Additions to the Cryptogamic Flora of Indiana. By J. C. Arthur.

It was not my privilege to be present at the meeting of the Academy a year ago, at which time I was appointed to take charge of a part of the work of the Biological Survey of the State. No official notice of my appointment has ever reached me, and no material appertaining to the Survey, such as herbarium specimens upon which the work of the Survey is based, reserve or duplicate specimens for exchange, books, circulars, extra copies of lists already reported, etc., have yet been turned over to me, if, indeed, such exist. This state of affairs has caused some doubt in the mind of the writer as to the exact degree of responsibility which has fallen to him, and some uncertainty as to the scope of the work he is expected to superintend.

Some good intentions of the earlier part of the year, to send out appeals to the botanists of the State for their support and active coöperation, were allowed to remain in embyro. A year has thus passed, and no special effort has been made to further the interests of the Survey. But the writer desires to state most emphatically, and he would do it orally were he able to be present at the current meeting of the Academy, that this lack of activity is not due to a want of sympathy with the aims of the Survey or unwillingness to give as much effort to the work as time and opportunity permit.

The following list of species is the result of setting aside such specimens as came to my attention during the year, that have not appeared in the previous lists of the Survey. They have been handed to me by various persons, but all residents of Lafayette, in part members of the University and in part citizens of the town. It includes all classes of cellular cryptogams coming to hand except *Uredineæ*, which are reported in a paper to be presented by Miss Lillian Snyder.

It is to be hoped that at the next annual meeting a far larger showing can be made, although the present list is by no means uninteresting. If every collector will send to the writer whatever may come in his way, whether its value is known or not, it will be easy to greatly extend the list, and in this way to distribute the labors of the Survey so that it will not be burdensome, and, indeed, may yield a measure of scientific profit to the participants.

ALGÆ.

Cladophora glomerata genuina Kirch.

On wood in Wabash River. Tippecanoe 10, 1896 (R. I. Hight.)

Chamæsiphon confervicola A. Br.

On Hydrodictyon, Spirogyra and other algæ. Tippecanoe 11, 1896 (Miss K. E. Golden).

AGARICINEÆ.

Lepiota procera Scop.

On ground in open woodland. Tippecanoe 5, 1896 (Throckmorton).

This well known edible agaric was found in considerable abundance in one place. The specimens were finely developed, the pileus of many measuring four to five inches in diameter. They were distributed to several families, and probably as many as a score of persons ate of them. They were palatable and pronounced good eating. The results, however, were unpleasant, for a majority of the persons who ate of them, even in small amount, were made sick. The symptoms in this instance were not those of poison, but everything indicated that the mushrooms were highly indigestible. Whether this was due to the mode of cooking, or to the age of the specimens, or to some other cause, was not ascertained.

Pleurotus sapidus Kalch.

On decaying stump. Tippecanoe 7, 1895 (Arthur).

This is also a large edible species, but its merits were not tested. It made its appearance about the first of July in a lawn where a tree had been cut down and the trunk cut off about six inches below the surface of the ground. The fungus flourished until a yellow mycetozoan (*Tilmadoche gyrosa*) spread over the gills, and in the course of a week devoured the whole fungus, leaving only a small amount of debris not exceeding the size of a walnut. The mycetozoan, having no more food, spread out over the grass of the lawn a yard in all directions and went into the fruiting stage. After a few days a fresh crop of the agaric appeared, the rain dissolved the fruit-heads of the mycetozoan, and it again attacked the fungus. This alternation continued until frosts and chilly days put an end to the activity of the mycetozoan. The agaric continued to flourish, however, throughout the winter, making some growth whenever not frozen, and proving, in fact, of about the same hardiness and vigor as winter wheat plants. When frozen solid, a piece taken into a warm room appeared as fresh and unharmed upon being thawed as if never frozen. The severe changes of thawing and freezing in March and April at last killed the fungus.

LICHENES.

Cladonia mitrula Tuck.

On ground in pastures. LaPorte 6, 1883 (Arthur). Determined by Fink.

MUCORACEÆ.

Mucor racemosus Fres.

On starchy food (cracker). Tippecanoe 2, 1896 (Miss Lillian Snyder).

Rhizopus nigricans Ehrenb.

On germinating seeds. Tippecanoe 2, 1896 (Arthur).

Rhizopus elegans (Eidam) Ber. & De T.

On masses of corn smut. Tippecanoe 2, 1896 (Wm. Stuart).

Thamnidium elegans Lk.

On vegetable refuse in greenhouse. Tippecanoe 1, 1896 (Arthur).

MISCELLANEOUS FUNGI.

Ascophanus carneus (Pers.) Boud.

On paper lying against sheep's dung. Tippecanoe 3, 1896 (Arthur).

Chætomium bostrychodes Zopf.

On sheep's dung. Tippecanoe 3, 1896 (Arthur). Determined by J. B. Ellis.

Monilia Martinii E. & S.

On a culture of mold in the laboratory. Tippecanoe 3, 1896 (Arthur).

Determined by J. B. Ellis, who thinks that while not agreeing exactly with this species as it usually appears, yet is not distinct enough to merit a separate description.

Podospora penicillata E. & E.

On sheep's dung. Tippecanoe 2, 1896 (Arthur).

Stilbum erythrocephalum Ditm.

On rabbit's dung. Tippecanoe 10, 1896 (Burrage).

Æthalia bombacina Pers. (*Institale bombacina* Fr., *Sporotrichum bombacinum* Lk.)

On dead wood under a board walk. Tippecanoe, 1895 (Stanley Coulter).

Determined by J. B. Ellis, who has also received it from North Carolina, Louisiana and Mexico, collected in similar situations. It forms large, thick, cake-like masses, six inches or more in length, of a dark purple color, with an efflorescence of white spores, and exudes a watery liquid that collects both inside and outside the mass in copious amber-colored drops.

The Uredineæ of Tippecanoe County, Ind. By Lillian Snyder.

Up to the present time about seventy species of *Uredineæ* have been found within Tippecanoe County, out of which there are about fifteen that are new to the State of Indiana. These species I wish to present to you, noting the points of interest concerning them. All the species herein mentioned have been closely examined by the writer in order to detect any differences from typical specimens that might exist, caused from difference in locality or otherwise.