

THE PHYCOLOGICAL SOCIETY OF AMERICA

Volume XIV

News Bulletin, March, 1961

Number 1

60 SECONDS — AN EDITORIAL

An editorial on the first page stands a good chance of being read! However, it may be easily ignored by those interested in the more 'meaty' aspects of this number of the PHYCOLOGICAL NEWS BULLETIN. Or, as it sits on your desk it may be read before it becomes covered with the usual book advertisements, meeting notices, exams, etc. If there is no other choice, I hope for the latter and also that you will then turn to the back page and fill in the form (both sides), tear it out and mail it. The success of the Society depends on you as much as on the officers.

Over 90 members have acknowledged the questionnaire included in the last NEWS BULLETIN. This is out of more than 300 members. The majority (22:1) favor continuing the publication, but these members are divided as to what it should contain. Realizing that this is only $\frac{1}{3}$ of the membership, it is difficult to set an editorial policy. At present all that can be hoped is to achieve a healthy combination of articles that will appeal to most members. This can only be done through your cooperation.

Too much 'chit-chat news' about members can be dull reading, yet information regarding honours, awards, grants, guest-lectures, and travels are of interest and worth reporting. A little bragging is good! Books and meetings of interest and information on grants and fellowships are quite helpful, especially to those who are not affiliated with large, centrally-located institutions. Phycological facilities, summer course offerings, opportunities in Phycology and related fields (positions for those trained in Phycology) are in general poorly advertised. These, again, are not always known to academic and research people, let alone students! Students interested in Phycology measure success by the Society publication. Often those who are not Phycologists have reference to something in the field and do not know where to secure the required information. The identification of algal forms to species is the work of a specialist; however, those willing to render such services, and frequently the specific field of competence, are unknown. Therefore a listing of those willing to serve on a consulting basis (for a fee) and in what groups, would be beneficial to both members and non-members. The affairs of the Society (various committees) should by all means be published. A regular publication of the NEWS BULLETIN with progress reports from the committees will serve a two-fold purpose: to keep the membership informed and interested; and to keep the committee active and serving its purpose.

In brief, *the advancement of Phycology* is the purpose of the Society (as stated in the constitution); the PHYCOLOGICAL NEWS BULLETIN is the obvious medium through which the degree of advancement is apparent. The year 1961 is to be one of experimentation, and the BULLETIN is only what the membership makes it. If the majority do not care, this will be reflected in the quality and quantity of material available. Therefore, judge accordingly! (Now, please turn to page 15.)

The PHYCOLOGICAL NEWS BULLETIN is the official publication of the Phycological Society of America and is published in Vancouver, B.C., Canada. Letters, news items, other contributions and communications about editorial matters should be addressed to J. R. Stein, Editor, Department of Biology and Botany, University of British Columbia, Vancouver. Changes of address should be sent promptly to the Secretary-Treasurer, Mr. W. A. Daily, Box 155, Butler University, Indianapolis, Indiana. Subscription orders from libraries and other institutions should also be sent to Mr. Daily. Printing and typography by Mitchell Press, Vancouver.

OFFICERS AND EXECUTIVE
COMMITTEE

PHYCOLOGICAL SOCIETY OF AMERICA

PRESIDENT Jack Myers,

Department of Zoology, University of
Texas, Austin

PAST PRESIDENT Richard C. Starr,

Department of Botany, Indiana University,
Bloomington

VICE-PRESIDENT Luigi Provasoli,

Haskins Laboratories, New York City

SECRETARY-

TREASURER William A. Daily,

Department of Botany, Butler University,
Indianapolis, Indiana

EDITOR Janet R. Stein,

Department of Biology and Botany,
University of British Columbia, Vancouver

CALL FOR NOMINATIONS

Nominations for the Officers of the Phycological Society of America are due by 15 April. Please use the enclosed ballot and send it immediately to Dr. Ruth Patrick, Chairman of the Nominating Committee, Academy of Natural Sciences, 19th and The Parkway, Philadelphia, Pennsylvania.

MEETINGS OF INTEREST
TO PHYCOLOGISTS

20 - 22 APRIL—Annual Meeting—Association of Southeastern Biologists, University of Kentucky, Lexington (including Botanical Society of America). John M. Carpenter, Department of Zoology, University of Kentucky.

20 - 24 APRIL — International Symposium "Microbial Reactions in Marine Environments," Chicago. Carl H. Oppenheimer, Institute of Marine Science, University of Texas, Port Aransas.

19 - 22 JUNE — Annual Meeting — Pacific Section, American Association for the Advancement of Science, University of California, Davis (includes Botanical Society of America, American Society of Limnology and Oceanography). Robert F. Scagel, Department of Biology and Botany, University of British Columbia, Vancouver.

21 AUGUST - 6 SEPTEMBER — 10th Pacific Science Congress, Honolulu, Hawaii. Harold J. Coolidge, Bishop Museum, Honolulu 17.

22 - 30 AUGUST — 1st International Conference on Protozoology, Prague, Czechoslovakia. William Trager, Rockefeller Institute, 66th Street & York, New York City 21.

27 - 31 AUGUST — Annual Meeting PHYCOLOGICAL SOCIETY OF AMERICA, Purdue University, Lafayette, Indiana (with AIBS).

18 - 25 SEPTEMBER — 4th International Seaweed Symposium, Biarritz, France. Monsieur Barriety, Directeur du Centre Scientifique, B. P. 28, Biarritz (Basses-Pyrénées), France.

26 - 31 DECEMBER — Annual Meeting — American Association for the Advancement of Science, Denver, Colorado.

If there appears to be a preponderance of news from the West Coast, it is because this is the home of your Editor. Future numbers should contain more information from other sections, if said information is forthcoming.

ABSTRACTS OF PAPERS PRESENTED AT STILLWATER

(concluded)

Marine Botanical Explorations Along Pacific Central America

E. YALE DAWSON

Beaudette Foundation, Solvang, California

Marine algal exploration along Pacific Central America was begun by W. R. Taylor in 1934, but confined essentially to Costa Rica. Until the summer of 1957 the recorded marine algae from the shores of the nations of this region were as follows: Guatemala, 0; El Salvador, 1; Honduras, 0; Nicaragua, 0; Costa Rica, 50; Panama, 21. Since 1957 the writer has added 89 species of algae to the flora. Extensive beds of marine phanerogams of 4 species were found in Panama and Nicaragua. Calcareous algal reef formations were found at Isla del Caño, Costa Rica. Evidence of a marked seasonal development of the flora in various parts of the area was recognized. Among some 40 frozen samples of these tropical algae tested for antibiotic activity, a wide distribution of materials inhibiting the growth of gram-positive bacteria was found.

Further exploration of the marine flora is in progress. Collections will be made in El Salvador during September, 1960, toward the preparation of the first of a series of illustrated handbooks of the marine vegetation, to be used as aids in training resident marine biologists along tropical Pacific Latin America.

Chromosome Studies in the Genus *Oedogonium*

LARRY R. HOFFMAN

University of Texas, Austin

Both mitosis and meiosis have been studied in the genus *Oedogonium*. Chromosome determinations were obtained for eight species as follows:

| | |
|--|--------------------------------|
| <i>Oe. foveolatum</i> | n = 16 |
| <i>Oe. geniculatum</i> | n = 33 |
| <i>Oe. capilliforme</i> | n = 17 (male & female) |
| <i>Oe. cardiacum</i> | n = 19 (male & female) |
| <i>Oe. princeps</i> | n = 19 (male & female) |
| Unidentified heterothallic species..... | n = 17 (male & female) |
| Unidentified gynandrosporous species.... | n = 17 (male & female) |
| <i>Oe. idioandrosporium</i> | n = 13 (female & androsporic) |
| <i>Oe. echinospermum</i> | n = 13? (female & androsporic) |

The count of $n = 19$ for *Oe. cardiacum* confirms the determination made by Howard and Horsley (Radiation Research 9: 131, 1958).

The highest chromosome number reported prior to this work was $n = 19$. An unidentified species was found in these studies to have a chromosome number between 34 and 40. A great amount of variation exists in the number, size and morphology of the chromosomes (as well as in relative size of the nuclei) of the different species of *Oedogonium*, demonstrating a remarkable range within a single genus. The cytology of normal haploid cells of female *Oe. cardiacum* was compared to that of cells of a naturally occurring diploid strain.

Meiosis was studied in *Oe. foveolatum* and a photographic record was obtained which offers incontrovertible proof that meiosis, comparable to that found in phanerogams, does indeed occur in the zygotes of *Oedogonium* as suggested by Gussewa (Planta 12: 293, 1930).

The Life Cycle of *Volvox Aureus* Ehr.IMY VINCENT HOLT
Oklahoma State University

A review of the literature on this organism prompted the author to proceed with more precise interpretations of the development of the coenobia (both male and female), gonidia, sperm platelet, and the comparative relationships of the post-zygotic embryo and the vegetative plakea. Eversions of the developing post-zygotic embryo and plakea were observed in this species while under culture conditions. The number of cells in both male and female coenobia increases continuously by mitosis during ontogeny.

Gonidia are differentiated in extremely young colonies. In the male colonies, a few vegetative cells remain after sperm platelets are differentiated. The number of motile sperm per platelet varies from 32 to 64.

The sperm are strongly attracted to the eggs. After fertilization a smooth, thick, gelatinous covering forms around the embryonic colony. The zygote and embryo are blue-black. Meiosis was not observed because of this coloration, and knowledge of coenobial constitution is yet incomplete. Whether the vegetative development of unfertilized gonidia should be referred to as parthenospory is yet hypothetical.

Inversion of the young coenobia was not observed in culture.

Problems under consideration in the furtherance of these studies are: (1) to obtain cytological evidence, if any, of the sex determining mechanism; (2) to establish the chromosome number in both the somatic and gametic cells; and (3) to obtain knowledge of meiosis and the derivatives therefrom.

Mass Culture of Thermophilic *Chlorella*F. F. NOE, H. CHAU, AND R. J. BENOIT
General Dynamics Corporation, Groton, Connecticut

The effect of various types of artificial lighting and lighting geometry on the continuous culture of *Chlorella* 71105 was investigated in a semiautomatic apparatus fabricated of glass, plastic and stainless steel. The unit contained 40 liters of algae slurry and was operated for 24-hour periods at an average volumetric culture density of 0.097.

With white fluorescent lighting (twenty-four 160-watt power groove lamps arranged about a nickel-plated circular reflector) doubling time of 5.7 hours was obtained. When simulated daylight lighting (seventeen 160-watt power groove lamps plus seven 85-watt daylight fluorescent lamps) was tested a doubling time of 5.3 hours was found.

Incandescent lighting (eight 1500-watt Quartz-line lamps, mounted on individual nickel-plated parabolic reflectors) gave a doubling time of 16.5 hours. The same lamps mounted internally resulted in doubling times similar to those obtained with white fluorescent and simulated daylight lighting.

In addition to doubling times, gas exchange was also measured during the course of the experiments. All results were evaluated by appropriate statistical treatment.

SUMMER COURSES IN PHYCOLOGY

This listing of summer instruction in Phycology includes only those courses concerned primarily with the Algae. Courses in Limnology, Oceanography, and Cryptogamic Botany are excluded. By next year it may be possible to list these 'fringe' courses. Data supplied were furnished by the Institution involved, usually the Director of the Biological Station.

The information is listed as follows:

STATE—Name of Biological Station:
Summer address:
Course name and credit (s = semester, q = quarter): Dates: Days per week: Instructor and home school: Where to apply: Deadline, if any: Additional information.

Primarily Freshwater

IOWA—Iowa Lakeside Laboratory: Milford.

Morphology of Algae (5s): 12 June-14 July: 5: J. D. Dodd, Iowa State University: Director, Iowa State University, Ames: Class limited to 6.

MICHIGAN—University of Michigan Biological Station: Pellston. *Fresh-water Algae* (2s): 24 June-19 August: 1: F. K. Sparrow, Jr., University of Michigan: University of Michigan Biological Station, 2129 Natural Sciences, Ann Arbor: 15 April.

—W. K. Kellogg Gull Lake Biological Station: Rt. 1, Hickory Corners. *Fresh Water Algae* (3q?): 19 June-11 August: 1½: W. E. Wade, Michigan State University: Director, Kellogg Gull Lake Biological Station, Rt. 1, Hickory Corners: 15 May: Course primarily for students in fisheries, wildlife management and sanitary engineering.

MINNESOTA—Lake Itasca Forestry & Biological Station: Lake Itasca.

Fresh-water Algae (4q): 11 June-15 July: 2: J. R. Stein, University of British Columbia: Office, Dean of Summer Session, University of Minnesota, Minneapolis 14: 11 June.

MONTANA—Montana State University Biological Station: Bigfork. *Fresh Water Algae* (3q?): 17 June-12 August: 2: G. W. Prescott, Michigan State University: Director, Montana State University, Missoula: 1 May.

OHIO—Franz Theodore Stone Laboratory: Put-in-Bay. *Algae* (4q): Not offered 1961, offered in even years (1960, 1962).

OKLAHOMA—University of Oklahoma Biological Station: Willis. Not offered 1961.

QUEBEC—Quebec Biological Bureau Not offered.

VIRGINIA—Mountain Lake Biological Station; Rt. 1, Pembroke. Not offered 1961, offered in even years (1960, 1962).

Freshwater and Marine

CONNECTICUT—University of Connecticut Marine Laboratory: Noank. Not offered 1961.

MASSACHUSETTS—Marine Biological Laboratory: Woods Hole. *Marine Botany* (0—home university

may give 5-6s): 19 June - 30 July (half the students remain 31 July - 2 September): 6: R. C. Starr, in charge, Indiana University; Tyge Christensen, Copenhagen; W. R. Herndon, University of Alabama, J. M. Kingsbury, Cornell University; W. R. Taylor, consultant, Uni-

versity of Michigan: Director,
Marine Biological Laboratory Woods
Hole: 15 March: Class limited to

20; NSF funds available for partial
support, request application at time
of course application.

Primarily Marine

CALIFORNIA—Hopkins Marine Sta-
tion: Pacific Grove.

Marine Algae (5q—Stanford Uni-
versity): 19 June-20 July: 3: G. J.
Hollenberg, Redlands University:
Director, Hopkins Marine Station,
Pacific Grove: 1 April: Bring warm
clothing and rubber boots; Registra-
tion 17 June.

Mendocino Biological Station: P.O.
Box 86; Albion.
Not offered 1961.

FLORIDA—Florida State University
Oceanographic Institute: Tallahas-
see.

Not offered 1961.

—University of Miami Marine Lab-
oratory: Coral Gables:
Not offered 1961.

HAWAII — Hawaii Marine Labora-
tory: Honolulu.

No course offered 1961: Graduate-
level research and individual in-
struction only on a pre-arranged
basis: A. J. Bernatowicz, M. S.
Doty, University of Hawaii: Botany
Department, University of Hawaii.

MISSISSIPPI — Gulf Coast Research
Laboratory: East Beach, Ocean
Springs.

Marine Botany, (4s): 5 June - 30
June: 6: R. B. Channell, Vanderbilt
University: Director, Gulf Coast
Research Laboratory, East Beach,
Ocean Springs: 5 June: Includes
flowering plants.

NORTH CAROLINA — Duke Uni-
versity Marine Laboratory: Beau-
fort.

No report received.

OREGON—Oregon Institute of Ma-
rine Biology: Charleston.

Not offered 1961 (see NSF Insti-
tutes).

PUERTO RICO — Institute of Ma-
rine Biology: Mayagüez.

Not offered during summer, 1961.

RHODE ISLAND — Narragansett
Marine Laboratory: Kingston.

Not offered during summer, 1961.

TEXAS—Institute of Marine Science:
Port Aransas.

Marine Botany (3s?): Not offered
in 1961, scheduled for 1962.

WASHINGTON— Walla Walla Col-
lege Biological Station: Rt. 3, Box
555, Anacortes.

Marine Botany (4q): 12 June - 14
July: 2: B. Emery, Walla Walla
College: Director, Biological Sta-
tion, Walla Walla College, College
Place: 2 May: Survey of marine
plants.

—Friday Harbor Laboratories: Fri-
day Harbor.

Marine Algology (6q?): 24 July -
26 August: 5½: M. Neushul, Uni-
versity of Washington: Director,
Friday Harbor Labs, 201 Johnson
Hall, University of Washington,
Seattle 5: 1 March.

PHYCOLOGICAL FACILITIES I

UNIVERSITY OF BRITISH COLUMBIA, VANCOUVER 8, CANADA

An intensive program in marine phycology was initiated in 1952 by Dr. ROBERT F. SCAGEL of the Department of Biology and Botany and the Institute of Oceanography. In 1959, the phycological activities were expanded to the freshwater forms with the addition of Dr. JANET R. STEIN to the Department of Biology and Botany. Distributional studies of the algae have resulted in the publication of a check-list of the marine forms by Dr. Scagel (1957, Natl. Museum Canada, Bull. No. 157), and the preparation of one for the freshwater forms by Dr. Stein. In addition, both are doing life-history and morphological studies. In recent years, Dr. KATHLEEN M. COLE, also of the Department of Biology and Botany, has undertaken cytological and genetical studies of the marine algae.

The phycological herbarium, which is particularly rich in material from the North Pacific (Oregon, Washington, British Columbia and Alaska) contains over 12,000 specimens. In 1960 Fasciculus I of "Plantae Exsiccatae Ab Universitate Britannico-Columbiana Editae, Series-Algae" comprising 25 specimens of marine algae was distributed. Early in 1961 Fasciculus II will be issued. The Exsiccatae are not offered for sale, but in exchange for specimens of marine algae. A few sets of Fasciculus I are available for distribution and interested institutions should write Dr. Scagel.

Recently the phycology laboratory acquired 4 new algal culture rooms with controlled temperature and lights (a Phycotron?). These walk-in-rooms, operated at 5°, 10°, 15°, and 20° C., are provided with illuminated shelves and racks for algal cultures. The laboratory is also equipped with a running sea water system. The new facilities afford outstanding opportunities for the study of the algae, and accordingly life-history, cytological and genetic studies are being expanded by the staff and graduate students at the University of British Columbia.

(Editor's note: This is the first in a series of articles discussing research and teaching opportunities in phycology. Other institutions are encouraged and requested to send copy concerning their facilities. Reprints will be available at cost.)

ANNUAL MEETING — PURDUE

The annual meeting will be 27-31 August 1961 at Purdue University, Lafayette, Indiana, under the auspices of the AIBS. As in the past, we will co-sponsor a meeting with the Phycological Section of the Botanical Society of America. Deadline for submitting titles is 15 May 1961. The Botanical Society Council voted (at Stillwater, Oklahoma) to require abstracts of papers presented at its sections. Said abstracts are to be printed *in advance*, in the July issue. The form for the abstract is similar to that in the AMERICAN JOURNAL OF BOTANY. Members who plan to give a paper at the meetings should mail the title and abstract in time for them to reach Mr. W. A. Daily by Monday 15 May.

In addition to the meeting, an algal foray is planned for Sunday, 27 August and a noon luncheon for 28 August. The luncheon will be an excellent time for phycologists to visit informally. Plan to attend the luncheon as well as the meeting!

PUBLICATIONS OF INTEREST

- CLIFTON, C. E., editor. 1960. Annual review of microbiology. Vol. 14. Chapter by Levine, R. P., Genetics and cytology of *Chlamydomonas*. Palo Alto, Calif.
- DEDUSENKO-SCHEGOLEVA, N. T., A. M. Matvienko, L. A. Shkoratov. 1959. Opredelitel presnovodnykh vodoroslei SSSR. 8. Zeleneye vodorosli klass volvoksovye. (Contribution to the freshwater algae of the USSR. 8. Chlorophyta: Volvocineae.) [in Russian] Akad. Nauk SSSR. Moscow-Leningrad.
- DESIKACHARY, T. V. 1959. Cyanophyta. Indian Council of Agricultural Research. New Delhi.
- FOTT, B. 1959. Algenkunde. Fischer. Jena (see review).
- MACHLIS, L., editor. 1960. Annual review of plant physiology. Vol. 11. Chapter by Steeman Nielsen, E., Productivity of the oceans. Palo Alto, Calif.
- NIKITIN, B. N., editor. 1960. Marine biology. Trudy Institute of Oceanology. Vol. XX. AIBS Russian Monograph Translations. Washington, D.C.
- RALFS, J. 1848. British Desmidiaceae. Reprint 1961. Stechert-Hafner. New York.
- RANDHAWA, M. S. 1959. Zygnemaceae. Indian Council of Agricultural Research. New Delhi.
- RUSSIAN-ENGLISH glossary of Hydrobiology. Based mainly on N. N. Smirnov's English-Russian Hydrobiological Dictionary. Interlanguage Dictionnaires. New York.
- SCHUSSNIG, B. 1960. Handbuch der Protophyten. Eine vergleichendmorphologische und biologische Darstellung der niederen Pflanzen für Biologen, Mediziner und Landwirte. Bd. II. Fischer. Jena.
- TAYLOR, W. R. 1960. Marine algae of the eastern tropical and subtropical coasts of the Americas. Univ. of Michigan Press. Ann Arbor.
- TRYON, C. A., Jr. and R. T. Hartman, editors. 1960. The ecology of algae (Pymatuning Laboratory of Field Biology Symposium, June 1959). Univ. of Pittsburgh Press. Pittsburgh, Pa.
- VORONTOSOVA, M. A. and L. D. Liosner. 1960. Asexual propagation and regeneration. (Translated from Russian by P. M. Allen.) Pergamon Press. New York.
- (Editor's note: This is by no means complete and is not intended to be so. The listings are brought to the attention of interested members.)

MARINE ALGAE OF THE BRITISH ISLES

The British Phycological Society is sponsoring the production of a series of biological studies of individual genera and species of British marine algae which it is hoped to publish in the "Journal of the Marine Biological Association (U.K.)." Reprints available are:

- DIXON, P. S., 1960a. Studies on marine algae of the British Isles: the genus *Ceramium*. J. Mar. Biol. Assoc. U.K. 39: 331-374. Price \$.60 incld. postage.
- DIXON, P. S., 1960b. Studies on marine algae of the British Isles: *Ceramium shuttleworthianum* (Kütz.) Silva. J. Mar. Biol. Assoc. U.K. 39: 375-390. Price \$.30 incld. postage.

These are available from Dr. Peter S. Dixon, The Hartley Botanical Laboratories, University of Liverpool, Liverpool 3. Check or money order should be made payable to "British Phycological Society."

FOTT, BOHUSLAV, Prof. Dr., Direktor des Botanischen Instituts der Biologischen Fakultät der Karls-Universität Prag. ALGENKUNDE. Mit 255 Fig. im Text und 1 Titelbild. VII. 482 S. 24 X 17 cm. 1959. Halbleinen 48,90 DM

The need for a modern textbook in the algae prompted Professor Fott to complete the original Czech version in 1956 and this subsequent translation into German three years later. It is unfortunate for English-speaking students that a similar book has not appeared in their language.

The book is divided into four major sections devoted to the algae in the natural system of plants, the taxonomy of various algal phyla, the ecology of algae, and the economic importance of algae. About 80% of the book is devoted to the section of taxonomy which includes the Cyanophyta, Chrysophyta, Phaeophyta, Rhodophyta, Chlorophyta, Euglenophyta, Pyrrophyta, as well as the colored and colorless flagellates of uncertain position. A general account of the morphology, reproduction, and ecology precedes the discussion of the families and representative genera in each phylum.

As would be expected the marine algae receive only a limited treatment. On the other hand, the account of the Phylum Chrysophyta is very excellent, reflecting the research interests of Professor Fott and his students. The text is beautifully illustrated with many drawings and some photographs.

New genera, families, suborders, and orders have been published in accordance with the Code of Botanical Nomenclature in *Preslia* 32: 142-154, 1960.

This book will serve as a text and an excellent reference to students of phycology.
—Richard C. Starr

PACIFIC SCIENCE CONGRESS

The 10th Pacific Science Congress will be held in Honolulu 21 August to 6 September 1961. Drs. A. J. Bernatowicz and Maxwell S. Doty cordially invite all members of the Phycological Society of America to spend the summer in Hawaii utilizing laboratory and library facilities as well as attending the Congress-sponsored events. Several algal field trips are planned and those attending are cautioned to bring anti-sunburn ointment (water temperature about 75°F).

Contributed papers on algae can be scheduled until 31 March 1961 by writing Dr. A. C. Smith, Division Organizer for Botany, U.S. National Museum of Natural History, Washington 25, D.C. In addition to contributed papers, a symposium, "Algal Productivity of the Pacific," is scheduled. This is planned for four sessions and will consist of discussions of the geography of primary productivity studies, the standardization of organisms and measurements, interpretations and significance of results, and demonstrations of different techniques employed for primary productivity studies. The demonstrations will include IBM computer techniques and a short cruise on the Australian research vessel, "Gascoyne," to demonstrate the 'at sea' aspects.

Further information regarding phycological activities at the Congress may be secured from Drs. Bernatowicz or Doty, Department of Botany, University of Hawaii; or Dr. H. B. S. Womersley, Department of Botany, University of Adelaide, Adelaide, South Australia.

NEWS AND NOTES

LEWIS HANFORD TIFFANY is recuperating from a ruptured brain blood vessel. He has been in the hospital since November; however, Mrs. Tiffany writes that he is learning to walk again and should be home before long. Dr. Tiffany was the first vice-president of the Phycological Society and served as the third president from 1948-1949. He is best known for his work on the Oedogoniaceae and Algae of Illinois. Formerly on the faculty at Northwestern University, Evanston, Illinois, his address is now: 941 Gary Street, Sarasota, Florida. He would probably appreciate hearing from the Phycologists.

The ALGAE CULTURE COLLECTION and RICHARD C. STARR were pictured in the December, 1960, issue of the "Indiana Alumni Magazine." It is an excellent picture of both; however, the Past-president seems to be behind bars (horizontal ones at that!). NSF has awarded a grant to support the collection for an additional 5 years.

VIVIENNE CASSIE and husband, from Wellington, New Zealand, are visiting various laboratories in the U.S. and Canada. They were at Woods Hole Oceanographic Institute and Bingham Oceanographic Laboratory until recently. They are scheduled to spend some time at the Scripps Oceanographic Institute, LaJolla, California, before leaving.

E. YALE DAWSON, Beaudette Foundation at Solvang, California, entertained after the Christmas meetings of the Western Society of Naturalists the largest West Coast gathering of Phycologists. Those present were SHIRLEY SPARLING, MAX DOTY, G. J. HOLLENBERG, and ROBERT F. SCAGEL.

ALISON DUXBURY (née Saunders) and husband have moved to New Haven, Connecticut, where she is a Research Associate with Gordon Riley at the Bingham Oceanographic Laboratory. Her husband is a Research Associate and Lecturer in Physical Oceanography.

W. T. EDMONDSON, University of Washington, has been elected President of the American Society of Limnology and Oceanography. He recently gave a lecture in Vancouver, Canada, at a joint meeting of the Zoology Departments of the University of Washington and the University of British Columbia.

MAX HOMMERSAND, University of North Carolina, has received an NSF grant to study cellular differentiation in *Cblamydomonas*. During the Christmas holidays he and Mrs. Hommersand collected algae at Martinique. The collecting was in general good, except for the one experience when the sea almost claimed a Phycologist. This spring he will offer a course in Radioisotope Tracer Techniques.

ROBERT W. HOSHAW, University of Arizona, is spending the academic year at Indiana University on an NSF Faculty Fellowship.

S. H. HUTNER, Haskins Laboratories in New York, is Vice-President of the Society of Protozoologists.

MIKE NEUSHUL and Mrs. Neushul, University of Washington, spent the month of December in South America as guests of the Argentinian government and attending the Argentinian Botanical Meetings. WILLIAM C. STEERE also participated at the meetings. Dr. NEUSHUL was one of the speakers at the joint University of Washington - University of British Columbia meeting held in Vancouver.

GEORGE F. PAPPENFUSS, University of California, Berkeley, is a Miller Research Professor working on material for his algal flora of South Africa. This ideal situation theoretically relieves him of all University affairs. His courses are being taught by the Past-Editor, PAUL C. SILVA, who is on leave of absence from the University of Illinois. Dr. SILVA will remain at Berkeley for the first part of the summer to teach General Botany.

BRUCE C. PARKER, who received his Ph.D. with a major in Phycology at the University of Texas in 1960, is a post-doctoral fellow in the laboratory of Dr. G. E. Fogg, University College, London. Besides doing research he is managing to keep busy seeing London and environs.

T. R. PARSONS, Pacific Oceanographic Group at Nanaimo, British Columbia, travelled East and visited the Bingham Oceanographic Laboratory.

Vice-President LUIGI PROVASOLI, Haskins Laboratories in New York, visited Indiana University early in January where he was a guest lecturer at one of the Microbiology seminars sponsored by a Public Health Service Training Grant in Microbiology that is jointly sponsored by the Departments of Bacteriology, Botany and Zoology. Later in January Dr. PROVASOLI presented a seminar at Yale University.

ROBERT F. SCAGEL, University of British Columbia, is Secretary of the Pacific section of the Botanical Society of America. He is hoping to plan an informal gathering of Pacific Coast Phycologists at the Davis meetings (University of California), June 19-22. At these meetings a symposium on primary productivity is planned. West-Coast-Phycologists, plan to attend!

AARON J. SHARP, University of Tennessee, is President of the American Society of Plant Taxonomists as well as still being the Treasurer of the Botanical Society of America.

RICHARD C. STARR, Indiana University, visited the University of Texas late in November (Thanksgiving!) and was engaged in several Phycological field forays.

RICHARD WOOD, University of Rhode Island,

is spending his sabbatical between the University of Adelaide, South Australia, and the University of Hawaii. He is studying the Characeae of the Pacific and is sponsored by Fulbright and NSF Funds.

NEW MEMBERS—1960 - 1961

- ADEY, Mr. Walter H., Department of Botany, University of Michigan, Ann Arbor.
 ALBERT, Miss LaVerne, Department of Botany, University of Texas, Austin 12.
 AZIZ, Mr. K. M. Sultanul, Department of Botany, Duke University, Durham, North Carolina.
 BEDNAR, Mr. Thomas W., Department of Botany, University of Wisconsin, Madison.
 BLACKLER, Dr. Helen, The Gatty Marine Laboratory, The University, St. Andrews, Fife, Scotland.
 BROOKS, Mr. Austin E., 506 W. Wabash Ave., Crawfordsville, Indiana.
 BUCHANAN, Mr. Ronald, 3563 W. 28th Ave., Vancouver 8, B.C., Canada.
 CAMERON, Mr. Roy E., Department of Botany, University of Arizona, Tucson.
 COOK, Mr. Philip W., Botany Department, Indiana University, Bloomington.
 DAVIDSON, Dr. Floyd F., Box 214, Baylor University, Waco, Texas.
 DAWSON, Mr. William A., Department of Oceanography, University of Washington, Seattle 5.
 DIXON, Dr. Peter S., Hartley Botanical Labs, The University, Liverpool 3, England.
 DRUEHL, Mr. Louis D., Department of Botany, University of Washington, Seattle 5.
 FALCON, Prof. Gisela de, P.O. Box 993, Caracas, Venezuela.
 FARIDI, Mr. M. A. F., Botany Department, Kansas University, Lawrence.
 GAUCHER, Mr. Thomas A., Narragansett Marine Laboratory, University of Rhode Island, Kingston.
 GRAFFIUS, Mr. J. Herbert, Department of Botany, Michigan State University, East Lansing.
 GUILLARD, Dr. Robert R. L., Woods Hole Oceanographic Institution, Woods Hole, Massachusetts.
 HANSEN, Mr. J. B., Botanical Museum, 130 Gothersgade, Copenhagen K, Denmark.
 HOLM-HANSEN, Dr. Osmund, Birge Hall, University of Wisconsin, Madison.
 HOIT, Dr. Imy Vincent, 2008 S. Westnedge Ave., Apt. 2, Kalamazoo, Michigan.
 HOLTON, Dr. Raymond W., University of Michigan, 1321 E. Court St., Flint, 3.
 JONES, Dr. Raymond F., Department of Biology, Princeton University, Princeton, New Jersey.
 LANG, Miss Norma Jean, Botany Department, Indiana University, Bloomington.
 LEEDALE, Dr. Gordon F., Department of Botany, The University, Leeds 2, England.
 MARSHALL, Mr. Harold G., 182 Eldred Ave., Bedford, Ohio.
 MCBRIDE, Mr. Landy J., Department of Botany, Birge Hall, University of Wisconsin, Madison.
 NICHOLS, Mr. Herbert Wayne, Biology Department, University of Alabama, University.
 NOE, Dr. Frederick F., 98 Mumford Avenue, Groton, Connecticut.
 NOLAN, Mr. Richard A., Department of Botany, University of Nebraska, Lincoln 8.
 PRAT, Dr. S., Plantarum Physiologia, University Carolinae, Vinicnà 5, Praha 2, Czechoslovakia.
 PRICE, Dr. Richard W., GE. MSVD., 3650 'D' St., Philadelphia 24, Pennsylvania.
 RAYNS, Mr. David Geoffrey, Botany Department, Queen Mary College, University of London, Mile End Rd., London, E.1, England.
 ROUND, Dr. Frank Eric, Department of Botany, The University of Bristol, Bristol 8, England.
 SAFFERMAN, Dr. Robert, 1915 Mears Ave., Cincinnati 30, Ohio.
 SAKARIN, Mrs. Aree A., Department of Botany, State University of Iowa, Iowa City.
 SEARLES, Mr. Richard B., Botany Department, University of California, Berkeley 4.
 SELLATI, Mr. Kenneth Giles, 3571 Fair Isle St., Miami 33, Florida.
 SHIELDS, Mr. Jack W., Department of Botany, University of Minnesota, Minneapolis 14.
 SOEDER, Dr. Carl J., Siesmayerstr. 70, Botanisches Institut, Frankfurt/M., Western Germany.
 SPIEGEL, Dr. Leonard E., Box 475, Central Michigan University, Mount Pleasant.
 SWEENEY, Dr. Beatrice M., Scripps Institution of Oceanography, LaJolla, California.
 TAYLOR, Dr. W. Rowland, Department of Oceanography, The Johns Hopkins University, Baltimore 18, Maryland.
 WATSON, Mr. Robert H., 103 Hill Street, Fayetteville, Arkansas.
 ZANEVELD, Dr. Jacques S., Biology Department, Box 6173, William and Mary College, Norfolk Division, Norfolk 8, Virginia.
- FARLOW REFERENCE LIBRARY, Harvard University, 20 Divinity Ave., Cambridge, Massachusetts.
 QUEEN MARY COLLEGE, University of London, Mile End Road, London E.1, England.
 UNIVERSITY OF WASHINGTON LIBRARY, Seattle 5, Washington.

PAY 1961 DUES TODAY

DARBAKER PRIZE IN PHYCOLOGY — 1961

The Committee on the Darbaker Prize of the Botanical Society of America will accept nominations for the award to be announced at the annual meeting of the Society at Lafayette, Indiana, in 1961. Under the terms of the bequest, the award is to be made for *meritorious work in the study of the algae*. The Darbaker Prize was established in 1955 from a bequest of Dr. Leasure K. Darbaker, a physician in Wilkensburg, Pennsylvania. The value of the Prize for 1961 will depend on the income from the trust fund, but is expected to be about \$250.

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 (1959, 1960). Persons not members of the Botanical Society are eligible for the award. At present, the award will be limited to residents of North America and only papers published in the English language will be considered.

Nominations for the 1961 award should be accompanied by a statement of the merits of the case and by reprints of the publications supporting the candidacy. These are to be received by 1 June 1961 by the Chairman of the Committee, Dr. Robert W. Krauss, Department of Botany, University of Maryland, College Park.

PREVIOUS DARBAKER PRIZE RECIPIENTS

| | | |
|------|-------|-----------------------------|
| 1955 | | R. C. Starr |
| 1956 | | R. W. Krauss |
| 1957 | | None |
| 1958 | | R. A. Lewin and P. C. Silva |
| 1959 | | Jack Myers |
| 1960 | | J. R. Stein |

GRANT AND FELLOWSHIP DEADLINES

NATIONAL SCIENCE FOUNDATION: Washington 25, D.C.

1 March 1961—Specialized Biological Facilities—These are for unique one-of-a-kind or unusual facilities that are not the usual part of a university department. These grants may represent new ventures or more traditional ones. For some institutions, illuminated constant environment rooms may be a possibility. (N.B.: although it is too late for this year, this is one grant to be remembered.)

15 May 1961—Research Grant Request—No application form necessary. For information write NSF.

1 September 1961—Graduate Laboratory Development Program—This requires 50% participation by the University with funds from a non-federal source. The grant is to aid in modernizing, renovating, or expanding graduate-level basic research laboratories. Only departments with current programs are eligible. Write: Office of Institutional Progress.

September 1961—Postdoctoral Fellowship—For this a Ph.D., or equivalent, is required. Write: Fellowship Office, National Academy of Sciences—National Research Council, 2101 Constitution Ave. N.W., Washington 25, D.C.

NATIONAL INSTITUTES OF HEALTH: Bethesda 14, Maryland.

15 March 1961—Research Grant Request—Specific application form available.

15 July 1961—Research Grant Request—Specific application form available.

NSF INSTITUTES

It is impossible in most instances to be considered for an Institute this year since applications were due 15 February. However, the following listing serves as a guide of those of interest to Phycologists. General information concerning the Institute Program is available from the National Science Foundation, Washington 25, D.C. The brochure entitled "Summer Institutes for Science, Mathematics and Engineering Teachers" is published in late December. Information regarding a specific Institute should be referred to the host institution, not to NSF. DUKE UNIVERSITY at Duke University Marine Laboratory, Beaufort, North Carolina. *Marine Sciences*. Director Dr. H. J. Humm, Duke University. For information write Dr. F. J. Vernberg at Beaufort. College, junior-college teachers.

UNIVERSITY OF OREGON at Oregon Institute of Marine Science, Charleston, Oregon. *Biology of Marine Organisms*. Director Dr. R. W. Castenholz, Department of Biology, University of Oregon, Eugene. College, junior-college teachers.

BOWDIN COLLEGE at Brunswick, Maine. *Basic Biology Especially as Shown by Marine Organisms*. Director Prof. A. H. Gustafson, Department of Biology, Bowdin College. Senior high school teachers.

FISK UNIVERSITY at Nashville, Tennessee. *Studies in Lower Plant and Animal Groups* plus 6 other topics. Dr. Edward L. Maxwell, Department of Biology. Junior and senior high school teachers.

MICHIGAN STATE UNIVERSITY at W. K. Kellogg Gull Lake Biological Station, Hickory Corners, Michigan. *Biology*. Director Dr. T. Wayne Porter, Science and Mathematics Teaching Center, 513 Education Building, Michigan State University, East Lansing. Junior and senior high school teachers.

UNIVERSITY OF HAWAII at Honolulu. *Marine Botany* plus 3 other topics. Dr. A. J. Bernatowicz, General Science Department. Junior and senior high school teachers.

UNIVERSITY OF MINNESOTA at Lake Itasca Forestry and Biological Station. *Basic Instruction in the Field and Laboratory with Experience in Biological Research at a Summer Field Station*. Dr. David W. French, 135 Johnston Hall, University of Minnesota, Minneapolis 14. Senior high school teachers.

JESSUP FUND

ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA

The Jessup Fellowships are for students of systematics who wish to study with one of the scientific staff or use the Academy's collections. The fellowships, usually for a 2-3 month period, provide about \$50 a week which is sufficient to cover living expenses plus minimum travel expenses. Applications for a fellowship may be secured from the Academy, 19th and The Parkway, Philadelphia 3, Pennsylvania.

SUGGESTION

One member wrote on the questionnaire, ". . . would like a section of the Society to devote some time to formulating and publishing some 'Standard Methods' for the evaluation of chemicals inhibitory or toxic to algae and associated flora and fauna. The surge in swimming pools and ornamental ponds has left many people at the mercy of industrial concerns who market products without testing them for a particular use." Those interested members should indicate such on the questionnaire on page 15.

EDITORIAL No. 2

Your Editor hopes to publish the PHYCOLOGICAL NEWS BULLETIN quarterly. For 1961 this will probably not be practical for 2 reasons: financial and physical. It is true that money may not be limiting; however, the copy and time are. There is very little of the former available! The deadline for submission for the next number is 20 May. This issue, to be mailed in July, will contain information regarding the Annual Meeting at Purdue. The third issue of 1961 is tentatively scheduled for November and the deadline is 1 October. In 1962, an attempt will be made to get numbers published in February, May, August, and November. *The deadlines will be the 10th of the preceding month (January, April, July, October).*

Some have expressed interest in the publication of short research notes (not just range extensions). The best way of determining if this will be a success is to try it. Thus, short manuscripts (1000 to 2000 words) subject to acceptance by the editor are solicited. At present immediate publication (within 3-4 months) can be guaranteed.

As to finances, there is some \$600 available for publication of the BULLETIN (300+ members at \$2 each). A 20-page issue (350 copies) costs approximately \$250. An off-set publication may be less expensive, although for the numbers involved the difference may not be significant. If the PHYCOLOGICAL NEWS BULLETIN should prove to be a more useful publication, fulfilling a demonstrated need, a slight increase in dues (\$1-2) might be acceptable to the membership.

In order to overcome the immense geographical spread of the members of the Society, the Editor is asking the officers to serve as correspondents for their area. Thus, members in the East should write to L. Provasoli; those in the South-Southwest to J. Myers; those in the West to the Editor; and those in the middle to either R. C. Starr or W. A. Daily. Of course, those who wish may correspond directly with the Editor.

Thus, the availability of publishable material and funds are the important factors in the success of the PHYCOLOGICAL NEWS BULLETIN. Contributions are encouraged and will be gratefully received, as will any suggestions for improvement.

DIVIDENDS

The PHYCOLOGICAL SOCIETY OF AMERICA entered into an agreement with the Charles F. Kettering Foundation wherein the Foundation was to underwrite the cost of publication of the book, *The Culturing of Algae. A Symposium*, published in 1950. It was agreed at that time that after sales of the book had returned the Foundation's investment, profits from the sales were to be returned to the Society. In February of this year, the first dividend of \$42.58 was received and duly deposited. Future profits, which will also be returned to the Society, will serve as an added source of revenue. Similarly sponsored symposia might be given due consideration in the near future.

CHROMOSOMES

The fourth number of the "Index to Plant Chromosome Numbers" for 1959 is now available from the University of North Carolina Press, Chapel Hill. This listing includes some 19 species of algae. In addition to the chromosome numbers and accompanying bibliography, there is included an index to the previous numbers (numbers 1-4 plus supplement). The cost is \$1 per number and previous issues are available at cost from the University of North Carolina Press. Contributors include Paul C. Silva, Janet R. Stein, and Mrs. Max Hommersand (née Fran Chisaki) a phycologist's wife.

PHYCOLOGICAL SOCIETY OF AMERICA

Dr., Mr., Mrs., Miss.....
 (Circle one) (Please Print)

Mailing Address.....

Present Position.....
 Interests (underline): Freshwater Marine Both; Biochemistry; Culturing; Cytology;
 Ecology; Fisheries; Food; Genetics: Life-histories (includes Morphology and Reproduction);
 Limnology; Oceanography; Physiology; Taxonomy; Water Supplies; Others.....

Primary Research Interest (please limit).....

Exchange (underline): Cultures: Herbaria: Plankton Samples: Reprints

Would be willing to serve as a consulting specialist: Yes..... No.....

Taxonomic groups in which proficient.....

Mail by 31 April 1961 to:

W. A. Daily
 Box 155
 Butler University
 Indianapolis, Indiana

or

J. R. Stein
 Dept. of Biology and Botany
 Univ. of British Columbia
 Vancouver 8, Canada

MARINE BOTANY OPENING

The faculty appointment as Marine Botanist at the University of Texas, Institute of Marine Science at Port Aransas on the Gulf Coast, is available to a Phycologist with academic credentials. This position will include research as well as graduate level teaching. At present, a new building is under construction with 3 plant growth chambers of the walk-in type plus many other modern facilities. Persons interested should write immediately to Dr. HOWARD T. ODUM, Institute of Marine Science, University of Texas, Port Aransas.

PHYCOLOGICAL SOCIETY OF AMERICA

News for the PHYCOLOGICAL NEWS BULLETIN — Include: summer plans, research, grants, fellowships, new positions (available or wanted), travels, etc.

