[From the 42d Report of the New York State Museum of Natural History.]

ANNUAL REPORT

OF THE

STATE BOTANIST

OF THE

State of New York. 1888

Made to the Regents of the University, Pursuant to Chapter 355, of the Laws of 1883.

By CHARLES H. PECK.

ALBANY:
THE TROY PRESS COMPANY, PRINTERS.
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No. 67.

IN SENATE,

FEBRUARY 28, 1889.

ANNUAL REPORT OF THE STATE BOTANIST.

OFFICE OF THE STATE BOTANIST,
ALBANY, *February* 25, 1889.

To the Honorable the Regents of the University of the State of New York:

I have the honor to present to you my annual report for the year 1888.

Very respectfully.

CHARLES H. PECK.

REPORT OF THE BOTANIST.

To the Honorable the Board of Regents of the University of the State of New York:

GENTLEMEN.—I have the honor of communicating to you the following report:

Specimens of plants for the State Herbarium have been collected by the Botanist during the season now closing, in the counties of Albany, Rensselaer, Saratoga, Essex, St. Lawrence, Jefferson, Lewis, Ulster, Orange and Suffolk. Specimens contributed by correspondents were collected in the counties of Orleans, Chenango, St. Lawrence, Rensselaer, Richmond and Queens.

Specimens representing two hundred and sixty-eight species of plants have been added to the Herbarium during the year, of which two hundred and fifty-three were collected by the Botanist and fifteen were contributed. Of the former, one hundred and eight are new to the Herbarium. The others are improved specimens, or such as exhibit some feature or variation in the species which was not well shown by the specimens already possessed. Of the contributed specimens, eleven species were not before represented, thus increasing the number of species now represented by one hundred and nineteen. Among these are forty species of fungi considered new to science. A list of the species of which specimens have been added is marked A.

Twenty-one persons have contributed specimens. Among the contributions are many extra-limital species not included in the foregoing enumeration. A list of the contributors and of their respective contributions is marked B.

A record of species not before reported, together with descriptions of such as are deemed new, is marked C.

Remarks concerning species previously reported, a record of new localities of rare plants and descriptions of varieties, will be found in a subdivision marked D.

Descriptions of New York species of Clitopilus are given in a section marked E.

The climatic conditions in the early part of the season were very unfavorable to the production of fleshy fungi. Very few even of the most common and ubiquitous species were seen. Dry weather prevailed, and the slight rains which fell were followed by such high winds and low temperature that few of these fungi could grow. But with the advent of more copious rains later in the season, an abundant crop of numerous species appeared. A visit to Essex county at this time was rewarded by large additions to the collection, many of which were new to the Herbarium. Places from which the timber had been cut many years ago and in which beautiful groves of young spruce, tamarack and balsam-fir trees had since grown were especially prolific, though everywhere on the wooded hills and in the mossy tamarack swamps the mycological flora was rich and varied. In these groves three esculent species were noticeable by reason of their great profusion. In every direction and at frequent intervals the brownish-red and tawny-red hues of groups and tufts of *Tricholoma imbricatum*, *T. vaccinum* and *T. transmutans* could be seen. They might have been gathered by bushels. But for the ignorance of the inhabitants concerning these plants, their tables and those of the large boarding houses there might have been supplied with an abundance of the novel but good and wholesome food which these three species would have furnished for the slight labor of gathering them. And other edible species were by no means rare or limited in quantity. *Geoglossum vitellinum*, a small but beautiful and tender fungus grew in such profusion in low woods where the ground is covered with moss, that it was tested as to its edible qualities and found to be very good. *Clitocybe media*, a new species, and *Tricholoma transmutans* were also tested for the first time. I have no hesitation in adding these three species to the list of edible fungi.

While collecting in this region the difference in the liability of certain kinds of wood to fungous attack was very apparent. Old stumps, prostrate trunks and decaying wood of spruce and balsam were inhabited by many species of fungi, while the wood and prostrate trunks of the tamarack and arbor-vitæ or white cedar in similar situations were almost entirely free from them. Thus

nature teaches, and the observant mycologist might affirm *a priori*, that the wood of these trees is much more durable than that of the spruce or of the balsam. The frequent use of spruce for fence posts in that region seems strange and unprofitable since tamarack is plentiful there and might be obtained almost as easily and as cheaply as spruce.

The beautiful rhodora, *Rhododendron Rhodora*, is a rare shrub in our State, and was but imperfectly represented in the Herbarium. Having learned of its occurrence on Sam's Point, a high rocky promontory-like spur of the Shawangunk mountains, lying about five miles east of Ellenville, I visited that locality in quest of specimens of it. Its usual habitat is "cool bogs," but here it was found growing in rocky rather than boggy places, though it was especially plentiful in a station not far from the shore of a small lake on the mountain. It was too late in the season to obtain its flowers which appear before the leaves are developed, but fine foliage and fruit-bearing specimens were secured. The broad plateau-like summit of the mountain proved to be an interesting botanical locality. Much of the vegetation is of a shrubby character. About sixty species of plants were noted, of which ten, or one-sixth of the whole, belong to the Heath family. The huckleberry, *Gaylussacia resinosa*, grows here in great profusion, and also the dwarf blueberry, *Vaccinium Pennsylvanicum*. These and the high-bush or swamp blueberry, *Vaccinium corymbosum*, afford a generous crop of fruit, in the picking of which some of the inhabitants of the vicinity were engaged at the time of my visit. The variations in the dwarf blueberry are worthy of notice. The typical form is common and the narrow-leaved dwarf variety is also present. There is also a form with pale green or glaucous foliage, approaching *V. vacillans* in appearance, but apparently distinct from it. This sometimes bore black shining berries destitute of bloom, thus approaching the variety *nigra*. Again it bore berries with the usual bloom, but of an oval shape, being longer than broad. Both this species and the huckleberry manifested their hardy character, their ability to grow under adverse circumstances, and their readiness to occupy all available space by frequently growing in long rows or lines, following the directions of crevices in the surface of the rock. A little soil had accumulated in these crevices, and this enabled these plants to maintain their foothold. These rows of shrubs curve and some-

times cross each other at various angles, and thus present a curious and somewhat artificial aspect. In a few boggy places the cranberry, *Vaccinium macrocarpum*, was growing.

The summit of the mountain is somewhat isolated and is exposed to sweeping winds from every direction. This, together with an altitude of 2,000 feet or more, and a very thin soil, must render the place a trying one for all except the most hardy species of plants. There is a marked tendency to dwarf development. The pitch pines have a starved misshapen appearance and bear cones when but one or two feet high. Specimens of chokeberry but eight or ten inches high were in fruit; also, the shad bush at two feet and the mountain holly at one foot. The narrow-leaved variety of the dwarf blueberry bore fruit though but three or four inches high. The coldness of the station is indicated by the presence of species usually found in more northern latitudes or in more elevated places. The rhodora already mentioned, the trifid rush, *Juncus trifidus*, the three-toothed cinquefoil, *Potentilla tridentata*, the slender cotton grass, *Eriophorum gracile*, and the Greenland sandwort, *Arenaria Greenlandica*, are examples of this kind. That which is manifestly a principle in nature receives confirmation here and is noticed because the existence of such a principle is sometimes overlooked. The principle to which reference is made is that a plant whose strength or vital force has been weakened or impaired by any cause, is more liable to suffer from the attacks of parasitic fungi than one whose vigor is unimpaired. The sheep laurel, *Kalmia angustifolia*, was badly infested by *Dothidella Kalmiæ*, a fungus which attacks the branches of the living plant and causes them to increase in diameter and become blackened. Their leaves do not attain half their usual size and the branch eventually dies. This fungus is a rare one, and I have never seen vigorous healthy appearing plants affected by it. *Rhytisma Canadensis* is a more common fungus that attacks the foliage of the mountain holly, but rarely do its attacks equal in severity those on the plants of Sam's Point. This shrub here shows by its dwarf development that the conditions of growth are unfavorable and that its vigor is impaired. Scarcely a clump of the bushes was seen whose leaves were not excessively spotted by the blackened swellings of this fungus. The wild black cherry, *Prunus serotina*, in other places furnishes an illustration of this same principle. On Long Island, in light

sandy soil about Manor and Eastport, where it makes an unthrifty straggling growth, its branches are badly infested by the black knot fungus, *Plowrightia morbosa*, but in those parts of the State where the soil is richer in the elements of plant food, and these trees make a healthy, vigorous growth, they are almost entirely free from this fungus. The practical application of this principle is plain. If we would have our cultivated and useful plants as free as possible from the attacks of injurious parasitic fungi, we must maintain their constitutional vigor and give them a full supply of plant food.

Respectfully submitted,

CHARLES H. PECK.

Albany, *December* 10, 1888.

(A.)

PLANTS ADDED TO THE HERBARIUM.

New to the Herbarium.

Hieracium prælatum *Vill.*
Penstemon lævigatus *Soland.*
Physalis Peruviana *L.*
Quercus heterophylla *Mx.*
Q. Rudkini *Britton.*
Setaria verticillata *Bv.*
Apera spica-venti *Bv.*
Equisetum litorale *Kuhl.*
Lepiota augustana *Britz.*
Tricholoma imbricatum *Fr.*
T. subacutum *Pk.*
T. silvaticum *Pk.*
T. nobile *Pk.*
T. brevipes *Bull.*
T. microcephalum *Karst.*
Clitocybe media *Pk.*
C. gallinacea *Scop.*
C. tumulosa *Kalchb.*
C. angustissima *Lasch.*
C. subditopoda *Pk.*
Collybia butyracea *Bull.*
C. acervata *Fr.*
C. ignobilis *Karst.*
Omphalia striæpileus *Fr.*
O. tubæformis *Pk.*
Pleurotus mitis *Pers.*
Hebeloma firmum *Pers.*
Naucoria scirpicola *Pk.*
Galera rufipes *Pk.*
Psathyra silvatica *Pk.*
Cortinarius fulgens *Fr.*
C. lanatipes *Pk.*
C. canescens *Pk.*
C. erraticus *Pk.*
C. cæspitosus *Pk.*
C. lutescens *Pk.*
C. adustus *Pk.*
C. pallidus *Pk.*
Hygrophorus Queletii *Bres.*
H. capreolarius *Kalchb.*
H. hypothejus *Fr.*
H. fuscoalbus *Fr.*
Lactarius atroviridis *Pk.*
L. quietus *Fr.*
Russula purpurina *Q. & S.*
Cantharellus rosellus *Pk.*
Marasmius peronatus *Fr.*
Lenzites heteromorpha *Fr.*
Boletus floccopus *Vahl.*
B. hirtellus *Pk.*
B. subvelutipes *Pk.*
Polyporus piceinus *Pk.*
P. aureo-nitens *Pat.*
P. variiformis *Pk.*
P. rhodellus *Fr.*
P. marginellus *Pk.*
P. sulphurellus *Pk.*
Trametes Pini *Pers.*
Merulius aureus *Fr.*
M. molluscus *Fr.*
Phlebia vaga *Fr.*
P. acerina *Pk.*
Odontia Pruni *Lasch.*
O. fusca *C. & E.*
Thelephora scoparia *Pk.*
Corticium sulphureum *Fr.*
C. rhodellum *Pk.*
C. subincarnatum *Pk.*
Hymenochæte abnormis *Pk.*
Pistillaria viticola *Pk.*
P. alnicola *Pk.*
Mitremyces lutescens *Schw.*
Geaster fornicatus *Fr.*
Phyllosticta Negundinis *S. & S.*
P. serotina *Cke.*
P. Hibisci *Pk.*
Phoma Libertiana *S. & R.*
Diplodia Dulcamaræ *Fckl.*
Hendersonia Mali *Thum.*
Septoria Trichostematis *Pk.*
Sacidium lignarium *Pk.*
Aposphæria aranea *Pk.*
Vermicularia truncata *Schw.*
V. Wallrothii *Sacc.*
Dinemasporium hispidulum *Sacc.*
Gloœosporium lagenarium *S. & R.*
G. Physalosporæ *Car.*
G. irregulare *Pk.*
Melanconium Tiliæ *Pk.*
M. foliicolum *Pk.*
Ustilago Osmundæ *Pk.*
Synchytrium aureum *Schrœt.*
Peronospora sordida *Berk.*
Monilia effusa *Pk.*

Monilia aurantiaca *Pk. & Sacc.*
Rhopalomyces Cucurbitarum *B.&R.*
Aspergillus fimetarius *Pk.*
Rhinotrichum ramosissimum *B.& C.*
Virgaria hydnicola *Pk.*
Fusicladium fasciculatum *C. & E.*
Septonema breviusculum *B. & C.*
Cercospora Epilobii *Schnd.*
C. Resedæ *Fckl.*
C. rhuina *C. & E.*
Sporocybe cellare *Pk.*
Helicomyces roseus *Lk.*
Tuberculariа fungicola *Pk.*
Tuberculina persicina *Sacc.*
Ombrophila albiceps *Pk.*
Peziza scubalonta *C. & G.*
P. hinnulea *B. & Br.*
Calloria acanthostigma *Fr.*
Valsa coronata *Fr.*
Anthostoma turgidum *Nits.*
Anthostomella limitata *Sacc.*
Nummularia repanda *Fr.*
Chætosphæria longipila *Pk.*
Celidium stictarum *Tul.*
Micrococcus prodigiosus *Cohn.*

Not new to the Herbarium.

Aconitum Noveboracense *Gr.*
Brassica oleracea *L.*
Cakile Americana *Nutt.*
Arabis lyrata *L.*
Hibiscus Moscheutos *L.*
Vitis Labrusca *L.*
V. æstivalis *Mx.*
V. cordifolia *Mx.*
Rhamnus catharticus *L.*
Desmodium Marilandicum *Boott.*
Lespedeza Stuvei *Nutt.*
L. retic. v.angustifolia *Max.*
Rubus strigosus *Mx.*
R. Canadensis *L.*
Pyrus arbutifolia *L.*
Cratægus parvifolia *Ait.*
Proserpinaca pectinacea *Lam.*
Epilobium angustifolium *L.*
Œnothera biennis *L.*
Œ. fruticosa *L.*
Ammannia humilis *Mx.*
Discopleura capillacea *DC.*
Sium lineare *Mx.*
Lonicera oblongifolia *Muhl.*
Eupatorium purpureum *L.*
E. album *L.*
E. teucrifolium *Willd.*
Aster spectabilis *Ait.*
A. concolor *L.*
A. dumosus *L.*
Solidaga odora *Ait.*
S. nemoralis *Ait.*
S. humilis *Pursh.*
S. tenuifolia *Pursh.*
Pluchea camphorata *DC.*
Chrysopsis Mariana *Nutt.*
Coreopsis trichosperma *Mx.*
Artemisia Absinthium *L.*
Erechthites hieracifolia *Raf.*
Centaurea nigra *L.*
Gaylussacia frondosa *T. & G.*
Vaccinium Pennsylvanicum *Lam.*
Rhododendron Rhodora *Don.*
Penstemon pubescens *Soland.*
Pycnanthemum lanceolatum *Pursh.*
Stachys hyssopifolia *Mx.*
Cuscuta Gronovii *Willd.*
C. compacta *Juss.*
Asclepias incarnata *L.*
Atriplex patula *L.*
Amaranthus pumilus *Raf.*
Acnida cannabina *L.*
Polygonum Pennsylvanicum *L.*
P. hydropiperoides *Mx.*
P. maritimum *L.*
Euphorbia Ipecacuanhæ *L.*
Betula glandulosa *Mx.*
Sagittaria variabilis *Engelm.*
Trillium grandiflorum *Salisb.*
Lilium superbum *L.*
Juncus tenuis *Willd.*
J. Greenii *O. & T.*
J. Canadensis *Gay.*
Xyris Caroliniana *Walt.*
Cyperus diandrus *Torr.*
Eriophorum gracile *Koch.*
Scleria reticularis *Mx.*
Scirpus maritimus *L.*
S. debilis *Pursh.*
Carex sterilis *Willd.*
C. scoparia *Schk.*
Aristida dichotoma *Mx.*
Spartina juncea *Willd.*
Bouteloua racemosa *Lag.*

Paspalum setaceum *Mx.*
Panicum filiforme *L.*
P. pauciflorum *Ell.*
P. dichotomum *L.*
P. crus-galli *L.*
Equisetum palustre *L.*
E. variegatum *Schleicher.*
Amanita muscaria *L.*
Lepiota metulispora *B. & Br.*
Armillaria mellea *Vahl.*
Tricholoma laterarium *Pk.*
T. leucocephalum *Fr.*
Clitocybe pithyophila *Fr.*
C. candicans *Pers.*
C. anisaria *Pk.*
C. cyathiformis *Fr.*
C. clavipes *Pers.*
Collybia maculata *A. & S.*
C. cirrhata *Schum.*
C. rubescentifolia *Pk.*
Omphalia chrysophylla *Fr.*
Mycena pura *Pers.*
M. atromarginata *Fr.*
Pleurotus lignatilis *Fr.*
Entoloma sarcophyllum *Pk.*
Clitopilus abortivus *B. & C.*
C. Noveboracensis *Pk.*
Pholiota discolor *Pk.*
Inocybe umboninota *Pk.*
Flammula spumosa *Fr.*
F. alnicola *Fr.*
Agaricus campestris *L.*
Stropharia Johnsoniana *Pk.*
Hypholoma appendiculatum *Fr.*
Coprinus radiatus *Fr.*
Hygrophorus pudorinus *Fr.*
H. coccineus *Fr.*
H. chlorophanus *Fr.*
Hygrophorus miniatus *Fr.*
Lactarius affinis *Pk.*
L. vellereus *Fr.*
L. fuliginosus *Fr.*
L. albidus *Pk.*
Cantharellus minor *Pk.*
C. umbonatus *Fr.*
Marasmius anomalus *Pk.*
Lenzites vialis *Pk.*
L. sepiaria *Fr.*
Boletus rubinellus *Pk.*
B. subtomentosus *L.*
B. porosus *Pk.*
B. flavipes *Pk.*
B. Russellii *Frost.*
B. felleus *Bull.*
Polyporus cæruleoporus *Pk.*
P. chioneus *Fr.*
P. spumeus *Fr.*
P. pubescens *Fr.*
P. biformis *Fr.*
P. versicolor *Fr.*
P. conchifer *Schw.*
P. pergamenus *Fr.*
Trametes sepium *Berk.*
Dædalea confragosa *Pers.*
D. unicolor *Fr.*
Hydnum adustum *Schw.*
H. ochraceum *Pers.*
Irpex lacteus *Fr.*
Sistotrema confluens *Pers.*
Stereum complicatum *Fr.*
S. Curtisii *Berk.*
Clavaria pusilla *Pk.*
C. argillacea *Fr.*
C. fragilis *Holmek.*
C. rugosa *Bull.*

(B.)

CONTRIBUTORS AND THEIR CONTRIBUTIONS.

Mary E. Banning, Baltimore, Md.

Geaster triplex *Jungh.*
G. saccatus *Fr.*
Geaster striatus *DC.*
Tulostoma mammosum *Fr.*

Mrs. E. C. Anthony, Gouverneur, N. Y.

Geaster fornicatus *Fr.*
Geaster mammosus *Chev.*

Mrs. E. G. Britton, New York, N. Y.

Rudbeckia hirta *L.*

Thomas G. Gentry, Philadelphia, Pa.

Polyporus Ribis *Fr.*
P. annosus *Fr.*
Hydnum Schiedermayeri *Heufl.*
Sparassis spathulata *Fr.*
S. laminosa *Fr.*
Corticium rhodellum *Pk.*

F. V. Coville, Oxford, N. Y.

Aconitum Noveboracense *Gr.*
Valerianella radiata *Dupr.*
V. Woodsiana v. patellaria *Gr.*
Polemonium cæruleum *L.*
Arceuthobium pusillum *Pk.*
Quercus ilicifolia *Wang.*
Q. prinoides *Willd.*
Orontium aquaticum *L.*
Polygonum articulatum *L.*
P. Hartwrightii *Gr.*
Listera cordata *R. Br.*
Microstylis ophioglossoides *Nutt.*
Sagittaria graminea *Mx.*
Eleocharis quadrangulata *R. Br.*
Equisetum litorale *Kuhl.*
E. variegatum *Schl.*

Prof. A. N. Prentiss, Ithaca, N. Y.

Graphiola Phœnicis *Poit.*

F. W. Anderson, Great Falls, Mont.

Ustilago Montanensis *E. & H.*

J. N. Bishop, M. D., Plainville, Conn.

Peridermium oblongisporium *Fckl.*

W. H. Hailes, M. D., Albany, N. Y.

Agaricus arvensis *Schæff.*

E. C. Howe, M. D., Lansingburgh, N. Y.

Setaria verticillata *Bv.*
S. Germanica *Bv.*
Apera spica-venti *Bv.*
Panicum pauciflorum *Ell.*
Bouteloua racemosa *Lag.*
Eleocharis diandra *Wright.*
Carex sterilis *Willd.*

C. F. Wheeler, Hubbardston, Mich.

Plowrightia morbosa *Sacc.*

Emily F. Paine, Albany, N. Y.

Aster multiflorus *Ait.*

E. S. Goff, Geneva, N. Y.

Helminthosporium carpophilum *Lev*
Stemonitis herbatica *Pk.*

William Herbst, M. D., Trexlertown, Pa.

Cordyceps capitata *Lk.*

Arthur Hollick, New Brighton, N. Y.

Quercus heterophylla *Mx.*
Q. Rudkini *Britton.*
Quercus Phellos *L.*

C. E. Fairman, M. D., Lyndonville, N. Y.

Corticium rhodellum *Pk.*

Rev. J. L. Zabriskie, Flatbush, N. Y.

Sacidium lignarium *Pk.*
Aposphæria aranea *Pk.*
Sporocybe cellare *Pk.*
Chætosphæria longipila *Pk.*

Hon. W. L. Learned, Albany, N. Y.

Marsilia quadrifolia *L.*

Prof. William Trelease, St. Louis, Mo.

Lycoperdon Missouriense *Trel.*
L. saccatum *Fr.*
Tulostoma fimbriatum *Fr.*

Prof. A. S. Hitchcock, Iowa City, Ia.

Synchytrium Anemones *Wor.*
S. decipiens *Farl.*
Peronospora effusa *Rabh.*
P. Ficariæ *Tul.*
P. gangliformis *DeBy.*
P. Arthuri *Farl.*
P. Euphorbiæ *Fckl.*
P. Lophanthi *Farl.*
P. parasitica *DeBy.*
P. Potentillæ *DeBy.*
P. Halstedii *Farl.*
P. Geranii *Pk.*
P. graminicola *Sacc.*
P. Trifoliorum *DeBy.*
P. pygmæa *Ung.*
P. viticola *DeBy.*
Cystopus candidus *Lev.*
C. Portulacæ *Lev.*
C. Bliti *DeBy.*
Podosphæria tridactyla *DeBy.*
Sphærotheca pannosa *Lev.*
S. Castagnei *Lev.*
Microsphæria extensa *C. & P.*
M. diffusa *C. & P.*
M. Ampelopsidis *Pk.*
M. Russellii *Clint.*
M. Symphoricarpi *Howe.*
M. Friesii *Lev.*
Erysiphe lamprocarpa *Lev.*
E. tortilis *Fr.*
E. Martii *Lev.*
Uncinula adunca *Lev.*
Darluca filum *Cast.*
Peziza Dehnii *Rabh.*
Phyllactinia suffulta *Sacc.*
Phyllachora graminis *Fckl.*
P. Trifolii *Fckl.*
Claviceps purpurea *Tul.*

J. M. Holsinger, Winona, Minn.

Anemone Virginiana *L.*
Ranunculus rhomboideus *Goldie.*
Delphinium azureum *Mx.*
Isopyrum biternatum *T. & G.*
Berberis repens *Lindl.*
Cardamine rhomboidea *DC.*
Silene nivea *DC.*
Malvastrum coccineum *Gr.*
Ceanothus ovalis *Bigel.*
Amorpha canescens *Nutt.*
Baptisia leucophæa *Nutt.*
B. leucantha *T. & G.*
Glycyrrhiza lepidota *Pursh.*
Lathyrus venosus *Muhl.*
Oxytropus Lamberti *Pursh.*
Petalostemon candidus *Mx.*
P. violaceus *Mx.*
Psoralea argophylla *Pursh.*
Heuchera hispida *Pursh.*
Œnothera serrulata *Nutt.*
Eryngium yuccæfolium *Mx.*
Symphoricarpus occidentalis *R. Br.*
Galium concinnum *T. & G.*
Valeriana edulis *Nutt.*
Vernonia fasciculata *Mx.*
Liatris pycnostachya *Mx.*
Kuhnia eupatorioides *L.*
Solidago speciosa *Nutt.*
Aster azureus *Ait.*
Boltonia asteroides *L'Her.*
Coreopsis palmata *Nutt.*
Silphium perfoliatum *L.*
S. laciniatum *L.*
Bidens connata *Muhl.*
Artemisia caudata *Mx.*
A. Ludoviciana *Nutt.*
A. frigida *Willd.*
A. dracunculoides *Pursh.*
Dodecatheon Meadia *L.*
Acerates longifolia *Ell.*
Gentiana alba *Muhl.*
G. Andrewsii *Griseb.*
Phlox maculata *L.*
Ellisia Nyctelea *L.*
Lithospermum angustifolium *Mx.*
Cuscuta glomerata *Chois.*

Lycium vulgare *Dunal.*
Castilleia sessilifolia *Pursh.*
Penstemon gracilis *Nutt.*
P. grandiflorus *Nutt.*
Verbena bracteosa *Mx.*
V. stricta *Vent.*
Hedeoma hispida *Pursh.*
Monarda punctata *L.*
Plantago Patagonica *Jacq.*
Chenopodium glaucum *L.*
Polygonum ramosissimum *Mx.*
Euphorbia marginata *Pursh.*
Parietaria Pennsylvanica *Muhl.*
Cypripedium candidum *Muhl.*
Liparis Lœselii *Richard.*
Leucocrinum montanum *Nutt.*
Streptopus roseus *Mx.*
Vilfa cuspidata *Torr.*

(C.)

SPECIES NOT BEFORE REPORTED.

Aconitum Noveboracense, *Gr.*

Banks of Chenango river, Oxford, Chenango county. July. *F. V. Coville.* The plant doubtfully referred to *A. Napellus,* Twenty-seventh Report, p. 89, belongs to this species, but in it as well as in the Chenango specimen, the racemes are somewhat hairy, contrary to the requirements of the description of the species.

Hieracium prœaltum, *Vill.*

Light sandy soil, near Harrisville, Lewis county. Also, along the road between Great Bend and Le Rayville, Jefferson county. July. This is an introduced species, but it is apparently well established in the localities mentioned. In the Synoptical Flora of North America it is said to grow near Carthage and Evans Mills, but I failed to find it in these localities. It is said in *Science* to have spread extensively in St. Lawrence county, where, in one place, it had taken complete possession of a thirty-acre field and had received the local name "king devil," in allusion to its character as a noxious weed.

Lactuca integrifolia, *Bigel.*

Cornwall, Orange county. This plant occurs in many parts of the State, but it has been considered a variety of *Lactuca Canadensis,* and as such has been recorded. But in the Synoptical Flora it has been raised to specific rank and it is now recorded as a species.

Penstemon lævigatus, *Soland.*

Near the canal, two miles west of Rome. June. Probably introduced from the west.

Lycopus sessilifolius, *Gr.*

Riverhead, Long Island. Formerly regarded as a variety of *L. Europœus,* but now raised to specific rank.

Physalis Peruviana, *L.*

Manor, Long Island. August. Spontaneous in gardens.

Quercus heterophylla, *Mx.*

Tottenville, Staten Island. *A. Hollick.*

Quercus Rudkini, *Britton.*

With the preceding. *Hollick.* The observations of Mr. Hollick upon these two oaks and their environment on Staten Island lead him to the conclusion that they are probably hybrid forms.

Sparganium affine, *Schn.*

Adirondack mountains, North Elba, Lake Sanford, etc. In the Manual this stands as a variety of *S. simplex*, but it is probably a good species. The dwarf terrestrial form was found at Edmonds Ponds and referred to *S. simplex* as a variety in the Thirty-fourth Report, p. 55.

Setaria verticillata, *Bv.*

Along the railroad near Lansingburgh. *E. C. Howe.* Introduced from Europe and very rare in this State.

Apera spica-venti, *Bv.*

Lansingburgh. *Howe.* This is *Agrostis spica-venti* L. It also has been introduced from Europe and is not common.

Equisetum litorale, *Kuhl.*

Oneida lake, near the mouth of Fish creek. *Coville.*

Lepiota augustana, *Britz.*

Groves or borders of woods. Meadowdale, Albany county. July. This scarcely differs from *L. cristata* except in the shape of the spores, and it has generally been referred to that species.

Tricholoma imbricatum, *Fr.*

In groves of spruce and balsam trees, *Abies nigra* and *Abies balsamea.* North Elba, Essex county. Sept. Edible.

Tricholoma subacutum, *n. sp.*

[Plate 1. Figs. 1-5].

Pileus at first ovate or broadly conical, then convex and subacutely umbonate, dry, silky and obscurely virgate with minute innate fibrils, whitish tinged with smoky-brown or bluish-gray, darker on the umbo, flesh white, taste acrid or peppery; lamellæ rather close, slightly

adnexed, white ; stem equal, stuffed or hollow, silky-fibrillose, white; spores broadly elliptical or subglobose, .00025 to .0003 in. long, .0002 to .00025 broad.

Pileus 1.5 to 3 in. broad ; stem 2 to 4 in. long, 3–6 lines thick.

Woods and groves. North Elba. Sept.

The species is perhaps too closely related to *T. virgatum*, but it is separable by its prominent subacute umbo, paler pileus, hollow stem and hot or peppery taste. The cuticle is separable from the pileus.

Tricholoma silvaticum, *n. sp.*

[Plate 2. Figs. 16-19.]

Pileus convex or nearly plane, dry, glabrous, subumbonate, whitish; lamellæ broad, ventricose, subdistant, adnexed, white ; stem subequal, solid, white ; spores rather large, elliptical, .00045 to .0005 in. long, .0003 broad.

Pileus 1 to 1.5 in. broad ; stem 1 to 2 in. long, 2 to 4 lines thick. Mossy ground in woods. North Elba. Sept. The whole plant is white and is related to *T. leucocephalum*, from which it is separated by its subdistant lamellæ, somewhat umbonate pileus and by the absence of any farinaceous odor. From *T. inamœnum* it is distinguished by the absence of odor and stem not radicated.

Tricholoma nobile, *n. sp.*

Pileus fleshy, convex or nearly plane, dry, minutely punctate or squamulose with innate fibrils, whitish or slightly tinged with yellow, flesh white, taste unpleasant, lamellæ broad, rather close, rounded behind and slightly adnexed, white, slowly changing to pale-yellow where wounded; stem equal, solid, slightly floccose-pruinose, whitish; spores minute, subglobose, .00016 to .0002 in. broad.

Pileus 2 to 4 in. broad; stem 1.5 to 2.5 in. long. 4 to 8 lines thick.

Woods. North Elba. Sept.

The plant is closely related to *T. album*, for which it might easily be mistaken, but its habit is more clearly that of other species of Tricholoma, and it may be distinguished by the minute though rather obscure squamules, the insertion of the lamellæ and the subglobose spores. Its taste is very unpleasant and leaves a burning sensation in the mouth and throat for a long time.

Tricholoma brevipes, *Bull.*

Menands, Albany county. Oct. A small form but apparently not distinct.

Tricholoma microcephalum, *Karst.*

Grassy ground in meadows and pastures. North Elba. Sept.

The specimens have the colors of *T. melaleucum*, but the spores agree better with those of *T. microcephalum*. The fresh plant bears some resemblance to small dark colored forms of *Collybia radicata* or to small *C. fuliginella*. The lamellæ retain their white color in the dried state.

Clitocybe media, *n. sp.*

[Plate 1. Figs. 9-12.]

Pileus fleshy, convex, becoming plane or slightly depressed, dry, dark grayish-brown, the margin often wavy or irregular, flesh white, taste mild; lamellæ broad, subdistant, adnate or decurrent, whitish, the interspaces somewhat venose; stem equal or but slightly thickened at the base, solid, elastic, not polished, colored like or a little paler than the pileus; spores elliptical, .0003 in. long, .0002 broad.

Pileus 2 to 4 in. broad; stem 1 to 2 in. long, 4 to 8 lines thick.

Mossy ground in deep woods. North Elba. Sept.

This species is intermediate between *C. nebularis* and *C. clavipes*. In its general appearance, and in the character of the pileus and stem, it resembles *C. nubularis*, but in the character of the more distant lamellæ and in the size of the spores it is nearer *C. clavipes*, of which it might perhaps be regarded as a variety. Two forms are distinguishable. In one the lamellæ are more distant, slightly rounded behind, and adnate or abruptly terminated, in the other they are closer and more distinctly decurrent. The plant is edible. *C. clavipes* is said to be inedible on account of its spongy substance.

Clitocybe gallinacea, *Scop.*

Woods. North Elba. Sept. Both the stem and the pileus appear as if pruinose or slightly mealy. The taste is bitter and unpleasant.

Clitocybe tumulosa, *Kalchb.*

Groves of spruce and balsam. North Elba. Sept. Densely cæspitose. Edible.

Clitocybe angustissima, *Lasch.*

Low wet ground in woods. North Elba. Sept.

Clitocybe subditopoda, *n. sp.*

Pileus thin, convex or nearly plane, umbilicate, hygrophanous, grayish-brown and striate on the margin when moist, paler when dry, flesh concolorous, odor and taste farinaceous; lamellæ broad, close, adnate, whitish or pale cinereous; stem equal, glabrous, hollow, colored

like the pileus; spores elliptical, .0002 to .00025 in. long, .00012 to .00016 broad.

Pileus 6 to 12 lines broad; stem 1 to 2 in. long, about 1 line thick.

Mossy ground in woods. North Elba. Sept.

I have separated this form *C. ditopoda* because of the striate margin of the pileus, paler lamellæ and longer elliptical spores.

Collybia butyracea, *Bull.*

Common in groves of spruce and balsam trees. North Elba. Sept.

Collybia acervata, *Fr.*

Woods. North Elba. Sept. *C. simillima* Pk. is doubtless a mere form of this species. *C. spinulifer* Pk. differs in the spinules of the lamellæ.

Collybia ignobilis, *Karst.*

Mossy ground in balsam groves. North Elba. Sept.

Omphalia striæpileus, *Fr.*

Groves of spruce and balsam. North Elba. Sept.

The specimens differ from the description of the species only in color. They are dingy whitish when moist, white when dry.

Omphalia tubæformis, *n. sp.*

Pileus submembranous, glabrous, deeply umbilicate, grayish, the margin decurved or spreading, lamellæ distant, deeply decurrent, white, sometimes branched, with venose interspaces; stem short, equal or tapering downward, hollow, subpruinose, blackish-brown toward the base; spores elliptical, .0002 in. long.

Pileus 8 to 12 lines broad; stem 6 to 10 lines long.

Dead bark of willow. Menands. June.

Pleurotus mitis, *Pers.*

Prostrate trunks of balsam, *Abies balsamea.* North Elba. Sept.

Hebeloma firmum, *Pers.*

Woods. North Elba. Sept.

Naucoria scirpicola, *n. sp.*

[Plate 2. Figs. 6-10.]

Pileus membranous, at first hemispherical and tomentose, then convex or nearly plane, glabrous or adorned with a few floccose, superficial scales, widely striate on the margin, tawny or subochraceous, subatomate when dry; lamellæ subdistant, slightly adnexed,

colored nearly like the pileus; stem slender flocculose toward the base, white, attached to the matrix by white tomentose filaments; spores elliptical, .0004 to .0005 in. long, .0003 broad.

Pileus 6 to 10 lines broad; stem 8 to 12 lines long, .5 lines thick.

Base of stems of *Scirpus validus*. Patchogue. Aug.

Easily known by the striate margin and the white tomentum of the young pileus. It belongs to the first section of the tribe Lepidoti in the Friesian arrangement.

Galera rufipes, *n. sp.*

[Plate 2. Figs. 11-15.]

Pileus campanulate or convex, hygrophanous, reddish-tawny and striatulate when moist, whitened on the margin by the remains of the white fibrillose veil, pale ochraceous when dry; lamellæ broad, subdistant, emarginate, yellowish or subochraceous, slightly crenulate on the whitish edge; stem slender, hollow, slightly fibrillose below, pruinose at the apex, reddish-brown; spores subochraceous, .00025 to .0003 in. long, .00016 to .0002 broad.

Pileus 4 to 6 lines broad; stem about 1 in. long, .5 line thick.

Mossy ground in woods. North Elba. Sept.

Psathyra silvatica, *n. sp.*

Pileus membranous, campanulate, glabrous, viscid, hygrophanous, dark-brown and striatulate when moist, grayish-brown when dry; lamellæ broad, ascending, subdistant, ferruginous-brown with a white edge; stem slender, subflexuous, hollow, brown; spores brown, .0004 in. long, .00025 broad.

Pileus 4 to 5 lines broad; stem 1 to 2 in. long, .5 line thick.

Mossy ground in woods. North Elba. Sept.

Cortinarius fulgens, *Fr.*

Mixed woods. North Elba. Sept.

This is a showy fungus. The specimens were wholly yellow except the center of the pileus, which was marked with ferruginous or tawny stains and spots.

Cortinarius (Phlegmacium) lanatipes, *n. sp.*

Pileus fleshy, broadly convex or nearly plane, viscose, grayish, often tinged with yellow, becoming yellowish or subfulvous and virgate with innate tawny fibrils when old, flesh whitish; lamellæ narrow, close, adnexed, pale violaceous when young; stem equal or tapering upward, solid, bulbous, subannulate, loosely fibrillose tomentose below, silky

above the annulus, white, veil white; spores elliptical, .0003 in. long, .0002 broad.

Pileus 1 to 3 in. broad ; stem 1 to 2 in. long, 3 to 5 lines thick.

Groves of spruce. North Elba. Sept.

The pale pileus becoming virgate and more highly colored with age and the loose, woolly covering of the stem are the distinguishing features of this species. The bulb is distinct, but scarcely marginate.

Cortinarius (Inoloma) canescens, *n. sp.*

Pileus fleshy, subcampanulate or convex, obtuse or somewhat umbonate, silky or squamulose with innate grayish fibrils, whitish-gray when young, tinged with yellow or rufous hues when old; lamellæ thin, subdistant, rounded behind and adnexed, pallid when young, stem equal or tapering upward from a large, soft, spongy clavate-thickened base, solid, white, peronate and subannulate by the silky-fibrillose white veil, spores elliptical, uninucleate, .0004 to .0005 in. long, .00025 to .0003 broad.

Pileus 2 to 3 in. broad ; stem 2 to 4 in. long, 4 to 6 lines thick.

Abundant and gregarious in groves of spruce. North Elba. Sept.

The species is distinct from its allies by the absence of violaceous hues on the young lamellæ and by its large, spongy bulbous base of the stem. There is no marked odor, but the taste is unpleasant.

Cortinarius (Inoloma) erraticus, *n. sp.*

Pileus fleshy, firm, subcampanulate or convex, obtuse, dry, silky or obscurely squamose with innate fibrils, canescent, often becoming grayish-tawny, flesh dingy-white ; lamellæ subdistant, adnexed, pale-tawny, becoming darker with age ; stem firm, solid, thickened toward the base, white and tomentose below, violaceous above; veil violaceous, often forming an imperfect annulus and sometimes remaining in fragments or floccose scales on the margin of the pileus ; spores elliptical, uninucleate, .0003 in. long, .0002 broad.

Pileus 2 to 3 in. broad ; stem 2.5 to 4 in. long, 3 to 6 lines thick.

Groves of balsam. North Elba. Sept.

This species resembles the preceding one, but is at once distinguished from it by the violaceous color of the veil and the smaller spores.

Cortinarius (Inoloma) cæspitosus, *n. sp.*

Pileus fleshy, firm, convex, often irregular from its crowded mode of growth, silky-fibrillose on the margin, pale-yellow or buff color, often a little darker on the disk, flesh white; lamellæ thin, close, rounded behind and adnexed, whitish when young, then subochra-

ceous; stem nearly equal, solid, subbulbous, cæspitose, silky-fibrillose, subannulate, floccose-villose at the apex, white, spores, elliptical, .0003 to .0004 in. long, .00016 to .0002 broad.

Pileus 2 to 4 in. broad; stem 1 to 3 in. long, 4 to 6 lines thick.

Mossy ground in open places. Catskill mountains. Sept.

The cæspitose mode of growth, yellowish pileus, pale lamellæ and white flesh and stem distinguish this species.

Cortinarius (Dermocybe) lutescens, *n. sp.*

Pileus broadly convex or nearly plane, unpolished, innately fibrillose, squamulose on the disk, dingy-yellow, often with a greenish tint and sometimes marked with reddish or brownish spots, flesh whitish; lamellæ rather broad, close, adnexed, subconcolorous when young, tawny-cinnamon when old; stem equal, firm, silky fibrillose, subannulate from the remains of the veil, colored like the pileus; spores broadly elliptical or subglobose, .00025 to .0003 in. long, .0002 to .00025 broad.

Pileus 1 to 3 in. broad, stem 1 to 1.5 in. long, 2 to 3 lines thick.

Mossy ground in woods. North Elba. Sept.

The pileus is somewhat moist in wet weather which makes the species ambiguous between Dermocybe and Telamonia. The fibrils of the pileus indicate a Dermocybe.

Cortinarius (Telamonia) adustus, *n. sp.*

Pileus broadly campanulate or convex, obtuse, hygrophanous, bay-brown when moist, sometimes canescent on the margin, paler when dry, but smoky-brown with age and generally rimose-squamose, flesh yellowish-gray; lamellæ rather thick, distant, subfree, purplish-brown; stem equal, stuffed or hollow, fibrillose, brownish with a white mycelioid coating at the base, colored within like the flesh of the pileus; spores elliptical, .0003 to .0004 in. long, .0002 to .00025 in. broad.

Pileus 10 to 18 lines broad; stem 1 to 3 in. long, 3 to 5 lines thick.

Balsam groves. North Elba. Sept.

The plant is sometimes cæspitose. The pileus, when old, becomes smoky-brown or blackish and is often chinky or rimose-areolate.

Cortinarius (Hydrocybe) pallidus, *n. sp.*

Pileus thin, broadly convex or nearly plane, glabrous, hygrophanous, pale alutaceous when moist, buff-yellow when dry, flesh concolorous when moist, whitish when dry; lamellæ thin, rather close, ventricose, pallid; stem equal, rigid, hollow, silky-fibrillose, pallid, becoming brownish toward the base; spores subelliptical, .0003 to .00035 in. long, .0002 to .00025 broad.

Pileus 1 to 1.5 in. broad; stem 1.5 to 3 in. long, 1 to 2 lines thick. Mossy ground in wooded swamps. North Elba. Sept.

Hygrophorus Queletii, *Bres.*

Groves of larch, balsam and spruce. North Elba. Sept.

This species was very abundant in the locality mentioned. It is commonly gregarious and sometimes cæspitose. The viscid pellicle is separable, by which character it is clearly distinct from the allied *H. pudorinus*. When cæspitose the stem and pileus are often irregular. It is a fine species, nearly white, but with the pileus most delicately tinted with pale flesh color.

Hygrophorus capreolarius, *Kalchb.*

Mossy ground in woods. North Elba. Sept.

Although this fungus was regarded by Kalchbrenner as a variety of *H. erubescens*, it appears to me to be a good and distinct species. Many specimens were found in the woods of North Elba but they were constant in their characters. The colors are darker than in *H. erubescens*, and the stem, in the American plant at least, is destitute of red dots or points at the top. No specimens of the true *H. erubescens* were found, although in Hungary the two plants grow in the same places.

Hygrophorus hypothejus, *Fr.*

Woods. North Elba. Sept.

Hygrophorus fuscoalbus, *Fr.*

Groves of spruce and balsam. North Elba. Sept. Our specimens are smaller than the European plant, but in other respects they appear to be the same.

Lactarius atroviridis, *n. sp.*

Pileus fleshy, firm, centrally depressed, scabrous-hairy, sometimes rimose-areolate, dark-green, flesh whitish, milk white, taste acrid; lamellæ rather close, adnate or decurrent, whitish, sometimes spotted, or green on the edge; stem equal, short, hollow, colored like, but often paler than the pileus, spotted; spores yellowish-white, subglobose, rough, .0003 in. in diameter.

Pileus 2.5 to 4 in. broad; stem 1 to 2 in. long, 6 to 10 lines thick.

Borders of woods. Sandlake. Aug.

The color of the pileus is a dark olive green, by which and by its dryness the species may be distinguished from *L. sordidus*. The same species occurs in North Carolina, where it was collected by Rev. C. J. Curtis.

Lactarius quietus, *Fr.*

Low woods. North Elba. Sept.

Russula purpurina, *Q. & S.*

Mossy ground in woods of balsam. North Elba, near Lake Placid. This is a beautiful and very distinct species, easily known by its red stem, mild taste and white spores.

Cantharellus rosellus, *n. sp.*

[Plate 1. Figs. 6-8.]

Pileus thin, infundibuliform, regular, glabrous, pale pinkish-red, flesh white; lamellæ narrow, close, dichotomous, deeply decurrent, whitish, tinged with pink; stem equal, slender, solid, subglabrous, often flexuous, colored like the pileus; spores minute, broadly elliptical, .00014 in. long, .0001 broad.

Pileus 4 to 8 lines broad; stem about 1 in. long, scarcely 1 line thick. Mossy ground in groves of balsam. North Elba. Sept. This small species belongs to the section Agaricoides, and is apparently closely allied to *C. albidus*, from which its smaller size and different color distinguish it. The pileus is sometimes deeply umbilicate

Marasmius peronatus. *Fr.*

Thin woods. North Elba. Sept.

Lenzites heteromorpha, *Fr.*

Stumps of spruce. North Elba. Sept.

In the Thirtieth Report I expressed the opinion that *Lenzites Cookei*, *Dædalea confragosa*, *Trametes rubescens*, etc., were all forms of one species. In Icones Selectæ Hymenomycetum Professor Fries says that *L. heteromorpha* exhibits three forms, one of which belongs to Lenzites, another to Dædalea and another to Trametes, thus showing too great an affinity between these genera. The form here noted belongs to Dædalea. The lenzitoid form, which is taken as the type of the species, was not detected by me.

Boletus floccopus, *Vahl.*

Woods. Selkirk, Albany county. Aug.

The forms which I have referred to this species scarcely differ from *B. strobilaceus*, except in having the tubes depressed around the stem.

Boletus hirtellus. *Pk. ms.*

Sandy soil under pine trees. Rensselaer lake, Albany county. Oct.

Boletus subvelutipes, *Pk. ms.*

Woods. Caroga and Catskill mountains. July.

Polyporus piceinus, *n. sp.*

Pileus 1 to 2 inches broad, thin subcorky, sessile, often concrescent and imbricated, sometimes resupinate or effuso-reflexed, tomentose, concentrically sulcate and adorned with intervening elevated tomentose lines or narrow zones, tawny-brown or subspadiceous, the thin margin at first golden-yellow, soon tawny, then concolorous; hymenium plane or concave, tawny-cinnamon, the pores minute, subrotund, long, the dissepiments thin, but entire; spores minute, subglobose, .00016 in. broad.

Dead trunks and bark of spruce, *Picea nigra.* Sandlake and Adirondack mountains. July to October.

This is a common species in regions where the spruce abounds, yet it does not appear to have been described, nor does it appear to grow on the trunk or bark of any other tree. The pileus often grows as if attached by the vertex, and thus resembles in form the pileus of *Hymenochaete rubiginosa,* or that of *Trametes mollis.* In color it resembles *Lenzites sepiaria* and *Trametes Pini,* but it is generally a little paler or more tawny. Sometimes the fungus appears to revive the second year, and the pores are then obscurely stratose. This, with the peculiar elevated lines of tomentum on the pileus, suggests a resemblance to *Fomes pectinatus,* but our plant would belong rather to the genus Polystictus, if the more recent genera into which the old genus Polyporus has been subdivided should be adopted. In the beginning a minute orbicular tuft of golden velvety hairs or fibres appear. As this tuft enlarges pores are formed in the center just as in *Polyporus* (*Polystictus*) *abietinus,* which sometimes accompanies it. On the under side of prostrate trunks the fungus remains resupinate, or has but a narrow reflexed margin, but in vertical situations a pileus is formed.

Polyporus aureonitens, *Patouillard in lit.*

Pileus 6 to 18 lines broad, rather thick, corky, sessile, variously concrescent and imbricated, minutely velvety-pubescent when young, soon glabrous, radiately fibrous-striate, the young plant and growing margin at first sulphur-yellow, then golden-tawny, finally tawny-ferruginous, generally concentrically marked with darker lines or narrow zones, somewhat shining, substance tawny; pores minute, subrotund, short, ferruginous with a silvery lustre; spores whitish, or very pale yellowish, elliptical-naviculoid, .0002 in. long, .00016 broad.

Trunks of birches, alders and maple, *Acer spicatum*. Sandlake, Catskill and Adirondack mountains. Aug. and Sept.

Related to *P. radiatus*, and like it belonging to the genus Polystictus of modern classification. It is distinguished by its paler color, often lineate-zonate pileus and paler spores.

Polyporus variiformis, *n. sp.*

Pileus 4 to 10 lines broad, coriaceous or subcorky, nearly plane, somewhat strigose-tomentose, tawny-rufescent, subzonate, often nodulose, sometimes wholly resupinate, substance white; pores rather large, subrotund, angular or even flexuous, white, in oblique situations gaping or lacerated.

Var. *nodulosus*. Pilei very small, narrowly reflexed, forming small nodules.

Var. *resupinatus*. Wholly resupinate or with a narrowly reflexed continuous margin.

Var. *interruptus*. Interruptedly resupinate or anastomosingly creeping, marginless.

Prostrate trunks of spruce, *Picea nigra*. Adirondack mountains, North Elba and Cascadeville. June and Sept.

This species is very variable and seems ambiguous between Polystictus, Dædalea and Trametes. It appears to live through the winter and revive again the next season. It is almost corky in texture. The pores are at first pure white, but they become whitish or pallid with age.

Polyporus rhodellus, *Fr.*

Prostrate trunks of hemlock, *Abies Canadensis*. Adirondack mountains. Aug.

This and the two following species belong to the genus Poria of Persoon.

Polyporus marginellus, *n. sp.*

Resupinate, effused, forming extensive patches, 1 to 3 lines thick; subiculum distinct, firm, subcinnamon, the extreme growing margin white, becoming dark-ferruginous with age; pores at first short, sunk in the tomentum of the subiculum, then longer, minute, rotund, often oblique, brownish-ferruginous, glaucous within, the dissepiments thick, obtuse.

Dead bark and decorticated trunks of spruce, *Abies nigra*. North Elba. Sept.

Remarkable for and very distinct by the narrow downy white margin that borders the growing plant.

Polyporus sulphurellus, *n. sp.*

Resupinate, effused, very thin, following the inequalities of the matrix; subiculum and margin downy, white; pores very short, minute, rotund, very pale-yellow, often with a slight salmon tint, the issepiments obtuse.

Dead bark of poplar. Catskill mountains. Sept.

Trametes Pini, *Fr.*

Railroad ties. Fishkill. Pine trees. Eastport, Long Island. Aug.

Merulius aureus, *Fr.*

Decaying wood of balsam, *Abies balsamea*. North Elba. Sept.

In drying, the specimens become orange colored.

Merulius molluscus, *Fr.*

Bark and decorticated wood of spruce. Averyville, Essex county. Sept.

Phlebia vaga, *Fr.*

Prostrate trunks of acerose trees. North Elba. Sept.

Phlebia acerina, *n. sp.*

Resupinate, effused, irregular, subglabrous beneath, the margin entire; hymenium dingy cream color, becoming darker with age, the folds irregular, obtuse, dentate, subporous.

Wood and bark of maple, *Acer saccharinum*. Mechanicville. July.

Closely related to *P. vaga* from which it appears to be distinct by its entire nearly glabrous margin and less tuberculose or papillate hymenium.

Odontia Pruni, *Lasch.*

Dead bark of wild red cherry, *Prunus Pennsylvanica*. Adirondack mountains. Sept.

Odontia fusca, *C. & E.*

Decaying wood of spruce. Averyville. Sept.

Thelephora scoparia, *n. sp.*

[Plate 2. Figs. 20, 21.]

Incrusting small plants, mosses, etc., here and there emitting fascicles of branches, united below, subterete, acuminate or fimbriately incised, at first pale or whitish, soon ferruginous brown; hymenium even, pruinose-pubescent; spores angular, rough, colored, .0003 to .0004 in. long.

Bethlehem and Selkirk. Aug.

This has the habit and color of *T. laciniata*, but it forms tufts of branches rather than pilei and the hymenium is even. Sometimes it overtops the stems which it incrusts and then it appears stipitate and branched above.

Corticium sulphureum, *Fr.*

Prostrate trunks of balsam. North Elba. Sept.

Corticium rhodellum, *n. sp.*

Thin, membranous, adnate; subiculum and fimbriate margin white or whitish; hymenium slightly pruinose, rosy-incarnate, bearing metuloids .0016 to .002 in. long, .0004 to .00045 broad; spores elliptical, naviculoid, .00016 to .0002 in. long.

Decaying wood. Lyndonville, Orleans county. *C. E. Fairman*, M. D. Specimens have also been found growing on the bark of poplar and communicated to me by *Mr. T. G. Gentry* of Philadelphia.

The species differs from *C. carneum* B. & C. in its brighter color and in the even, not rimose, hymenium. From *C. roseum* Pers. it is distinct by the presence of metuloids and its smaller spores. It belongs to the genus Peniophora of Cooke.

Corticium subincarnatum, *n. sp.*

Effused, thin, pale-yellow, soon subincarnate, even, pruinose-pulverulent, the broad scarcely determinate margin sulphur yellow; spores elliptical, minute, .00016 in. long, .00008 broad.

Decorticated wood of spruce. North Elba. Sept.

Hymenochæte abnormis, *n. sp.*

[Plate 1. Figs. 13-16.]

Pileus effuso-reflexed, coriaceous or subcorky, about six lines broad, generally imbricated and wavy or complicate, tomentose, obscurely zonate, sometimes tuberculate or uneven, blackish; hymenium cinereous, pruinose, setulose with pale-ferruginous blunt setæ; spores oblong, colorless, .0004 to .0005 in. long, .0002 to .00025 broad.

Decaying wood of spruce in wet places. Adirondack mountains. Sept.

Remarkable for the colored but unusually blunt and subcylindrical setæ of the hymenium. These are sometimes paler above and sometimes slightly rough.

Pistillaria viticola, *n. sp.*

[Plate 2. Figs. 25-27.]

Club ovoid or obovoid, obtuse, glabrous, white, about equal to or only half as long as the stem; stem cylindrical or slightly tapering upward, glabrous, .5 to .75 line long, white; spores elliptical, .00025 to .0003 in. long.

Dead stems of grape vine, *Vitis æstivalis*. Ellenville, Ulster county.

Pistillaria alnicola, *n. sp.*

[Plate 2. Figs. 22-24.]

Club ovate or oblong, obtuse, sometimes compressed or irregular, one to two lines high, sessile or with a very short stem-like base, erumpent, glabrous, varying in color from brownish-ochre to bay-red, whitish and spongy within; basidia with four sterigmata; spores ovate, pointed at one end, .0004 to .0006 in. long, .00025 to .0003 broad.

Dead branches of alder, *Alnus incana.* Adirondack mountains. Cascadeville. Sept.

Mitremyces lutescens, *Schw.*

Shaded banks. Ellenville. July. This is considered by Dr. G. Massee to be synonymous with *Calostoma cinnabarina,* Desf.

Geaster fornicatus, *Fr.*

Gouverneur, St. Lawrence county. *Mrs. E. C. Anthony.*

The specimens have numerous rays and belong to var. *multifidus.* Mrs. A. also sends from the same locality a specimen of *G. mammosus,* Chev.

Phyllosticta Negundinis, *Sacc. & Speg.*

Living leaves of box elder, *Negundo aceroides.* Patchogue. Aug.

Phyllosticta serotina, *Cke.*

Living leaves of wild black cherry, *Prunus serotina.* Manor, Long Island. Aug. The wild black cherry is very common in the eastern part of Long Island, and its leaves are often spotted by this fungus. Its branches also are frequently attacked by *Plowrightia morbosa,* the fungus that causes the "black knot," although in the northern and eastern parts of the State this tree is almost entirely exempt from the attacks of this fungus.

Phyllosticta Hibisci, *n. sp.*

Spots suborbicular, whitish or reddish-gray, with a narrow brown border, 2 to 4 lines broad; perithecia minute, .004 in. broad, epiphyllous, black; spores oblong, .0003 to .0004 in. long, .00012 to .00015 broad, usually with one or two nuclei; sporophores simple or branched, .0004 to .0008 in. long.

Living leaves of swamp rose mallow, *Hibiscus moscheutos.* Eastport and Patchogue. Aug.

Phoma Libertiana, *Speg. & Roum.*

Corticated branches of hemlock, *Abies Canadensis.* Sandlake. Aug.

Diplodia Dulcamaræ, *Fckl.*

Dead stems of bittersweet, *Solamun dulcamara.* Sandlake. Aug.

The spores are at first simple, and in this condition the fungus might be referred to the genus Sphæropsis.

Hendersonia Mali, *Thum.*

Living leaves of apple tree. Phœnicia, Ulster county. Sept. In our specimens the perithecia are rather smaller than in the type.

Septoria Trichostematis, *n. sp.*

Spots mostly large, but one or two on a leaf, brownish-gray, generally with a broad purplish margin; perithecia epiphyllous, minute, .003 to .004 in. broad, black; spores bacillary, slender, straight or curved, .0012 to .0016 in. long.

Living leaves of blue curls, *Trichostema dichotomum.* Manor. Aug.

Sacidium lignarium, *n. sp.*

Perithecia numerous, scattered or aggregated, thin, membranous, clypeate, astomous, quadrangular or pentangular, black, easily separable from the matrix; spores minute, oblong, colorless or faintly colored, .00016 in. long, .00008 broad.

Bottom of a basswood barrel in a cellar. Flatbush, Long Island. April. *Rev. J. L. Zabriskie.*

Aposphæria aranea, *n. sp.*

Perithecia scattered or gregarious, superficial, astomous, subglobose, submembranous, rupturing irregularly, black, involved in and generally seated on pale webby filaments; spores .00012 to .00016 in. long, about .0001 broad.

With the preceding. *Zabriskie.*

Vermicularia truncata, *Schw.*

Old bean pods. Menands. Oct.

Vermicularia Wallrothii, *Sacc.*

Kind of squash, *Cucurbita melopepo.* Menands. Sept.

Dinemasporium hispidulum, *Sacc.*

Dead wood of *Viburnum dentatum.* West Albany. May.

Glœosporium lagenarium, *Sacc. & Roum.*

Rind of squash, *Cucurbita melopepo.* Menands. Nov.

Glœosporium Physalosporæ, *Car.*

Ripening grapes. Menands. Oct.

Glœosporium irregulare, *n. sp.*

Spots large, irregular, generally but one or two on a leaflet, brown or reddish-brown; acervuli numerous, hypophyllous, minute; spores elliptical, obtuse, .0003 to .0004 in. long, .00016 to .0002 broad, oozing out and forming minute subglobose pale or whitish masses.

Living leaves of ash trees, *Fraxinus Americana.* Menands. June.

In the locality mentioned, this fungus has appeared on several trees two years in succession. In some instances nearly all the leaves are affected by it, and in consequence the foliage appears badly blighted and injured as if by fire.

Melanconium Tiliæ, *n. sp.*

Heaps subcutaneous, minute, scarcely elevating the epidermis; spores ovate or subelliptical, involved in mucus, black, .0009 to .0011 in. long, .0007 to .0008 broad, oozing out and forming small black dot-like stains on the matrix.

Dead branches of basswood, *Tilia Americana.* Mechanicville. July.

This species may be easily recognized by its minute heaps, small spore stains, and by having its spores involved in mucus.

Melanconium foliicolum, *n. sp.*

Spots orbicular, brown or reddish-brown, surrounded by a narrow darker border; heaps hypophyllous, minute, black; spores elliptical, slightly colored, .0004 to .0005 in. long, about .0003 broad.

Dead spots on living leaves of sassafras. Manor. Aug.

Ustilago Osmundæ, *Pk.*

Living fronds of royal fern, *Osmunda regalis.* Knox, Albany county. July.

The fungus attacks the apical part of sterile fronds and thickens and distorts the frond tissues. The fresh specimens show that it is scarcely a good Ustilago, inasmuch as the spores appear to be borne at the surface, and not to be deeply seated as in genuine species. Its true affinity is not yet clear. The margin of the affected part of the frond is sometimes whitened by minute fungous filaments. The spores are globose, reddish-brown, slightly rough, .0004 to .0005 in. in diameter. Probably it is an aberrant Uredo.

Synchytrium aureum, *Schrœt.*

Living leaves and petioles of strawberry, *Fragaria Virginiana.* Sandlake. June.

Peronospora sordida, *Berk.*

Living leaves of figwort, *Scrophularia nodosa* v. *Marilandica.* Knowersville, Albany county. July.

Monilia effusa, *n. sp.*

Patches at first small, soon confluent and widely effused, thin, pulverulent, pale tawny or ochraceous; hyphæ hyaline, septate, spores catenulate, limoniform, apiculate at one or both ends, .0006 to .0007 in. long, .0004 to .0005 broad.

Decaying wood. Jayville, St. Lawrence county. July.

From *M. aurea* it differs in its smaller spores and more effused mode of growth.

Monilia aurantiaca, *Peck & Sacc.*

Tufts pulvinate, superficial, rather compact, soon fragile, velvety-pulveraceous, 1 to 6 lines in diameter, sometimes confluent, orange-salmon color; hyphæ radiating, .0004 to .0005 in. broad, irregularly branched, septate as well as the branches, the joints at length separating; spores heteromorphous, at first globose or elliptical, .0004 to .0005 in. broad, or .0007 in. long, .0004 broad, then sublimoniform, forming rather long chains, .0004 to .0005 in. long, .0003 to .00035 broad, the chains often branched.

Dead bark of *Ailanthus glandulosus*. Manor, L. I. Aug.

Related to *M. aureofulva* and *M. sitophila*, but distinct in the color of the tufts and in the form and size of the spores.

Rhopalomyces Cucurbitarum, *B. & R.*

Flowers and fruit of squash. Menands. Aug.

Aspergillus fimetarius, *n. sp.*

White; sterile hyphæ creeping, fertile erect, simple, septate, slightly enlarged at the apex; basidia oblong or subcylindrical, pointed at the apex, .0005 to .0006 in. long; spores globose, .00016 to .0002 in. long.

Excrement of deer. Adirondack mountains. July.

The species is very closely allied to *A. candidus*, but is distinguished by its septate hyphæ, larger spores and different habitat.

Rhinotrichum ramosissimum, *B. & C.*

Decaying oak wood and bark; also on maple wood. Menands and Selkirk. Aug.

Our specimens agree with the description of *R. Curtisii* in the character of the terminal joints of the hyphæ, but in color and spore character they correspond better with the description of *R. ramosissimum*.

Virgaria hydnicola, *n. sp.*

Hyphæ minute, forked or ternately divided, brownish, the ramuli subulate, slightly divergent; spores globose, minute, .0001 to .00015 in. broad.

On a white resupinate Hydnum to which it imparts a smoky brown color. North Elba. Sept.

Fusicladium fasciculatum, *C. & E.*

Living leaves of ipecac spurge, *Euphorbia Ipecacuanha.* Manor. Aug.

Septonema breviusculum, *B. & C.*

Bark of living maple, *Acer saccharinum.* Menands and Knowersville. May and June. This fungus forms a thin black crust over the bark.

Cercospora Epilobii, *Schnd.*

Living leaves of willow herb, *Epilobium angustifolium.* Harrisville and Jayville. July.

Cercospora Resedæ, *Fckl.*

Living or languishing leaves of mignonette, *Reseda odorata.* Menands. Aug. and Sept.

On living leaves the spots are whitish or grayish, but on dead leaves they often become blackish.

Cercospora rhuina, *C. & E.*

Living leaves of dwarf sumac, *Rhus copallina.* Manor. Aug.

Our specimens differ from the type in having the spots blackish and may be designated as variety *nigromaculans.*

Sporocybe cellare, *n. sp.*

Stems .04 to .07 in. long, cylindrical or tapering upward from an enlarged or subbulbous base, straight, blackish-brown, composed of densely compacted filaments except on the surface, capitulum broader than the stem, tawny-brown; spores very numerous, globose, colored, .0002 to .00025 in. broad.

On a barrel in a cellar. Flatbush. March, *Zabriskie.*

It differs from *S. bulbosa Schw.* in the character of the spores.

Helicomyces roseus, *Lk.*

Dead bark of poplar, *Populus tremuloides.* Adirondack mountains. Sept.

Tubercularia fungicola, *n. sp.*

Tubercles minute, scattered, subglobose, .007 to .014 in. broad, orange colored; spores oblong or subfusiform, hyaline, straight or slightly curved, .0004 to .0006 in. long, .00012 broad.

On old *Hypoxylon coccineum.* Knowersville. May.

Tuberculina persicina, *Sacc.*

Parasitic on the Æcidium of *Clematis Virginiana.* Near Lowville, Lewis county. July.

This is apparently a very rare fungus in this State.

Ombrophila albiceps, *n. sp.*

[Plate 2. Figs. 1-5.]

Pileus hemispherical or convex, tough, whitish or sometimes with a faint incarnate tinge, 2 to 4 lines broad; stem equal or slightly thickened at the base, tough, stuffed, appearing as if externally coated with gluten in wet weather, pallid or reddish-brown, 4 to 8 lines long, 1 to 1.5 lines thick; asci narrow, cylindrical, paraphysate, 8-spored, .0016 to .002 in. long, .0002 to .00025 broad; spores minute, elliptical, .0002 in. long, .00012 broad.

Decaying wood of deciduous trees. North Elba. Sept.

This is a very distinct species, easily separated from its allies by its peculiar colors and its external resemblance to species of Leotia. The central pith of the stem is accurately limited and sometimes in drying the stem becomes hollow.

Peziza scubalonta, *C. & G.*

Cow dung. North Elba. Sept. In the dried specimens the hymenium sometimes becomes rimose or perforated by contraction.

Peziza hinnulea, *B. & Br.*

Burnt ground. Menands. Aug.

Calloria acanthostigma, *Fr.*

Decorticated wood of deciduous trees. Adirondack mountains. Aug.

Valsa coronata, *Fr.*

Dead bark of maple, *Acer saccharinum.* Catskill mountains. Sept.

Anthostoma turgidum, *Nits.*

Dead bark of beech, *Fagus ferruginea.* Selkirk. Aug.

Anthostomella limitata, *Sacc.*

Dead stems and branches of swamp honeysuckle, *Lonicera oblongifolia.* Knox. July.

Nummularia repanda, *Fr.*

Dead branches and trunks of mountain ash, *Pyrus Americana.* North Elba. Sept.

Externally this species resembles *N. discreta,* but it may be distinguished by its larger size dentate-lacerated margin of the stroma and ovate spores.

Chætosphæria longipila, *n. sp.*

Perithecia very small, gregarious, black, seated on or involved in a subiculum of very long, slender, webby, cinereous or grayish-brown filaments; asci oblanceolate, the sporiferous part .0016 in. long, .0005 broad; spores crowded or biseriate, straight, .0004 to .0005 in. long, .0002 to .00025 broad, triseptate, the two intermediate cells colored, the terminal ones hyaline.

Old barrel in a cellar. Flatbush. March. *Zabriskie.*

This is related to *C. phæostroma* and *C. phæostromoides,* but it differs from both in its paler subiculum and shorter straight spores.

Celidium stictarum, *Tul.*

Receptacles of lungwort lichen, *Sticta pulmonaria.* Catskill and Adirondack mountains, also in Sandlake. The fungus blackens the surface of the apothecia and thus makes the affected ones easily recognizable.

Micrococcus prodigiosus, *Cohn.*

Stale bread in damp places. Menands. Aug.

(D.)

REMARKS AND OBSERVATIONS.

Proserpinaca pectinacea, *Lam.*

Manor, L. I. Aug. In the State Flora, Vol. 1, p. 241, Dr. Torrey admits this plant on the authority of Dr. Douglas, and says that "it will very probably yet be found on Long Island." It was found, with *Ammannia humilis,* growing on the shores of a pond about half a mile Northwest of Manor. It is a very rare species.

Lonicera oblongifolia, *Hook.*

Tamarack swamp near Knox. Some of the plants in this locality produce united berries, others have them nearly distinct.

Valerianella Woodsiana, *Walp.* **var. patellaria,** *Gr.*

Alluvial meadows along the Chenango river. Oxford. *Coville.*

Solidago nemoralis, *Ait.*

Elizabethtown, Essex county. A remarkable form with white rays. The general hue of the panicles is creamy yellow.

Rudbeckia hirta, *L.*

This is already a pestilent weed in some parts of the State. In some meadows it has become as plentiful as the white or ox eye daisy. A double flowered form, probably from Marion, Wayne county, was communicated by Mrs. E. G. Britton.

Coreopsis trichosperma, *Mx.* var. tenuiloba, *Gr.*

Near Eastport and Patchogue. Aug. In the Synoptical Flora this variety is attributed to peat bogs in Indiana and Illinois, but either it or a very closely allied form occurs on Long Island. The leaves and their divisions are linear and entire or merely hispidulous-serrulate. The awns of the achenia are variable.

Rhododendron Rhodora, *Don.*

Sam's Point, Ulster county. July. This locality for one of our rare plants was first made known by the late *C. F. Austin.*

Polemonium cæruleum, *L.*

Abundant in alder swamps and bogs in McDonough and Preston, Chenango county. *Coville.*

Celtis occidentalis, *L.*

Banks of Black river near Lowville. This is a form having the leaves variegated with pale greenish yellow angular spots or blotches. The blackberry, *Rubus villosus,* and the red raspberry, *Rubus strigosus,* occasionally occur with variegated foliage.

Arceuthobium pusillum, *Pk.*

Black spruce in Preston, Plymouth and German, Chenango county. *Coville.*

Betula glandulosa, *Mx.*

Abundant in a tamarack swamp between Lake Bonaparte and Harrisville. The shrubs are four to six feet high, and by their size the pale lower surface of the leaves and the longer fertile aments they appear to connect with *B. pumila.* But the branches are somewhat glandular dotted and for this reason the plants are referable to *B. glandulosa.*

Sagittaria graminea, *Mx.*

Abundant about Lake Geneganslet in McDonough. *Coville.*

Epipactis Helleborine, *Crantz, var.* viridens, *Irm.*

This rare orchidaceous plant which was discovered near Syracuse a few years ago and subsequently near Buffalo, has now been detected in a third locality near Otisco, Onondaga county, by *Dr. W. W. Munson.*

Trillium grandiflorum, *Salisb., var.* variegatum, *Pk.*

Additional specimens sent by Mrs. Goodrich show a great variation in the coloring of the flowers. In one specimen two petals had a narrow green dash in the center, the other one was wholly white. In

another specimen the central green line is replaced by a row of green spots. Two specimens have the petals almost wholly green, the extreme apex and adjacent margins only being white. Between these extremes all degrees of variation in the extent of the green coloring exist. The plants grew in abundance, about a hundred specimens having been found. Mrs. G. adds in an accompanying note that two specimens were found in which not only the petals but also the sepals were wholly white.

Eleocharis quadrangulata, *R. Br.*

Lake Neahtowantah, near Fulton, Oswego county. *Coville.*

Paspalum setaceum, *Mx.*

A form was found near Manor, often having two spikes from the upper sheath.

Equisetum variegatum, *Schl.*

Greene, Chenango county, *Coville.* Also near Lerayville, Jefferson county.

Equisetum palustre, *L.*

Banks of the railroad near Lake Bonaparte, Lewis county. Sometimes two or three fertile stems spring from the same root.

Tricholoma transmutans, *Pk.*

Common in spruce and balsam groves in North Elba, where it is associated with *T. imbricatum* and *T. vaccinum*, which it resembles in color, and in its farinaceous odor and taste, but from which it is readily distinguished by its viscid pileus. It belongs to the group of which *T. fulvellum*, *T. flavobrunneum* and *T. albrobrunneum* are representatives, and, though closely allied to these species, it is quite distinct from them. It is an edible species.

Clitopilus Noveboracensis *var.* brevis, *n. var.*

Pileus abundantly rivulose, plane or slightly depressed, pallid or subrufescent and pure white on the margin when moist, wholly white or whitish when dry; lamellæ slightly decurrent; stem short, about one inch long.

Groves of spruce and balsam. North Elba. Sept.

This variety manifests a tendency to grow in lines or in arcs of circles. It is often somewhat cæspitose. The white margin of the moist pileus is due to a silky web of interwoven white filaments. This with the short stem and less deeply decurrent lamellæ separate the variety from the typical form.

Polyporus cinnabarinus, *Jacq.*

The usual habitat of this fungus is wood of deciduous trees, but it occasionally occurs on hemlock, *Abies Canadensis.*

Polyporus abietinus, *Fr. var.* irpiciformis *n. var.*

Resupinate, at first orbicular, then often confluent in irregular patches, thin, the margin fimbriate, whitish; hymenium pallid, composed of radiating lamellæ gashed into subulate or fimbriate irpiciform aculei.

Bark of balsam, *Abies balsamea.* North Elba. Sept.

Some fungi belonging to the Polyporei are very variable and break over the generic limits assigned them. The species now under consideration apparently occurs in four well-marked forms, two pileate and two resupinate, one of each belonging to the genus Polyporus, or, as some classify it, to Polystictus, and one of each to Irpex, and therefore to the distinct order Hydnei.

The typical pileate form is very common in the Adirondack forests growing on trunks and branches of spruce, balsam, larch and sometimes on pine and hemlock. A resupinate form is also common. The form known as *Irpex fuscoviolaceus,* which is regarded by some mycologists as belonging to this species, is much more rare and has been observed by me on spruce only. But I have found it growing on the same trunk and in company with *P. abietinus,* and so closely resembling it in all respects save in the hymenium that it is difficult to believe it a distant species. The hymenium is similar in color to that of *P. abietinus,* but it is composed of radiating lamellæ (as in Lenzites), which are incised so as to form teeth or aculei as in Irpex. The discovery of the resupinate variety, now described as var. *irpiciformis,* strengthens the belief in the specific unity of *Irpex fuscoviolaceus* and *Polyporus abietinus,* for here again we have the radiating lamellæ incised into irpiciform teeth, thus showing the structure of the hymenium to be the same as in *I. fuscoviolaceus,* and besides this, we have a variation in color corresponding to that which occurs in the hymenium of *P. abietinus.* For in the resupinate form of *P. abietinus* the color of the hymenium, even in young and growing specimens is often much paler than in the typical pileate form, exhibiting scarcely a trace of violaceous color, but showing rather a pallid hue with a slight suggestion of pale cinnamon. This peculiar color is seen in variety *irpiciformis* and enforces the conclusion that it is not a distinct species of Irpex but rather a mere variety of *P. abietinus.* It indicates a very intimate connection between Lenzites among the Agaricini, Polyporus

among the polyporei and Irpex among the Hydnei. Such a blending of generic characters in one species is not very assuring to our present estimation of generic limits.

Corticium cinereum *Fr. var.* fumigatum, *Thum.*

Dead branches of hickory, *Carya alba.* Selkirk. June.

Geoglossum vitellinum, *Bres.*

Very abundant and luxuriant in mossy damp ground in the woods of North Elba. It was tested for its edible quality and found to be good. Its small size would ordinarily make it of but little importance as an esculent fungus, but this objection to it is in great measure obviated when it occurs in great profusion. It maintains the irregular character of the species even when growing luxuriantly.

(E.)

NEW YORK SPECIES OF CLITOPILUS.

Clitopilus, *Fr.*

Stem fleshy or fibrous, diffused above into the pileus, of which the margin is at first involute. Hymenophore continuous with the stem. Lamallæ equally attenuated behind and subdecurrent, neither separating nor sinuate.

Terrestrial, often strong smelling, the pileus more or less depressed or umbilicate, the umbilicus similarly colored.

This genus belongs to the rosy or pink-spored series, and corresponds to Clitocybe in the white-spored series. It is separated from Eccilia by its fleshy stem, and from Entoloma by its adnate or decurrent lamellæ. The species are less numerous than those of Clitocybe, and some are separable from that genus by a slight difference in the color of the spores only. The spores of most of the species have the usual flesh-colored hue of the series Hyporhodii, but in two species they are more highly colored, exhibiting a rosy-red hue, while in a few species they are very pale, barely tinted with flesh color when caught on white paper. If caught on black or brown paper they appear sordid or whitish, and the species might then be sought in the genus Clitocybe. The spores of different species vary also in size and shape, thus furnishing important specific characters. Some of the species are edible, others are bitter and unpleasant in flavor. A farinaceous odor is observable in several species, and this is sometimes accompanied by a bitter taste. Most authors follow Fries in the

arrangement of the species, dividing them into two groups, the Orcelli, distinguished by deeply decurrent lamellæ and an irregular, scarcely hygrophanous pileus, with the margin at first flocculose; and Sericelli, distinguished by adnate or slightly decurrent lamellæ, and a regular silky or hygrophanous-silky pileus with a naked margin. This arrangement is not strictly applicable to some of our species. *C. abortivus, C. erythrosporus* and *C. Noveboracensis* have the lamellæ deeply decurrent in some individuals, adnate or slightly decurrent in others, and therefore the same species might be sought in both groups. For this reason, the primary grouping of our species has been made to depend on the variation in the spore colors. By far the greater number of our species appear to be peculiar to this country, only two of them occurring also in Europe.

SYNOPSIS OF THE SPECIES.

	Spores and mature lamellæ flesh-colored	1
	Spores and mature lamellæ rosy-red	9
	Spores very pale flesh-colored	10
1.	Pileus hygrophanous	8
1.	Pileus not hygrophanous	2
	2. Pileus gray or grayish-brown	5
	2. Pileus some other color	3
3.	Pileus white or whitish	4
3.	Pileus pale tan-color	*C. pascuensis.*
	4. Pileus firm, dry, pruinate	*C. prunulus.*
	4. Pileus soft, slightly viscid when moist	*C. Orcella.*
5.	Pileus large, more than 1.5 in. broad	*C. abortivus.*
5.	Pileus small, less than 1.5 in. broad	6
	6. Spores even	*C. unitinctus.*
	6. Spores angular	7
7.	Stem longer than the width of the zoneless pileus	*C. albogriseus.*
7.	Stem shorter than the width of the commonly zonate pileus	*C. micropus.*
	8. Pileus brown or grayish brown	*C. subvilis.*
	8. Pileus white or yellowish-white	*C. Woodianus.*
9.	Stem colored like the pileus	*C. erythrosporus.*
9.	Stem white, paler than the pileus	*C. conissans.*
	10. Pileus even	11
	10. Pileus rivulose	*C. Noveboracensis.*
11.	Stems cæspitose, solid	*C. cæspitosus.*
11.	Stems not cæspitose, hollow	*C. Seymourianus.*

Spores flesh-colored.

a. Spores even.

Clitopilus prunulus. *Scop.*

PLUM CLITOPILUS.

Pileus fleshy, *compact*, at first convex and regular, then repand, *dry, pruinate*, white or cinereous white, flesh white, unchangeable, with a pleasant farinaceous odor; lamella deeply decurrent, subdistant, flesh-colored; stem solid, naked, striate, white; spores subelliptical, pointed at each end, .0004 to .00045 in. long, .0002 to .00025 broad.

Pileus 1.5 to 3 in. broad, stem 1 to 2 in. long, 3 to 4 lines thick.

Woods. Albany, Rensselaer and Saratoga counties.

Not abundant, but edible and said to be delicious and one of the best of the esculent species.

Clitopilus Orcella, *Bull.*

Pileus fleshy, *soft*, plane or slightly depressed, often irregular, even when young, *slightly silky, somewhat viscid when moist*, white or yellowish-white, flesh white, taste and odor farinaceous; lamellæ deeply decurrent, *close*, whitish, then flesh-colored; stem short, solid, flocculose, often eccentric, thickened above, white; spores elliptical, .00035 to .0004 in. long, .0002 broad.

Generally a little smaller than the preceding species, softer and more irregular, but so closely allied that by some it is considered a mere variety of it. It is said to be edible and of a delicate flavor. It occurs in wet weather in pastures and open places. Rensselaer county.

Clitopilus pascuensis, *Pk.*

PASTURE CLITOPILUS.

Pileus fleshy, compact, centrally depressed, *glabrous, reddish or pale-alutaceous*, the cuticle of the disk cracking into minute areas; lamellæ rather narrow, close, decurrent, whitish, becoming flesh-colored; stem short equal or tapering downward, solid, glabrous, colored like the pileus; spores subellipitical, pale incarnate, .0003 to .0004 in. long, .0002 to .00025 broad.

Pileus 2 to 3 in. broad; stem 8 to 18 lines long, 4 to 6 lines thick.

Pastures. Saratoga county.

The species is related to *C. prunulus* from which it is distinct by its shorter, paler spores, its glabrous pileus rimose-areolate on the disk, and tinged with red or alutaceous and by its paler lamellæ. From *C. pseudo-orcella* it differs in its glabrous pileus with no silky luster

and in its closer lamellæ. Its odor is obsolete but it has a farinaceous flavor. It is probably esculent, but has not been found in sufficient quantity to afford a test of qualities.

Clitopilus unitinctus, *Pk.*

ONE-COLORED CLITOPILUS.

Pileus thin, *submembranous*, flexible, convex or nearly plane, centrally depressed or umbilicate, glabrous, subshining, often concentrically rivulous, grayish or grayish-brown, flesh whitish or grayish-white, odor obsolete, taste mild; lamellæ narrow, moderately close, *adnate or slightly decurrent*, colored like the pileus; stem slender, straight or flexuous, subtenacious, equal, slightly pruinose, grayish-brown, with a close white mycelioid tomentum at the base and white root-like fibres of mycelium penetrating the soil; spores elliptical, .0003 in. long, .0002 broad.

Var. *albidus*. Whitish or grayish-white, not rivulose; lamellæ broader; spores brownish flesh-color.

Pileus 6 to 16 lines broad; stem about 1 in. long, 1 line thick.

Woods of pine or balsam. Albany and Essex counties. Autumn.

The variety is a little paler than the typical form, with lamellæ a little broader, but is probably not specifically distinct. The species is apparently closely related to *C. cicatrisatus* but differs in color. The pileus is somewhat silky-shining and is often wavy on the margin.

b. Spores angular or irregular.

1. *Pileus not hygrophanous.*

Clitopilus abortivus, *B. & C.*

ABORTIVE CLITOPILUS.

Pileus fleshy, firm, convex or nearly plane, regular or irregular, dry, *clothed with a minute silky tomentum*, becoming smooth with age, gray or grayish-brown, flesh *white*, taste and odor subfarinaceous; lamellæ thin, close, slightly or deeply decurrent, at first whitish or pale-gray, then flesh-colored; stem nearly equal, solid, minutely flocculose, sometimes fibrous-striated, colored like or paler than the pileus; spores irregular, .0003 to .0004 in. long, .00025 broad.

Pileus 2 to 4 in. broad; stem 1.5 to 3 in. long, 3 to 6 lines thick.

Ground and old prostrate trunks of trees in woods and open places. Rensselaer, Lewis and Albany counties. August and September.

This species is, in our State, the most abundant one of the genus. It is commonly gregarious, but it is also scattered and cæspitose. Frequently it fails to develop properly, and then forms irregular or subglobose fleshy whitish masses similar to those sometimes formed

by *Armillaria mellea*. These generally occur in company with the normal form and apparently under the same conditions of soil, moisture and temperature. They are suggestive of the name of the species. Our plant is related to *C. popinalis*, from which it is distinguished by its firmer less glabrous unspotted pileus, paler flesh and larger spores. *C. popinalis* var. *firmatus* is more closely allied by its compact texture, but its spotted pileus and umber-brown color both without and within easily distinguish it. Our species has been found to be edible, but its flavor is scarcely as agreeable as that of some other species.

Clitopilus albogriseus, *Pk.*

PALE-GRAY CLITOPILUS.

Pileus firm, convex or slightly depressed, *glabrous*, pale-gray, odor farinaceous; lamellæ moderately close, adnate or slightly decurrent, grayish, then flesh-colored; stem solid, colored like the pileus; spores angular or irregular, .0004 to .0005 in. long, .0003 broad.

Pileus 6 to 12 lines broad; stem 1.5 to 2.5 in. long, 1 to 2 lines thick

Woods. Adirondack mountains. August.

Clitopilus micropus, *Pk.*

SHORT-STEMMED CLITOPILUS.

Pileus thin, fragile, convex or centrally depressed, *umbilicate, silky*, gray, usually with one or two narrow zones on the margin, odor farinaceous; lamellæ narrow, close, adnate or slightly decurrent, gray, becoming flesh-colored; stem *short*, solid, slightly thickened at the top, pruinose, gray, with a white mycelium at the base; spores angular or irregular, .0004 in. long, .00025 broad.

Pileus 6 to 12 lines broad; stem 8 to 10 lines long, 1 line thick.

Thin woods. Essex and Rensselaer counties. Aug.

This species is closely allied to the preceding one, but may be separated from it by its short stem and silky umbilicate subzonate pileus. Both species are rare and have been observed only in wet, rainy weather.

2. *Pileus hygrophanous.*

Clitopilus subvilis, *Pk.*

WORTHLESS CLITOPILUS.

Pileus thin, centrally depressed or umbilicate, with the margin decurved, hygrophanous, *dark-brown* and striatulate on the margin when moist, grayish-brown and silky-shining when dry, taste farinaceous; lamellæ *subdistant*, adnate or slightly decurrent, whitish when young, then flesh-colored; stem slender, brittle, rather long, *stuffed or hollow*,

glabrous, colored like the pileus or a little paler; spores angular, .0003 to .0004 in. long.

Pileus 8 to 15 lines broad, stem 1.5 to 3 in. long, 1 to 2 lines thick.

Damp soil in thin woods. Albany county. October.

The species is allied to *C. vilis*, from which it is separated by its silky-shining pileus subdistant lamellæ and farinaceous taste.

Clitopilus Woodianus, *Pk.*

Woods Clitopilus.

Pileus thin, convex or nearly plane, umbilicate or centrally depressed, hygrophaneous; striatulate, on the margin when moist, *whitish or yellowish-white* and shining when dry, the margin often wavy or flexuous; lamellæ *close*, adnate or slightly decurrent, whitish, then flesh-colored; stem equal, flexuous, shining, *solid*, colored like the pileus; spores subglobose, angular, .00025 to .0003 in. long.

Pileus 1 to 2 in. broad; stem 2 to 3 in. long, 2 lines thick.

Ground and decayed prostrate trunks in woods. Lewis county. September.

This species is perhaps too closely allied to the preceding, but it may easily be separated by its paler color, closer lamellæ and solid stem, though this is sometimes hollow from the erosion of insects. In color it resembles *Entoloma Grayanum*, but it is a much more slender species with a different mode of attachment to the lamellæ.

Spores rosy-red.

Clitopilus erythrosporus; *Pk.*

Red-spored Clitopilus.

Pileus thin, hemispherical or strongly convex, glabrous or merely pruinose, pinkish-gray, flesh whitish tinged with pink, taste farinaceous, lamellæ narrow, crowded, arcuate, *deeply decurrent*, colored like the pileus; stem equal or slightly tapering upward, hollow, slightly pruinose at the top, *colored like the pileus;* spores elliptical, .0002 in. long, .00012 to .00016 broad.

Pileus 1 to 2 in. broad; stem 1 to 1.5 in. long, 2 to 3 lines thick.

Decayed wood and among fallen leaves in woods. Albany and Ulster counties. September and October.

The species is easily recognized by its peculiar uniform color, its narrow, crowded and generally very decurrent lamellæ and by its bright rosy-red spores. Sometimes individuals occur in which the lamellæ are less decurrent.

Clitopilus conissans, *Pk.*

DUSTED CLITOPILUS.

Pileus thin, convex, glabrous, pale-alutaceous, often *dusted by the copious spores;* lamellæ close, *adnate*, reddish-brown; stem slender, brittle, hollow, cæspitose, *white;* spores narrowly elliptical, .0003 in. long, .00016 broad.

Pilus 1 to 1.5 in. broad; stem 1 to 2 in. long, 1 to 2 lines thick.

Base of an apple tree. Catskill mountains. September.

Remarkable for the copious bright rosy-red spores which are sometimes so thickly dusted over the lower pilei of a tuft as to conceal their real color. The species is very rare.

Spores very pale flesh-colored, merely tinted.

Clitopilus cæspitosus, *Pk.*

TUFTED CLITOPILUS.

Pileus at first convex, firm, nearly regular, shining, white, then nearly plane, fragile, often irregular or eccentric, glabrous but with a slight silky lustre, *even*, whitish, flesh white, *taste mild;* lamellæ narrow, thin, crowded, often forked, adnate or slightly decurrent, whitish, becoming dingy or brownish-pink; stems *cæspitose*, solid, silky-fibrillose, slightly mealy at the top, white; spores .0002 in. long, .00016 broad.

Pileus 2 to 4 in. broad; stem 1.5 to 3 in. long, 2 to 4 lines thick.

Thin woods and pastures. Ulster county. Sept.

This is a large, fine species, very distinct by its cæspitose habit, white color and very pale sordid-tinted spores. But for the color of these the plant might easily be taken for a species of Clitocybe. The tufts sometimes form long rows.

Clitopilus Noveboracensis, *Pk.*

NEW YORK CLITOPILUS.

Pileus thin, convex, then expanded or slightly depressed, dingy white *rimose-areolate or concentrically rivulose*, sometimes obscurely zonate, odor farinaceous, *taste bitter;* lamellæ narrow, close, deeply decurrent, some of them forked, white, becoming dingy, tinged with yellow or flesh-color; stem equal, solid, colored like the pileus, the mycelium white, often forming white branching root-like fibres; spores globose .00016 to .0002 in. broad.

Var. *brevis.* Margin of the pileus, in the moist plant, pure white; lamellæ adnate or slightly decurrent; stem short.

Pileus 1 to 2 in. broad; stem 1 to 2 in. long, 1 to 3 lines thick.

Woods and pastures. Adirondack mountains, Albany and Rensselaer counties. August to October.

The plant is gregarious or cæspitose. Sometimes, especially in the variety, it grows in lines or arcs of circles. The margin is often undulated, and in the variety it is, when fresh and moist, clothed with a film of interwoven webby white fibrils which give it a peculiar appearance, and if the spore characters are neglected it might be mistaken for *Clitocybe phyllophila.* The disk is often tinged with reddish-yellow or rusty hues when moist and its rivulose character is then more distinct. A farinaceous odor is generally present, especially in the broken or bruised plant, but its taste is bitter and unpleasant. Sometimes bruises of the fresh plant manifest a tendency to assume a smoky-brown or blackish color. The base of the stem is sometimes clothed with a white mycelioid tomentum. The species is apparently closely allied to *C. concentricus,* Gill., of which the lamellæ are said to be cinereous or reddish-cinereous, and the spores of a dirty rosy hue.

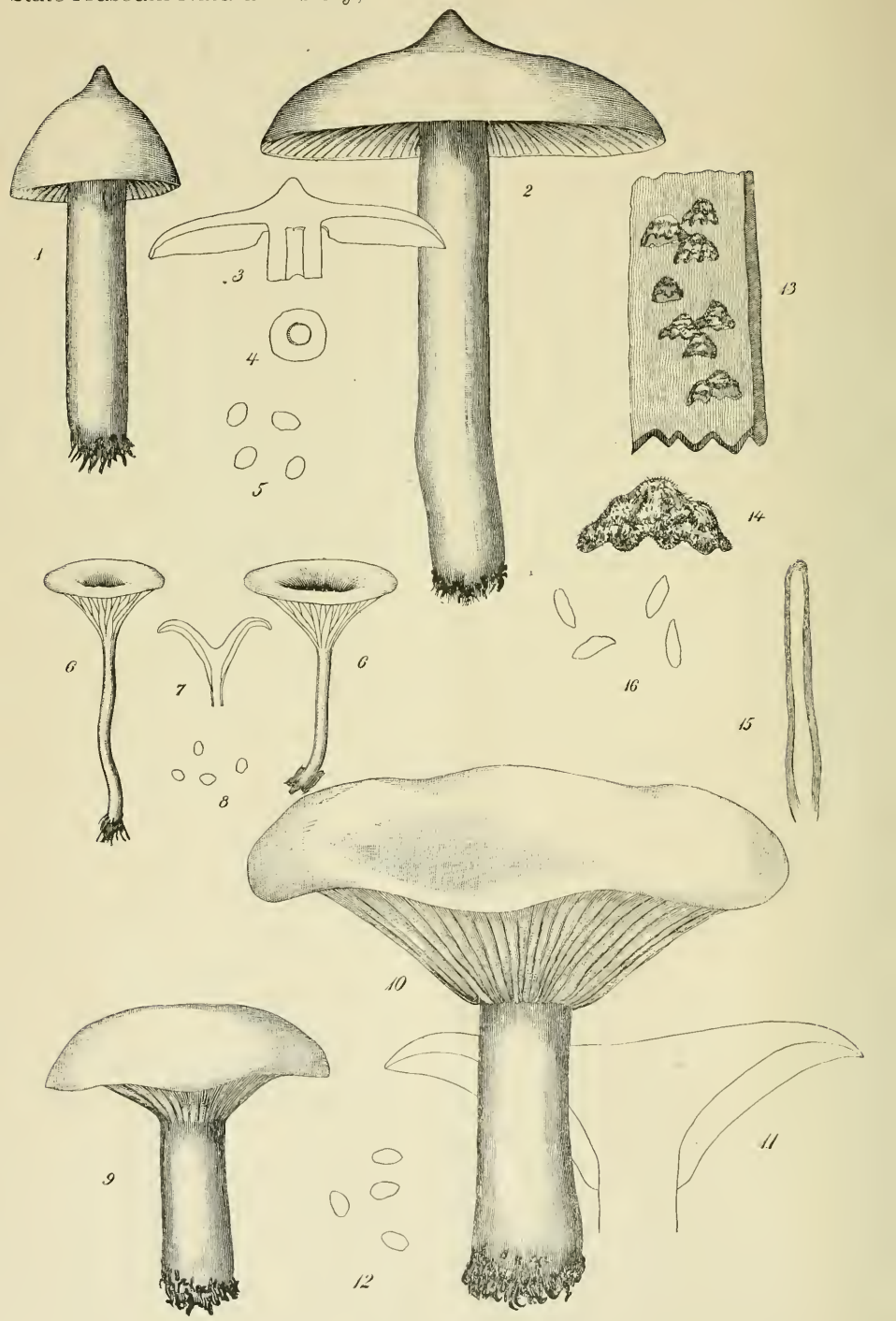
Clitopilus Seymourianus, *Pk.*

SEYMOUR'S CLITOPILUS.

Pileus fleshy, thin, broadly convex or slightly depressed, even, *pruinose, whitish with a dark lilac tinge,* sometimes lobed and eccentric; lamellæ narrow, crowded, decurrent, some of them forked at the base, whitish with a pale flesh-colored tint; stem equal, silky-fibrillose, *hollow;* spores minute, globose or nearly so, .00014 to .00016 in. long.

Pileus 1 to 2.5 in. broad; stem 1.5 to 2.5 in. long, 3 to 4 lines thick.

Woods. Lewis county. September.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EXPLANATION OF PLATE 1.

Tricholoma subacutum, *Peck.*

Fig. 1. An immature plant.
Fig. 2. A mature plant.
Fig. 3. Vertical section of a pileus and upper part of its stem.
Fig. 4. Transverse section of a stem.
Fig. 5. Four spores x 400.

Cantharellus rosellus, *Peck.*

Fig. 6. Two mature plants.
Fig. 7. Vertical section of a pileus and upper part of its stem.
Fig. 8. Four spores x 400.

Clitocybe media, *Peck.*

Fig. 9. An immature plant.
Fig. 10. A mature plant.
Fig. 11. Vertical section of a pileus and upper part of its stem.
Fig. 12. Four spores x 400.

Hymenochæte abnormis, *Peck.*

Fig. 13. Piece of spruce wood bearing eight plants.
Fig. 14. A plant enlarged.
Fig. 12. A seta from the hymenium x 400.
Fig. 16. Four spores x 400.

EXPLANATION OF PLATE 2.

OMBROPHILA ALBICEPS, *Peck.*

Fig. 1. Piece of wood bearing four plants.
Fig. 2. A plant enlarged.
Fig. 3. A dried plant enlarged.
Fig. 4. An ascus with its spores and a paraphysis x 400.
Fig. 5. Four spores x 400.

NAUCORIA SCIRPICOLA, *Peck.*

Fig. 6. An immature plant.
Fig. 7. A mature plant.
Fig. 8. Vertical section of a pileus and upper part of its stem.
Fig. 9. Transverse section of a stem.
Fig. 10. Four spores x 400.

GALERA RUFIPES, *Peck.*

Fig. 11. A moist plant.
Fig. 12. A dry plant.
Fig. 13. Vertical section of a pileus and upper part of its stem.
Fig. 14. Transverse section of a stem.
Fig. 15. Four spores x 400.

TRICHOLOMA SILVATICUM, *Peck.*

Fig. 16. A small umbonate plant.
Fig. 17. A larger plant without an umbo.
Fig. 18. Vertical section of a pileus and upper part of its stem.
Fig. 19. Four spores x 400.

THELEPHORA SCOPARIA, *Peck.*

Fig. 20. Three plants attached to different matrices.
Fig. 21. Four spores x 400.

PISTILLARIA ALNICOLA, *Peck.*

Fig. 22. Piece of bark of alder bearing four plants.
Fig. 23. A plant and its matrix enlarged.
Fig. 24. Four spores x 400.

PISTILLARIA VITICOLA, *Peck.*

Fig. 25. Fragment of grape vine bearing six plants.
Fig. 26. A plant enlarged.
Fig. 27. Four spores x 400.

FUNGI.

State Museum Natural History, 42. Plate 2.