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A report of the algae of Vigo County, Indiana, and a classified record of all Indiana algae as of 1940

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A REPORT OF THE ALGAE OF VIGO COUNTY, INDIANA,
AND A CLASSIFIED RECORD
OF ALL INDIANA ALGAE AS OF 1940

by
Helen H. Welch

Contribution of the Graduate School
of
Indiana State Teachers College

Submitted in Partial Fulfillment
of the Requirements for the
Master of Arts Degree
in Education
1940

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The thesis of Helen H. Welch,
Contribution of the Graduate School, Indiana State
Teachers College, Number 430, under the title A
REPORT OF THE ALGAE OF VIGO COUNTY, INDIANA, AND A
CLASSIFIED RECORD OF ALL INDIANA ALGAE AS OF 1940
is hereby approved as counting toward the completion
of the Master's degree in the amount of 8 hour's
credit.

Committee on thesis:

J. M. Macneil
E. L. Chubb
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CHAPTER I

INTRODUCTION

Problem

The purpose of this study was twofold. First, the principal aim was to make a survey of the algae, excluding the diatoms, which occur in Vigo County, Indiana. At the same time the writer felt the need for a complete and compact record of all the algae reported in Indiana up to the present time. This was formulated as the second purpose of this paper.

Value of the Study

This thesis is a contribution to science in that it makes a complete presentation and classification of the algae of Vigo County. The classification of all Indiana algae gives to science a compact list of the genera, species, and varieties of algae and should facilitate further scientific research in this field.

Review of Previous Related Studies

The papers dealing with the algae of Indiana are more numerous than those dealing with the algae of Vigo County. Previous to this study there has been no study pertaining only

to the algae of Vigo County. The most extensive work related to this county was that of Dr. B.H. Smith in his thesis, The Algae of Indiana,¹ which was published in 1931. The majority of his determinations were made from collections of Vigo County, but he listed also numerous forms from the other counties of the state.

Three years later M.E. Britton and Dr. B.H. Smith published a sequel to the above paper which listed less than ten more forms of algae found in Vigo County. In this study, Further Studies of Indiana Algae,² the authors reported more algae found in the other counties than in Vigo County.

In 1932 Louise M. Love and Robert L. Rogers wrote a paper, Some Algae of Vigo, Greene, and Daviess Counties,³ in which were listed twenty-one plants not previously reported from Vigo County in addition to thirteen plants previously unreported for the state. With the exception of Zygnema pectinatum var. conspicuum (Hass.) Kirchner, all of these were from Vigo County. In the same year Britton and Smith listed thirty-nine species, varieties, and forms of algae of the lower Wabash

¹ B.H. Smith, "The Algae of Indiana." Proceedings of the Indiana Academy of Science, 41 (1932), pp. 177-206.

² M.E. Britton and B.H. Smith, "Further Studies of Indiana Algae." Proceedings of the Indiana Academy of Science, 44 (1934), pp. 65-68.

³ Louise M. Love and Robert L. Rogers, "Some Algae of Vigo, Greene, and Daviess Counties." Proceedings of the Indiana Academy of Science, 42 (1933), pp. 79-81.

Valley. Only a few of these were reported from Vigo County. Additional Algae of the Lower Wabash Valley¹ by Britton and Smith reported algal forms collected primarily in Gibson and Posey counties. Six were listed from Vigo County.

There have been several papers pertaining to the algae of the different counties, rivers, and ponds of Indiana, but only one author has previously published a classified list of all algae reported from Indiana. C. Mervin Palmer published in 1928 a check list of Indiana algae which had been reported from 1875 to 1928. Additions to this list were made in 1931, 1933, and 1936. He listed the genera and species alphabetically in the following four groups: Cyanophyceae, Desmids, Diatoms, and All Other Algae.²

On the whole, the studies dealing with the algae of Indiana are widely scattered, many of the reports listing less than ten genera or species. The material pertaining to Vigo County is more compact but more limited. The work of Dr. B.H. Smith is the only paper reporting any great number of algae from this county.

¹ M.E. Britton and B.H. Smith, "Additional Algae of the Lower Wabash Valley." Proceedings of the Indiana Academy of Science, 45 (1936), pp. 61-63.

² C. Mervin Palmer, "Algae of Indiana - A Classified Check List of Those Published Between 1875 and 1928." Proceedings of the Indiana Academy of Science, 38 (1929), pp. 109-121.

Procedures in the Laboratory and Field

The collections were made by the author over a period of six months and two weeks when the weather was suitable, the most intensive collecting being done during the crest period of reproduction. Although these collections were made from streams, ponds, swamps, ditches, and pools, the writer found that the swamps, small ponds, ditches, and pools were more abundant with algae. However, the author attempted to collect from every possible source in Vigo County. Since no determinations were made in the field, the material was immediately placed in a vial of Transeau's Solution consisting of water, alcohol, and formaldehyde in the ratio 6-3-1. Each vial was labeled in detail as to location and date of collection. Over one thousand vials were brought into the laboratory and innumerable slides were made of the specimens. The author made no less than six slides per vial, and often many more, in order to determine every genus and species present in the material.

Some difficulty was encountered in the determinations, especially in those of *Vaucheria* and of the blue-green algae. There is a great necessity for a revision of the key and sketches of the *Vaucheriaceae*. For this reason the author was unable to determine many of the *Vaucheriaceae* which she had collected. The material dealing with the *Myxophyceae* was likewise somewhat unsatisfactory; however there was less difficulty

in the determination of the blue-green algae than of the Vaucheriaceae.

Organization

This paper is divided into four divisions or chapters. The first division, the introduction, states the problem, the importance of the study, the review of previous related studies, and the field and laboratory procedures. The second chapter consists of a classified list of the algae of Vigo County, Indiana, which were determined by the author. The third chapter is composed of a classified record of all Indiana algae through June, 1940. The fourth chapter is a brief summary of the thesis.

CHAPTER II

A SYSTEMATIC REPORT OF THE ALGAE FOUND IN VIGO COUNTY, INDIANA

The author presents in this chapter a classified arrangement of the algal groups which she collected from Vigo County, Indiana. In this list the writer has indicated the finding of previously unreported genera and species as follows: 1G -- unreported genera from Indiana, 1S -- unreported species from Indiana, 2G -- unreported genera from Vigo County, and 2S -- unreported species from Vigo County. The algae are alphabetically arranged into classes and orders and the authority follows each genus or species if it was given in the description.

CLASS - MYXOPHYCEAE

Order - Hormogonales

Anabaena oscillarioides var. stenospora Born. and Flah. 1S, 2S

Lyngbya digueti Gom. 2S

Phormidium autumnale Gom. 1S, 2S

Spirulina princeps W. and G.S. West.

CLASS - HETEROKONTAE

Order - Heterococcales

Ophiocytium cochleare (Eichw.) A. Br.

Ophiocytium majus Næg.

Ophiocytium parvulum (Perty) A. Br. 1S, 2S

CLASS - CHLOROPHYCEAE

Order - Tetrasporales

Tetraspora gelatinosa (Vauch.) Desv. 2S

Order - Ulotrichales

Aphanochaete repens A. Br.

Cladophora callicoma Kutz. 2S

Cladophora glomerata Kutz.

Cladophora kuetzingiana Grunow. 1S, 2S

Draparnaldia glomerata (Vauch.) Ag. 2S

Draparnaldia platyzonata Hazen. 2S

Draparnaldia plumosa (Vauch.) Ag.

Pithophora oedogonia Mont. 1S, 2S

Pithophora varia Wille.

Radiofilum conjunctivum Schmidle. 1G, 1S, 2G, 2S

Stigeoclonium nanum (Dillw.) Kutz.

Order - Oedogoniales

Oedogonium flavescens (Hass.) Wittr.

Oedogonium gallicum Hirn. 1S, 2S

Oedogonium giganteum (Kuetz.) Wittr. 1S, 2S

Oedogonium richterianum Lemm. 2S

Oedogonium suecicum Wittr.

Larger than the species as previously reported.
 Oogonia 40-44u x 44-48u; oospore 36-40u x 36-40u;
 vegetative cell 20u x 76-104u; suffoltry cell
 24u x 80u.

Order - Chlorococcales

Hydrodictyon reticulatum Roth.^{2S}

Pediastrum boryanum (Turpin) Menegh.

Order - Siphonales

Vaucheria borealis Hirn.^{1S, 2S}

Vaucheria geminata (Vauch.) De Cand.

Vaucheria megaspora Iwanoff.^{1S, 2S}

Vaucheria polysperma Hass.

Vaucheria sessilis (Vauch.) De Cand.

Vaucheria terrestris (Vauch.) De Cand.

Vaucheria woroniniana Heering.^{1S, 2S}

Order - Zygnematales

Closterium acerosum (Schrank) Ehrb.

Closterium diana Ehrb.^{2S}

Closterium lanceolatum Kg.^{2S}

Cosmarium subcrenatum Hantz.

Desmidium swartzii Ag.

Hyalotheca dissiliens (Smith)

Spirogyra aerolata Lagerheim.
Spirogyra biformis.^{1S, 2S}
Spirogyra condensata (Vauch.) Kuetz.
Spirogyra dubia.^{2S}
Spirogyra juergensii Kuetz.
Spirogyra lambertiana Transeau sp. nov.^{1S, 2S}
Spirogyra longata (Vauch.) Kuetz.
Spirogyra lutetiana Petit.^{1S, 2S}
Spirogyra majuscula Kutz.
Spirogyra petitiana Transeau sp. nov.^{1S, 2S}
Spirogyra semiornata.^{1S, 2S}
Spirogyra varians (Hass.) Kuetz.
Zygnema cyaneum.^{1S, 2S}
Zygnema cylindricum Transeau.^{2S}

The writer is reporting one genus, seventeen species, and one variety which have not been previously reported from Indiana. These are tabulated in the following list:

CLASS - MYXOPHYCEAE

Order - Hormogonales

Anabaena oscillarioides var. stenospora Born. and Flah.

Phormidium autumnale Gom.

CLASS - HETEROKONTAE

Order - HeterococcalesOphiocytium parvulum (Perty) A.Br.Order - UlotrichalesCladophora kuetzingiana Grunow.Pithophora oedogonia Mont.Radiofilum conjunctivum Schmidle.Order - OedogonialesOedogonium gallicum Hirn.Oedogonium giganteum (Kuetz.) Wittr.Order - SiphonalesVaucheria borealis Hirn.Vaucheria megaspora Iwanoff.Vaucheria woroniniana Heering.Order - ZygnematalesSpirogyra biformis.Spirogyra lambertiana Transeau sp. nov.Spirogyra lutetiana Petit.Spirogyra petitiana Transeau sp. nov.Spirogyra semiornata.Zygnema cyaneum.

In making this survey of Vigo County the writer determined thirty previously unreported algal forms. These include one genus, twenty-eight species, and one variety. They are as follows:

CLASS - MYXOPHYCEAE

Order - Hormogonales

Anabaena oscillarioides var. stenospora Born. and Flah.

Lyngbya digueti Gom.

Phormidium autumnale Gom.

CLASS - HETEROKONTAE

Order - Heterococcales

Ophiocytium parvulum (Perty) A. Br.

Tetraspora gelatinosa (Vauch.) Desv.

Order - Ulotrichales

Cladophora callicoma Kutz.

Cladophora kuetzingiana Grunow.

Draparnaldia glomerata (Vauch.) Ag.

Draparnaldia platyzonata Hazen.

Pithophora oedogonia Mont.

Radiofilum conjunctivum Schmidle.

Order - Oedogoniales

Oedogonium gallicum Hirn.

Oedogonium giganteum (Kuetz.) Wittr.

Oedogonium richterianum Lemm.

Order - Chlorococcales

Hydrodictyon reticulatum Roth.

Order - Siphonales

Vaucheria borealis Hirn.

Vaucheria megaspora Iwanoff.

Vaucheria woroniniana Heering.

Order - Zygnematales

Closterium dianae Ehrb.

Closterium lanceolatum Kg.

Spirogyra biformis.

Spirogyra dubia.

Spirogyra lambertiana Transeau sp. nov.

Spirogyra lutetiana Petit.

Spirogyra petitiana Transeau sp. nov.

Spirogyra semiornata.

Zygnema cyaneum.

Zygnema cylindricum Transeau.

CHAPTER III

A COMPACT AND CLASSIFIED LIST OF ALL INDIANA ALGAE AS OF 1940

The author has made every possible attempt to construct a complete systematic list of all the algae of Indiana up to the present time in order to facilitate further research and studies dealing with the phytoplankton of this state. The algal genera, species, and varieties are organized alphabetically into the following eight groups: Myxophyceae, Rhodophyceae, Heterokontae, Chrysophyceae, Bacillarieae, Chlorophyceae, Dinophyceae, and Euglenophyceae. These classes are further divided into orders according to the classification of G.M. Smith.¹ The authority of the genus or species is given for each alga if this authority was found in the original report. Following each species is a list of the counties from which it was reported and the date of its identification. The author did not include in the arrangement any genera which had been reported without any reference to the particular species. There were three species which the author was unable to classify from her available material. These she has listed at the end of the arrangement as Unclassified Algal Genera.

¹ G.M. Smith, The Fresh-Water Algae of the United States.
(New York: McGraw-Hill Book Company, Inc., 1933),
716 pp.

CLASS I - MYXOPHYCEAE

Order - Chroococcales

- Aphanocapsa delicatissima W. and G.S. West. Laporte Co., 1927; Porter Co., 1927.
- Aphanocapsa elachista W. and G.S. West. Laporte Co., 1927; Porter Co., 1927.
- Aphanocapsa pulchra (Kuetzing) Rabenhorst. Parke Co., 1932.
- Aphanocapsa rivularis (Carm) Rabenhorst. Gibson Co., 1935.
- Aphanothece stagnina (Sprengel) A. Braun. Marshall Co., 1920; Sullivan Co., 1930; Vigo Co., 1929.
- Chroococcus coherens. Monroe Co., 1909.
- Chroococcus dispersus (V. Keiss) Lemm. Lake Co., 1927; Porter Co., 1927.
- Chroococcus limneticus Lemm. Kosciusko Co., 1929; Marion Co., 1931; Morgan Co., 1931; Porter Co., 1927; Vigo Co., 1930.
- Chroococcus minutus (Kütz) Nag., Marion Co., 1931; Parke Co., 1932; Porter Co., 1927; Vigo Co., 1928.
- Chroococcus turgidus (Kuetz.) Naegle. Kosciusko Co., 1929; Lake Co., 1932; Marshall Co., 1920; Monroe Co., 1926; Vigo Co., 1929.
- Coelosphaerium kutzingianum Naeg. Laporte Co., 1927; Marshall Co., 1920; Porter Co., 1927.
- Coelosphaerium nagelianum Unger. Kosciusko Co., 1929; Vigo Co., 1929.
- Gleocapsa aeruginosa. Monroe Co., 1909.
- Gleocapsa arenaria (Hass.) Rabh. Vigo Co., 1929.
- Gleocapsa coracina. Monroe Co., 1909.
- Gleocapsa gelatinosa Kuetzing. Monroe Co., 1929; Vigo Co., 1929.

Gleocapsa magma, Kuetz. Marshall Co., 1920; Monroe Co., 1926.

Gleocapsa muralis Kuetz. Vigo Co., 1928.

Gleocapsa polydermatica Kuetz. Marshall Co., 1920; Monroe Co., 1909; Vigo Co., 1928.

Gleocapsa quarternata Kutzing. Monroe Co., 1929.

Gleocapsa rupestris. Monroe Co., 1909.

Gleocapsa sanguina. Monroe Co., 1909.

Gomphosphaeria apoina Kuetz. Elkhart Co., 1929; Marshall Co., 1920; Montgomery Co., 1929.

Gomphosphaeria lacustris Chodat. Vigo Co., 1932.

Merismopedia convoluta Breb. Monroe Co., 1908, 1909.

Merismopedia elegans A. Braun. Vigo Co., 1929, 1930.

Merismopedia glauca (Ehr.) Nag., Laporte Co., 1927; Marion Co., 1928, 1931; Marshall Co., 1920; Monroe Co., 1909; Porter Co., 1927; Vigo Co., 1929, 1930.

Merismopedia minima Beck. Vigo Co., 1931.

Merismopedia punctata Meyen. Gibson Co., 1935; Vigo Co., 1929, 1930, 1931.

Merismopedia tenuissima Lemm. Posey Co., 1935; Vigo Co., 1932.

Microcystis aeruginosa Kuetz. Knox Co., 1934; Kosciusko Co., 1920; Marion Co., 1928, 1931; Marshall Co., 1920; Vigo Co., 1930.

Microcystis aeruginosa var. major (Wittr.) G.M. Smith. Vigo Co., 1930.

Microcystis flos-aquae (Wittr.) Kirchner. Knox Co., 1934; Kosciusko Co., 1929; Marion Co., 1931; Vigo Co., 1930.

Microcystis incerta Lemm. Marion Co., 1931.

Microcystis parisitica Kuetz. Wabash Co., 1929.

Microcystis pseudofilamentosa Craw. Kosciusko Co., 1929.

Microcystis pulvera (Wood) Migula. Knox Co., 1934.

Synechococcus racemosus Wolle. Marion Co., 1931.

Synechocystis aquatilis Snow. Marion Co., 1931; Morgan Co., 1931.

Order - Hormonoganales

Anabaena affinis Lemm. Vigo Co., 1929.

Anabaena californica Borge. Sullivan Co., 1931; Vigo Co., 1929.

Anabaena catenula (Kuetz.) Born and Flah. Greene Co., 1931; Vigo Co., 1929.

Anabaena flos-aquae (Lyngh.) Breb. Vigo Co., 1929; Marshall Co., 1920.

Anabaena inaequalis (Kuetz) Born and Flah. Monroe Co., 1909; Montgomery Co., 1929.

Anabaena klebahn var. robusta Lemm. Vigo Co., 1929.

Anabaena laxa. A. Braun. Vigo Co., 1929.

Anabaena limnetica G.M. Smith. Kosciusko Co., 1929.

Anabaena macrospora var. crassa. Klebahn. Vigo Co., 1930.

Anabaena oscillarioides var. stenospora Born. and Flah. Vigo Co., 1940.

Anabaena plantonica Brunthaler. Wabash Co., 1930.

Anabaena poulseniana Boye P. Vigo Co., 1930.

Anabaena saccata Wolle. Marshall Co., 1920.

Anabaena scheremetievi Flenken. Montgomery Co., 1929.

- Anabaena sphaerica Born and Flah. Vigo Co., 1930.
- Anabaena spiroides var. contracta Klebahn. Lake Co., 1934.
- Anabaena spiroides var. crassa Lemm. Vigo Co., 1930.
- Anabaena stagnalis Ktz., Marshall Co., 1920; Monroe Co., 1926.
- Anabaena variabilis. Monroe Co., 1926; Vigo Co., 1931.
- Anabaenopsis circularis (G.S. West) Wolosz. Vigo Co., 1930.
- Anabaenopsis raciborskii Wolosz. Vigo Co., 1930.
- Aphanizomenon flos-aquae Ralfs. Marshall Co., 1920; Vigo Co., 1930.
- Arthrospira jenneri (Kuetz) Sitzenburger. Monroe Co., 1908.
- Calothrix fusca, B. and F., Marshall Co., 1920.
- Calothrix gracilis. Monroe Co., 1909.
- Calothrix gypsophila. Monroe Co., 1926.
- Calothrix juliana (Memgh.) Bornet. Monroe Co., 1908.
- Calothrix orsiniana. Monroe Co., 1926.
- Calothrix parietina, (Naeg.) Thuret. Marion Co., 1928; Monroe Co., 1928.
- Calothrix sandwicensis (Nordst.) Schmidle. Vigo Co., 1929.
- Calothrix stagnalis Gom. Vigo Co., 1928.
- Chamaesiphon confervicola A. Br. Tippecanoe Co., 1896.
- Cylindrospermum limnicola Kg., Monroe Co., 1929.
- Cylindrospermum macrospermum. Monroe Co., 1909.
- Cylindrospermum majus Kuetz. Vigo Co., 1913.
- Cylindrospermum minutissimum Collins. Vigo Co., 1930.
- Cylindrospermum minutum Wood. Vigo Co., 1930.

- Cylindrospermum musciola Kuetz. Sullivan Co., 1931.
- Cylindrospermum stagnale (Kuetz) Born and Flah. Vigo Co., 1929.
- Desmonema wrangelii (Ag.) Born and Flah. Vigo Co., 1931.
- Dicothrix gypsophila (Kuetz) Born and Flah. Kosciusko Co., 1929.
- Gloeotrichia echinulata (J.E. Smith) Richt. Vigo Co., 1930.
- Gloeotrichia natans (Hedw.) Rabenh. Monroe Co., 1909; Vigo Co., 1930.
- Gloeotrichia pisum. Monroe Co., 1909.
- Hammatoidea normanii (W. and G.S. West) Vigo Co., 1929.
- Hapalosiphon braunii. Monroe Co., 1926.
- Hapalosiphon tenuissimus. Monroe Co., 1909, 1926.
- Lyngbya aerugineo-caerulea (Ktz.) Gom. Marion Co., 1931; Vigo Co., 1931.
- Lyngbya aestuarii, Liebman. Kosciusko Co., 1920; Marshall Co., 1920.
- Lyngbya arachnoidea Kuetz. Vigo Co., 1929.
- Lyngbya contorta Lemm. Vigo Co., 1930.
- Lyngbya digueti Gom. (?) Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1940.
- Lyngbya distincta (Nordstedt) Schmidle (?) Marion Co., 1931.
- Lyngbya juliana Menegh. Monroe Co., 1908.
- Lyngbya lagerheimii (Möb.) Gom. Marion Co., 1931; Morgan Co., 1931.
- Lyngbya major Menegh. Vigo Co., 1929, 1930.
- Lyngbya martensiana Menegh. Vigo Co., 1929.
- Lyngbya nana Tilden (?) Marion Co., 1931; Morgan Co., 1931.

- Lyngbya naveanum Grun. Monroe Co., 1929.
- Lyngbya ochracea (Roth.) Thur. Monroe Co., 1908.
- Lyngbya putealis Mont. (?) Knox Co., 1929; Marion Co., 1931.
- Lyngbya subtilis W. West. Marion Co., 1931; Morgan Co., 1931.
- Nodularia spumigena, Mertens. Knox Co., 1913.
- Nostoc coeruleum. Monroe Co., 1926; Vigo Co., 1928.
- Nostoc commune Vaucher. Monroe Co., 1908, 1909; Montgomery Co., 1925; Vigo Co., 1928.
- Nostoc linckia (Roth) Bornet. Vigo Co., 1928.
- Nostoc minutissimum Kg. Lawrence Co., 1909.
- Nostoc muscorum. Monroe Co., 1909, 1926.
- Nostoc pruniforme. Kosciusko Co., 1930.
- Nostoc punctiforme Ag. Montgomery Co., 1930; Vigo Co., 1930.
- Nostoc rupestere. Monroe Co., 1926.
- Nostoc sphaericum. Monroe Co., 1909.
- Nostoc verrucosum (L.) Vauch. Marshall Co., 1920; Monroe Co., 1908, 1909, 1926.
- Oscillatoria aerugineo-coerulea Kg. Monroe Co., 1929.
- Oscillatoria agardhii, Gom. Marion Co., 1931; Morgan Co., 1931.
- Oscillatoria amphibia Agardh. Greene Co., 1934.
- Oscillatoria anguina Bory. Tippecanoe Co., 1929; Vigo Co., 1931.
- Oscillatoria angustissima W. and G.S. West. Vigo Co., 1930.
- Oscillatoria antliaria. Monroe Co., 1909.

- Oscillatoria boryana Bory. Morgan Co., 1931.
- Oscillatoria brevis, Ktz. Marion Co., 1931; Monroe Co., 1909.
- Oscillatoria chalybea Mert. Marion Co., 1931; Monroe Co., 1909; Morgan Co., 1931; Warren Co., 1930.
- Oscillatoria chlorina Ktz. Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1929.
- Oscillatoria cruenta. Monroe Co., 1909.
- Oscillatoria elegans. Monroe Co., 1926.
- Oscillatoria formosa Bory. Marion Co., 1931; Morgan Co., 1931.
- Oscillatoria froelichii. Monroe Co., 1909.
- Oscillatoria geminata Menegh. Morgan Co., 1931.
- Oscillatoria imperator. Monroe Co., 1926.
- Oscillatoria limosa Ag. Benton Co., 1931; Marion Co., 1931; Monroe Co., 1908, 1909; Morgan Co., 1931; Vigo Co., 1931.
- Oscillatoria major. Marshall Co., 1920; Monroe Co., 1926.
- Oscillatoria minnesotensis Tilden. Marion Co., 1931.
- Oscillatoria natans. Monroe Co., 1909, 1926.
- Oscillatoria nigra. Monroe Co., 1926.
- Oscillatoria numidica Gom (?). Marion Co., 1931; Morgan Co., 1931.
- Oscillatoria okeni Agardh. Vigo Co., 1930.
- Oscillatoria ornata Kuetz. Clay Co., 1929.
- Oscillatoria percursa. Monroe Co., 1909.
- Oscillatoria princeps Vauch. Benton Co., 1931; Clay Co., 1931; Greene Co., 1934; Marion Co., 1928; Monroe Co., 1908, 1909; Parke Co., 1928, 1929; Vigo Co., 1930.

- Oscillatoria prolifica (Grenville) Dumont. Kosciusko Co., 1917.
- Oscillatoria proboscidea Gom. Warren Co., 1930.
- Oscillatoria sancta Ktz., Marion Co., 1931; Montgomery Co., 1929.
- Oscillatoria splendida Brev. Clay Co., 1929; Marion Co., 1931; Monroe Co., 1929; Vigo Co., 1930; Wabash Co., 1929.
- Oscillatoria subfusca. Monroe Co., 1909.
- Oscillatoria subsalsa Ag., Morgan Co., 1931.
- Oscillatoria subtilissima Ktz., Marion Co., 1931; Vigo Co., 1929.
- Oscillatoria tenuis Ag. Marion Co., 1928, 1931; Marshall Co., 1920; Monroe Co., 1908, 1909; Morgan Co., 1931; Vigo Co., 1929; Wabash Co., 1929.
- Oscillatoria terebriformis Ag. Gomant. Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1929.
- Phormidium autumnale Gom. Vigo Co., 1940.
- Phormidium incrustatum (Narg.) Gomont. var. cataractorum. Monroe Co., 1908.
- Phormidium retzii (Ag.) Gom. (?). Marion Co., 1931; Wabash Co., 1929.
- Phormidium tenue (Mench.) Gom. Sullivan Co., 1931.
- Phormidium uncinatum (Ag.) Gom. (?) Marion Co., 1931.
- Plectonema tenue Thuret. Monroe Co., 1908; Vigo Co., 1929.
- Rivularia borealis Richt. Wabash Co., 1929.
- Rivularia dura Roth. Marshall Co., 1920; Monroe Co., 1909.
- Rivularia echinulata (Smith) Born and Flah. Marshall Co., 1920; Monroe Co., 1909, 1929.
- Rivularia haematiles Agardh. Marshall Co., 1920.

Rivularia minutula (Kuetz) Born and Flah. Wabash Co., 1929.

Rivularia natans (Hedwig) Welwitach. Grant Co., 1929; Marshall Co., 1920.

Scytonema calotrichoides. Monroe Co., 1926.

Scytonema cortex. Monroe Co., 1926.

Scytonema gracile. Monroe Co., 1926.

Scytonema mirable (Dillwyn) Born. Vigo Co., 1929, 1930.

Scytonema myochrous. Monroe Co., 1909.

Scytonema natans. Monroe Co., 1909.

Scytonema tolypothrichoides. Monroe Co., 1909.

Scytonema turfosum. Monroe Co., 1926.

Sirosiphon compactus. Monroe Co., 1926.

Sirosiphon pluvinatus. Monroe Co., 1909.

Spirulina densa sp. nov., St. Joseph Co., 1935.

Spirulina duplex. Monroe Co., 1909.

Spirulina gomontiana (Setchell) Geitner. Vigo Co., 1930.

Spirulina jenneri Kuetz. Marshall Co., 1920; Monroe Co., 1909.

Spirulina major Kuetz. Greene Co., 1934; Marion Co., 1931; Vigo Co., 1930.

Spirulina princeps (W. and G.S. West) Clay Co., 1931; Vigo Co., 1929, 1940.

Spirulina tenuissima Kutz. Monroe Co., 1926.

Tolypothrix distorta (Desv.) Wartm. Monroe Co., 1909; Vigo Co., 1930.

Tolypothrix flaccida. Lake Co., 1891; Monroe Co., 1926.

Tolypothrix lanata (Desv.) Wartmann. Kosciusko Co., 1929;
Lake Co., 1910; Vigo Co., 1929.

Tolypothrix pulchra. Monroe Co., 1926.

Tolypothrix rupestris. Monroe Co., 1926.

Tolypothrix tenuis Kuetz. Marshall Co., 1920; Monroe Co.,
1909; Vigo Co., 1928.

Trichodesmium thisbautii Gom. Vigo Co., 1930.

CLASS II - RHODOPHYCEAE

Order - Bangiales

Poryphridium cruentum. Monroe Co., 1926.

Order - Nemalionales

Batrachospermum moniliforme Roth. Monroe Co., 1909; Montgomery Co., 1917.

Lemanea annulata Kütz. Owen Co., 1883; Shelby Co., 1932.

Lemanea australis Atk., Harrison Co., 1931.

Lemanea catenata Kutz. Owen Co., 1932.

Lemanea nodosa Kutz. Bartholomew Co., 1932; Decatur Co., 1932; Jennings Co., 1932; Owen Co., 1932; Putnam Co., 1933; Ripley Co., 1932.

Lemanea pleocarpa Atk. Franklin Co., 1932; Owen Co., 1932.

Lemanea torulosa Sirodat. Clark Co., 1933; Crawford Co., 1931; Jackson Co., 1930; Jefferson Co., 1925; Jennings Co., 1930; Lawrence Co., 1930; Monroe Co., 1890.

CLASS III - HETEROKONTAE

Order - Heterococcales

Botryococcus braunii Kuetz. Clay Co., 1931; Marshall Co., 1920; Monroe Co., 1909, 1926.

Botryococcus protuberans W. and G.S. West var. minor G.M. Smith, Vigo Co., 1929.

Botryococcus sudeticus Lemm. Laporte Co., 1927; Porter Co., 1927; Vigo Co., 1930.

Ophiocytium arbuscula A. Br. Raben. Knox Co., 1913.

Ophiocytium bicuspidatum Lemm. Monroe Co., 1908.

Ophiocytium capitatum Walle. Marion Co., 1931; Vermillion Co., 1931.

Ophiocytium cochleare (Eichwald) A. Braum. Lake Co., 1891; Sullivan Co., 1931; Tippecanoe Co., 1929; Vigo Co., 1932, 1940.

Ophiocytium mains N geli. Elkhart Co., 1929.

Ophiocytium majus N geli. Vigo Co., 1940.

Ophiocytium parvulum (Perty) A. Br. Vigo Co., 1940.

Order - Heterotrichales

Conferva (Tribonema) affinis. Monroe Co., 1909.

Conferva bombycinia. Monroe Co., 1929.

Conferva floccosa. Monroe Co., 1909.

Conferva fugacissima. Monroe Co., 1909.

Conferva punctalis. Monroe Co., 1926.

Conferva utriculosa Kuetz. Monroe Co., 1926, 1929.

Conferva vulgaris. Monroe Co., 1909.

Tribonema bombycinum (Ag.) Derb. and Sol. Marion Co., 1931;
Marshall Co., 1920; Morgan Co., 1931; Vigo Co., 1931.

Tribonema bombycinum f. minor Wille. Vigo Co., 1932.

Tribonema minus (Wille) Hazen. Marion Co., 1931; Morgan Co.,
1931.

Order - Heterosiphonales

Botrydium granulatum (L.) Grev. Marion Co., 1928; Marshall
Co., 1920; Monroe Co., 1902; Tippecanoe Co., 1929;
Vigo Co., 1930.

CLASS IV - CHRYSOPHYCEAE

Order - Chrysomonadales

Cryptomonas anomala Fritsch. Morgan Co., 1931.

Cryptomonas ovata Ehr. Porter Co., 1927.

Chrysosphaerella longispina Lauter. Laporte Co., 1927.

Dinobryon sertularia Ehr. Laporte Co., 1927; Porter Co., 1927.

Dinobryon sociale Ehr., Marion Co., 1931.

Dinobryon stipitatum Stein. Marion Co., 1931.

Dinobryon tabellariae (Lemm.) Pascher. Marion Co., 1931;
Morgan Co., 1931.

Synura uvella Ehr. Marion Co., 1931; Morgan Co., 1931.

Uroglena americana Calkins. Lake Co., 1927.

Order - Rhizochrysidales

Rhizochrysis limneticus G.M. Smith. Laporte Co., 1927.

CLASS V - BACILLARIEAE

Order - Centrales

Biddulphia decipiens, Van Heurck. Marion Co., 1882.

Cyclotella kutzingiana. Marion Co., 1882.

Cyclotella meneghiniana Vorce. Franklin Co., 1885; Marion Co., 1882.

Hyalodiscus collettensis. Marion Co., 1882.

Lysogonium granulata (Ehr.) Ralfs. Laporte Co., 1927.

Lysogonium varians Ag. Lake Co., 1927; Laporte Co., 1927; Porter Co., 1927.

Melosira arenaria. Monroe Co., 1909.

Melosira crenulata. Marshall Co., 1920.

Melosira hyporborea Grun. Marion Co., 1882.

Melosira varians Ag. Marion Co., 1882; Marshall Co., 1920; Monroe Co., 1909.

Stephanodiscus niagre Ehr. Lake Co., 1927; Laporte Co., 1927; Porter Co., 1927.

Order - Pennales

Achnanthes hungarica. Monroe Co., 1909.

Achnanthes flexellum. Smith. Marion Co., 1882.

Amphiprora alata (Ehr.) Kutz. Laporte Co., 1927; Porter Co., 1927.

Amphiprora ornata Bailey. Porter Co., 1927.

Amphora clevia. Monroe Co., 1929.

- Amphora ovalis Kuetz. Marion Co., 1882; Marshall Co., 1920; Monroe Co., 1909.
- Asterionella gracillima (Hautz) Heib. Lake Co., 1927; Porter Co., 1927.
- Campylodiscus hibernicus Ehr. Porter Co., 1927.
- Cocconeis amygdalma forma major. Marion Co., 1882.
- Cocconeis pediculus. Franklin Co., 1885; Marshall Co., 1920; Marion Co., 1882.
- Cocconeis pinnularia. Monroe Co., 1926.
- Cocconeis placentula Ehr. Monroe Co., 1909; Porter Co., 1927.
- Cocconema lanceolatum. Monroe Co., 1909.
- Cymatopleura elliptica Breb. Marion Co., 1882; Marshall Co., 1920.
- Cymatopleura solea Breb. Franklin Co., 1885; Marion Co., 1882; Marshall Co., 1920.
- Cymbella cymbiformis Ehrenb. Marshall Co., 1920.
- Cymbella excisa. Monroe Co., 1929.
- Cymbella gastroides Van Heurck. Franklin Co., 1885; Marion Co., 1882.
- Cymbella helvetica Van Heurck. Franklin Co., 1885; Marion 1885.
- Cymbella lanceolata (Ehr.) Kirch. Franklin Co., 1885; Marion Co., 1882; Monroe Co., 1909; Porter Co., 1927.
- Cymbella maculata Kuetz. Marshall Co., 1920.
- Cymbella naviculiformis Auersw. Marshall Co., 1920.
- Cymbella prostrata Berk. Marshall Co., 1920.
- Diatoma constrictum Ralfs. Marion Co., 1882.
- Diatoma constrictum var. longatum. Marion Co., 1882.

- Diatoma elongatum. Monroe Co., 1909.
- Diatoma hiemal Van Heurck. Marion Co., 1882.
- Diatoma meridion circulare. Marion Co., 1882.
- Diatoma vulgare Bory. Marion Co., 1882; Monroe Co., 1929.
- Encyconema prostaticum (Berk.) Kütz. Porter Co., 1927.
- Epithemia argus (Ehrenb.) Marshall Co., 1920.
- Epithemia gibba. Franklin Co., 1885; Marion Co., 1882; Marshall Co., 1920; Monroe Co., 1909.
- Epithemia granulata. Franklin Co., 1885.
- Epithemia turgida (Ehr.) Kuntze. Monroe Co., 1909; Porter Co., 1927.
- Epithemia zebra (Ehrenb.) Marshall Co., 1920.
- Eunotia cygnus. Monroe Co., 1929.
- Eunotia gracilis. Monroe Co., 1909.
- Eunotia parallela. Franklin Co., 1885; Marion Co., 1882.
- Eunotia pectinalis. Monroe Co., 1909.
- Fragilaria brevastriata var. subacuta Green. Marion Co., 1882.
- Fragilaria capucina. Monroe Co., 1909.
- Fragilaria construens. Marion Co., 1882.
- Fragilaria cratonensis (Edw.) Kilton. Lake Co., 1927; Laporte Co., 1927; Porter Co., 1927.
- Fragilaria lanceolata. Marion Co., 1882.
- Fragilaria mutabilis. Marshall Co., 1920.
- Fragilaria smithiana Green. Marion Co., 1882.
- Fragilaria ungeriana Green. Franklin Co., 1885; Marion Co., 1882.

- Fragilaria virescens Ralfs. Lake Co., 1927; Laporte Co., 1927; Porter Co., 1927.
- Fragilaria virescus. Marion Co., 1882.
- Gomphonema acuminatum Ehr. Franklin Co., 1885; Marion Co., 1882; Marshall Co., 1920; Porter Co., 1927.
- Gomphonema aporica. Kosciusko Co., 1920.
- Gomphonema capitatum. Franklin Co., 1885.
- Gomphonema constrictum Ehr. Franklin Co., 1885; Marion Co., 1882; Marshall Co., 1920; Monroe Co., 1909.
- Gomphonema curvatum. Franklin Co., 1885.
- Gomphonema dichotomum. Monroe Co., 1929.
- Gomphonema dicotoma. Franklin Co., 1885.
- Gomphonema geminatum. Franklin Co., 1885; Monroe Co., 1909.
- Gomphonema olivaceum Ehr. Marshall Co., 1920.
- Gomphonema sphaerophorum var. turgidum Ehr., Boone Co., 1882.
- Gomphonema symmetrica var. Kutz. Marion Co., 1882.
- Gyrosigma acuminatum (Kutz) Cl., Porter Co., 1927.
- Gyrosigma attenuatum. Monroe Co., 1909.
- Hantzschia amphioxys. Marion Co., 1882.
- Homocladia sigmoidea (Nitz.) Elmore. Franklin Co., 1885; Porter Co., 1927.
- Licmorpha flabellata. Monroe Co., 1909.
- Meridion circulare. Monroe Co., 1909.
- Meridion constrictum. Franklin Co., 1885; Marion Co., 1882.
- Navicula affinis. Franklin Co., 1885.
- Navicula alpina. Monroe Co., 1909.

- Navicula amhirynchus. Monroe Co., 1909.
- Navicula angustata. Monroe Co., 1909.
- Navicula atoneoides. Marion Co., 1882.
- Navicula borealis Ehr. Kg. Franklin Co., 1885; Marion Co., 1882.
- Navicula cardinalis. Monroe Co., 1929.
- Navicula cryptocephala. Monroe Co., 1929; Marion Co., 1882.
- Navicula cuspidate. Marion Co., 1882.
- Navicula dactylis. Monroe Co., 1929.
- Navicula dicephala. Franklin Co., 1885; Marion Co., 1882.
- Navicula dicephala var. ambigua Ehr. Marion Co., 1882.
- Navicula gastrum. Marshall Co., 1920.
- Navicula hemiptera. Monroe Co., 1929.
- Navicula lanceolata. Franklin Co., 1885; Marion Co., 1882.
- Navicula lata. Marion Co., 1882.
- Navicula lucidula Grunow. Marion Co., 1882.
- Navicula major Kg., Marion Co., 1882.
- Navicula mesogongyla Kg., Monroe Co., 1929.
- Navicula mesolepta. Monroe Co., 1929.
- Navicula obtusata. Franklin Co., 1885.
- Navicula placentula. Franklin Co., 1885; Marion Co., 1882.
- Navicula reinhardtii Grun. Marshall Co., 1920.
- Navicula rhyncocephala Kuetz. Marshall Co., 1920.
- Navicula roteana. Marion Co., 1882.
- Navicula serians. Monroe Co., 1909.

- Navicula sphaerophora. Monroe Co., 1909.
- Navicula timodis. Franklin Co., 1885; Marion Co., 1882.
- Navicula viridis Kg. Franklin Co., 1885; Marion Co., 1882; Monroe Co., 1909, 1926, 1929.
- Nitzschia acicularis. Monroe Co., 1909.
- Nitzschia amphioxus. Franklin Co., 1885; Marion Co., 1882.
- Nitzschia bicephala. Franklin Co., 1885; Marion Co., 1882.
- Nitzschia bilobata. Monroe Co., 1929.
- Nitzschia coaretata Van Heurck. Marion Co., 1882.
- Nitzschia constricta. Monroe Co., 1909.
- Nitzschia longa. Marion Co., 1882.
- Nitzschia sigmoidea. Monroe Co., 1909.
- Nitzschia sigmoidea var. obtusa. Marion Co., 1882.
- Nitzschia vivax. Franklin Co., 1885.
- Pinnularia major. Franklin Co., 1885.
- Pleurosigma spenceri. Marion Co., 1882.
- Rhabdonemae minuta. Franklin Co., 1885.
- Sphinctocystis (Cycmatopleura) eliptica (Kütze) Kuntze. Laporte Co., 1927; Porter Co., 1927.
- Sphinctocystis librilis (Ehr.) Hass. Laporte Co., 1927; Porter Co., 1927.
- Suriella ablonga. Franklin Co., 1885.
- Suriella biseriata C.M. Vorce. Marion Co., 1882.
- Suriella elegans Ehr. Van Heurck. Marion Co., 1882.
- Suriella limosa. Franklin Co., 1885.
- Suriella linearis. Franklin Co., 1885.
- Suriella minuta. Franklin Co., 1885.

- Suriella ovata, var. minor. Franklin Co., 1885; Marion Co., 1882.
- Suriella ovata var. radiata. Marion Co., 1882.
- Synedra acus. Franklin Co., 1885; Monroe Co., 1909, 1929.
- Synedra acuti. Marion Co., 1882.
- Synedra amphicephala Ktz., Marion Co., 1882.
- Synedra chasei. Monroe Co., 1929.
- Synedra dicephala. Marion Co., 1882.
- Synedra lanceolata. Marion Co., 1882.
- Synedra longissima. W. Sm. Marshall Co., 1920.
- Synedra obtusa Van Huerck. Franklin Co., 1885; Marion Co., 1882; Marshall Co., 1920.
- Synedra parallelogram. Franklin Co., 1885; Marion Co., 1882.
- Synedra pulchella. Monroe Co., 1909.
- Synedra radians W. Sm. Marshall Co., 1920.
- Synedra spathuliflariis, Green. Marion Co., 1882.
- Synedra tenuissima Kütz. Lake Co., 1927; Laporte Co., 1927; Porter Co., 1927.
- Synedra ulna (Nitz.) Ehr. Lake Co., 1927; Laporte Co., 1927; Porter Co., 1927.
- Synedra valens. Monroe Co., 1926.
- Tabellaria fenestrata (Kutz.) Kuntze. Monroe Co., 1909; Lake Co., 1927; Laporte Co., 1927; Porter Co., 1927.
- Tabellaria flocculosa (Roth) Kuntze. Laporte Co., 1927; Porter Co., 1927.
- Tryblionella gracilis. Franklin Co., 1885.

CLASS VI - CHLOROPHYCEAE

Order - Volvocales

Carteria klebsii (Dangeard) Dill. Vigo Co., 1929.

Chlamydobotrys gracilis Korschikoff. Marion Co., 1931.

Chlamydomonas angulosa Dill. Vigo Co., 1931.

Chlamydomonas communis Snow. Marion Co., 1931; Morgan Co., 1931.

Chlamydomonas globosa Snow. Marion Co., 1931; Morgan Co., 1931.

Chlamydomonas gracilis Snow. Morgan Co., 1931.

Chlamydomonas nivalis (Bauer) Wille. Marion Co., 1931.

Chlamydomonas pulviale. Monroe Co., 1909.

Chlamydomonas pulviusculus Ehrb. Monroe Co., 1929.

Chlamydomonas reticulata Gorosch. Marshall Co., 1920.

Chlamydomonas tingens. Monroe Co., 1909.

Eudorina elegans Ehr. Laporte Co., 1927; Marion Co., 1931; Morgan Co., 1931; Porter Co., 1927; Posey Co., 1935; Sullivan Co., 1930; Vigo Co., 1929.

Eudorina stignalis. Monroe Co., 1909.

Gonium pectorale Mùll. Marion Co., 1931; Marshall Co., 1920; Monroe Co., 1908, 1909; Vigo Co., 1929.

Gonium sociale (Duj.) Warm. Marion Co., 1928.

Pandorina morum Bory. Daviess Co., 1934; Lake Co., 1934; Lawrence Co., 1909; Marion Co., 1931; Monroe Co., 1908, 1909; Morgan Co., 1931; Parke Co., 1929; Posey Co., 1935; Vigo Co., 1930.

Pleodorina californica Shaw. Monroe Co., 1899; Tippecanoe Co., 1895; Vigo Co., 1930.

Pleodorina illinoisensis Kofoid. Howard Co., 1929; Marion Co., 1928; Morgan Co., 1931.

Sphaerella pluvialis. Monroe Co., 1909.

Volvox aureus (Ehrenberg) Kosciusko Co., 1920; Lawrence Co., 1909; Marshall Co., 1918, 1920.

Volvox globator L. Knox Co., 1913; Kosciusko Co., 1929; Lawrence Co., 1909; Monroe Co., 1909; Sullivan Co., 1932; Vigo Co., 1923.

Volvox mononae G.M. Smith. Posey Co., 1935; Sullivan Co., 1932; Vigo Co., 1929.

Order - Tetrasporales

Asterococcus limneticus G.M. Smith. Putnam Co., 1931.

Asterococcus superbus (Cienk) Scherffel. Montgomery Co., 1930.

Elaktothrix viridis (Snow) Printz. Vigo Co., 1930.

Gloecystis gigas (Kütz) Lagerh. Monroe Co., 1908.

Gloecystis vesiculosa Naeg. Vigo Co., 1932.

Palmella hyalina Breb. St. Joseph Co., 1909.

Sphaerocystis schroeteri Chodat. Kosciusko Co., 1929; Lawrence Co., 1909; Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1930, 1932.

Tetraspora bulbosa. Monroe Co., 1929.

Tetraspora cylindrica. Monroe Co., 1909.

Tetraspora gelatinosa (Vauch.) Desv. No date or county given. Vigo Co., 1940.

Tetraspora lacustris Lemm. Marion Co., 1930.

Tetraspora limnetica W. and G.S. West. Vigo Co., 1930.

Tetraspora lubrica (Roth.) Ag., Marshall Co., 1920; Monroe Co., 1908, 1909, 1926.

Order - Ulotrichales

Aphanochaete repens A. Br. Clay Co., 1931; Vigo Co., 1932, 1940.

Basicladia chelonum (Collins) Hoffman and Tilden. Vigo Co., 1929.

Chaetophora elegans Ag. Marion Co., 1930; Monroe Co., 1909; St. Joseph Co., 1909; Vigo Co., 1930.

Chaetophora endiviaefolia Ag. Monroe Co., 1908.

Chaetophora incrassata (Hudson) Hazen. Marshall Co., 1920; Vigo Co., 1930.

Chaetophora pisiformis (Roth) Ag. Marshall Co., 1920; Monroe Co., 1908, 1909, 1910; Sullivan Co., 1931; Vigo Co., 1929.

Chaetophora tuberosa. Monroe Co., 1909.

Chaetosphaeridium globosum var. depressum. W. and G.S. West. Vigo Co., 1932.

Chaetosphaeridium pringsheimii Klebahn. Vigo Co., 1932.

Chara contraria A. Br. Marshall Co., 1920; Vigo Co., 1931.

Chara foliolosa Muhl. and Willd. Marshall Co., 1920.

Chara fragilis Desv. Clay Co., 1931; Marshall Co., 1920.

Chara gymnopitys A. Br. Marshall Co., 1920.

Chara polyphylla. Gibson Co., 1875.

Chara subverrucosa A. Br. Marshall Co., 1920.

Chara vulgaris L. Marshall Co., 1920.

Chroolepus (Trentepholia) aureus. Monroe Co., 1926.

Cladophora callicoma Kutzing. Monroe Co., 1929; Vigo Co., 1940.

Cladophora crispata (Roth) Kuetz. Monroe Co., 1909; Vigo Co., 1930.

Cladophora flotowiana. Marshall Co., 1920.

Cladophora fluitans. Monroe Co., 1926.

Cladophora fracata. Monroe Co., 1909.

Cladophora glomerata Kg. Marshall Co., 1920; Monroe Co., 1908, 1909; Morgan Co., 1913; Vigo Co., 1930, 1940.

Cladophora glomerata var. clavata Wolle. Vigo Co., 1931.

Cladophora glomerata var. genuina Kirch. Tippecanoe Co., 1896.

Cladophora insignis (Ag.) Kutzing. Monroe Co., 1929.

Cladophora kuetzingiana Grunow. Vigo Co., 1940.

Cladophora oligoclona. Monroe Co., 1929.

Cladophora sauteri (Nees) Kuetz. Kosciusko Co., 1931.

Cladophora uberrima Lambert. Monroe Co., 1929.

Coleochaete irregularis. Monroe Co., 1909.

Coleochaete scutata Breb. Lake Co., 1928; Marshall Co., 1920; Monroe Co., 1908, 1909; Vigo Co., 1929.

Coleochaete soluta (Breb.) Pringh. Monroe Co., 1909; Vigo Co., 1929.

Cylindrocapsa geminella Wolle. Clay Co., 1930; Monroe Co., 1909.

Draparnaldia glomerata (Vauch) D.C. Marshall Co., 1920; Monroe Co., 1909; St. Joseph Co., 1909; Vermillion Co., 1931; Vigo Co., 1940.

Draparnaldia platyzonata Hazen. Vigo Co., 1940.

- Draparnaldia plumosa (Vauch) Agardh. Monroe Co., 1908;
Putnam Co., 1902; Vigo Co., 1929, 1940.
- Draparnaldia ravenelii Wolle. Vigo Co., 1930.
- Geminella interrupta Turpin. Kosciusko Co., 1929.
- Geminella ordinata (W. and G.S. West) Heering. Vigo Co.,
1931.
- Herposterion confervicola Nageli. Monroe Co., 1929.
- Microspora stagnorum (Ktz.) Lag (?) Marion Co., 1931;
Parke Co., 1928.
- Microspora tumidula Hazen. Morgan Co., 1931; Vigo Co., 1930.
- Microthamnion kutzingianum Naeg. Vigo Co., 1931.
- Microthamnion strictissimum Rabenh. Vigo Co., 1931.
- Myxonema glomeratum Hazen. Monroe Co., 1929.
- Nitella batrochosperma (Reich) Marshall Co., 1920.
- Nitella monodactyla A. Br. Marshall Co., 1920.
- Nitella mucronata A. Br., Marshall Co., 1920.
- Nitella tenuissima (Desv.) Marshall Co., 1920.
- Pithophora oedogonia Mont. Vigo Co., 1940.
- Pithophora oedogonia var. polyspora Rendle and West. 1930.
Dr. B.H. Smith developed this species in the laboratory.
- Pithophora varia Wille. Clay Co., 1930; Monroe Co., 1929;
Montgomery Co., 1929; Noble Co., 1929; Tippecanoe Co.,
1929; Vigo Co., 1931, 1940.
- Pleurococcus naegelii Chod. 1930, 1931. Common everywhere
on north side of trees.
- Pleurococcus viridis. Monroe Co., 1909.
- Pleurococcus vulgaris Menegh. Marion Co., 1928; Monroe Co.,
1908.
- Protococcus viridis Ag. var. gigas. Lake Co., 1891.

- Radiofilum conjunctivum Schmidle. Vigo Co., 1940.
- Rhizoclonium fontinali. Monroe Co., 1926, 1929.
- Rhizoclonium hieroglyphicum Kuetz. Vigo Co., 1929.
- Schizomeris leibleinii. Marion Co., 1930; Marshall Co., 1920.
- Stichococcus scopulinus Hazen (?) Marion Co., 1931.
- Stigeoclonium lubricum Ktz. Kosciusko Co., 1929; Marion Co., 1931; Morgan Co., 1931.
- Stigeoclonium nanum Dillw. Hazen. Monroe Co., 1908, 1909; Vigo Co., 1940.
- Stigeoclonium radians Kg. Marshall Co., 1920; Monroe Co., 1929.
- Stigeoclonium stagnatile (Hazen) Vigo Co., 1932.
- Stigeoclonium tenue. Monroe Co., 1908, 1929; Vigo Co., 1929.
- Stigeoclonium tenue var. bulbiferum Wolle. Vigo Co., 1930.
- Stigeoclonium thermale. Monroe Co., 1926.
- Ulothrix aequalis Kuetz. Monroe Co., 1908, 1926; Vigo Co., 1930.
- Ulothrix compacta. Monroe Co., 1929.
- Ulothrix muralis. Monroe Co., 1909.
- Ulothrix subtilis Kutz. Monroe Co., 1908, 1909.
- Ulothrix tenerrima Ktz. Marion Co., 1931; Vigo Co., 1932.
- Ulothrix tenuissima Kuetz. Marshall Co., 1920; Vigo Co., 1932.
- Ulothrix variabilis Kuetz. Knox Co., 1930; Vigo Co., 1930, 1931.
- Ulothrix zonata (Weber and Mohr) Kuetzing. Marshall Co., 1920; Monroe Co., 1908, 1926; Montgomery Co., 1930; Vigo Co., 1934, 1935.

Order - Oedogoniales

- Bulbochaete basispora Wittr. and Lund. Vigo Co., 1930.
- Bulbochaete crenulata Pringh. Monroe Co., 1908, 1926; Vigo Co., 1929.
- Bulbochaete intermedia DeBary. Knox Co., 1926; Monroe Co., 1929; Montgomery Co., 1930.
- Bulbochaete intermedia var. depressa Wittr. Montgomery Co., 1930.
- Bulbochaete minor (A. Braun) Wittr. Knox Co., 1913.
- Bulbochaete phygmea (Pringsh.) Marshall Co., 1920.
- Bulbochaete rectangularis Wittr. Greene Co., 1931; Knox Co., 1926; Vigo Co., 1931.
- Bulbochaete repanda Wittr. Greene Co., 1931.
- Bulbochaete varians Wittr. Greene Co., 1931; Montgomery Co., 1929.
- Oedogonium areolatum Lagerheim. Posey Co., 1935.
- Oedogonium armigerum Hirn. Montgomery Co., 1930.
- Oedogonium biforme Nordst. Knox Co., 1931.
- Oedogonium borisianum (Le Clere) Wittr. Clay Co., 1930; Montgomery Co., 1930; Posey Co., 1935; Sullivan Co., 1932; Vigo Co., 1929.
- Oedogonium borisianum var. minus Tiffany and B.H. Smith var. nov. Vigo Co., 1929.
- Oedogonium borisianum var. westii Tiffany and Brown. Vigo Co., 1931, 1932.
- Oedogonium borisianum var. zehneri Tiffany. Knox Co., 1927.
- Oedogonium boscii (Le Clerc) Wittr. Marshall Co., 1920; Vigo Co., 1932.
- Oedogonium boscii (Le Clerc) Wittr. var. occidentale Hirn. Greene Co., 1931; Vigo Co., 1932.

- Oedogonium braunii (Kuetz.) Pringsh. var. zehneri Tiffany.
1930.
- Oedogonium capillare (L) Kuetz. Parke Co., 1929; Vigo Co.,
1929.
- Oedogonium capillare forma stagnale (Kuetz: Wittr.) Hirn.
Parke Co., 1929.
- Oedogonium capilliforme Kuetz. Wittr. Montgomery Co.,
1930; Vermillion Co., 1931.
- Oedogonium capilliforme var. australe Wittr. Montgomery Co.,
1929; Vigo Co., 1931.
- Oedogonium capilliforme var. diversum (Hirn) Tiffany. Clay
Co., 1931; Vigo Co., 1932.
- Oedogonium cardiacum (Hass.) Wittr. Montgomery Co., 1930;
Vigo Co., 1932.
- Oedogonium cardiacum var. carbonicum Wittr. Vigo Co., 1931.
- Oedogonium cardiacum var. minus Lemm. Putnam Co., 1931;
Vigo Co., 1931.
- Oedogonium ciliatum (Hass.) Pringh. Knox Co., 1926.
- Oedogonium concatenatum Wittr. Vigo Co., 1930.
- Oedogonium crassiusculum, Wittr. Monroe Co., 1908, 1926.
- Oedogonium crassiusculum var. arechavaletae (Wittr.) Hirn.
Clay Co., 1931; Sullivan Co., 1931.
- Oedogonium crassiusculum var. cataractum (Wolle) Tiffany.
Vigo Co., 1931.
- Oedogonium crassiusculum Wittr. var. idianosporum Nordst
and Wittr. Knox Co., 1926; Sullivan Co., 1929; Vigo
Co., 1929.
- Oedogonium crassum (Hass.) Wittr. Monroe Co., 1909; Vigo
Co., 1932.
- Oedogonium crassum (Hass.) Wittr. var. longum Transeau.
Sullivan Co., 1932.

Oedogonium crenulatocostatum Wittr. Vigo Co., 1929.

Oedogonium crenulatocostatum var. aureum Tilden. Posey Co., 1935.

Oedogonium crenulatocostatum form cylindricum Hirn. Clay Co., 1932.

Oedogonium crenulatum Wittr. var. gracillius Nordst and Hirn. Sullivan Co., 1929.

Oedogonium crispum (Hass.) Wittr. Knox Co., 1926.

Oedogonium crispum var. gracilescens Wittr. Posey Co., 1935.

Oedogonium crispum var. hawaiense Nordst. Posey Co., 1935.

Oedogonium cryptoporum Wittr. Monroe Co., 1908.

Oedogonium cryptoporum Wittr. var. vulgare Wittr. Montgomery Co., 1929; Vigo Co., 1929.

Oedogonium curvum Pringh. Knox Co., 1926.

Oedogonium cyathigerum Wittr. Vigo Co., 1926.

Oedogonium cyathigerum forma perfectum Hirn. Vigo Co., 1928.

Oedogonium decipiens var. africanum Tiffany. Vigo Co., 1932.

Oedogonium decipiens Wittr. forma dissimile Hirn. Knox Co., 1926.

Oedogonium exocostatum Tiffany. Vigo Co., 1927.

Oedogonium flavescens (Hass) Wittr. Vigo Co., 1932, 1940.

Oedogonium fonticula. Monroe Co., 1909.

Oedogonium foveolatum Wittr. Vigo Co., 1934.

Oedogonium fragile Wittr. Knox Co., 1926; Vigo Co., 1932.

Oedogonium gallicum Hirn. Vigo Co., 1940.

Oedogonium giganteum (Kuetz.) Wittr. Vigo Co., 1940.

Oedogonium globosum Nordst. Montgomery Co., 1930; Posey Co., 1935.

Oedogonium gracillimum Wittr. and Lund. Knox Co., 1926;
Montgomery Co., 1930; Vigo Co., 1929.

Oedogonium grande Kuetz. Wittr. Knox Co., 1913; Vigo Co.,
1929.

Oedogonium grande var. aequatoriale Wittr. Knox Co., 1926.

Oedogonium grande var. majus Hansg. Vigo Co., 1929.

Oedogonium gunii Wittr. Vigo Co., 1932.

Oedogonium hirnii Gutwinski. Lake Co., 1934.

Oedogonium inconspicuum Hirn. Montgomery Co., 1930.

Oedogonium indianense Britton and Smith sp. nov. Vigo Co.,
1932.

Oedogonium intermedium Wittr. Vigo Co., 1929.

Oedogonium iowense Tiffany. Knox Co., 1926.

Oedogonium irregulare Wittr. Monroe Co., 1926; Vigo Co.,
1931.

Oedogonium kurzii Zeller. Sullivan Co., 1932.

Oedogonium lageniforme Hirn. Posey Co., 1935.

Oedogonium landsboroughi (Hass.) Wittr. Marshall Co., 1920;
Monroe Co., 1929.

Oedogonium landsboroughi var. norvegicum Wittr. Vigo Co.,
1929.

Oedogonium latiusculum Tiffany. Vigo Co., 1929.

Oedogonium longatum Kuetz. Marshall Co., 1920.

Oedogonium macrandrium Wittr. var. propinquum Wittr. Hirn.
Vigo Co., 1932.

Oedogonium mexicanum Wittr. Vigo Co., 1929.

Oedogonium monile Berkley and Harvey. Putnam Co., 1931.

Oedogonium moniliforme Wittr. Vigo Co., 1929.

Oedogonium multisporum Wood. Daviess Co., 1931; Vigo Co.,
1931.

- Oedogonium oblongum Wittr. Knox Co., 1926; Vigo Co., 1929.
- Oedogonium obtruncatum. Monroe Co., 1909.
- Oedogonium pachyandrium Wittr. Vigo Co., 1932.
- Oedogonium paludosum (Hass.) Wittr. Knox Co., 1926; Vigo Co., 1932.
- Oedogonium paludosum var. parvisporum Hirn. Clay Co., 1931;
- Oedogonium paucocostatum Transeau. Vigo Co., 1930.
- Oedogonium paulense Nordst and Hirn. Clay Co., 1931; Greene Co., 1931.
- Oedogonium pisanum Wittr. Parke Co., 1931.
- Oedogonium pisanum var. gracilis Transeau and Tiffany. Knox Co., 1931.
- Oedogonium plagiostomum Wittr. Clay Co., 1931; Sullivan Co., 1929; Vigo Co., 1932.
- Oedogonium plagiostomum var. gracilius Wittr. Knox Co., 1930; Sullivan Co., 1932; Vigo Co., 1932.
- Oedogonium plusiosporum Wittr. Sullivan Co., 1929.
- Oedogonium porrectum Nordst. N. and Hirn. Knox Co., 1926.
- Oedogonium pratense Transeau. Knox Co., 1926; Vigo Co., 1929.
- Oedogonium princeps (Hass.) Wittr. Vigo Co., 1931.
- Oedogonium pringsheimii Cramer; Wittr. Knox Co., 1929; Monroe Co., 1929.
- Oedogonium pringsheimii var. abbreviatum Hirn. Knox Co., 1929; Vigo Co., 1930.
- Oedogonium pringsheimii var. nordstedtii. Knox Co., 1929; Posey Co., 1935.
- Oedogonium pseudacrosporum Wittr. Vigo Co., 1929.
- Oedogonium richterianum Lemm. Knox Co., 1926; Vigo Co., 1940.

Oedogonium rivulare (Le Clere) A. Braun. Vigo Co., 1930.

Oedogonium rufescens Wittr. Vigo Co., 1932.

Oedogonium rufescens var. exiguum (Elfving) Tiffany. Montgomery Co., 1929.

Oedogonium rufescens var. lundellii (Wittr.) Tiffany. Sullivan Co., 1931.

Oedogonium rugulosum (Nordst.) forma minutum (Hanag.) Hirn. Montgomery Co., 1930; Posey Co., 1935.

Oedogonium sexangulare Cleve. Monroe Co., 1909; Montgomery Co., 1930; Sullivan Co., 1932.

Oedogonium sodiroanum Lagerheim. Vigo Co., 1932.

Oedogonium suecicum Wittr. Knox Co., 1930; Vigo Co., 1929, 1940.

Oedogonium suecicum var. australe (G.S. West) B.H. Smith nov. comb. Knox Co., 1931; Vigo Co., 1932.

Oedogonium undulatum Breb. Monroe Co., 1910, 1926, 1929.

Oedogonium varians Wittr. and Lund. Knox Co., 1929; Posey Co., 1935.

Oedogonium vaucherii (Le Clere) A. Br. Wittr. Vigo Co., 1929.

Oedogonium verrucosum Hallas. Montgomery Co., 1929.

Oedogonium wabashense Tiffany nov. sp. Knox Co., 1927.

Oedogonium wyliei Tiffany. Montgomery Co., 1929.

Order - Ulvalves

Schizomeris leibleinii Kuetz. Knox Co., 1929; Marshall Co., 1920.

Order - Schizogoniales

Prasiola crispa (Lightf) Menegh. forma muralis (Kuetz) G.S. West. Vigo Co., 1930.

Prasiola parietina (Vaucher.) Marshall Co., 1920.

Order - Chlorococcales

Actinastrum gracillimum Smith. Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1932.

Actinastrum hantzschii Lagerh. Vigo Co., 1930.

Actinastrum hantzschii var. fluvitale Lemm. Vigo Co., 1930.

Ankistrodesmus chodati (Tanner-Fullemann Brunnth) Vigo Co., 1930.

Ankistrodesmus falcatus (Corda) Ralfs. Marion Co., 1928; Morgan Co., 1931; Porter Co., 1927; Vigo Co., 1932.

Ankistrodesmus falcatus var. mirabilis G.S. West. Kosciusko Co., 1929; Sullivan Co., 1931; Vermillion Co., 1931.

Ankistrodesmus falcatus var. spirilliformis G.S. West. Sullivan Co., 1930.

Ankistrodesmus nitzschiioides G.S. West. Vigo Co., 1930.

Ankistrodesmus setigerus (Schrod) G.S. West. Parke Co., 1931; Sullivan Co., 1931;

Ankistrodesmus spiralis (Turner) Lemm. Parke Co., 1929.

Characium limneticum Lemm. (?) Marion Co., 1931.

Characium naegelli var. maius. Hanaging. Montgomery Co., 1930.

Characium pringsheimii Braun. Kosciusko Co., 1929; Monroe Co., 1926.

Characium sublatum A. Braun. Vigo Co., 1932.

Chlorella vulgaris Beyerinck. Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1930.

- Chlorococcum humicolum (Narg.) Raben. Sullivan Co., 1931.
- Closteriopsis longissima West. Marion Co., 1931; Morgan Co., 1931.
- Closteriopsis longissima var. aciculare (Chod.) Vigo Co., 1930.
- Coelastrum cambricum Arch. Marion Co., 1931; Monroe Co., 1909; Parke Co., 1932; Sullivan Co., 1932.
- Coelastrum microporum Nag. Knox Co., 1934; Lake Co., 1891, 1927; Marion Co., 1931; Marshall Co., 1920; Monroe Co., 1908, 1909; Morgan Co., 1931; Montgomery Co., 1929; Noble Co., 1929; Parke Co., 1931; Porter Co., 1927; Sullivan Co., 1932.
- Coelastrum regiculatum (Dangeard) Senn. Laporte Co., 1927; Porter Co., 1927; Vigo Co., 1930.
- Coelastrum sphaericum Naeg. Marshall Co., 1920; Parke Co., 1931; Vermillion Co., 1931.
- Crucigenia apiculata (Lemm.) Schmidle. Kosciusko Co., 1929; Morgan Co., 1931.
- Crucigenia cruciata (Wolle) Schmidle. Vigo Co., 1930.
- Crucigenia crucifera (Wolle) Collins. Marion Co., 1931; Morgan Co., 1931; Posey Co., 1935.
- Crucigenia fenestrata Schmidle. Morgan Co., 1931.
- Crucigenia irregularis Wille. Marion Co., 1931; Morgan Co., 1931.
- Crucigenia lauterbornei Schmidle. Morgan Co., 1931.
- Crucigenia quadrata. Marion Co., 1931; Morgan Co., 1931; Vermillion Co., 1931; Warren Co., 1931.
- Crucigenia rectangularis (Naeg) Gay. Kosciusko Co., 1929; Vigo Co., 1929.
- Crucigenia tetrapedia (Karchner) W. and G.S. West. Marshall Co., 1920; Vigo Co., 1930.
- Crucigenia truncata G.M. Smith. Vigo Co., 1930.

- Dactylococcus bicaudatus. Monroe Co., 1909.
- Dictyosphaerium ehrenbergianum Naeg. Marshall Co., 1920; Monroe Co., 1929; Montgomery Co., 1930.
- Dictyosphaerium pulchellum Wood. Daviess Co., 1934; Lake Co., 1927; Laporte Co., 1927; Marion., 1931; Morgan Co., 1931; Porter Co., 1927; Sullivan Co., 1932; Vigo Co., 1930.
- Dictyosphaerium reniforme Buluh. Lake Co., 1891; Monroe Co., 1909.
- Dimorphococcus cordatus Wolle. Lake Co., 1891.
- Dimorphococcus lunatus A. Braun. Sullivan Co., 1932; Vigo Co., 1934.
- Eremosphaera viridis De By. Marshall Co., 1920.
- Gloeocystopsis limneticus G.M. Smith. Morgan Co., 1931.
- Gloeotaenium loitlesbergerianum Hansg. Howard Co., 1929; Sullivan Co., 1930; Vigo Co., 1930.
- Golenkinia paucispina W. and G.S. West. Marion Co., 1931; Morgan Co., 1931.
- Golenkinia radiata Chodat. Morgan Co., 1931.
- Hydrodictyon reticulatum Roth. Lake Co., 1891; Marshall Co., 1920; Morgan Co., 1910; Owen Co., 1913; Vigo Co., 1929, 1940.
- Kirchneriella lunaris (Kirchner) Möbius. Kosciusko Co., 1929; Vigo Co., 1930.
- Kirchneriella obesa (W. West) Schmidle. Laporte Co., 1927; Morgan Co., 1931; Montgomery Co., 1930; Sullivan Co., 1932.
- Kirchneriella obesa var. aptera (Teiling) Brunnthaler. Vigo Co., 1930.
- Kirchneriella obesa var. major (Bunard) G.M. Smith. Sullivan Co., 1931.
- Lagerheimia chodati Bern. Marion Co., 1931; Morgan Co., 1931.

- Lagerheimia citriformis (Snow) G.M. Smith. Marion Co., 1931.
- Lagerheimia droescheri (Lemm) Printz. Marion Co., 1931.
- Lagerheimia subsalsa Lemmerman. Greene Co., 1934.
- Micractinium pusillum Fresen. var. elegans. G.M. Smith.
Vigo Co., 1930.
- Nephrocytium agardhianum Naeg. Marion Co., 1931; Monroe Co.,
1908; Sullivan Co., 1932; Vigo Co., 1934.
- Oocystis borgei Snow. Lake Co., 1934; Marion Co., 1931;
Vigo Co., 1929, 1930.
- Oocystis crassa Wittr. Vigo Co., 1931.
- Oocystis elliptica W. West. Parke Co., 1929; Sullivan Co.,
1935.
- Oocystis natans (Lemm) Wille. Grant Co., 1929.
- Oocystis natans var. major G.M. Smith. Vigo Co., 1931.
- Oocystis parva W. and G.S. West. Vigo Co., 1930.
- Oocystis pusilla Hansg. Marion Co., 1931; Morgan Co., 1931;
Sullivan Co., 1931.
- Oocystis solitaria Wittr. Montgomery Co., 1929.
- Pediastrum angulosum. Monroe Co., 1926.
- Pediastrum boryanum (Turpin) Meneghini. Knox Co., 1934;
Kosciusko Co., 1929; Lake Co., 1891; Laporte Co., 1927;
Lawrence Co., 1909; Marion Co., 1931; Marshall Co.,
1920; Monroe Co., 1908, 1909; Morgan Co., 1931; Porter
Co., 1927; Vermillion Co., 1931; Vigo Co., 1929, 1940.
- Pediastrum boryanum var. granulatum (Kuetzing) al. Braun.
Marshall Co., 1934.
- Pediastrum boryanum var. longicorne Raciborski. Kosciusko
Co., 1929; Vigo Co., 1929.
- Pediastrum duplex Meyen. Laporte Co., 1927; Marion Co.,
1931; Marshall Co., 1920; Morgan Co., 1931; Porter
Co., 1927; Vigo Co., 1927.

Pediastrum duplex var. clathratum (A. Brown) Lagerheim. Sullivan Co., 1932; Vigo Co., 1930.

Pediastrum duplex var. cohaerens Bahlin. Vigo Co., 1932.

Pediastrum duplex var. gracillimum W. and G.S. West. Vigo Co., 1930.

Pediastrum duplex var. rotundatum Lucks. Vigo Co., 1929.

Pediastrum ehrenbergii. Lake Co., 1891; Marshall Co., 1920; Monroe Co., 1929.

Pediastrum integrum Naeg. Marshall Co., 1934; Sullivan Co., 1930, 1934; Tippecanoe Co., 1929; Vigo Co., 1931.

Pediastrum integrum var. priva Printz. Posey Co., 1935.

Pediastrum ovatum (Ehr.) A. Br. Vigo Co., 1930.

Pediastrum pertusum. Lake Co., 1891; Monroe Co., 1909.

Pediastrum sculpatum G.M. Smith. Kosciusko Co., 1929.

Pediastrum simplex (Bail.) Laporte Co., 1927; Marion Co., 1931; Monroe Co., 1926; Morgan Co., 1931; Porter Co., 1927.

Pediastrum simplex var. duodenarium (Bailey) Reben. Knox Co., 1934; Vermillion Co., 1931; Vigo Co., 1930.

Pediastrum simplex var. granulatum Lemm. Kosciusko Co., 1929.

Pediastrum strumii. Monroe Co., 1926.

Pediastrum tetras (Ehr.) Ralfs. Knox Co., 1934; Kosciusko Co., 1929; Marshall Co., 1934; Marion Co., 1931; Monroe Co., 1909; Morgan Co., 1931; Sullivan Co., 1932; Vermillion Co., 1931; Vigo Co., 1932.

Phyllobium sphagnicola G.S. West. Vigo Co., 1931.

Planktosphaeria gelatinosa G.M. Smith. Marshall Co., 1934.

Polydrium minimum. Monroe Co., 1926.

Polyedriopsis spinulosa Schmiddle. Marion Co., 1931; Morgan Co., 1931.

- Raphidium convolutum. Monroe Co., 1909.
- Raphidium (Ankistrodesmus) polymorphum. Monroe Co., 1909.
- Scenedesmus abundans (Kirchner) Chodat. Lake Co., 1934;
Marion Co., 1931; Marshall Co., 1920; Morgan Co., 1931;
Sullivan Co., 1931.
- Scenedesmus abundans var. longicanda G.M. Smith. Knox Co.,
1934.
- Scenedesmus acuminata (Lagerheim) Chodat. Lake Co., 1934;
Marion Co., 1931; Morgan Co., 1931.
- Scenedesmus acuminata var. elongatus G.M. Smith. Vigo Co.,
1931.
- Scenedesmus acutiformis Schroeder. Lake Co., 1934; Vigo Co.,
1934.
- Scenedesmus acutus. Monroe Co., 1909.
- Scenedesmus arcuatus Lemm. Marion Co., 1931; Morgan Co.,
1931; Vigo Co., 1932.
- Scenedesmus arcuatus var. capitatus. Lake Co., 1934; Vigo
Co., 1930.
- Scenedesmus arcuatus var. platydisca G.M. Smith. Parke Co.,
1931; Vigo Co., 1929, 1930.
- Scenedesmus armatus (Chodat) G.M. Smith. Lake Co., 1934.
- Scenedesmus bernardi G.M. Smith. Parke Co., 1931.
- Scenedesmus bijuga (Turpin) Lagerheim. Knox Co., 1931; Lake
Co., 1934; Marion Co., 1931; Morgan Co., 1931; Pike
Co., 1931; Posey Co., 1935; Vigo Co., 1932.
- Scenedesmus bijuga var. alternans (Reinsch) Borge. Daviess
Co., 1932; Kosciusko Co., 1929.
- Scenedesmus bijuga var. alternans forma irregularis G.M.
Vigo Co., 1930.
- Scenedesmus bijuga var. flexuosus Lemm. Vigo Co., 1930.
- Scenedesmus bijuga var. irregularis (Wille) G.M. Smith.
Vigo Co., 1930.

- Scenedesmus brasiliensis Bohlin. Sullivan Co., 1934.
- Scenedesmus caudatus Corda. Lake Co., 1891; Monroe Co., 1908-1909.
- Scenedesmus caudatus Corda var. abundans Kirch. Lake Co., 1891.
- Scenedesmus denticulatus Lagerheim. Howard Co., 1929; Knox Co., 1934; Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1932.
- Scenedesmus denticularis var. linearis Haneg. Vigo Co., 1930.
- Scenedesmus dimorphus (Turpin) Ktz. Lake Co., 1891; Marion Co., 1928; Monroe Co., 1909; Morgan Co., 1931; Vigo Co., 1930.
- Scenedesmus longus Meyen. Daviess Co., 1932; Howard Co., 1930; Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1934.
- Scenedesmus longus var. brevispina G.M. Smith. Vigo Co., 1930.
- Scenedesmus obliquus (Turpin) Kuetzing. Lake Co., 1934; Marion Co., 1928; Marshall Co., 1920; Morgan Co., 1931; Pike Co., 1932; Vigo Co., 1932.
- Scenedesmus obtusus Meyen. Lake Co., 1891; Monroe Co., 1908, 1909.
- Scenedesmus opoliensis P. Richter. Knox Co., 1934; Marion Co., 1931; Morgan Co., 1931; Parke Co., 1931; Vigo Co., 1930.
- Scenedesmus quadricauda (Turpin) de Brebisson. Knox Co., 1934; Lake Co., 1934; Marion Co., 1928; Morgan Co., 1931; Vigo Co., 1929.
- Scenedesmus quadricauda var. africana Fritsch. and Rich. Vigo Co., 1930.
- Scenedesmus quadricauda var. longispina (Chod.) G.M. Smith. Vigo Co., 1930.
- Scenedesmus quadricauda var. parvus G.M. Smith. Knox Co., 1934; Lake Co., 1934; Parke Co., 1931; Vigo Co., No date.

Scenedesmus quadricauda var. quadrispina (Chodat) G.M. Smith. Knox Co., 1934; Lake Co., 1934; Parke Co., 1931.

Scenedesmus quadricauda var. westii. G.M. Smith. Knox Co., 1934; Parke Co., 1931; Vigo Co., 1932.

Scenedesmus rotundatus. Monroe Co., 1926.

Selenastrum bibraianum Reinsch. Marion Co., 1931; Morgan Co., 1931.

Selenastrum westii G.M. Smith. Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1930.

Sorastrum americanum (Bohlin) Schmidle. Sullivan Co., 1932.

Sorastrum americanum (Bohlin) Schmidle var. undulatum G.M. Smith. Vigo Co., 1930.

Sorastrum spinulosum Nägeli. Knox Co., 1934; Kosciusko Co., 1929; Lake Co., 1890; Monroe Co., 1909; Montgomery Co., 1929; Sullivan Co., 1931; Vigo Co., 1929.

Tetraedron caudatum (Corda) Hanag. Sullivan Co., 1931; Knox Co., 1934.

Tetraedron caudatum var. longispinum Lemmerman. Knox Co., 1934.

Tetraedron enorme Rab. Lake Co., 1891.

Tetraedron gracile (Reinsch) Hansg. Marion Co., 1931; Morgan Co., 1931.

Tetraedron gracile var. excavatum G.M. Smith. Vigo Co., 1930.

Tetraedron hastatum (Reinsch) Hansg. Marion Co., 1931; Marshall Co., 1920.

Tetraedron minimum A. Braun Hansg. Lake Co., 1934; Marshall Co., 1920; Monroe Co., 1926; Parke Co., 1929; Vermillion Co., 1931.

Tetraedron minutum A. Br. Lake Co., 1891.

Tetraedron muticum A. Br. Lake Co., 1891.

- Tetraedron regulare Ktz. Marion Co., 1934; Morgan Co., 1934.
- Tetraedon regulare Ktz. forma major Reinsch. Martin Co., 1929.
- Tetraedon trigonum (Näg) Hansg. Marion Co., 1931; Morgan Co., 1931.
- Tetraedron trigonum Naeg. var. bifurcatum Wille. Lake Co., 1891.
- Tetraedron trigonum Naeg. var. gracile (Reinsch) de Toni. Vigo Co., 1930.
- Tetraedron trigonum Naeg. var. tetragonum Rab. Lake Co., 1891.
- Tetraedron trigonum Naeg. var. typicum Kirch. Lake Co., 1891.
- Tetrastrum elegans Playf. Vigo Co., 1930.
- Tetrastrum heterocanthum (Nordet) Chod. Vigo Co., 1930.
- Tetrastrum staurogeniaeforme (Schröd) Lemm. Marion Co., 1931; Vigo Co., 1930.
- Treubaria triappendiculata Bern. Vigo Co., 1930.
- Trochiscia reticularis (Reinsch) Hansging. Vigo Co., 1934.
- Westella botryoides (W. West) de Wildeman. Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1932.

Order - Siphonales

- Dichotomosiphon tuberosus (A. Br.) Ernst. Lagrange Co., 1929.
- Micractinium pusillum Fresenius. Marion Co., 1931; Morgan Co., 1931.
- Vaucheria aversa. Monroe Co., 1926.
- Vaucheria borealis Hirn. Vigo Co., 1940.

- Vaucheria dichomata (Lyngb.) Ag. St. Joseph Co., 1909.
- Vaucheria dillwynii. Monroe Co., 1909.
- Vaucheria geminata (Vauch.) D.C. Greene Co., 1931; Marion Co., 1928, 1930; Monroe Co., 1908, 1909; Montgomery Co., 1930; St. Joseph Co., 1909; Vigo Co., 1931, 1940; Wayne Co., 1918.
- Vaucheria geminata forma racemosa (Vauch.) Walz. Monroe Co., 1926, 1929; Vigo Co., 1931.
- Vaucheria hamata (Vauch.) de Candolli. Vigo Co., 1931.
- Vaucheria longipes Collins. Vigo Co., 1929.
- Vaucheria megaspora Iwanoff. Vigo Co., 1940.
- Vaucheria orthocarpe (Reinsch) var. major var. nov. Vigo Co., 1929.
- Vaucheria pachyderma Walz. Henry Co., 1930; Marion Co., 1930; Warren Co., 1931.
- Vaucheria polysperma Hassell. Vigo Co., 1930, 1940.
- Vaucheria repens Hassell. Vermillion Co., 1931.
- Vaucheria sericea. Monroe Co., 1909.
- Vaucheria sessilis (Vauch.) D.C. Marion Co., 1928, 1931; St. Joseph Co., 1909; Sullivan Co., 1931; Monroe Co., 1908, 1909; Vermillion Co., 1931; Vigo Co., 1931, 1940.
- Vaucheria sessilis forma genuina Hansg. Vigo Co., 1931.
- Vaucheria terristris de Candolle. Putnam Co., 1931; Monroe Co., 1909; Montgomery Co., 1929; Sullivan Co., 1931; Vigo Co., 1929, 1940.
- Vaucheria uncinata Kuetz. Vigo Co., 1931, 1940.
- Vaucheria woroniniana Heering. Vigo Co., 1940.

Order - Zygnematales

- Arthrodesmus convergens (Ehrb.) Ralfs. Monroe Co., 1909; 1929; Montgomery Co., 1929; Sullivan Co., 1933.
- Arthrodesmus fragalis. Monroe Co., 1929.
- Arthrodesmus incus Hass. Monroe Co., 1926; Lake Co., 1891.
- Arthrodesmus octocornus. Monroe Co., 1926.
- Bambusina brebissonii. Monroe Co., 1929.
- Calocylinthus (Cosmarium) curtus. Monroe Co., 1926.
- Calocylinthus thwaitesii Ralfs. Montgomery Co., 1898.
- Closterium abruptum West. Vigo Co., 1930.
- Closterium acerosum (Schrank) Ehrenberg. Greene Co., 1934; Knox Co., 1934; Monroe Co., 1908, 1909; Pike Co., 1934; Vigo Co., 1922, 1940.
- Closterium acerosum var. elongatum Breb. Clay Co., 1931; Lake Co., 1934; Vermillion Co., 1932.
- Closterium acuminatum. Monroe Co., 1909, 1929.
- Closterium acutum (Lyng.) DeBreb. Marion Co., 1931.
- Closterium archerium Cleve. Vigo Co., 1930.
- Closterium attenuatum. Monroe Co., 1909.
- Closterium brebissonii Delp. Lake Co., 1891.
- Closterium cucumis Ehrenb. Monroe Co., 1908, 1909.
- Closterium cynthia De Not. Knox Co., 1931.
- Closterium decorum Breb. Montgomery Co., 1929.
- Closterium decussatum. Monroe Co., 1926, 1927.
- Closterium diana. Lake Co., 1891; Marshall Co., 1920; Monroe Co., 1908, 1910; Montgomery Co., 1929; Vigo Co., 1940.

- Closterium diana var. arcuatum (Breb) Rabenh. Kosciusko Co., 1929.
- Closterium didymotocum Corda. Clay Co., 1931; Montgomery Co., 1929.
- Closterium ehrenbergii Menegh. Kosciusko Co., 1929; Monroe Co., 1908, 1909; Posey Co., 1935; Sullivan Co., 1929; Vigo Co., 1930.
- Closterium gracile De Breb. Lake Co., 1891; Laporte Co., 1927; Marion Co., 1931; Morgan Co., 1931; Porter Co., 1927; Vigo Co., 1930.
- Closterium juncidum. Monroe Co., 1929.
- Closterium keutzingii De Breb. Montgomery Co., 1930; Vigo Co., 1929.
- Closterium lanceolatum. Lawrence Co., 1909; Monroe Co., 1929; Montgomery Co., 1898; Vigo Co., 1940.
- Closterium leibleinii Kuetz. Monroe Co., 1909; Noble Co., 1929; Sullivan Co., 1931.
- Closterium leibleinii Kg. var. curtum West. Montgomery Co., 1898.
- Closterium lineatum. Monroe Co., 1929; Tippecanoe Co., 1929.
- Closterium lineatum var. maximum var. nov. Montgomery Co., 1929.
- Closterium lunula. Posey Co., 1935.
- Closterium macilentum Breb. Sullivan Co., 1930.
- Closterium moniliferum Ehrb. Monroe Co., 1926, 1929; Montgomery Co., 1898; Morgan Co., 1931; Pike Co., 1934; Posey Co., 1935; Sullivan Co., 1931; Vermillion Co., 1931; Vigo Co., 1931; Wabash Co., 1929.
- Closterium nastum. Monroe Co., 1926.
- Closterium parvulum. Monroe Co., 1926.
- Closterium pritchardianum Arch. Vigo Co., 1930.

- Closterium rostratum Ehrb. Lake Co., 1891.
- Closterium setaceum Ehrenb. Vigo Co., 1929.
- Closterium strigosum Breb. Monroe Co., 1908.
- Closterium subcostatum Nord. Lawrence Co., 1909.
- Closterium subtle Breb. Monroe Co., 1926.
- Closterium subulatum (Kuetz) Breb. Vigo Co., 1929.
- Closterium venus Kg. Lake Co., 1891; Monroe Co., 1926; 1929; Noble Co., 1929.
- Cosmarium abbreviatum Racib. var. planctonicum W. and G.S. West. Putnam Co., 1931.
- Cosmarium abscissum var. subetchachanense. Montgomery Co., 1929.
- Cosmarium benustum. Monroe Co., 1909.
- Cosmarium binum Nordst. Vigo Co., 1930.
- Cosmarium bioculatum Breb. Kosciusko Co., 1929; St. Joseph Co., 1909.
- Cosmarium bireme Nordst. Vigo Co., 1930.
- Cosmarium biretum Breb. Monroe Co., 1926.
- Cosmarium biretum Breb. var. trigibbernum Nordst. Vermillion Co., 1931.
- Cosmarium blytii Wille. Clay Co., 1930; Sullivan Co., 1931.
- Cosmarium botrytis Menegh. Monroe Co., 1908, 1910, 1926, 1929; Parke Co., 1929; St. Joseph Co., 1909; Vigo Co., 1930.
- Cosmarium botrytis var. subtumidum Wittr. Sullivan Co., 1931.
- Cosmarium calcareum Wittr. Montgomery Co., 1929.
- Cosmarium circulare Reinsch. Elkhart Co., 1929.
- Cosmarium coelatum. Monroe Co., 1926.

- Cosmarium conspersum. Monroe Co., 1929.
- Cosmarium contractum Kirch. Lake Co., 1891.
- Cosmarium cordanum Breb. Montgomery Co., 1898.
- Cosmarium costatus Wolle. Franklin Co., 1885.
- Cosmarium cucumis. Monroe Co., 1909.
- Cosmarium dentatum Walle. Lake Co., 1891; Sullivan Co., 1930; Vigo Co., 1930.
- Cosmarium eloisanum Wolle. Vigo Co., 1929.
- Cosmarium formosulum Hoff. Vermillion Co., 1931.
- Cosmarium globosum Bulnk. Lake Co., 1891; Monroe Co., 1909.
- Cosmarium granatum Breb. Lake Co., 1891; Marshall Co., 1920; Montgomery Co., 1898; Vermillion Co., 1931; Vigo Co., 1930.
- Cosmarium granatum var. ocellatum W. West and G.S. West. Sullivan Co., 1930.
- Cosmarium granatum var. subgranatum Nordst. Sullivan Co., 1931; Vigo Co., 1932.
- Cosmarium hammeri. Monroe Co., 1929.
- Cosmarium holmiense var. integrum Lund. Montgomery Co., 1898.
- Cosmarium impressulum Elfv. Monroe Co., 1929; Sullivan Co., 1931.
- Cosmarium intermedium Deponte. Marshall Co., 1920; St. Joseph Co., 1909.
- Cosmarium laeve Rabenh. Monroe Co., 1908; Vigo Co., 1930.
- Cosmarium latum Breb. Lake Co., 1891; Marshall Co., 1920.
- Cosmarium lundelli var. corruptum (Turn.) West and G.S. West. Putnam Co., 1931.
- Cosmarium lundelli Delp. var. ellipticum West. Grant Co., 1929; Parke Co., 1929.

- Cosmarium margaritifera. Monroe Co., 1929.
- Cosmarium margaritatum f. minor Boldt. Vigo Co., 1932.
- Cosmarium meneghinii Breb. Lake Co., 1891; Monroe Co., 1926; Vigo Co., 1930.
- Cosmarium moniliforme. Lake Co., 1891; Monroe Co., 1926.
- Cosmarium naegelianum Breb. Montgomery Co., 1898.
- Cosmarium nitidulum. Monroe Co., 1929.
- Cosmarium obsoletum. Monroe Co., 1909.
- Cosmarium obtusatum Schmidle. Clay Co., 1930; Montgomery Co., 1929; Vermillion Co., 1931.
- Cosmarium obtusatum var. beanlandii, W. and G.S. West. Clay Co., 1930; Parke Co., 1930.
- Cosmarium ochthodes Nordst. Montgomery Co., 1929.
- Cosmarium orbiculatum. Monroe Co., 1909.
- Cosmarium ornatum Ralfs. Lake Co., 1891.
- Cosmarium ovale Ralfs. Monroe Co., 1929; Montgomery Co., 1929.
- Cosmarium pachydermum Lund. Noble Co., 1929.
- Cosmarium phaseolus Breb. Monroe Co., 1908.
- Cosmarium pokornyanum (Green) W. and G.S. West. Noble Co., 1929.
- Cosmarium polymazum Nord. Lake Co., 1891.
- Cosmarium polymorphum Nord. Montgomery Co., 1898.
- Cosmarium portianum Archer. Daviess Co., 1934; Montgomery Co., 1929; Parke Co., 1929; Vigo Co., 1930; Sullivan Co., 1929.
- Cosmarium portianum var. major nov. var. Greene Co., 1931; Vigo Co., 1930.
- Cosmarium portianum var. nephroidum Wittr. Pike Co., 1934; Vigo Co., 1930.

- Cosmarium protractum (Naeg.) DeBory. Montgomery Co., 1929.
- Cosmarium pseudatlanthoideum West. Montgomery Co., 1929.
- Cosmarium pseudobromii Wolle. Franklin Co., 1885; Montgomery Co., 1898.
- Cosmarium pseudoconnatum Nordst. Vigo Co., 1930.
- Cosmarium pseudoprotuberans Kirchn. Vigo Co., 1930.
- Cosmarium pseudopyramidatum Lund. Parke Co., 1930; Vermillion Co., 1931.
- Cosmarium punctulatum Breb. Montgomery Co., 1929.
- Cosmarium punctulatum var. subpunctulatum (Nordst.) Borg. Parke Co., 1929.
- Cosmarium pyramidatum. Monroe Co., 1908, 1926.
- Cosmarium quadratum Ralfs. Montgomery Co., 1929.
- Cosmarium quadratulum (Gay) De Toni. Grant Co., 1929.
- Cosmarium quasillus Lund. Monroe Co., 1909; Vigo Co., 1929.
- Cosmarium rectangulare Grum. Grant Co., 1929.
- Cosmarium rectangulare Grum. var. hexagonum (Elfr.) W. and G.S. West. Kosciusko Co., 1929; Sullivan Co., 1930.
- Cosmarium reniforme (Ralfs) Arch. Grant Co., 1929; Marshall Co., 1934; Montgomery Co., 1929; Parke Co., 1931; Vermillion Co., 1931
- Cosmarium reniforme var. elevatum W. and G.S. West. Clay Co., 1931; Noble Co., 1929.
- Cosmarium reniforme var. compressum Nordst. Putnam Co., 1931.
- Cosmarium schliephockeanum. Monroe Co., 1929.
- Cosmarium sexangulare Lund. Monroe Co., 1909.
- Cosmarium sexangulare Lund. forma minima Nordst. Vermillion Co., 1931; Vigo Co., 1930.

Cosmarium speciosum Lund. Clay Co., 1931; Monroe Co., 1926; Montgomery Co., 1898.

Cosmarium speciosum var. rostafinskii (Gutw.) W. and G.S. West. Parke Co., 1929.

Cosmarium speciosum var. simplex Nordst. Clay Co., 1931.

Cosmarium subcostatum Nordst. Parke Co., 1929.

Cosmarium subcostatum var. minor W. and G.S. West. Vigo Co., 1930.

Cosmarium subcrenatum Hantz. Grant Co., 1929; Marshall Co., 1920; Vigo Co., 1929, 1940.

Cosmarium subcucumis Schmidle. Putnam Co., 1931.

Cosmarium suborbiculare. Monroe Co., 1909.

Cosmarium subretusiforme W. and G.S. West. Vigo Co., 1930.

Cosmarium subspeciosum Nordst. var. validus Nordst. Vigo Co., 1929.

Cosmarium supraspeciosum Wolle. Montgomery Co., 1929.

Cosmarium tetraophthalmum Breb. Lake Co., 1891; Monroe Co., 1910; Montgomery Co., 1929.

Cosmarium triplicatum Wolle. Montgomery Co., 1929.

Cosmarium turpinii Breb. var. eximum G.S. West. Clay Co., 1931; Knox Co., 1931.

Cosmarium turpinii Breb. var. podolicum Gutw. Sullivan Co., 1931; Vigo Co., 1929, 1930.

Cosmarium undulatum Corda var. crenulatum (Naeg) Wittr. Clay Co., 1930.

Cosmarium ungerianum (Naeg) De Bary var. bohemicum Lutkem. Desm. Bohn. Sullivan Co., 1931.

Cosmarium vexatum West. Vigo Co., 1929, 1931.

Debarya decussata Transeau. Vigo Co., 1929.

- Desmidium aptogonium Breb. Lake Co., 1891; Monroe Co., 1926, 1929; Sullivan Co., 1932; Vigo Co., 1932.
- Desmidium baileyi Ralfs. Lake Co., 1891; Monroe Co., 1929.
- Desmidium quadratum Nord. Marshall Co., 1920.
- Desmidium swartzii Agardh. Elkhart Co., 1929; Lake Co., 1891; Marshall Co., 1920; Monroe Co., 1909; Montgomery Co., 1929; Sullivan Co., 1930; Vigo Co., 1929, 1940.
- Docidium connatum. Monroe Co., 1909.
- Docidium crenulatum Rabenh. Monroe Co., 1909, 1910.
- Docidium hirsutum Bail. Lake Co., 1891.
- Docidium giganteus. Monroe Co., 1929.
- Docidium nodosum. Monroe Co., 1909.
- Docidium rectum. Monroe Co., 1929.
- Docidium trabecula (Ehrb) Naeg. Monroe Co., 1908, 1926, 1929.
- Docidium tridentulum. Monroe Co., 1926.
- Docidium truncatum. Monroe Co., 1926.
- Docidium verrucosum (Bail.) Marshall Co., 1920.
- Docidium verticillatum. Monroe Co., 1926.
- Docidium woodii. Monroe Co., 1926.
- Euastrum ansatum. Monroe Co., 1909, 1926.
- Euastrum ansatum Ralfs. var. attenuatum Schmidle. Sullivan Co., 1930.
- Euastrum bidentatum Naeg. Parke Co., 1929; Vigo Co., 1930.
- Euastrum circulare. Monroe Co., 1926.
- Euastrum crassum. Monroe Co., 1909.

- Euastrum cuneatum. Monroe Co., 1909.
- Euastrum denticulatum (Kirchn) Gay. Sullivan Co., 1930.
- Euastrum dideltha. Monroe Co., 1909.
- Euastrum dubium Naeg. Vigo Co., 1930.
- Euastrum elagans. Monroe Co., 1926.
- Euastrum gemmatum. Monroe Co., 1929.
- Euastrum insulare (Wittr.) Ray. Kosciusko Co., 1929.
- Euastrum interme. Monroe Co., 1929.
- Euastrum multilobatum. Monroe Co., 1926.
- Euastrum oblongum (Grev.) Ralfs. Putnam Co., 1931.
- Euastrum pokornyanum. Monroe Co., 1926.
- Euastrum pulchellum Breb. Sullivan Co., 1930.
- Euastrum spinulosum Ralfs. Lake Co., 1891.
- Euastrum ventricosum. Monroe Co., 1926.
- Euastrum verrucosum Ehrenb. Lake Co., 1891; Vigo Co., 1929.
- Euastrum verrucosum var. alatum. Wollé. Knox Co., 1931; Kosciusko Co., 1929; Montgomery Co., 1929; Posey Co., 1935; Sullivan Co., 1930; Vigo Co., 1929.
- Euastrum verrucosum Ehrenb. var. reductum Nordst. Vigo Co., 1932.
- Gonatozygon asperum. Monroe Co., 1926.
- Gonatozygon monotaenium De Bary. Montgomery Co., 1929.
- Hyalotheca dissiliens (Smith) Breb. Elkhart Co., 1929; Lake Co., 1891; Monroe Co., 1908, 1926; Montgomery Co., 1929; Sullivan Co., 1929; Vigo Co., 1931, 1940.
- Hyalotheca dissiliens forma tridentula Nordst. Greene Co., 1931.

- Hyalotheca mucosa (Dillwyn) Ehrenb. Monroe Co., 1926; Sullivan Co., 1932.
- Hyalotheca undulata. Monroe Co., 1926.
- Mesocarpus (Mougeotia) nummuloides. Monroe Co., 1909.
- Mesocarpus parvulus. Monroe Co., 1929.
- Mesocarpus recurvus. Monroe Co., 1909.
- Mesocarpus robustus. Monroe Co., 1909.
- Mesotaenium braunii. Monroe Co., 1909.
- Mesotaenium caldariorum (Lag.) Hansg. Marion Co., 1931.
- Mesotaenium clepsydra. Monroe Co., 1926.
- Mesotaenium micrococcum. Monroe Co., 1926.
- Micrasterias americana (Ehr.) Ralfs. Greene Co., 1931; Knox Co., 1931; Montgomery Co., 1929; Sullivan Co., 1932; Vigo Co., 1929.
- Micrasterias crux-melitensis Ehrb. Ralfs. Lake Co., 1891; Monroe Co., 1929.
- Micrasterias denticulata. Monroe Co., 1929.
- Micrasterias fimbriata. Monroe Co., 1926.
- Micrasterias furcata. Monroe Co., 1929.
- Micrasterias muricata. Monroe Co., 1926.
- Micrasterias papillifera. Monroe Co., 1909.
- Micrasterias pseudofurcata. Monroe Co., 1926.
- Micrasterias radiata Hass. Monroe Co., 1909, 1926; Sullivan Co., 1929; Vigo Co., 1929.
- Micrasterias truncata (Corda) Breb. Monroe Co., 1909; Parke Co., 1929; Sullivan Co., 1932; Vigo Co., 1930.
- Micrasterias truncata var. semiradiata, Naeg. Lake Co., 1891; Marshall Co., 1920.

- Mougeotia divarecata. Monroe Co., 1909.
- Mougeotia genuflexa (Dillwyn) Agardh. Monroe Co., 1908;
Vigo Co., 1930.
- Mougeotia laetevirens (Braun) Wittr. Sullivan Co., 1930;
Vermillion Co., 1931; Vigo Co., 1930.
- Mougeotia minnesotensis. Monroe Co., 1929.
- Mougeotia mirabilis Al. Br. St. Joseph Co., 1909.
- Mougeotia nummuliodes. Monroe Co., 1909.
- Mougeotia parvula Hass. Monroe Co., 1908.
- Mougeotia pulchella Wittr. Vigo Co., 1929.
- Mougeotia recurvus. Monroe Co., 1909.
- Mougeotia robusta (DeBary) Wittr. Monroe Co., 1909; Sul-
livan Co., 1930; Vermillion Co., 1931; Vigo Co., 1930.
- Mougeotia robusta var. biornata Wittr. Sullivan Co., 1930;
Vigo Co., 1930.
- Mougeotia scalaris Hassall. Monroe Co., 1908; St. Joseph
Co., 1909; Vigo Co., 1931.
- Mougeotia sphaerocarpa Wolle. Vermillion Co., 1931.
- Netrium digitus (Ehrenb.) Itzigsh and Rothe. Monroe Co.,
1929; Sullivan Co., 1929; Vigo Co., 1930.
- Onychonema filiforme (Ehr.) Ray and Bissett. Sullivan Co.,
1932.
- Onychonema laeve Nordstedt var. latum, W. and G.S. West. Sul-
livan Co., 1932.
- Penium brebissoni (Menegh.) Ralfs. Montgomery Co., 1898.
- Penium closteriodes. Monroe Co., 1926.
- Penium cucurbitinum Biss. Parke Co., 1929.
- Penium interruptum. Monroe Co., 1908, 1929.

- Penium libellula (Focke) Nordst. Vigo Co., 1929.
- Penium margaritaceum (Ehrenberg) Breb. Knox Co., 1934;
Marion Co., 1929; Monroe Co., 1929; Montgomery Co.,
1898, 1930; Pike Co., 1934; Posey Co., 1935; St.
Joseph Co., 1909.
- Penium minutum (Ralfs) Cleve. Vigo Co., 1929.
- Penium navicula. Monroe Co., 1926.
- Penium spirostriolatum Barker. Monroe Co., 1926; Montgom-
ery Co., 1930.
- Pleurocarpus (Mougeotia) mirabilis. Monroe Co., 1909.
- Pleurotaenium ehrenbergii (Breb) DeBory. Elkhart Co., 1929;
Vigo Co., 1929.
- Pleurotaenium maximum (Reinsch) Lund. Clay Co., 1932; Gib-
son Co., 1935; Montgomery Co., 1929; Sullivan Co.,
1930; Vigo Co., 1932.
- Pleurotaenium maximum var. tumidum Brown. Montgomery Co.,
1929.
- Pleurotaenium trabecula (Ehrenb.) Naeg. Gibson Co., 1935;
Montgomery Co., 1929; Putnam Co., 1931; Vigo Co., 1930.
- Pleurotaenium trabecula forma clavata (Kuetz.) W. and G.S.
West. Kosciusko Co., 1929; Vigo Co., 1930.
- Sphaerozosma excavatum. Monroe Co., 1926.
- Sphaerozosma filiforme. Monroe Co., 1926.
- Sphaerozosma pulchellum. Monroe Co., 1929.
- Sphaerozosma serratum Bailey. Lake Co., 1891.
- Spirogyra adnata. Monroe Co., 1926.
- Spirogyra affinis (Hass.) Petit. Vigo Co., 1931.
- Spirogyra areolata Lagerheim. Vigo Co., 1932, 1940.
- Spirogyra articulata Trans. Vigo Co., 1935.

- Spirogyra biformis. Vigo Co., 1940.
- Spirogyra borgeana Transeau. Montgomery Co., 1930; Putnam Co., 1931.
- Spirogyra bucheti Petit. Sullivan Co., 1930.
- Spirogyra catenaeformis (Hass.) Kuetz. Decatur Co., 1930; Sullivan Co., 1930; Vigo Co., 1931.
- Spirogyra catenaeformis var. parvula Transeau. Decatur Co., 1930; Sullivan Co., 1930; Vigo Co., 1931.
- Spirogyra communis (Hass.) Kuetz. Monroe Co., 1903; Vigo Co., 1931.
- Spirogyra condensata (Vauch.) Kuetz. Marshall Co., 1920; Putnam Co., 1931; Vigo Co., 1931, 1940.
- Spirogyra crassa (Hass.) Wittrock. Knox Co., 1926; Marion Co., 1928; Monroe Co., 1908, 1909, 1926, 1929.
- Spirogyra decimina (Mueller) Kuetz. Monroe Co., 1909; Sullivan Co., 1932; Vigo Co., 1931.
- Spirogyra decimina var. plena W. and G.S. West. Sullivan Co., 1931; Vigo Co., 1930.
- Spirogyra denticulata Transeau sp. nov. 1934.
- Spirogyra dubia. Monroe Co., 1914, 1926; Vigo Co., 1940.
- Spirogyra ellipsospora Transeau. Knox Co., 1931; Marion Co., 1928; Warren Co., 1931.
- Spirogyra elongata (Berk) Kg. Monroe Co., 1912, 1926.
- Spirogyra farlowii Transeau. Greene Co., 1931; Vigo Co., 1930, 1931.
- Spirogyra fluvitalis (Hilse) Raben. Greene Co., 1931; Knox Co., 1926; Monroe Co., 1929.
- Spirogyra fusco-atra. Monroe Co., 1909.
- Spirogyra gracilis. Monroe Co., 1909.
- Spirogyra grevilleana (Hass.) Kuetz. Vigo Co., 1931.

- Spirogyra inconstans Collins. Sullivan Co., 1931.
- Spirogyra inflata. Monroe Co., 1908, 1926; Vigo Co., 1930, 1931.
- Spirogyra insignis var. braunii Raben. Monroe Co., 1929.
- Spirogyra juergensii Kuetz. Benton Co., 1931; Greene Co., 1931; Vigo Co., 1930, 1931, 1940.
- Spirogyra jugalis. Monroe Co., 1909.
- Spirogyra lambertiana Transeau sp. nov. Vigo Co., 1940.
- Spirogyra laxa Kuetz. Clay Co., 1931.
- Spirogyra longata (Vauch) Kuetz. Knox Co., 1931; Monroe Co., 1909; Vigo Co., 1930, 1931, 1940; Warren Co., 1931.
- Spirogyra lutetiana Petit. Vigo Co., 1940.
- Spirogyra majuscula Kuetz. Clay Co., 1929; Marshall Co., 1920; Monroe Co., 1910; Putnam Co., 1931; Sullivan Co., 1931; Vigo Co., 1930, 1931, 1940.
- Spirogyra maxima (Hass.) Wittr. Vigo Co., No date given.
- Spirogyra mirabilis (Hass.) Kutz. Marshall Co., 1920; Monroe Co., 1929.
- Spirogyra nawaschini Kasanowsky. Montgomery Co., 1930.
- Spirogyra neglecta (Hass.) Kutz. Monroe Co., 1908, 1926; Sullivan Co., 1930, 1931.
- Spirogyra nitida (Dillw.) Link. Monroe Co., 1908, 1909; Montgomery Co., 1929; Pike Co., 1934.
- Spirogyra petitiana Transeau sp. nov. Vigo Co., 1940.
- Spirogyra porticalis (Mueller) Cleve. Knox Co., 1930; Monroe Co., 1926; Vigo Co., 1931.
- Spirogyra protecta Wood. Clay Co., 1931; Sullivan Co., 1931; Vigo Co., 1930.
- Spirogyra quadrata. Monroe Co., 1926.
- Spirogyra quinina. Monroe Co., 1909.

- Spirogyra reflexa Transeau. Vigo Co., 1929.
- Spirogyra reticulata Nordst. Vigo Co., 1930.
- Spirogyra rivularis Raben. Monroe Co., 1908, 1926.
- Spirogyra schmidtii W. and G.S. West. Clay Co., 1930.
- Spirogyra semiornata. Vigo Co., 1940.
- Spirogyra setiformis (Roth.) Kuetz. Monroe Co., 1909; Montgomery Co., 1929.
- Spirogyra smithii Transeau sp. nov. 1934.
- Spirogyra singularis Nordst. Vigo Co., 1930.
- Spirogyra spreeiana Rabenh. Vigo Co., 1930.
- Spirogyra strictica (Egl. Bot.) Wille. Vigo Co., 1929.
- Spirogyra subreticulata Fritsch. Sullivan Co., 1929; Montgomery Co., 1929.
- Spirogyra tenuissima (Hass) Kutz. Montgomery Co., 1931; St. Joseph Co., 1909; Vigo Co., 1931.
- Spirogyra tetrapla sp. nov. Transeau. Vigo Co., 1935.
- Spirogyra tolosana Comere. Clay Co., 1931; Vigo Co., 1931.
- Spirogyra varians (Yass.) Kuetz. Clinton Co., 1931; Henry Co., 1930; Knox Co., 1930; Monroe Co., 1908; Vigo Co., 1930, 1940.
- Spirogyra varians var. minor Teodoresco. Greene Co., 1931; Henry Co., 1930; Sullivan Co., 1929, 1930; Vigo Co., 1931.
- Spirogyra vilata Nordst. Vigo Co., 1930.
- Spirogyra vilata var. occidentalis Transeau. Benton Co., 1931; Knox Co., 1926, 1930; Montgomery Co., 1930.
- Spirogyra weberi Kuetz. Benton Co., 1931; Clay Co., 1931; Monroe Co., 1908, 1929; Vigo Co., 1931; Warren Co., 1931.

- Spirotaenia bryophila. Monroe Co., 1926.
- Spirotaenia condensata. Monroe Co., 1909.
- Spirotaenia obscura. Monroe Co., 1926.
- Staurastrum alternans de Brebisson. Monroe Co., 1909, 1926;
Sullivan Co., 1934.
- Staurastrum anatinum Cooke and Wills var. curtum G.M. Smith.
Vigo Co., 1929.
- Staurastrum anatinum var. denticulatum G.M. Smith. Vigo Co.,
1929.
- Staurastrum arachne. Monroe Co., 1909.
- Staurastrum aristiferum. Monroe Co., 1926.
- Staurastrum artiscon. Monroe Co., 1909, 1929.
- Staurastrum asperum Ralfs. Marion Co., 1882.
- Staurastrum avicula Breb. Elkhart Co., 1929; Lake Co., 1891;
Monroe Co., 1926.
- Staurastrum botrophilum Wolle. Montgomery Co., 1898.
- Staurastrum brebissonii Archer. Marshall Co., 1920.
- Staurastrum brevispina Breb. Lake Co., 1891.
- Staurastrum cerastes. Monroe Co., 1929.
- Staurastrum crenulatum. Monroe Co., 1926.
- Staurastrum crytocerum. Monroe Co., 1909.
- Staurastrum dejectum Breb. Lake Co., 1891; Monroe Co., 1909.
- Staurastrum dickei. Monroe Co., 1929; Sullivan Co., 1934.
- Staurastrum dilatatum Ehrenb. Kosciusko Co., 1929; Lake Co.,
1891; Vigo Co., 1930.
- Staurastrum echinatum Breb. Lake Co., 1891.
- Staurastrum erasum Breb. var. espinulosa Lind. Lake Co., 1891.

- Stauroastrum eustephanum Ralfs. var. b. Lake Co., 1891.
- Stauroastrum furcigerum Breb. Lake Co., 1891; Montgomery Co., 1929; Vigo Co., 1932.
- Stauroastrum gracile Ralfs. Lake Co., 1891; Monroe Co., 1909.
- Stauroastrum gracile Ralfs. var. coronulatum Boldt. Vigo Co., 1929.
- Stauroastrum hirsutum. Monroe Co., 1909.
- Stauroastrum incisum Wolle. Lake Co., 1891; Monroe Co., 1909.
- Stauroastrum luteolum. Monroe Co., 1909.
- Stauroastrum margaritaceum (Ehrenb.) Menegh. Lake Co., 1891; Vigo Co., 1930.
- Stauroastrum minnesotense Wolle. Monroe Co., 1926.
- Stauroastrum muticum De Breb. Vigo Co., 1930.
- Stauroastrum orbiculare Ralfs. Montgomery Co., 1929; Parke Co., 1929; Vigo Co., 1930.
- Stauroastrum orbiculare var. ralfsii. W. and G.S. West. Vigo Co., 1930.
- Stauroastrum paradoxum Meyen var. biradiatum W. and G.S. West. Knox Co., 1930; Vigo Co., 1930.
- Stauroastrum pentacladum. Monroe Co., 1926.
- Stauroastrum polymorphum Breb. St. Joseph Co., 1909; Vigo Co., 1930.
- Stauroastrum punctulatum. Monroe Co., 1926.
- Stauroastrum pusillum Wolle. Vigo Co., 1932.
- Stauroastrum quadrangulare Breb. var. breviaculeatum G.M. Smith. Vigo Co., 1930.
- Stauroastrum regulosum Breb. St. Joseph Co., 1909.
- Stauroastrum setigerum Cleve. Montgomery Co., 1929.
- Stauroastrum setigerum var. brevispinum G.M. Smith. Montgomery Co., 1929.

- Stauroastrum spongiosum. Monroe Co., 1909.
- Stauroastrum striolatum (Naeg.) Arch. Clay Co., 1930.
- Stauroastrum subgemmaulatum W. and G.S. West. Kosciusko Co., 1929.
- Stauroastrum tricornu Breb. Lake Co., 1891.
- Stauroastrum turgescens De Not. Vigo Co., 1929.
- Stauroastrum vestitum. Monroe Co., 1909.
- Staurospermum capucinum. Monroe Co., 1929.
- Tetmemorus brebissonii. Monroe Co., 1909, 1929.
- Tetmemorus giganteus. Monroe Co., 1926.
- Xanthidium antilopaeum (Breb.) Kuetz. Vigo Co., 1929.
- Xanthidium antilopaeum var. hibridarum W. and G.S. West. Montgomery Co., 1929.
- Xanthidium antilopaeum Kg. var. polymazum Nord. Lake Co., 1891.
- Xanthidium aramatum. Monroe Co., 1909.
- Xanthidium fasciculatum (Ehrb) Ralfs. Monroe Co., 1926.
- Zygnema anomalum. Monroe Co., 1909.
- Zygnema collinsianum Trans. Knox Co., 1926.
- Zygnema cruciatum (Vauch.) Agardh. Greene Co., 1931; Monroe Co., 1926; Sullivan Co., 1931; Vigo Co., 1929.
- Zygnema cyaneum. Vigo Co., 1940.
- Zygnema cylindricum Transeau. Greene Co., 1931; Knox Co., 1931; Vigo Co., 1940.
- Zygnema insigne (Hass.) Kutzing. Monroe Co., 1908, 1909, 1926; St. Joseph Co., 1909; Vigo Co., 1930, 1931.
- Zygnema laetevirens Klebs. Greene Co., 1931.
- Zygnema leiospermum De Bary. Monroe Co., 1908, 1909.

Zygnema pectinatum var. conspicuum (Hass.) Kirchner. Greene Co., 1932.

Zygnema pectinatum (Vauch.) Agardh. var. crassum Transeau. Vigo Co., 1930.

Zygnema peliosporum Witttr. Vigo Co., No date given.

Zygnema stellium (Vauch.) Agardh. var. Clay Co., 1931; Monroe Co., 1926; Vigo Co., 1930.

Zygnema sterile Transeau sp. nov. Prairie regions, 1934.

Zygnema stetlum Agardh. Monroe Co., 1910.

Zygnema subcruciatum Trans. Vigo Co., 1935.

Zygnema vaucherii Agardh. Vigo Co., 1926.

Zygogonium decussatum. Monroe Co., 1909.

Zygogonium parvulum. Monroe Co., 1926.

Zygogonium pectinatum. Monroe Co., 1926.

CLASS VII - DINOPHYCEAE

Order - Dinoflagellatae

Ceratium hirundinella O. Fr. M. Schrank. Kosciusko Co.,
1895, 1920; Laporte Co., 1927; Porter Co., 1927;
Vigo Co., 1930.

Ceratium hirundinella var. carenthianum zederb. Vigo Co.,
1930.

Ceratium hirundinella var. piburgense zederb. Vigo Co.,
1930.

Ceratium macroceras Schrenk. Marshall Co., 1918, 1920.

Ceratium tripos. Kosciusko Co., 1918, 1920.

Glenodinium oculatum Stein. No county or date given.

Gymnodinium aeruginosum Stein (?) Marion Co., 1931.

Gymnodinium paradoxum Schilling. Marion Co., 1931; Morgan
Co., 1931.

Peridinium cinctum Ehrb. Vigo Co., 1930.

Peridinium elpatiewsky (Ostenf) Lemm. Sullivan Co., 1930.

Peridinium laeve Huitf-Hass var. wailesii var. nov. Mont-
gomery Co., 1930.

Peridinium lomnicki Wolosz. Vigo Co., 1930.

Peridinium penardi Lemm. Vigo Co., 1930.

Peridinium quadridens Stein. Vigo Co., 1930.

Peridinium tabulatum (Ehrenberg) Marshall Co., 1918, 1920;
Monroe Co., 1910.

Peridinium willei Huitf-Hass. Vigo Co., 1930.

CLASS VIII - EUGLENOPHYCEAE

Order - Euglenales

- Euglena acus Ehr. Marion Co., 1931; Monroe Co., 1910; Morgan Co., 1931.
- Euglena acutissima Lemm. Marion Co., 1931.
- Euglena deses Ehr. Marion Co., 1931; Morgan Co., 1931.
- Euglena ehrenbergii Klebs. Marion Co., 1931.
- Euglena fusca (Klebs) Lemm (?) Marion Co., 1931; Morgan Co., 1931.
- Euglena gracilis Klebs. Marion Co., 1931; Morgan Co., 1931.
- Euglena intermedia (Klebs) Morgan Co., 1931.
- Euglena limnophila Lemm. Marion Co., 1931; Morgan Co., 1931.
- Euglena oxyuris Schmarda. Porter Co., 1927.
- Euglena pisciformis Klebs. Marion Co., 1931; Morgan Co., 1931.
- Euglena polymorpha Dangeard (?) Marion Co., 1931.
- Euglena proxima Dangeard. Marion Co., 1931; Morgan Co., 1931.
- Euglena spirogyra Ehrb. Marion Co., 1931; Monroe Co., 1929; Morgan Co., 1931; Vigo Co., 1930.
- Euglena splendens Dangeard (?) Morgan Co., 1931.
- Euglena terricola Dangeard (?) Marion Co., 1931.
- Euglena tripteris dujard. Marion Co., 1931.
- Euglena truncata Walton. Marion Co., 1931; Morgan Co., 1931.
- Euglena variabilis Klebs. Marion Co., 1931; Morgan Co., 1931.
- Euglena viridis Ehrenberg. Marion Co., 1931; Marshall Co., 1918, 1920; Monroe Co., 1910, 1926; Morgan Co., 1931; Vigo Co., 1930, 1931.

- Eutreptia viridis Perty (?) Marion Co., 1931.
- Lepocinclis globosa Francé. Marion Co., 1931.
- Lepocinclis sphagnophila Lemm (?) Marion Co., 1931.
- Lepocinclis teres (Schmitz) Marion Co., 1931.
- Lepocinclis texta (Dujardin) Marion Co., 1931; Morgan Co., 1931.
- Phacus acuminata Stokes. Marion Co., 1931.
- Phacus caudata Hübner (?) Marion Co., 1931.
- Phacus longicauda (Ehr.) Marion Co., 1931; Morgan Co., 1931; Vigo Co., 1931.
- Phacus pleuronectes (Mull.) Marion Co., 1931; Morgan Co., 1931; Monroe Co., 1910.
- Phacus pyrum (Ehr.) Marion Co., 1931; Monroe Co., 1910; Morgan Co., 1931.
- Phacus triqueter (Ehr.) Marion Co., 1931; Morgan Co., 1931; Porter Co., 1927.
- Trachelomonas annata Ehrenb. Monroe Co., 1910.
- Trachelomonas caudata (Ehr.) Morgan Co., 1931.
- Trachelomonas conspersa Pascher (?) Marion Co., 1931.
- Trachelomonas crebea Kellicott. Marion Co., 1931.
- Trachelomonas fluvitalis Lemm. Marion Co., 1931.
- Trachelomonas globularis (Awerinz) Marion Co., 1931; Morgan Co., 1931.
- Trachelomonas hispida (Perty) Marion Co., 1931; Morgan Co., 1931; Porter Co., 1927.
- Trachelomonas hispida (Perty) var. cylindrica Klebs. Marion Co., 1928.
- Trachelomonas intermedia Dangeard. Marion Co., 1931.
- Trachelomonas oblonga Lemm (?) Morgan Co., 1931.

Trachelomonas piscatoris (Fisher) Marion Co., 1931.

Trachelomonas urceolata Stokes. Marion Co., 1931.

Trachelomonas volvocina Ehr. Marion Co., 1931.

Trachelomonas westii Wolosz. Marion Co., 1931.

UNCLASSIFIED ALGAL GENERA

Borzia trilocularis Colen. Montgomery Co., 1929.

Codonella cratera (Leidy) Vorce. Montgomery Co., 1930.

Lygogonum pectinatum. Monroe Co., 1929.

CHAPTER IV

SUMMARY

The purposes of the author in preparing this study were to make a survey of all the phytoplankton of Vigo County, Indiana, and to compile in one paper a systematic list of all algae reported from the state of Indiana.

The writer spent six months and two weeks making the survey of Vigo County and endeavored to collect and determine algal groups from every swamp, stream, pool, pond, and ditch in the county. The algal material was placed in a vial of Transeau's Solution immediately upon its collection. These vials were labeled as to location and date of collection and then were taken to the laboratory, where the material was intensively examined under the microscope. In the determination of some of the algal groups, some difficulty was encountered because of insufficient materials and the need for revision of some of the keys.

An intensive study was made of all previous papers and reports pertaining to the algae of Indiana. These algal groups were classified into classes and orders. The writer made every attempt to include in this list every genus, species, variety, and form reported from Indiana up to and including this paper. It is the hope that this section of the thesis will encourage and facilitate further research in this phase of science.

The number of publications pertaining to the algae of Vigo County, Indiana is limited. There has been no previous study dealing entirely with the phytoplankton of this county, and there are only four reports listing any number of algae. Only one of these, the work of Dr. B.H. Smith,¹ reports a large number of algal groups from Vigo County. C. Mervin Palmer² previously published a check list of Indiana algae which had been reported from 1875 to 1928. This and his three additions^{3,4,5} to the paper are the only systematic check lists published up to this time. The studies concerning Indiana algae are limited and scattered, many of the papers listing less than ten genera or species. It was the purpose of the author to classify all these scattered papers into one systematic and compact report.

¹ B.H. Smith, "The Algae of Indiana." Proceedings of the Indiana Academy of Science, 41 (1932), pp. 177-206.

² C. Mervin Palmer, "Algae of Indiana - A Classified Check List of Those Published Between 1875 and 1928." Proceedings of the Indiana Academy of Science, 38 (1929), pp. 109-121.

³ C. Mervin Palmer, "Algae of Indiana - Additions to the 1875-1928 Check List." Proceedings of the Indiana Academy of Science, 40 (1931), pp. 107-109.

⁴ C. Mervin Palmer, "Algae of Indiana: Second List of Additions to the 1875-1928 Check List." Proceedings of the Indiana Academy of Science, 42 (1933), pp. 90-92.

⁵ C. Mervin Palmer, "Algae of Indiana: Third List of Additions to the 1875-1928 Check List." Proceedings of the Indiana Academy of Science, 45 (1936), pp. 99-101.

The report of the algae of Vigo County, Indiana lists nineteen genera, species, and varieties previously unreported from Indiana. This list is composed of one genus, Radiofilum, seventeen species, and one variety, Anabaena oscillarioides var. stenospora Born and Flah. This section of the dissertation also includes a systematic arrangement of thirty algal forms previously unreported from Vigo County. The arrangement is made up of one genus, Radiofilum, twenty-eight species, and one variety, Anabaena oscillarioides var. stenospora. Preceding these two lists is a classified arrangement of all algae from Vigo County, Indiana, which was collected and determined by the author.

The writer attempted to fulfill her purposes in this dissertation and to present a thesis of some value. It is hoped that the preceding reports and classifications may be of use to scientists in research and scientific study in this field.

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