

## REPORT OF THE BOTANIST.

27 Reg Rep.

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*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.

PLANTS COLLECTED.	New to the Herbarium.	New to the State.	New to Science.
Flowering Plants .....	3	1	
Club Mosses.....	1	1	
Mosses .....	5	5	
Liverworts.....	5	5	
Lichens .....	9	9	
Fungi.....	97	97	39
	120	118	39
PLANTS CONTRIBUTED.			
Flowering Plants .....	9	7	
Ferns .....	2	2	
Mosses .....	1	1	
Algæ .....	1	1	
Fungi.....	18	18	5
	151	147	44

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 lamellæ 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 larvæ 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 lamellæ, 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 sphagnous 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 larvæ 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.

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 <i>L.</i>	Pannaria lurida <i>Mont.</i>
Medicago sativa <i>L.</i>	P. Guepini <i>Delis.</i>
Desmodium lævigatum <i>DC.</i>	P. rubiginosa <i>Ach.</i>
Potentilla recta <i>Willd.</i>	Collema tenax <i>Sw.</i>
Heuchera Americana <i>L.</i>	C. cladodes <i>Tuck.</i>
Torilis Anthriscus <i>Gært.</i>	Physcia cil. v. angustata <i>Tuck.</i>
Helianthus angustifolius <i>L.</i>	Gyalecta Pineti <i>Schrad.</i>
Hieracium murorum <i>L.</i>	Stereocaulon condensatum.
Utricularia resupinata <i>Greene.</i>	Biatora rivulosa <i>Ach.</i>
Pycnanthemum pilosum <i>Nutt.</i>	B. Russellii <i>Tuck.</i>
Chenopodium polyspermum <i>L.</i>	Buellia turgescens <i>Nyl.</i>
Rumex Engelmanni <i>Ledeb.</i>	Lecanactis pr. v. chloroconia.
Scirpus debilis <i>Pursh.</i>	Staurothele circinata <i>Tuck.</i>
Rhynchospora nitens <i>Vahl.</i>	Arthonia lecideella <i>Nyl.</i>
Agrostis perennans <i>Tuck.</i>	Verrucaria pinguicula <i>Mass.</i>
Panicum amarum <i>Ell.</i>	V. pyrenophora <i>Ach.</i>
Andropogon Virginicus <i>L.</i>	V. rupestris <i>Schrad.</i>
Asplenium montanum <i>Willd.</i>	V. papillosa <i>Ach.</i>
Chara hispida <i>L.</i>	Stigonema coloratum <i>Ag.</i>
C. Hedwigii <i>Ag.</i>	Ectocarpus aureus <i>Lyngh.</i>

- Agaricus Friesii* *Lasch.*  
 A. *fuscusquameus* *Pk.*  
 A. *felinus* *Pers.*  
 A. *oblitus* *Pk.*  
 A. *ponderosus* *Pk.*  
 A. *rubicundus* *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. *griseoscabrosus* *Pk.*  
 A. *bellulus* *Pk.*  
 A. *geminellus* *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. *virgatulus* *Pk.*  
 H. *borealis* *Pk.*  
*Lactarius regalis* *Pk.*  
 L. *Gerardii* *Pk.*  
*Russula sordida* *Pk.*  
 R. *consobrina* *Fr.*  
*Nyctalis asterophora* *Fr.*  
*Marasmius cæspitosus* *Pk.*  
 M. *Viticola* *B. & C.*  
 M. *glabellus* *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 cæruleoporus *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. sanguinolentus *Fr.*  
 P. attenuatus *Pk.*  
 P. Gordoniensis *B. & Br.*  
 P. Armeniacus *Fr.*  
 Cyclomyces Greeni *Berk.*  
 Hexagona carbonaria *B. & C.*  
 Sistotrema confluens *Pers.*  
 Hydnum confluens *Pk.*  
 H. sulphureum *Schw.*  
 H. ferruginosum *Fr.*  
 Grandinia coriaria *Pk.*  
 Thelephora Willeyi *Clinton.*  
 Stereum tenerrimum *B. & R.*  
 S. radiatum *Pk.*  
 Corticium leucothrix *B. & C.*  
 C. bicolor *Pk.*  
 Clavaria fistulosa *Fr.*  
 Exobasidium Azaleæ *Pk.*  
 E. Andromedæ *Pk.*  
 Lycoperdon pedicellatum *Pk.*  
 Æthaliium Ferrincolæ *Schw.*  
 Spumaria alba *DC.*  
 Licea cylindrica *Fr.*  
 Stemonitis typhoides *DC.*  
 S. herbatica *Pk.*  
 Arcyria incarnata *Pers.*  
 A. nutans *Fr.*  
 A. globosa *Schw.*  
 Didymium furfuraceum *Fr.*
- Didymium farinaceum *Fr.*  
 D. connatum *Pk.*  
 Diderma crustaceum *Pk.*  
 D. farinaceum *Pk.*  
 D. Mariæ-Wilsoni *Clinton.*  
 Trichia reniformis *Pk.*  
 Physarum pulcherripes *Pk.*  
 Angioridium sinuosum *Grev.*  
 Perichæna flavida *Pk.*  
 Licea cæspitosa *Pk.*  
 Craterium leucocephalum.  
 C. obovatum *Pk.*  
 Diplodia vulgaris *Lev.*  
 Excipula Equiseti *Pk.*  
 Dinemasporium Robiniæ *Ger.*  
 D. acerinum *Pk.*  
 Hendersonia Robiniæ *West.*  
 Pestalozzia pezizoides *De Not.*  
 Bactridium Ellisii *Berk.*  
 Puccinia Lobeliæ *Gerard.*  
 P. curtipes *Howe.*  
 Æcidium Lycopi *Gerard.*  
 Æ. Uvulariatum *Schw.*  
 Æ. Hydrophylli *Pk.*  
 Ceratium hydnoides *A. & S.*  
 C. porioides *A. & S.*  
 Stilbum ramosum *Pk.*  
 Helicoma Mulleri *Cd.*  
 Oidium fulvum *Lk.*  
 O. megalosporum *B. & C.*  
 Fusisporium roseolum *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. corrugata *C. & P.*  
 P. coronata *Bull.*

Peziza Dehnii <i>Rabh.</i>	Diatrype moroides <i>C. &amp; P.</i>
Helotium rugipes <i>Pk.</i>	D. bullata <i>Fr.</i>
H. macrosporum <i>Pk.</i>	D. adusta <i>C. &amp; P.</i>
H. thujinum <i>Pk.</i>	D. atropunctata <i>Schw.</i>
H. gracile <i>C. &amp; P.</i>	D. quercina <i>Tul.</i>
H. Limonium <i>C. &amp; P.</i>	Valsa bicincta <i>C. &amp; P.</i>
Hysterium typhinum <i>Fr.</i>	V. centripeta <i>Fr.</i>
H. sphaerioides <i>A. &amp; S.</i>	V. profusa <i>Fr.</i>
H. maculare <i>Fr.</i>	V. hapalocystis <i>B. &amp; Br.</i>
H. macrosporum <i>Pk.</i>	Massaria Argus <i>Tul.</i>
Torrubia capitata <i>Fr.</i>	Eutypa Acharii <i>Tul.</i>
Hypocrea alutacea <i>Fr.</i>	Lophiostoma magnata <i>C. &amp; P.</i>
Nectria Ribis <i>Tode.</i>	L. turrita <i>C. &amp; P.</i>
N. Celastris <i>Schw.</i>	Sphæria viridicoma <i>C. &amp; P.</i>
N. ochracea <i>Fr.</i>	S. fuscella <i>B. &amp; Br.</i>
N. balsamea <i>C. &amp; P.</i>	S. Semen <i>C. &amp; P.</i>
N. Apocyni <i>Pk.</i>	S. mutans <i>C. &amp; P.</i>
N. mycetophila <i>Pk.</i>	S. subconica <i>C. &amp; P.</i>
Elaphomyces variegatus <i>Vitt.</i>	S. Sarmentorum <i>Fr.</i>
Xylaria grandis <i>Pk.</i>	S. Staphyleæ <i>Pk.</i>
Hypoxyton perforatum <i>Schw.</i>	S. Desmodii <i>Pk.</i>
H. rubiginosum <i>Fr.</i>	

( 2. )

## PLANTS COLLECTED.

Polygonum Hartwrightii <i>Gr.</i>	Frullania Oakesiana <i>Aust.</i>
Lycopodium sabinæfolium.	Cetraria Fahlunensis <i>Schær.</i>
Thelia Lescurii <i>Sulliv.</i>	Lecanora badia <i>Fr.</i>
Hypnum Oakesii <i>Sulliv.</i>	Cladonia deformis <i>Hoffm.</i>
H. exannulatum <i>Gumb.</i>	C. papillaria <i>Hoffm.</i>
H. cupressiforme <i>L.</i>	Bæomyces byssoides <i>Fr.</i>
H. acutum <i>Mitt.</i>	Biatora milliaria <i>Fr.</i>
Sphagnœcetes Hubeneriana,	Lecidea arctica <i>Smf.</i>
Jungermannia albescens <i>Hook.</i>	L. Diapensiae <i>Th. Fr.</i>
J. ventricosa <i>Dicks.</i>	L. melancheima <i>Tuck.</i>
Scapania undulata <i>N. &amp; M.</i>	Agaricus fumosoluteus <i>Pk.</i>

- Agaricus rosellus *Fr.*  
 A. atroalboides *Pk.*  
 A. constans *Pk.*  
 A. delectabilis *Pk.*  
 A. Acicula *Schæff.*  
 A. galopus *Schrad.*  
 A. montanus *Pk.*  
 A. Rhododendri *Pk.*  
 A. luteofolius *Pk.*  
 A. infidus *Pk.*  
 A. fuscodiscus *Pk.*  
 A. fragilior *Pk.*  
 A. chimonophilus *B. & Br.*  
 Coprinus aquatilis *Pk.*  
 Cortinarius fuscoviolaceus *Pk.*  
 Hygrophorus aurantiacoluteus  
 Gomphidius stillatus *Strauss.*  
 Lactarius alpinus *Pk.*  
 Marasmius minutus *Pk.*  
 M. minutissimus *Pk.*  
 Panus operculatus *B. & C.*  
 Polyporus squamosus *Fr.*  
 P. spumeus *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.*  
 Irpex 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 Mariæ *Clinton.*  
 Coryneum triseptatum *Pk.*  
 Spilocæa concentrica *Schw.*  
 Helicosporium olivaceum *Pk.*  
 H. ellipticum *Pk.*  
 Ustilago Syntherismæ *Schw.*  
 Uredo Empetri *DC.*  
 Peridermium elatinum *A. & S.*  
 P. balsameum *Pk.*  
 P. decolorans *Pk.*  
 Pterula setosa *Pk.*  
 Cladosporium Lignicola *Cd.*  
 Oidium corticale *Pk.*  
 Fusidium flavovirens *Fr.*  
 Monilia candida *Pk.*  
 Pilobolus crystallinus *Tode.*  
 Chætomium melioloïdes *C. & P.*  
 Helvella sphærospora *Pk.*  
 Mitrula cucullata *Fr.*  
 M. inflata *Schw.*  
 Peziza adusta *C. & P.*  
 P. subcarnea *C. & P.*  
 Ascobolus pilosus *Fr.*  
 Helotium aciculare *Fr.*  
 H. fastidiosum *Pk.*  
 Tympanis Fraxini *Schw.*  
 Hysterium tumida *Duby.*  
 H. xylomoides *Chev.*  
 H. Rhododendri *Schw.*  
 Rhytisma monogramma *B. & C.*  
 Torrubia entomorrhiza *Fr.*  
 Epichloe Hypoxylon *Pk.*

Nectria epispæria <i>Fr.</i>	Lophiostoma sexnucleata <i>Ck.</i>
Dothidea Dalibardæ <i>Pk.</i>	Sphæria lagenaria <i>Pers.</i>
Diatrype platasca <i>Pk.</i>	S. orthogramma <i>B. &amp; C.</i>
D. corniculata <i>Ehrh.</i>	S. thujina <i>Pk.</i>
Valsa impulsæ <i>C. &amp; P.</i>	S. Parnassiæ <i>Pk.</i>
V. subclypeata <i>C. &amp; P.</i>	S. Arceuthobii <i>Pk.</i>
V. Peckii <i>Howe.</i>	

(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.*

Sphærococcus coronopifolius.

S. cor. v. clavatus *Ag.*Schizymena Dubyi *Chauv.*Rhodymena palnetta *Grev.*R. pal. v. Sarniensis *Grev.*Dasya coccinea *Huds.*Delesseria ruscifolia *Lam.*Polysiphonia byssoidea *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.*

Pycnophytus tuberculatus.

Cystoseira siliquosa *Ag.*C. ericoides *G. & W.*Calliblepharis ciliata *Kutz.*C. jubata *Kutz.*

Corynospora pedicellata <i>J. Ag.</i>	Tetraspora lubrica <i>Ag.</i>
Bangia Ceramicola <i>Chauv.</i>	Chaetomorpha area <i>Dill.</i>
Codium Bursa <i>L.</i>	Lemanea torulosa <i>Ag.</i>
C. tomentosum <i>Ag.</i>	Batrachospermum vagum.
Ulva bullosa <i>Roth.</i>	

Rev. A. P. VAN GIESON, Poughkeepsie, N. Y.

Aconitum Napellus *L.*

Rev. H. WIBBE, Oswego, N. Y.

Ammannia humilis <i>Mx.</i>	Tofieldia glutinosa <i>Willd.</i>
Zygadenus glaucus <i>Nutt.</i>	

Prof. P. A. PUISSANT, Troy, N. Y.

Verbena bracteosa *Mx.*

E. HUNT, Utica, N. Y.

Botrychium matricariæfolium *Braun.*

E. W. MUNDY, Syracuse, N. Y.

Botrychium Lunaria *Sw.*

H. GILLMAN, Detroit, Mich.

Parnassia parviflora <i>DC.</i>	Botrychium Lunaria <i>Sw.</i>
Abies balsamea <i>Marshall.</i>	

A. H. CURTISS, Liberty, Va.

Sedum Nevii <i>Gr.</i>	Arceuthobium campylopodum
Galium anglicum <i>Huds.</i>	<i>Engelm.</i>

E. C. HOWE, M. D., Yonkers, N. Y.

Puccinia curtipes <i>Howe.</i>	Dothidea tetraspora <i>Fr.</i>
Uromyces Phaseoli <i>Strauss.</i>	

H. W. YOUNG, Aquebogue, N. Y.

Solidago elliptica <i>Ait.</i>	Scirpus Olneyi <i>Gr.</i>
S. cæs. v. albiflora <i>Young.</i>	Carex striata <i>Mx.</i>
Callitriche heterophylla <i>Ph.</i>	C. sterilis <i>Willd.</i>
Polygonum Careyi <i>Olney.</i>	Agrostis alba <i>L.</i>
Rumex Engelmanni <i>Ledeb.</i>	

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

Protomyces Martindalei *Pk.*

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

Fragaria Vir. v. Illincensis <i>Gr.</i>	Phlox stellaria <i>Gr.</i>
Saxifraga Forbesii <i>Vasey.</i>	Cheilanthes vestita <i>Sw.</i>
Heuchera Rugellii <i>Shutt.</i>	Pellæa atropurpurea <i>Lk.</i>
Dodecatheon Mea. v. Frenchii <i>Vasey.</i>	Asplenium pinnatifidum <i>Nutt.</i>

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

Polyporus cupulæformis.	Peridermium Pini <i>Chev.</i>
Discosia maculæcola <i>Gerard.</i>	Rœstelia cornuta <i>Tul.</i>
Septoria Verbenæ <i>D &amp; R.</i>	Æcidium Taraxaci <i>Kz.</i>
S. Hepaticæ <i>Desm.</i>	Æ. Centaureæ <i>DC.</i>
S. Tiliæ <i>West.</i>	Perenospora sordida <i>Berk.</i>
S. Acericola <i>Desm.</i>	P. Urticæ <i>Casp.</i>
Phyllosticta Cytisi <i>Desm.</i>	P. Bistortæ <i>Fckl.</i>
P. vulgaris <i>Desm.</i>	P. ovata <i>Fckl.</i>
Diplodia Fibricla <i>Berk.</i>	Sporotrichum densum <i>Lk.</i>
D. juglandina <i>Fr.</i>	Erysiphe Linkii <i>Lev.</i>
Ascochyta Medicaginis <i>Fckl.</i>	E. Umbelliferarum <i>De By.</i>
Glæosporium Juglandis <i>Lib.</i>	E. tortilis <i>Lk.</i>
Melanconium juglandinum	Microsphæra holosericea <i>Lev.</i>
Phragmidium effusum <i>Fckl.</i>	Rhytisma salicinum <i>Fr.</i>
Puccinia Cirsii <i>Lasch.</i>	R. umbonatum <i>Fr.</i>
P. obtusa <i>Schl.</i>	Psilospora faginea <i>Rabh.</i>
P. obtegens <i>Tul.</i>	Dothidea Ulmi <i>Fr.</i>
P. Pimpinellæ <i>Lk.</i>	Valsa nivea <i>Fr.</i>
P. Bardanæ <i>Cd.</i>	Sphærella sparsa <i>Awd.</i>
P. Ægopodii <i>Lk.</i>	S. maculæformis <i>Pers.</i>
Uromyces Genistæ <i>Fckl.</i>	S. perexigua <i>Fckl.</i>
Cystopus cubicus <i>Lev.</i>	

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

Ptelea trifoliata <i>L.</i>	Cyperus Michauxianus <i>Schul.</i>
Euphorbia Cyperissias <i>L.</i>	Agrostis alba <i>L.</i>
Scirpus Olneyi <i>Gr.</i>	Onoclea sensibilis <i>L.</i>

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

Uredo Ledicola *Pk.*

GEO. VASEY, M. D., Washington, D. C.

*Æcidium Cressæ DC.*

S. WATSON, Cambridge, Mass.

*Peridermium decolorans Pk.*

J. M. COULTER, Washington, D. C.

*Puccinia Porteri Pk.**Sphæria Coulteri Pk.**Peziza vulcanalis Pk.*

J. B. ELLIS, Newfield, N. J.

*Paxillus flavidus Berk.**Rœstelia transformans Ellis.**Boletus Russellii Frost.**Hysterium rufescens Schw.*

C. C. PARRY, M. D., Davenport, Iowa.

*Æcidium Psoraleæ Pk.**Dothidea Gramma Schw.**Æ. Parryi Pk.*

C. C. FROST, Brattleboro' Vt.

*Boletus Frostii Russell.**Boletus pictus Pk.*B. *Russellii Frost.*B. *auriporous Pk.*B. *Spraguei Frost.*B. *flavidus Fr.*B. *robustus Frost.*B. *luteus L.*B. *speciosus Frost.*B. *edulis L.*B. *miniato-olivaceus Frost.*B. *piperatus Bull.*B. *pallidus Frost.*B. *felleus Fr.*B. *sordidus Frost.*B. *collinitus Fr.*B. *chromapes Frost.*B. *spadiceus Fr.*B. *subchromeus Frost.*B. *cyanescens Bull.*B. *rubeus Frost.*B. *strobiliformis Scop.*B. *Roxanæ Frost.**Polyporus cæruleoporous Pk.*

R. P. WHITFIELD, Albany, N. Y.

*Trichomanes radicans Swartz.*

E. L. HANKENSON, Newark, N. Y.

*Polygonum Hartwrightii Gr.*

Hon. H. SEYMOUR, Utica, N. Y.

*Polyporus sulfureus Fr.**Polyporus Curtisii Berk.*P. *sanguineus Fr.**Morchella esc. v. conica Fr.*

HON. G. W. CLINTON, Buffalo, N. Y.

Antitrichia Californica <i>Sulliv.</i>	Polyporus sanguineus <i>L.</i>
A. curtispindula <i>Brid.</i>	P. incarnatus <i>Fr.</i>
Leskea Austinii <i>Sulliv.</i>	P. Salviæ <i>B. &amp; C.</i>
Neckera Douglassii <i>Hook.</i>	Phoma Syringæ <i>B. &amp; C.</i>
Hypnum crispifolium <i>Hook.</i>	Pestalozzia Mariæ <i>Clinton.</i>
H. Oreganum <i>Sulliv.</i>	Puccinia Veratri <i>Clinton.</i>
H. myosuroides <i>L.</i>	Ustilago Erythronii <i>Clinton.</i>
H. lutescens <i>Dill.</i>	Uromyces Lillii <i>Clinton.</i>
Porphyridium cruentum <i>Ag.</i>	Uredo Smilacis <i>Schw.</i>
Agaricus cepæstipes <i>Sow.</i>	Aecidium dubium <i>Clinton.</i>
Lenzites striata <i>Sw.</i>	Sporidesmium concinnum.
Merulius bellus <i>B. &amp; C.</i>	Cladosporium Typhæ <i>Schw.</i>
Ditiola radicata <i>Fr.</i>	Hypomyces aurantius <i>Tul.</i>
Trametes hydnoides <i>Fr.</i>	

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(4.)

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

ACONITUM NAPELLUS *L.*

Along the upper waters of the Beaver Kill, Ulster county.  
*Rev. A. P. Van Gieson.*

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.*

Waste grounds. West Troy. *P. A. Puissant.* Doubtless introduced from the west.

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 thecæ 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 LESCURI* *Sulliv.*

Dry rocky soil. Port Jervis, Sullivan county. Sterile.

*LESKEA AUSTINI* *Sulliv.*

Trunks of trees. Saratoga. *Hon. G. W. Clinton.* Sterile.

*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.*

Wet places. Catskill and Adirondack Mts. Sterile.

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

*HYPNUM CUPRESSIFORME* *L.*

Port Jervis and Helderberg Mts. Sterile.

*HYPNUM ACUTUM* *Mitt.*

Wooded swamps. Sandlake. Rare. Oct.

*SPHAGNOCETIS HUBENERIANA* *Rabh.*

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.*

Rocks. Mt. Colvin.

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 DIAPENSIS *Th. Fr.*

Summit of Mt. Marcy, on *Diapensia* sods.

LECIDEA MELANCHEIMA *Tuck.*

Old fence rails. Sandlake.

PORPHYIDIUM CRUENTUM *Ag.*

Ground in a conservatory. Buffalo. *Clinton.*

AGARICUS CEPÆSTIPES *Sow.*

Greenhouse. Buffalo. *Clinton.*

AGARICUS (TRICHOLOMA) FUMOSOLUTEUS *n. sp.*

Pileus fleshy, convex or expanded, smooth, moist, smoky-yellow ; lamellæ 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.*

Hemlock woods. Forestburgh. Sept.

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, uncinata 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, uncinata, 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.

Among mosses in woods. Forestburgh. Sept.

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 lamellæ. (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; lamellæ 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; lamellæ 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; lamellæ 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 subcæspitose, 2'-3' high, pileus 1'-2' broad, stem 3"-5" thick.

Trunks of birch trees. Forestburgh. Sept.

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, lamellæ 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.

Mossy ground in swampy woods. Adirondack Mts. Sept.

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; lamellæ 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 lamellæ 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.

Damp, decaying leaves in water holes of swamps. Indian Lake. July.

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 lamellæ 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-plicate almost to the apex, furfuraceous, yellowish-brown; lamellæ 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; lamellæ 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.

Sphagnous marshes. Forestburgh. Sept.

HYGROPHORUS AURANTIACOLUTEUS *B. & C.*

Among Dicranum. Sandlake and Albany. Aug.

GOMPHIDIUS STILLATUS *Strauss.*

Low mossy ground in woods. Adirondack Mts. Aug.

LACTARIUS ALPINUS *n. sp.*

Pileus fleshy, dry, umbilicate or centrally depressed, tomentose-squamulose, ochraceous or tawny-yellow; lamellæ 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; lamellæ distant, subvenose, unequal, sometimes branched, white; stem capillary, smooth, shining, blackish-brown.

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

Fallen leaves in woods and swamps. Catskill Mts. and Sandlake. July.

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; lamellæ 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 lamellæ are reduced to three or four vein-like elevations.

*PANUS OPERCULATUS B. & C.*

Dead branches of alders. Adirondack Mts. Aug.

*POLYPORUS CUPULEFORMIS. B. & C.*

Dead branches. Poughkeepsie. *W. R. Gerard.*

*POLYPORUS SQUAMOSUS Fr.*

Trunk of an elm tree. Albany. May.

*POLYPORUS SPUMEUS Fr.*

Decaying trunks of trees. Adirondack Mts. Aug.

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 subrose *Placodermei*.

POLYPORUS NIGRICANS *Fr.*

Trunks of birch trees. Indian Lake. July.

POLYPORUS CONCHATUS *Fr.*

Trunks of ash trees. Indian Lake. July.

POLYPORUS PINICOLA *Fr.*

Trunks of dead pine trees. Croghan. Sept.

POLYPORUS VULGARIS *Fr.*

Decaying wood. Forestburgh. Sept.

POLYPORUS INCARNATUS *Fr.*

Decaying wood. Buffalo, *Clinton*. North Greenbush. Oct.

POLYPORUS SALVIE *B. & C.*

Decaying wood. Goat Island. *Clinton*.

TRAMETES ODORATUS *Fr.*

Old trunks of spruce trees Adirondack Mts.

MERULIUS PORINOIDES *Fr.*

Old pine stumps. Forestburgh. Sept.

MERULIUS BELLUS *B. & C.*

Decaying wood. Tonawanda. *Clinton.*

IRPEX LACTEUS *Fr.*

Dead branches and stumps of frondose trees. Forestburgh. Sept.

This is thought by some to be a variety of *Irpea 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.

Bark of dead balsam trees, *Abies balsamea*. Adirondack Mts. Aug.

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.*

Decaying wood and dead branches. North Greenbush. Oct.

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.

Dead stems of ferns, *Osmunda cinnamomea*. Forestburgh. Sept.

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.*

Decaying leaves, twigs and stems in damp places. Sand-lake, Portville, Forestburgh and Adirondack Mts. Aug. and Sept.

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.*

Decaying wood. Buffalo and Olean. *Clinton*. Forestburgh. Spring and Autumn.

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 SYRINGÆ *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 VERBENÆ *D. & R.*

Verbena leaves. Poughkeepsie. *Gerard*.

DISCOSIA MACULÆCOLA *Gerard*.

Living leaves of *Smilax rotundifolia*. Poughkeepsie. *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 setæ .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 bisepate, 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.

SPILOCEA CONCENTRICA *Schw.*

Decaying squashes. Albany. November.

HELICOSPORIUM OLIVACEUM *n. sp.*

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

Hemlock wood. North Greenbush. October.

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; flocci 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 flocci appear to anastomose as in the capillitium of *Stemonitis*. The spores are not distinctly septate. (Plate 2, figs. 9-12.)

SPORIDESMIUM CONCINNUM *B. & C.*

Decaying wood. Buffalo. September. *Clinton*.

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. Lobeliae*.

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.

Leaves of *Lilium Canadense*. Buffalo. July. *Clinton*.

The roughness of the spore appears to be produced by little pits or depressions. The species is related to *U. apiculosa* and *U. Euphorbiae*.

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 SYNTHETERISMÆ *Schw.*

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.

UREDOSMILACIS *Schw.*

Leaves of *Lilium Canadense*. Buffalo. August. *Clinton*.

UREDOPETRI *D. C.*

Leaves of the crowberry, *Empetrum nigrum*. Summit of Haystack Mountain. August.

ÆCIDIUM NESÆE *Gerard.*

Stems and leaves of *Nesaea verticillata*. Poughkeepsie. *Gerard*. Buffalo. *Clinton*.

ÆCIDIUM DUBIUM *Clinton. n. sp.*

Spots scattered, suborbicular, yellow or purplish; peridia small, subcircinating, crowded; spores yellow.

Lower surface of leaves of *Calystegia*. Squaw Island. June. *Clinton*.

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

PERIDERMIIUM 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.

PERIDERMIIUM 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.

PERIDERMIIUM 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, subglobose, rough, with a thick epispore, yellow, about .0015' in diameter.

Leaves of spruce trees, *Abies nigra*. Adirondack Mountains. August. (Plate 1, figs. 19-21.)

I found this species very abundant on the low starved spruces of the high summits and cold sphagnous 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.

Decaying *Polyporus elegans*. Adirondack Mts. Aug.

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

*CLADOSPORIUM LIGNICOLA Cd.*

Birch chips. Indian Lake. July.

*CLADOSPORIUM TYPHE Schw.*

Dead leaves of *Typha latifolia*. Buffalo. Clinton.

This appears to differ from *C. Herbarum* in habit.

*OIDIUM 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 subangular, .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 distinct spores as in most other species.

*FUSIDIUM FLAVOVIRENS Fr.*

Fallen leaves. Albany. Oct.

MONILIA CANDIDA *n. sp.*

Flocci scattered, erect, simple, septate, pellucid; heads of spores rather compact, subglobose, erect, white; spores subglobose, .00025'-.0003' in diameter.

Decaying fungi. Forestburgh. Sept.

PILOBOLUS CRYSTALLINUS *Tode.*

Horse dung. Bethlehem. September.

The spores in our specimens are about .0005' in diameter.

CILETOMIUM MELIOLOIDES *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. funiculum*, but with the hairs more branched, the branches more spreading, and the spores equal in size. Externally it resembles a *Meliola*.

HELVELLA SPHEROSPORA *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.

Old stumps in woods. Indian Lake. July.

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 OCUCLATA *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.*

Decaying wood and bark of trees. Catskill Mts. and Worcester. July and August.

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.

Burnt ground under pine trees. West Albany. July.

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.*

Dung of deer. Adirondack Mts. August.

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.

TYMPANIS FRAXINI *Schw.*

Dead branches of ash trees. Forestburgh. September.

HYSTERIUM TUMIDA *Duby.*

Fallen leaves of beech trees. Croghan. September.

HYSTERIUM XYLOMOIDES *Chev.*

Fallen maple leaves. Croghan. September.

HYSTERIUM RHODODENDRI *Schw.*

Leaves of *Rhododendron maximum*. Forestburgh. Sept.

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 larvæ imbedded in decaying wood or leaves in woods. Adirondack Mts. August.  
The head in our specimens is yellow when fresh.

EPICHLÖE 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.

Living stems of grass. Sandlake. July.

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 EPISPLERIA *Fr.*

On *Diatrype stigma* and allied fungi. Forestburgh. Sept.

DOTHIDEA TETRASPORA *Fr.*

Dead stems of *Iva frutescens*. Yonkers. *Howe.*

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 *Ehrh.*

Dead bark of ash trees. Sandlake. August.

VALSA 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.

VALSA 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.

VALSA 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.

#### SPHERIA THUJINA 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.

Decaying wood of *Thuja occidentalis*. Adirondack Mts. Aug.

#### SPHERIA PILIFERA Fr.

Decaying wood. Buffalo. Clinton.

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.

#### SPHERIA LAGENARIA Pers.

On the hymenium of some old *Polyporus*. Adirondack Mountains. August.

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 mucedinous growth.

SPHERIA ORTHOGRAMMA *B. & C.*

Old stems of Indian corn. North Greenbush. Oct.  
Sterile.

SPHERIA PARNASSIÆ *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.

Dead stems of *Parnassia Caroliniana*. Albany. Sept.

SPHERIA ARCEUTHOBII *n. sp.*

Perithecia small, densely cæspitose, 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 CÆSIA *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.

## DIPLOPAPPUS UMBELLATUS T. &amp; 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.*

JUNCUS 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.

COMMELYNIA 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 FÆNEA *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.*

Ground in pine woods. West Albany. Oct.

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 GLYCIOSMUS *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.           |
| a. Spores produced in the flowers, fruit or ovaries .....    | c.           |
| b. Spores produced in suborbicular swellings or blotches ... | Erythronii.  |
| b. Spores produced in long lines .....                       | longissima.  |
| c. Spores intensely black in the mass .....                  | d.           |
| c. Spores black, generally tinged with brown .....           | e.           |
| c. Spores black, tinged with purple .....                    | utriculosa.  |
| d. Inhabiting Juncus .....                                   | Junci.       |
| d. Inhabiting Carex .....                                    | urceolorum.  |
| e. Place of spore formation, much swollen or distended ...   | Maydis.      |
| e. Place of spore formation, not much swollen .....          | f.           |
| f. Generally affecting but few of the ovaries .....          | Montagnei.   |
| f. Generally affecting whole spikes or panicles .....        | g.           |
| g. Spores smooth, .0002 inch in diameter .....               | Carbo.       |
| g. Spores rough, .0004 inch in diameter .....                | Syntherismæ. |

Ustilago Erythronii Clinton.	Inhabits	Erythronium Americanum Sm.
U. longissima Tul.	"	Glyceria aquatica Sm.
U. utriculosa Tul.	"	Polygonum (several species).
U. Junci Schw.	"	Juncus tenuis Willd.
U. urceolorum Tul.	"	Carex (several species).
U. Maydis Cd.	"	Zea Mays L.
U. Montagnei Tul.	"	Rhynchospora alba Vahl.
U. Carbo Tul.	"	{ Avena sativa L.
		{ Triticum vulgare Vill., etc.
U. Syntherismæ Schw.	"	Cenchrus tribuloides L.

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. Zeæ* Schw., and *U. Carbo* Tul. equals *U. segetum* Ditm. *U. Syntherismæ* 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 Hepaticæ, 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.*

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PLATES AND EXPLANATIONS.

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## 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. 3. A young plant.  
" 4. Three plants of ordinary size.  
" 5. Vertical section of a pileus.  
" 6. Four spores x 400.

### *DOTHIDEA DALIBARDÆ* Peck.

Page 109.

- FIG. 7. A leaf of *Dalibarda repens* bearing the Dothidea.  
" 8. An ascus containing spores x 400.  
" 9. Three spores x 400.

### *SPHERIA ARCEUTHOBII* Peck.

Page 111.

- FIG. 10. A plant of *Arceuthobium pusillum* bearing three tufts of the Sphæria.  
" 11. A capsule bearing a tuft of the Sphæria, magnified.  
" 12. Two perithecia more highly magnified.  
" 13. An ascus containing young spores x 400.  
" 14. Four mature spores x 400.

### *VALSA PECKII* Howe.

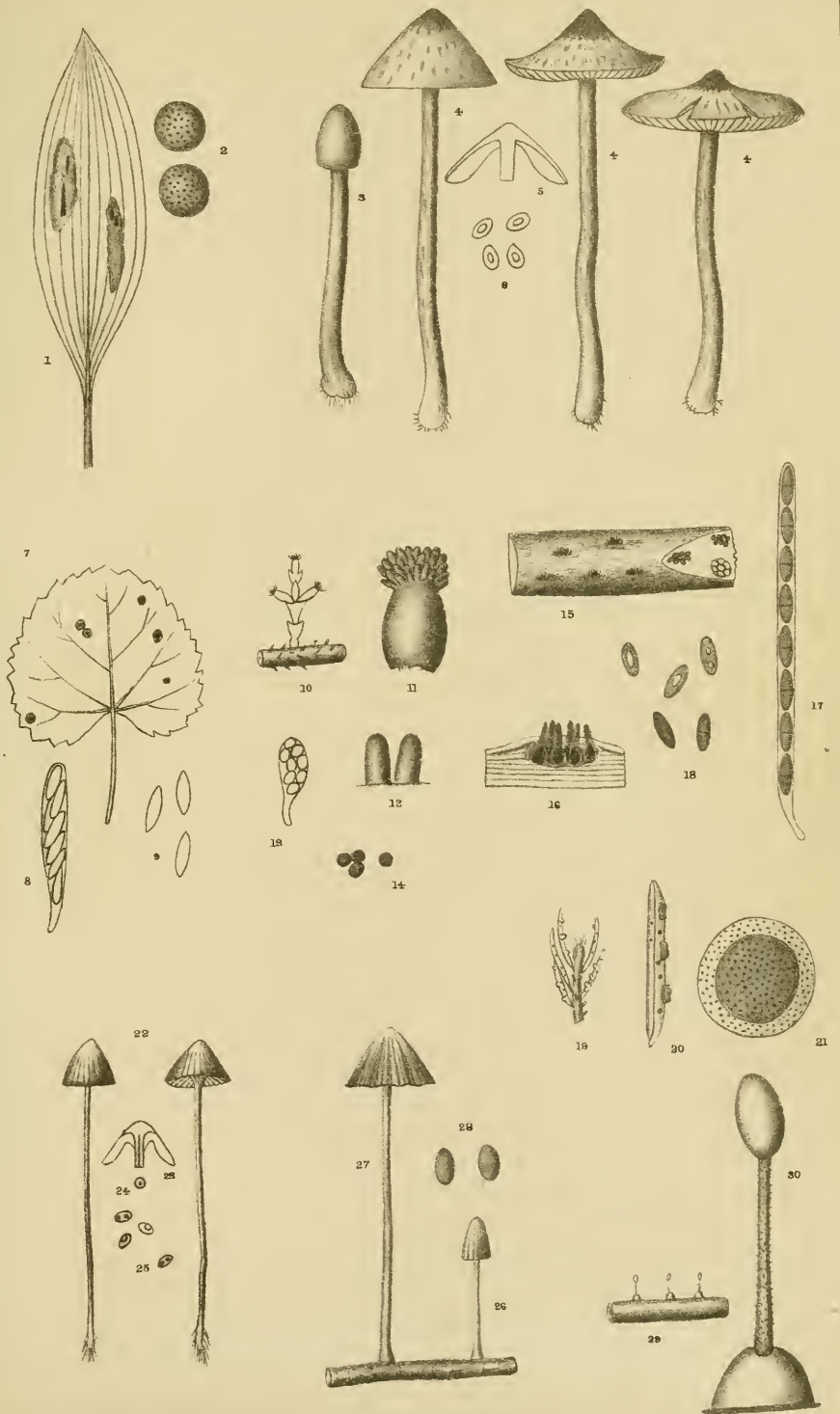
Page 109.

- 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.

### *PERIDERMIIUM 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.

Page 98.

- 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.

Page 105.

- FIG. 7. A piece of bark bearing tufts of the Oidium.  
" 8. Flocci and spores x 400.

### *HELICOSPORIUM ELLIPTICUM* Peck.

Page 103.

- 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.

Page 103.

- FIG. 13. Apical part of a leaf of *Veratrum viride* bearing the Puccinia.  
" 14. Two spores x 400.

### *AGARICUS (OMPHALIA) RHODODENDRI* Peck.

Page 94.

- FIG. 15. Two plants attached to a piece of bark.  
" 16. A plant magnified.  
" 17. Vertical section of a pileus magnified.  
" 18. Transverse section of a stem magnified.  
" 19. Four spores x 400.

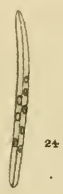
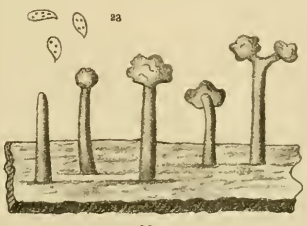
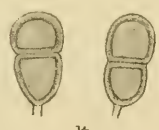
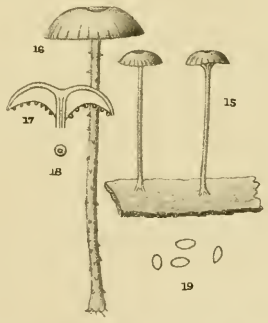
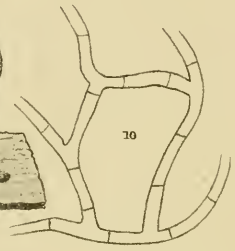
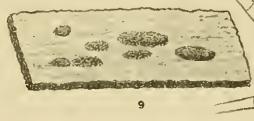
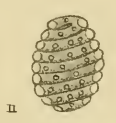
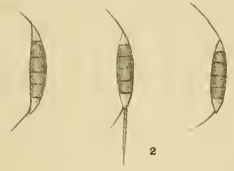
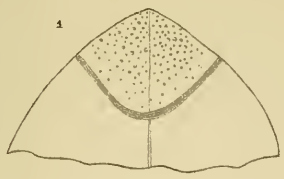




PLATE II. — (Continued.)

*CLAVARIA SPATHULATA* Peck.

Page 100.

FIG. 20. Part of a branch of *Carya alba* bearing five plants.

" 21. A plant magnified.

*TREMELLA (CORYNE) STIPITATA* Peck.

Page 100.

FIG. 22. A piece of wood bearing five plants.

" 23. Three spores x 400.

*PERIDERMIIUM BALSAMEUM* Peck.

Page 104.

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.

Page 97.

FIG. 27. Part of a leaf bearing three plants.

" 28. A plant magnified.

## 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.

Page 182.

FIGS. 1, 2, 3. Dorsal, ventral and profile views of specimen enlarged two diameters.

#### *ORTHIS NISIS* H. & W.

Page 181.

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. *CATA- RACTA* H. & W.

Page 198.

FIGS. 9, 10. Ventral and profile views.

#### *SPIRIFERA ROSTELLUM* H. & W.

Page 182.

FIGS. 11-13. Dorsal, ventral and front views.

#### *CYRTINA CRASSA* Hall.

Page 198.

FIGS. 14, 15, 16. Dorsal, cardinal and front views.

#### *SPIRIFERA RADIATA* Sow.

Page 196.

FIGS. 17, 18. Dorsal and ventral views of a specimen from the horizon of the Clinton group, near Louisville, Ky.

#### *CYRTIA TRAPEZOIDALIS* Hisinger.

Page 183.

FIGS. 19, 20, 21. Dorsal, front and cardinal views of specimen.