



PHYCOLOGICAL NEWSLETTER

Membership Asked to Help

WORKBOOK PLANNED



REPRINTS FOR MBL LIBRARY

Phycologists are urged to send their reprints to the library at the Marine Biological Laboratory, Woods Hole, Mass. Janet Stein reports that the reprint collection in phycological literature is poor. Journals may not be removed from the library, but reprints can be taken to the laboratories, a decided advantage in teaching and research. Reprints should be mailed to The Librarian, Marine Biological Laboratory Library, Woods Hole, Mass.

Janet R. Stein, Editor of the forthcoming technique **Workbook** in phycology, reports that several publishers are expressing an interest, and a contract is anticipated by September, 1968. She suggests that the membership can help by discussing the **Workbook** with colleagues (non-phycologists, too) and with various publisher's representatives. The best contents, contributors, and publication arrangements will benefit the users of the **Workbook** as well as the Society. Members can be especially helpful by indicating to publishers that there is a need for the **Workbook**.

The **Workbook** Editorial Committee met December 28, 1967, in New York City at the AAAS meetings to consider contents, format, and other problems. Present were Janet Stein, P.W. Cook, P.B. Green, R.R.G. Guillard, H.W. Nichols, and representatives from P.R. Gorham and J.C. Lewin.

The tentative format will be four volumes with flexible binding (not paper back). Volumes and contents listed below are incomplete and tentative:

Volume I.—Field Techniques

Collection, observation, enumeration, preservation; Special techniques for specific organisms; productivity; Population dynamics; Herbarium procedures; Pollution; Algalicides; Paleobotany.

Volume II.—Culture Techniques

Media; Isolation, purification; Apparatus; Continuous Cultures; Mass cultures; Synchronized cultures; Preservation (live).

Volume III.—Developmental Techniques (including Cytological and Genetic)

Fluorescent microscope; Electron microscope; Autoradiography; Histochemistry; Specific organelles; Reproduction; Sexual substances; Ge-

(Continued on page 5)

FROM THE PRESIDENT'S DESK

As pointed out at the AIBS meetings in Texas, we have a healthy and rapidly growing society. It might be appropriate now to reflect for a moment about the society. Can you suggest any ways in which our role and policies might be improved? Perhaps communication among members of the society, and the members and their officers could improve. It appears that we have not made much use of open discussion, such as letters to the Editor in our Newsletter.

Have you expressed an opinion regarding—

- 1. The value of the proposed awards of merit?*
- 2. The annual lecture in phycology by a distinguished phycologist?*
- 3. The types of symposia to be organized by our society?*
- 4. The "10-minute" paper at annual meetings?*

I would like to make a special effort to keep lines of communication open and urge your cooperation in this matter.

— F. R. Trainor

Research Topics Under Investigation

In our continued promotion of communication among those of us engaged in phycological research, the following topics under investigation in several laboratories are listed. Please feel free to write the investigator or laboratory directly, should a particular topic or area interest you. Response to requests for lists of research topics has been excellent. Please continue to submit such lists without special solicitation, and we will print them as space permits.

● **The Great Lakes Laboratory, Buffalo**
(R.A. Sweeney):

- Interactions of selected algae and water quality
- Interactions of algae and pesticides
- Ecology, morphology and physiology of selected cyanophytes

● **North Texas State University, Denton**
(B. Dwain Vance; G. Roland Vela):

- Biological concentration of pesticides by algae
- Effects of phytohormones on the growth and cell division of algae
- Effects of herbicides on the growth and metabolism of selected algae
- Genetic studies of blue-green algae
- Biochemical interrelationships between algae and bacteria in mixed cultures
- Growth of some soil algae in harsh environments
- Control of bacterial populations by rapidly dividing algae

● **The University of Texas, Austin**
(H.C. Bold; R.M. Brown, Jr.):

- Studies on soil algae from various habitats in Texas and elsewhere
- Airborne algae of Hawaii and Texas
- Sexual reproduction in *Chlamydomonas moewusii* (Ultrastructure)
- Electron microscopy of zoosporogenesis and vegetative cell division in *Tetracystis*
- Ultrastructural studies of algal viruses
- Serological methods applicable to the taxonomy of Chlorococcalean and Chlorosphaeralean algae
- Isoenzymes as a taxonomic aid in the identification of algae
- Studies in the algae of sand dunes and bogs with special reference to the genus *Chlorococcum* (Patricia Archibald)
- Taxonomic studies in Oscillatoriaceae based on field and laboratory study in axenic culture (Ailsie Baker)



H. C. Bold, University of Texas and a former president of PSA and immediate past president of the Botanical Society of America, looks up from his microscope and studies on soil algae long enough to tell us about the research projects in his laboratory.

Studies of non-aquatic algae from rocks and tree bark (Linda Edwards)

Field and laboratory studies of the marine algal flora in the vicinity of Port Aransas, Texas (Peter Edwards)

Comparative taxonomic studies of chlorosphaeralean algae (Robert D. Groover)

Nutritional and life history studies of *Enteromorpha* species in the vicinity of Port Aransas, Texas (Donald Kapraun)

Ultrastructure of pigment formation and decomposition in *Spongiochloris* and *Chlorococcum* (Dr. Robert McLean)

Field and laboratory studies of periodicity, nutrition and sexual reproduction in certain species of *Zygnema* and *Spirogyra* (George Pessoney)

Isolation, purification and characterization of algal viruses and their life cycles (James Stewart)

Morphological, ultrastructural and biochemical systematics of *Protosiphon* (Dempsey Thomas)

Nutrition, morphology and ultrastructure of *Pyrobotrys* (Linda Voswinkel)

Ultrastructure and physiology of development in *Microthamnion* and *Aphanochaetae* (Melvin Watson)

Ultrastructure of the intact lichen and its separated components (Ricky Wilson)

● **Washington University, St. Louis**
(H.W. Nichols; B.C. Parker):

Comparative developmental studies of the Bangiophycidae — *Compsopogon*, *Porphyridium*, *Erythrotrichia*, *Goniotrichum*, *Asterocystis*, *Porphyra*, *Bangia*, *Erythrocladia*. The studies include axenic and non-axenic studies of many species of the above genera, including physiology, morphology, cytology, and biochemistry. Comparative developmental studies in the Nematoliales, in particular, species of *Nemalion* and *Batrachospermum*

Gas chromatographic analyses of Chlorophycean and Rhodophycean algae, in particular, pyrolysis-gas-liquid chromatographic analyses of closely related Chlorococcalean and Bangiophycean genera, species, varieties and strains

Mathematical analysis of variation in red algae. In particular, those characteristics of known taxonomic significance

Comparative studies in the Ectocarpales and *Sphacelaria*

Comparative experimental studies of certain members of the Delesseriaceae, Ceramiaceae, Dasyaceae and Rhodomelaceae

Marine algal flora of Panama

Cell Wall Chemistry — Systematics and Phylogeny:

Chemistry and structure of fossil and extant species of *Chara*

(Continued on page 5)

Call for Papers

The Phycological Society will be meeting in association with the AIBS this year in Columbus, Ohio. Titles and abstracts for papers to be given at the meetings must be received by **April 25**. It is hoped that the relatively late deadline will allow the preparation of informative abstracts. Abstracts should be 300 words or less and should not contain bibliography. Please prepare the material so that it can be presented in the allotted time period (10 minutes for oral presentation and 5 minutes for discussion).

Please note that the audio-visual equipment is limited to 2 x 2 or 3 1/4 x 4 slide projectors and 16 mm movie projectors. It is also recommended that glass-bound 2 x 2 slides **NOT** be used since they often jam the automatic projectors.

Submit 1) title, 2) author(s), 3) required projection equipment and 4) abstract to:

Dr. Philip Cook
Department of Botany
University of Vermont
Burlington, Vermont 05401

SMITH'S COLLECTIONS TO BERKELEY, HOPKINS

2800 microscope slides of freshwater algae (mostly desmids) which had been in the late Professor Gilbert M. Smith's collection were given recently to the Herbarium of the University of California, Berkeley, by the Department of Biological Sciences at Stanford University.

Dr. Smith's other algal specimens, chiefly of marine algae of the Monterey Peninsula, California, and his large reprint collection and library are at Hopkins Marine Station, Pacific Grove (Stanford's marine station). Type specimens of species collected by Smith and Hollenberg from California, and type specimens and other collections by Maxwell S. Doty from Oregon continue to be housed at the Dudley Herbarium on the Stanford main campus, but it is anticipated that when new facilities become available at Hopkins, these will be transferred to Pacific Grove. Dr. Isabella A. Abbott serves as Curator of the Smith Herbarium which presently contains about 6000 numbers.

DEADLINE FOR MAY ISSUE SET AT APRIL 5

Your Newsletter editor requests news items, notices of forthcoming symposia and meetings of a local, regional, or more widespread nature. Announcements concerning positions open or desired, recent or forthcoming graduates, current research projects, changes or new appointments in personnel, anticipated field trips, cruises, and other travel will be welcomed. Black and white glossy prints of phycological or related activities, accompanied by a story or explanation are requested. The new printing procedure allows for the reproduction of photographs, so please flood this office with them and news of your activities. The editorial job is easier if your items are types or printed. The deadline for material to be included in the May Newsletter is April 5!

Desmid Papers Wanted

For the past several years, John R. Glassy has been updating Nordstedt's INDEX DESMIDIARUM, as well as compiling a Latin description of all species of desmids. He would like to receive copies of past and current papers on desmids, and notices of those forthcoming. He would appreciate loan copies of those for which an extra copy is not available. Such copies will be returned as soon as possible. Send papers and information to Mr. John R. Glassy, Department of Public Utilities, P.O. Box 11007, Tacoma, Washington 98411.

DUES NOTICE

Please pay your dues as soon as possible. Your 1968 dues cover all 4 issues of volume 4 of the *Journal of Phycology*. Pay in U.S. dollars.

Dues Schedule:

Full-time students	\$ 5
Individuals (not students)	9
Libraries and organizations	10
Joint members	14
Retired individuals (at least 10 years' tenure as members)	5

Send dues to:

Dr. H. Wayne Nichols
Department of Botany
Washington University
St. Louis, Missouri 63130

NOMINATIONS FOR 1968 DARBAKER PRIZE IN PHYCOLOGY SOLICITED

The committee on the Darbaker Prize of the Botanical Society of America encourages nominations for an award to be announced at the annual meeting of the Society at Columbus, Ohio, in 1968. Under the terms of the bequest, the award is to be made for meritorious work in the study of the algae. Persons not members of the Botanical Society are eligible for the award. The Committee will base its judgment primarily on the papers published by the nominee during the last two full calendar years previous to the closing date for nominations. At present, the award will be limited to residents of North America. Only papers published in the English language will be considered. The value of the Prize for 1968 will depend on the income from the trust fund but is expected to be about \$250. Nominations for the 1968 award must be accompanied by one or more letters of recommendation and reprints of the publications supporting the candidacy. The deadline is **June 1, 1968**. Chairman of the Committee: Dr. Frank R. Trainor, Department of Botany, University of Connecticut, Storrs, Connecticut 06268.

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CHANGING ADDRESSES?

Please send any notification of change of address (and zip code) to the Secretary of the Society: Dr. Philip Cook, Department of Botany, University of Vermont, Burlington, Vt. 05401. Please do not request that the *Journal* and *Newsletter* be sent to a temporary address (such as a field station) if you will be returning to the permanent address.

News of Members

Webber Receives Degree

E. E. Webber is new Assistant Professor of Biology at Keuka College, Keuka Park, New York. He has recently received the Ph.D. degree from the University of Massachusetts, where his dissertation on "Systematics and Ecology of Benthic Soil Marsh Algae at Ipswich, Massachusetts," was directed by Dr. R. T. Wilce.

Sweeney Appointed Acting Director

Robert A. Sweeney has been appointed Acting Director of the Great Lakes Laboratory of the State University of New York. This research-teaching facility is the only academically affiliated limnological laboratory on Lake Erie. He would appreciate reprints concerning algae of the Great Lakes, particularly Lake Erie, Lake Ontario and their tributaries. The GLL will duplicate and return articles if only a single copy is available.

Halicki Now Scientific Director

Phillip J. Halicki is Scientific Director

at Carl Zeiss, Inc., in New York City.

Chihara on Fellowship

Mitsue Chihara from the National Museum, Tokyo, Japan, is a postdoctoral fellow at the University of British Columbia.

Stein Named Director and Editor

Janet Stein, University of British Columbia, is a Director of the Canadian Botanical Association and also Editor of the Association Bulletin, which begins publication in January 1968.

Craigie on Leave

J.S. Craigie, National Research Council, Halifax, Nova Scotia, is on leave at Scripps Institution of Oceanography, La Jolla, California.

Taylor in England

A.R.A. Taylor, University of New

Brunswick, is on sabbatical leave at the Marine Biological Association of the United Kingdom, Plymouth, England.

Scagel Plans Trip to Chile

R.F. Scagel, University of British Columbia, expects to join P.S. Chamut and J.W. Markham on their marine algae collecting trip in Chile (using Chilean Navy vessels). Chamut and Markham are already in Chile, and R. Scagel plans to be there for a February trip.

Scagel, Lee, and Druehl Named

R.F. Scagel is Chairman of the Phycology Section of the Canadian Botanical Association. Secretary is R.K.S. Lee, National Museum of Canada, Ottawa, and Director is Louis Druehl, Simon Fraser University, Burnaby, British Columbia. Past Chairman was A.R.A. Taylor, University of New Brunswick, and past Secretary was H.C. Duthie, University of Waterloo, Ontario.

THE UNIVERSITY OF MINNESOTA ANNOUNCES STIPENDS FOR SUMMER RESEARCH IN BIOLOGY

ITASCA BIOLOGY SESSION/UNIVERSITY OF MINNESOTA/SUMMER SESSION
June 12 to July 22 and July 24 to August 26, 1968

The University of Minnesota is pleased to announce a National Science Foundation sponsored program in support of biological research at the Lake Itasca Forestry and Biological Station during the coming summer. Stipends can be allocated for periods other than the two regular terms of the Biology Session as shown above.

Three categories of biological research workers will be enabled to share opportunities and experience in research and instruction as indicated below:

PREDOCTORAL STUDENTS may register in one graduate course for credit and carry out research under the supervision of regular Station staff members.

POSTDOCTORAL SCHOLARS may participate in one graduate course and carry out research under guidance of a regular Station staff member.

INDEPENDENT RESEARCH

SCHOLARS may carry out a research project best suited to their objectives and the opportunities presented at the Station.

Stipends not to exceed \$250, \$500, and \$750 for each five-week term are available under the respective categories and academic fees are provided for under the terms of the grant. Grantees may be housed with other members of the student body and eat at the Station Dining Hall or, if they wish to bring families, may live off campus. Amounts of stipends for periods other than the regular terms of the Biology Session will be prorated at the same level.

Persons interested in applying for these stipends should write for further information and application materials to:

Director, Field Biology
112 Snyder Hall
University of Minnesota
St. Paul, Minnesota 55101

Dartmouth Hosts Photobiology Congress

The Vth International Congress on Photobiology will be held August 26-31, 1968, at Dartmouth College, Hanover, New Hampshire. The second announcement of the Congress is now available. It contains detailed information on the Congress and application forms for registration and presentation of papers. This announcement and further information may be obtained by writing to the Secretariat, Vth International Photobiology Congress, Argonne National Laboratory—202, Argonne, Illinois 60439.

POSITION AVAILABLE

Arizona State University, Tempe, Arizona, is interested in adding a young phycologist to the faculty in September, 1968. The appointment would probably be made at the Assistant Professor level, salary \$7800-9000, depending upon the candidate's training and experience. The person selected should be capable and willing to teach a survey course in the non-vascular plants (with emphasis on the algae), to develop graduate courses or seminars in his specialty, and to carry on an active research program. Interested persons write: Dr. James E. Canright, Chairman, Department of Botany, Arizona State University, Tempe, Arizona 85281.

NEW PUBLICATIONS AVAILABLE

- "Guide to Seaweeds of British Columbia" by R.F. Scagel. Booklet #27 by Provincial Museum, Victoria, B.C. Cost: \$1.
- "Environmental Requirements of Blue-Green Algae" A printing of a 110-page volume on blue-green algae provides the full texts and the discussion of six research papers presented at a 2-day symposium sponsored by the Federal Water Pollution Control Administration and the University of Washington. Copies may be obtained by writing to Eutrophication Research, Pacific Northwest Water Laboratory, Federal Water Pollution Control Administration, 200 South 35th Street, Corvallis, Oregon 97330.

Research papers included in the new publication:

- "Why Study Blue-Green Algae?" W. T. Edmondson, University of Washington.
 - "Problems in the Laboratory Culture of Planktonic Blue-Green Algae." W.R. Eberly, Manchester College, Indiana.
 - "Aspects of the Nitrogen Nutrition of Some Naturally Occurring Populations of Blue-Green Algae." V.A. (Digdale) Billaud, University of Alaska.
 - "Environmental Requirements of Thermophilic Blue-Green Algae." R.W. Castenholz, University of Oregon.
 - "Growth Requirements of Blue-Green Algae as Deduced From Their Natural Distribution." W.C. Vinyard, Humbolt State College, California.
 - "Recent Advances in the Physiology of Blue-Green Algae." O. Holm-Hansen, Scripps Institution of Oceanography, LaJolla, California.
 - "Discussion." George P. Fitzgerald, University of Wisconsin.
- Dick Wood, University of Rhode Island, reports that he has finished what he has been working toward for years—a simple, inexpensive guide to CHAROPHYTES OF NORTH AMERICA. The general ideas and plates are taken from "A Revision of the Characeae," but distribution maps have been added. Each species is illustrated, and each species and variety is described briefly. 65 p., plastic spiral. Available from: Bookstore, University of Rhode Island, Kingston, R.I. 02881 (USA) at \$2.00 plus shipping charges (about 25¢ in USA).

(Continued from page 2) RESEARCH TOPICS

- Chemistry and structure of *Scenedesmus quadricauda*
- Chemistry and structure of other algae: *Anabaena cylindrica* (heterocyst and akinete), *Derbesia*, moss calyptra, *Lycogala* sporangial wall
- Aquatic Ecological Studies:
 - Comparative studies of the new method of biodialysis and routine methods for the sampling and separation of dissolved organic matter from the natural environment
 - Studies of thermocline geometry, chemistry, and biology
 - Studies of the influence of extra-cellular organic products from lakes upon the phytoplankton
- Developmental Studies:
 - Cell wall development in the zoospores of *Vaucheria sessilis* (includes biosynthesis of cellulose)

COMMITTEE SOLICITS NOMINATIONS FOR 1969 OFFICERS

The following 3-member Nominating Committee has been appointed to solicit nominations for 1969 officers in the Society:

- Dr. Clinton Dawes (Chairman), Department of Botany, University of South Florida, Tampa, Florida
- Dr. H. T. Andrews, Department of Botany, Colorado State University, Fort Collins, Colorado
- Dr. William Daily, Department of Biology, Butler University, Indianapolis, Indiana

Officers to be nominated for 1969 include President, Vice-President, Secretary, and Treasurer. Also, three members of the Editorial Board must be nominated and elected by the membership to replace the 3 retiring members. Send your nominations to Clinton Dawes before April 5.

(Continued from page 1) WORKBOOK PLANNED

netic mutants; Genetic analyses; Growth measurements.

Volume IV.—Biochemical Processes and Products

Cell fractionation; Storage products; Pigments; Phenolic compounds; Toxins; Nucleic acids; Carbohydrates; Proteins; Lipids; Photosynthesis; Nutrient uptake; Nitrogen fixation; Osmotic pressure; Bleaching; Bioassay; Heterotrophic growth; Rhythmic migrations; Bioluminescence; Serology.

Contributors will be contacted in the spring as soon as the contents are finalized. Comments and suggestions concerning contents and contributors are requested and should be sent to Dr. Janet R. Stein, Department of Botany, University of British Columbia, Vancouver 8, B.C., Canada.

INTRODUCING PSA'S OFFICERS FOR 1968

Frank Trainor Heads Society

FRANCIS R. TRAINOR, Professor of Biology, University of Connecticut, Storrs. Dr. Trainor served as Vice-President of the Phycological Society in 1967. He was the recipient of the Darbaker Award in 1965 for his discovery of sexual reproduction in *Scenedesmus*, and in 1962, he received the Distinguished Faculty Award for teaching excellence at the University of Connecticut. He received the B.S. degree from Providence College, and the M.A. and Ph.D. degrees from Vanderbilt University. He has been a special lecturer at the Marine Biological Laboratory, Woods Hole, Massachusetts, and has served on the faculty of the University of Virginia Biological Station, Mountain Lake, Va.



B.C. Parker Named Vice-President

BRUCE C. PARKER, Associate Professor of Botany, Washington University, St. Louis. Dr. Parker served as Secretary-Treasurer of the Phycological Society from 1965-67. He was named, in 1966, as Senior Fellow, Center for the Biology of Natural Systems. He received the B.S. degree from Tufts University, an M.S. from Yale University, and the Ph.D. degree from the University of Texas. He has been a Visiting Biologist at Brookhaven National Laboratory, and in 1960-61 as an N.S.F. Postdoctoral Fellow, he studied at University College, London, England. He was Assistant Professor of Botany at UCLA from 1961-65. His research interests include cell wall chemistry, algal inhibitory substances, and organic limnology.

Oceanographic Expedition and Awards

Stanford Oceanographic Expedition 19 will commence 26 June, 1968, in Monterey, California, and terminate on 11 September, 1968, in Guayaquil, Ecuador. The cruise is the second half of a seasonal study of the biological oceanography of the Galapagos and surrounding waters, and will include a productivity/nutrient survey of the equatorial current system to the west of the Galapagos. Applications will be accepted until 1 March, 1968, and advance inquiries are encouraged. Applicants must be research-oriented graduate students in biology, in

good academic standing and excellent physical and emotional health. The expedition represents an intensive 15-unit graduate level course given at sea by a faculty of three (Drs. Malvern Gilmartin, Stanford University; W. Jan Newhouse, University of Hawaii; Margaret Bradbury, San Francisco State). Ten NSF Awards covering room and board, transportation to and from the vessel, and full tuition are available. Contact Prof. M. Gilmartin, Hopkins Marine Station, Pacific Grove, California 93950, for further information.

Letter to the Editor:

In the organization of paper sessions at future meetings, might we not form two categories -

1. Papers by those whose prime interest is the demonstration of a point or a phenomenon by figures and data. **MAXIMUM TALK, MINIMUM DISCUSSION.**
2. Papers by those who believe that a thorough discussion of a topic is appropriate. **MINIMUM TALK, MAXIMUM DISCUSSION.**

Sincerely,

F. R. Trainor
University of Connecticut

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