PROPOSED ALGOLOGICAL SURVEY OF OHIO.

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Little or no attention has been paid to the Ohio Algae, except by a few persons in a few localities, and it is therefore proposed that botanists, collectors and amateurs, unite in an effort to make known, the coming season, the character and distribution of our State Algo logical flora. To this end all who may be interested—and it is hoped this number will include persons in every county in Ohio—and are willing to make observations and contributions are invited to send specimens for examination to the Botanical Department, Ohio State University. Mr. W. W. Stockberger of Denison University, Granville, will assist in working up the material and tabulating the results. If the suggestions here are not ample, interested parties are requested to send letters of inquiry.

Many media or solutions for temporarily preserving Algae have been recommended—such as a weak solution of carbolic acid, two per cent. solution of formalin, Riport and Petit's solution, one per cent. solution of chrome-alum, and camphor water (small piece of gum camphor in water)—but we have concluded that nothing is better than a tiny drop of carbolic acid in the vial of water containing the Alga.

Homeopathic vials, or still better, shell vials, say two drachm capacity, with cork stoppers, will be found suitable, and large enough in most cases to contain ample material. Slender forceps are very convenient for securing the Algae and placing them in the bottles, though subtle fingers must never be underrated in natural history work. It is desirable that the collector note the habitat of each species taken and add any other notes that might suggest themselves for record.

Numbers could be written with ink on the cork stopper, but it is preferable to use paper attached to the vials. A sheet of gummed paper can be obtained at any book store and this cut in narrow and short strips will be found most convenient. A continuous or serial numbering ought to be adopted by every one who sends material. No number should ever be repeated in sending natural history specimens of any kind, and the collector should always keep a record of the numbers, with notes of habits, localities, etc. If reports are desired on the material sent to the State Harbarium, they will be made, and reference to specimens will always be by number.

Such specimens may be sent by mail, but only when enclosed in a box so as to prevent them from being crushed and thereby endangering other mail matter. The rate of postage is one cent per ounce. The name and address of the sender should be written
on the outside of the package, numbers only enclosed with the specimens. Contributions are earnestly solicited.

To make exsiccata, or dried specimens, for the herbarium is a very simple matter, and I suggest a method of procedure for the benefit of those who may be interested in this phase of the work. If the Alga is a large one, for example a coarse filamentous pond-scum (Spirogyra), or very branching form from running water (Cladophora), place a small portion of the material in a basin of water. Then insert under it a piece of writing paper (book paper is not satisfactory, it must be sized), say three inches square or perhaps 2½ x 4 inches, and very slowly bring it to the surface of the water, in the meantime gently spreading out the Alga over it so as to show advantageously and naturally on the white paper. For this a camel's hair brush will be found useful, particularly for spreading the more delicate filaments. When the paper is lifted and drained of the excess of water, the Alga being spread satisfactorily, it should be laid in the plant-press or put between folds of paper under pressure to dry; but first spread over the specimen a piece of muslin (do not use a new piece of cloth), or worn-out handkerchief will serve as well, thus preventing the drying papers from coming in direct contact with the Alga. The next day when the mounted specimens are examined, it will be found that the Alga adheres firmly to the paper, the covering cloth being easily removed.

But for the smaller specimens, and especially for the colonies of gelatinous or slimy forms, it is preferable to use smaller pieces of mounting paper, and let the Alga dry without pressure. That is, put a small quantity of the Alga on a piece of paper, leaving it exposed till all the water evaporates, when the specimen will remain attached. Small pieces of mica are preferable for such mounting, since when later the material is moistened to remove a portion for study and microscopic examination, the remainder is less disturbed than might be the case when paper is used for mounting. I usually mount specimens on both paper and mica; on the former the mass shows to better advantage.

Those who wish to make a careful study of our Algae will scarcely find a good pocket lens sufficient even for general examination. But a compound microscope with a comparatively low objective will be quite satisfactory. To study the various kinds of spore formation and modes of reproduction would be as interesting as it is difficult, but beginners and amateurs need not by reason of this hint anticipate insurmountable difficulties.

The accompanying plate, will give a general though crude idea of the variety of forms that are comprised in the greater portion of our Algological flora. The delicacy and beauty of the numerous species can only be realized when one enters upon their enthusiastic study.
Sketches Illustrating Common Genera of Ohio Algae.
APPENDED is an alphabetical list of species hitherto reported as occurring in Ohio, the nomenclature according in the main with that used by DeToni in the Sylloge Algarum.

LIST OF ALGÆ REPORTED AS OCCURRING IN OHIO.

ANABAENA
oscillatorioides
stagnalis

APHANOCHAETE
repens

BACILLARIOPSIS
moniliforme

BULBOCHAETE
crenulata

CHAETOPHORA
cornu-damae
elegans
pisiformis

CHANTRANSIA
pygmaea
violacea
violacea beardsleei

CHARA
corrabria
coronata
flexilis
foetida
fragilis

gymnopus michauxii
intermedia

CHARACIUM
sessile

CLADOPHORA
crispata
crispata vitrea
fracta
glomerata
glomerata clavata
glomerata pumila
glomerata rivularis
linnaei

CLOSTERIUM
acerosum
dianae
lineatum
moniliferum
parvulums
strigosum

COLEOCHAETE
scutata
soluta

CONFERVA
bomyecina
glacialioides
rhynophila
tenerr. rhynophila

COSMARIA
botrysix
brebissonii
biretum
broomei
contractum
intermedium
latum
orbiculatum
ralfsii
seleyanum

CYPRESS
amoena

CYLINDROCAPSA

CYLINDROSPERMUM
macrospernum

DESMIDIUM
swartzii

DRAPARNAUDIA

glomerata

glomerata maxima
plumosa
ravenelli

EUAETUM

elegans
rostratum

EUDORINA

EUGLENA
viridis

GLOEOCYSTIS
gigas

GLOEOTRICHIA

HAEOMOCELUS
lacustris

HORMISCA
flacida
subtilis
subtilis variabilis

HYALOTHICA
mucosa

HYDRODICTYON
reticulatum

LEMANEA
torulosa

LYNGBYA
palliata
vulgaris

MICROSPORA
floccosa
fontinalis
vulgaris

MICRASPERMA
truncata

MICROCOLEUS
gracilis

MOGROTIA

columbiana
genuflexa

NOSTOC

collumune
muscorum
rupestre
sphaericum
tenuissima

ORDONUM
borisianum

capillare

capilliforme

cardiacum

crispum

cryptoporum

cotticulum

FRAGILE

gracillimum

paludosum

POLYMORPHUM

WOLLEUM

ONOCRONEMA
filiforme

OSCILLATORIA
anguina
elegans
froelichii
froelichii fusca
imperator
limosa
major
migra
princeps
sancta
subtilissima
tenerrima
tenuis
March, 1902.]

A New Species of Phyllosticta.

PANDORINA
  morum
PEDIASTRUM
  angulosum
  boryanum
  simplex
  tetrast
PITHOPHORA
  oedogonia
PLEUROTOENIUM
  trabecula
PROTOCOCCUS
  viridis
RAPHIDIUM
  polymorphum
SCENEDESMUS
  quadricaudatus
  polymorphus
SPIROGYRA
  adnata
  bellis
  communis
  crassa
  decimina
  dubia
  dubia longe-articulata
  elongata
  fluviate
  grevilleana
  herricki
  inflata
  insignis
  longata
  lutea
  majuscula
  maxima
  nitida
  porticalis
  porticalis jurgensii
  rivularis
  setiformis
  tenuissima
  varians
  weberi
  STIGEOCLONIUM
  nanum
  radians
  tenue-genuinum
  TETRASPORE
  bullosa
  explanata
  lubrica
  THOREA
  ramossissima
  VAUCHERIA
  dichotoma
  dillwynii
  geminata
  geminata racemosa
  sessilis
  terrestre
  VOLVOX
  globator
  ZYGMAE
  cruciatum
  insignis
  stellatum