REPORT OF THE BOTANIST,

CHARLES H. PECK.

36 Reg. Report.

REPORT OF THE BOTANIST.

Hon. DAVID MURRAY, LL. D.,

Secretary of the Board of Regents of the University:

SIR — Since the date of my last report, specimens of one hundred and forty-two species of plants have been mounted and placed in the State Herbarium, of which sixty-eight were not previously represented therein. The specimens of the remaining species represent new forms or varieties of species before represented, or exhibit some features or characters not well shown by the older specimens. A list of the species of which specimens have been mounted is hereinafter given and marked (1).

By reason of the veto, by the Governor, of the appropriation for the reimbursement of the expenses of the Botanist for the years 1880 and 1881, it was not deemed prudent by me to advance any more money to meet these expenses. I have, therefore, been obliged to devote myself to the accomplishment of such work as could be done with the materials already on hand, and I have no additions to the Herbarium by the collecting of the Botanist, to report. This interruption of the work is to be regretted since it delays its completion and thereby increases the cost. If it shall be deemed best to continue the work of supplying deficiencies in the Herbarium and of developing a knowledge of the cryptogamic botany of our State, it is desirable that either the salary of the Botanist be increased sufficiently to enable him to meet the necessary expenses out of his own pocket, or else that an appropriation for these expenses be made in advance.

As usual, numerous specimens have been contributed to the Herbarium by various correspondents and other co-laborers in botany. A list of the contributors and of their respective contributions is marked (2).

Some of the contributed specimens represent plants that are new to the Herbarium and have not before been reported, others are rare plants from newly-discovered localities, or specimens that exhibit some

peculiar variation in the species, and for these or other reasons are worthy of notice. New stations of rare plants, remarks and observations are recorded in a section marked (3).

Among the contributed specimens is a new species of edible fungus belonging to the genus Agaricus, subgenus Psalliota, and closely related to the common edible mushroom, and its near relative the horse mushroom. The mushrooms are so interesting by reason of their frequent use as an article of food, and the three species mentioned are so variable and so intimately related to each other, that in pursuance of a plan already adopted in two previous reports (in which synopses of the subgenera Amanita and Lepiota have been given), I have thought best to give a full descriptive synopsis of all our New York species of the subgenus Psalliota. In this monograph the descriptions have been revised and made more complete, the dimensions of the spores have been given and copious remarks have been added with the design of pointing out more clearly the distinguishing features of the species and of aiding in their discrimination. It is marked (4).

(1.)

PLANTS MOUNTED.

Not new to the Herbarium.

Ranunculus abortivus, *L.*
Raphanus Raphanistrum, *L.*
Brassica Sinapistrum, *Boiss.*
Viola Selkirkii, *Pursh.*
Geranium maculatum, *L.*
Acer rubrum, *L.*
Trifolium repens, *L.*
Rubus triflorus, *Rich.*
Opuntia Rafinesquii, *Engelm.*
Tiarella cordifolia, *L.*
Mitchella repens, *L.*
Viburnum nudum, *L.*
Heracleum lanatum, *Mx.*
Tanacetum vulgare, *L.*
Vaccinium corymbosum, *L.*
V. Pennsylvanicum, *Lam.*
Nyssa multiflora, *Wang.*
Scutellare galericulata, *L.*
Marrubium vulgare, *L.*
Apocynum cannabinum, *L.*
Polygonum orientale, *L.*
Fraxinus Americana, *L.*
F. pubescens, *Lam.*
Quercus alba, *L.*
Q. Prinus, *L.*
Q. rubra, *L.*
Q. coccinea, *Wang.*
Q. tinctoria, *Bart.*
Populus tremuloides, *Mx.*
P. grandidentata, *Mx.*
Potamogeton crispus, *L.*
P pusillus, *L.*
P pectinatus, *L.*
P. gramineus, *L.*
Smilax hispida, *Muhl.*
Trillium grandiflorum, *Salisb.*
Polygonatum giganteum, *Diet.*
Uvularia sessilifolia, *L.*
Heteranthera reniformis, *R. and P.*
Eleocharis tuberculosa, *R. Br.*
Scleria pauciflora, *Muhl.*
Carex stricta, *Lam.*
C. Muhlenbergii, *Schk.*
C. cephalophora, *Muhl.*
C. Emmonsii, *Dew.*
C. Pennsylvanica, *Lam.*
C. tenera, *Dew.*
C. lagopodioides, *Schk.*
C. adusta, *Boott.*
C. granularis, *Muhl.*
C. gracillima, *Schw.*
C. cristata, *Schw.*
C. mirabilis, *Dew.*
C. virescens, *Muhl.*
C. vulpinoidea, *Mx.*
C. plantaginea, *Lam.*
C. laxiflora, *Lam.*
Zizania aquatica, *L.*
Stipa avenacea, *L.*
Aira flexuosa, *L.*

Bromus racemosus, *L.*
Poa trivialis, *L.*
Eragrostis pilosa, *Bv.*
Aspidium Boottii, *Tuckm.*
Osmunda cinnamomea, *L.*
Agaricus serotinus, *Schrad.*
A. æruginosus, *Curt.*
Agaricus sapidus, *Kalchb.*
Polyporus adustus, *Willd.*
P. hispidioides, *Pk.*
Trametes mollis, *Sommf.*
Corticium læve, *Pers.*
C. incarnatum, *Pers.*
C. lilacinofuscum, *B. and C.*

New to the Herbarium.

Malva crispa, *L.*
Tillæa simplex, *Nutt.*
Sedum acre, *L.*
Amarantus blitoides, *Wats.*
Sagittaria pusilla, *Nutt.*
Eragrostis Purshii, *Schrad.*
Agaricus alluviinus, *Pk.*
A. rubrotinctus, *Pk.*
A. albus, *Schæff.*
A. pascuus, *Pers.*
A. sinuatus, *Fr.*
A. fastibilis, *Fr.*
A. sulcatipes, *Pk.*
A. hærens, *Pk.*
A. tiliophilus, *Pk.*
A. nitidipes, *Pk.*
A. epimyces, *Pk.*
Hygrophorus fuligineus, *Frost.*
H. flavodiscus, *Frost.*
Marasmius salignus, *Pk.*
Polyporus immitis, *Pk.*
P. fraxinophilus, *Pk.*
Irpex crassus, *B. and C.*
I. mollis, *B. and C.*
Corticium effuscatum, *C. and E.*
Thelephora rosella, *Pk.*
Cyphella læta, *Fr.*
Phoma cucurbitale, *B. and C.*
Sphæropsis Caryæ, *C. and E.*
Discella hysteriella, *Pk.*
D. albomaculans, *Pk.*
Glœosporium fraxinea, *Pk.*
Septoria cannabina, *Pk.*
S. Sicyi, *Pk.*
Septoria Cirsii, *Niessl.*
S. Calystegiæ, *Sacc.*
S. musiva, *Pk.*
Phyllosticta Cratægi, *Pk.*
P. variabilis, *Pk.*
Protomyces macrosporus, *Ung.*
Ustilago pallida, *Schræt.*
Acalyptospora Populi, *Pk.*
Macrosporium transversum, *Pk.*
Alternaria tenuis, *Nees.*
Ellisiella caudata, *Sacc.*
Botrytis ceratioides, *Pk.*
Dactylium dendroides, *Fr.*
Verticillium Lactarii, *Pk.*
Cercospora Tiliæ, *Pk.*
C. Lepidii, *Pk.*
C. Daturæ, *Pk.*
C. varia, *Pk.*
C. longispora, *Pk.*
Ramularia Vaccinii, *Pk.*
R. Ranunculi, *Pk.*
R. Hamamelidis, *Pk.*
R. aquatilis, *Pk.*
Asterophora Pezizæ, *Cd.*
Peziza lætiruba, *Cke.*
P. singularia, *Pk.*
Tympanis Nemopanthis, *Pk.*
Cenangium betulinum, *Pk.*
Triblidium clavæsporum, *Pk.*
Ascomyces deformans, *Berk.*
Gymnascella aurantiaca, *Pk.*
Valsa tomentella, *Pk.*
Sphærella fraxinea, *Pk.*
Venturia curviseta, *Pk.*

(2.)

CONTRIBUTORS AND THEIR CONTRIBUTIONS.

Mrs. L. A. Millington, Glens Falls N. Y.

Epilobium molle, *Torr.*

Miss M. Bowles Columbia, Tenn.

Polypodium incanum, *Pursh.*

C. D. Hill, Tunis, N. Y.

Calystegia Sepium, *L.*

J. F. Shoemaker, Luverne, Minn.

Oxybaphus nyctagineus, *Sweet.*

Charles E. Smith, Philadelphia, Penn.

Corema Conradii, *Torr.*

C. F. Cornelius, Willow Brook, N. Y.

Cynoglossum officinale, *L.*

Rev. Washington Rodman, Astoria, N. Y.

Agaricus Rodmani, *Pk.*

H. N. Johnson, Coeymans, N. Y.

Sagittaria pusilla, *Nutt.*
Thalictrum anemonoides, *Mx.*

W. C. Stevenson, Jr., Philadelphia, Pa.

Puccinia Myrrhis, *Schw.*

S. J. Bowman, Albany, N. Y.

Ranunculus multifidus, *Pursh.*

Hon. G. W. Clinton, Albany, N. Y.

Tillæa simplex, *Nutt.*
Amarantus blitoides. *Wats.*
Eragrostis pœoides, *Bv.*
E. Purshii, *Schrad.*

J. Howell, Arthur, Oregon.

Puccinia mirabilissima, *Pk.*
Dædalea vorax, *Hark.*
Berberis Aquifolium, *Pursh.*
Wood of Abies Douglassii.

S. B. Griswold, Albany, N. Y.

A flower of the Century plant, Agave Americana, *L.*

W. M. Canby, Wilmington, Del.

Tillæa simplex, *Nutt.*

W. Russell, Albany, N.Y.

A specimen of the Chinese "leechee nut."

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

Sedum reflexum, *L.*
Azolla Caroliniana, *Willd.*
Salix cordatax sericea.

Felix von Thumen, Vienna, Austria.

Agaricus geophyllus, *Sow.*
A. mitis, *Fr.*
A. sphinctrinus, *Fr.*
Polyporus cinnabarinus, *Jacq.*
P. pergamenus, *Fr.*
P. cuticularis, *Fr.*
Merulius molluscus, *Fr.*
Dædalea mollis, *Somm.*
Craterellus sinuosus, *Fr.*
C. cornucopioides, *Fr.*
Thelephora sebacea, *Pers.*
T. fastidiosa, *Fr.*
Stereum lobatum, *Kze.*
Stereum sanguinolentum, *Fr.*
Corticium roseum, *Fr.*
C. radiosum, *Fr*
C. Juniperina, *Karst.*
Hirneola Auricula-Judæ, *Berk.*
Clavaria fistulosa, *Fr.*
C. Kunzei, *Fr.*
C. cristata, *Holmsk.*
Pistillaria quisquilaris, *Fr.*
Typhula filiformis, *Fr.*
Tremella disciformis, *Fr.*
Geaster triplex, *Jungh.*
Mycogala parietinum, *Rost.*

Æcidium Lampsanæ, *Schultz.*
Æ. Thalictri, *Grev.*
Æ. Pastinaceæ, *Rost.*
Æ. Onosmatis, *Thum.*
Æ. Lithospermi, *Thum.*
Æ. Symphyti, *Thum.*
Æ. Ligustri, *Strauss.*
Æ. Orchidearum, *Desm.*
Æ. Xylostei, *Wallr.*
Æ. Frangulæ, *Schum.*
Æ. Tussilaginis, *Pers.*
Puccinia Oxyriæ, *Fckl.*
P. Asteris, *Schw.*
P. Anemones, *Pers.*
P. Wilcoxiana, *Thum.*
P. crassivertex, *Thum.*
P. Artemisiarum, *Duby.*
P. Brachypodii, *Fckl.*
P. Morthierii, *Kornick.*
P. Cirsii, *Lasch.*
Urocystis primulicola, *Magn.*
Synchytrium Taraxaci, *DeBy.*
Ceratitium Oxyacanthæ, *Desm.*
C. laceratum, *Sow.*
Uredo cancellata, *D. and M.*
U alpestris, *Schroet.*
U. Iridis, *Duby.*
U. digitariæcola, *Thum.*
Coleosporium ochraceum, *Bon.*
C. Campanulacearum, *Fr.*
Uromyces Cacaliæ, *Lev.*
U. Lathyri, *Fckl.*
U. Iridis, *Lev.*
Cronartium ribicola, *Dietr.*
Melampsora Euphorbiæ, *Castr.*
M. Balsamiferæ, *Thum.*
M. Lini, *Tul.*
Podosphaeria biuncinata, *C. and P.*
P. Kunzei, *Lev.*
Uncinula flexuosa, *Pk.*
U. macrospora, *Pk.*
U circinata, *C. and P.*
Calocladia penicillata, *Lev.*
Microsphaeria Viburni, *Schw.*
Erysiphe Martii, *Lev.*
E. lamprocarpa, *Lev.*
Phyllactinia guttata, *Lev.*
Sphaerotheca Castagnei, *Lev.*
S. Niesslii, *Thum.*
Stigmatea Chætomium, *Fr.*
S. confertissima, *Fckl.*
Capnodium pelliculosum, *B. and Br.*
Ceratostoma spurium, *Fr.*
Massaria fœdans, *Fr.*
M. inquinans, *Tul.*
Epichloe typhina, *Tul.*
Cryptospora nigro-annulata, *Rehm.*
Phyllachora Ulmi, *Fckl.*
Ascomyces Quercus, *Cke.*
A. cœrulescens, *Mu.*
A. alutaceus, *Thum.*
Exoascus Alni, *Fckl.*
E. Betulæ, *Fckl.*
Botryosphaeria Berengeriana, *DeNott.*
Calosphaeria tumidula, *Sacc.*
Anthostomella Yuccæ, *Thum.*
Zignoella punctiformis, *Sacc.*
Rœsleria hypogaea, *P. and T.*
Gibberella pulicaris, *Sacc.*
Coleroa Alchemillæ, *Fr.*
Ombrophila Mortheriana, *Rehm*
Bulgaria inquinans, *Fr.*
Durella macrospora, *Fckl.*
Mollisia excelsior, *Karst.*
Helotium scutula, *Karst.*
H. stigmarion, *Rehm.*
Peziza striata, *Nees.*
P. flavofuliginea, *A. and S.*
P. carpinea, *Fr.*
Hypoderma Lauri, *Duby.*
Lophium decipiens, *Karst.*
Lophodermium petiolicolum, *Fckl.*
Gnomonia errabunda, *Awd.*
Phelonitis strobilina, *Fr.*
Cladosporium fasciculare, *Fr.*
C. Martianoffianum, *Thum.*
C. diaphanum, *Thum.*
C. ampelinum, *Pass.*
Cercospora beticola, *Sacc.*
C. Solani, *Thum.*
C. Smilacis, *Thum.*
C. Thalictri, *Thum.*
C. acerina, *Hart.*
C. persica, *Sacc.*
C. Rhamni, *Fckl.*
C. Bupleuri, *Pass.*
Triposporium Juglandis, *Thum.*
Macrosporium Ravenelii, *Thum.*
M. diversisporium, *Thum.*
Fusicladium Aronici, *Sacc.*
F. dendriticum, *Wallr.*
F. orbiculatum, *Thum.*
F. pyrinum, *Bon.*
Dendryphium curtum, *B. & Br.*
Sporidesmium Macluræ, *Thum.*
Ramularia Hellebori, *Fckl.*
R. didyma, *Ung.*
R. Nemopanthis, *C. & P.*
Sporotrichum pulviniforme, *Thum.*
Isaria farinosa, *Fr.*
Fusisporium Buxi, *Fr.*
F. lacteum, *Desm.*
F. chenopodinum, *Thum.*
Cystispora foliicola, *Lib.*
C. Therryana, *Thum.*
Sphacelia segetum, *Lev.*
Glœosporium filicinum, *Rost.*
G. Sibiricum, *Thum.*
G. ampelophagum, *Sacc.*
G. affine, *Sacc.*
G. Robergei, *Desm.*
G. Pisi, *Oud*
G. paradoxum, *Sacc.*
G. sphaerelloides, *Sacc.*
Pestalozzia Planimi, *Vize.*
P. Acaciæ, *Thum.*
P. lignicola, *Cke.*
Diplodia carpinea, *Thum.*

Diplodia Incarvilleæ, *Thum.*
D. Henriquesii, *Thum.*
D. Molleriana, *Thum.*
D. fœniculina, *Thum.*
D. radiciperda, *Thum.*
Dothichiza Sorbi, *Lib.*
Micropera Pinastri, *Sacc.*
Phoma negundicola, *Thum.*
Aposphæria suffulta, *Thum.*
Asteromella vulgaris, *Thum.*
Phyllosticta Bolleana, *Thum.*
P. nuptialis, *Thum.*
Ascochyta Lactucæ, *Rostr.*
Septoria æsculina, *Thum.*
S. leguminum, *Desm.*
Myxosporium colliculosum, *Berk.*
Hendersonia Foueroyæ, *Thum.*
Henriquesia lusitanica, *P. & T.*
Heliscus Lugdunensis, *S. & T.*
Helminthosporium turcicum, *Pass.*
Fusarium globulosulum, *Pass.*
Fusidium stachydis, *Pass.*
Epidochium ambiens, *Desm.*
Botrytis cinerea, *Pers.*
Exosporium Rubi, *Nees.*
Penicillium glaucum, *Lk.*
Passalora bacilligera, *Fr.*
Stachybotrys lobulata, *Berk.*
Septosporium curvatum, *Rabh.*
Coniothecium didymum, *D. & M.*
C. Mollerianum, *Thum.*
Hydnum amicum, *Quel.*
H. septentrionale, *Fr.*
Irpex paradoxus, *Fr.*
Microcrassus candidus, *Cohn.*
Ectostroma Mulgedii, *Thum.*
E. Macluræ, *Thum.*

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

Sisymbrium canescens, *Nutt.*
Draba arabisans, *Mx*
Alyssum calycinum, *L.*
Hypericum Canadense, *L.*
Dianthus Armeria, *L.*
Trifolium hybridum, *L.*
Lespedeza Stuvei, *Nutt.*
Prunus pumila, *L.*
Poterium Canadense, *Gr.*
Agrimonia parviflora, *Ait.*
Rubus neglectus, *Pk.*
Cratægus coc. v. macracantha.
Potentilla recta, *Willd.*
P. fruticosa, *L.*
P. palustris, *Scop.*
Saxifraga aizoides, *L.*
Chærophyllum procumbens, *Lam.*
Lonicera hirsuta, *Eaton.*
L. oblongifolia, *Muhl.*
L. Xylosteum, *L.*
L. Tartarica, *L.*
Scabiosa australis, *Wulf.*
Tragopogon pratensis, *L.*
Polymnia Uvedalia, *L.*
Coreopsis discoidea, *T. & G.*
Pyrola sec. v. pumila, *Paine.*
Moneses uniflora, *Gr.*
Gerardia purpurea, *L.*
Lobelia Kalmii, *L.*
Calamintha acinos, *Clairv*
Onosmodium Carolinianum, *D. C.*
Amarantus blitoides, *Wats.*
Rumex Brittanica, *L.*
Quercus Muhlenbergii, *Engelm.*
Myrica Gale, *L.*
Naias major, *All.*
Sagittaria variabilis, *Engelm.*
Aplectrum hyemale, *Nutt.*
Spiranthes Romanzoviana, *Chapm.*
Iris pseudacorus, *L.*
Juncus alp. v. insignis, *Fr.*
Elocharis rostellata, *Torr.*
Scirpus Smithii, *Gr.*
S. planifolius, *Muhl.*
S. pauciflorus, *Lightf*
Carex Steudelli, *Kunth.*
C. tetanica, *Schk.*
C. Grayii, *Carey.*
C. hirta, *L.*
C. flaccosperma, *Dew.*
C. Hitchcockiana, *Dew.*
Oryzopsis Canadensis, *Torr.*
Aira cæspitosa, *L.*
Panicum virgatum, *L.*
P. hispidum, *Muhl.*
Eragrostis capillaris, *Nees.*
Botrychium simplex, *Hitch.*
B. matricariæfolium, *Braun.*
Ophioglossum vulgatum, *L.*
Isoetes Engel. v. gracilis, *Engelm.*
Azolla Caroliniana, *Willd.*

Clarence Lown, Poughkeepsie, N. Y.

Cheilanthes vestita, *Sw.*
Asplenium ebenoides, *Scott.*
Asplenium Bradleyi, *D. C. Eaton.*

(3.)

NEW STATIONS, REMARKS AND OBSERVATIONS.

The first thirteen species noticed are new to the Herbarium, the first eleven have not before been reported.

SISYMBRIUM CANESCENS, *Nutt.*

Watkins Glen, Schuyler county. *Professor W. R. Dudley.* In the manual, this plant is reported to have been found at Lucifer Falls, Tompkins county, by J. W. Chickering, but Prof. Dudley writes that he has searched for it in vain in that locality.

MALVA CRISPA, *L.*

Roadside, Petersburgh, Rensselaer county. Escaped from gardens and sparingly naturalized.

LYCHNIS DIURNA, *L.*

With the preceding species. Also escaped from gardens and door-yards.

LONICERA XYLOSTEUM, *L.*

South Hill near Ithaca. A single shrub was found growing in a pasture where there was an abundance of *Lonicera Tartarica*, L. *Dudley.* Both species have also been introduced about Albany where the latter also takes the lead in establishing itself.

SCABIOSA AUSTRALIS, *Wulf.*

Established about Union Springs, Cayuga county. *Dudley.*

CALAMINTHA ACINOS, *Clærv.*

Roadsides near Ithaca. Introduced. *Dudley.*

AMARANTUS BLITOIDES, *Wats.*

About Albany. *G. W. Clinton.* Union Springs and Frontenac Island, Cayuga lake. *Dudley.* Introduced from the West. In its foliage it resembles the very common *Amarantus albus*, but it has long prostrate spreading stems and branches and much larger seeds than that species.

IRIS PSEUDACORUS, *L.*

Near Ithaca. Also established in two localities in alluvial soil near Cayuga lake. *Dudley.*

CAREX HIRTA, *L.*

South Hill, Ithaca. Near the Delaware, Lackawana and Western railroad and apparently introduced. *Dudley.*

CAREX FLACCOSPERMA, *Dew.*

South Hill, Ithaca. *Dudley.* A stout form of *Carex laxiflora* var. *intermedia* sometimes occurs about Albany, which resembles this species in general aspect but it is readily distinguished from it by its much longer scales and different perigynia.

ASPLENIUM EBENOIDES, *R. R. Scott.*

Near Saugerties, Ulster county. Growing on limestone rocks in company with the walking fern, *Camptosorus rhizophyllus. C. Lown.* Mr. Lown had previously found a few specimens of this extremely rare fern about four miles south-east of Poughkeepsie. In this case as in all others it was associated with *Camptosorus rhizophyllus* and *Asplenium ebeneum,* the three growing within a foot of each other. In the Saugerties locality the *Asplenium ebeneum,* though present, was several feet distant.

SEDUM ACRE, *L.*

Roadside, Petersburgh. Escaped from cultivation and sparingly naturalized.

SAGITTARIA PUSILLA, *Nutt.*

In the New York Flora this species is recorded as occurring on "muddy banks of the Hudson where the water is brackish, as at West Point and Peekskill." The habitat attributed to it in the Manual is, "inundated shores, from eastern New Jersey and Philadelphia southward near the coast." It was recently detected by *Mr. H. N. Johnson* along the river shore at Coeymans, a few miles below Albany. This is a long distance from the usual stations of the plant and far above the reach of brackish water.

THALICTRUM ANEMONOIDES, *Mx.*

Coeymans. *Johnson.* This species manifests a strong disposition to produce double flowers. A few years ago Mr. Johnson took some of the plants from their native habitat and set them in his garden. The past season they developed double flowers. The exterior sepals are green and bract-like, but the inner, which are numerous, are white and petal-like. No stamens exist in any of the flowers and no pistils in some, thus indicating that the stamens have been transformed into petals.

ALYSSUM CALYCINUM, *L.*

University grounds, Ithaca. Introduced. *Dudley.*

DRABA ARABISANS, *Mx.*

Esty Glen and shore of Cayuga lake. *Dudley.*

LEPIDIUM CAMPESTRE, *L.*

Near Ithaca. *Dudley.* Also near Coeymans and rapidly spreading over the State.

LESPEDEZA STUVEI, *Nutt.*

Ithaca. *Dudley.*

RUBUS NEGLECTUS, *Pk.*

West shore of Cayuga lake. *Dudley.*

POTENTILLA RECTA, *Willd.*

Near Moravia. *Dudley.*

AGRIMONIA PARVIFLORA, *Ait.*

Freeville and Danby, Tompkins county. *Dudley.*

CRATÆGUS COCCINEA var. MACRACANTHA.

College campus, Ithaca and Union Springs. The thorns on the specimens are four to four and a half inches long.

PRUNUS PUMILA, *L.*

South Hill, Ithaca. *Dudley.* Some of the fruit is swollen into a pale, soft body, ovate or obovate in form and pointed at the apex. This is the result of an attack by a fungus, *Exoascus Pruni*, Fckl. This fungus also attacks the fruit of the wild plum, *Prunus Americana*, Marshall. I have also seen the fruit of our wild black cherry, *Prunus serotina*, swollen in a similar manner but the cause in this case was from an attack of an insect, the larvæ of which were found in the affected fruit.

SEDUM REFLEXUM, *L.*

Thoroughly established by the roadside near Newark, Wayne county. *E. L. Hankenson.*

EPILOBIUM MOLLE, *Torr.*

Sphagnous marsh in "Cheney's woods," near Glens Falls. *Mrs. L. A. Millington.* The specimens sent are young plants and they show at the base a dense cluster of very small thick subterranean scale-like leaves, which might easily be mistaken for a cluster of small tubers. They are arranged in pairs on opposite sides of the stem, as are the leaves, and they appear whitish, thick and starchy like cotyledonous leaves. Their office is apparently similar to that of cotyledonous leaves, that is, to store up nutriment upon which the plant can draw at some subsequent period of its existence. They do not appear upon the base of old plants or those which have flowered and fruited. They are also found at the base of young plants of *Epilobium palustre.*

LONICERA OBLONGIFOLIA, *Muhl.*

Michigan Hollow, near Danby. *Dudley.*

SAXIFRAGA AIZOIDES, *L.*

Cliffs of Taghanic ravine, near Ithaca, growing with *Primula Mistassinica* and *Pinguicula vulgaris.* *Dudley.*

CHÆROPHYLLUM PROCUMBENS, *Lam.*

In "Negundo woods," near Ithaca. *Dudley.*

MITCHELLA REPENS, *L.*

Near Moravia. *M. F. Merchant,* M. D. This is the form that produces white berries, concerning which Dr. Merchant writes, "I have observed them quite closely for nearly three years and have watched their flowering two seasons and their fruiting three. The flowers are not dimorphous in this patch, but are all of one form, all having long exserted stamens and short pistils. The fruit is copious and without any tendency to change or approach the red-fruited form. The plants are thrifty and spreading and there are none of the red-fruited plants in the immediate vicinity."

COREOPSIS DISCOIDEA, *T. & G.*

Shores of Dryden lake. *Dudley.*

LOBELIA KALMII, *L.*

Farley's Point, Cayuga lake, growing along the shores and in meadows. A variety with stout stem and large flowers. *Dudley.*

PYROLA SECUNDA var. PUMILA, *Paine.*

Deep moss in a fir-tree swamp near Freeville. *Dudley.*

CALYSTEGIA SEPIUM, *L.*

Tunis, Lewis county. *C. D. Hill.* The specimen differs from the ordinary form of the plant in having the stem pubescent, the leaves narrow and the flower tube very short. The flowers appear as if they were double, but in their dried and pressed condition this appearance may be deceptive.

RUMEX BRITANNICA, *L.*

Shores of Owasco lake inlet. *Dudley.*

COREMA CONRADII, *Torr.*

Shawangunk mountains, Ulster county. *C. E. Smith.* Long Island is the only locality in the State from which this pretty little evergreen heath-like shrub has previously been reported. Judging from the localities usually ascribed to it in the manuals, this

new station is much farther inland than the plant usually occurs. Its presence here gives an additional botanical interest to the Shawangunk mountains which have already furnished several very rare and interesting species of plants.

QUERCUS MUHLENBERGII, *Engelm.* (*Q. castanea,* Muhl.)

"Big Gully" near Union Springs. *Dudley.* This is the *Q. Prinus* var. *acuminata* of the Manual, *Q. acuminata,* Mx., but it is regarded by Dr. Engelmann as quite distinct from *Q. Prinus.* It is a rare species in our State, its proper home being, according to Dr. Engelmann, in the Mississippi valley. In the New York Flora it is attributed to Chemung county on the authority of Dr. Knieskern. There are two forms of it; one having lanceolate narrow leaves, five to six inches long and one and a half to two inches broad, with acuminate apex and sharp teeth; the other having broadly ovate or obovate leaves, six or seven inches long and four or five inches broad, with broader and more rounded teeth. Our specimens belong to the narrow-leaved form.

MYRICA GALE, *L.*

Locke pond, Cayuga county. *Dudley.*

SAGITTARIA VARIABILIS var. HASTATA, *Engelm.*

Summit marsh, Spencer, Tioga county. *Dudley.* The specimen shows long linear and lanceolate phyllodia; also stolons giving rise to young plants. The variations in this well-named Sagittaria are exceedingly numerous. Specimens collected at Coeymans have the leaves of variety *latifolia,* but all the flowers staminate on some plants, thus passing to the dicœcious inflorescence of variety *obtusa.* Specimens of variety *gracilis* from the same place have, in some cases, all the leaves without lobes, in others some leaves are lobed, others, lobeless. A specimen of this variety from Long lake has the fruiting heads almost sessile, as in *S. heterophylla.* Specimens of variety *hastata* and variety *angustifolia* also sometimes occur with dicœcious inflorescence.

NAIAS MAJOR, *All.*

Foot of Cayuga lake. A slender form with long internodes and long narrow leaves. Black lake, a shallow pond four miles below Cayuga lake. A short, stout, dark or purplish-colored leafy form with dichotomous recurved habit and slightly curved and more distinctly reticulated fruit. *Dudley.*

APLECTRUM HYEMALE, *Nutt.*

West Dryden. *Dudley.*

SCIRPUS SMITHII, *Gr.*

Shore of Cayuga lake, near Union Springs. *Dudley.*

CAREX STEUDELII, *Kunth.*

Six-mile creek, near Ithaca. *Dudley.*

ERAGROSTIS PURSHII, *Schrad.*

Waste places about Albany. *Clinton.* This southern grass is rapidly extending its range northward. Last year it was reported from Yonkers, this year it appears to be well established at Albany. It appears, like many other introduced plants, to follow the lines of the railroads which are a powerful agency in extending the distribution and range of species and in intermingling the floras of different localities. This grass closely resembles its congener, *E. pilosa*, from which it is most readily distinguished by the naked axils of its panicle.

ERAGROSTIS CAPILLARIS, *Nees.*

Ithaca. *Dudley.* A dwarf form three or four inches high.

CHEILANTHES VESTITA, *Sw.*

Two miles below Poughkeepsie on the east side of the river. It occurs also on the west side of the river, but in blasting the rocks for the West Shore railroad, its station may have been destroyed. *C. Lown.*

ASPLENIUM BRADLEYI, *D. C. Eaton.*

Shawangunk mountains, Ulster county. *Lown*

BOTRYCHIUM SIMPLEX, *Hitch.*

Danby. *Dudley.* The specimens are well developed and belong to the varieties *incisum* and *subcompositum.*

BOTRYCHIUM MATRICARIÆFOLIUM, *A. Braun.*

McLean, Tompkins county. *Dudley.* Both these species and the more rare *B. lanceolatum*, Angst., occur in Petersburgh, Rensselaer county, growing together.

ISOETES ENGLEMANNI var. GRACILIS, *Engelm.*

Locke pond. *Dudley.*

AZOLLA CAROLINIANA, *Willd.*

Foot of Cayuga lake. *Dudley.* Sodus bay. *Hankenson.* The Cayuga lake specimens are much more dense and compact in habit than the Sodus bay specimens.

(4.)

NEW YORK SPECIES OF PSALLIOTA.

"Stem annulate, distinct from the hymenophorum; lamellæ free." *Hymen, Europ.*, p. 278.

The name of the subgenus Psalliota is derived from the Greek word *Ψαλλιον* (*Ψελλιον*), a bracelet or armlet. Its application to these Agarics was probably suggested by the annulus or ring which encircles the stem. The species of this subgenus correspond in structure to those of the subgenus Lepiota in the Leucospori or white-spore series and to those of the subgenus Annularia in the Hyporhodii or pink-spore series. The tendency of the flesh in some species of Psalliota to change color when cut or bruised corresponds also to a similar tendency in some of the Lepiotæ. No corresponding subgenus has yet been established in the Dermini or ochraceous-spore series, nor in the Coprinarii or black-spore series. The Agarics belonging to the subgenus Psalliota are generally of medium or large size and rather attractive in appearance until the lamellæ have assumed the blackish color of age. They are most abundant in late summer or autumn, but in warm wet weather some of them occur early in the season also. The pileus is more or less fleshy but usually rather brittle or easily broken. It may be either smooth, fibrillose or scaly. Sometimes even individuals of the same species exhibit pilei with all these characters. The fibrillose pileus of a young individual may become either smooth or scaly with age. No species having a viscid pileus appears yet to have occurred either in our State or in Europe, though an Ohio species *A. fabaceus*, Berk., is described as having the pileus viscid when moist. The lamellæ are generally close or crowded and rounded at their inner extremity and not attached to the stem. They change color with advancing age, becoming darker as they grow older. This change of color is in great measure due to the development of the spores which cause the lamellæ to assume their own brown or blackish-brown hue. The lamellæ of young plants are generally whitish or pallid, changing in some species, directly from this color to the brown color of maturity, and in others, assuming an intervening pinkish rosy or reddish hue before taking on the final dark or sombre color. The exceptional *A. fabaceus* is described as having the lamellæ brown even in the young plant, but even in this case they are said to become darker with age. In the common mushroom, *A. campestris*, they may become moist or subdeliquescent when old, thus indicating a relationship with the inky species of the genus Coprinus. The stem is fleshy and furnished with an annulus or ring, which in some species varies in its degree of development, and in others is more or less thin and somewhat evanes-

cent. The spores in our species are quite small, elliptical or subelliptical in outline and do not vary greatly in dimensions in the different species.

Fries groups the European species in two sections which he names "Edules," and "Minores." The former group includes the larger and more fleshy species. Several of them are edible and have long been used as an article of food. No representatives of the "Minores" have yet been found in our State. Of the "Edules" we have several species which may again be divided into two sub-groups depending on their usual habitats. Those which grow in open places, manured grounds or cultivated fields generally have a thicker, firmer pileus and a comparatively shorter stouter stem than those that grow in copses groves and woods. It is among these especially that the most notable succulent "mushrooms" are found.

SYNOPTICAL TABLE OF THE SPECIES.

Growing in fields, open places or cultivated grounds		2
2. Lamellæ at first whitish or pallid		3
2. Lamellæ at first pinkish or flesh colored	A. campestris.	
3. Lamellæ narrow, stem solid	A. Rodmani.	
3. Lamellæ broader, stem stuffed or hollow	A. arvensis.	
1. Growing in woods, copses or groves		4
4. Stem bulbous		5
4. Stem not bulbous		6
5. Pileus smooth	A. silvicola.	
5. Pileus squamulose	A. placomyces.	
6. Pileus two inches or more in diameter	A. silvaticus.	
6. Pileus less than two inches in diameter	A. diminutivus.	

AGARICUS CAMPESTRIS, *L.*

Common Mushroom. Edible Mushroom. Field Agaric.

Pileus at first hemispherical or convex, then expanded with decurved margin or nearly plane, smooth silky floccose or hairy squamulose, the margin extending beyond the lamellæ, the flesh rather thick, firm, white; lamellæ free, close, ventricose, *at first delicate pink or flesh color*, then blackish-brown, *subdeliquescent;* stem equal or slightly thickened toward the base, *stuffed*, white or whitish, nearly or quite smooth; annulus at or near the middle, more or less lacerated, sometimes evanescent; spores elliptical, .00025 to .0003 in. long, .00016 to 0002 in. broad.

Plant 2 to 4 in. high, pileus 1.5 to 4 in. or more broad, stem 4 to 8 lines thick.

Fields, pastures, manured grounds, mushroom beds, etc.

This is the well-known "edible mushroom," a species which is more extensively cultivated and more generally used as food than any other. With proper attention to its characteristic features there is no need of

its being mistaken for or confused with any deleterious or poisonous species.

The pileus is nearly always regular in shape, rather thick and moderately firm, hemispherical or convex when young but usually becoming more flattened or nearly plane with age.

In its young state it is adorned with fine silky or hairy fibrils which sometimes, with advancing age, form minute persistent tufts or scales and sometimes disappear altogether, leaving the surface quite smooth. The decurved margin usually extends a little beyond the extremity of the lamellæ. The cuticle or skin is more or less readily separable from the flesh, which is white, but sometimes manifests a tendency to change color slightly when cut or bruised, and to exhibit pinkish or reddish stains. The color of the pileus in the wild form is usually white or whitish with us, but in the cultivated forms it is often ochrey-brown or pale tawny, and varieties sometimes occur in which it is brown.

The lamellæ have a very beautiful and delicate pinkish hue which is apparent as soon as they are exposed to the light by the separation of the concealing veil from the margin of the pileus. This color gradually becomes darker with advancing age until it finally changes to a dark brown or almost black hue. This character is one of the best by which to distinguish the "edible mushroom" from all other Agarics, except its nearest allies, *A. Rodmani* and *A. arvensis*. And even from these, when young, it may readily be distinguished by the primary color of its lamellæ. The subgenera Annularia and Pluteus in the pink-spore series contain species the lamellæ of which exhibit similar pinkish colors, but these never change to brown or blackish-brown as the plant matures or becomes old. In the mushroom the lamellæ are rounded at their inner extremity and not attached to the stem, so that generally in mature specimens there is a small free space between it and them.

The stem is commonly short in proportion to the breadth of the pileus, its length being, in most cases, less than the horizontal diameter of the pileus. Ordinarily it is cylindrical in shape, though now and then instances occur in which it may either be slightly thickened or slightly narrowed toward the base. The central portion of the stem is a little softer in texture than the external portion, hence it is said to be stuffed. The annulus encircles it at or near the middle. It is sometimes quite thin and flabby and is then easily torn and destroyed.

The mushroom, like many other plants which have been the subject of long and extensive cultivation, has given rise to several forms which exhibit quite marked distinctive features. These forms differ

so much from the original typical form that they have received distinguishing names and are called varieties. The following are the principal ones.

Var. *albus.* White variety. Pileus smooth or slightly silky-fibrillose, white or whitish, stem short.

This is our most common variety. It occurs in unfrequented streets, waste places, cultivated grounds and especially in rich pastures where the grass is kept short. It usually appears in August and September, but sometimes in warm, wet weather it is found early in the season. A very large form with the pileus six or seven inches broad sometimes occurs.

Var. *praticola.* Meadow variety. (A. praticola, *Vitt.*) (A. pratensis, *Handbook.*) Pileus adorned with reddish scales, flesh somewhat tinged with pink. This variety must be uncommon with us. I have seen no examples of it, nor of the three following varieties:

Var. *umbrinus.* Brown variety. Pileus smooth, brown; stem stout and minutely scaly.

Var. *rufescens.* Reddish variety. Pileus reddish, minutely scaly; lamellæ at first white; stem elongated; flesh turning bright red when cut or bruised. This departs so decidedly from the ordinary characters of the type, especially in the white color of the young lamellæ, that it seems to merit separation as a distinct species.

Var. *villaticus.* Villa variety. (A. villaticus, *Brond.*) Plant large, pileus scaly; stem scaly, coated or subvolvate by the inferior veil. In the Handbook of British Fungi this is placed as a variety of *A. arvensis,* but most authors regard it as a variety of *A. campestris.*

Var. *hortensis.* Garden variety. Pileus brownish or ochrey-brown, bearing hairy fibrils or minute scales. This is often cultivated and is occasionally exposed for sale in the markets of Albany.

Var. *Buchanani.* Buchanan's variety. Pileus white, smooth, depressed in the center, the margin naked; stem stout; annulus thin, lacerated. A rare variety sometimes occurring in mushroom beds.

Var. *elongatus.* Long-stem variety. Pileus small, smooth, convex, the margin adorned with the adherent remains of the lacerated veil; stem long, slender, slightly thickened toward the base; annulus slight or evanescent. This is also a variety of mushroom beds.

Var. *vaporarius.* Green-house variety. (A. vaporarius, *Vitt.*) Pileus brownish, coated with long hairs or fibrils; stem hairy-fibrillose, becoming transversely scaly. Conservatories, cellars, etc. Not differing greatly from Var. *hortensis.*

AGARICUS RODMANI, *Pk.*

Rodman's Mushroom.

Pileus rather thick, firm, at first convex, then nearly or quite plane, with decurved margin, smooth or rarely slightly rimose-squamose on the disk, white or whitish, becoming yellowish or subochraceous on the disk, the flesh white, unchangeable; lamellæ close, *narrow*, rounded behind, free, reaching nearly or quite to the stem *at first whitish, then pink or reddish-pink*, finally blackish-brown; stem short, subequal, *solid*, whitish, smooth below the annulus, often furfuraceous or slightly mealy-squamulose above; annulus variable, thick or thin, entire or lacerated, at or below the middle of the stem; spores broadly elliptical or subglobose, generally uninucleate, .0002 to .00025 in. long, .00016 to .0002 in. broad.

Plant 2 to 3 in. high; pileus 2 to 4 in. broad; stem 6 to 10 lines thick.

Grassy ground and paved gutters. Astoria, Long Island. *Rev. W. Rodman.* Washington Park, Albany. May to July.

This species is intermediate between *A. campestris* and *A. arvensis*, from both of which it may be distinguished by its narrow lamellæ, solid stem and smaller, almost globose, spores. In size, shape of the pileus and general appearance it most resembles *A. campestris*, but in the whitish primary color of the lamellæ and in the yellowish tints which the pileus often assumes, it approaches nearer to *A. arvensis*. The pileus, which is usually smooth, occasionally manifests a tendency to crack into small areas or scales on the disk. The flesh is quite thick and firm, its thickness generally much exceeding the breadth of the lamellæ. This character, together with the solidity of the stem, indicates a disposition in the species to produce flesh rather than fruit and may make it more desirable for cultivation than the common mushroom. The length of the stem, in all the specimens I have seen, is less than the breadth of the pileus. Its shape is nearly cylindrical. The annulus is generally rather thick and sometimes projects both above and below in such a manner that it appears like a grooved band or collar surrounding the stem. In some instances it is so near the base that it suggests the idea of a volva. Its lower or exterior surface is occasionally rimose, thereby indicating another point of resemblance between this species and *A. arvensis*. In this respect, as well as in its solid stem and narrow lamellæ, it also approaches *A. augustus*, a large and showy European species which has not yet occurred with us, but which may be known by its lamellæ changing at once from the pallid color of immaturity to the dark-brown hue of age, without exhibiting any intervening pinkish tints.

The species is respectfully dedicated to its discoverer. Its edible qualities are deemed equal to those of the common edible mushroom. It has been tested by Mr. G. Rodman. It is apparently a rare species, but may be more common than is supposed, for it may possibly have been heretofore confused with the common mushroom, which it much resembles in color, the pileus being at first white or whitish, although it soon assumes yellowish tints or becomes a pale ochrey-red or russet color on the disk.

AGARICUS ARVENSIS, *Schæff.*

Horse Mushroom. Plowed-land Mushroom.

Pileus at first convex or conical-campanulate, then expanded, at first more or less floccose or mealy, then smooth, white or yellowish, flesh white; lamellæ close, free, generally broader anteriorly, *at first whitish, then pinkish*, finally blackish-brown; stem equal or slightly thickened toward the base, smooth, *hollow or stuffed* with a floccose pith; annulus rather large, thick, the lower or exterior surface often cracked in a radiate manner; spores elliptical, .0003 to .0004 in. long, .0002 to .00025 in. broad.

Plant 2 to 5 in. high; pileus 3 to 5 in. or more broad; stem 4 to 10 lines thick.

Cultivated fields and pastures. Summer and autumn.

This species is so closely related to the common mushroom that it is regarded by some authors as a mere variety of it. Even the renowned Persoon is said to have written concerning it, "It appears to be only a variety of *A. campestris*." Cordier says of it, "Distinguished from *A. campestris* by its pure white color, more pale lamellæ, its white flesh not changing color when cut or bruised, its lamellæ remaining pale a long time and not deliquescing." Fries also says that it is commonly not distinguished from *A. campestris*, but that it is diverse in some respects; its white flesh being unchangeable, its lamellæ never deliquescing, remaining a long time pale and not becoming dark red in middle age. Berkeley says of it, "A coarse, but wholesome species, often turning yellow when bruised."

In size the horse mushroom often exceeds the common mushroom, its pileus, according to the Handbook, sometimes attaining a breadth of eighteen inches and its stem a thickness of one to two inches. The white color of the pileus often becomes tinged with yellow, either with age or in drying. The pale primary color of the lamellæ, the thick, well-developed annulus and the hollow stem are available features for distinguishing it from its close allies. It is less common with us than *A. campestris*, to which in edible qualities it is very similar. A. Georgii, *Sow.*, A. pratensis, *Scop.*, A. edulis, *Krombh.*, and A. exquisitus, *Vitt.*, are synonyms.

AGARICUS SILVICOLA, *Vitt.*

Silvan Mushroom.

Pileus convex or subcampanulate, sometimes expanded or nearly plane, *smooth, shining,* white or yellowish ; lamellæ close, thin, free, rounded behind, generally narrowed toward each end, *at first whitish, then pinkish,* finally blackish-brown ; *stem long,* cylindrical, stuffed or hollow, white, *bulbous ;* annulus either thick or thin, entire or lacerated ; spores elliptical, .00025 to .00032 in. long, .00016 to .0002 in. broad.

Plant 4 to 6 in. high ; pileus 3 to 6 in. broad ; stem 4 to 8 lines thick.

Woods, copses and groves or along their borders. Summer and autumn.

Many authors place this as a variety of *A. campestris,* but as it occurs with us its characters are very constant and well marked and enable it to be distinguished from that species with great facility. It generally attains a larger size, has a smoother, more shining pileus, which is usually tinged with yellow, it has the primary color of the lamellæ whitish, and its stem is longer and proportionately more slender and distinctly bulbous. It has, as Fries suggests, more points of resemblance to *A. arvensis* than to *A. campestris,* but its bulbous stem at once separates it from that species. The bulb is peculiar, it being small but very abrupt and depressed or flattened like a common turnip. The pileus is thin in proportion to its breadth and is quite fragile, so that the plants must be handled with care to prevent its being broken. In mature plants the margin of the pileus sometimes has a lurid or dull purplish tint, which is probably derived from the color of the spores.

The annulus is often tinged with yellow exteriorly and is sometimes radiately rimose on the lower surface like that of *A. arvensis.* In some instances fragments of it remain attached to the margin of the pileus. The plants sometimes grow in close groups or tuft-like clusters. *A. edulis,* Berk., is given as a synonym.

It is reported to be esculent, but I have not tested it. Persons unacquainted with it should guard against confounding immature specimens of it with the white forms of the phalloid agaric, *A. phalloides,* a poisonous species which grows in similar places and bears some resemblance to it. The poisonous *A. phalloides* has a much larger bulb to the stem and the lamellæ remain permanently white or whitish, showing at no age either the pinkish or blackish-brown hues which are so conspicuous in *A. silvicola.*

AGARICUS PLACOMYCES, *Pk.*

Flat-cap Agaric.

Pileus fleshy but rather thin, at first convex or campanulate, then expanded and quite plane, *squamulose*, whitish, *the disc and minute scales brown ;* lamellæ close, free, *white, then pinkish*, finally blackish-brown; stem smooth, stuffed with a small pith slightly tapering upward, *bulbous*, whitish, the bulb stained with yellow and usually giving rise to one or two mycelioid white root-like processes; annulus large, flabby; spores elliptical, .0002 to .00025 in. long, .00016 to .00018 in. broad.

Plant 3 to 5 in. high, pileus 2 to 4 in. broad, stem 2 to 4 lines thick.

Under hemlock trees. Oneida and Knowersville. July.

This rare but beautiful Agaric is easily distinguished from its allies by the bulbous stem and the perfectly flat white surface of the expanded pileus finely adorned by numerous minute brown scales. These scales are confluent on the disk where they form a brown spot, thus imitating in appearance many species of the subgenus Lepiota. Sometimes faint radiating striæ extend from the disk to the margin of the pileus. In damp weather the large thin annulus is sometimes studded with drops of moisture of a dark color. Nothing is known concerning the edible qualities of the species. The specific name is derived from two Greek words, πλακους, a flat cake, and μυκης, a fungus, and has reference to the very flat horizontally expanded pileus.

AGARICUS SILVATICUS, *Schæff.*

Wood Agaric.

Pileus thin, at first convex or campanulate, then expanded, *gibbous or subumbonate*, fibrillose or variegated with a few thin tawny brownish or reddish-brown *spot-like appressed scales*, whitish, brownish or smoky gray, the disk sometimes tinged with red or reddish-brown, the flesh white or faintly reddish ; lamellæ thin, close, free, narrowed toward each end, reddish, then blackish-brown ; stem rather long, *equal or slightly tapering upward*, hollow, whitish ; spores elliptical, .0002 to .00025 in. long, .00016 to .0002 in. broad.

Plant 3 to 5 in. high, pileus 2 to 4 in. broad, stem 4 to 6 lines thick.

Woods. Summer and autumn. Not common.

The absence of a bulbous base to the stem and the fibrillose or feebly scaly pileus which is more or less gibbous or umbonate, serve to distinguish this from the two preceding species. Concerning its edibility,

Cordier says that it is at least suspicious and that Vivian pronounces it "pernicious." Its odor is strong and its flesh when cut assumes a slight yellowish tint.

AGARICUS DIMINUTIVUS, *Pk.*

Diminutive Agaric.

Pileus thin, fragile, at first convex, then plane or centrally depressed, sometimes slightly umbonate, whitish or alutaceous, faintly spotted with small thin silky appressed brownish scales, the disk brownish or reddish-brown; lamellæ close, thin, free, ventricose, brownish-pink becoming brown, blackish-brown or black; stem equal or slightly tapering upward, stuffed or hollow, smooth, pallid; annulus thin, persistent, white; spores elliptical, .0002 in. long, .00015 to .00016 in. broad.

Plant 1.5 to 2 in. high, pileus 1 to 1.5 in. broad, stem 1 to 2 lines thick.

Woods. Croghan and Sandlake. Autumn.

This is a small but symmetrical and beautiful Agaric. It is perhaps too closely related to the preceding species of which it may possibly prove to be a mere variety or dwarf form. Its pileus is quite thin and fragile. Usually the darker or reddish hue of the disk gradually loses itself in the paler color of the margin, but sometimes the whole surface is tinged with red.

In closing this brief report my most cordial thanks are tendered to those botanists who have aided me by contributing specimens and information, and their continued co-operation in the work now well advanced is most earnestly solicited.

Respectfully submitted,

CHAS. H. PECK.

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