

# Additions to the Algal Flora of Indiana

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# ADDITIONS TO THE ALGAL FLORA OF MARION COUNTY, INDIANA

By CHARLENE COFFING

In January, 1933, the writer began working on a special problem in the identification of the plankton algæ of the canal which cuts through the Butler University campus. The primary purpose of the problem is the study of the periodicity of the algæ of the canal. It is planned to consider in a later paper this study of periodicity which will include both seasonal and weekly variations which occurred in the kinds of algæ and the effect of temperature of water and amount of precipitation upon the algal flora.

From January 30 to October 30 the algæ from forty samples of water were identified. It is hoped that the later paper on periodicity will include fifty-two samples, a sample being taken once a week at regular intervals.

In the forty samples, 146 species and varieties have been identified. Of this number, seventy-three have not been reported previously for Marion county. Forty-six of the forms new for the county are also new for Indiana. A list of the species and varieties new for Marion county is included in this report. The forty-six forms which have not been reported previously for Indiana are in boldface type. The list includes forty-three genera and sixty-seven species and varieties. Fifteen of the genera reported are new for Marion county, while six of this number have not been reported before for the state. The six genera which are new for the state are: *Botrydiopsis?*, *Frustulia?*, *Hemidinium*, *Phacotus*, *Quadrigula*, *Schræderia*.

When the identification has been uncertain, a question mark is placed after the name of the alga.

The algæ are grouped according to classes, the classification being based on that used by Smith.<sup>1</sup>

The writer wishes to express her appreciation to Professor C. Mervin Palmer, who suggested and directed this problem.

The algæ which have not been reported previously for Marion county are as follows:

<sup>1</sup>Smith, Gilbert M. *The Fresh-water Algæ of the United States*. 1 Ed. 1933.

## MYXOPHYCEÆ

- Anabæna spiroides* Klebahn  
*Cælosphærium Kuetsingianum* Nüg.  
*Lyngbya contorta* Lemm.

## HETEROKONTÆ

- Botrydiopsis*?  
*Ophiocytium capitatum* Wolle var. *longispinum* (Möbius) Lemm.

## CHRYSOPHYCEÆ

- Dinobryon sertularia* Ehr.

## BACILLARIÆ

- Asterionella formosa* Hass.  
*Cymbella prostrata* (Berk.) Cleve  
*C. ventricosa* Kütz.  
*Eunotia luovaris* (Ehr.) Grun.  
*Frustulia rhomboides* (Ehr.) DeToni?  
*Gomphonema olivaceum* (Lyngb.) Kütz.  
*G. parvulum* (Kütz.) V. H.  
*Gyrosigma* sp?  
*G. Kuetsingii* (Grun.) Cleve  
*G. scalproides* (Rab.) Cleve  
*Meridion circulare* (Grev.) Ag.  
*Navicula cuspidata* Kütz.  
*N. radiosa* Kütz.  
*N. rhyncocephala* Kütz.  
*Nitzschia acicularis* (Kütz.) W. Smith  
*N. acicularis* (Kütz.) W. Smith var. *closterioides* Grun.  
*N. amphibia* Grun.  
*N. clausii* Hantzsch  
*N. palea* (Kütz.) W. Smith?  
*N. parvula* W. Sm.?  
*N. vermicularis* (Kütz.) Hantzsch  
*Pinnularia* sp?  
*P. brehissonii* (Kütz.) Cleve  
*P. divergens* W. Smith?  
*P. subcapitata* Greg. var. *paucistriata* Grun.  
*P. sublinearis* (Grun.) Cleve  
*Stauroneis anceps* Ehr.  
*S. phœnicenteron* (Nitzsch) Ehr.  
*Synedra acus* Kütz.  
*S. parvula* Kütz.  
*S. pulchella* (Ralfs) Kütz.  
*S. ulna* (Nitzsch) Ehr.

## CHLOROPHYCEÆ (EXCLUDING DESMIDS)

- Ankistrodesmus falcatus* (Chorda) Ralfs var. *mirabilis*  
 (W. & G. S. West) G. S. West  
*Carteria*  
*Chlorella variegatus* Beyerinck?  
*Crucigenia fenestrata* Schmidle  
*Glæocystis gigas* (Kütz.) Lagerh.  
*Golenkinia radiata* Chod.  
*Kirchneriella lunaris* (Kirchner) Möb.  
*K. obesa* (W. West) Schmidle  
*K. obesa* (W. West) Schmidle var. *major* (Bernard) G. M. Smith  
*Lagerheimia eiliata* (Lagerh.) Chod.  
*L. longiseta* (Lemm.) Prinz  
*L. subsala* Lemm.  
*L. wratislawiensis* Schröder  
*Nephrocytium limneticum* G. M. Smith  
*Ædogonium*  
*Oocystis parva* W. & G. S. West  
*Phacotus lenticularis* (Ehr.) Stein  
*Quadrigula lacustris* (Chod.) G. M. Smith  
*Scenedesmus bijuga* (Turp.) Lagerh. var. *alternans* (Reinsch) Borge  
*Schröderia judayi* G. M. Smith  
*S. setigera* (Schröder) G. M. Smith  
*Selenastrum gracile* Reinsch  
*Tetrastrum elegans* Playfair  
*Treubaria setigerum* (Archer)  
*T. triappendiculata* Bernard

## DESMIDIACEÆ

- Closterium venus* Kützing?  
*Cosmarium* sp?

## DINOPHYCEÆ

- Ceratium hirundinella* (O. F. M.) Schrank  
*Hemidinium nasutum* Stein

## ENGLÉNOPHYCEÆ

- Englena intermedia* (Klebs) Schmitz  
*E. intermedia* (Klebs) Schmitz var. *klebsii* Lemm.  
*Phacus anacælus* Stokes  
*P. orbicularis* Hübner  
*Trachelomonas acuminata* (Schmarda) var. *verrucosa* Teodor.  
*T. volgensis* Lemm.?