thick, as above stated, in the year formed, the layers of each year became finally very compact and were only a fraction of the original thickness. Of all the forms of plants present, Gloeocapsa was by far the most numerous and was of greatest volume. The algae found during the several years above referred to in the jars, numbered 32 species. Not all were, by any means, present at one time; but they came and went according to the general conditions of growth. Quite a number could be found at any one time. Of the forms observed, Pediastrum was the least numerous and was found only during the first weeks of the observation. The resistance of Chara to a dense growth of other forms was well shown in this experiment. As was the case with Elodea nearly every other species of higher forms would have been crowded out under the conditions here described and in a comparatively short time.

A STUDY OF LICHENS.

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It is frequently of interest to ascertain why plants are living in certain places and how they maintain their existence in definite areas. On the other hand it is equally valuable to ascertain, when they disappear wholly or partly, what forms vanish first, what ones partly and what ones remain. It has long been known that one striking fact concerning lichens is the apparent ease with which they are crowded out by civilization. At the end of the following list of lichens of Monroe County, these points will be briefly indicated.

Peltigera canina, P. rufescens, P. horizontalis, Lecidea melancheima, Gyrophora muhlenbergii, Graphis scripta, Collema pulposum, Leptogium scotinum, Teloschistes polycarpus, T. lychneus, T. concolor, Umbilicaria pustulata, Amphiloma lanuginosum, Thamnolia vermicularis, Acarospora chlorophana, Trypethelium virens, Verrucaria rupestris, Pertusaria communis, P. vellata, P. Leioplaca, Endocarpon miniatum, Leptogium tremelloides, Hydrothyria venosa, Nephroma helvetica, Lopadium periroideum, Pannaria leucosticta, P. lurida, Coniocybe pallida, Psora Russellii, Xylographa paralella, Arthonia radiata, Arthothelium spectabile, Rinodina sophodes, Placodium elegans, P. cinnabarrinum, Urceolaria scruposa, Lecanora Hageni, L. muralis, L. subfusca, L. pallida, Cladonia rangiferina, C. cristatella, C. pyxidata, C. verticillata, C. fimbriata, C. sylvatica, C. bacillaris, Usnea barbata, Physcia stellaris, P. speciosa, P. pulverulenta, P. tribacia, Parmelia perlata, P. rudecta, P. perforata, P. physodes, P. caperata, P. borreri, Sticta amplissima.

A few specimens of Collema were partly displaced by Mucor in very damp situations and this sometimes occurs when this form is kept very moist for some time in the laboratory. As is known dust is very destructive; hence many forms have vanished along dusty roads and streets. The great power of some forms to resist desiccation has been

overcome in certain types, therefore Collema and some others have disappeared from this cause alone. Smoke, especially in and about towns, has been very detrimental to these forms, as well as some other plants. Of the list given here, some genera will be mentioned in the order of disappearance. They have partly or wholly vanished during my observations of more than 20 years on these points, where the conditions have been much changed. The first genera to disappear were Collema, Peltigera, Sticta, Usnea, and Umbilicaria. The following forms have retained more or less completely their habitats. The first two are less common: Graphis, Lecidea, Physcia, Parmelia, and Cladonia. In the densely populated places all of these last five have entirely disappeared from limited areas.

SOME FLOWERING PLANTS OF MONROE COUNTY, INDIANA.

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The following list of plants is a partial enumeration of the flowering plants of Monroe County which the writer has recorded over a stretch of many years and includes certain escaped and introduced forms. The families of plants mentioned in this list have been arranged in the same order as those of the seventh edition of Gray's Manual of Botany.

TYPHACEAE: *Typha latifolia*

NAJADACEAE: *Potamogeton natans*

ALISMACEAE: *Sagittaria latifolia, Alisma Plantago-aquatica*

HYDROCHARITACEAE: *Elodea canadensis*

ARACEAE: *Arisaema triphyllum, Dracontium, Acorus Calamus*

LEMNACEAE: *Lemna trisulca*

COMMELINACEAE: *Tradescantia brevicaulis, pilosa, virginiana, Commelina virginica*

PONTEDERIACEAE: *Heteranthera reniformis*

JUNCACEAE: *Juncus tenuis, effusus, acuminatus, Luzula campestris*

LILIACEAE: *Uvularia perfoliata, grandiflora, Allium tricoccum, cernuum, vineale, Hemerocallis fulva, Lilium canadense, Erythronium americanum, albidum, Camassia esculenta, Ornithogalum umbellatum, Muscari, botryoides, Yucca filamentosa, Asparagus officinalis, Smilacina racemosa, Polygonatum biflorum, commutatum, Convallaria majalis, Medeola virginiana, Trillium sessile, recurvatum, erectum, nivale, Smilax herbacea, rotundifolia, Bona-nox, hispida, pseudo-china*

DIOSCOREACEAE: *Dioscorea villosa*

AMARYLLIDACEAE: *Narcissus pseudonarcissus, poeticus, Hypoxis hirsuta*

IRIDACEAE: *Iris versicolor, I. cristata, Belamcanda chinensis, Sisyrinchium angustifolium, S. gramineum*

ORCHIDACEAE: *Cypripedium parviflorum, acaule, Orchis spectabilis, Habenaria peramoena, Pogonia verticillata, Spiranthes gracilis, cernua, Epipactis pubescens, Corallorrhiza odontorhiza, Microstylis unifolia, Liparis liliifolia, Aplectrum hyemale*

SALICACEAE: *Salix nigra, amygdaloides, cordata, discolor, humilis, Populus alba, tremuloides, grandidentata, balsamifera, deltoides*