S. B. Woolworth, LL.D.,

Secretary of the Board of Regents of the University:

Sir—Since the date of my last report specimens of two hundred and forty-six species of plants have been mounted and placed in the State Herbarium. A list of these is marked (1).

Specimens have been collected in the counties of Albany, Essex, Rensselaer, Hamilton and Sullivan. These represent one hundred and twenty species new to the Herbarium, and one hundred and eighteen species new to the State. Ninety-seven are fungi, of which thirty-nine are considered new or undescribed species. A list of plants collected is marked (2).

Specimens of thirty-one species new to the Herbarium and not among my collections of the past season have been received from correspondents. These were collected in the counties of Dutchess, Erie, Onondaga, Oneida, Saratoga, Ulster, Suffolk and Westchester. If these be added to those of my own collecting, the total number of additions to the Herbarium, the past season, becomes one hundred and fifty-one species. This does not include extra-limital species, specimens of a considerable number of which have been received. A list of contributors and their contributions is marked (3).
A classified statement of New York State species collected and contributed is given below.

<table>
<thead>
<tr>
<th>PLANTS COLLECTED.</th>
<th>New to the Herbarium</th>
<th>New to the State</th>
<th>New to Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowering Plants</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Club Mosses</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>Mosses</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Liverworts</td>
<td>5</td>
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<tr>
<td>Lichens</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Fungi</td>
<td>97</td>
<td>97</td>
<td>39</td>
</tr>
</tbody>
</table>

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<tr>
<td>Flowering Plants</td>
<td>9</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Ferns</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Mosses</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Algae</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fungi</td>
<td>18</td>
<td>18</td>
<td>5</td>
</tr>
</tbody>
</table>

A list of previously unreported species, descriptions of new species, new stations of rare plants, etc., is marked (4).

The plan of making colored sketches of fleshy fungi, as fast as collected, has been continued. Experiments have also been continued with the purpose of increasing the list of species known to be edible. I have no hesitation in adding Coprinus micaceus and Agaricus naucinus to this list. The former should be taken while young, before the lamellae have changed to a black color, for this change spoils the attractive character of the dish. This fungus has not the filthy habits of some of its congeners as indicated by the generic name. It grows in tufts or clusters upon decaying wood or stumps. It is not rare even in cities, springing from decaying stumps and roots of shade trees that have been cut down. It has, therefore, the advantage over most others of being procurable in a fresh condition at our very doors. It appears in successive crops in favorable seasons from May to November.

The other species, A. naucinus, grows in grassy places and on lawns, and has the advantage of being free from the attack of insects. The presence of insect larvae detracts
much from the value of many edible fungi, but I have never found them in this species. It is about the same size as the common edible mushroom, A. campestris, and not very dissimilar to it in general appearance, but the lamellae, as well as the rest of the plant, are white, and never have the bright pink color seen in the common mushroom. Its taste, when cooked, is similar to that of Coprinus comatus, but its flesh is less tender. It combines beauty and utility in an unusual degree, it being very even and symmetrical in form.

My attention having been directed to the fact that, in some parts of the Great Northern Wilderness, the spruce trees were rapidly dying, to the great pecuniary loss of the lumbermen and land owners, I visited the counties of Hamilton and Essex, partly with the purpose of making some investigations into the nature and cause of the malady. It is said that in some tracts of considerable extent, nearly all the spruce trees are killed, giving to the forest a desolate look and a prevailing brown hue, much as if a fire had run through the woods. I failed to find any of the affected districts, and it is perhaps hardly worth while to speculate concerning the cause of the evil. It may not be out of place, however, to mention three supposable or possible causes, by way of suggesting directions in which those having the opportunity of investigation may look. The three are insects, fungi and drought. It is recorded that considerable tracts of pine forest are sometimes killed by the attacks of multitudes of small coleopterous insects, and it is at least supposable that spruce trees may have a similar foe. Young spruce trees were observed in the town of Keene, which, at a distance, appeared to have their branches terminated by an abundant crop of cones, but, upon a closer observation, the apparent cones proved to be only the dead and discolored tips of the branches. In most cases every leaf upon the affected parts of the branches was dead, and had a gall-like enlargement at its base, evidently the work of some insect. Attacks of this kind, if sufficiently numerous and persistent, would kill the tree.

Fungi sometimes cause the death of trees, but cases of this kind are comparatively rare, and it is not very likely that the destruction of the spruces will be found due to such a cause. An interesting instance of a fungoid malady among them will, however, be noticed presently.
Long continued dry weather may be mentioned as one of the most probable causes. The terrible destruction of coniferous trees, that happened in the winter of 1871 and 1872, is thought by many to be attributable to a lack of the necessary amount of moisture; nor so far as I am informed, did the malady of the spruces in the "North Woods" attract special attention previous to that unfortunate winter. The proportion of deaths is said to be greatest among the trees of low lands; and this is what might be expected, for such trees are generally less vigorous, and therefore less likely to withstand any unfavorable change in their circumstances, and especially a change from their usual abundance of moisture to a scarcity of it. As the miser becomes more miserly by the increase of his hoarded treasures, so the rapid destruction of our forests may be accelerated by nature herself when man becomes too avaricious and too improvident to manifest a just appreciation of the wild woodland, one of nature's choicest gifts.

An interesting instance of the special liability of weak, unthrifty plants to the attacks of parasitic fungi was observed in Essex county. Small sphagous marshes abound among the Adirondack Mts., and about the shores of many of the small lakes of that region. Upon and about these marshes the spruces are almost always small and starved, or sickly in appearance. The branches are abundant, the lowest, in most cases, springing from the very base of the trunk; but the internodes are short and small, indicating very slow growth and the leaves seldom attain the usual size, or have the dark, green hue of those on more vigorous, healthy plants. The closeness of the "grain," or concentric layers of wood, also indicates extreme slowness of growth, thirty rings in one instance forming a trunk scarcely more than an inch in diameter.

Also on the high summits of the mountains, a similar starved and feeble growth is apparent. The trees become dwarfed, bushy and half prostrate. They cling close to the ground as if seeking shelter from the fierce winds, while their trunks and branches are generally clad with a shaggy coat of lichens, as if some such external protection against the bitter cold of those elevated places were needed. So unlike the ordinary spruce trees do these appear, that any but a close observer might readily be pardoned for doubting if they
really were the same species. Everywhere, upon Nipple Top, Mt. Colvin, Haystack, Skylight, Mt. Marcy and the marshes of the Boreas Ponds, these feeble spruces, struggling for an existence in uncongenial places, were badly infested by a species of rust-fungus, *Peridermium decolorans*, that attacks and discolors the leaves. But nowhere on the lower and drier lands, where the growth of the spruces is more vigorous and healthy, was any evidence of the presence of this fungus visible. It seems to have been unusually abundant the past season, for it was not observed in any of my previous visits to the mountains. So many of the leaves were affected that at a considerable distance the yellowish hue of the foliage was apparent. The effect upon the trees must necessarily be detrimental, but, whether it will prove fatal, future observation must tell.

The bramble rust, *Uredo luminata*, is rapidly becoming a pest to the cultivators of blackberries and raspberries, if we may judge from the numerous complaints of its ravages and the frequent inquiries for a remedy. It is certainly desirable that some one, having facilities for such work, should institute a series of experiments for the purpose of discovering some effective means of counteracting or preventing its injurious attacks. The presence of the fungus can be detected soon after the leaves begin to expand, and it becomes more and more obvious until the whole lower surface of the affected leaf is covered with pale blotches. Soon these are ruptured, revealing the very bright orange-colored dust — the spores of the fungus — which now gives a brilliant hue to the affected surface of the leaf, and is ready for dissemination and the further extension of the mischief. It would therefore be well to employ the remedial agents before the epidermis is ruptured and the spores disseminated.

In consequence of the growing interest in the study of fungi, and the numerous inquiries concerning the best methods of preparing and preserving specimens, it has been thought best to give a few brief hints and suggestions in relation to their collection and preservation. The collector should have a suitable tin box in which to carry his specimens. With care, a little ingenuity in placing specimens in the box, and a few small paper boxes for delicate or fragile species, an ordinary botanical box will answer. A box with partitions, so
arranged that specimens may be kept separate and protected from the injury of mutual pressure, is sometimes recommended. Envelopes or folded paper pockets are convenient for the reception of the minute species that inhabit herb stems, twigs, bark, etc., as much time and labor is saved by keeping each species in a wrapper by itself. Leaf specimens may also be placed in similar wrappers, or in some small portfolio or book that can be conveniently carried. A pocket lens, a stout sharp knife, a lead pencil and a memorandum book should always be carried on collecting excursions. The habitat of every species should be carefully noted, and any new, remarkable or interesting fact be at once entered in the memorandum book. Of the fleshy putrescent fungi, full descriptions of the fresh plant are desirable whenever practicable, unless it be a known species.

Fungi are so diverse in character, that the same mode of treatment is not applicable to all. The fleshy perishable species, such as the Agarici, Boleti, etc., are the most difficult to preserve. The most convenient method of preserving them is by drying; putting them in alcoholic or other preservative solutions being expensive and requiring too much space. They should not at first be placed in a press. They may be exposed to the full rays of the sun, or placed under or near a stove in which a fire is kept burning, but care must be taken not to heat them so much as to discolor them. The best success is generally attained when the process of drying is slow but continuous. It is sometimes better, however, to dry them as rapidly as possible without burning, in order to prevent decomposition and injury from the larvae of insects. The Coprini or inky fungi, which are especially difficult to dry well, on account of the rapid deliquescence of the lamellæ, are sometimes successfully treated by suspending them in a sunny exposure in the open air. After they have been thoroughly dried, they may, at any convenient time, be exposed to the moist air of a rainy day, dewy night, or damp cellar, until they are flexible enough to be pressed into proper shape to lie well on the herbarium sheets. This slight moisture may be abstracted, and the proper shape made permanent, by placing the specimens in any ordinary plant press for a short time. Fungi of a dry or coriaceous texture may be placed in the plant press without previous drying; but even these often
make better specimens, if treated in the same manner as the fleshy ones. Some Polypori are so hard and tough, that drying under pressure is impracticable. Entire specimens of such should be arranged in drawers or on shelves, but thin vertical and horizontal slices or sections may be placed on the herbarium sheets. It is well to preserve such thin vertical sections of all thick and bulky species, as they serve to show the color and character of the internal substance and of the interior of the stem.

Fungi, parasitic on living plants or their leaves, should be collected and preserved on the plants or leaves they inhabit. These may be dried in the plant press, or, if more convenient, between the leaves of an old book; but it is better to use only just enough pressure to keep the leaves smooth, avoiding the crushing of the parasite if possible.

The very fragile fungi, known as Myxogasters, should never be placed under pressure, not even of the herbarium sheets. Small paper boxes, one-fourth of an inch deep and about three inches long and two wide, are convenient receptacles for these. They may be glued to the herbarium sheets and placed in the herbarium without inconvenience.

The multitudes of Sphæriaceous and other minute fungi that inhabit fallen leaves, dead branches, herb stems, bark and decaying wood, need little or no preparation, except proper trimming of the matrix, so that the specimens shall not be too thick, and shall lie well on the herbarium sheet. In such genera as Diatrype and Valsa, it may be well to trim away a portion of the bark or the covering epidermis, in order to reveal the concealed characters as much as possible. Vertical sections of the larger species of Xylaria and Hypoxylon are desirable. The general rule is to exhibit as many of the specific characters as possible, but, if only a single specimen of a species is possessed, it is better to leave it entire.

It is well to poison all specimens of fungi. The fleshy species, and some of the hard Polypori, are especially liable to be attacked by insects, and, unless poisoned, would be speedily destroyed. They must also be kept in a dry place, or they will soon become moldy.

In mounting specimens, I deem it better, for the sake of uniformity, to use sheets of the ordinary size, even though it is a little more expensive, giving a whole sheet to a species.
TWENTY-SEVENTH REPORT ON THE STATE MUSEUM.

This will, in most cases, afford space enough for the exhibition of the various stages and forms of a species. The specimens may be glued to the sheet in the same manner as flowering plants, but leaf specimens are best attached by adhesive strips, as they are apt to separate from the glue or else become broken by the contraction and expansion of the herbarium sheet. Adhesive plaster, used by physicians and surgeons, may be cut into narrow strips and used for this purpose.

If, in all cases of fleshy fungi that change color in drying, as many of them do, a colored sketch of the fresh plant could be attached to the herbarium sheet, it would add much to the value and utility of the collection, but this is only practicable when the requisite time and skill can be commanded. So also, the addition of a magnified sketch of the spores of all species is greatly to be desired, but can only be attained by the use of a compound microscope with the camera lucida.

(1.)

PLANTS MOUNTED.

Reseda luteola L. | Pannaria lurida Mont.
Medicago sativa L. | P. Guepini Delis.
Desmodium laevigatum DC. | P. rubiginosa Ach.
Potentilla recta Willd. | Collema tenax Sw.
Heuchera Americana L. | C. cladodes Tuck.
Torilis Anthriscus Gerv. | Physcia cil. v. angustata Tuck.
Helianthus angustifolius L. | Gyalecta Pineti Schrad.
Hieracium murorum L. | Stereocaulon condensatum.
Utricularia resupinata Greene. | Biatora rivulosa Ach.
Pycnanthemum pilosum Nutt. | B. Russelli Tuck.
Chenopodium polyspermum L | Buellia turgescens Nyl.
Rumex Engelmanni Ledeb. | Lecanactis pr. v. chloroconia.
Scirpus debilis Pursh. | Staurothele cincinata Tuck.
Rhynchospora nitens Vahl. | Arthonia lecideëlla Nyl.
Panico amarum Ell. | V. pyrenophora Ach.
Andropogon Virginicus L. | V. rupestris Schrad.
Asplenium montanum Willd. | V. papillosa Ach.
Chara hispida L. | Stigonema coloratum Ag.
C. Hedwigii Ag. | Ectocarpus aureus Lyngb.
REPORT OF THE BOTANIST.

Agaricus Friesii *Lasch.*
A. fuscosquamens *Pk.*
A. felinus *Pers.*
A. oblitus *Pk.*
A. ponderosus *Pk.*
A. flavescens *Pk.*
A. lacunosus *Pk.*
A. laterarius *Pk.*
A. Limonium *Pk.*
A. leucocephalus *Krbh.*
A. fumidellus *Pk.*
A. thujinus *Pk.*
A. Hebeloma *Pk.*
A. connexus *Pk.*
A. albissimus *Pk.*
A. maculosus *Pk.*
A. Truncicola *Pk.*
A. subzonalis *Pk.*
A. Gerardianus *Pk.*
A. niger *Schw.*
A. conigenus *Pers.*
A. coloreus *Pk.*
A. miratus *Pk.*
A. echinipes *Lasch.*
A. rugosodiscus *Pk.*
A. cyaneus *Pk.*
A. byssisedus *Pers.*
A. foliomarginatus *Pk.*
A. fuscofolius *Pk.*
A. Herbarum *Pk.*
A. nephrodes *B. & C.*
A. fulvotomentosus *Pk.*
A. cerasinus *Pk.*
A. stellatosporus *Pk.*
A. griseoscapsorus *Pk.*
A. bellulus *Pk.*
A. geminellius *Pk.*
A. discomorbidus *Pk.*
A. expansus *Pk.*

Agaricus callistus *Pk.*
A. coprinoides *Pk.*
A. diminutivus *Pk.*
A. Howeanus *Pk.*
A. phyllogenus *Pk.*
Coprinus insignis *Pk.*
C. angulatus *Pk.*
Cortinarius sphærosporus *Pk.*
C. longipes *Pk.*
C. claricolor *Fr.*
C. porphyropus *A. & S.*
C. lilacinus *Pk.*
C. Clintonianus *Pk.*
C. modestus *Pk.*
C. lignarius *Pk.*
C. torvus *Fr.*
C. nigrellus *Pk.*
C. pulcher *Pk.*
Lepista cinerascens *Bull.*
Paxillus strigosus *Pk.*
Hygrophorus purus *Pk.*
H. eburneus *Bull.*
H. Cossus *Fr.*
H. virgatus *Pk.*
H. borealis *Pk.*
Lactarius regalis *Pk.*
L. Gerardii *Pk.*
Russula sordida *Pk.*
R. consobrina *Fr.*
Nyctalis asterophora *Fr.*
Marasmius cespitosus *Pk.*
M. Viticola *B. & C.*
M. glabellas *Pk.*
M. longipes *Pk.*
M. straminipes *Pk.*
Panus strigosus *B. & C.*
Lenzites vialis *Pk.*
Boletus piperatus *Bull.*
B. chrysenteron *Fr.*
B. pallidus *Frost.*
Boletus ampliporus Pk.
Polyporus caeruleoporus Pk.
P. griseus Pk.
P. flavidus Pk.
P. splendens Pk.
P. humilis Pk.
P. rhipidius Berk.
P. maculatus Pk.
P. aurantiacus Pk.
P. conchifer Schw.
P. ferruginosus Fr.
P. sanginolentus Fr.
P. attenuatus Pk.
P. Gordoniensis B. & Br.
P. Armeniacus Fr.

Cyclomyces Greenii Berk.
Hexagona carbonaria B. & C.
Sistotrema confluentes Pers.
Hydnum confluentes Pk.
H. sulphureum Schw.
H. ferruginosum Fr.

Grandinia coriaria Pk.
Thelephora Willeyi Clinton.
Stereeum tenerrimum B. & R.
S. radiatum Pk.
Corticium leucothrix B. & C.
C. bicolor Pk.
Clavaria fistulosa Fr.

Exobasidium Azaleae Pk.
E. Andromedae Pk.
Lycoperdon pedicellatum Pk.
Æthalium Ferrincolà Schw.

Spumaria alba DC.
Licea cylindrica Fr.

Stemonitis typhoides DC.
S. herbatica Pk.

Arcyria incarnata Pers.
A. nutans Fr.
A. globosa Schw.

Didymium farinaceum Fr.
D. connatum Pk.
Diderma crustaceum Pk.
D. farinaceum Pk.
D. Marie-Wilsoni Clinton.

Trichia reniformis Pk.
Physarum pulcherripes Pk.
Angiogramum sinuosum Grev.
Perichæna flavida Pk.
Licea caespitosa Pk.

Craterium leucocephalum.
C. obovatum Pk.

Diplodia vulgaris Leo.
Excipula Equiseti Pk.

Dinemaspórium Robiniae Ger.
D. acerinum Pk.

Hendersonia Robiniae West.

Pestalozzia pezizoides De Not.
Bactridium Ellisii Berk.
Puccinia Lobeliiæ Gerard.
P. curtipes Howe.

Æcidiwm Lycopti Gerard.
Æ. Uvulariatum Schw.
Æ. Hydrophylli Pk.

Ceratium hydnoides A. & S.
Stilbum ramosum Pk.
Helioma Mulleri Cæ.

Oidium fulvum Lk.
O. megalosporum B. & C.

Fusispoirum rosemolium Steph.

Pilacre Petersii B. & C.

Erysiphe Euphorbiæ Pk.

Peziza violacea Pers.
P. subochracea C. & P.
P. lacerata C. & P.
P. crocitincta B. & C.
P. albumina C. & P.
P. corrupata C. & P.
P. coronata Bull.
Peziza Dehniii Rabb.
Helotium rugipes Pk.
H. macrosporum Pk.
H. thujinum Pk.
H. gracile C. & P.
H. Limonium C. & P.
Hysterium typhinum Fr.
H. spheraeoides A. & S.
H. maculare Fr.
H. macrosporum Pk.
Torrubia capitata Fr.
Hypocrea alutacea Fr.
Nectria Ribis Tode.
N. Celastris Schwo.
N. ochracea Fr.
N. balsamea C. & P.
N. Apocyni Pk.
N. mycetophila Pk.
Elaphomyces variegatus Vitt.
Xylaria grandis Pk.
Hypoxylon perforatum Schwo.
H. rubiginosum Fr.

Diatrype moroides C. & P.
D. _bullata Fr.
D. adusta C. & P.
D. atropunctata Schw.
D. quercina Tul.
Valsa bicineta C. & P.
V. centripeta Fr.
V. profusa Fr.
V. hapalocystis B. & Br.
Massaria Argus Tul.
Eutypa Acharii Tul.
Lophiostoma magnata C. & P.
L. turrita C. & P.
Sphaeria viridicoma C. & P.
S. fuscella B. & Br.
S. Semen C. & P.
S. mutans C. & P.
S. subconica C. & P.
S. Sarmentorum Fr.
S. Staphyleæ Pk.
S. Desmodii Pk.

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PLANTS COLLECTED.

Polygonum Hartwrightii Gr.
Lycopodium sabinaefolium.
Thelia Lescurii Sulliv.
Hypnum Oakesii Sulliv.
H. exannulatum Gumb.
H. cupressiforme L.
H. acutum Mitt.
Sphagnœcetis Hubeneriana,
Jungermannia albescens Hook.
J. ventricosa Dicks.
Scapania undulata N. & M.

Frullania Oakesiana Aust.
Cetraria Fahlunensis Schær.
Lecanora badia Fr.
Cladonia deformis Hoffm.
C. papillaria Hoffm.
Bæomyces byssonides Fr.
Biatora milliaria Fr.
Lecidea arctica Smf.
L. Diapensiae Th. Fr.
L. melancheima Tuck.
Agaricus fumosolutens Pk.
Agaricus rossellus Fr.
A. atroalboides Pk.
A. constans Pk.
A. delectabilis Pk.
A. montanus Pk.
A. luteofolius Pk.
A. infidus Pk.
A. fuscodiscus Pk.
A. chimonophilus B. & Br.
Coprinus aquatilis Pk.
Cortinarius fusciolacaeus Pk.
Hygrophorus aurantiacoluteus
Gomphidius stillatus Strauss.
Lactarius alpinus Pk.
Marasmius minutus Pk.
M. minutissimus Pk.
Panus operculatus B. & C.
Polyporus squamosus Fr.
P. spumens Fr.
P. volvatus Pk.
P. nigricans Fr.
P. conchatus Fr.
P. Pinicola Fr.
P. vulgaris Fr.
P. incarnatus Fr.
Trametes odoratus Fr.
Merulius porinoides Fr.
Irplex lacteus Fr.
Stereum balsameum Pk.
S. versiforme B. & C.
Corticium calceum Fr.
C. cremoricolor B. & C.
C. lilacinofuscum B. & C.
Cyphella candida Pk.
Clavaria spathulata Pk.
Typhula gyrans Fr.
Typhula filicina Pk.
Tremella enata B. & C.
T. stipitata Pk.
Dacrymyces fragiformis Nees.
Ditiola radicata Fr.
Reticularia umbrina Fr.
Diderma umbilicatum Pers.
Phoma ellipticum Pk.
Pestalozzia Mariae Clinton.
Coryneum triseptatum Pk.
Helicospora concentrica Schw.
Stictus ciliolatus Pk.
H. ellipticum Pk.
Ustilago Syntherismæ Schw.
Uredo Empetri DC.
Peridermium elatinium A. & S.
P. balsameum Pk.
P. decolorans Pk.
Pterula setosa Pk.
Cladosporium Lignicola Cd.
Oidium corticale Pk.
Fusidium flavovirens Fr.
Monilia candida Pk.
Pilobolus cristallinus Tode.
Chætomium melioloides C. & P
Helvella sphærospora Pk.
Mitrula cucullata Fr.
M. inflata Schw.
Peziza adusta C. & P.
P. subcarnea C. & P.
Ascobolus pilosus Fr.
Helotium acicular Fr.
H. fastidiosum Pk.
Tympanis Fraxini Schw.
Hysterium tumida Duby.
H. xylomoides Chev.
H. Rhododendri Schw.
Rhytisima monogramma B. & C
Torrubia entomorrhiza Fr.
Epichloe Hypoxylon Pk.
Nectria episphaeria Fr.
Dothidea Dalibardae Pk.
Diatrype platascæ Pk.
D. corniculata Blhrh.
Valsia impulsa C. & P.
V. subclypeata C. & P.
V. Peckii Howe.

Lophiostoma sexnucleata Ck.
Sphaeria lagenaria Pers.
S. orthogramma B. & C.
S. thujina Pk.
S. Parnassiae Pk.
S. Arcenthobii Pk.

(3.)

CONTRIBUTORS AND THEIR CONTRIBUTIONS.

Miss S. P. Monk, Santa Barbara, Cal.

Evernia vulpina Wulf.

Mrs. E. E. Atwater, Chicago, Ill.

Viola lanceolata L.
V. primulæfolia L.
V. cucullata L.
Argemone Mexicana L.
Pinguicula pumila Mx.

Gelsemium sempervirens Ait.
Polypodium incanum Sw.
Aspidium patens Sw.
Evernia vulpina Wulf.

Miss M. L. Wilson, Buffalo, N. Y.

Chondria intertexta Chauv.
C. pinn. v. osmunda Ag.
Gigartina acicularis Wulf.
G. mamillosa G. & W.
Sphaerococcus coronopifolius.
S. cor. v. clavatus Ag.
Schizymena Dubyi Chauv.
Rhodymena palmetta Grev.
Dasya cocinea Huds.
Delesseria ruscifolia Lam.
Polysiphonia byssoidæa Grev.
Callithamnion Rothii Lyngb.

Callithamnion Daviesii Ag.
C. Turneri Ag.
C. tetricum Dill.
C. roseum Sm.
C. tetragonum Ag.
Ceramium ciliatum Ellis.
C. Delongchampii Chauv.
Lomentaria ovalis Huds.
Pycnophyta tuberculatus.
Cystoseira siliquosa Ag.
C. ericoides G. & W.
Calliblepharis ciliata Kutz.
C. jubata Kutz.
Corynospora pedicellata \textit{J. Ag.} | Tetraspora lubrica \textit{Ag.}
Bangia Ceramicola \textit{Chaum.} | Chætomorpha area \textit{Dill.}
Codium Bursa \textit{L.} | Lemanea torulosa \textit{Ag.}
C. tomentosum \textit{Ag.} | Batrachospermum vagum.
Ulva bullosa \textit{Roth.}

Rev. A. P. \textsc{Van Gieson}, Poughkeepsie, N. Y.
Aconitum Napellus \textit{L.}

Rev. H. \textsc{Wibbe}, Oswego, N. Y.
Ammannia humilis \textit{Mx.} | Tofieldia glutinoso \textit{Willd.}
Zygodenus glaucus \textit{Nutt.}

Prof. P. A. \textsc{Puissant}, Troy, N. Y.
Verbena bracteosa \textit{Mx.}

E. \textsc{Hunt}, Utica, N. Y.
Botrychium matricariæfolium \textit{Braun.}

E. W. \textsc{Mundy}, Syracuse, N. Y.
Botrychium Lunaria \textit{Sw.}

H. \textsc{Gillman}, Detroit, Mich.
Parnassia parviflora \textit{DG.} | Botrychium Lunaria \textit{Sw.}
Abies balsamea \textit{Marshall.}

A. H. \textsc{Curtiss}, Liberty, Va.
Sedum Nevii \textit{Gr.} | Arcenthobium campylopodum \textit{Engelm.}
Galium anglicum \textit{Huds.}

E. C. \textsc{Howe}, M. D., Yonkers, N. Y.
Puccinia curtipes \textit{Hove.} | Dothidea tetraspora \textit{Fr.}
Uromyces Phaseoli \textit{Strauss.}

H. W. \textsc{Young}, Aquebogue, N. Y.
Solidago elliptica \textit{Ait.} | Scirpus Olneyi \textit{Gr.}
S. \textit{caes. v. albiflora Young.} | Carex striata \textit{Mx.}
Callitrichæ heterophyllæ \textit{Ph.} | C. sterilis \textit{Willd.}
Polygonum Careyi \textit{Olney.} | Agrostis alba \textit{L.}
Rumex \textit{Engelmanni Lede.}

\textbf{TWENTY-SEVENTH REPORT ON THE STATE MUSEUM.}
REPORT OF THE BOTANIST.

I. C. MARTINDALE, Camden, N. J.

Protomyces Martindalei Pk.

Prof. G. H. FRENCH, Irvington, Ill.

Fragaria Vir. v. Illincensis Gr. | Phlox stellaria Gr.
Saxifraga Forbesii Vasey. | Cheilanthes vestita Sw.
Heuchera Rugellii Shutt. | Pellaea atropurpurea Lk.

W. R. GERARD, Poughkeepsie, N. Y.

Polyporus cupulæformis. | Peridermium Pini Chev.
Discosia maculæcola Gerard. | Rœstelia cornuta Tul.
Septoria Verbæ D & R. | Æacidium Taraxaci Kz.
S. Hepaticæ Desm. | Æ. Centaureæ DC.
S. Tiliæ West. | Perenospora sordida Berk.
S. Acericola Desm. | P. Urticae Casp.
Phyllosticta Cytisi Desm. | P. Bistorta Fckl.
P. vulgaris Desm. | P. ovata Fckl.
Diplodia Fibricola Berk. | Sporotrichum densum Lk.
D. juglandina Fr. | Erysiphe Linkii Lev.
Ascochyta Medicaginis Fckl. | E. umbelliferarum De By.
Glaeosporium Juglandis Lib. | E. tortilis Lk.
Melanconium juglandinum | Microsphaera holosericea Lev.
Phragmidium effusum Fckl. | Rhytisma salicinum Fr.
Puccinia Cirsiii Lasch. | R. umbonatum Fr.
P. obtusa Schl. | Psilospora faginea Rabh.
P. obtegens Tul. | Dothidea Ulmi Fr.
P. Pimpinellæ Lk. | Valsa nivea Fr.
P. Bardane Cd. | Sphaerella sparsa Awd.
P. Ægopodii Lk. | S. maculaeformis Pers.
Uromyces Genistæ Fckl. | S. perexigua Fckl.
Cystopus cubicus Lev.

E. S. MILLER, Wading River, N. Y.

Ptelea trifoliata L. | Cyperus Michauxianus Schul.
Euphorbia Cyperissias L. | Agrostis alba L.
Scirpus Olneyi Gr. | Onoclea sensibilis L.

J. S. MERRIAM New York, N. Y.

Uredo Ledicola Pk.
<table>
<thead>
<tr>
<th>Species Name</th>
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<tr>
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<tr>
<td>Puccinia Porteri</td>
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<td>Paxillus flavidus</td>
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<td>Boletus Russelii</td>
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<td>C. C. Parry, M. D., Davenport, Iowa.</td>
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<td>Aeacidium Psoraleae</td>
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<td>Dothidea Gramma</td>
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<td>R. P. Whitfield, Albany, N. Y.</td>
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<td>Trichomanes radicans</td>
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<td>E. L. Hankenson, Newark, N. Y.</td>
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<td>Polygonum Hartwrightii</td>
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<td>Hon. H. Seymour, Utica, N. Y.</td>
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<td>Polyporus sulfureus</td>
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<td>Polytorus Curtisii</td>
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<td>Morchella esc. v. conica</td>
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Antitrichia Californica *Sulliv.*
A. *curtipendula* *Brid.*
Leskea Austinii *Sulliv.*
Neckera Douglassii *Hook.*
Hyphnum crispifolium *Hook.*
H. *Oreganum* *Sulliv.*
H. *myosuroides* *L.*
H. *lutescens* *Dill.*
Porphyridium cruentum *Ag.*
Agaricus cepæstipes *Sow.*
Lenzites striata *Sow.*
Merulius bellus *B. & C.*
Ditiola radicata *Fr.*
Trametes hydnoides *Fr.*
Polyporus sanguineus *L.*
P. *incarnatus* *Fr.*
P. *Salviæ B. & C.*
Phoma Syringæ *B. & C.*
Pestalozzia Maris *Clinton.*
Puccinia Veratri *Clinton.*
Ustilago Erythronii *Clinton.*
Uromyces Lilii *Clinton.*
Uredo Smilacis *Schw.*
Aecidium dubium *Clinton.*
Sporidesmium concinnum.
Cladosporium Typhæ *Schw.*
Hypomyces aurantius *Tul.*

(4.)

**PLANTS FOUND GROWING SPONTANEOUSLY IN THE STATE AND NOT BEFORE REPORTED.**

**Aconitum Napellus** *L.*


The specimens show a loose paniculate inflorescence quite unlike the ordinary form seen in gardens. The flowers are few and on widely diverging slender branches, and the leaves are not as finely dissected as usual. The plants were found in a wild unsettled region far from any present habitation, though the Rev. Mr. Van Gieson writes me that many years ago, thirty to fifty, a family settled in this part of the valley of the stream. Though their stay was short, he suggests this settlement as a possible explanation to the introduction of the plant into this singular locality. Its modified character may perhaps be due to the fact that it was left to run wild in a not very congenial locality. And yet it is a little remarkable that a plant rarely found with us "shifting for itself," should be so thoroughly naturalized in this remote spot. It is desirable that its history and character should be further investigated.
Verbena bracteosa Mx.

Solidago elliptica Ait.
Black Brook, Long Island. H. W. Young.

Polygonum Hartwrightii Gr.
Newark. E. L. Hankenson. Bethlehem. If this species is rightly understood by me it is not rare on the Cayuga marshes, but is seldom found in flower. In the younger plants the spreading foliaceous tips of the sheaths are conspicuous.

Euphorbia Cyparissias L.
Wading River. Long Island. E. S. Miller.

Scirpus Olneyi Gr.
Salt marshes, Aquebogue and Wading River. Young, Miller.

Carex striata Mx.
Bogs near Riverhead, L. I. Young. The plant referred to this species in New York State Flora is believed to be C. polymorpha Muhl.

Botrychium Lunaria Swartz.
Near Syracuse. E. W. Mundy.
This is a very interesting addition to our list of ferns, and indicates the varied and comprehensive character of our flora. The single specimen sent by Mr. Mundy does not differ in any essential respect from specimens of this species received from the Lake Superior region, hitherto its only reported locality in this country. A specimen of Botrychium received from Mr. Cowles, and unhesitatingly considered the large form of B. simplex as described in Paine's Catalogue of Oneida County Plants, might, with almost equal propriety, be deemed a small form of this species. It would be remarkable if the two species should be found to run together.

Botrychium matricarlefolium Braun.
Deerfield, Oneida county. E. Hunt.

Lycopodium sabinæfolium Willd.
Elevated marshes near Nipple Top and on the slope of Mt. Marcy.
This plant is regarded by some as a variety of L. compla-
natum, but our specimens are so very dissimilar to typical forms of that species that I am disposed at present to keep them distinct. The spikes in our specimens are sometimes sessile, sometimes on a short bracted peduncle, which is apparently produced by a slight elongation of the rachis, together with a failure of the thecae to develop in the axils of the lower bracts or scales. The fertile branches are frequently longer than the sterile and sometimes less densely clothed with leaves. They are usually forked near the top, each branch bearing a single spike. There is no apparent tendency either in these or in the sterile branches to become flattened, as in L. complanatum.

**Thelia Lescurii Sulliv.**

**Leskea Austini Sulliv.**

**Hypnum Oakesii Sulliv.**
Summit of Haystack Mt. This mountain stands next to Mt. Marcy on the east, and, though not as high as its more renowned neighbor, it afforded several species of plants not yet found on that lofty summit.

**Hypnum exannulatum Gumb.**
In Hobkirk's Synopsis of British Mosses, this is given as synonymous with *H. aduncum* Dill., *H. aduncum* Hedw. being referred to *H. Kneiflii* B. & S.

**Hypnum cupressiforme L.**
Port Jervis and Helderberg Mts. Sterile.

**Hypnum acutum Mitt.**

**Sphagnecetis Hubeneriana Rabb.**
Adirondack Mts. and Center.

**Jungermannia albescens Hook.**
Adirondack Mts.

**Jungermannia ventricosa Dicks.**
Adirondack Mts.
Scapania undulata N. & M.
Water holes in marshy places. Adirondack Mts.

Frullania oakesiana Aust.
Trunks of balsam trees. Adirondack Mts.

Cetraria fahlunensis Schær.

Lecanora badia Fr.
Rocks on the high summits of the Adirondacks.

Cladonia deformis Hoffm.
Dry pastures. Indian Lake. Sterile.

Cladonia papillaria Hoffm.
Summit of Skylight Mt. Also on the Catskills.

Bæomyces byssoides Fr.
Rocks along mountain streams. Adirondack Mts.

Biatora milliaria Fr.
High summits of the Adirondack Mts.

Lecidea arctica Smf.
Summit of Mt. Marcy; incrusting mosses, etc. The specimens are imperfect, and, perhaps, entitled to some doubt.

Lecidea diapensiæ Th. Fr.
Summit of Mt. Marcy, on Diapensia sods.

Lecidea melancheima Tuck.
Old fence rails. Sandlake.

Porphydrium cruentum Ag.

Agaricus cepæstipes Sow.

Agaricus (Tricholoma) fumosoluteus n. sp.
Pileus fleshy, convex or expanded, smooth, moist, smoky-yellow; lamellae broad, close, rounded behind and deeply
emarginate, white; stem stout, smooth, hollow, white; spores subglobose, .00018'- .0002' in diameter.

Plant 3'–4' high, pileus 2'–3' broad, stem 4''–6'' thick.

Ground in woods. Forestburgh, Sullivan county. Sept. When cut, the flesh has a farinaceous odor. The plant sometimes grows in tufts. In size and general character it is related to A. virescens.

**Agaricus roSELLus Fr.**


Agaricus (Mycena) atroalboiDES *n. sp.*

Pileus campanulate, obtuse or subumbonate, striate on the margin; at first blackish-brown with a slight pruinosity, then fading to cinereous on the margin; lamellæ close, narrow ascending, uncinate with a decurrent tooth, white or cinereous; stem long, smooth, equal, colored like the pileus, villous at the base; spores with a slight apiculus at one end, elliptical, .0003' long.

Plant 3'–4' high, pileus 4''–6'' broad, stem .5''–1'' thick.

Wet places among mosses in woods. Forestburgh. Sept. The stem in the younger plants is darker toward the top. The lamellæ are not free, and the stem is not thickened at the base as in *A. atroalbus*.

There is a slender variety in which the umbo becomes whitish in drying.

Agaricus (Mycena) constAnS *n. sp.*

Pileus submembranaceous, campanulate or convex, striate, pale-cinereous; lamellæ close, ascending, uncinate, white; stem slender, equal, smooth, colored like the pileus, with hairy filaments at the base; odor alkaline.

Plant about 2' high, pileus 1''–3'' broad.


In general appearance it bears some resemblance to small forms of *A. vulgaris*, but it is easily separated by its dry stem and its odor of hartshorn which is very distinct when the plant is first gathered.

Agaricus (Mycena) delectabilis *n. sp.*

White; pileus thin, conical, subacute, striate; lamellæ close, arcuate-decurrent; stem slender, equal, smooth, with hairy filaments at the base; odor alkaline.
Locality, size and habitat as in the preceding species, from which it is separated by its white color, more conical pileus and decurrent lamellae. (Plate 1, figs. 22-25.)

Agaricus Acicula Schaeff.
Damp places on leaves and twigs. Indian Lake. July.

Agaricus galopus Schrad.
Among fallen leaves in woods. Forestburgh. Sept.
Easily known by the milky juice of the stem.

Agaricus (Omphalia) montanus n. sp.
Blackish-brown; pileus thin, umbilicate, smooth; lamellae distant, decurrent, the edge darker; stem equal, smooth.
Plant about 1' high, pileus 6"-8" broad.
Thin soil covering rocks. Summit of Mt. Marcy. Aug.

Agaricus (Omphalia) Rhododendri n. sp.
White, slightly viscid when moist; pileus convex, glabrous, umbilicate, striate on the margin; lamellae arcuate-decurrent, rather close, beaded on the edge; stem slender, rough with minute white gland-like protuberances.
Plant 6"-8" high, pileus 1"-2" broad.
Dead trunks of Rhododendron maximum. Forestburgh. Sept. (Plate 2, figs. 15-19.)
The peculiar roughness of the stem is a marked feature of this small species.

Agaricus (Pholiota) luteofolius n. sp.
Pileus firm, convex, dry, squamulose, fibrillose on the margin, pale red or yellowish; lamellae broad, sub-distant, emarginate, serrate on the edge, yellow becoming bright-ferruginous; stem firm, fibrillose, solid, colored like the pileus, often curved from the place of growth; annulus obsolete; spores bright-ferruginous, .00028' long, .00016' broad.
Plant subcaespitose, 2'-3' high, pileus 1'-2' broad, stem 3"-5" thick.
The general appearance of this plant is like A. variegatus or reddish forms of A. multipunctus. The reddish color appears sometimes to fade with age.
Agaricus (Hebeloma) infidus n. sp.

Pileus firm, campanulate or expanded, subumbonate, slightly squamulose on the disk, often split on the margin, whitish, lamellae close, pallid becoming cinnamon-brown; stem equal or slightly bulbous-thickened at the base, minutely furfuraceous, hollow, colored like the pileus; spores globose, rough with little nodules, .0003' in diameter.

Plant about 2' high, pileus 6''-12'' broad, stem 1''-2'' thick.


This species bears some resemblance to A. geophyllus, but the slightly squamulose pileus and the rough spores readily separate it. The margin of the pileus is sometimes deeply split, the radiating lobes giving a stellate appearance to the pileus.

Agaricus (Hebeloma) fuscodiscus n. sp.

Pileus at first subviscid, conical, covered with blackish-brown fibrils, then campanulate or expanded, umbonate, whitish, the disk remaining blackish-brown; lamellae close, whitish then brownish, minutely rough on the edge; stem equal, solid, whitish and pruinose at the top, elsewhere brownish, fibrillose; spores .00035' long, .00018' broad.

Plant 1'-3' high, pileus 6''-12'' broad, stem 1''-2'' thick.

In an old pasture under trees. Forestburgh. Sept. (Plate 1, figs. 3-6.)

The somewhat viscid pellicle is separable. The odor resembles that of chestnut blossoms.

Agaricus (Hebeloma) fragilior n. sp.

Small, fragile, pale grayish ochre; pileus thin, convex, then expanded or centrally depressed, sometimes irregular or wavy on the margin, at first minutely squamulose lamellae close, when young a little paler than the pileus, minutely eroded on the edge; stem slender, squamulose, hollow, often expanded at the base into a thin disk.

Plant about 1' high, pileus 3''-6'' broad, stem scarcely 1'' thick.


The minute scales of the pileus easily rub off and they disappear with age. They sometimes project from the margin in a fimbriate manner.
Agaricus chimonophilus B. & Br.

Vegetable mold or decaying wood lying on or half buried in damp earth. Forestburgh. Sept.

Our plant does not fully agree with the description of the species under which we have placed it. The lamellae are rounded behind, the spores are ferruginous-brown, and the pileus, which is often attached to the matrix by downy filaments, is frequently half an inch broad. Further investigation may require its separation.

Coprinus aquatilis n. sp.

Pileus membranaceous, campanulate, sulcate-pecticate almost to the apex, furfuraceous, yellowish-brown; lamellae subdistant, reaching the stem, brownish then black; stem slender, equal, hollow, furfuraceous, whitish; spores .0005' long, .0003' broad.

Plant fragile, 2'-2.5' high, pileus 6"-8" broad.

Sticks and twigs partly submerged or lying in wet mossy places. Adirondack Mts. Aug. (Plate 1, figs. 26-28.)

The young plant is more yellow than the mature one. The species is related to C. silvaticus.

Cortinarius (Hygrocybe) fuscoviolaceus n. sp.

Pileus convex, soon expanded or centrally depressed, umbonate, smooth, hygrophanus, chestnut-brown tinged with violet, the margin whitened by silky fibrils; lamellae at first plane then ventricose, rounded behind, rather distant, dark-violaceous, becoming subcinnamon; stem flexuous, equal, solid, colored like the pileus, silky fibrillose.

Plant 1'-1.5' high, pileus 6"-10" broad.


Hygrophorus aurantiacoluteus B. & C.


Gomphidius stillatus Strauss.


Lactarius alpinus n. sp.

Pileus fleshy, dry, umbilicate or centrally depressed, tomentose-squamulose, ochraceous or tawny-yellow; lamellae close, yellowish-ochraceous; stem subequal, solid, whitish or pallid; milk white, unchangeable, taste acrid.

Plant about 2' high, pileus 1' broad, stem 2"-3" thick.
Thin soil covering rocks. Summit of Haystack Mt., at an altitude of about 5,000 ft. Aug.
Only three specimens were found. I have seen no other Lactarius on the high summits of the Adirondacks.

**Marasmius minutus** *n. sp.*

Pileus membranaceous, convex, glabrous, striate-sulcate, reddish-brown; lamellae distant, subvenose, unequal, sometimes branched, white; stem capillary, smooth, shining, blackish-brown.

Plant scarcely 1' high, pileus 1"–2" broad.


This is a very small species, easily overlooked. The color of the pileus approaches a vinous red.

**Marasmius minutissimus** *n. sp.*

Very minute; pileus convex or expanded, pubescent, white, sometimes nodding; lamellae few, vein-like, scarcely extending to the margin of the pileus; stem capillary, smooth or slightly hairy, blackish-brown, pellucid-white at the top.

Plant 1"–3" high, the pileus scarcely broader than the head of a pin.

Fallen leaves in woods. Forestburgh. Sept. (Plate 2, figs. 27 and 28).

This is the smallest species known to me. It is remarkable for the pubescence of the pileus. In damp weather the plant appears as if glandular-pubescent, minute drops of moisture tipping the hairs. When young the stem is sometimes white nearly or quite to the base. The lamellae are reduced to three or four vein-like elevations.

**Panus operculatus** *B. & C.*


**Polyporus cupuliformis.** *B. & C.*


**Polyporus squamosus** *Fr.*

Trunk of an elm tree. Albany. May.

**Polyporus spumeus** *Fr.*

**POLYPORUS VOLVATUS n. sp.**

Subglobose, fleshy, firm, smooth, flattened behind and appearing sessile, but usually attached to the matrix by a small point, whitish, more or less tinged with yellow, red or reddish brown, the cuticle continuous, completely enveloping the hymenium like a coriaceous volva, at length rupturing below and revealing the hymenium; pores long, whitish, minute or punctiform, the mouths yellowish with a tinge of cinnamon; flesh white; spores elliptical, flesh-colored, .0003’–.00035’ long, about .0002’ broad.

Trunks of dead spruce trees, *Abies nigra*. Indian Lake. July. *(Plate 2, figs. 3–6.)*

This is a small species, rarely attaining a diameter of one inch, but very remarkable for the volva-like prolongation of the pileus around and below the pores. When this is ruptured, little heaps of spores are seen dotting its inner surface. So abundant are these and so protected from the air when they fall from the pores, that they sometimes accumulate in heaps whose altitude much exceeds the diameter. The volva does not lie close to the mouths of the pores but leaves an intervening space nearly as great as the distance from the mouths of the pores to the apex of the pileus. The length of the pores generally exceeds the thickness of the flesh of the pileus. The form of the plant with the volva-like portion cut away is nearly hemispherical. This interesting but rare and aberrant species is allied to the suberose *Placodermei*.

**POLYPORUS NIGRICANS Fr.**


**POLYPORUS CONCHATUS Fr.**


**POLYPORUS PINICOLA Fr.**


**POLYPORUS VULGARIS Fr.**


**POLYPORUS INCARNATUS Fr.**


**POLYPORUS SALVIE B. & C.**

Trametes odoratus Fr.
Old trunks of spruce trees Adirondack Mts.

Merulius porinoides Fr.

Merulius bellus B. & C.
Decaying wood. Tonawanda. Clinton.

Irpex lacteus Fr.
This is thought by some to be a variety of Irpex sinuosus.

Stereum balsameum n. sp.
Orbicular or confluent, resupinate, rather thick and firm; slightly tawny-tomentose beneath; the margin free, thin, whitish; hymenium brown, uneven, sometimes concentrically zoned, stained dark red or purplish where bruised, the stains at length changing to black.

By the confluence of individuals patches several inches in diameter are sometimes formed. In the dried specimens the hymenium is more or less cracked.

Stereum versiforme B. & C.
Dead branches. Forestburgh. Sept.

Corticium calceum Fr.

Corticium cremoricolor B. & C.
Spruce wood. Indian Lake. July. The areolæ in our specimens are small but quite distinct.

Corticium lilacinofuscum B. & C.
Old fence posts. Greenbush.

Cyphella candida n. sp.
Cups scattered or gregarious, minute, obconic, nearly or quite sessile, externally tomentose, soft, white, sometimes deflexed.

Clavaria spathulata n. sp.
Simple, pale yellow; club compressed, spatulate, tapering into the slender slightly furfuraceous stem.
Plant scarcely more than two lines high.
Dead branches of hickory trees, Carya alba. Greenbush. Oct. (Plate 2, figs. 20 and 21.)
The color is like that of Spathularia flavida.

Typhula gyrans Fr.

Typhula filicina n. sp.
White; club thickened, obovate or elliptical, obtuse, erect; stem rather stout, short, pubescent, usually slightly thickened toward the base, arising from a chestnut-colored sclerotium.
Plant 1"–2" high.
Dead stems of ferns, Osmunda cinnamomea, in damp places. Forestburgh. Sept. (Plate 1, figs. 29 and 30.)
This is a smaller but comparatively stouter plant than the preceding, easily distinguished by its shorter club and stem.

Tremella enata B. & C.
Dead oak branches. Forestburgh. Sept.

Tremella stipitata n. sp.
Head small, tremelloid, subglobose or irregular, glabrous, more or less uneven with gyrose convolutions, yellow, often changing to orange or reddish-brown in drying; stem distinct, firm, dry, solid, nearly equal, yellow, often tinged with brown at the base, rarely throughout its whole extent, sometimes divided at the top into two branches, each bearing a head; spores subelliptical, with a slight oblique apiculus at one end, .00033' long.
Plant 5"–10" high.
Decaying wood in swamps. Forestburgh. Sept. (Plate 2, figs. 22 and 23.)
The texture of the stem is very unlike that of the head. The color of the stem generally fades to whitish or pallid in drying. The stem is sometimes slightly recurved at the top and appears to penetrate the receptacle as in the genus
Spathularia. Barren stems occur, obtusely pointed at the apex and destitute of a head. The species belongs to the subgenus Coryne, and seems to be related to Coryne gyrocephala B. & C., but its larger size and different color easily distinguish it. The changed color of the dried plants is readily restored by soaking in water.

Dacrymyces fragiformis Nees.

Decaying wood. Adirondack Mountains. August.
This plant retains its bright red color in the dried state. It produces an abundance of moniliform strings of conidia.

Ditiola radicata Fr.


Reticularia umbrina Fr.

Old logs in woods. Forestburgh. September.
The silvery hue of the peridium is conspicuous and beautiful.

Diderma umbilicatum Pers.

Decaying wood. Adirondack Mountains. August.
The specimens when collected were old and imperfect, but the very large columella leaves scarcely a doubt of the correctness of the determination.

Phoma Syringae B. & C.

Bark of Syringa. Buffalo. Clinton.
Identified by comparison with specimens received from Dr. Curtis.

Phoma ellipticum n. sp.

Perithecia at first covered by the epidermis, then free, scattered, elliptical, black; spores oblong-elliptical, colorless, with a small nucleus near each end, .00035' long, .00016' broad.

Dead stems of Galium boreale. West Albany. May.
The perithecia are rather large and when broken from the matrix leave a whitish spot surrounded by a black line.

Septoria Verbenae D. & R.


Discosia maculata Gerard.

**Pestalozzia Marle Clinton n. sp.**

Spots arid, brown or cinereous with a brown margin; pustules minute, scattered, erumpent, black; spores fusiform, five-septate, the four intermediate cells colored, a terminal cell and a long seta at each end hyaline, length of spore exclusive of the setae .0007’-.001’.

Leaves of *Rhododendron maximum*. Buffalo. *Clinton*. Forestburgh. September. (Plate 2, figs. 1 and 2.)

This is apparently a rare species. In all the specimens that I have seen the spots are large and situated at the apex of the leaf. The epidermis is ruptured in a somewhat stellate manner. The peduncle sometimes remains adhering to the spore, thus giving the appearance of two setæ at one end.

**Coryneum triseptatum n. sp.**

Spots large, brown or cinereous; stroma obsolete; sori scattered, minute, erumpent, black; spores oblong-pyriform, .0006’-.0007’ long, at first colorless and biseptate, then tri-septate with one apical and two basal cells hyaline, the remaining cell broad and colored; peduncle about as long as the spore, easily separating.

Living leaves of *Rhododendron maximum*. Forestburgh. September.

I am not acquainted with *Coryneum Rhododendri* Schw. which also inhabits Rhododendron leaves, but judging from the description it must be distinct from our plant for it is said to have thick septate pedicels and no mention is made of the most remarkable feature of the spores, the broad colored central cell, sharply contrasted with the two hyaline cells below it and the single one above it.

**Spilocæa concentrica Schw.**


**Helicosporium olivaceum n. sp.**

Flocci black, subulate, simple, septate, the articulations several times longer than broad; spores slender, coiled, simple or obscurely septate, olivaceous.


It forms thin olivaceous patches. Closely related to *H. vegetum*, from which the long articulations of the flocci and the obscurely septate or simple spores seem to separate it.
Helicosporium ellipticum n. sp.

Tufts elliptical or oblong, sometimes confluent or effused, greenish-brown or brown; floci intricately and somewhat reticulately branched, colored, septate, the articulations three to five times as long as broad; spores very long, closely coiled in about eight volutions, forming ellipsoid masses, greenish-yellow, containing many nuclei.

With the last, than which it is much darker colored. The floci appear to anastomose as in the capillitium of Stemonitis. The spores are not distinctly septate. (Plate 2, figs. 9-12.)

Sporidesmium concinnum B. & C.


Puccinia Veratri Clinton n. sp.

Spots indefinite, yellowish; sori scattered, small, brown; spores elliptical, often irregular, constricted in the middle, easily separating at the septum, pale, .001' long, .00065' broad; peduncle very short.

Lower surface of leaves of Veratrum viride. Buffalo. July. Clinton. (Plate 2, figs. 13 and 14.) Under slight pressure the spore readily separates into two parts as in P. Lobelia.

Uromyces Lilii Clinton n. sp.

Sori amphigenous, small, scattered, surrounded or partly covered by the ruptured epidermis, brown; spores obovate, rough, .0011'-.0015' long, .0008'-.001' broad; often with a slight apiculus at the apex; peduncle very short.


Uromyces Phaseoli Strauss.

Leaves of Phaseolus. Yonkers. Dr. E. C. Howe. I have seen no description of this species and have determined the specimens by comparison with those received from Dr. Curtis under the above name.

Ustilago Syntherismae Schwo.

In the sheaths of Cenchrus tribuloides. Center and Port Jervis. September.
It seems to prevent the development of the annoying spikes of spiny involucres of the grass. If this be really the case the fungus ought to be classed among the useful species.

**Uredo Smilacis Schw.**

**Uredo Empetri D. C.**

**Æcidium Nes. Gerard.**

**Æcidium Dubium Clinton. n. sp.**
Spots scattered, suborbicular, yellow or purplish; peridia small, subcircinating, crowded; spores yellow.


Very near *Æ. Compositarum*, and in the dried state scarcely to be distinguished from that species except by the habitat.

**Peridermium Elatinum Lk. (Æcidium elatinum A. & S.)**
Living leaves of balsam trees, *Abies balsamea*. Indian Lake. July. The leaves attacked by this fungus scarcely exceed half the usual size.

**Peridermium Balsameum n. sp.**
Spots indefinite, whitish or pale yellow; peridia subrotund, slightly elevated, generally arranged in two rows, at first entire, then lacerated at the apex; spores subglobose, rough, white, about .001' in diameter.

Lower surface of balsam leaves. Adirondack Mountains. August. (Plate 2, figs. 24–26.)

The affected leaves attain the usual size, but, by their pale color, contrast beautifully with the healthy ones, and give the foliage a variegated appearance. The fungus was observed on young trees only.

**Peridermium Decolorans n. sp.**
Spots indefinite, yellow, generally discoloring the whole leaf; peridia subrotund or oblong, pustulate, at length rup-
tured and lacerated at the apex, white; spores large, sub-
globose, rough, with a thick epispore, yellow, about .0015' in
diameter.

Leaves of spruce trees, *Abies nigra*. Adirondack Moun-
tains. August. (Plate 1, figs. 19-21.)
I found this species very abundant on the low starved
spruces of the high summits and cold sphagnum marshes
of the Adirondack Mountains, attacking and discoloring the
foliage to such an extent as to give the trees a yellowish hue
even when seen at a distance. Minute brown or blackish
dots, probably the spermogonia of the fungus, are scattered
upon the affected leaves.

*Pterula setosa* n. *sp.*
Simple or branched, setose, about one-fourth of an inch
high, whitish or straw-colored with whitish tips, the branches
slightly diverging, clothed above with widely diverging hair-
like filaments; spores elliptical or subglobose, .00016'–
.0002' long.

The plants grow rather thickly upon the matrix, and are
in appearance suggestive of prickles upon a burr

*Cladosporium Lignicola* Cäs.

*Cladosporium Typsil Schüe.*
Dead leaves of *Typha latifolia*. Buffalo. Clinton.
This appears to differ from *C. Herbarum* in habit.

*Oldium Corticale* n. *sp.*
Tufts minute, orbicular, convex, at first compact and
bluish-brown, then more lax and paler or cinereous; flocci
few, nodose; spores small, colored, subglobose or suban-
gular, .00016' in diameter, joined together in moniliform
strings.

Old bark. North Greenbush. Oct. (Plate 2, figs. 7
and 8.)
The strings of spores do not so readily break up into dis-
tinct spores as in most other species.

*Fusidium flavovirens* Fr.
Monilia candida n. sp.
Flocci scattered, erect, simple, septate, pellucid; heads of spores rather compact, subglobose, erect, white; spores subglobose, .00025'–.0003' in diameter. 

Pilobolus crystallinus Tode.
Horse dung. Bethlehem. September.
The spores in our specimens are about .0005' in diameter.

Chetomium melioides C. & P.
Scattered, minute; conceptacles brown, globose, springing from a septate branched mycelium, hairs dark-brown, rather rigid, two to three times dichotomously branched above, branches divaricately spreading; spores ovate or subglobose, pale-brown, .00018' in diameter.
Old stems of Indian corn. North Greenbush. October. Similar to C. funiculums, but with the hairs more branched, the branches more spreading, and the spores equal in size. Externally it resembles a Meliola.

Helvella sphérospora n. sp.
Pileus large, irregular, ochraceous, the margin free, somewhat veiny and minutely tomentose beneath; stem stout, deeply lacunose, smooth or with a minute appressed tomentum, white; asci cylindrical; spores globose, .00035'–.0004' in diameter.
Plant 3'–4' high, pileus 3'–4' broad, stem 1'–2' thick.
In the dried specimens the pileus becomes darker, so that the colors resemble those of H. esculenta, but the true relationship is with H. costata. The globose spores are peculiar and suggest the specific name.

Mitrula cucullata Fr.
Fallen leaves of spruce trees. Forestburgh. September.
This rare and interesting little plant has been placed by various authors in the genera Helvella, Leotia, Heyderia, Geoglossum and Mitrula. The head is either ovate or conical, and in large specimens is slightly wrinkled or uneven. It is whitish, pale-yellow or cream colored when fresh, but changes to a subferruginous or cinnamon hue in the dried specimens.
Mitrula inflata Schw.
I have never found this plant fertile.

Peziza adusta C. & P.
Gregarious or scattered; cups subglobose, then open and hemispherical, at length flattened, one line broad, somewhat irregular when dry, brown externally, with a few radiating white filaments at the base; disk amber-colored or yellowish, darker when dry, nearly plane or slightly concave; asci cylindrical; spores elliptical, binucleate, .0007' long, .0003' broad; paraphyses clavate, brownish.

Peziza subcarnea C. & P.
Scattered, stipitate, small; cups at first clavate then infundibuliform, wholly flesh-colored; stem long, attenuated at the base, expanded above into the cup; margin contracted, paler; asci cylindrical; spores linear, obtuse, hyaline.
Dead liverworts on old logs in woods. Indian Lake. July.
The liverworts die in suborbicular patches which are sometimes several inches in diameter. On these patches of dead plants the fungus grows. The inference is that the fungus causes the death of the liverwort. The species is closely allied to P. pyriformis.

Ascobolus pilosus Fr.

Helotium aciculare Fr.
Decaying half-buried wood. Adirondack Mts. August.

Helotium fastidiosum n. sp.
Cups small, convex or plane, stipitate, pale yellow or whitish; stem slender, about equal in length to the diameter of the cups, brownish or yellow with a brownish base; asci narrowly clavate; spores crowded or biseriate, elongated, subclavate, multinucleate, .001' long, about .0002' broad, sometimes slightly curved.
Petioles and midribs of fallen alder leaves in wet places. Forestburgh. September.
The long spores are narrowed toward one end, and have a shape very similar to that of the asci that contain them. I have never found it growing on the blade of the leaf.

**Tymanis Fraxini** Schw.
Dead branches of ash trees. Forestburgh. September.

**Hysterium tumida** Duby.
Fallen leaves of beech trees. Croghan. September.

**Hysterium xylomoides** Chev.

**Hysterium Rhododendri** Schw.

**Rhytisma monogramma** B. & C.
Living leaves of grape vines. Port Jervis. September.
I have seen no description of this species, and depend upon a comparison of our plant with authenticated specimens for its identification.

**Torrubia entomorrhiza** Fr.
Dead larvae imbedded in decaying wood or leaves in woods. Adirondack Mts. August.
The head in our specimens is yellow when fresh.

**Epichloe** Hypoxylon *n. sp.*
Convex or pulvinate, subconfluent, blackish externally, white within, seated on a whitish or gray subiculum; ostiola prominent; asci very long, linear; spores elongated, filiform, multinucleate, colorless.

In shape and color this plant is suggestive of the genus Hypoxylon, but its habitat and spores point to Epichloe.

**Hypomyces aurantius** Tul.
Decaying fungi. Buffalo. Clinton.

**Nectria epispherea** Fr.
On *Diatrype stigma* and allied fungi. Forestburgh. Sept.

**Dothidea tetraspora** Fr.
Dothidea Dalibardæ n. sp.
Spots small, scattered, suborbicular, reddish-brown; stroma central, uneven, prominent on both surfaces, black; ostiola obscure; asci clavate; spores crowded, simple, subfusiform, nearly colorless, .0005'-.0006' long.

Living leaves of Dalibarda repens. Forestburgh. Sept. (Plate 1, figs. 7–9).

Diatrype Platasca n. sp.
Stroma suborbicular, rather small, erumpent, black; ostiola long, slender, often slightly curved, cylindrical; asci oblong or subfusiform, very broad; spores crowded, colorless, oblong, uniseptate, quadrinucleate, .0005'-.0006' long.

Dead birch branches. Adirondack Mts. August.
The long slender ostiola and very broad asci are characteristic features of this species. It seems to be related to D. incarcerata.

Diatrype Corniculata Ehrlh.
Dead bark of ash trees. Sandlake. August.

Valsia Impulsa C. & P.
Erumpent; stroma suberose, formed from the bark; perithecia eight to twelve, clustered, globose, black; ostiola long, smooth, black; asci cylindrical; spores fusiform, uniseptate, hyaline, each cell binucleate, .0008' long, .0003' broad.

Dead branches of mountain ash. Adirondack Mts. August.

Valsia Subclypeata C. & P.
Perithecia three or four together, forming pustules beneath the elevated black shining epidermis which is at length lacerated, the torn edge becoming whitish; ostiola convergent, just piercing the ruptured epidermis; asci narrowly fusiform; spores linear, minute, rounded at the ends, slightly curved, hyaline.

Dead branches of oak and Rhododendron. Forestburgh. Sept.

Valsia Peckii Howe.
Perithecia numerous, crowded together, sunk in the wood; ostiola subcylindrical, obtuse, crowded, erumpent, black,
sometimes involved in a gray tomentum; asci linear; spores oblong-elliptical, colored, uniseriate, uniseptate, .0005'-.0006' long.

Dead branches of *Vaccinium corymbosum*. Forestburgh. September. Also on branches of *Kalmia latifolia*. J. B. Ellis. (Plate 1, figs. 15–18).

The young spores are pale and simple, containing one or more nuclei, but they soon become colored and uniseptate.

**Lophiostoma sexnucleata** Cooke.

Dead stems of grape vines. North Greenbush. October.

The perithecia in our specimens are closely placed and the spores are smaller than in the type, being .001'-.0012' long, but I have not thought best to separate our plant as a distinct species.

**Sphéria thuïna** n. sp.

Perithecia scattered, nearly free, hemispherical or conical, slightly rugulose, thin, fragile; ostiola at first slightly papillate then pertuse; spores large, uniseptate, oblong-elliptical, constricted at the septum, colored, .0015'-.0018' long.


**Sphéria pilifera** Fr.


The specimens are sterile but appear to belong here. I have seen no description of the fruit of this species and conclude that it is rarely fertile.

**Sphéria lagenaria** Pers.


I find no account of the spores of this species and therefore subjoin the following description of the fruit of our specimens.

Asci very broad, delicate, fugacious; spores crowded, simple, elliptical, colored, .0005' long, .0003' broad.

This is, apparently, a rare species with us. The spores are sometimes found adhering, in a mass, to the apex of the long slender ostiolum. The subicular tomentum is present in some of the specimens and there is sometimes a hairy appearance to the perithecia which seems to be due to this tomentum or to some minute mucilaginous growth.
**Sphēria orthogramma** B. & C.

Sterile.

**Sphēria Parnassæ n. sp.**

Perithecia scattered, convex or sub-hemispherical, prominent, pierced, black; asci cylindrical; spores long, narrow, uniseptate, generally constricted at the septum, often slightly curved, colored, .0015'-.0016' long, with one or two nuclei in each cell.


**Sphēria Arceuthobii n. sp.**

Perithecia small, densely caespitose, oblong or cylindrical, very obtuse, shining, black; asci subclavate, fugacious; spores crowded, globose, colorless, .00016' in diameter.

Capsules of *Arceuthobium pusillum*. Forestburgh. Sept. (Plate 1, figs. 10-14.)

It forms little black tufts, crowning the fruit at the tips of the stems and branches. I have not seen it on the staminate plant. I am not fully satisfied that the generic reference is correct, as the perithecia seem to be mouthless. It is interesting to observe the extent to which parasitism prevails. The Arceuthobium is a parasite on the spruce, this fungus is parasitic on the Arceuthobium, and in a few instances a third parasite, a minute white mold, was seen on the perithecia of the fungus.

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**NEW STATIONS OF RARE PLANTS—REMARKS AND OBSERVATIONS.**

**Ptelea trifoliata** L.

Wading River, L. I. *Miller.*

**Sambucus pubens** *Mx.*

The variety with dissected leaves occurs in the town of Indian Lake.

**Solidago caesia** L.

Mr. Young finds on Long Island a variety with white flowers.
Nabalus Boothii DC.

I am not aware that this species has been found anywhere on the Adirondack Mts., except on the summit of Whiteface, and I greatly fear it will soon be exhausted or trodden out from this station which is now so frequently visited by tourists and others. Its near ally, N. nanus, occurs everywhere on the higher summits and slopes of these mountains.

Diploappus umbellatus T. & G.

Among the Adirondacks this plant is greatly reduced in size and frequently bears no more than six to ten heads of flowers. But notwithstanding the elevation and coolness of the locality it is in flower there by the middle of August.

Rhododendron maximum L.

Near Chapel Pond, Essex county. O. S. Phelps. It is also very abundant in Forestburgh, Sullivan county, where it forms dense and almost impenetrable thickets.

Campanula rotundifolia L.

This plant manifests a tendency to sport. Small flowerless specimens collected near Port Jervis have the rounded leaves on the upper part of the stem, the linear leaves being below them.

Rhinanthus Crista-galli L.

Summit of Haystack Mt. It is interesting to note that in this locality as well as in the neighboring one on Mt. Marcy this plant occupies the southern inclination of the exposed summit, where it is in a measure protected from the bleak northwesterly winds. It was not found on Skylight, whose broad open summit gave promise of a fine botanical field. Perhaps the very broad and nearly flat summit of this mountain does not afford a sufficiently protected southern inclination for it.

Polygonum Careyi Olney.

Long Pond, Wading River. Young.

Arceuthobium pusillum Pk.

Forestburgh. It is more abundant there than in the Sandlake locality. In one instance it was growing in great profusion on an unusually thrifty-looking tree, just as if the luxuriance of the parasite was in proportion to that of its host. Both staminate and pistillate plants were occasionally seen on the same tree, but I have not yet found them intermingled on the same branch. The pistillate plants seem to be the most numerous.
Abies nigra Poir.
This tree extends to the summits of all the high peaks of the Adirondacks, but in the most elevated situations it generally assumes the appearance of a low, half-prostrate bush, the branches sometimes spreading laterally as in the dwarf yew, and the leaves are frequently glaucous. In less elevated situations where the trees are thrifty the glaucous-leaved variety, in the absence of the cones, might easily be mistaken for the white spruce.

Larix Americana Mx.
Variety pendula occurs near "Griffin's Place," Indian Lake. A small shrubby form grows near the summit of Haystack Mt., which is probably the highest altitude attained by this tree in the State. It is there in company with Abies nigra, A. balsamea, Juniperus communis and Thuja occidentalis,—more coniferous trees than I have seen on any of the other high summits of the Adirondacks.

Zygadenus glaucus Nutt.
Lodi swamp near Syracuse, in company with Tofieldia glutinosa. Rev. H. Wibbe.

Jun cus stygius L.
Marshy borders of a lake, Adirondack Mts. The only locality in the State hitherto reported for this rare species is Perch Lake, Jefferson county, and this I infer from the remarks in Paine's Catalogue of Oneida County Plants, is either destroyed or exhausted. Though the newly discovered locality is a remote one, seldom visited by botanists, I hesitate, for prudential reasons, to designate it more definitely.

Commelyna Virginica L.
Fishkill, where it is apparently a stray from cultivation.

Carex scirpoidea Mx.
This, and Abies nigra, should be added to the list of flowering plants found on the summit of Mt. Marcy.

Carex silicea Olney.
Sandy shores near Sag Harbor.

Carex fœnea Willd.
Suffolk county. Young.
Sporobolus serotinus *Gr.*
Near the Old Adirondack Iron Works. Essex county.

Equisetum scirpoides *Mx.*
Shaded ravines. Adirondack Mts.

Sphagnum neglectum *Angst.*
Marshes between Nipple Top and Mt. Colvin.
Dr. Braithwaite considers this as synonymous with *S. laricinum* Spruce, and as it is somewhat doubtful if either is more than a variety of *S. subsecundum* I forbear reporting it as a species to be added to our flora.

Stereocaulon condensatum *Laur.*
A variety of this occurs on the high summits of the Adirondacks.

Agaricus Campanella v. badipus *Eng. Fl.*

Agaricus fibuloides *Pk.*
Burnt ground. Forestburgh. Sept.

Agaricus strictior *Pk.*
A variety of this species occurs in sphagnous marshes in Forestburgh. The stem is less straight and more fragile than usual, and the pileus is somewhat concentrically zoned when moist.

Cortinarius asper *Pk.*
This plant sometimes grows in tufts or clusters and bears a very close resemblance to *Agaricus melleus*, both in color and in the character of the scales of the pileus.

Lactarius glycosmus *Fr.*
Abundant under pine trees in Forestburgh, where it generally has the pileus of a lurid-brown color.

Polyporus sulfureus *Fr.*
An unusually large and intricately confluent mass of this fine and edible species was found growing on the trunk of a cherry tree in Deerfield by Hon. Horatio Seymour. A part of the specimen was presented to, and is preserved in, the State Herbarium. He has also contributed specimens of *Helvella esculenta* var. *conica* Fr., which grew in considerable abundance on his grounds in Deerfield.
USTILAGO UTRICULOSA Tul.

A form of this species was found in Forestburgh, having the spores rather larger than usual and their reticulations smaller and less distinct. It inhabits Polygonum sagittatum. Nine species of this genus are now known to occur in the State. They are injurious to the plants they attack and are worthy of careful study. To facilitate the identification of the species, the following analytical synopsis and list of host plants is subjoined:

a. Spores produced in the leaves only
b. Spores produced in the flowers, fruit or ovaries
c. Spores produced in suborbicular swellings or blotches
   Erythronii.
d. Spores produced in long lines
   longissima.
e. Spores intensely black in the mass
   utriculosa.
f. Spores black, generally tinged with purple
   Junci.
g. Spores smooth, .0003 inch in diameter
   Carbo.
h. Spores rough, .0004 inch in diameter
   Syntherismae.

Ustilago Erythronii Clinton. Inhabits Erythronium Americanum Sm.
U. longissima Tul. " Glyceria aquatica Sm.
U. urceolorum Tul. " Carex (several species).
U. Maydis Cd. " Zea Mays L.
U. Carbo Tul. " | Avena sativa L.
U. Syntherismae Schw. " | Triticum vulgare Vill., etc.

I have seen U. utriculosa on Polygonum Pennsylvanicum and P. sagittatum. In Europe it occurs on other species.

U. urceolorum is found with us on Carex Pennsylvanica and C. umbellata. In Europe it attacks other species. U. Maydis Cd. is the same as U. Zea Schw., and U. Carbo Tul. equals U. segetum Ditm. U. Syntherismae is said to occur also on Digitaria and Andropogon.

In closing this report, grateful acknowledgments are rendered to C. F. Austin, Esq., for aid in the determination of Hepaticae, and to H. Willey, Esq., for aid in the determination of lichens, and to all the botanists whose names appear in the preceding pages, for their kind coöperation in the investiga-
tion of our flora, and for their generous contributions of specimens.

When no name is added to the station or stations herein given, the plant has been found therein by the writer. Dates signify the time when the specimens were collected.

Respectfully submitted,

CHAS. H. PECK.

ALBANY, January 6, 1874.
EXPLANATION OF PLATE I.

USTILAGO ERYTHRONII Clinton.

Page 115.

Fig. 1. A leaf of *Erythronium Americanum* bearing the Ustilago.

" 2. Two spores magnified 400 diameters.

AGARICUS (HEBELOMA) FUSCODISCUS Peck.

Page 95.

Fig. 2. Two spores magnified 400 diameters. 

DOTHIDEA DALIBARDAE Peck.

Page 109.

Fig. 3. A young plant.

" 4. Three plants of ordinary size.

" 5. Vertical section of a pileus.

" 6. Four spores x 400.

SPHÆRIA ARCEUTHOBII Peck.

Page 111.

Fig. 7. A leaf of *Dalibarda repens* bearing the Dothidea.

" 8. An ascus containing spores x 400.

" 9. Three spores x 400.

VALSA Peckii Howe.

Page 109.

Fig. 15. A piece of wood of *Vaccinium corymbosum* bearing clusters of the Valsa.

" 16. A vertical section of a cluster and the surrounding wood magnified.

" 17. An ascus containing spores x 400.

" 18. Five spores, three of them immature, x 400.

PERIDERMUM DECOLORANS Peck.

Page 104.

Fig. 19. Tip of a branch of *Abies nigra*, its leaves bearing the Peridermium.

" 20. A leaf bearing three peridia, slightly magnified.

" 21. A spore x 400.
PLATE 1 — (Continued.)

**Agaricus (Mycena) delectabilis Peck.**

Page 93.

**Fig. 22.** Two plants of ordinary size.

" 23. Vertical section of a pileus.

" 24. Transverse section of a stem.

" 25. Four spores x 400.

**Coprinus aquatilis Peck.**

Page 96.

Fig. 26. A young plant.

" 27. A mature plant.

" 28. Two spores x 400.

**Typhula filicina Peck.**

Page 100.

Fig. 29. A piece of a fern stem bearing three plants.

" 30. A plant magnified.
EXPLANATION OF PLATE II.

**Pestalozzia Marle Clinton.**
Page 102.

Fig. 1. Apical part of a leaf of *Rhododendron maximum* bearing the Pestalozzia.

" 2. Three spores, one with the peduncle attached, x 400.

**Polyporus volvatus Peck.**
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Fig. 3. A plant attached to a piece of wood.

" 4. A plant with the centrally ruptured volva cut loose from the anterior portion of the pileus and pendent, revealing the pores.

" 5. Vertical section of a plant with heaps of spores on the inner surface of the ruptured volva.

" 6. Four spores x 400.

**Oidium corticale Peck.**
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Fig. 7. A piece of bark bearing tufts of the Oidium.

" 8. Flocci and spores x 400.

**Helicosporium ellipticum Peck.**
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Fig. 9. A piece of wood bearing tufts of the Helicosporium.

" 10. Anastomosing flocci x 400.

" 11. A coiled spore, lateral view, x 400.

" 12. A coiled spore, vertical view, x 400.

**Puccinia Veratri Clinton.**
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Fig. 13. Apical part of a leaf of *Veratrum viride* bearing the Puccinia.

" 14. Two spores x 400.

**Agaricus (Omphalia) Rhododendri Peck.**
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Fig. 15. Two plants attached to a piece of bark.


" 17. Vertical section of a pileus magnified.

" 18. Transverse section of a stem magnified.

" 19. Four spores x 400.
PLATE II. — (Continued.)

Clavaria spatulata Peck.
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Fig. 20. Part of a branch of Carya alba bearing five plants.

Tremella (Coryne) stipitata Peck.
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Fig. 22. A piece of wood bearing five plants.
  " 23. Three spores x 400.

Peridermium balsameum Peck.
Page 101.
Fig. 24. A leaf of Abies balsamea bearing the Peridermium.
  " 25. Part of a leaf with one closed and one ruptured peridium, magnified
  " 26. A spore x 400.

Marasmius minutissimus Peck.
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Fig. 27. Part of a leaf bearing three plants.
EXPLANATION OF PLATES.

The following Plates, 9-13, inclusive, are illustrative of a paper on New Species of Fossils from the Vicinity of Louisville, Kentucky, and the Falls of the Ohio, in the 24th Report on the State Museum of Natural History, pp. 181-200. The plates were omitted in the publication of the Report for want of time for their preparation. Explanations refer to pages of 24th Report.

PLATE IX.
Orthis rugæplicata H. & W.
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Figs. 1, 2, 3. Dorsal, ventral and profile views of specimen enlarged two diameters.

Orthis Nisis H. & W.
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Figs. 4-6. Dorsal, ventral and profile views of a large individual.

" 7, 8. Profile and dorsal views of a smaller individual.

Productus (Productella) subaculeata Murch., var. cataracta H. & W.
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Figs. 9, 10. Ventral and profile views.

Spirifera rostellum H. & W.
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Figs. 11-13. Dorsal, ventral and front views.

Cyrtina crassa Hall.
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Figs. 14, 15, 16. Dorsal, cardinal and front views.

Spirifera radiata Sow.
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Figs. 17, 18. Dorsal and ventral views of a specimen from the horizon of the Clinton group, near Louisville, Ky.

Cyrtia trapezoidalis Hisinger.
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Figs. 19, 20, 21. Dorsal, front and cardinal views of specimen.