basidia
 cylindrical

Peridium chalk white irregular, veined,
 easily separable gleba olive brown firm
 elastic spores fusiform without markings
 underabrescanadensis below surface
 gate on old Gerrish I. road

Rhizopogon luteolus Fitzinger & Nordmann
 Concepcion Chile dirty gamboge yellow,
 under needle cover beneath introd. Pinus
 Oct 1905 R. Thaxter.

Rhizopogon atlanticus Coker + Dodge
 Hymenogaster at base of long leaved
 pine Eustis Fla. Oct. 1897 R. Thaxter

Fructifications globose to somewhat
 irregular up to 0.8 cm in diam, yellowish
 in alc drying smuff brown or lighter.
 fibrils somewhat free scanty anastom-
 osing & concolorous with peridium

Gallacera Thaxteri (Z. & D.) Speg.

Hysterangium Thaxteri Z + D n. sp.

Parque 3 Feb. Buenos Aires Mar 1906 [R Thaxter]

Fructifications shrinking to 1.5 cm in alcohol
glycerine russet to Mars brown.

fibrils slender abundant free concolorous

peridium thick 33 mm thick duplex, outer

layer 140-150 μ of thickwalled hyaline densely

woven hyphae 4-5 μ in diameter, inner perid

3100-3150 of loosely woven thinwalled

hyphae 2-4 μ in diameter in a gel, ^{with clamp connections}

gleba argus brown

columella straight 1 m thick cylindric unbran-

ched gel in center third

septa 40-45 μ of loosely woven nodose

hyphae, ^{thin walled} 2-3 μ in diam, in a gel, basidia

oblong clavate

spores numerous per basidium smooth nearly

hyaline singly but brown in mass, 3 x 2

ellipsoidal

Zeller 1725 *Scleroderma hypogaea* Zeller
Peridium 4500 μ compactly woven hyphae
gleba black ashy fracture
Capillitium 5 μ in diam yellow with roughened
walls
spores 20 μ in diam dark purplish brown

Dodge 974 and 1294

Scl. aurantium (Vailly) Pers

Hollos part Hung 1314 - 177. 274

citrinum Herb Schw

vulgare Marshall

verrucosum Lloyd.

Scl. Bovista Fr

Texense B.

(Baill)

Scl. Cepa Pers

Scl. Coelatum (Pat) Sacc & Syd.

Mycenastrum coelatum Pat W.I.

Scl. Corium

Myc. corium Desv.

Myc spinulosum PK

= var Sterlingii Lloyd.

= Dugesii (Deynes) Sacc (Mex)

Mycenastrum Dugesii Deynes

= flavidum Ell & Ev. var

achyrea multifida Raf.

= Geaster

* polyrhizon S Lyn Car 349

Stella americana Massee

Sclerangium americanum E Fischer

Achlya sicula Raf is a variety

Scl *Martincense* (Pat) Sacc + D Sacc

Ohense is *Bovistella radicata*

Scl. *divacuum*

oregonense is *Bovista pila* B+C

Scl *Pteridis* Shear. Bull Torrey Bot Club ^{29:451}₁₉₀₂

Scl *sclerodermoides* (Clements) Fischer

Scl *spinulosum* (Pk) De Toni

Bovista spinulosa Pk

Mycenastrum spinulosum Pk

Scl *tenerum* B+C

lycopodioides Sch

verrucosum Auctam p.p.

vulgare Auctamer p.p.

Bovista auctamer p.p.

Scl. *verrucosum*

var *maculatum* Pk

Scl *violaceum* (Raf) De T)

Scl *vulgare* Fr


Gasterosporium

Color chalky white, more or less soiled w. brownish Bogg's farm, humus & among leaves. Thick gelatinous wall as thick as the diam. of lumen nearly filled with powdery spore mass.

Cocoanut Grove Fla. Nov. 1897

P. Thaxter

Collection of 3 fructifications 1.5 cm in diam "chalky white more or less soiled with brownish" Prouts brown toummy brown in alc 1920. Long slender, paler rootlike mycelium; surface smooth; interior a single large cavity lined by a hymenium; basidia

 7x5; spores hyaline or dilute olivaceous, 3 μ in diam.

Basidia scattered not in definite hymenium, longitudinally septate 4 spored.

Hymenogaster arenarius Tulasne

Found in potato field Kittery Pt Me
R Thaxter Sept 10, 1903 chalk white

Fructifications 0.5-0.6 cm in diam
chalkwhite when fresh, smoke gray in
alcohol; fibrils none; slight sterile base
but no columella

cavities more or less



rotund radiating from the base. peridium
250-320 μ thick of large, thinwalled
~~to~~ hyaline hyphae 7-8 μ ^{in diam.} ~~thick~~; gleba
concolorous

Hysterangium Cistophilum (Zul) Z. + D.

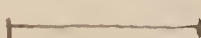
[R Thaxter] Fung Hypog No 3 white stained with and turning fawn red. Gleba olive, peridium separable, very variable in size \pm to \pm

Woods above Unw (?) Puntas Arenas
Chile Feb. 1906.

Fructifications 0.4 to 2.3 cm drying to 1.0 cm in long diam. subglobose to elongated ob-pyriform or even subobconical; white with and turning fawn red, now Apr '20 drying light pinkish cinnamon to basal brown; radicating mycelium prominent, fibrils not evident. peridium separable μ thick, of closely woven brownish hyphae parallel to the surface; gleba olive drying deep ^{green} grape to Lincoln green; cavities somewhat irregular, empty.

Gautieria ^{Harknessii $z + d$} *graveolens* Vitt.

[R Thaxter] Fung. hypog No 14 Hymenogaster. irregular] lobed-peridium evanescent or absent spores longitudinally winged: mottled dull white with rough dirty surface. gleba pale reddish brown

Under leaf cover in sandy bank in woods above  Puntas

Arenas Chile Feb 28, 1906 R.J. also
Mass. 1106. R.J. Formalin spec.

Preserved specimens resemble *Plumbea* in color but not in structure.

Hydnangium
~~Sclerogaster~~ liocporum?

Hypogaeous - Dry hilltop under pine needles
 Herm[?] woods Nov. 1905 R.J. [Haxter]
 Concepcion Chile.

Fructifications badly insecteaten
 sterile base not evident; fructifications
 drying 1.5 cm in diam., probably
 globose to somewhat irregular;
 drying pinkish buff to tawny olive; fibrils
 not evident; columella not seen; peridium
 duplex, μ thick, outer layer yellow
 thick of yellow closely woven hyphae
 inner layer μ thick of loosely woven
 slender hyaline hyphae, line of demar-
 cation between layers not sharp; gleba
 concolorous, ^{caulus} small, polygonal, empty
 septa μ thick of anastomosing pale
 yellow gelatinized hyphae; basidia
 μ thick - spored, sterigma-
 ta; spores variable between
 typically thick walled roughened spores
 and smooth, globose, 7-8 ~~7-8~~ μ
 of short ellipsoid.

Hysterangium cristophilum (Tul.) Z. + D.
 [R Thaxter] Fung hypog. Puntas Arenas
 Chile Mar 1906.

Fructifications drying 0.6cm or less
 swelling in alc + glycerine to
 subglobose, drying wood to snuff
 brown, soaking up to near Van Dyke
 brown; radicating mycelium prominent
 columella slender, cartilaginous not
 prominent when dry nearly percurrent.
 peridium thin 50 μ thick -

Rhizopogon occidentalis Z+D

Dry hilltop under leaves Color dirty
cream... Concepcion Chile Nov. 1905
Collection also contains:

? *Arcangeliiella Soderstromii* (Sagert) Z+D
Color dirty cream running to crushed
strawberry red

Rhizopogon violaceus Cooke & Massee

[R Thaxter] Hypogaeus No 1 Nov
1905 mostly buried in ground
^{stains purple}
Hum Woods. [Concepcion, Chile]

Gleba has shrunk away from the
peridium and fills not more than
 $\frac{2}{3}$ the ~~root~~ peridium. Otherwise typical.
= *Gelopella Thaxteri* Zeller Mycologus 31: 22, 1939

Scleroderma undulans Thaxter herb nom

Scleroderma like undulating
in pockets on side of path cut
on bank Hum woods Concepcion
Chile just visible from exterior
Nov 9, 1905.

Both dried and preserved material

Fructifications up to 1.2 cm preserved subglobose, light pinkish cinnamon to cinnamon and sorghum brown, to light seal brown; fibulae scanty large prominent concolorous becoming free partially ^{on} at drying.

Hysterangium clathroides Vitt.

R Thaxter Punta Arenas Chile 1906
 Single large globose fructification
 1.5 cm in diam color like preserved
 material of *Hysterangium* (Thaxter Fung
 Hypog No 3) dirty brownish white with
 brown spots; gleba very dark olivaceous
 in alcohol, whole gelatinous shiny now
 mycelial base + included dirt nearly
 as large as the fructification,
 columella inconspicuous running
 to the center of the fructification.

Hymenogaster albellus M + R

Hymenogast. No 1 Gleba dull red brown
Punta Arenas Chile [R Thaxter Feb 1906]

Fructification 0.8 X 1.5 reniform
olivaceous black in formalin, no
base, no columella apparent, no
fibrils, texture soft + hard to cut; gleba
concolorous;

Hymenogaster

Buenos Aires [Argentina] Oct. 1-10, 1965

R. Thaxter.

Simple small fructification, 0.8 cm
in diam, ^{sub}globose, olivaceous black in
alcohol; columella, fibrils + radicating
mycelium not evident; gleba concolorous
much firmer than the preceding;

Hymenogaster tener Berk.

Hymenogast. 1902x. Sept 18, 1902, Kittery Pt
 pend chalky white in road to beech ^{0.193}
 under leaves

Fructifications small not over 4mm
 in diam. ^{globose} dirty white in preservative
 no fibrils no radiating mycelium
 no columella evident. still young
 only a few scattered mature spores,
 mostly still clinging to basidia

Hymenogaster tener Berk

Cutts Island, Kittery Pt. Me Sept 13, 1902
Road to beach under leaf humus spores
♂ see mount *Hymenogaster* 1902 X R. Thaxter

Fructifications small not over 0.6 cm
in diam, globose dirty white in preservative
slight amount of dirt adherent to base with
slight thickening of peridium simulating
a sterile base, rather more mature, spores
still clinging to basidia; gleba concolorous
with peridium;

araneosus ZT.D.

Senecogaster ~~hispidus~~ ~~var. thaxteri~~

... Cranberry N.C. Aug 1896 R Thaxter

Fructification single globose 0.6 cm
in diam, snuff brown to brates,
fibrils scanty inconspicuous altho
proportionately large half innate,
somewhat branched but not anasto-
mizing; sterile base none columella
none; gleba tawny in cavities lighter
sepals; peridium simplex 130 μ -180 μ thick
of very fine brown closely woven hyphae,
septa thin, compact between mycelial
layers 40-50 μ thick of three layers, i.e.
middle layer slightly colored, compactly
woven gelatinizing hyphae, hymenial
layer very loosely woven basidia on long
slender pedicels, nodding, paraphyses
none, basidia hyaline granular guttulate
of pyriform, 8-10 μ X 6-8 on pedicels
up to 300 μ long, 4-spored; spores shallowly
pitted, 8-11 in diam surrounded by a
thin gelatinous sheath.

Notes at Gray Herb May 7-8, 1920

Petch J. additions to Ceylon Fungi.

Roy Bot Gard Peradeniya 6: 195-256, 1917.
page 207. Hymenogastreae

Rhizopogon flavum, n. sp.

Subglobose or ellipsoidal, scattered or fused in clusters, up to 3 cm X 2 cm sordid yellow sparsely covered with brown mycelial strands. Peridium about 0.5 mm thick, yellow internally; septa thin. Internally blackish brown, gleba yellow when mounted. Spores pale yellow, narrow-oval or cylindric, ends obtuse 4-6 X 2-3 μ . Hakgala, January 1914.

No 3936 in Herb Peradeniya

Subglobosum vel ellipsoideum sparsum vel conglobatum, ad 3 cm X 2, sordide flavum, rhizomorphis brunneis sparsis tenuibus vestitum; peridis circa 0.5 mm crass., intus flavo; septis tenuibus; gleba flava, per saturatam nigro-brunnea; sporis pallide flavis, angusto-ovalibus vel cylindricis, obtusis, 4-6 X 2.5-3 μ .

Hymenogaster zeylanicus n. sp.

Subglobose or depressed, up to 2 cm diameter, brownish yellow, rugose, internally reddish-brown (dry). Chambers small, irregularly polygonal toward the center, tending to rectangular and tangentially elongated toward the periphery, up to 1×0.3 mm. Wall thin about 25μ thick when dry, dissepiments up to 1×0.3 mm. ~~Wall thin, about 25μ thick when dry, dissepiments 10μ thick (dry)~~ No central columella. Basidia one-spored, sterigmata short (3μ). Spores yellow brown verrucose, thick walled oval or biapiculate $12-16 \times 8-9\mu$. Hakgala May 1913; No 4603 in Herb Peradenya.

208.] Subglobose vel depressus ad 2 cm diam brunneo-flavus, rugosus intus (sicco) rubrobrunneus; loculis parvis, centro irregulariter polygonus exteriorem versus quadrangulis et elongatis, ad 1×0.3 mm; peridio tenui circa 25μ crasso. (sicco, dissepimentibus

10 μ crass; columella nulla; basidiis unisporis
sterigmatibus brevibus, sporis flavobrunneis
verrucosis, episporio crasso ovalibus vel
bipapiculatis 12-16 X 8-9 μ .

Hooker, J. D. Bot. of the Antarctic Voyage of
H.M. discovery ships Erebus & Terror in the years
1839-1843 under command of Capt Sir James
Clark Ross... by... Part III Florae Tasmaniae
2: 263⁴. Aug 18, 1859 see Jackson in Bull
Boiss. 1: 299. for dates of parts.

1. *Octaviania Archeri* (Berk.); obovata,
pusilla, basi sterili satis magna,
fibrillis nullis trama compacta, sporis
globosis echinatis.

Hab. On sandy ground, Archer.
Obovate, $\frac{1}{4}$ inch high. Peridium very thin
passing into a thick sterile base, from
which proceeds a little [264] down, binding
the sand together without any decided
filaments, Trama compact. Spores
globose, $\frac{1}{2}$ inch across, strongly

echinulate. — This agrees with *Hydnangium* in the trama separating in the centre, in consequence of its compact structure, and with *Octaviania* in its sterile base. There is only a single specimen, much eaten by insects.

Boudier & Patouillard, Note sur deux nouvelles espèces de Champignons des environs de Nice. Journ de Botanique 2:445. 1888.

1. *Hydnangium monosporum* Boud et Pat

Subepigaeum, simplex aut subcespitosum

3-4 cm. latum et totidem altum, fulvo-ferrugineum ~~fuliginosum~~, ovato-pyriforme, irregulare vertice saepius depresso. Receptaculum extus plus minusve papillato squamulosis, intus gleba firma, albida aut albedo-lutescente, trita fulvescente, et loculis numerosis, minutis, oblongis et varie flexuosis semper vacuis, repleta Hymenium basidiis oblongo clavatis, 30-40. X 12 μ formatum maturis sterigmate

elongato, unico, longitudine dimidio aequante
 supra attenuato et sporam unicam gerentibus
 Sporae hyalinae, perfecte rotundatae, extus
 minutissime echinulatae, hilo bene con-
 spicuo et intus guttula unica crassa
 et media granulisque minoribus repletæ
 15-16 μ latae Odor gravis, Ananatis
 sativæ paululum in memoriam revocans

Ad terram argillosam in collibus Agri
 Mcaensis, unde misit D. Barla.

Cette espèce que nous voyons décrite nulle
 part est assez grosse, puisqu'elle atteint
 et même dépasse la taille d'une noix. Elle
 nous paraît devoir rentrer dans ce genre
 par la dureté de sa chair et ses spores
 blanches, rondes et échinulées, bien
 distinctes de celles des Hymenogaster.
 Les vacuoles hymenifères ne sont jamais farcies
 de spores. Elle s'éloigne de toutes les espèces décrites
 par sa couleur et surtout par la forme particulière
 de ses basides atténuées en un stérigmate allongé
 et ne supportant qu'une seule spore. Son odeur est

assez forte et penetrante et rapelle un peu celle de l'Ananas, quoique moins agreable.

Elle nous a été envoyée assez frequemment de Nice par notre eminent collègue M. Barla, à qui la mycologie de cette region doit tant de decouvertes precises.

Hennings, P. Die in den gewächshäusern des Berliner botanischen Gartens beobachteten Pilze.

Bot. Vereins der Prov. Brandenburg. 40: 109-
^{2 pl. 9 figs.}
 177. 1898.

[146] *H. [ymenogaster] tener* Berk. n. var. *arbuticola*
 P. Henn. Taf. 1, Fig. 19. Fruchtkörper unregelmäßig kugelig, etwas eckig, höckerig oder grubig, anfangs weißlich oder gelblich seidig glänzend, mit dünner etwas schülferiger oder faseriger Peridie, später schmutzig bräunlich, auf der Oberfläche oft bis tief ins Innere zerklüftet. Gleba anfangs weißlich oder gelblich, dann graubraun, endlich schmutzigbraun mit unregelmäßigen Höhlungen durchsetzt. Sporen citronenförmigen, erst 1 tröpfig, später von zahlreichen kleinen Tröpfchen

erfüllt, ihre Membran warzig, rotbräunlich, $14-18 \times 7-8 \mu$; Basidien $15-17 \times 9 \mu$ geruch anfangs wangenartig, später nach frischen Mohrrüben.

Auf Töpfen und Kübeln von *Arbutus Unedo* und *A. Andrachne* im Winter bis zum Mai. Die Fruchtkörper entwickeln sich meist aus der oft zerklüfteten Rinde oder Stämme oberhalb des Erdbodens, sowie aus den halb oberirdischen Wurzeln der Pflanzen; seltener brechen sie aus der Erde der Töpfe zwischen den Wurzeln hervor. Häufig treten die Fruchtkörper nesterweise auf.

Nach Hesses brieflicher Mitteilung scheint ihm der Pilz nicht zu dieser Art gehörig, sondern neu zu sein, während Bresdola ihn für diese ansieht. Vorläufig mag er hurgestellt werden.

Richon, Ch. Note sur deux champignons nouveaux
Hymenogaster leptoniaesporus et *Capronia juniperi*
 Soc. Bot de France Bull. 34: 59-61. pl 2, f. 1-2. 1887.

[59] *Hymenogaster leptoniaesporus* Ch. R. (planche II, fig. 1)

spec. nov. — Cette espèce, trouvée à Saint-Sunier, en Champagne, m'a été communiquée par M. Jannet, Cultivateur, le 9 septembre 1885. C'est au cultivant le sol crayeux d'un champ de Suzerne avec la charrue, que les Hymenogaster, d'une grosseur variant entre celle d'une noisette et celle d'une châtaigne, apparurent à la surface.

À cette époque je constatai, par l'examen microscopique de la glebe, la présence de spores anguleuses et rosées, rappelant celles des Entoloma et des Septonia; soupçonnant une nouveauté, je consultai la planche X des Fungi hypogaei de MM Tulasne, représentant 13 espèces d'Hymenogaster et je remarquai qu'aucune spore dessinée n'affectait cette forme sporifère particulière.

L'année suivante, une seconde récolte faite dans la localité désignée me donna les mêmes résultats.

Voici les renseignements que j'ai pris sur cette espèce:

Le peridium, à l'état frais, est de forme variable, tantôt sphérique, tantôt piriforme mamelonné, de consistance ferme; sa surface est lisse, blanche

puis couleur chamois; il rassemble, a première vue, au *Rhizopogon luteolus*; ordinairement, il est privé de racines, et néanmoins j'ai remarqué chez quelques sujets un petit faisceau rudimentaire de radicelles brunâtres et très courtes (voy. fig. 1) partant d'une légère dépression située à la base du peridium.

La glèbe, blanche d'abord, puis rougeâtre, est composée de plis sinueux, tapissés par un hyménium porteur de larges bandes claviformes, surmontées lors de leur développement complète, de deux a quatre apicules courts. Chaque apicule porte une spore semblable, a s'y méprendre, a celle des *Septonia*, d'où vient le nom de *Septoniaesporus* que nous donnons à l'espèce. Étant jeune, la spore est incolore et ovoïde; avec l'âge, elle prend la forme hexagone et la teinte qui caractérise les *Agaricines* à spores roses.

Mes observations microscopiques s'accordant parfaitement avec celles de mon ami Boudier à qui j'ai soumis quelques échantillons, je présente, sans hésiter, l'*Hymenogaster leptoniaesporus*

comme une nouvelle espèce pour la flore cryptogamiques.

Caractéristique de l'espèce:

Hymenogaster leptoniae sp. nov. Ch. Richon —

Peridium carnosum, laeve, subglobosum vel irregulare lobatum, in junioribus album, in adultis ochraceum, subtus paulo depressum et aliquando ad basin fibrillis fuscis, brevibus instructum magnitudine avellanae, juglandis et ultra: odor nullus; gleba albida demum rufescenti lacunis gregis, basidiis stipatis sporiferis composita; sporophora obovata et plurimum 2-4 spora; spora hexagonae spora Septoniae aemulantes, leves, coloratae ad roseum vergentes et guttula magna factae in basidii apice sterigmatibus brevibus suffultae. Fungus gregatim vel solitarie 5-6 cent. alte in terram immissus. Habitat in agris cultis et locis graminosis, Saint Sumier, prope Saint-Amand-sur-Fiond. September 1885. — Octob. 1886.



purplish purple

Hennings, P. *Fungi japonici III* [Engler] Bot
 Jahrb. f. syst pfl ges. u. pfl geog. 32: 33-46. 1902.

[41] *Hymenogaster Suzukianus*, P. Henn. n. sp.;
 peridio subglobozo-ovato, substipitato vel sessili,
 tenui, plicato gyroso, clauso, carneo-brunneo
 ca. 5-10 mm. diametro; gleba carnosae laciniis
 irregularibus, gyrosis, creberrimis exculpta,
 ochracea; sporis citriformibus, verrucosis
 rufo-brunneis, 15-18 x 12-14 μ superne papillatis
 inferne substipatis.

Komaba: auf Erdboden (F. Suzuki n. 45, April 1900)

Hennings, P. *Fungi camerunenses II*. [Engler] Bot
 Jahrb. f. syst; pfl ges. u. pfl geog. ~~33~~²³: 537-558. 1897.

[557] *Corditubera* P. Henn. n. gen.

Peridium carnosum, tuberiforme, durum, leve,
 glabrum, tenuiter corticatum, intus farctum,
 reticulato-venosum; basidia subclavata 4sterig-
 matibus; sporae globosae, aculeatae, hyalinae
 coloratae, stipitatae Pompholyci Corda aff.

C. Staudtii P. Henn. n. sp.; peridio carnosum,
 cordiformi, duro, firmo medio sulcato, 5 cm

longo latoque 2-2½ cm crasso, cortice tenui,
 levi glabro, dein meandriformi rimoso, primo
 pallido, dein sanguineo; intus carnosio, farcto
 duro venoso-reticulato, e pallido rubescente;
 basidiis subclavatis vel oblongis, 4-sterigmatibus
 sporis globosis, dense echinatis, [Plate copied in E. P.
 hyalino-fuscescentibus 9-13µ diametro, aculeis
 1-1½ µ longis, sterigmatibus 4-5 µ long.

Kamerun: Solodorf am Berge Mbange in
 einer dunklen Felsenhöhle auf der Erde liegend
 (Staudt n. 127 — 10. März 1895).

Ein merkwürdiger, fleischiger, herzförmiger
 Pilz, der mit einer glatten, später etwas rissigen
 sehr dünnen Rinde umkleidet ist. Im Innern
 fand ich zahllose kugelige Sporen, die meist
 zu vier in gewissen Abständen liegen.

Basidien wurden von mir nicht wahrgenommen. Ich sandte daher einen Säugschnitt an Herrn Prof. E. Fischer in Bern der so lebenswürdig war, eine genaue Untersuchung des Stückes durch Herrn F. Bucholtz in seinem Laboratorium ausführen zu lassen.

Setzterer hat das Resultat seiner Untersuchung in folgenden Sätzen zusammengestellt und mir die obenstehende Veröffentlichung übersandt. Herrn Prof. Dr. E. Fischer sowie Herrn F. Bucholtz sage ich hiefür besten Dank.

Nach Untersuchung des letzteren besteht der Fruchtkörper aus einem Geflecht von unregelmäßigen vielfach verzweigten Hyphen, welche an der Oberfläche dichter zusammenliegenden und so eine bräunliche Rindenschicht bilden. Das Innere des Fruchtkörpers ist von netzartig verzweigten Adern durchsetzt, zwischen denen die Sporen in einem lockeren, leicht verschwindenden Geflecht eingelagert sind. Die Endverzweigungen solcher Hyphen, reich an plasmatischem Inhalt, bilden Basidien, an deren Enden auf recht langen Sterigmen die stacheligen Sporen abgeschützt werden. Setztere sind 9-12 μ im Durchmesser und besitzen eine dicke, stark lichtbrechende Membran. Die Stacheln sind nicht zugespitzt, sondern sind schmal cylindrisch (Fig. 6, 7). Das Sporenlumen steht manchmal mit den

Sterigma lumen in offener Verbindung (Fig 6) doch ist meistens durch Membranverdickung die Öffnung geschlossen (Fig 7.) zuweilen scheint die Basidie seitlich an den Hyphen zu entstehen (Fig 1, 5) Sie ist sehr dünnwandig und zart nach der Sporenreife ohne Inhalt und nur nach Färbung mit Haematoxylin sichtbar.

Gray Herb. June 4, 1920
 Massa, G. Fungi exotici I. Kew Bull
 Misc Inf. 1898: 113-136. 1898.

124. The following collection, remarkably rich in new and interesting hypogaeous species, was referred to Kew for determination by Mr. S. Rodway of Hobart, Tasmania. Coloured figures of the Basidiomycetes were sent with the specimens. ...

125. *Gymnomyces*, Masset Rodw (gen. nov.)
Peridium haud distinctum vel nullum
 gleba carnosae, ad basin fertilis, extus
 intusque lacunosa, cellulis cavis ubique

subaequalibus; septa haud scissilia.
Basidia plerumque 2-spora. Sporae
 globosae, hyalinae, echinulatae vel verru-
 cosae.

Differs from Gautieria in the hyaline
 globose spores. Some species of Octaviania
 in which the peridium is very delicate,
 bear some resemblance to the species
 included in the present genus, but are
 distinguished by the well developed
 sterile base ~~and sterile~~ ^{and the tinted} spores.

Gymnomyces pallidus, Mass. et Rodw
 (sp. nov.) Gleba globosa, irregularis,
 intus albida, dein sordida, cellulis
 majusculis irregularibus sordide
 albidis; septa tenuia, albida, nec
 scissilia. Sporae globosae, 9-10 μ diam
 hyalinae, verrucosae, saepe
 brevissime caudatae, in quoque basidio
 binae, sterigmatibus brevibus suffultae

Underground, Rodway, 299.

Irregularly spherical, 2-4 μ in

diameter, very fragile, no distinct peridium
sterile base obsolete, but in one specimen
growing into a slender stem emerging
from an umbilicus

Gymnomyces seminudus Mass. et Rodw.
(sp. nov.). gleba globosa, albida, extus
laxe tomentosa, 1.5-2.5 cm, lata,
cellulis minutis ~~et~~ creberrimis vacuis
irregularibus; septa crassiuscula, albida
nec scissilia. Basidia subclavata, 2-
sterigmatica. Sporae sphaericae,
11-12 μ diam., creberrime echinatae,
hyalinae

Emerging from the ground, Rodway, '24.

There is a delicate external downiness
or silkiness, which may be considered
as a very rudimentary peridium. There
is no trace of a sterile base, which, along
with the hyaline spores, separates this fungus
from those species of *Octaviania* in which
the peridium is slight. Distinguished from
G. pallidus, Mass. et Rodw. by the larger, strongly
and densely echinulate spores. " "

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Hymenogaster Rodwayi, Massae (sp. nov.).

Peridium globoso-deforme, sat irregulare, carnosulum, sericeum, albidum, demum lutescens. Gleba firma, compacta, demum obscure brunnea, cellulis minutis irregularibus e basi sterili ad peripheriam obscure directis. Basidia clavata, 2-sterigmatica, sterigmatibus brevibus $40 \times 7-8 \mu$. Sporae ellipticae vel limoni-formes, apice apiculatae, basi ^{sub}truncatae, longitudinaliter rugulosae vel carinatae, initio ochraceae, dein flavo-brunneae $20 \times 10-12 \mu$.

Among buried twigs Hobart, Rodway 116.

Growing underground, irregular, 2-3 cm. in diameter, white, becoming dingy yellow when dry. Peridium very distinct. Gleba compact, cavities small, irregular in form, showing an indistinct tendency to radiate from the sterile base toward the periphery of the fungus. Sterile base

conspicuous, and giving off branching veins penetrating the gleba, which becomes dark brown at maturity. Basidia usually with two sterigmata, sometimes however only a single sterigma is present. Spores elliptical or lemon-shaped, apex apiculate base slightly truncate at the point corresponding to the attachment of the sterigma; longitudinally ribbed, ribs simple, or forked and anastomosing, strong, converging at the ends.

Most nearly approaching H. decorus Tul the latter however differs in the violet color tinge of the gleba, the narrow basidia very inconspicuous sterile base, and larger spores, which lack the strong longitudinal ~~ribs~~ ^{wings} ornamenting the epispore of the present species.

Hymenogaster albellus, Mass. et Rodw.
(sp. nov). Peridium globosum, irregulare,
subglabrum, album, demum pallidum, tenu-

issimum, nec separabile. Gleba pallide
brunnea, firmula, cellulis majusculis &
pulvinulo basilari sterile minuto albido
subradiantibus. Basidia clavata, haud
raro furcata vel regularia, 1-4; plerum-
que 2-sterigmatica, sterigmatibus longi-
usculis. Sporae elliptico-fusiformes
vel citrifformes, vulgo utrinque apiculatae
flavae, maturitate flavo-brunneae, verru-
culosae 16-17 x 8-9 μ .

Subterranean, Rodway, 117.

Irregularly subglobose, white, 2-3 cm
in diameter. Most closely allied to H. tener
Berb., but readily distinguished by the
larger cavities of the gleba, much less
conspicuous sterile base, and the

127. distinctly although very minutely
warted spores. H. Klotzschii, Tul., also
presents affinities with the present
species, but differs in the obtuse,
glabrous spores.

Hymenogaster violaceus Mass. et Rodw. (sp. nov.).
Peridium globosum, sat irregulare, lilacino-
 fuscum, dein ~~brunnea~~, cellulis tortuosis
 majusculis violaceum, viscidum, tunc
 in gleba innatum, sericeum. gleba sub-
 elastica, initis tota albida, dein brunnea
 cellulis tortuosis majusculis creberrimis
 basi sterili glebae minutis; septa tenuia
Basidia angusta, subflexuosa, 2-sterig-
 matica, sterigmatibus longiusculis
 acutis. Sporae globoso-ellipticae, ob-
 tusae, verruculosae, $9 \times 7 \mu$, initis ochraceae
 dein fuscae.

Subterranean, or emerging from
 the ground, Rodway, 297.

Irregularly subglobose, 2-3 cm. in
 diameter. Allied to *Hymenogaster lila-*
cinus, Tul., and *H. decorus*, Tul.; differing
 from the former in the viscid, violet
 peridium and warted spores; and from
 the latter in the absence of a violet

or purple tinge in the gleba, and the much smaller spores.

Hysterangium viscidum, Mass. et Rodw.
(sp. nov.). Peridium irregulare, oblongum,
extus castaneum, viscidum, 3 X 1.5 cm.,
facile a gleba separabile, elasticum,
cellulis e basi radiantibus irregulari-
bus minutis; septa crassa, brunnea,
non scissilia. Sporae oblongo-ellip-
ticae, utrinque obtusatae, 14-15 ~~µ~~
~~µ~~ X 10 µ, 3-4 in quoque basidio,
papillatae, flavo-brunneae, pellucidae,
vel in massis viscae sordide brunneae.

Underground near Hobart, Rodway, 270.

Readily distinguished in the genus by
the chocolate-brown, viscid peridium,
and the elliptic ~~oblong~~, obtuse spores.

Hysterangium fusisporum Mass. et Rodw.
(sp. nov.). Peridium subglobosum, irregulare,
leve, albidum, tenuissimum, nec a gleba
separabile, extus albidum flavo-maculatum

intus albidum. Gleba firma albida pallida
 cellulis exiguis irregularibus sinuosis
 absque basi sterili vix conspicuis. Sporae
 fusiformes, leves, 20-22 x 8 μ , in quoque
 basidia binae, sterigmatibus brevibus
 suffultae, hyalinae.

Growing underground, Rodway, 276.

A distinct species irregularly subglobose
 1.5-2 cm in diameter. Allied to H.
membranaceum, Vittad., and to the
 following species, but readily distin-
 guished from either by the larger,
 distinctly fusiform, hyaline spores,
 acute at both ends.

Hysterangium affine, Mass et Rodw (sp. nov.)

Peridium, subglobosum, basi fibrillis radi-
 calibus instructum, supra nudum, crassum,
 extus pallide fuscum, fibrillosum, intus
 candidum, a gleba facile secedens.

Gleba matura gelatinoso elastica, prima
 aetate sordide viridis, dein obscura grisea

cellulis difformibus gyrosis creberrimis
 minutis. Basidia oblongo-subclavata, 40 x 8 μ .
 plerumque tetraspora, sterigmatibus brevibus
Sporae ellipsoideo-oblongae, utrinque
 obtusatae, leves, pallide glaucovescentes
 11-13 x 5-6 μ .

Mc Robie's gully, Hobart, Rodway, 123.

A very fine species, subglabrous, 1-2 cm
 in diameter, collected in abundance at
 the locality given above, by Mr. Rodway.
 Occupying a position intermediate
 between H. clathroides Vittad. and H.
membranaceum, Vittad., but quite
 distinct from either. Distinguished
 from the first named in the presence
 of well developed, persistent. [128] rooting
 fibres, and the absence of a broadly
 effused, pure white mycelium; and from
H. membranaceum Vittad. in the thick,
 glabrous peridium and the very slight
 indication of a sterile base. The basidia

are most frequently tetrasporous, but a few bisporous basidia are present. The sterigmata are very short.

Hysterangium clathroides, Vittad. Monog
Tuber. (1831) ^{P. 13} t. 4, f. 2.

Subterranean Rodway, 265.

Hysterangium membranaceum Vittad.
Monog Tuber (1831) p. 14. t. 4. fig 15.

Closely allied to *H. affine* Mass. & Rodw.
But distinguished by the membranaceous
dry subtomentose; white peridium, which
like the gleba, becomes tinged with
indigo or green when bruised.

Underground, Hobart, Rodway 288

Hydnangium australiense Berk. et Broome
in Trans. Linn Soc. ser 2, ii (1883); *Octaviania*
australiensis, Cooke Handb. Austr. Fungi
(1892) p. 246.

Subterranean, Rodway, 20. Also known
from Victoria.

Emerging from ~~the~~ ^{the} ground; when freshly
cut milk-bearing. Irregularly reniform,

1.5-2 cm. in diameter, rufous-brown. Gleba rather compact, paler; sterile base small or none, peridium distinct, rather compact paler; ~~sterile base small or none,~~ continuous. Spores hyaline, globose, very minutely and sparsely verruculose, 10-13 μ in diameter. Basidia clavate, bisporous or rarely monosporous, sterigmata elongated.

The Tasmanian specimens agree perfectly with Berkeley's type of the species.

Hydnangium, carneum, Wallr in Dietr Fl Boruss (1838) T. 465.

Underground. Roadway 118. Widely distributed; there are specimens in the Kew Herbarium from the following countries: England, Scotland, France, Germany, Silesia, Italy, Sweden, Finland, and Australia.

Irregular, 2-3 cm in diameter smooth pale pink. Peridium very thin. Gleba

rather fragile, pink; cavities tortuous, rather large; sterile base very distinct, sometimes sending strands through the gleba. Bandian narrowly cylindrical-clavate with two long, lapping sterigmata, rarely only one sterigma is present. Spores globose, hispid with crowded, slender spines, 2-3 μ long, hyaline 13-18 μ in diameter.

Allied to *H. australe* Berk & Broome but readily distinguished by the pink tinge of the peridium and the more distinctly spinulose spores. . . .

Massee, G. *Fungi exotici* II. Kew Bull.

1899: 164-185. 1899.

Tasmania Massee + Rodw
[180]. *Hymenogaster namus* ~~Cooke + Mass~~

(sp. nov.) Peridium globosum, gibbosum, vix viscidum, 1.5 cm. latum, griseo-brunneum, a gleba facile separabile; cellulae e basi sterili, radiantes; septa crassa, brunnea. Sporae ellipticae, utrinque subacutae,

verruca ~~bulbosa~~, flavo-brunneae pellucidae
14-15 X 8 μ .

Underground, Hobart, Rodway 609.

"I have ^{only} found the one specimen. It seems very close to *Decotium Gunnii*? but the spores are brown and twice as large" (Rodway).

181. *Hysterangium neglectum* Masseur et Rodway (sp. nov.). Peridium subglobosum extus pallidum, rugulosum, nec a gleba separabile, 1-1.5 cm. latum. Gleba subgelatinosa, obscure brunnea, absque basi sterili; cellulae irregulares, gyrae. Sporae ellipsoides-oblongae, utrinque obtusae, rugulosae, pallide flavo-brunneae, 12-13 X 8 μ .

Underground, Hobart, Rodway, 614.

Allied to *H. affine*, Masseur & Rodway

Masseur, *g. Fungi exotici III*. Kew Bull. Mac
Inf. 1901: 150-169.

Tasmania

[158] ... Decotium Rodwayi, Masse (sp. nov.)

Peridium 2-3 cm. latum, globoso-depressum
tomentosum, ochraceo-albidum, inferne
profunde excavatum. Sporae globosae
verruculosae, subhyalinae, plerumque
stipitatae, 7-8 μ in diam. Stipes
brevissimus, primitus infra furfuraceus
cavus.

Subterranean, Rodway 571 with fig.

Underground and only exposed when
washed out or dug up by small marsupial
als.

Hymenogaster albidus Masse et
Rodway (sp. nov.). Peridium globoso-
difforme, 1-2 cm., diam., floccosum,
sordide albidum, demum lutescens. Gleba
brunnea, firma, cellulis tortuosis
majusculis e basi ipsa sterili vix
conspicuis. Sporae ellipsoideae, utrin-
que obtusae, longitudinaliter carinatae
flavo-brunneae, 21-28 x 14-18 μ in quoque
basidio binae.

Occurring underground, Rodway 643.
 allied to *Hymenogaster Rodwayi*
Massee; differing in the larger cavities
 of the gleba and obsolete sterile base.

Hysterangium affine *Massee* et
 Rodway in Kew Bull (1898) p. 127,
 var irregularare Massee (var nov)

Differt praecipue peridris vix regu-
 lariter subglobosis tenuiore, gleba
 fuscente, sporis minoribus.

Underground, Rodway, 657.

Tulasne, S. R. & Tulasne, C. Fung. Hypog. 76, 1851.

4. *Hydnangium liospermum* †

(Tab. XXI, fig. 1.)

H. exiguum firmum globosum albidum arrhizum, intus lacte ochraceum aut armeniaci coloris; peridio crasso insolubili; locellis minutis crebris suboppletis; septis angustissimis praeter primaria vix conspicuis; sporis innumeris minutissimis sphaericis levibus hyalinis, breviter caudatis.

Fungillus solidus firmus pisi magnitudine subsphaericus, basi absorbenti minutissima instructus, albidus, hinc et illinc bysso lanuginoso albo secedente obductus mycelioque subdestitutus. Integumentum crassum maxime homogeneum continuum integrum, gleba arcte adhaerens nec separabile, extus intusque albidum, contextu illius confuso, ut videtur vage celluloso et in septa gleba transeunte. Gleba illi *Hysterangiorum* subconsimilis, firmula, propter sporarum colorem lacte ochraceam

aut mali armeniacy coloris, locellis numerosis
 inaequalibus saepius oblongo-angustatis,
 e centro ad peripheriam obscure vergentibus
 ubique confossa, iisque sporis foetis ita
 ut aegre absque lentis auxilio discernantur
 septa mucoso-cartilaginosa, grisea,
 minuta contra et luci obversa hyalina,
 subhomogenea, medio scilicet cellulis
 linearibus consociatis effecta et in utro-
 que latere basidiis curtis vestita, nunc
 cuncta angustissima vix conspicua,
 nunc unum, alterumve e basi assurgentia
 multo ceteris caeteris, crassiora, ideoque
 primaria dicenda. Sporae acrogenae
 innumerabiles exiguae sphaericae,
 diametro 0^{mm} 0065 crassae, ~~breves~~
 prorsus leves, loculos ex toto demum
 replentes, luci obversae pellucidae,
 sterigmate tenui longiusculo aequali
 instructae. Odorem non ~~off~~ olfecimus.

Sub foliis deciduis fere epigaeum, in
 quercetis, Genabi haud procul (Parc de

Beauvoir, prope Brivodurum), autumnus (1843)
semel omnino legitimus.

Obs. Cette espèce ressemble à l'*H. candidum*
par la couleur tant du peridium, que de la
masse centrale; mais elle en diffère, ainsi
que de toutes ses congénères, par ses spores
lisses.

Sloyd, C. G. Mycological notes 61:889. 1920.

Hymenogaster arenarius, from Miss A. V.
Duthie, South Africa (Fig 1543).— We determined
this from Zulasne's monograph which seems
to agree tho all such determinations should
be confirmed by comparison. The peridium
is white, unchangeable. gleba argus brown
(Redgway). Spores smooth, lemon shaped
as shown by Zulasne ~~as~~ for *Hymenogaster*
Bulhardii. We present in our figures
the plant natural size and a section
also the spores of *H. Bulhardii* (Fig 1544
which are the same as this plant. The ba-
sidia are hyaline and they are not the

same as shown by Bucholtz. Hence the determination is not sure. We are very glad indeed to get the specimen however, and some day we may learn whether Bucholtz or we made the best guess as to its determination.

Rhizopogon cerebrinum, from Professor A. Yasuda, Japan (Fig 1545).— Peridium thick, hard, strongly tubercular, convolute. Surface pale with a reddish cast, minutely ~~verrucose~~ reticulate. Gleba hard, greenish olive compact, no cavities visible to the eye. Sporophore drying hard and solid, tho when fresh or soaked it is hollow the gleba forming a layer within the peridium. A section shows alternate layers of brown and hyaline tissue, but specimens may [890] not be ripe. Spores 3×5 , hyaline. The genus to which this should be referred is doubtful to me, though it is surely congeneric with

the plant I published in Mycological Notes, page 611, as *Hysterangium Phellipsii* which Dodge refers to *Rhizopogon violaceus*. Both collections have little resemblance to the genus *Rhizopogon* in Europe, and new genera should be based on them. It may be the same plant as *Rhizopogon violaceus* and I should prefer to confirm the determination before saying much about it. We present in our figure (1545) the dried plant, also soaked and a section soaked.

Buchholz Feodor

Hypogaeen aus Russland Hedw 40:304-322
1901

— Verzeichniss der bisher im Baltikum
bekannten Hypogaeen. Korrespondenz-
Blatt des Naturf. Verein zu Riga 44:1-9. 1901

— Beiträge zur Morphologie und systema-
tik der Hypogaeen (Tuberaceen und Gastero-
myceten pr. p.) nebst Beschreibung aller
bis jetzt in Russland angetroffen Arten
Naturh. Mus. der Gräfin K P Scheremeteff
in Michaelowskoje Gow. Moskau 1:1-
.5 pl. 1902 [Zur Morphologie und
Systematik der Fungi Hypogaei. Ann
Myc. 1:152-174. 2 pl. 1903.]

— Nachträgliche Bemerkungen zur
Verbreitung der Fungi Hypogaei in
Russland. Soc imp Nat Moscow,
Bull. :335-343. 1904.

— zweiter Nachtrag zur Verbreitung
der Hypogaeen in Russland. I bid
MS. ²¹ ~~1904~~ : 431-492. 1908

[442.] Basidiomycetes

Hypogaäische, selten fast epigäische Fruchtkörper von mehr oder weniger fleischiger Beschaffenheit; das Fruchtkörperinnere (gleba) mit zahlreichen Gängen oder Kammern, deren Wände von der basidienführenden Schicht (Hymenium) ausgekleidet sind Hymenogastrineae

A Gleba von einer unverzweigten in die Peridie übergehenden Kolumella durchsetzt

Secotiaceae Ed Frisch

Secotium Kunze

I Fruchtkörper hypogaäisch oder weniger epigäisch, mit deutlichem Stiel; gleba bei der Reife in pulverigen Sporenstaub zerfallend

(25) *S. agaricoides* (Egern)
Beitr. 140. pl. 4. ^{Holla} 19, 20

II Fruchtkörper hypogaäisch mit rudimentärem Stielchen; gleba bei der Reife fleischig, nicht in Staub zerfallend; Sporen stachelig (*Elaomyces* Cavara)

a Fruchtkörper außen weiß, bis 3 cm
in Durchmesser. 26. ♂(E) *Kryzhanovskij*
(Beitr 142. pl 3. f. 1-10.)
ense 7 Bucholtz

b Fruchtkörper außen rotbraun, un-
gefähr 1 cm ~~hoch~~ in Durchm.

27. ♂(E) *Michailowsky* 7 Bucholtz
(Beitr 143 pl 3 f 11.)

B Gleba ohne Kolumella oder mit einer kurzen
starkverzweigten, nicht bis zur Peridie
reichenden Kolumella

Isoporenführende Partien (Zangplatten)
erheben sich strahlenförmig von einer
sterilen, häufig verzweigten und von
der Basis in die gleba hineinragenden
Geflechtspartie Hysterangiaceae

a. Sporenmembran gerippt,
faltig oder höckerig

1. Sporenmembran mit
Sangrippen; Peridie bald
verschwunden Goutier 12, 111
(a) glebahaar klein,
weniger als 2 mm in Durchm
Mycelstrunk am Grunde

des Fruchtkörpers fast unverzweigt. 28g. graveolens Vitt
Beitr. 146 pl 3 f. 14. pl 4 f. 21.

(b) Glebakammern größer, gewöhnlich 3mm und mehr in Durchmesser; Mycelstrunk am Grunde des Fruchtkörpers stark verzweigt.

29. g. morchellaformis Vitt
Beitr. 147 pl 3 f. 12-13.

1. Sporenmembran faltig oder hochring; peridie bleibend.

Dendrogaster F. Buchholtz

30. D. convectus F. Buchholtz

Beitr. 149. pl 3 f. 15-16.

b. Sporenmembran glatt; sporen ellipsoidisch oder stäbchenförmig

Hysterangium Vitt

1. Sporen 12-16 μ lang

31. H. clathroides Vitt.

Beitr. 152. pl 1 f. 16.

2. Sporen 20-23 μ lang

32. *N. stoloniferum* Tul var. *mutabile* mihi
Nachtrac Beml. c. p. 339.

II Tramaplatten von der Peridie ausgehend, nicht
strahlig angeordnet; Gleba ohne Kolumella
zuweilen mit steriler Basis.

Hymenogastraceae Schroeter.

a. Fruchtkörper ohne wurzelähnliche
Mycelstränge

1. Sporen eiförmig, ellipsoidisch
oder spindelförmig an der Spitze
zuweilen mit Papille Hymenogaster
Vitt
Key to sp. see p. 472.

2. Sporen kugelig, stachelig
(a) Sterile Basis vorhanden; Trama
platten leicht spaltbar.

Octaviania Vitt.
O. mutabilis Roum.

(b) Keine sterile Basis; Tramaplatten
nicht spaltbar *Hydnangium* Wallr.
H. carneum Wallr.
Beet. 161 pl 4 f 27-28.

θ. Fruchtkörper mit wurzelähnlichen Mycelsträngen, seltener fast ohne dieselben, dann aber Sporen stets glatt und stäbchenförmig

1. Glebakammern anfangs durch eine gelatinöse Masse ausgefüllt. Sporen ellipsoidisch oder kugelig

[*Seucogaster* Hesse]

Beitr. 162.

(a) Glebakammern hohl

- (1) Sporen glatt, ellipsoidisch
Rhizopogon Fr.

α Peridie dünn, hautig, mit wenigen Mycelsträngen am Grunde des Fruchtkörpers oder fast ohne dieselben.

41 *Rh. aestivus* Fries

(Beitr. 162 pl. 1. f. 17; Nachtr. Bem. lc. 341.)

β Peridie dick, bei der Reife hornig werdend von Mycelsträngen überall und besonders am Grunde bedeckt

42 *Rh. lutescens* Fries

(Beitr. 165 pl. 1. f. 18 Nachtr. Bem. lc. 341.)

* (α) Peridie von der Gleba schwer trennbar Fruchtkörper gelb.

42. *Rh. lutesolus* Fries

(Beitr. 165 pl 1 f 18. Nachtr. Bem. l. 341.

(β) Peridie leicht abtrennbar
Fruchtkörper anfangs weiß
dann rötlich, zuletzt gelb
braun. 43 *Rh. virens* Fries
Beitr. 167.

(γ) Sporen kugelig, warzig
Sclerogaster Hesse
Beitr. 168.

Hypogaeischer seltener epigaeischer Fruchtkörper
von mehr oder weniger fleischiger Beschaffenheit
gleba ohne Kammern und Gänge; Basidien einzeln
zerstreut oder in unregelmäßigen Gruppen
dem Geflecht eingelagert (Plectobasidineae)

Hypogaeische Formen finden sich nur unter
Familie der Sclerodermataceae Fries.

A. Peridie weich fleischig, nicht streng
von den Gleba abgesondert; Sporen
ellipsoidisch, glatt, dunkelgefärbt

Melanogaster Corda.

I. Peridie gelbbraun oder rötlichbraun

Sporen ellipsoidisch, am Ende stumpf.

44 M. variegata Tul.

(Beitr 170 pl 1 f 19-21.

II Peridie olivenbraun, ~~braun~~ fast blaunig

Sporen am Ende zugespitzt, fast
cubonienförmig 45 M. ambigua Tul

Beitr 171 pl 1 f 22-24; Nachtr Bem. lc 342.

B. Peridie häutig oder lederartig, mehr
oder weniger von der glebe abgesondert

I Sporen vor der Reife von einer Hyl-
hülle umgeben. Scleroderma Per

Mit der hypogaeischen Unterzattung

Phlyctospora Corda

a. Fruchtkörper glatt; Sporen groß,
mehr als 8 μ im Durchm.

46. Scl (Phl) fuscum (Corda) Ed Fischer

Beitr. 173 pl. f 25 pl 5 f. 12-14.

b. Fruchtkörper warzig; Sporen klein
nicht größer als 5 μ im Durchm.

47. Scl (Phl) Magni Ducis (Sorok) ^{Ed Fischer}

Beitr 174

II Sporen ohne Hülle

Pompholyx Corda
P. sepidium Corda

Beitr. 175 pl 5 f 15-16. Nachtr Bemlc 342.

A Sporen rund

a Sporen glatt

Secotium agaricoides

b. Sporen nichtglatt

1. Basidien im Hymenium

{ *Secotium* (*Clasmospora*)
Octaviania
Hydnangium

2. Kein Hymenium vorhanden.

Scleroderma (*Phlyctospora*) *Pompholyx*

B Sporen länglich

1 Sporen glatt

{ *Hysterangium*
Rhizopogon
Melanogaster

2 Sporen nichtglatt

{ *Gautieria*
Dendrogaster
Hymenogaster

Pages 463-492 deal with *Hymenogasteraceae*

Patonillard, N. Champignons nouveaux ou
peu connus Soc myc France 12: 132-136.
pl 9. 1896.

[135] *Scleroderma dictyosporum* nov. sp
Pl. IX fig 1. — Peridio subgloboso attenuato
coriaceo, fusco brunneo, 1 millim. crasso
sursum dense papillis atris, minutis obsito
deorsum breviter radicato; gleba atra
floccis albis marmorata; sporis um-
brinis, globosis, 8-12 μ diam. limbo
hyalino alveolato-reticulato, 2-4 μ
crasso cinctis; floccis hyalinis,
mollibus, cylindraceis, rectis vel
tortuosis, 3-10 μ latis, simplicibus
vel furcatis.

Hab. ad terram arenosam in
Guinea gallica. Seg Dybowski

Espèce naine ne dépassant guère
2 à 3 centimètres de diamètre, munie à
la base d'une petite touffe radiciforme
elle est presque glabre sur toute sa sur-
face, la partie supérieure seule est

couverte de petites verrues plus foncées.
Elle se distingue de toutes ses congénères
par ses spores munies d'alvéoles angu-
leuses et non simplement verruqueuses
ou lisses.

Harkness, H.W. New Species of Californian
Fungi. Cal. Acad. Sci. Bull 1: 29-47
1884.

29] *Octaviania rosea*.

Gregarious, peridium fibrillose, rugose
irregularly lobed, 1-3 cm., with distinct
absorbing base, pale rose color, deepening
within; basidia 1-2 spored; sterigmata
filiform, capitate, as long as the diameter
of the spore; spores globose, hyaline, pale;
epispore covered with short obtuse spines
 μ 14-17.

30] Under shrubby oaks, at Golden Gate Park
San Francisco, Jan. 2204.

Gautieria monticola.

Dark brown, irregularly lobed, 10 cm in

Breadth, uniformly about 3 cm in thickness, nearly plane above and below; stipe short and slender; stroma ferruginous brown; basidia apparently always 2-spored; sterigmata filiform; spores pale brown elliptic or obovate, apiculate, longitudinally or somewhat obliquely striate $\mu 10-12 \times 7-8$.

Found (a solitary specimen) in vegetable humus, at the root of the Grizzly Giant, in the Mariposa Big Tree grove, July 1883. 3543

With the odor of decaying onions.

Splanchnomyces Behrii.

Cinnamon brown, irregularly lobed lacunose, 1-4 cm. in diameter; absorbing base inconspicuous; basidia 2-spored; sterigmata short, filiform; spores very unequal in size, yellowish brown, oval or elliptic, apiculate by the remains of the sterigmata, pitted all over ~~by~~ with minute irregular depressions $\mu 10-15 \times 10$.

growing in vegetable humus in Wald-wood Glen above the reservoir Sausalito, Ca.

Named in recognition of the valuable assistance of the frequent companion of our collecting excursions, Dr. H. H. Behr.

Gautieria (*Chamonixia*) *flava* sp. nov.

Fructificationes gregariae, subglobosae vel irregulares 1-4 cm. diametro metentes flavae, "russet" vel "tawny" (Bridgway) in alcohol servatae, rhizomorpha longa flava; columella ^{fructificationem} percurrentes ramosa, albida; peridium duplex, 90 - 100 μ stratum ~~interum~~ ^{septatis} 90 - 100 μ crassitudine hyphis 4-5 μ diametro sub lente coloratis laxo complexum; stratum interum 75 - 90 μ , hyphis tenuibus dense compactum; gleba albida locelli irregulares, vacui; septa 90 - 100 μ crassitudine inter stratochymeniales hyphis septatis dilute brunneis basidia 7-9 μ hyalina - spora, sterigmatibus 4- μ

longitudine; sporae ellipsoideae,
 accervatae, longitudinally
 striatae striis 1-12, 11-15 x 7-8 μ
 Habitat in solo sub Quercu. California

Gautieria Trabuti (Chatin) Patouillard

Fructification 2 cm globose, surface
 convoluted pale gray ^{drab} on dried material
^{mummy brown when moistened}
 stipe slightly developed radicleiform
 peridium evanescent but outer hymenial
 layer has large globose cells 15-
 25 μ ~~scattered~~ scattered over its surface
 [are these related to vanished perid?]
 cavities empty sinuous, small,
 septa hyaline 225-275 μ , fibrous
 of small gelatinized hyaline hyphae
 cystidia none paraphyses mm^4 mm^4
 basidia short clavate 2 spored
 ; spores acrogenous
 ellipsoidal obtuse above, mucronate

below. 12-18 x 8-10 fine longitudinal striations warted until some appear to be warted spores, warts smaller &

more numerous than american species

July 9, 1921. Univ. California Herbarium

Seucogaster citrinus.

Parks 86 Boys Outing Farm Daratoga Cal

Dale Parks. From same place as

HE Parks 822. May 31, 1919

Parks 822. In soil or at surface at maturity embedded in a very scanty yellow mycelium under laurel at edge of stream Peridium an ochre yellow to lemon red with roughened surface, thin, seems to be slightly viscid turns darker in alcohol. Gleba composed of sac like cells with colorless contents at this stage of development. Cells small at the surface, - becoming larger toward center. June 1, 1919

Seucogaster araneosus
 Parks 37b. Under redwoods + *Passerina*
densiflora between Call of the wild
 & Aldercroft Creek - Jan 26, 1918.
 tinged with red. 2 attached together
 Ⓞ on surface under debris.
 color alcohol

CE Broome's copy of *Tulasne* in
 library of Univ of California

Seucogaster

Parks 820 save for further study
 see slide

Gasterosporium

Globose or slightly lobed, very hard,
 very deep in stiff clay soil under
 madrone. at first very bright yellow patches
 Cut open: ^{single} large cavity partly filled with
 cottony mycelium. Call of the Wild, Cal.
 Feb 27, 1918. H.E. Parks 76.

d,

tches

i

al.

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