

[FROM THE 45th REPORT OF THE NEW YORK STATE MUSEUM OF NATURAL HISTORY.]

ANNUAL REPORT
OF THE
STATE BOTANIST
OF THE
STATE OF NEW YORK. 1891.

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

By CHARLES H. PECK.

ALBANY:
JAMES B. LYON, STATE PRINTER.
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STATE OF NEW YORK.

No. 66.

IN SENATE,

JANUARY, 1892.

ANNUAL REPORT

OF THE

STATE BOTANIST.

OFFICE OF THE STATE BOTANIST, }

ALBANY, *January*, 1892. }

*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 1891.

Very respectfully.

CHARLES H. PECK.

R E P O R T .

To the Honorable the 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 in the counties of Albany, Cattaraugus, Cayuga, Cortland, Essex, Fulton, Hamilton, Rensselaer, Saratoga, Seneca, Tompkins, Ulster and Wayne.

Specimens have been contributed by correspondents who collected them in the counties of Albany, Orleans, Onondaga, Rensselaer, Richmond, St. Lawrence, Sullivan, Tompkins and Wayne.

Specimens representing 165 species have been added to the Herbarium during the past year, of which 154 were collected by the Botanist and 11 were contributed. Of the former number 29 were not before represented in the Herbarium, and six of these are new or undescribed species. Of the 11 contributed species, five were not before represented. The increase in the number of species represented is 34. The remaining specimens show some variety or form which was lacking in the Herbarium or serve to improve or make more complete the representation of their respective species.

A list of the species of which specimens have been added to the Herbarium is marked A. Appended to this list are the names of 37 species of trees of which specimens have been collected. These are intended to accompany the collection of wood sections taken from the trunks.

Specimens have been contributed by 23 persons. Among the contributed specimens are many extra-limital species not included in the foregoing enumeration.

Among the contributions is a volume of dried specimens of Carices which is of much interest. It was kindly presented to the State Museum by Mrs. Gould of Hudson and contains examples of about 150 species. It bears the inscription "Carices

Americæ Septentrionalis Exsiccataë. Edidit H. P. Sartwell M. D., Pars I. II. Penn Yan, Nov. Ebor. 1848. 50." Many of the specimens were collected in New York by Dr. Sartwell himself, but there are contributions from such eminent botanists (most of whom, alas! are now dead) as Dewey, Tuckerman, Oakes, Gray, Wood, Chapman, Carey, Olney, Crawe, Sullivant, Mead, Vasey, Kneiskern, Curtis, Cooley and Hale. There are specimens from Massachusetts, Rhode Island, New Jersey, North and South Carolina, Florida, Louisiana, Ohio, Illineis, Michigan and the White Mountains of New Hampshire. Some of the species represented are quite rare and the printed labels show us how all of them were understood by these master minds in those early days of American caricography.

Another contribution worthy of special notice is that of Professor Eaton of New Haven. It is a collection of ferns made in the Island of Trinidad by Mr. Augustus Fendler and commonly known as "Fendler's Ferns of Trinidad." The luxuriant and beautiful ferns of tropical regions are always full of interest to students of this branch of botany, and these will greatly aid those who may wish to study the ferns of our conservatories. A list of contributors and their respective contributions is marked B.

A record of species not before reported by me and descriptions of such as are thought to be new will be found in a part of the report marked C.

I have added to this the descriptions of seven extra-limital species that were sent to me for identification but of which no description was found.

Remarks concerning species previously reported, a record of new localities of rare plants and descriptions of new varieties may be found in a part of the report marked D.

Following a plan previously adopted, the descriptions of our New York species of *Omphalia* have been revised and rewritten and the spores examined and their dimensions included so that the identification of our species may be made more easy, certain and satisfactory. These descriptions may be found in a part of the report marked E.

In accordance with my instructions the work of preparing life-size drawings of our edible and poisonous species of fleshy fungi, colored according to nature, has been commenced. At

the present time twenty plates have been completed and five others are partly done. About forty plates will be needed to illustrate the species satisfactorily. Except in case of some of the smaller species, an entire plate is devoted to a single species, so that its variations in size and color may be shown. The plates are 9 x 12, or $7\frac{1}{2}$ x $9\frac{1}{2}$ within the marginal lines. It has been my purpose to make a personal trial of all the edible species illustrated so that it may be possible for me to speak with confidence concerning their qualities. With two or three exceptions this has been done with the species already figured, and these exceptions will be tried as soon as opportunity is afforded. From the eagerness with which literature pertaining to and illustrations of edible and poisonous fungi are sought and from the numerous inquiries received by me concerning the edible qualities of specimens sent in for identification it is clearly manifest that there is a widespread and increasing desire among our people to understand more of this subject and to be able to distinguish with confidence the good species. I am sure therefore that any well-directed and faithful efforts to meet this demand and to give reliable information on this subject will be well received and highly appreciated.

Some observations of no little interest have been made upon some of the parasitic fungi. A minute grayish mold-like fungus, known to mycologists as *Botrytis vulgaris* is quite common. It is classed among the saprophytes, and its habitat is given as "decaying herbs, fruits, flowers, twigs and leaves." My observations lead to the conclusion that it often acts as a true parasite. It is common enough on the fruit of strawberry, raspberry and black-berry plants. It spreads rapidly in favorable weather from the affected to the sound fruit. If a sound berry is in contact with one affected by this fungus a discolored decaying spot soon appears at the point of contact, showing clearly that the mycelium of the fungus has passed from the diseased berry to the sound one and penetrated its tissues. In this way the contagion will quickly extend through all the berries of the cluster, provided they touch each other and the diseased ones are allowed to remain in place. The fungus quickly produces rot or decay in the berry it attacks but it has no hesitation in attacking perfectly sound and healthy fruit.

The "fruit oidium," *Monilia fructigena*, which has recently been called the "peach rot," is similar to the preceding one in color but very different in structure. It also was regarded by the earlier botanists as a saprophyte, but it also is now known to be a real and a very destructive parasite. The habitat usually ascribed to it in the books is "decaying fruits," but Professors Arthur and Smith have both shown most conclusively that it attacks sound and healthy fruits and that it induces that decay in them which was formerly thought to be a condition of its growth. My observations confirm what they have said of this fungus and show very clearly some of the contributing causes to its ravages. It is well known that its behavior is especially malignant in wet weather and that it works with most destructive force on peaches, plums and cherries, though frequently attacking also, apples, pears and quinces. The past season, cherries with us almost entirely escaped for the simple reason that dry weather prevailed up to the time of their ripening. Plums and peaches on my grounds were fully one-half destroyed by this fungus, but at the time they were maturing wet, cloudy and rainy weather prevailed. One plum tree maturing its fruit later than the others had many diseased fruits while the wet weather lasted, but the trouble was greatly diminished after the rains ceased. Then even the fruit that had cracked open escaped attack.

Insects that eat holes in the fruit are a contributing cause. The only quince on my grounds that I have thus far seen affected was one in the side of which some insect had eaten a small hole and then left it. The aperture was very shallow, but the fungus spores gained admission to the flesh by it and immediately produced the characteristic decayed brown spot all about it as a center of infection. Very many of the affected peaches first showed the presence of the fungus on the side where small holes had been made through the peel, apparently by some small insect, though I was not able to detect any insect in the act. Honey bees in great numbers were found sucking the juice of the peach from these little cavities, and not a few striped cucumber beetles were found in them feeding upon the juicy flesh of the peach. Whenever peaches as well as plums were in contact, an affected one would quickly transmit its disease to its sound neighbor

through the point of contact, which is a strong argument for the proper thinning of fruit. Peaches sometimes transmit the disease, through the agency of the mycelium of the fungus, to the branch that sustains them, and then the branch soon withers and dies. This may be prevented by promptly removing the affected peaches. But sometimes young and tender branches are killed by an attack through the agency of the spores. On a young plum tree the tips of several branches on which there were no plums died and showed the characteristic spore clusters of this fungus on their surface. A young apricot tree, on which there was no fruit, lost the tips of many of its branches by the invasion of this same fungus. New shoots started, but during a renewal of the rainy weather the attack was repeated and these were in like manner killed. The fungus is certainly one capable of doing a vast amount of mischief; nor is it to be overcome by picking and destroying the affected fruit and twigs unless this is promptly done by every one in an affected district, for if the trees of one orchard or garden are cleared, the spores are quickly wafted to them again by the winds from any neglected neighboring orchard or tree.

Another minute mold-like fungus, *Rhopalomyces Cucurbitarum*, has "putrid squashes" recorded as its habitat. But in this case, as in the others, the fungus is itself the cause of the putridity in the squashes, not a consequence. Young but sound squashes scarcely out of blossom are attacked by it and quickly reduced to a pulpy putrid mass. Mature squashes are less often injured or destroyed by it unless there is a contributing cause. Sometimes centipedes eat cavities in the under side of a squash where it is in contact with the earth. Through these cavities the fungus spores gain access and quickly reduce the squash to a worthless putrid mass.

Very respectfully submitted.

CHAS. H. PECK.

ALBANY, October 1, 1891.

A.

PLANTS ADDED TO THE HERBARIUM.

New to the Herbarium.

Cardamine rotundifolia <i>Mr.</i>	Septoria podophyllina <i>Pk.</i>
Stellaria graminea <i>L.</i>	Gleosporium populinum <i>Pk.</i>
Ailanthus glandulosus <i>Desf.</i>	G. allantoideum <i>Pk.</i>
Aster Herveyi <i>Gr.</i>	G. nervisequum <i>Sacc</i>
Lysimachia nummularia <i>L.</i>	Puccinia Zopfii <i>Wint.</i>
Plantago Patagonica <i>Jacq.</i>	Ustilago Tritici <i>Jens.</i>
Carya sulcata <i>Nutt.</i>	U. Hordei <i>K. & S.</i>
Carex æstivalis <i>M. A. C.</i>	Doassansia Martianoffiana <i>Schroet.</i>
Panicum miliaceum <i>L.</i>	Entyloma Physalidis. <i>Wint.</i>
Clitopilus carneo-albus <i>With.</i>	Peronospora Rubi <i>Rabh.</i>
Leptonia parva <i>Pk.</i>	P. obovata <i>Bon.</i>
L. grisea <i>Pk.</i>	Sporotrichum parasiticum <i>Pk.</i>
Galera flava <i>Pk.</i>	Pseudopeziza Medicaginis <i>Sacc.</i>
Agaricus hæmorrhoidarius <i>Schulz.</i>	Sphærotheca mors-uvæ <i>B. & C.</i>
Hypholoma subaquilum <i>Banning.</i>	S. Humuli <i>Burrill.</i>
Russula roseipes <i>Bres.</i>	Erysiphe Galeosidis <i>DC.</i>
Dædalea quercina <i>Fr.</i>	

Not new to the Herbarium.

Anemone Virginiana <i>L.</i>	Conium maculatum <i>L.</i>
Magnolia acuminata <i>L.</i>	Galium trifidum <i>L.</i>
Cardamine rhomboidea <i>DC.</i>	Solidago bic. var. concolor <i>T. & G.</i>
Nasturtium lacustre <i>Gr.</i>	S. puberula <i>Nutt.</i>
Hudsonia tomentosa <i>Nutt.</i>	S. uliginosa <i>Nutt.</i>
Viola cucullata <i>Ait.</i>	S. speciosa <i>Nutt.</i>
V. sagittata <i>Ait.</i>	S. arguta <i>Ait.</i>
V. renifolia <i>Gr.</i>	Aster undulatus <i>L.</i>
V. pub. var. scabriuscula <i>T. & G.</i>	A. cord. var. kevigatus <i>Porter.</i>
Dianthus Armeria <i>L.</i>	A. vimineus <i>Lam.</i>
D. barbatus <i>L.</i>	A. diffusus <i>Ait.</i>
Lychnis Flos-cuculi <i>L.</i>	A. paniculatus <i>Lam.</i>
Stellaria longipes <i>Goldie.</i>	A. Novi-Belgii <i>L.</i>
Hypericum perforatum <i>L.</i>	A. puniceus <i>L.</i>
Tilia Americana <i>L.</i>	Erigeron stri. var. discoideus <i>Rob.</i>
Oxalis Acetosella <i>L.</i>	Antennaria plantaginifolia <i>Hook.</i>
Acer sacch. var. nigrum <i>T. & G.</i>	Lampsana communis <i>L.</i>
Rubus Canadensis <i>L.</i>	Cirsium arvense <i>Hoffm.</i>
Fragaria Indica <i>L.</i>	Vaccinium corymbosum <i>L.</i>
Poterium Canadense <i>B. & H.</i>	Lysimachia stricta <i>Ait.</i>
Pyrus communis <i>L.</i>	L. strict. var. producta <i>Gr.</i>
P. Malus <i>L.</i>	Asclepias incarnata <i>L.</i>
P. sambucifolia <i>C. & S.</i>	Halenia deflexa <i>Gris.</i>
Thaspium barbinode <i>Nutt.</i>	Phlox divaricata <i>L.</i>
Cicuta bulbifera <i>L.</i>	Polemonium reptans <i>L.</i>

Pentstemon lævigatus *Soland.*
 Verbena urticifolia *L.*
 V. hastata *L.*
 Polygonella articulata *Meisn.*
 Juglans nigra *L.*
 Carya amara *Nutt.*
 C. microcarpa *Nutt.*
 Betula nigra *L.*
 Quercus palustris *DuRoi.*
 Salix nigra *Marsh.*
 S. amygdaloides *And.*
 Populus balsamifera *L.*
 Corallorhiza innata *R. Br.*
 Clintonia umbellata *Torr.*
 Erythronium Americanum *Ker.*
 Trillium grandiflorum *Salish.*
 Sagittaria vari. var. gracilis *Eng.*
 Cyperus dentatus *Torr.*
 Eriophorum vaginatum *L.*
 Eleocharis tuberculosa *R. Br.*
 Juncus Balt. var. littoralis *Eng.*
 Scirpus atrovirens *Muhl.*
 S. microcarpus *Presl.*
 S. sylvaticus *L.*
 S. polyph. var. macrostachys
Bœckl.
 Carex Grayii *Carey.*
 C. utric. var. minor *Boott.*
 C. hystericina *Muhl.*
 C. riparia *Curt.*
 C. triceps *Mx.*
 C. gracillima *Schw.*
 C. Oederi *Ehrh.*
 C. laxiflora *Lam.*
 C. pubescens *Muhl.*
 C. alopecoidea *Tuckm.*
 C. rosea var. radiata *Dew.*
 C. varia *Muhl.*
 C. echinata *Murr.*
 C. trisperma *Dew.*
 Panicum latifolium *L.*
 P. Crus-galli *L.*
 Muhlenbergia sobolifera *Trin.*
 M. sylvatica *T. & G.*

Agrostis vulgaris *With.*
 Poa comp. var. sylvestris *Torr.*
 Agropyrum caninum *R. & S.*
 Festuca nutans *Willd.*
 Botrychium ternatum *Sw.*
 Amanita cæsarea *Scop.*
 Lepiota rhacodes *Vitt.*
 Tricholoma album *Fr.*
 T. personatum *Fr.*
 Clitocybe cyathiformis *Fr.*
 Collybia Familia *Pk.*
 Mycena galericulata *Scop.*
 Pholiota discolor *Pk.*
 Hebeloma crustuliniformis *Bull.*
 Agaricus sylvicola *Fr.*
 Stropharia squamosa *Fr.*
 Psilocybe spadicea *Fr.*
 Cortinarius collinitus *Fr.*
 Hygrophorus splendens *Pk.*
 H. pratensis *Fr.*
 Cantharellus lutescens *Bull.*
 Marasmius erythropus *Fr.*
 Boletus punctipes *Pk.*
 Polyporus brumalis *Fr.*
 Poria sanguinolenta *Fr.*
 Dædalea unicolor *Fr.*
 Hydnum pallidum *C. & E.*
 H. stipatum *Fr.*
 Irpex Tulipifera *Schw.*
 Corticium lacteum *Fr.*
 Coniophora puteana *Fr.*
 Tremella mesenterica *Retz.*
 Glæosporium lagenarium *S. & K.*
 Ramularia variabilis *Fckl.*
 R. lineola *Pk.*
 Bactridium flavum *K. & S.*
 Zygodemus fuscus *Cd.*
 Fusarium Solani *Sacc.*
 Tubercularia persicina *Sacc.*
 Cystopus candidus *Lev.*
 Vibrissea truncorum *Fr.*
 Peziza chlora *Schw.*
 Melogramma vagans *DeNot.*

Specimens from Trees.

Magnolia acuminata *L.*
 Tilia Americana *L.*
 Acer saccharinum *Wang.*
 A. sacch. var. nigrum *T. & G.*
 A. dasycarpum *Ehrh.*

Betula lenta *L.*
 B. populifolia *Ait.*
 B. papyrifera *Marsh.*
 B. nigra *L.*
 Ostrya Virginica *Willd.*

Prunus Pennsylvanica L.
P. serotina Ehrh.
Ulmus fulva Mx.
U. Americana L.
U. racemosa Thomas.
Celtis occidentalis L.
Morus rubra L.
Platanus occidentalis L.
Juglans nigra L.
J. cinera L.
Carya sulcata Nutt.
C. porcina Nutt.
C. amara Nutt.
Quercus palustris DuRoi.
Betula lutea Mx.

Carpinus Caroliniana Walt.
Fagus ferruginea Ait.
Castanea sat. Americana Mx.
Salix nigra Marsh.
Populus balsamifera L.
P. bal. var. candicans Gr.
P. monilifera Ait.
Pinus Strobus L.
P. rigida Mill.
P. resinosa Ait.
Abies balsamea Mill.
Larix Americana Mx.
Thuja occidentalis L.
Juniperus Virginiana L.

B.

CONTRIBUTORS AND THEIR CONTRIBUTIONS.

Mrs. Hannah Gould, Hudson, N. Y.

Carex glaucescens, Ell.
C. longirostris Torr.
C. oligosperma Mx.
C. Tuckermanni Boott.
C. bullata Schk.
C. ampullacea Good.
C. monile Tuckm.
C. Schweinitzii Dew.
C. retrorsa Schw.
C. stenolepis Torr.
C. squarrosa L.
C. lupuliformis Sart.
C. lupulina Muhl.
C. subulata Mx.
C. turgescens Torr.
C. rostrata Mx.
C. folliculata L.
C. Elliottii S. & T.
C. Grayii Carey.
C. intumescens Rudge.
C. tentaculata Muhl.
C. hystericina Willd.
C. pseudo-cyperus L.
C. comosa Boott.
C. trichocarpa Muhl.
C. aristata R. Br.
C. lacustris Willd.
C. striata Mx.
C. Halseyana Dew.
C. vestita Willd.

Carex eburnea Boott.
C. Hitchcockiana Dew.
C. oligocarpa Schk.
C. ignota Dew.
C. blanda Dew.
C. laxiflora Lam.
C. digitalis Willd.
C. retrocurva Dew.
C. platyphylla.
C. Careyana Dew.
C. plantaginea Lam.
C. hirsuta Willd.
C. virescens Muhl.
C. gracillima Schw.
C. formosa Dew.
C. Davisii S. & T.
C. flaccosperma Dew.
C. grisea Wahl.
C. conoidea Schk.
C. pallescens L.
C. Meadii Dew.
C. Woodii Dew.
C. crinita Lam.
C. cephaloidea Dew.
C. alopecoidea Tuckm.
C. Leavenworthii Dew.
C. scabrior Sart.
C. disticha Huds.
C. granularis Muhl.
C. Crawei Dew.

Carex lanuginosa <i>Mx.</i>	Carex tetanica <i>Schk.</i>
C. filiformis <i>L.</i>	C. panicea <i>L.</i>
C. Ederi <i>Ehrh.</i>	C. livida <i>Willd.</i>
C. flava <i>L.</i>	C. aurea <i>Nutt.</i>
C. Cherokeënsis <i>Schw.</i>	C. Shortiana <i>Dew.</i>
C. flexilis <i>Rudge.</i>	C. atrata <i>L.</i>
C. capillaris <i>L.</i>	C. Buxbaumii <i>Wahl.</i>
C. venusta <i>Dew.</i>	C. irrigua <i>Sm.</i>
C. debilis <i>Mx.</i>	C. limosa <i>L.</i>
C. arctata <i>Boott.</i>	C. flacca <i>Schreb.</i>
C. Sullivantii <i>Boott.</i>	C. salina <i>Wahl.</i>
C. scabrata <i>Schw.</i>	C. aquatilis <i>Wahl.</i>
C. miliacea <i>Muhl.</i>	C. stricta <i>Lam.</i>
C. Chapmani <i>Sart.</i>	C. strictior <i>Dew.</i>
C. pubescens <i>Muhl.</i>	C. acuta <i>L.</i>
C. præcox <i>Jacq.</i>	C. vulgaris <i>Fr.</i>
C. Richardsoni <i>R. Br.</i>	C. torta <i>Boott.</i>
C. varia <i>Muhl.</i>	C. rigida v. Bigelovii <i>Tuckm.</i>
C. Pennsylvanica <i>Lam.</i>	C. straminea <i>Schk.</i>
C. lucorum <i>Willd.</i>	C. alata <i>Torr.</i>
C. Emmonsii <i>Dew.</i>	C. foenea <i>Muhl.</i>
C. umbellata <i>Schk.</i>	C. mirabilis <i>Dew.</i>
C. Baltzellii <i>Chapm.</i>	C. tenera <i>Dew.</i>
C. pedunculata <i>Muhl.</i>	C. festucacea <i>Schk.</i>
C. cristata <i>S. & T.</i>	C. cephaloidea <i>Dew.</i>
C. lagopodioides <i>Schk.</i>	C. sparganioides <i>Muhl.</i>
C. scoparia <i>Schk.</i>	C. stipata <i>Muhl.</i>
C. Liddoni <i>Boott.</i>	C. alopecoidea <i>Tuckm.</i>
C. arida <i>S. & T.</i>	C. Crus-corvi <i>Shutt.</i>
C. synocephala <i>Carey.</i>	C. decomposita <i>Muhl.</i>
C. sterilis <i>Schk.</i>	C. vulpinoidea <i>Mx.</i>
C. scirpoides <i>Schk.</i>	C. prairiea <i>Dew.</i>
C. Deweyana <i>Schw.</i>	C. Sartwellii <i>Dew.</i>
C. stellulata <i>Good.</i>	C. teretiuscula <i>Good.</i>
C. sphærostachya <i>Dew.</i>	C. siccata <i>Dew.</i>
C. canescens <i>L.</i>	C. Backii <i>Boott.</i>
C. tenuiflora <i>Wahl.</i>	C. Steudelii <i>Kunth.</i>
C. trisperma <i>Dew.</i>	C. Willdenowii <i>Schk.</i>
C. gracilis <i>Ehrh.</i>	C. bromoides <i>Schk.</i>
C. Fraseri <i>Sims.</i>	C. polytrichoides <i>Muhl.</i>
C. chordorhiza <i>Ehrh.</i>	C. pauciflora <i>Light.</i>
C. retroflexa <i>Muhl.</i>	C. capitata <i>L.</i>
C. rosea <i>Schk.</i>	C. scirpoidea <i>Mx.</i>
C. Muhlenbergii <i>Schk.</i>	C. dioica <i>L.</i>
C. cephalophora <i>Muhl.</i>	

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

Viola cucullata Ait.

Mrs. L. L. Goodrich, Syracuse, N. Y.

Fragaria Indica L.

Prof. D. C. Eaton, New Haven, Conn.

- | | |
|-----------------------------|--------------------------------|
| Adiantum Kaulfussii Kze. | Danæa elliptica Sm. |
| A. intermedium Sw. | Davallia inæqualis Kze. |
| A. tetraphyllum Willd. | D. saccoloma Spreng. |
| A. pulverulentum L. | Dicksonia cicutaria Sw. |
| A. lucidum Sw. | Gymnogramme calomelanos Kaulf. |
| A. villosum L. | Gleichenia pubescens H. B. K. |
| A. macrophyllum Sw. | G. pectinata Presl. |
| A. tenerum Sw. | Hemionitis palmata L. |
| A. obtusum Desv. | Hemitelia grandifolia Spreng. |
| A. polyphyllum Willd. | Hymenophyllum ciliatum Sw. |
| Aspidium molle Sw. | Hypoderris Brownii Sm. |
| A. macrophyllum Sw. | Lindsæa stricta Dry. |
| A. subquinquefidum Bv. | L. trapeziformis Dry. |
| A. invisum Sw. | Lygodium venustum Sw. |
| A. amplum Mett. | L. volubile Sw. |
| A. melagodes Mett. | Meniscium reticulatum Sw. |
| A. Sprengelii Kaulf. | Nephrolepis acuta Presl. |
| A. semicordatum Sw. | N. exaltata Presl. |
| A. trifoliatum Sw. | Oleandra nodosa Presl. |
| A. effusum Gris. | O. neriiformis Cav. |
| A. Imrayanum Fee. | Phegopteris crenata Mett. |
| Asplenium Shepherdi Spreng. | P. flavopunctata Fee. |
| A. grandifolium Sw. | Pteris pungens Willd. |
| A. lunulatum Sw. | P. aquil. v. esculenta H. & B. |
| A. crenulatum Baker. | Polypodium aureum L. |
| A. cultrifolium L. | P. incanum Sw. |
| Aneimia Phyllitidis Sw. | P. neriifolium Schk. |
| A. Breuteliana Presl. | P. vacciniifolium L. |
| Acrostichum sorbifolium L. | P. nematorhizon Eaton |
| A. osmundaceum Hook. | P. serrulatum Mett. |
| A. flaccidum Fee. | P. lycopodioides L. |
| A. cervinum L. | P. piloselloides H. & B. |
| A. nicotianifolium Sw. | Trichomanes crispum L. |
| A. caudatum Hook. | T. pinnatum Hedw. |
| Alsophila nitens Sm. | T. sinuosum Rich. |
| A. ferox Presl. | T. membranaceum L. |
| A. blechnoides Hook. | T. Prieurii Kye. |
| Blechnum occidentale L. | T. spicatum Hedw. |
| B. longifolium H. B. K. | Lycopodium cernuum Lve. |
| B. volubile Kaulf. | Selaginella patula Spreng. |
| Cheilanthes radiata R. Br. | S. serpens Spreng. |
| Cyathea Schanshin Mart. | |

Prof. N. L. Britton, New York, N. Y.

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| Nymphæa reniformis DC. | Vaccinium corymbosum L. |
| Nelumbium nuciferum Gært. | V. discarpum Bigel. |
| Lathyrus maritimus Bigel. | Halenia deflexa Gris. |
| Aster cordifolius L. | Carya microcarpa Nutt. |
| Vaccinium vacillans Sibth. | Juncus Balticus Deth. |
| V. Pennsylvanicum Lam. | Eleocharis tuberculosa R. Br. |

Prof. B. D. Halsted, New Brunswick, N. J.

Peronospora Rubi <i>Rabh.</i>	Peronospora parasitica <i>DeBy.</i>
P. alta <i>Fekl.</i>	Plasmopara viticola <i>B. & C.</i>
P. obovata <i>Bou.</i>	Puccinia Spergulæ <i>DC.</i>

Rev. F. D. Kelsey, Helena, Mont.

Phragmidium subcorticium <i>Wint.</i>	Æcidium Pini <i>Pers.</i>
Puccinia intermixta <i>Pk.</i>	Æ. Clematidis <i>DC.</i>
P. Tanacetii <i>DC.</i>	Æ. Ranunculacearum <i>DC.</i>
P. Menthæ <i>Pers.</i>	Æ. porosum <i>Pk.</i>
P. Malvastrii <i>Pk.</i>	Æ. Allenii <i>Clint.</i>
P. Troximontis <i>Pk.</i>	Æ. Cleomis <i>E. & A.</i>
P. Giliæ <i>Hark.</i>	Æ. Asterum <i>Schw.</i>
P. Phragmitis <i>Korn.</i>	Æ. Violæ <i>Schum.</i>
P. mirabilissima <i>Pk.</i>	Æ. Compositarum <i>Mart.</i>
P. emaculata <i>Schw.</i>	Æ. Thalictri <i>Grev.</i>
P. Thlaspeos <i>Schub.</i>	Æ. Eurotiæ <i>E. & E.</i>
P. Hieracii <i>Mart.</i>	Æ. gaurinum <i>Pk.</i>
Uromyces Eriogoni <i>E. & H.</i>	Æ. monoicum <i>Pk.</i>
U. Trifolii <i>Lev.</i>	Æ. Plantaginis <i>Cke.</i>
U. borealis <i>Pk.</i>	Erysiphe communis <i>Wallr.</i>
Ustilago segetum <i>Dittm.</i>	E. Cichoracearum <i>DC.</i>
Melanospora farinosa <i>Pers.</i>	Sphærotheca Castagnei <i>Lev.</i>
M. Cerastii <i>Schroet.</i>	Phyllactinia suffulta <i>Reb.</i>
M. Lini <i>Tul.</i>	Microsphaeria Ravenelii <i>B.</i>
Coleosporium Solidaginis <i>Thum.</i>	Valsa boreella <i>Karst.</i>
Cronartium Comandræ <i>Pk.</i>	Physalospora megastoma <i>Sacc.</i>
Roestelia lacerata <i>Tul.</i>	Leptosphaeria Typharum <i>Desm.</i>
Cystopus candidus <i>Lev.</i>	Phyllachora Wittrockii <i>Erik.</i>
Ramularia arnicalis <i>E. & E.</i>	

C. L. Shear, Alcove, N. Y.

Agaricus placomyces <i>Pk.</i>	Plantago Patagonica <i>Jacq.</i>
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E. W. D. Holway, Decorah, Ia.

Puccinia Zopfii <i>Wint.</i>	Entyloma Castaliæ <i>Holway.</i>
P. Rhodiola <i>B. & Br.</i>	E. Yuccæfoliæ <i>Holway.</i>
Uromyces perigynius <i>Halsted.</i>	

P. H. Dudley, New York, N. Y.

Xylaria Hypoxylon <i>Fr.</i>	Trametes Pini <i>Fr.</i>
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A. P. Morgan, Preston, O.

Tilmadoche columbina <i>Berk.</i>	Physarum albicans <i>Pk.</i>
Cornuvia elegans <i>Morg.</i>	Dermodium conicum <i>Pers.</i>

Roland Thaxter, New Haven, Conn.

Rhopalomyces strangulatus <i>Thax.</i>	Sporotrichum globuliferum <i>Speg.</i>
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J. B. Ellis, Newfield, N. J.

Cercospora Asiminæ <i>E. & K.</i>	
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Chas. L. Williams, Glens Falls, N. Y.

Lysimachia stricta Ait. var. *producta* Gr.

Prof. S. M. Tracy, Agricultural College, Miss.

By exchange.

<i>Agropyrum tenerum</i> Vasey.	<i>Oplismenus setarius</i> R. & S.
A. glaucum R. & S.	<i>Poa tenuiflora</i> Nutt.
A. divergens Nees.	P. Traceyi Vasey.
<i>Avena flavescens</i> L.	P. alpina L.
A. pratensis L.	P. compressa L.
A. sterilis L.	P. gracillima Vasey.
<i>Aristida stricta</i> Mx.	P. flexuosa Muhl.
A. stipoides R. Br.	P. cenisia All.
A. oligantha Mx.	P. cæsia Sm.
<i>Alopecurus agrestis</i> L.	<i>Poppophorum Wrightii</i> Wats.
<i>Anthænantia rufa</i> Benth.	<i>Polygogon maritimum</i> L.
A. villosa Bv.	<i>Phleum alpinum</i> L.
<i>Bromus erectus</i> Huds.	<i>Panicum viscidum</i> Ell.
<i>Bouteloua hirsuta</i> Lag.	P. serotinum Trin.
<i>Beekmannia erucæformis</i> Huds.	P. scoparium Lam.
<i>Cynosurus echinatus</i> L.	P. Palmeri Vasey.
<i>Cottea pappaphoroides</i> Kth.	P. obtusum H. B. K.
<i>Chloris acicularis</i> R. Br.	P. microcarpum Muhl.
C. Swartziana Dcell.	P. glabrum Ell.
<i>Ctenium Americanum</i> Spreng.	P. effusum R. Br.
<i>Coix lachryma</i> L.	P. dichotmum v. viride Vasey.
<i>Diplachne Tracyi</i> Vasey.	P. autumnale Bosc.
D. imbricata Vasey.	P. commutatum ch.
<i>Deyeuxia neglecta</i> Kth.	<i>Paspalum dilatatum</i> Poir.
<i>Elymus Macounii</i> Vasey.	P. Floridanum Mx.
<i>Eragrostis campestris</i> Tris.	P. platycaul P. ir.
<i>Eatonia obtusata</i> Gr.	P. purpurascens Ell.
<i>Eleusine Ægyptiaca</i> Pers.	<i>Roteboellia rugosa</i> Nutt.
<i>Erianthus saccharoides</i> Mx.	<i>Schedonnardus Texanus</i> Steud.
<i>Festuca elatior</i> L.	<i>Setaria setosa</i> Bv.
<i>Glyceria distans</i> Wahl.	<i>Sporobolus junceus</i> Kth.
<i>Hordeum murinum</i> L.	S. depauperatus Vasey.
<i>Koeleria cristata</i> Pers.	S. ramulosus Kth.
<i>Leptochloa mucronata</i> Kth.	S. asperifolius N. & M.
<i>Leersia hexandra</i> Sw.	<i>Tragus racemosus</i> Hall.
<i>Munroa squarrosa</i> Torr.	<i>Uniola paniculata</i> L.
<i>Oryzopsis cuspidata</i> Benth.	

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

Gloeosporium allantoides Pk. | *Rhizopus nigricans* Ehr.

L. H. Cress, Fremont, Ohio.

Morchella conica Pers.

E. L. Hankenson, Newark, N. Y.

Lychnis Flos-cuculi L. | *Lampsana communis* L.

F. L. Henderson, Olympia, Wash.

Mycena strobilinoidea <i>Pk.</i>		Nidularia candida <i>Pk.</i>
Exobasidium Cassiopes <i>Pk.</i>		

M. E. Jones, Salt Lake City, Utah.

Septoria Peraphylli <i>Pk.</i>		Uromyces deciduus <i>Pk.</i>
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F. L. Hervey, Orono, Maine.

Clavaria Herveyi *Pk.*

C. F. Millspaugh, Morganstown, W. Va.

Septosporium Equiseti *Pk.*

Prof. W. R. Dudley, Ithaca, N. Y.

Pentstemon lævigatus *Sol.*

Arthur M. Peck, Sandlake, N. Y.

Populus balsamifera *L.*

(C.)

PLANTS NOT BEFORE REPORTED.

Cardamine rotundifolia *Max.*

Springy and wet places. Carrollton, Cattaraugus county. June.

New Jersey and Pennsylvania have heretofore been considered the northern limit of this plant, but it is plentiful in at least two localities near Carrollton.

Stellaria graminea *L.*

Roadsides. Sandlake, Rensselaer county; New Scotland, Albany county. June and July. A pretty little species introduced from Europe and resembling somewhat the native species, *S. longifolia* and *S. longipes*, but distinct from both by its leaves and rough seeds.

Ailanthus glandulosus *Desf.*

Roadsides and waste places. Long Island; Cold Spring, Putnam county; Marlborough, Ulster county. This rapid-growing tree, introduced from China, often springs up spontaneously by roadsides and in waste places about cities and villages. It has been represented to me as spreading so rapidly in some places that it is troublesome.

Aster Herveyi *Gray.*

Borders of woods. Salamanca, Cattaraugus county. September.

This species might easily be taken for a bright violet-rayed form of *A. macrophyllus*, but it differs from that species in its glandular pubescent floral branches and peduncles.

Lysimachia nummularia L.

Wilton, Saratoga county. July. Introduced and escaped from cultivation.

Plantago Patagonica Jacq. var. aristata Gr.

Sandy fields. Alcove, Albany county. August. *C. L. Shear*. Probably a recent introduction.

Carya sulcata Nutt.

Alluvial soil along the inlet of Owasco lake. July.

This hickory was first observed in this locality by Professor Dudley. The trees are not numerous but thrifty. Their leaves are very large, some of them measuring nearly two feet in length including the petiole. The terminal leaflet measures ten to twelve inches long and three to three and a half inches broad in the dried specimens. Withered aments were seen but no young fruit.

Carex æstivalis M. A. C.

Woods. East Worcester, Otsego county. July.

This plant somewhat resembles slender forms of *Carex arctata*, but from that species it may be distinguished by its more slender and erect spikes, its less pointed perigynia, shorter scales and by the pistillate flowers or perigynia at the top of the staminate spike.

Panicum miliaceum L.

Ithaca. *Professor Dudley*. Todt Hill road, near the Moravian church, Richmond county. *A. Hollick*. This millet has been introduced and is occasionally spontaneous. It is a beautiful and an interesting grass.

Clitopilus carneo-albus With.

Shaded ground. Menands. June.

Leptonia parva n. sp.

Pileus thin, convex or nearly plane, umbilicate, slightly radiate-striate, violaceous-brown, the umbilicus darker and squamulose; lamellæ subdistant, adnate, whitish tinged with flesh-color; stem slender, glabrous, solid, colored like the pileus: spores irregular or angular, uninucleate, about .0003 in. long, .00025 broad.

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

Woods. Lake Pleasant, Hamilton county. August.

The color of the pileus is almost exactly like that of dark-colored forms of *L. serrulata*, but its smaller size, whitish lamellæ without darker serrated edge and stem not punctate at the top separate it.

***Leptonia grisea* n. sp.**

Pileus broadly convex or plane, umbilicate, striatulate when moist, glabrous except the squamulose umbilicus, grayish brown; lamellæ broad, subdistant, grayish; stem slender, hollow, glabrous, colored like the pileus; spores subglobose, angular, uninucleate, .0003 to .0004 inches in diameter.

Pileus 6 to 12 lines broad; stem 1.5 to 2.5 inches long, 1 line thick.

Among sphagnum and in wet woods, Lake Pleasant. August.

The species is easily known by its nearly uniform grayish color and its globose spores.

***Galera flava* n. sp.**

Pileus thin, ovate or campanulate, obtuse, finely plicate-striate to the middle, yellow; lamellæ thin, narrow, close, adnate, at first whitish, then yellowish-cinnamon; stem equal or slightly tapering upward, hollow, sprinkled with white mealy particles, slightly striate at the top, white or slightly tinged with yellow; spores brownish-ferruginous, ovate or subelliptical, .0005 inches long; .0003 broad.

Pileus 6 to 12 lines broad; stem 2 to 3 inches long, 1 to 2 lines thick.

Damp vegetable mold in woods. Freeville, Tompkins county. July.

The pileus is moist or subhygrophanous, and when dry it appears to be sprinkled with shining atoms. The yellow epidermis sometimes breaks up into squamules.

***Agaricus hæmorrhoidarius* Schulzer.**

Ground under hemlocks. Menands. August.

This species is easily known, when fresh, by wounds upon any part of it quickly changing to red, as if about to bleed. The habitat usually ascribed to it is "About the roots of oaks," but our specimens were found growing under a hemlock tree. Gillet gives Fries as the author of the species, Fries ascribes it to Kalchbrenner and Kalchbrenner to Schulzer.

The pileus is at first covered with a fawn-colored or tawny-brown tomentum which soon breaks up and forms scales. The flesh is white and the lamellæ are at first whitish, soon flesh-colored, then brown. The spores are brown, elliptical, .0002 to .00025 in. long, .00016 broad.

Hypholoma subaquilum *Banning.*

Decaying wood. Adirondack mountains. August and September.

This species is closely allied to *H. appendiculatum*, but may be separated by its darker color, and especially by the darker color of its lamellæ.

Russula roseipes *Bres.*

Under hemlock trees. Menands. August. It might easily be taken for a small form of *R. alutacea*, from which its more strongly striate-tuberculate margin distinguishes it. It is edible.

Dædalea quercina *Fr.*

Dead stumps and trunks of oak. Selkirk, Albany county. August.

Septoria podophyllina *Pk.*

Living and languishing leaves of mandrake, *Podophyllum peltatum*. Freeville. July.

Glœosporium nervisequum *Sacc.*

Living leaves of sycamore, *Platanus occidentalis*. McLean, Tompkins county. July.

This fungus attacks the foliage and young branches early in the season and is often quite injurious to the tree. It manifests its presence either by discolored spots which follow the principal veins of the leaf, or by producing broad and irregular brown patches in the leaf. When the attack is severe it kills the entire leaf or even the branch and all its leaves. Indeed, it is said sometimes to be fatal to the tree.

Glœosporium populinum *n. sp.*

Spots small, 1 to 2 lines broad, nearly orbicular, reddish-brown, often paler in the center and then appearing to be surrounded by a broad darker margin, paler on the lower surface; heaps of spores hypophyllous, either single and central or several more or

less concentrically arranged; spores subcylindrical, often a little curved, supported by slender sporophores, oozing out and forming a reddish mass, .001 to .0016 in. long, about .00012 in. broad.

Living leaves of poplar, *Populus grandidentata*. Freeville. July.

This species may be distinguished from other species of *Gloeosporium* growing on poplar, by its narrow elongated spores which are not much unlike those of some species of *Septoria*. From *Cylindrosporium* it is separated by the agglutinated spore mass. From *G. stenosporum*, which occurs in Kansas on leaves of *Populus monilifera*, it differs in its smaller darker-colored spots, and in its darker-colored spore-masses, which are hypophyllous, and in its longer and simple spores.

***Gloeosporium allantoideum* n. sp.**

Heaps minute, numerous; spores cylindrical, curved, obtuse, .0005 to .0008 in. long, oozing out and forming minute whitish masses which are concentrically arranged.

Rind of pumkin. Lyndonville. January. C. E. Fairman.

The heaps are sometimes overrun by mucedinous filaments. The species is distinguished from *G. lagenarium* by its curved spores.

***Puccinia Zopfii* Wint.**

Living leaves of cowslips, *Caltha palustris*. Buffalo. G. W. Clinton.

In reviewing some specimens of *Puccinia* on leaves of *Caltha palustris* sent me several years ago by the late Judge Clinton, I find some belonging to this species. He also sent me the true *Puccinia Calthæ*, so that these species meet on common ground in the western part of the State.

***Ustilago Triticæ* Jensen.**

Heads of wheat, *Triticum vulgare*. Meadowdale, Albany county. June.

This and the next following species have by most writers been included with the smut on oats as mere forms or varieties of the one comprehensive species *Ustilago segetum*. But Jensen indicated their distinct character, and the investigations of Professors Kellerman and Swingle have confirmed his views.

Ustilago Hordei K. & S.

Heads of barley, *Hordeum vulgare*. Sevey, St. Lawrence county and McLean, Tompkins county. July.

Another species of smut, *Ustilago nuda* also occurs on barley, but I have seen no specimens of it. It differs from the present species in having less globose spores, with the épispore spiny and the color of the spores in the mass brown instead of black.

Doassansia Martianoffiana Schrcet.

Living leaves of pondweed. Near the outlet of Marl pond, Cortland county. July. The water in which the pondweed grew had evaporated and left the plants stretched upon the muddy soil. They were small and apparently dwarfed, and now being deprived of their normal quantity of water is it any wonder that they yielded to the attacks of their parasite?

Entyloma Physalidis Wint.

Living leaves of the viscid ground cherry, *Physalis Virginiana*. Menands. August.

Peronospora Rubi Rabh.

Living leaves of blackberry, *Rubus villosus*. Cold Spring, Long Island. July. *B. D. Halsted*.

Peronospora obovata Bon.

On corn spurry, *Spergula arvensis*. Liberty, Sullivan county. July. *Halsted*.

Sporotrichum parasiticum n. sp.

Effused, minute, white; hyphæ very slender and delicate, irregularly branched; spores numerous, minute, elliptical, .00012 to .00016 inches long, .00008 broad.

On excrescences of the black knot, *Plowrightia morbosa*. Menands. July.

This fungus forms a thin white coating over the surface of the excrescence. It is often quite conspicuous because of the dark color of the background. It attacks young as well as old black knots, and in the former case it apparently prevents the free formation of the perithecia of the black knot, and should therefore be regarded as a useful fungus. It is sometimes accompanied by *Trichothecium roseum*.

Septocylindrium scirpinum *n. sp.*

Forming minute, somewhat confluent, flocculent white tufts; spores narrowly fusiform, pointed at one or both ends, .0008 to 0.002 inches long, .00016 to .00025 broad, with one to six septa.

Dead spikelets of cotton grass, *Eriophorum cyperinum*. Lake Pleasant. August.

Pseudopeziza Medicaginis *Sacc.*

Living or languishing leaves of nonesuch, *Medicago lupulina*. Menands. July.

Sphærotheca mors-uvæ *B. & C.*

Fruit and leaves of gooseberry, *Ribes Cynosbati*. Sprakers, Montgomery county, and Bergen, Genesee county. June.

Sphærotheca Humuli *Burrill.*

Living leaves of agrimony, *Agrimonia Eupatoria*. Newburgh. Also of marsh five-finger, *Potentilla palustris*. Adirondack mountains. Specimens have also been collected on *Rubus odoratus*, *R. triflorus*, *Poterium Canadense* and *Physocarpus opulifolius* which apparently belong here.

Erysiphe Galeopsidis *DC.*

Living leaves of hemp nettle, *Galeopsis Tetrahit*, rough hedge nettle, *Stachys aspera*, mad dog skullcap, *Scutellaria lateriflora*. Tyre, Seneca county and Sandlake. August and September.

The following species are extra-limital. Specimens of them have been sent to me for identification, but I find no descriptions that harmonize with their characters. They are therefore recorded here as new species.

Mycena strobilinoidea *n. sp.*

Pileus thin, subcampanulate, obtuse, glabrous, bright scarlet; lamellæ whitish, reddish on the edge; stem short, glabrous but with a tawny villosity at the base, colored like but a little paler than the pileus.

Pileus 4 to 6 lines broad; stem about 1 inch long.

Under *Abies subalpina*. Olympia mountain, Washington. "Appearing soon after the snow disappears." *L. F. Henderson*.

The species belongs to the section *Calodontes*, and is distinguished from *M. strobilina* by its obtuse pileus and the colored villosity at the base of the stem.

Clavaria Herveyi *n. sp.*

Gregarious or subcaespitose, simple or with a few branches, often compressed or irregular, scarcely one inch high, golden-yellow, sometimes brownish at the apex, flesh white, branches when present short, simple or terminating in few or many more or less acute denticles; spores globose, .0003 in. broad, minutely roughened; mycelium white.

Ground under hemlock trees. Orono, Maine. September.
F. L. Hervey.

Allied to *C. fastigiata* and *C. muscoides* but distinct from both by its more irregular and less branching character and by its larger spores.

Exobasidium Cassiopes *n. sp.*

Attacking the young shoots and all their leaves, thickening and enlarging them; spores oblong, .0005 in. long.

On *Cassiope Mertensiana*. Olympia, Washington. *Henderson.*

The galls are very variable in color, and may be either pinkish, red, purple or whitish purple.

Nidularia candida *n. sp.*

Peridium externally tomentose, white, becoming cup-shaped, within glabrous, snowy-white, the mouth wide, entire; peridiola numerous, .035 to .05 in. broad, lenticular, brown, marked with numerous diverging and intercrossing blackish lines; spores broadly elliptical, .0003 in. long, .0002 broad.

Ground among mosses. Olympia, Washington. July.
Henderson.

All the peridia seen were fully open, and therefore their shape and character when young remain unknown. The size and shape of the native plant are similar to those of *Crucibulum vulgare*. The peridiola are smaller than in that species and of a darker color. The absence of the funiculus places the species in the genus *Nidularia*.

Septoria Peraphylli *n. sp.*

Spots rather large, 2 to 4 lines broad, one or two on a leaf, suborbicular, reddish brown, sometimes with a whitish center above; perithecia epiphyllous, slightly prominent, black, shining; spores subcylindrical, straight or somewhat curved, or subflexuous

and slightly unequal, few or many-nucleate, sometimes obscurely uniseptate, colorless or slightly colored, .001 to .0016 in. long, .00025 to .0003 broad.

Living leaves of *Peraphyllum ramosissimum*. Southern Utah. June. *M. E. Jones*.

This is an aberrant species with the spores unusually broad and variable and the perithecia rather large and somewhat unequal.

Septosporium Equiseti *n. sp.*

Hyphe forming minute tufts, the fertile very short, bearing acrogenous spores, the sterile longer, septate, colored; spores elliptical, usually with three transverse septa and one or two longitudinal ones, colored, .001 in. long, .0005 broad.

Dead tips of branches of *Equisetum arvense*. West Virginia. June. *C. F. Millsbaugh*.

Uromyces deciduus *n. sp.*

Spots none; sori minute, rotund, pulverulent, hypophyllous or amphigenous, often surrounding the young branches and occupying the whole lower surface of the leaflets, less abundant on the upper surface, rusty-brown; teleutospores oblong-elliptical or oblong-pyriform, .0008 to .0012 in. long, .0005 to .0006 broad, with the epispore roughened or verruculose, quickly deciduous from the short pedicel, a few abruptly clavate or capitate paraphyses intermingled with the teleutospores, .0012 to .0016 in. long.

Living leaflets and young branches of the screw bean, *Prosopis pubescens*. Mescal mountains, Arizona. May. *Jones*.

This species is easily known by its quickly deciduous spores and the intermingled capitate paraphyses. The pedicels are from one-fourth to one-half the length of the spores. "The fungus does not kill the leaves but causes the stem to form fascicles or bird's-nest clusters of branchlets near the end of the present year's growth."

(D.)

REMARKS AND OBSERVATIONS.

Corydalis flavula *D. C.*

In the Manual, Pennsylvania is given as the northeastern limit in the range of this species. It has been collected in New York, in Ulster county by the late W. H. Leggett, and in Onondaga county by Prof. L. E. Underwood.

Nasturtium lacustre Gr.

A terrestrial form of this plant occurs along the inlet of Owasco lake. The leaves are early and easily deciduous

Hudsonia tomentosa Nutt.

Sandy shore of Lake Pleasant, Hamilton county.

The plants in this remarkably inland station differ so much from the typical form of the species that I am disposed to consider them a good variety. They are intermediate between *H. tomentosa* and *H. ericoides* and may therefore bear the name

Var. *intermedia*. Stems and branches more slender and longer; leaves narrow, less imbricating and less tomentose; flowers on pedicels mostly a little longer than the leaves.

The variation in the leaves, downy tomentum and pedicels is in every case toward *H. ericoides*.

Viola blanda Willd. var. renifolia Gr.

Mossy ground in woods. Helderberg mountains.

Viola cucullata Ait.

A form with variegated flowers. Gouverneur. Mrs. E. C. Anthony.

Lychnis Flos-cuculi L.

Grassy yard. Newark. E. L. Hankenson.

The specimens are unusually small and few-flowered.

Lathyrus ochroleucus Hook.

Common about Carrollton. June.

Fragaria Indica L.

Banks of Onondaga creek. Mrs. L. L. Goodrich.

The specimens sent by Mrs. Goodrich appear to be dwarfed. They are very much smaller than those from Staten Island. The fruit is borne singly in the axils of the leaves of the runners. The seeds are superficial on the receptacle as in *F. vesca* and in our specimens are bright red, thus giving a beautiful appearance to an insipid fruit. The petals are yellow. The plant has been introduced and probably has escaped from cultivation.

***Cicuta bulbifera* L.**

In our State this plant usually blossoms and fruits very sparingly. Generally but a single umbel of flowers is developed and that terminates the main stem. Sometimes the two uppermost branches, which usually overtop the stem, are also terminated each by an umbel of flowers. Rarely very thrifty plants are still better furnished with flowers. The branches are generally well furnished with bulblets. The more the flowers the fewer the bulblets.

***Solidago uliginosa* Nutt.**

Lake Pleasant. August.

This is a peculiar form in which the panicle is small, dense, oblong or thyriform and mostly somewhat recurved.

***Aster undulatus* L.**

A very noticeable form of this species is found in dry sandy soil at Karner and also on Long Island. The leaves are thick, scabrous above, wavy on the margin, broadly or narrowly ovate, dark colored and all, except three or four near the base of the stem, are sessile by a heart-shaped base. The branches are clothed by ovate or oblong-ovate abruptly pointed bracts and bear the flowers mostly near the end either singly or somewhat clustered.

It might easily be thought to be a hybrid between *Aster undulatus* and *A. patens* which is generally associated with it or found near it, though this species flowers earlier than *A. undulatus*.

***Aster cordifolius* L. var. *lævigatus* Porter.**

Woods and open places. Lake Mohonk, Ulster county. September.

This variety of the heart-leaved aster was discovered by Professor Porter in Pennsylvania. It also occurs in New Jersey, where Professor Britton says, it is quite as abundant as the species itself. It has also been reported from Staten Island and Westchester county in this State, but has not before been found so far north as Lake Mohonk. It is a variety strongly marked by the wing-margined petioles, the longer smooth leaves with

pale under surface and more blunt and oppressed serratures. The flower-heads are generally less numerous and larger than in the type. Professor Porter remarks that perhaps it is a good species, and also that it is suggestive of a hybrid between *Aster cordifolius* and *A. levis*.

Aster vimineus Lam.

This species and *A. diffusus* are not easily separated in some of their forms. Near Wells, Hamilton county, an Aster is common which has the narrow leaves of *A. vimineus*, but the hairy stem of *A. diffusus*.

Aster Novi-Belgii L.

Â form was collected at Northville in which the heads are unusually small, being about three lines long. They are about the size of the heads of *A. dumosus*.

At Lake Pleasant, a small form occurs in which the stem is one to two feet high, rarely branched and bearing from one to six flowers of usual size. At Wells is a form like this in all respects except that the stem and midvein of the leaves are hairy as in *A. puniceus*, to which, on this account the specimens have been referred, although the leaves are much more narrow than in ordinary forms of *A. puniceus*. It may be a question whether these should be considered as a narrow-leaved, few-flowered form of *A. puniceus*, or a hairy-stemmed, few-flowered form of *A. Novi-Belgii*. Both forms are apparently due to poor soil.

A form was collected near Wells, having the long linear leaves of variety *elodes*. They are four to four and a half inches long and not more than three lines wide.

Erigeron strigosus Muhl, var. discoideus Robbins.

Roadsides and pastures. Alcove. C. L. Shear. Menands and Grafton. June and July.

This variety appears, at first sight, as if its rays had been closely eaten by insects.

Lactuca leucophæa Gr. var. integrifolia Gr.

Along the railroad near Carrolton. September. Probably introduced from the west.

Polygonella articulata Meisn.

The plant is abundant in the sandy region between Albany and Schenectady. Its flowers are generally described as rose-colored or flesh-colored. They are sometimes white. Nearly all the plants in the region mentioned had white flowers the present season though in former seasons they have been generally rose-colored. What made the difference?

Populus balsamifera L.

Not rare in the Adirondack region. Near Elizabethtown, Essex county, are trees which appear to connect the species and the variety *candicans*. The leaves on the older branches are truncate or subcordate, but those on the young and thrifty branches and shoots from the roots are somewhat pointed at the base as in the type. The hairiness of the petiole is scarcely perceptible.

Clintonia umbellata Torr.

Fine flowering specimens were found near Carrollton. The leaves and scape are generally more or less pubescent. The umbel consists of six to eighteen small white flowers in a close erect cluster. Usually there is a bract just below the umbel. It grows in damp places either in pastures or in woods, and is in flower in June.

Erythronium Americanum Ker.

The bulbs of this plant sometimes emit long white leafless runners or offsets which come to the surface and after describing an irregular curve a few inches long, thrust the growing tip beneath the surface again. One bulb, dug from beneath the decaying leaves, had a leaf at one end and two offsets growing from the other.

Cyperus dentatus Torr.

Abundant on the sandy shore of Lake Pleasant. The spikes are changed to leafy tufts in almost every plant in this locality.

Eleocharis tuberculosa R. Br.

Erastina, Richmond county. November. *N. L. Britton.*

Scirpus sylvaticus *L.* var. **digynus** *Boeckl.*

This sedge is apparently more common than has been supposed. Fine specimens were obtained near Wilton, Saratoga county. It maintains its distinguishing characters with great uniformity and is apparently a good and distinct species, easily recognizable at a glance and at once distinguishable from *S. sylvaticus* by its more densely clustered darker colored spikelets and by the purplish red sheaths that give a variegated appearance to the stem.

Scirpus polyphyllus *Vahl.* var. **macrostachyus** *Boeckl.*

Lake Pleasant. August. This variety is not indicated in the Manual. It differs from the ordinary form of the species as represented in our flora, in being less leafy, in having much longer and darker colored spikelets, shorter achenes and longer, more slender and more sparsely and irregular barbed bristles. In general appearance it is quite unlike the leafy form with short-ovate, densely clustered yellow-brown spikelets. Occasionally a slender pedicel supporting a cluster of spikelets rises from the axil of the uppermost leaf.

Eriophorum cyperinum *L.* var. **laxum** *W. & C.*

This variety was found at Lake Pleasant growing, in several instances, side by side with the typical form of the species. In addition to the distinguishing characters mentioned in the Manual it was found that when growing side by side and, so far as could be seen, subjected to exactly the same conditions, the variety reached maturity much earlier than the type. The woolly bristles of the mature plant are much paler and less dense in the mass. Sometimes the spikelets are all contracted into a single dense cluster one to two inches in diameter.

Carex flava *L.* var. **graminis** *Bailey.*

Borders of lakes. Adirondack mountains. July. In our specimens the perigynia often have the beak deflexed as in the type, but in other respects the agreement with the description is good.

Carex granularis *Muhl.* var. **Haleana** *Porter.*

Swamp near Meadowdale. June.

Carex alopecoidea *Tuckerm.*

Plentiful about Lyons, Wayne county. June.

Muhlenbergia sylvatica T. & G.

A form with branches erect and with purplish densely flowered panicles occurs about Lake Pleasant and also at Wells.

Muhlenbergia sobolifera Trin.

This species is common enough in the lower part of the valley of the Hudson and on the Shawangunk mountains, but I have not observed it north of Saugerties.

Agrostis vulgaris With.

This grass grows freely in sandy soil. A very stout, rigid form with dark purple panicles was found growing in the loose sharp sand along the shore of Lake Pleasant.

Poa compressa L. var. sylvestris Torr.

This variety grows in open places as well as in woods. Fine specimens were found at Menands. It is easily recognized by its short open or spreading panicle.

Asplenium montanum Willd.

This fern was discovered to be an inhabitant of our State about twenty years ago. It was then found growing from crevices in the rocks about Lake Mohonk. This has remained its only known station in our State until the present season, in which I learn it has been found in the Catskill mountains, a station still farther to the north. Mr. Smiley informs me that it has been found in several new places about Lake Mohonk, that it appears to be increasing in abundance and that it is in no danger of extermination there, for it grows on the faces of the cliffs in places where it is wholly inaccessible to the most eager collector.

Collybia radicata Relh. var. furfuracea n. var.

Pileus and lamellæ as in the typical form; stem more slender, generally slightly tapering upward, *even, fufuraceus*, more or less brownish.

This form is much more common with us than the type. The variation is toward *C. longipes*, which has the stem villose rather than furfuraceous, and its pileus is dry and velvety, but in our plant it is glabrous and viscid or glutinous when moist. As in the type, the pileus is sometimes umbonate. There is a dwarf form which is quite common. In it the pileus is from six to sixteen lines broad and the stem proportionably slender. It might be designated as var. *pusilla*.

(E.)

NEW YORK SPECIES OF OMPHALIA.

Omphalia Fr.

Pileus thin, submembranaceous. Lamellæ decurrent. Stem cartilaginous, stuffed or hollow, somewhat thickened upwards. Spores white.

The species of *Omphalia* are generally small, the pileus rarely exceeding an inch or an inch and a half in diameter. It is usually umbilicate, a character which gives name to the genus, the word *Omphalia* being derived from the Greek, *ὀμφαλος* an umbilicus. It is sometimes either umbilicate or umbonate even in the same species. It is generally very thin, almost or quite membranous, and most often hygrophanous, so that generally it is striate or striatulate when moist. When mature, it assumes a funnel shape in a few species and then simulates some species of *Clitocybe*, but from these the species of *Omphalia* may be distinguished by their cartilaginous stem. From species of *Mycena* they are separated by their truly decurrent lamellæ.

They grow chiefly on decaying wood or other vegetable matter or on soil largely composed of such matter. They are fond of moisture and are to be sought in damp shaded places or in wet weather. Some occur in cold situations or at high altitudes, and others appear to be capable of enduring great variations in temperature. *O. Campanella*, one of our most common and most abundant species may be found throughout the season. It may even be found in sheltered cavities or on the under side of decayed prostrate trunks when the ground is covered with snow. On the other hand many species are quite rare, and some here described have been found but once in many years of exploration. Because of their small size the species are not regarded as important for the table and none are classed as edible.

The grouping of the species in the Friesian arrangement depends upon the primary form of the pileus, the character of its margin and the degree of proximity of the lamellæ to each other, but these characters have not appeared to me to be very sharp and satisfactory and in the following pages I have disregarded them.

O. subgrisea has been found to belong to another genus, and *O. tubæformis* is probably a large form of *Marasmius salignus*.

Omphalia rugosidisca *Pk.*

RUGOSE-DISKED OMPHALIA.

(Report 26, p. 55.)

Pileus thin, broadly convex or nearly plane, umbilicate obtuse or slightly umbonate, sometimes slightly umbilicate, *rugose on the disk*, glabrous, hygrophanous, brown and striatulate when moist, paler when dry, the thin margin often wavy; lamellæ narrow, close, arcuate, decurrent, white, *emitting drops of a watery juice where cut or broken*; stem short, glabrous, hollow, often curved, whitish or colored like the pileus; spores elliptical, .00025 to .00028 in. long, .00016 broad.

Pileus 6 to 12 lines broad; stem about 1 inch long, .5 to 1 line thick.

Decaying prostrate trunks of coniferous trees, especially hemlock. Adirondack mountains, Otsego, Ulster, Albany and Rensselaer counties. July to September.

The species is remarkable because of the watery juice which oozes in drops from the lamellæ of the fresh plant where cut or broken.

Omphalia lilacifolia *Pk.*

LILAC-LEAVED OMPHALIA.

(*Agaricus lilacinus* Rep. 24, p. 63. *A. lilacifolius* Rep. 29, p. 66.)

Pileus convex, deeply umbilicate, glabrous, *viscid*, hygrophanous, dingy-yellow with a slight greenish tinge and striatulate when moist, bright sulphur-yellow when dry; lamellæ close, narrow, arcuate, decurrent, *pale lilac*; stem equal, glabrous, hollow, *viscid*, yellowish with a *pale lilac-colored mycelium at the base*; spores subelliptical, .0002 to .00025 in. long, about .00012 broad.

Pileus 6 to 12 lines broad; stem 6 to 12 lines long, .5 to 1 line thick.

Decaying prostrate trunks of hemlock. Oneida and Albany counties. September.

This is a very distinct species, remarkable for its viscid pileus and stem and for the peculiar hue of the lamellæ and mycelium.

Omphalia Oculus *Pk.*

EYE-SPOT OMPHALIA.

(Report 23, p. 84.)

Pileus convex, umbilicate, often with a small umbo or papilla in the umbilicus, *minutely squamulose*, dingy-white, *the umbilicus blackish-brown*; lamellæ white, narrow, close, subarcuate; stem

hollow, minutely squamulose or furfuraceous, easily splitting, often curved, whitish; spores subglobose, .00016 to .0002 in. in diameter.

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

Prostrate trunks of hemlock in woods. Adirondack mountains. August.

The dark colored umbilicus is a noticeable feature. The plant has not been found since its discovery in 1869. The species is evidently rare. It is apparently closely related to *Collybia abundans*, from which it is distinguished by its more decided darker umbilicus and squamulose pileus.

Omphalia olivaria Pk.

OLIVE-GREEN OMPHALIA.

(Report 25, p. 76.)

Pileus convex, umbilicate, glabrous, *olive-green*; lamellæ subdistant, arcuate-decurrent, *pale-yellow*; stem equal, short, glabrous, hollow, colored like the pileus; spores subglobose or broadly elliptical, .00025 to .00028 in. long, about .0002 in. broad.

Pileus about 1 in. broad; stem about 1 in. long, 1 line thick.

Burnt ground under balsam fir trees. North Elba, Essex county. July.

This plant was discovered in 1871. It has not since been found.

Omphalia chrysophylla Fr.

GOLDEN-LEAVED OMPHALIA.

(Hym. Europ. p. 156. Syl. Fung. Vol. V, p. 312.)

Pileus convex or nearly plane, flocculose, umbilicate, hygrophanous, yellowish-brown when moist, paler when dry, the spreading margin sometimes reflexed; lamellæ broad, distinct, distant, strongly decurrent, *bright-yellow*; stem equal, tough, hollow, sometimes curved, even, glabrous, villous at the base, *yellow*; spores oblong-elliptical, .0004 to .00045 in. long, .00016 to .0002 broad.

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

Decaying wood of coniferous trees. Adirondack mountains, Schoharie and Rensselaer counties. August and September.

Var. *chrysea*. (*Agaricus chryseus*, Rep. 23, p. 85.)

Whole plant yellow, lamellæ rather narrow.

This differs from the true *O. chrysophylla* so slightly that it seems best to regard it as a mere variety of that species. The pileus varies in depth of coloring and the spores in the American plant, from which the dimensions here given were taken, are somewhat longer than the dimensions ascribed to those of the European plant. This fungus is not common.

Omphalia pyxidata Bull.

CUP-SHAPED OMPHALIA.

(Hym. Europ. p. 157. Syl. Fung. Vol. V, p. 313.)

Pileus at first convex or nearly plane and umbilicate, then funnel-form, glabrous, hygrophamous, brick-red or reddish-brown when moist and wholly radiate-striate, or on the margin only, pale when dry and flocculose or slightly silky; lamellæ narrow, subdistant, decurrent, tinged with flesh-color, then *yellowish*; stem equal, tough, glabrous, stuffed or hollow, *pallid or reddish*; spores subelliptical, .00025 to .0003 in. long, .00016 to .0002 broad.

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

Grassy or mossy ground in pastures. Lewis county. September.

This is evidently a rare species with us, as it has not been observed since its discovery here in 1870.

Omphalia striipilea Fr.

STRIATE-CAPPED OMPHALIA.

(Hym. Europ. p. 157. Syl. Fung. vol. V, p. 314)

Pileus membranous, convex or plane, umbilicate, never funnel-form, *glabrous*, hygrophamous, livid brown and beautifully *striate when moist*, even and paler when dry; lamellæ not crowded, slightly decurrent, whitish; stem equal, rather firm and tough, glabrous, hollow, often flexuous, *brownish*; spores nearly or quite globose, .00025 to .00028 in. broad.

Pileus 6 to 12 lines broad; stem 1 to 1.5 in. long, about 1 line broad.

In groves of spruce and balsam fir. Essex county. September.

Omphalia Epichysium Pers.

OVERSPREADING OMPHALIA.

(Hym. Europ. p. 158. Syl. Fung. vol. V, p. 314)

Pileus membranous, soft, nearly plane, umbilicate, hygrophanous, sooty-gray and striate when moist, paler when dry and *silky or flocculose*; lamellæ narrow, subdistant, slightly decurrent, whitish or cinereous; stem equal, somewhat hollow, glabrous, cinereous; spores elliptical, .0003 in. long, .00016 broad.

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

Decaying wood and dead trunks of trees. Adirondack mountains. August.

Omphalia Gerardiana Pk.

GERARD'S OMPHALIA.

(Agaricus Gerardianus. Rep. 26, p. 54)

Pileus thin, nearly plane or soon funnel-form, generally umbilicate, fragile, *dotted with minute blackish points*, hygrophanous, brown or grayish-brown and striatulate when moist, paler when dry; lamellæ narrow, subdistant, decurrent, sometimes forked, whitish or cinereous; stem long or short, glabrous, stuffed or hollow, colored like the pileus; spores oblong or ovate-oblong, .0003 to .00045 in. long, about .00016 broad.

Pileus 8 to 12 lines broad; stem 1 to 2.5 in. long, .5 to 1 line thick.

Growing in Sphagnum. Rensselaer, Ulster and Seneca counties. June.

This fungus was formerly referred to the subgenus Clitocybe, but later observations indicate a closer relationship to Omphalia. It is closely related to such species of Omphalia as *O. affricata*, *O. telmatiea*, *O. sphagnicola* and *O. philonotis*. From all these it differs in the peculiar adornment of the pileus.

Omphalia montana Pk.

MOUNTAIN OMPHALIA.

(Report 27, p. 94.)

Pileus thin, umbilicate, glabrous, blackish-brown; lamellæ distant, decurrent, whitish, *darker on the edge*, stem equal, glabrous, colored like the pileus; spores broadly elliptical, about .0003 in. long.

Pileus 6 to 8 lines broad; stem about 1 inch long, 1 line thick.

Thin soil covering rocks. Mount Marcy. August. Very rare. Not found since 1873. Remarkable for the discolored edge of the lamellæ.

Omphalia umbellifera L.

UMBEL-BEARING OMPHALIA.

(Hym. Europ. p. 161. Syl. Fung. vol. V, p. 321.)

Pileus convex or plane, somewhat obconic, hygrophanous, radiate-striate when moist, whitish or pale-yellow; lamellæ *broad, distant, somewhat triangular*, white; stem short, stuffed, becoming hollow; spores broadly elliptical, .0003 to .0004 in. long, .0002 to .00025 broad.

Pileus 4 to 8 lines broad; stem 6 to 10 lines long, .5 line thick, ground or decaying wood.

Var. *scabriuscula*. (*Agaricus scabriusculus* Rep. 23, p. 85.)

Plant commonly larger, pileus flocculose-pulverulent, yellow; lamellæ white or pale-yellow, the interspaces venose; stem hairy-squamulose.

Decaying wood. Adirondack mountains.

This is a very variable species. It occurs from June to September, and grows on ground largely composed of decomposed vegetable matter or on much decayed wood. In this State it seems to be limited in its range to the Adirondack region and there it ascends to the tops of the highest peaks. Its pileus and broad lamellæ together have an obconic shape. It is often irregular or misshapen. The stem may be either glabrous, pruinose or hairy-squamulose. Sometimes it is pubescent or villose at the base only. The pileus is either glabrous or silky or flocculose-pulverulent.

Omphalia Campanella Batsch.

BELL-SHAPED OMPHALIA.

(Hym. Europ. p. 162. Syl. Fung. vol. V, p. 327.)

Pileus thin, rather tough, hemispherical or convex, glabrous, umbilicate, hygrophanous, yellow-ferruginous and striatulate when moist, paler when dry; lamellæ moderately close, arcuate, decurrent, yellowish, the interspaces venose; stem firm, rigid, hollow, *brown*, often paler at the top, *tawny-strigose at the base*;

spores elliptical, .00024 to .00028 in. long, .00012 to .00016 broad. Pileus 4 to 8 lines broad; stem about 1 in. long, scarcely 1 line thick.

Much decayed wood of coniferous trees. Very common. May to November.

This pretty little species occurs everywhere in woods and shaded places where there are prostrate, much decayed trunks of hemlock, spruce and pine. It makes its appearance as soon as the weather is moderately warm in spring, and successive crops develop till all growth is stopped by the return of the cold weather of winter. Rarely it grows on ground well filled with decaying vegetable matter. It usually grows in large flocks or dense clusters but sometimes is more scattered. It is the most frequent and most abundant of our species of *Omphalia* and is easily recognized by its yellowish-red pileus, dark-brown stem and the little ball or tuft of tawny-colored coarse hairs at the base of the stem. The pileus varies some in the intensity of its color but all the hues of the moist plant appear to be mixtures of yellow and dull red in different proportions. In the dry plant, the yellow predominates. The mycelium of this species is regarded as destructive to the wood of coniferous trees.

Omphalia fibuloides *Pk.*

BUTTON-LIKE OMPHALIA.

(Report 24, p. 63.)

Pileus thin, convex, deeply umblicate, glabrous, hygrophanous, dull orange and striatulate when moist, paler when dry; lamellæ rather close, arcuate strongly decurrent, white, the *interspaces venose*; stem equal, glabrous, hollow, colored nearly like the pileus; spores *elliptical*, .0003 in. long, .0002 broad.

Pileus 6 to 10 lines broad; stem 1 to 2 in. long, scarcely 1 line thick.

Burnt, mossy ground. Lewis and Sullivan counties. September.

It is closely related to *Omphalia Fibula*, which it resembles in color, but from which it may easily be distinguished by its much larger size, more robust habit and venose interspaces. Its spores also are larger than in that species.

Omphalia Fibula Bull.

BUTTON OMPHALIA.

(Hym. Europ. p. 164. Syl. Fung. vol. V, p. 331.)

Pileus membranous, commonly convex or hemispherical and umbilicate, striatulate when moist and varying in color from pale-yellow to orange, even and paler when dry; lamellæ *distant*, arcuate, strongly decurrent, white; stem slender, commonly long in proportion to the breadth of the pileus, colored like or a little paler than the pileus; spores *narrowly elliptical*, minute, .00016 in. long, .0008 broad.

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

Mossy ground and prostrate mossy trunks of trees in woods or open places. Common. April to November.

Var. *conica*. Pileus conical, not umbilicate, sometimes papillate. Fulton county.

This is a very small species and of frequent occurrence in damp mossy places, but rarely abundant. Its pileus varies in color from almost white to bright orange. Large forms approach the preceding species in appearance.

Omphalia Swartzii.*Agaricus Fibula* var. *Swartzii* Fr.

SWARTZ'S OMPHALIA.

(Hym. Europ. p. 164. Syl. Fung. vol. V, p. 331.)

Pileus rather firm, even, whitish, *disk brownish*; stem whitish, somewhat *violaceous at the top*. In other respects like the preceding species.

Although this plant scarcely differs from *O. Fibula* except in color, and is regarded by almost all mycologists as a mere variety of it, yet it is so peculiar and so constant in its color and so easily recognized that it seems best to separate it as a species.

Omphalia corticola Pk.

BARK-INHABITING OMPHALIA.

(Report 44, p. 18)

Pileus submembranous, convex, then expanded and umbilicate, distantly radiate-striate, *whitish or pale-cinereous*; lamellæ narrow, distant, *at first arcuate and adnate*, then truly decurrent, white;

stem short, curved, subpruinose or sprinkled with mealy particles, at first whitish with a brown base, then brown with a whitish top; spores elliptical, .0003 in. long, .00016 broad, generally containing a single large nucleus.

Pileus 2 to 4 lines broad; stem 4 to 6 lines long.

Bark of oak trees. Cattaraugus county. September.

This species is distinguished from *Mycena corticola* by its paler pileus, more narrow and, at length, decurrent lamellæ and elliptical spores.

Omphalia gracillima Weim.

SLENDER OMPHALIA.

(Hym. Europ. p. 165. Syl. Fung. vol. V, p. 332.)

Pileus membranaceous, *hemispherical*, papillate or umbilicate, somewhat flocculose when young, becoming glabrous, sulcate on the margin, white; lamellæ thin, somewhat distant, decurrent, the alternate ones shorter, white; stem filiform, white, inserted by a floccose base; spores elliptical, .00024 in. long .0001 broad.

Pileus 2 to 3 lines broad; stem 4 to 8 lines long.

Dead twigs and fallen leaves in wet places. Rensselaer county. September.

A very small delicate species, the whole plant pure white.

Omphalia stellata Fr.

STELLATE OMPHALIA.

(Hym. Europ. p. 162. Syl. Fung. vol. V, p. 325.)

Pileus membranous, *convex, umbilicate*, glabrous, striate, diaphanous, white; lamellæ broad, very distant, thin, decurrent, white; stem filiform, fragile, equal, glabrous, white, radiate-floccose at the base; spores subglobose or broadly elliptical, .00024 in. long, .0002 broad.

Pileus 2 to 4 lines broad; stem 6 to 10 lines long.

Decaying prostrate trunks of trees in woods. Albany county. August.

Omphalia Rhododendri Pk.

RHODODENDRON OMPHALIA.

(Report 27, p. 94.)

Pileus convex, umbilicate, glabrous, slightly viscid when moist, striate on the margin, white; lamellæ subdistant, arcuate, decurrent, white, beaded on the edge with gland-like protuber-

ances; stem slender, *roughened with minute white gland-like protuberances*, white; spores oblong or narrowly elliptical, .0003 in. long, .00012 broad.

Pileus 2 to 3 lines broad; stem 6 to 8 lines long.

Dead stems of great laurel, *Rhododendron maximum*. Sullivan county. September.

Omphalia Austini *Pk.*

AUSTIN'S OMPHALIA.

(Report 28, p. 48.)

Pileus rather tenacious, convex or hemispherical, glabrous, striate, deeply umblicate, sometimes perforate, *viscid when moist*, white; lamellæ subarcuate, distant, decurrent, white; stem equal, hollow, *even*, glabrous, villose at the base, white; spores elliptical, .0003 in. long, .0002 broad.

Pileus 3 to 6 lines broad; stem 1 to 1.5 in. long, .5 line thick.

Decaying wood of spruce. Saratoga, Hamilton, Fulton and Essex counties. July and August.

Rarely the pileus has a slight smoky or grayish tint.

Omphalia scyphoides *Fr.*

CUP-LIKE OMPHALIA.

(Hym. Europ. p. 156. Syl. Fung. vol. V, p. 310.)

Pileus submembranous, plane and umbilicate or funnel-form, often irregular or somewhat eccentric, *even*, silky, white; lamellæ *narrow, close*, decurrent, white; stem short, stuffed, subvillose, white; spores elliptical, .00024 inches long, .00016 to .0002 broad.

Pileus 2 to 4 lines broad; stem 4 to 8 lines long.

Decaying wood, leaves, etc., Saratoga county. July and August.

In our specimens there is no villosity on the stem except at the base.