



# PHYCOLOGICAL NEWSLETTER

## BRAZILIAN PHYCOLOGISTS MEET FOR FIRST TIME

### DAMBACH KEYNOTES CONFERENCE ON BIOTA CHANGES

A conference on the changes in the biota of Lakes Erie and Ontario was held at the State University College at Buffalo, N.Y., on April 16-17. The keynote speaker was Dr. Charles Dambach of Ohio State University.

Papers on the plankton and benthon were delivered respectively by Drs. Charles Davis of Case-Western Reserve and Ralph Brinkhurst of the University of Toronto.

A summary of the presentations and discussions concerning the algae will be prepared by Dr. Robert A. Sweeney of the Great Lakes Laboratory for a later issue of the Newsletter. The proceedings of the entire conference will be published jointly by the State University of New York and the Buffalo Museum of Science.

### Pappenfuss, Symposium To Highlight PSA-AIBS Meetings

Two events are scheduled to highlight the Phycological Section at the 1968 AIBS meetings in Columbus, Ohio. Dr. George Pappenfuss, University of California, Berkeley, will

(Continued on back page)

The first Brazilian Phycological Meeting was held Jan. 22-23 in the State of Ceará in northeastern Brazil. It was organized by Drs. Aylthon B. Joly and Carlos E.M. Bicudo in collaboration with the University of São Paulo and the São Paulo Botanical Institute.

Several Brazilian phycologists attended the meeting, as did Dr. Augusto Aldave P. from Trujillo, Peru. The following papers were read and discussed:

- \* C.E.M. BICUDO: Contribution to the knowledge of Brazilian Dinophyceae—Immobile genera (with B.V. Skvortzov).  
Freshwater algae of Lapa swamp, Itatiaia National Park, Brazil (with M.R. Ventrice).
- \* R.M.T. BICUDO: Contribution to the knowledge of Brazilian Characeae.
- \* L.M. de CARVALHO: Freshwater algae from Recife, II.
- \* E. ESKINAZI: Contribution to the knowledge of the diatom-flora of the mouth of the São Francisco River, Brazil.  
Bacillariophyceae from "Olho d'Água" Lake, Pernambuco, Brazil (with Y. Maruo and I.M.V. Moreira).
- \* M.M. FERREIRA: Some information regarding the nutrition of *Quelonia* sp.
- \* A.B. JOLY: Notes on Brazilian algae, II—A new *Anadyomene* from the deep water flora (with E.C. de Oliveira Filho).
- \* H. MOREIRA FILHO: *Margaritum*, a new genus of diatoms from Brazil.
- \* E.C. de OLIVEIRA FILHO: A new species of *Calliblepharis* from Brazilian marine waters.  
A brief report on some new Ceramiales from Brazil.
- \* A. ALDAVE P.: A preliminary note on Peruvian desmids.
- \* N. YAMAGISHI-TOMITA: A new species of *Bolbocoleon* Pringsheim gathered from "Ilha Redonda," Southern Bahia, Brazil.

A seminar was held on the present status of phycological studies in Brazil as part of the first Brazilian Phycological Meeting.

A pleasant seafood dinner by the shore was the final event of the meeting. — Carlos E.M. Bicudo

# NOTICES

## International Symposium

"Penetration of Calcareous Substrates by Invertebrates and Lower Plants: a Multidisciplinary Forum" is the tentative title of an international symposium to be held in December, 1968, at the AAAS meetings in Dallas, Texas. The Phycological Society is one of several societies sponsoring the symposium which has been organized by Drs. Melbourne R. Carriker, MBL, Woods Hole, Mass.; Edmund H. Smith, Pacific Marine Station, Cal.; and Robert T. Wilce, University of Massachusetts.

The primary purpose of the symposium will be to examine a) the structure of the substrates being destroyed, b) the physical and chemical means of dissolution and abrasion of these substrates by non-biological systems, and c) the nature of the structures and mechanisms employed by organisms to penetrate these substances.

Please address correspondence to Dr. Melbourne R. Carriker, Director, Systematics-Ecology Program, Marine Biological Laboratory, Woods Hole, Massachusetts 02543.

## Stanford Expedition to Tropical Pacific

Stanford Oceanographic Expedition 20 will depart Guayaquil, Ecuador, on 16 September 1968 for research in the Eastern Tropical Pacific, and will terminate in Monterey, California, on 1 December 1968. The cruise will provide the opportunity for almost all types of "blue-water" biological oceanographic research but will tend to concentrate on the reproductive cycles and food chain relationships of the abyssal benthic communities of the region. The Expedition represents an intensive 15 quarter-unit graduate level course in biological oceanography given at sea by a faculty of three. Ten NSF Awards covering room and board, transportation to and from the vessel,

and full tuition are available. Applicants must be research-oriented graduate students in biology, in good academic standing and excellent physical and emotional health. Applications will be accepted until 1 June 1968 and advance inquiries are encouraged. Contact: Prof. M. Gilmartin, Hopkins Marine Station, Pacific Grove, California 93950.

## Canadian Botanical Association Meeting

Phycologists interested in attending the Canadian Botanical Association meeting June 11-14 should contact Dr. D.R. Lindsay, Department of Biology, Lakehead University, Port Arthur, Ontario.

## Gathering of Western Phycologists

Speaking for several West Coast phycologists, I (Richard Castenholz, University of Oregon, Eugene) would like to urge others to join the Western Society of Naturalists and attend the annual meeting in the last week of December. In 1967 there were over 25 phycologists in attendance, many phycological papers were presented, and a luncheon for phycologists was organized by Dr. Papenfuss. It was suggested by those present that these meetings could serve as a pleasant and informal gathering of Western States phycologists. The 1968 meeting is in Corvallis, Oregon. Anyone interested in membership (\$3.00) should contact David Montgomery, Secretary-WSN, Department of Biological Science, California State Polytechnic College, San Luis Obispo, California 93401.

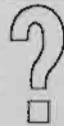
## Tribonema, Vaucheria Wanted

For their investigations of algal pigments, the group at Argonne National Laboratory desires kilogram quantities of *Vaucheria* sp. and

(Continued on page 5)

## STEIN URGES WORKBOOK CONTRIBUTIONS

Phycology Workbook Editor Janet Stein urges anyone who would like to contribute techniques and information to the Workbook to do so as soon as possible and to send reprints along with their contributions. Comments and suggestions concerning contents and contributors are requested; volunteers are invited. Correspondence should be addressed to Dr. Janet R. Stein, Department of Botany, University of British Columbia, Vancouver, B.C., Canada.



## Change of Address

Notifications of address changes (with zip code) should be sent to Dr. Philip W. Cook, Department of Botany, University of Vermont, Burlington, Vermont 05401. Please do not request that the *Journal* or *Newsletter* be sent to a temporary address: if you will be returning to your permanent address.

## SEPTEMBER 27 IS DEADLINE FOR OCTOBER ISSUE

Response to a plea for news has been excellent. Please continue to send announcements, reports on meetings or symposia, current research projects, personnel changes, or any other newsworthy items. Copy should be typed and double-spaced throughout. Photographs must be black and white glossy prints and will be returned to the sender upon request. The deadline for material to be included in the October Newsletter is September 27, 1968!

## \* \* Research Topics Under Investigation \* \*

This is the third listing of research topics in a continuing program to promote communication among those of us in phycological research. Please feel free to write to the investigator or laboratory directly. Please continue to submit such lists from your laboratories without special solicitation, and we will print them as space permits.

### ◆ The University of Tennessee, Knoxville

(W.R. Herndon, R.W. Holton, L.W. Jones, P.L. Walne)

Environmental conditions in relation to control of algal life cycles

Isolation, characterization, and function of electron transport compounds, particularly cytochromes from blue-green algae

Fatty acid and lipid analyses of blue-green algae and

related organisms as indicators of possible taxonomic relationships

Early physical events of photosynthesis derived from rapid fluorescence and delayed light measurements in green algae

Ultrastructural, physiological, and serological studies of development and senescence in euglenoid and chlamydomonad flagellates.

Ultrastructural and biochemical modifications of unicellular algae (especially *Euglena* and *Chlamydomonas*) in response to treatment with selected chemical agents.

Possible functional relationships between the phycobilin of the blue-green and red algae and phytochrome of higher plants (Maria Bible)

Effect of different light and temperature conditions on the development of different stages of the life cycle of *Chlorogloea* (Davis Findley)

Terrestrial epiphytic algae of the Great Smoky Mountain National Park (John H. Green)

Effect of different light, temperature, and nutritional conditions on growth and development in *Euglena granulata* (William H. Harvey)

Biogenesis of pseudocilia in Tetrasporalean algae, with special emphasis on ultrastructure and physiology (Carole A. Lembi)

Computer analysis of taxonomic relationships in selected green algae (Robert F. McGuire)

Temperature and light-intensity effects on the photosynthetic apparatus in blue-green algae (John Mullins)

Ultrastructural and physiological changes accompanying senescence in *Euglena granulata* (John R. Palisano)

Comparative pigment analyses of *Chlorogloea* grown under varying temperature, light, and nitrogen regimes (John D. Pike)

Early physical events of photosynthesis derived from rapid fluorescence and delayed light measurements in green algae (Mike Smolen)

Isolation and characterization of water-soluble cytochromes from *Chlorogloea* (Linda J. Tuck)

Effect of different wave lengths and intensities of light on sporulation in *Pseudobumilleriopsis* and in a *Gonium*-like organism (Richard D. Waer)

### ◆ Instituto de Botânica, São Paulo, Brazil

(C.E.M. Bicudo)

Taxonomical survey of the desmid-flora of the State of São Paulo, Southern Brazil

World-wide revision of the desmid genus *Xanthidium*

Taxonomical survey of Brazilian Characeae (Rose Maria T. Bicudo)

Taxonomical survey of the marine algae of the State of Santa Catarina, Southern Brazil (Marilza Cordeiro-Marino)

Taxonomical survey of the marine algae of Southern part of the State of Bahia, Brazil (Noemy Yamaguishi-Tomita)

### PARKER REPORTS ON BRITISH PHYCOLOGICAL SOCIETY MEETING

While enjoying a 3-weeks' vacation in England, I had the additional pleasure of attending the B.P.S. meeting at Queen Elizabeth College, Jan. 4-5, 1968. Sixteen papers and one special lecture were presented to an audience of about 100, including several visitors from the Continent. Each regular paper involved 20 minutes communication and 10 minutes for discussion. The speakers timed their presentations perfectly, and there seemed to be no great hurry on the part of speakers or questioners, a point in striking contrast to our P.S.A. sessions.

Professor Braarud from Oslo, opened the sessions with a review of "Seasonal and regional variability in marine phytoplankton from Norway." Subsequent sessions included algal ecology, ultrastructure, and other subjects, all received with enthusiasm. The most stimulating and scholarly papers, in my opinion, were delivered with a clear understanding of the related, relevant research from other fields. We phycologists must avoid a narrowing of our interests, such that we neglect the literature from other fields. The atmosphere of the entire meeting was cordial, each session being concluded with tea or a visit to the on-campus "pub" facilities.

My conversations with numerous B.P.S. members, including the President (Dr. M.T. Martin) and Secretary (Dr. J.D. Dodge), indicated eagerness on behalf of their society to establish closer ties and opportunities for greater interaction with our society. Members of the Phycological Society of America may wish to contemplate ways and means by which we can achieve the above goals.

— Bruce C. Parker, Vice-President, P.S.A.

# SUMMER COURSES IN MARINE BOTANY ANNOUNCED

## Dalhousie University Starts Summer Course in Marine Algae

Under the direction of Dr. Louis A. Hanic, Assistant Professor of Biology, Dalhousie University at Halifax, Nova Scotia, will offer a summer course in marine algae from July 3-Aug. 16, 1968.

In addition to the instructor, Dr. Hanic, consultants for the course will include Drs. T. Edelstein, and J. McLachlan of the National Research Council and C.I. McFarlane, Nova Scotia Research Foundation. J.E. Byrne will serve as course assistant, and a number of local and visiting scientists will give special lectures.

The course, which pre-supposes an understanding of algal morphology and taxonomy, is designed for graduate or advanced undergraduate students and will provide them an opportunity to study marine algae of the northeastern Atlantic. Field and laboratory work will be emphasized and will include collection, identification, and mensuration of benthic and planktonic algae. Scuba diving and dredging in off-shore areas will provide information on the sublittoral flora.

Field trips to such local and distant sites as the Bay of Fundy, Prince Edward Island, and Cape Breton are scheduled. Lectures will review and enlarge on taxonomic, biological, and ecological aspects of major marine taxa. A post-course, 10-day field trip to Newfoundland will be organized for those interested.

For further information, write Dr. H.J. Uhlman, Director of Summer Session, Dalhousie University, Halifax, Nova Scotia.

## Krauss Heads Course in Marine Plant Biology at Maryland

Professor Robert W. Krauss, University of Maryland, will be in charge of the course in Marine Plant Biology at the Chesapeake Biological Laboratory, Solomons Island, Md., from June 24-Aug. 2, 1968. Other faculty include Drs. Constantine Sorokin, Raymond A. Galloway, Glenn W. Patterson, Edward P. Karlander, all of the University of Maryland, plus a number of visiting lecturers.

The course will be devoted to the study of the plants of the sea with emphasis on those which occur in the Chesapeake Bay. An introduction to the classification and identification of representative species with an examination of their life cycles will provide a background for further study. The nature of sea water and modes of algal nutrition will be examined in conjunction with tidal and re-

productive sequences. Light and dark fixation of  $CO_2$  will be studied in lecture and laboratory. Detailed studies of the life cycle of single-celled algae should equip the student with a better understanding of cell physiology. Such work, coupled with mechanisms of isolation and characterization of algae and bacteria from ocean water, is aimed at laying a groundwork for future research programs. The nature of photosynthesis, related specifically to primary productivity, will be evaluated against energy losses by secretion and cell senescence. The chemical structure of marine plants should provide a more accurate framework for evaluating the role of the algae in the economy of the oceans. A summary of recent ecological concepts dealing with aquatic environments will serve to bring together the elements of biochemistry, physiology, and taxonomy reviewed in the early part of the course.

Field trips and laboratory work involving the use of measuring devices, collecting techniques, and the research approach will provide the student with an opportunity to become familiar with numerous techniques of value to the marine biologist with a special interest in plants.

(Continued on page 5)



Attired in a wet suit, an investigator collects a sample from a plankton tow  
—photo courtesy of B. Bergoffen, Chesapeake Biological Laboratory

## NEW

### PUBLICATIONS AVAILABLE

"Annotated Bibliography of Fossil Algae" by J. Harlon Johnson. Vol. 62, No. 4, Quarterly of the Colorado School of Mines, Nov. 1967. This publication covers the period 1956-1965; about 1400 articles are listed, and a majority of them are annotated. The references are indexed by 1) subject matter, 2) geographical distribution, 3) geologic age, and 4) by genera described in the publication. Cost: \$4. Order from Department of Publications, Colorado School of Mines, Golden, Colorado 80401. Make checks payable to Colorado School of Mines; add 25% for orders outside the USA.

"Lower Cretaceous Algae from Texas" by J. Harlon Johnson. Professional Contribution of the Colorado School of Mines, Vol. 4, 1967. This report describes Lower Cretaceous algae from numerous localities in Texas. Two papers are included. One describes and illustrates the algal flora of the Buda Limestone; the second covers algae from the Pre-Buda Cretaceous Limestones. Cost: \$4. See above listing for ordering.

"The Myxophyceae of North Carolina" by Elton C. Cocke. 1967. This is an illustrated key with descriptions of more than 300 species which have been collected in North Carolina. Cost: \$5, less 20% professional discount. Order pre-paid from: E.C. Cocke, Box 7325, Reynolds Station, Winston-Salem, N.C. 27109.

"A Guide to the Phytoplankton of Narragansett Bay, Rhode Island" by Wood and Lutes. 1967. Plastic spiral binding, 65 p., 103 fig. Order from Bookstore, University of Rhode Island, Kingston 02881. Cost: \$1.85 plus shipping charges.

"Charophytes of North America" by R.D. Wood. 1967. Plastic spiral binding, 72 p., 23 pl. Order as above. Cost: \$2 plus shipping charges.

## COOK, NICHOLS SERVE AS NEW OFFICERS IN PSA

### Phil Cook Named Secretary

Philip W. Cook, Assistant Professor of Botany, University of Vermont, Burlington. A native Vermonter, avid hiker and snowshoer, Dr. Cook received his B.Sc. and M.Sc. degrees from the University of Vermont and his Ph.D. degree from Indiana University. He spent a year (1962-63) as an NSF Postdoctoral Fellow at the University of California, Berkeley, and in the summers 1963-1967, he served on the staff of the Marine Botany Course at the Marine Biological Laboratory, Woods Hole, Mass. His research interests include the taxonomy and ecology of the phytoplankton of Lake Champlain, and the cytochemistry of desmids and their phycomyxete parasites.

### Wayne Nichols Assumes Treasurer's Post

H. Wayne Nichols, Associate Professor, Department of Botany, Washington University, St. Louis. Dr. Nichols is a member of the National Editorial Committees for the *Workbook* and for another book for the Phycological Society. Among his numerous activities, he has been named as Senior Fellow, Center for the Biology of Natural Systems; as a Science Consultant to the McGraw-Hill Book Co.; and as Curator of Cryptogamic Plants for the Missouri Botanical Garden. He received his B.S., M.S., and Ph.D. degrees from the University of Alabama. He has been a visiting lecturer at the University of Texas and served on the staff of the Marine Botany Course at the Marine Biological Laboratory, Woods Hole, Mass., during the summers of 1964-67. His research interests include the fine structure of marine and freshwater red algae; induction and control of morphogenetic phenomena in red, green, and brown algae; nutritional studies of red algae; systematic and environmental studies of the Bangiophycidae; and gas chromatographic studies of Chlorophyceae and Rhodophyceae algae.



Phil Cook checks an experiment in progress at the University of Vermont



Wayne Nichols prepares media in his culture chamber at Washington University

(Continued from page 4)

### SUMMER COURSES

#### ▶ Humm, Dawes Teach Phycology at St. Petersburg

Dr. Harold J. Humm and Dr. Clinton Dawes will teach a summer course in phycology at the Marine Science Institute of the University of South Florida, Bay Campus, St. Petersburg, from July 18-Aug. 24.

The course, which carries 5 quarter hours credit, is designed for graduate and advanced undergraduate students. Introductory biology is the only prerequisite. For information write Dr. H.J. Humm at the above address.

### DUES NOTICE

Please pay your dues!! 1968 dues cover all 4 issues of Vol. 4 of the *Journal of Phycology* and 3 issues of Vol. 4 of the *Newsletter*. Pay in U.S. dollars.

#### Dues Schedule:

Full-time students.....	\$ 5
Individual (not student).....	9
Libraries and organizations.....	10
Joint members.....	14
Retired members (with 10 years' tenure as members) ....	5

Send dues to: Dr. H. Wayne Nichols  
Department of Botany  
Washington University  
St. Louis, Missouri 63130

(Continued from page 2)

### NOTICES

*Tribonema* sp. or other "yellow-greens" in relatively pure growth. They are prepared to collect and transport the algae to their laboratory in order to prevent damage to the cells and alteration of the pigments. Anyone who finds a massive, relatively pure growth of these algae is asked to notify Harold H. Strain, Argonne National Laboratory, 9700 S. Cass Ave., Argonne, Ill., 60439. Tel. A.C. 312, 739-7711, ext. 2675.

#### Ⓞ Research Request

Carlos E.M. Bicudo, Instituto de Botânica, Caixa Postal 4005, São Paulo, Brazil, will be grateful to receive *Xanthidium* material (fixed or permanent preparations on slides) for a revision of the genus.

#### Ⓞ Reprints Solicited

Reprints on any aspect of phycology are being solicited to start a collection at the Marine Science Institute, East Point, Nahant, Massachusetts 01908. Send as soon as possible.

(Continued from Page 1)

PAPPENFUSS

present the Distinguished Lecture in Phycology.

Participants in this year's Symposium — "Algae As Indicator Organisms" — include Dr. Ruth Patrick, Philadelphia Academy of Natural Sciences; Dr. Clarence Taft, Ohio State University; Dr. C. Mervin Palmer, Taft Sanitary Engineering Center, Cincinnati; Dr. Robert A. Sweeney, Great Lakes Laboratory, Buffalo; Dr. Matthew Höhn, Central Michigan University, Mt. Pleasant.

## Letters to the Editor

...When you mention that papers are needed for the Journal of Phycology, *do* mention that I require 1 original and 2 copies and that I urge that people read instructions on how to stick to our format—a few do. This would spare much editorial annoyance...

Luigi Provasoli, *Editor*  
*Journal of Phycology*

...PHYCOLOGICAL WORKBOOK would like more publicity... I am interested still in those who might be interested in contributing techniques. I would appreciate those so interested in sending reprints. Already I have heard from several and would like to hear from others doing active research on the algae. Don't be modest!...

Janet R. Stein, *Editor*  
*Phycological Workbook*

## NEWS OF MEMBERS

### Nichols, Sommerfeld Survey Panama Algae

H. Wayne Nichols and Milton Sommerfeld left Washington University in St. Louis recently to initiate a preliminary survey of the algae of the Atlantic, Pacific, and transcanal Panama. H.W.N. will be teaching a phycology course this summer at the University of Texas, Austin.

### McLean to Brockport

Robert J. McLean, Postdoctoral Fellow at the University of Texas, Austin, will be Assistant Professor of Botany in the Department of Biological Sciences at the State University of New York, Brockport, in September.

### Chambers Receives Award

John E. Chambers, University of Southwestern Louisiana, Lafayette, has received a grant-in-aid from The Society of the Sigma Xi to assist him in his study of "Variation in Golgi apparatus in marine red algae, an electron microscope study."

### Brown to North Carolina

R.M. Brown, Jr., Assistant Professor of Botany at the University of Texas, Austin, has accepted a faculty position at the University of North Carolina, Chapel Hill.

### Webber to Teach at Institute

Edgar E. Webber, Keuka College, N.Y., will teach a course in marine algae this summer at the Marine Science Institute of Northeastern University at Nahant, Mass.

### Cox Receives Award

Elenor R. Cox, Texas A & M University, College Station, has received a fellowship for summer study at the University of Texas, Austin, where she will learn electron microscopy.

### Dillard to Western Kentucky

Gary E. Dillard, Assistant Professor of Botany, Clemson University, S.C., has accepted a position as Associate Professor of Biology at Western Kentucky University, Bowling Green, as of July 1, 1968.

### Bold Plans Trip to Europe

H.C. Bold, University of Texas, Austin, is planning an extended trip to several European countries in the fall. He will attend a symposium in Spain and will tour a number of other countries while he is abroad.

Phycological Newsletter

May, 1968, Vol. 4, No. 2

Department of Botany

The University of Tennessee

Knoxville, Tennessee 37916

Editor: Patricia L. Walne

Non-Profit Org.  
U.S. Postage  
PAID  
Permit No. 220  
Knoxville, Tennessee

