British Phycological Society
NEWSLETTER

July / August 1974 Number 7.

Correspondents.

More correspondents in all parts of the world are needed. The Editor will be pleased to receive reports of conferences, symposia, field meetings etc.

The Editor also wishes to thank all those members who have contributed articles to the present and past issues of the Newsletter.

Next Issue.

It is hoped that the next Newsletter will be produced during December 1974, and distributed to European members during that month. Overseas distribution will take place during January 1975.

Contributions for Newsletter no. 8 should reach the Editor not later than November 15th 1974.

Backnumbers.

Backnumbers of Newsletters 2 - 5 are available upon request to the Editor. Copies of the December 1973 membership list are also available.

1974/75 Winter Meeting.

The meeting will be held at Goldsmiths College, London, January 2 - 4, 1975.

Changes of address.

Changes of address should be communicated to the Hon. Membership Secretary, Mr W.D.Richardson, Goldsmiths College, London S.E. 14, U.K.

Subscriptions:

Rates are as follows:
Full membership: £3 or $ 8.00
Student membership: £2 or $ 5.50
Part membership: £1 or $ 3.00
(not receiving the Journal).

Reduced charges are available for members who have retired from full time employment.
Hon. Treasurer, Dr A.Marker, F.B.A.
River Laboratory, East Stoke, Wareham, Dorset, BH20 6BB.

CONTENTS.

SUPPLEMENT

The British Phycological Society: Constitution and Rules.

TWENTY-SECOND ANNUAL WINTER MEETING

2 - 4 January 1974 at University College, London

Something of a unique situation immediately preceded this year's Winter Meeting. Both the fuel emergency and the restricted rail services brought forcibly to the attention of the Executive Members of Council that a last-minute cancellation was a possibility. Indeed, such an eventuality did befall other Societies meeting in London. It was, therefore, with some relief that I heard from Ian Morris, our Local Secretary, that as far as University College and the Hall of Residence were concerned the meeting could go ahead, on the understanding that all heating would be switched off at 4.15 p.m. each day. We hopefully assumed that the build-up of warmth during the day would last us through to the late afternoon! The main problem now was that members could be sure of their travel arrangements. It was again a relief to see the arrivals on the first day, and to know that a good attendance was assured. We were again delighted to welcome members from Europe, the U.S.A., Canada, and one from Tunisia, both to give papers and to join in the discussions. Twenty-eight papers were read at five sessions, viz., taxonomy, ecology and life histories, ecology and physiology of phytoplankton and benthic micro-algae; productivity studies and interactions; cytology, ultrastructure and cell morphology, and physiology and biochemistry. The five chairmen, (Harry Powell, Frank Round, Arthur Marker, Gordon Leedale and John Hayward), carried out successfully the difficult dual tasks of keeping people within their time limits and maintaining continuity. The variety of topics covered was interesting, particularly since this year no themes were suggested and members were free to submit titles and abstracts on any topic. Fortunately, for programme planning, they could be grouped under the headings given above.

The Winter Meeting is also a social occasion, and the Society Dinner held in the Old Refectory at University College was a most enjoyable occasion. Professor and Mrs Lewis were the principal guests, and the President expressed the thanks of the Society to Professor Lewis for the invitation to meet at University College, and for the facilities provided in the Botany Department. Our grateful thanks to the Local Secretary were also expressed and passed with acclamation by the members and their guests. I am also indebted to Ian Morris for all his help in planning and running the Meeting, and for so cheerfully coping with the many demands sent by post or by telephone.

The Annual General Meeting was held on the morning of January 4. Forty members signed the attendance form, and this meeting was a memorable one for two reasons. In addition to the reports of the Treasurer and Secretaries of Sub-Committee, Harry Powell [illegible] asking the members to endorse a statement [illegible] posed introduction of [illegible]

22nd ANNUAL WINTER MEETING Contd.

to start the meeting at 2.0 p.m. on Thursday 2 January, and to end it on Saturday 4 January at 12.30 p.m. The January 1st Bank Holiday does cause difficulties in forward planning, since there can be no certainty about accommodation with staff of Halls in Residence on holiday. To hold the meeting in the second week of January is impossible if we are to use University facilities and accommodation. The timing and place of our future Winter Meetings may well have to be looked at very carefully, and I would be glad to hear the views of members on this important aspect of our Society's functions.

A. D. BONEY.

THE SARGASSUM SAGA CONTINUED.

As has already been reported in this Newsletter and elsewhere, the advent of the Pacific brown alga Sargassum muticum in the Solent region created considerable interest, not to say alarm, among British marine biologists. Attempts were made last summer to eradicate this invader using the crude, but selective, method of handpicking by parties of environmentally-concerned volunteers from the general public. For obvious reasons, activities were restricted during the winter. The initial populations found at Bembridge, on the Isle of Wight, and within Portsmouth Harbour, have been kept in control by repeated cropping, but during last winter, Sargassum spread from Bembridge to Shanklin, St.Helens and Ryde (some 10 miles of shoreline along the Isle of Wight. Apart from the plants growing on floating landing-stages within Portsmouth harbour, the only sightings on the mainland have been scattered drift plants cast up on a few local beaches.

Grants supporting research and eradication-campaigns by reimbursing the travelling expenses of our volunteers have been received from NERC Nature Conservancy, M.A.F.F., Hampshire C.C., West Sussex C.C., Southern Rive Authority, Hampshire and Isle of Wight Naturalist Trust and Angling Foundation; . We still need volunteers in clearing S.muticum and any assistance from members of the B.P.S. will be appreciated.

A cine-film (16mm with magnetic sound-track, running time 8 mins) has been made about S.muticum, which was shown at the B.P.S. at the A.G.M. It is possible for interested institutions to borrow this film from us.

M.F.FARNHAM

PHYCOLOGICAL ACTIVITIES AT PORTSMOUTH POLYTECHNIC

Marine Laboratory, Ferry Road, Hayling Island, Hants. PO11 ODG

The laboratory accommodates the marine biologists from the Department and is equipped with running sea-water, growth rooms etc. There is one teaching laboratory for some 20 students. We would be pleased to receive visiting investigators and field-course parties. In particular, we would welcome participants in the International Seaweed Symposium before or after the meeting in Bangor.

The main lines of algal research by the staff are as follows:
M.F.Farnham (Lecturer)

Studies of algae introduced into the Solent region - Grateloupia filicina var. luxurians, G.dorycnora and Sargassum muticum.

The marine algae of the Summer Isles (W.Scotland)

Dr. R.L. Fletcher, (Senior Research Assistant, Ministry of Defence).
Investigations into ship-fouling algae with emphasis on the fine structural and biochemical aspects of reproductive spores and initial settlement stages.

The life-histories of our bare algae.

PHYCOLOGICAL ACTIVITIES AT PORTSMOUTH POLYTECHNIC CONTD.

Mr N.Jephson (NERC Research Student).
A survey of the marine algae in the Solent region , and in particular, S.muticum and sublittoral algae.

Susan Lewey (Research Assistant)

The autecology of S.muticum in Britain, with special reference to its distribution and attempted eradication

MARINE BOTANY AT PORTSMOUTH POLYTECHNIC

Dept. of Biological Sciences - King Henry I St., Portsmouth
Marine Microbiology Section

Dr. E.B. Gareth Jones (Reader)
The taxonomy, ecology and physiology of marine fungi.
Fungi growing on polyurethane plates submerged in the sea.

Dr. D.J.Alderman (Research Fellow)
Diseases of oysters and other marine invertebrates.

G. Bremer (Technician)
An investigation of the physiology and nutrition of some biflagellate phycomycetes.

A. Chamberlain (SRC Research Associate)
Histochemistry and ultrastructure of marine phycomycetes.

Dr. R.A.Eaton (Lecturer)
The biodeterioration of wood in water cooling towers.

K. Fazzani (Research Assistant)
Spore settlement in aquatic fungi.

S.E.J. Furtado (Research Assistant)
The interactions of organisms in the decay of timber in aquatic habitats.

Judith Haythorn (NERC Research Student)
The utilization of waste products by marine fungi.

D.F.Kane (Research Assistant)
The effect of sewage effluent on the growth of micro-organisms in the marine environment.

School of Pharmacy - King Henry I St., Portsmouth

Dr. G. Blunden (Lecturer)
Uses and mode of action of seaweed extracts in agriculture and horticulture.

R.T.Jones (Lecturer)
The constitution and mode of action of the toxic compounds of Ascophyllum nodosum.

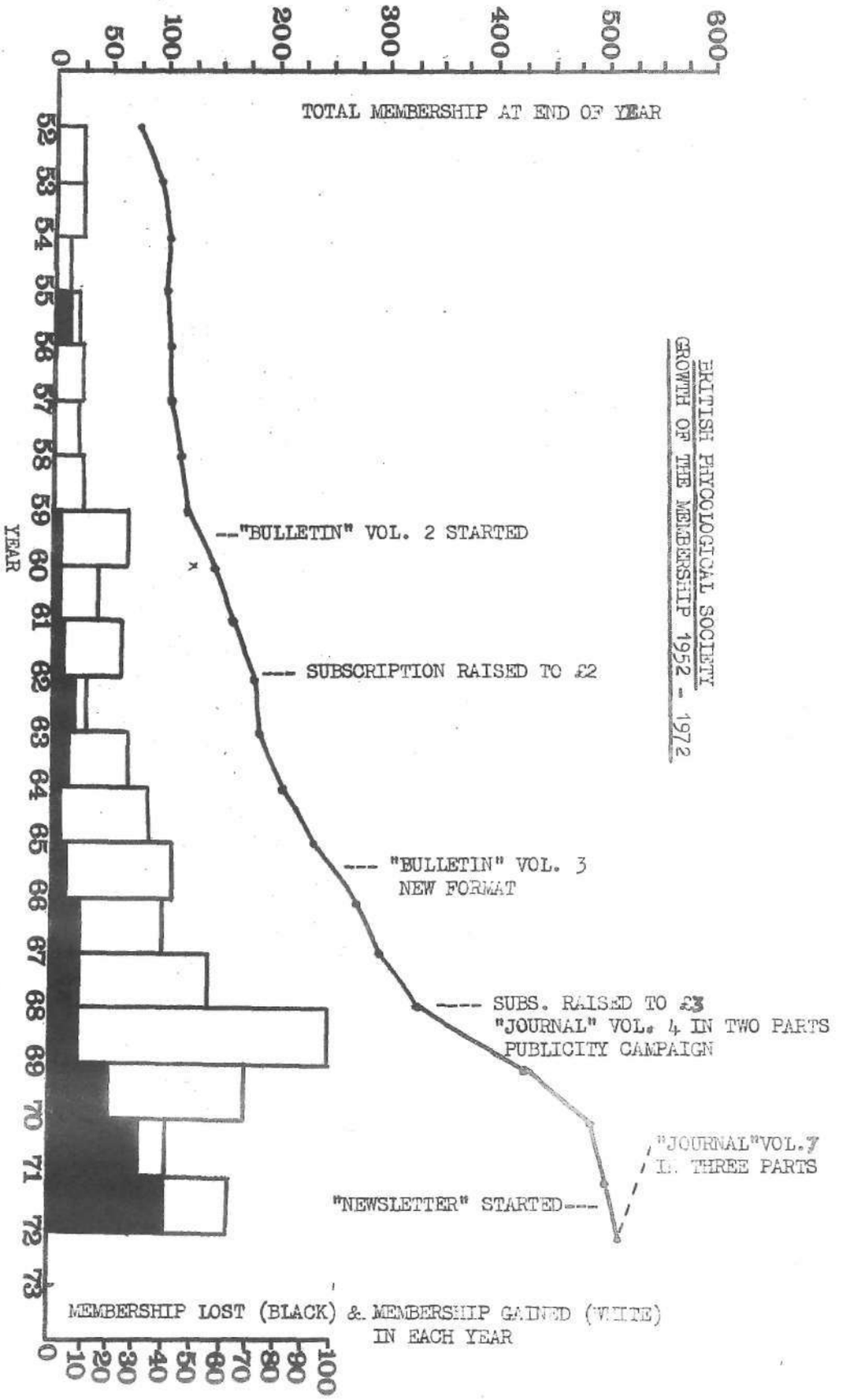
D.J. Rogers (Lecturer)
Investigations of haemagglutinins in seaweeds, with special reference to Ptilota plumosa.

P.B. Wildgoose (Research Assistant)
Growth regulatory compounds in seaweeds.

W. F. FARNHAM.

ILLUSTRATION ON PAGE 5:

Sargassum muticum (Yendo) Fensholt, drawn from material collected at Bembridge, Isle of Wight.


BRITISH PSYCOLOGICAL SOCIETY
GROWTH OF THE MEMBERSHIP 1952 - 1972
0 50 100 200 300 400 500 600
TOTAL MEMBERSHIP AT END OF YEAR
YEAR
52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73
--"BULLETIN" VOL. 2 STARTED
--- SUBSCRIPTION RAISED TO £2
--- "BULLETIN" VOL. 3
NEW FORMAT
---- SUBS. RAISED TO £3
"JOURNAL" VOL. 4 IN TWO PARTS
PUBLICITY CAMPAIGN
"JOURNAL"VOL.7
IN THREE PARTS
"NEWSLETTER" STARTED---
MEMBERSHIP LOST (BLACK) & MEMBERSHIP GAINED (WHITE)
IN EACH YEAR
0 10 20 30 40 50 60 70 80 90 100

THE MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM

The Botanical Section at the Plymouth Laboratory of the Marine Biological Association of the United Kingdom, is a small group of scientists closely interconnected in their work with the rest of the staff at the Laboratory.

Dr Mary Parke, F.R.S., was the first full-time botanist appointed to the staff in 1941 and the section has been developed under her guidance. Although now retired from the staff Dr Parke is still an active worker at the Laboratory and is currently preparing, with Prof. P.S. Dixon and with the assistance of Dr E.M.Burrows, Dr J.D. Dodge, Dr J.C. Green, Mrs Linda Irvine, Mr M.T. Powell and Dr G. Russell, a further revision of the Checklist of British Marine Algae. Dr Parke would appreciate any new records for inclusion in this list.

Dr Gerald T. Boalch was appointed to the staff in 1961 after working at the Laboratory for three years as International Paints Fellow. Although at this time he was culturing small brown and green algae his main work is now on phytoplankton. Working on a joint programme with chemists, Dr Boalch is investigating primary production and the ecology of phytoplankton in the western English Channel. He is also studying the taxonomy and life history of marine diatoms and dinoflagellates and maintains a number of species in laboratory culture. In his work Dr Boalch is assisted by Mr Derek Harbour. Mr Harbour is also studying the benthic marine diatoms of south western England and in this work is being helped by Mr N.I.Hendey. Dr Parke, Dr Boalch and Mr Harbour are preparing an account of their studies on the genus Pterosperma with special reference to the species found in the Western Approaches. Although mainly concerned with the larger phytoplankton Dr Boalch maintains an interest in the ecology of British seaweeds and is involved, with the zoological staff, in some long term studies of shores in the south west. He is also responsible for the upkeep of the Herbarium at Plymouth Laboratory and in this is assisted by Mrs Joan Woollard.

During her career, first at Port Erin and subsequently at Plymouth, Dr Parke built up her internationally famous collection of algae in culture (principally smaller flagellates of the classes Chrysophyceae, Haptophyceae, Cryptophyceae, Chlorophyceae, Prasinophyceae, and Dinophyceae). Since her retirement the Plymouth culture collection has been in the care of Dr John Green and it continues to provide cultures for workers throughout the world who are engaged in the rearing of marine animals (particularly shellfish) or in various aspects of nanoflagellate research. Dr Green's own research interests are concerned with the life-histories and fine-structure of the smaller algae and are centred at the present on members of the Haptophyceae and Chlorophyceae. Particular attention is being given to those members of the former class which have a dominant benthic non motile phase (e.g. Chrysotila, Ruttnera etc.) and whose zoids hitherto have been unknown or known only from (sometimes incomplete) optical microscope investigations. Dr Green is assisted both in his research and in the maintenance of the culture collection by Mrs Joan Woollard and Mrs Anne Shears.

Dr Patrick Holligan was appointed to the staff in October 1973 as a plant biochemist. He is primarily interested in the synthesis and metabolism of storage carbohydrates and his future research will be mainly related to studies of the photosynthetic products of nannoplankton and their utilisation, under field and laboratory conditions, by grazing zooplankton. Dr Holligan has also worked on the physiology of symbiotic organisms and at present is investigation the nutrition of Convoluta roscoffensis.

G. Boalch, J.Green. and P.Holligan.

A NOTE ON THE COLLECTION AND PRESERVATION OF CHAROPHYTA

Charophytes a neglected group of algae found in many aquatic habitats, are often overlooked both by Phycologists and the collectors of flowering plants alike.

They are found in unpolluted water at varying depths, preferring an undisturbed muddy bottom and mainly base-rich waters, although some thrive in brackish conditions of up to twothirds the salinity of sea-water. Habitats include semi-permanent 'puddles', ponds, lakes, slow flowing streams, bog pools and salterns by the sea.

When collecting, the following points should be observed:-

1) Collect by hand if possible as the brittle lime-encrusted species are easily damaged. It may be necessary to use a boat and drag-line on large areas of water.

2) Collect whole fruiting specimens (approx. May-September) making sure, where possible, that both sexes of dioecious species are represented.

3) Keep fresh for identification by storing in polythene bags of water in a cool, shady place.

4) Specimens may be cleaned by gentle agitation in a dish of water, removing debris with forceps or water-jets from a syringe.

5) For long-term storage pickle in 2% formalin and keep in a well-stoppered bottle away from heat and bright light. Do not allow to dry out, a little glycerin may be added which will prevent this.

Dried and pressed herbarium specimens are not recommended for identification purposes.

Mrs. J.A. Moore of the Botany Dept., British Museum (Natural History), Cromwell Road, London. SW7 5BD, will be pleased to receive charophyte material from the British Isles. Particularly requested are records and material of Lamprothamnion papulosum (Wall.) J.Gr.

When posting material for determination please place specimens in polythene bags, pour off excess liquid and seal. Wrap the bags in wads of newspaper for protection and also to absorb leaking fluid. Enclose full collection details. Send in a strong envelope or 'jiffy-bag'. Envelopes containing fresh material should be marked 'Live plant - Keep cool' If a postal delay is anticipated, specimens should be sent in a completely full and well-sealed tube of 2% formalin.

J. A. MOORE.

LIVERPOOL UNIVERSITY HERBARIUM

The Liverpool University British herbarium is on permanent loan to Liverpool City Museum. (The foreign material is at Ness). The collection, which includes all the algae, was acquired earlier this year and incorporation into the Museum collections was completed just before Easter of this year. One or two groups appear to be missing - notably Fucus; however, thus far about 4,000 sheets have been numbered. Most of the material derives from Anglesey and the Isle of Man. All the material is accessible and readily available for study.

ALGAL RESEARCH ON ALDABRA ATOLL

Although this remote island in the Indian Ocean is better known for its giant tortoises, growths of terrestrial algae there are particularly abundant and of considerable interest.

A five year project on the blue-greens, supported by the Royal Society and financed by N.E.R.C., is at present at the halfway stage. Brian Whitton and Alan Donaldson have already visited the island, while Malcolm Potts will be commencing a ten month stay in October 1974. The terrestrial and freshwater algae of coral atolls have received almost no study in the past, so other workers might be interested in receiving samples, either of field material or (mostly unialgal) cultures already isolated. Many of the blue-green algae from Aldabra seem very robust, being particularly tolerant of frequent drying and re-wetting. Many of them have grown out on agar rapidly after five years storage in a dried state. Some would certainly prove excellent research organisms.

Anyone interested in samples or cultures should write to :-
Dr. B.A. Whitton, Department of Botany, Durham University.

B. WHITTON.

MEETING OF NATIONAL BIOLOGICAL SOCIETIES

Juniper Hall Field Centre, 10th November 1973.

This annual meeting which aims to help Societies with recording schemes and provides the Biological Records Centre with data for planning future developments was attended this year by Dr Franklyn Perring, John Heath and Diana Scott from BRC and representatives of 36 Biological Societies and other interested organisations.

The following selected topics may be of interest to Society members.

Codes of Conduct

Dr. Southward (MBA Plymouth) reported that a draft of a marine Code of Conduct had now been prepared for circulation. This will probably be discussed by our Conservation Committee. The assistance of the World Wildlife Fund is likely to be sought for its publication in due course.

A draft geological Code and the final draft of the Wildlife Code have also been produced.

Endangered Species; World Wildlife Fund/Petfood Ltd.

Funds are still available to finance research on and protection of endangered British plants and animals (see Newsletter No.5 p.6). Dr. D.E.G.Irvine represents the BPS on the Working Group which advises the WWF Committee on the allocation of the Fund. Projects are now urgently needed since it is imperative, in the interest of possible future schemes, that all the Funds are utilised.

Application forms may be obtained from J. Blackwood, Nature Conservancy Council, 19 Belgrave Square,. London. SW1.

Co-ordination of information at a local level.

Dr Frank Perring reported on the recent Conference on Centres for Environmental Records at Leicestershire University (Report available 45p, post free from the Department of Adult Education, Leicester Univ,) which was concerned with the establishment of Recording Centres additional to BRC and the co-ordination of recording at a County level in local Museums.

From discussion around this topic it was generally agreed that there now existed a real need by a variety of conservation minded bodies and individuals for a guide to the expert help in various groups that is available in difference regions of the British Isles and Dr.Perring

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therefore undertook to investigate the production of a County or Area Guide with names and addresses of experts. It was agreed that the 'guide' should have only a limited distribution to organisations such as the NCC, Conservation Trusts, Museums and Local Authorities, thus allaying the fears of some of those present that they might be inundated with enquiries for which an adequate alternative already existed.

As far as the BPS is concerned, it is hoped to use some of the data from the list of exports assembled for the Marine Mapping Scheme; any individual whose name appears will be asked for their approval that their name should be included in the final version. Suggestions as to other ways the Society can help in this scheme will be gratefully received.

Future of Biological Recording in Europe

Dr Perring outlined his hopes for the future development of Biological Recording in Europe. His comments are reported here since they are directly relevant to phycologists now the BPS has an organised Mapping Scheme.

There are three major groups concerned with mapping the Flora and Fauna of Europe: Atlas Flora Europaea has already produced two volumes; European Invertebrate Survey was very well organised with an active Secretariat and there was a European Ornithological Atlas Committee. A group based on Copenhagen is mapping 100 macrofungi using the 100 km U.T.M. grid and might form the nucleus of a macrofungal scheme. He saw advantages in limiting the number of large organisations and hoped steps would be taken to start schemes for Bryophytes and Lichens, Algae and Vertebrates (excluding birds). He suggested that as far as possible 'Europe' ought to be the same area for all the groups, although there were bound to be exceptions. A strong plea was made in discussion for including Cyprus and the Aegean Islands which are omitted in Flora Europaea, for example. Whatever the exact area, however, he hoped all were agreed on the 50 km U.T.M. grid squares. It would be even more satisfactory if this could be adopted for the seas around us as well, providing continuity between land and sea for groups like Molluscs and Isopods, and between freshwater and saltwater for fish and algae.

To achieve our aims we need a Biological Records Centre in every country, the Secretariat of each being responsible for national organisation, sending data to the appropriate European Centre, and for running one major European scheme themselves. The Council of Europe would probably provide money to hold meetings to talk about work to be done, but funds would be needed from elsewhere to run the Secretariats. The proposal to set up a European Fundamental Science Foundation is to be welcomed: the British Submission included Flora Europaea amongst the examples of projects which would seem suitable for funding from such a source.

Dr. Perring felt that until funds became available we must set out hopefully and suggested four priorities.

a) Setting up Centres: especially those covering all groups, following the pattern of BRC, so that growing demands for information from planners can be met by seeking it from one source only. The importance of local records centres in this respect was stressed.

b) Production of manuals: mapping the flora of the British Isles could not have taken place without an up-to-date Flora; mapping the flora of Europe has depended upon the existence of Flora Europaea; the same will be true of other groups.

c) Training of volunteers: to collect the necessary data we require more taxonomists than exist in Europe or we can ever afford to pay. Our helpers will have to be voluntary - and come from the millions of people all over north and west Europe who are soon to face a four-day week and retirement at sixty.

MEETING OF NATIONAL BIOLOGICAL SOCIETIES CONTD.

d) Production: Publication of Provisional Atlases, however incomplete can be a great stimulus to further work, especially for a little known group. Nevertheless, our aim must eventually be to have definitive works, at least for the popular groups, which will summarise the position in Europe over a relatively short period - perhaps five years in the case of the ornithology. Surveys repeated and published at intervals would provide an objective assessment of what is happening to our species, and indicate where special conservation problems lie.

The meeting also included a description of present and future data banking at BRC by Diana Scott, a situation report on biological recording in Europe by John Heath, now Secretary General of the European Invertebrate Survey, and a report on current developments in biological recording at NERC.

D. HIBBERD
L.M.IRVINE.

ALGAE AT SAN FRANCISCO

The 140th meeting of the American Association for the Advancement of Science (AAAS - which publishes the journal Science) was held in February 1974 at San Francisco.

Although this large gathering covered topics from Politcal Science to Water Pollution, in its many symposia there were current research topics of interest to phycologists. I have divided these into two aspects: kelp and lake phytoplankton.

The Pacific Coast kelp beds, apart from supporting a significant harvesting industry, are sub-ecosystems of some interest especially with regard to their high productivity and interaction with the once near-extinct sea otter. A.W. Ebleling (University of California at Santa Barbara) reported on his extensive undersea measurements of fish and snails in the Santa Barbara kelp beds. He distinguished several groups of fish occupying different habitats in the kelp during the day (canopy, rocky/red algal bottom, rock bottom and fringe areas) but found little activity at night. This is a contrast from tropical reef algal/fish communities. In addition herbivorous fish grazing on algae were less common than in tropical environments, even during the day. He concluded that this lack of algal grazing by fish was simply due to the much lower light levels at Santa Barbara where winter gloom, spring and autumn phytoplankton blooms, summer coastal fog and kelp canopy self-shading prevented the delicate algal nibbling characteristic of fish in crystal-clear tropical waters. Almost all the energy flow in the system, although produced by kelp photosynthesis, was not used directly. Rather it was exported as drift algae to many drift feeders in nearby rocks, benthos and sea shore. Examples of drift kelp feeders were sea urchins, abalones, and many filter feeders.

J.S.Pearse and V.A.Gerard (University of California at Santa Cruz) discussed the interaction of the increasing populations of sea otters and kelp beds. Sea otters, which were once hunted to near-extinction, are now expanding their range under strict protection. They are very fond of sea urchins, which are the major young kelp grazers. At Hopkins Marine Station large kelp beds have become established in the decade since sea otters returned. Surveys of nearby areas suitable for kelp, or with kelp already present, were studied to predict the effect of sea otter arrival. In some areas kelp is well established but rinced with sea urchins which apparently do not enter the kelp bed. The reasons for this are unknown, but the anticipated arrival of sea otters will probably increase the extent of existing kelp beds

ALGAE AT SAN FRANCISCO CONTD.

In a seminar on 'Lakes in Transition' Lake Powell in Arizona (formed by the Hoover Dam) and Lake Tahoe in California-Nevada were discussed. Phycologists are not yet well represented in the National Science Foundations 'Research Applied to National Needs' programme for Lake Powell, but did record rather high primary production levels.

Values as high as 500 mg C m^{-2} day^{-1} were noted for this 10-year-old lake in a canyon. Lake Tahoe, via C.R.Goldman's team (University of California at Davis) fared rather better phycologically. They demonstrated that measured increases in primary production of as much as 50% may have occurred in this ultra-oligotrophic lake during the last decade. Extensive study attributes this to old sewage, old and current erosion from developments and failure of the scientist to convey news of harmful effects of certain types of development to the planning authorities prior to the movement of the bulldozers.

Of special interest were the scanning electron micrographs of H.Paerl which demonstrated the role of bacteria and fungi in first stripping and then releasing organic nutrients as they descended the long 400 m water column. These 'decomposers' live on the surface of the detritus, mainly diatoms, which provide an essential substrate as well as a food source (see also Science 180, 496-8, 1973). The role of stream periphyton in removing dissolved organic matter was cited as a possible crucial component in maintaining the lake's oligotrophic status. Developments tend to produce sufficient silt to bury the periphyton, eliminating the filter effect and thus further accelerating cultural eutrophication.

ALEXANDER J. HORNE

UNIVERSITY OF CALIFORNIA AT BERKELEY.

POST SYMPOSIUM EXCURSION

PORTSMOUTH, 1 - 7th SEPTEMBER 1974.

We should like to extend a cordial invitation to participants in the International Seaweed Symposium to visit Portsmouth during the first week in September. This will allow attendance on the official excursions and will then coincide with the time of spring tides.

The facilities of the Department of Biological Sciences, Portsmouth Polytechnic and of the Marine Laboratory (based nearby on Hayling Island) will be available. Qualified and equipped divers will be able to dive and some dredging may be undertaken.

The algal flora of the Solent region and the Isle of Wight is rich in its variety of species for which a range of habitats is available - rocky-shores, lagoons, sheltered harbours. One of the interesting features of the Solent is the occurrence of introduced algae e.g. Grateloupia filicina var. luxurians, G.doryphora and the dreaded Sargassum muticum. Also to be found: Sporochnus pedunculates, Stilophora rhizodes; Callophyllis sp., Chondria coeralescens, Gracilaria bursa-pastoris, Halarachnion ligulatam, Meredithia microphylla, Scinaia forcellata.

Portsmouth is easily reached by fast and frequent trains from London. For general travel information, please consult the travel agents: Magnet World Travel.

We would appreciate a prompt reply by interested participants so that accommodation can be booked in local hotels as early September is still peak holiday-time. We hope to be able to accommodate up to 30 participants so according to response, numbers may have to be limited. The probable cost of this excursion will be approx. £40.
Please reply to W.F.Farnham, Marine Laboratory, Ferry Road, Hayling Island, Hants PO11 0DG, Eng., as soon as possible.

THE IDENTIFICATION OF BRITISH SEAWEEDS.

Newcomers to the study of seaweeds often find that the identification of their collections is a discouraging, even an insurmountable obstacle. Newton's Handbook of the British Seaweeds (1931) is full of pitfalls for those not familiar with the groups.

As this state of affairs is likely to continue at least until all the volumes of the forthcoming flora of the British seaweeds are published, I have compiled a list of references which contain keys or at least descriptions of species which supercede the account in Newton (1931). This list was intended to help those participating in the Society's scheme for mapping the distribution of seaweeds, but it is reprinted below in the hope that it may be useful to a wider audience.

A work is listed only if it includes all or at least most of the British representatives of that genus. I would be grateful for any suggested amendments or additions to the list.

Keys to the genera of almost all the British seaweeds - Jones (1962)

Chlorophyceae.

Most tubular and membranous greens - Bliding (1963 & 1968)

Blidingia	- Bliding (1963) ✓	Kornmannia	- Bliding (1968) ✓
Capsosiphon	- " " ✓	Monostroma	- " " ✓
Cladophora	- Hoek (1963) Sonderstrom (1963) ✓	Percursaria	- " " ✓
Codium	Silva (1955) ✓	Ulva	- " " ✓
Enteromorpha	- Bliding (1963) ✓	Ulvaria	- " " ✓

Phaeophyceae

Most brown seaweeds	- Hamel (1931-39)	Giffordia	- Cardinal (1964) Kuckuck (1961)
Most brown filaments	- Cardinal (1964)		
Cystoseira	- Roberts (1967)	Hermonema	- Cardinal (1964)
Ectocarpus	- Russell (1966)	Kuckukia	- " "
Feldmannia	- Cardinal (1964)	Sphacelaria	- Maas-Wiekirk (1965) Irvine (1956)
Fucus distichus sub-species	- Powell (1957)		

Rhodophyceae

All calcareous crusts	- Adey & Adey (1973)	Lithothamnium	- Adey & Adey (1973)
All non-calcareous "	- Denizot (1968)	Lithophyllum	- Adey & Adey (1973)
Antithamnion	- Hardy-Halos (1968)	Melobesia	- Denizot (1968)
Ceramium	- Dixon (1960) (spiny species only)	Mesophyllum	- Adey & Adey (1973)
Corallina.	- Hamel & Lemoine (1953)	Petroglossum	- Schotter(1968)
Epilithon	- Denizot (1968)	Phyllophora	- Newroth (1971)
Gelidium	- Feldman & Hamel (1936)	Pterocladia	- Feldman & Hamel (1936)
Gymnogongrus	- Schotter (1968)	Porphyra	- Conway (1964)
		Stenogramme	- Schotter (1968)

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TREVOR NORTON.

PHYCOLOGICAL PUBLICATIONS.

In case you missed any of the new books which poured from the presses in 1973 here is a list of those known to us:-

THE BIOLOGY OF BLUE GREEN ALGAE - Edited by N.G.Carr and B.A.Whitton. Blackwells £13.50

THE BIOLOGY OF THE RHODOPHYTA - P.S.Dixon. Oliver & Boyd £5.00

THE FINE STRUCTURE OF ALGAL CELLS - J D.Dodge. Academic Press £6.00

THE BLUE GREEN ALGAE - G.E.Fogg, W.D.P.Stewart, P.Fay & A.E.Walsby. Academic Press £8.50

CHONDRUS CRISPUS - Ed.: M.J.Harvey and J. McLachlan. Institute of Science, Halifax, Nova Scotia $6 (paper) $9 (hardback)

A HANDBOOK OF PHYCOLOGICAL METHODS - Edited by J. Stein for the Phycological Society of America. Cambridge Univ. Press £8.00

New Editions

THE ALGAE - V.J.Chapman and D.J.Chapman. 2nd Edition. Macmillan £6.95.

THE BIOLOGY OF THE ALGAE - F.E.Round. 2nd Edition. E. Arnold £2.95 (paper) £6. (hardback)

Also of interest to many phycologists:

THE BIOLOGY OF THE PROTOZOA - M. Sleigh. E. Arnold. £3.75 (paper).

J.D. DODGE

PHYCOLOGIA

Journal of the International Phycological Society

Starting in 1974 the Journal will be published for the Society by Blackwells of Oxford. It will be issued in four parts per annum. The Editor is Dr.K. Cole, University of British Columbia.

Membership of the Society is open to anyone interested in the algae and costs $12 per annum. Enquiries about membership should be made to: Dr.J.McLachlan, Atlantic Regional Laboratory, 1411 Oxford Street, Halifax, Nova Scotia, Canada.

J.D.DODGE

OTHER LITERATURE OF INTEREST TO PHYCOLOGISTS.

ALGAE ABSTRACTS. A guide to the Literature.
Vol.1. to 1969 vii + 308pp demy 4 to 1973 £16. 25.

ALGAE ABSTRACTS A guide to the Literature.
Vol.2. 1970 - 1972 vii + 693pp demy 4 to 1973. £16.25.

Obtainable from H.K.Lewis & Co. Ltd. P.O.Box 66,
136, Gower Street, London. WC1E 6BS

EXHIBITIONS

Coventry Cathedral - Coventry Cathedral Authorities will be holding an exhibition on the Sea during October of this year. The B.P.S. will be contributing an exhibition on Seaweed, being a part of a general section on 'What the oceans contain'.

County Borough of Luton - The Society has been asked to contribute to an exhibition entitled 'Under the Sea'. This will be held at Luton Central Library during June and at Luton Branch Libraries during July and August.

CULLINANE J.P. 1973 PHYCOLOGY OF THE SOUTH COAST OF IRELAND.
pp (5) + 99 CORK UNIVERSITY PRESS, CORK £1. 50

Cullinane's compendium 'phycology of the south coast of Ireland' is a booklet for browsing over before spending a day on the shore somewhere in Southern Ireland. It gives the phycologist a good idea of what to look for in Limerick, Kerry, Cork and areas peripheral.

For those not about to brave the elements, the historical reviews collate considerable amounts of diffuse information and thus provide background data for workers involved with historical research. The phytogeographer will also benefit in being able to derive distributional data from the detailed county species lists. Indeed, Cullinane's booklet usefully overlaps and complements the 'Distribution of benthic marine Algae. A bibliography for the British Isles'. The two works together would form a basis for future projects of the 'county flora' type for Southern Ireland. Detailed county works in marine phycology although sorely needed, are unfortunately still non-existant for the British Isles.

The wealth of data presented in this small book (bear in mind that printing is restricted to 200 copies) suggest good value for £1.50.

Copies may be obtained from the Secretary, Cork University Press, University College, Cork. Ireland.

IAN TITTLEY.

JEFFREY, C. BIOLOGICAL NOMENCLATURE pp ix + 69.
EDWARD ARNOLD, LONDON. £1.00 (soft back)

For those who, like myself, have frequently looked upon the rather imposing tome on the 'Internation Code of Botanical Nomenclature', but who have less frequently opened it and perhaps less frequently still have sat down and digested its contents in detail .... do read on.

Jeffrey's little book translates the legalistic jargon of the Code into simple English. It tells us why we need names, classification and therefore, why we need codes. Jeffrey discusses the differencies between the Botanical, Zoological and Bacteriological codes. The fundamental and more advanced principles of nomenclature are lucidly explained. These are followed by a consideration of name changes and synonomy. The rules governing authorities and their citation are also dealt with.

This easily comprehended book should encourage phycologists to be less reticent on matters of classification, and indeed, encourage them to open, read, understand and use the Code as a matter of course.

No excuses can be offered about not having time to read this book, for only 60 pages are involved, likewise with expense, since the soft-back edition is very reasonably priced at £1.00.

IAN TITTLEY.

Newsletter No. 7 issued by the British Phycological Society, c/o Department of Botany, British Museum (Natural History), Cromwell Road, London, S.W.7 5BD.
Edited by Ian Tittley and duplicated at the British Museum (Natural History).

NEW MEMBERS APRIL 1974.

Amspoker, Mr. Michael C. BS, MS	Department of Botany, Oregon State University, Corvallis Oregon 97331
Bell, Derek B.Sc.	Dept. of Botany, The Hartley Botanical Laboratories, Univ. of Liverpool. P.O.Box 147 L'pool L69
Birch, Paul B.Sc., Ph.D.,	22 Atkinson Road, London E16 3LR
Bohlke, Kordula	Dept. of Botany, Univ. of Liverpool Brownlow St.P.O.Box 147 L'pool 169
Cheney Donald, P.	Univ. of South Florida, Dept of Biology, Tampa, Florida 33620 USA.
Colijn, Mr. F.	Lab. of Plant Systematics, Biological Centre, Haren, The Netherlands
Coppejans, Mr. Eric	Leerstoel voor Morfologie, Systematik en Ekologia der Planten (Lab Algologie) Ledeganckstraat35 3-9000 Ghent, Belgium.
Donaldson, A.	Dept. of Botany, Univ. of Durham, Science Laboratories, South Road, Durham.
Fross, Jack,	429 W.Park Avenue Apt.23, Tallahassee Florida 32301. USA.
Hardy, Frederick C.	11 Windsor Avenue, South Gosforth Newcastle-upon-Tyne NE3 1PS
Harper, Dr.Margaret Anne	169 Pembroke Road, Northland, Wellington 5. New Zealand.
Hooligan, P.M., M.A., Ph.D.,	The Laboratory, Citadel Hill, Plymouth, PL1 2PB.
Jassby, Alan D. Dr.,	Fisheries Research Board of Canada Marine Ecology Laboratory, Bedford Institute, Dartmouth, N.S B2Y 4A2 Canada.
Knox, Miss Anne D.	College of Arts & Sciences, Virginia Polytechnic Inst. & State Univ., Blacksburg, Virginia 24061 USA.
Lane, Miss Janet K.,	School of Plant Biology, Univ. College of North Wales.Bangor.Caerns.
Meeks, John C., BA., M.Sc.,Ph.D.,	Dept. of Biological Sciences, Univ. of Dundee, Dundee DD1 4HN Scotland
Metwalli, Dr.A.M.,	Kuwait Univ., Faculty of Science, Botany Dept. State of Kuwait
Mohsen, Dr.A.F.	Alexandria Univ., Faculty of Science Dept. of Botany, Moharrem Bay. Alexandria, Egypt.
Pollingher, Mrs. Utsa M.Sc.,	Israel Oceanographic & Limnoligical Research Ltd., Haifa Laboratories P.O.Box 1723, Haifa. Israel.
Picken, Mr.Michael J., B.Sc.,	Dunstaffnage Marine Research Lab., P.O.Box 3, Oban Argyll. Scotland.
Rice, Clifford P.	Syracuse Univ. Research Corpn., Merrill Lane, University Heights, Syracuse, New York 13210 USA.
Schonbeck, Mark	Dept. of Botany, Univ. of Glasgow Glasgow. G12 8QQ
Sharples, E. Joanna Dr.,	Dept. of Botany, P.O.Box 147, Liverpool L69 3BX.
Sanada Faisal A., B.Sc.,M.Sc.,	Dept. of Biological Sciences, Univ. of Dundee, Dundee DD1 4HN Scotland.
Somers, Mr. Daniel	Leerstoel voor Morfologie, Systematick en Ekologie der Planten (Lab Algologia) Ledeganckstraat 35 3-9000 Ghent. Belgium.
Tai, Miss Y.C., B.S.c., M.Sc., (Hong Kong)	Dept., of Botany, University College Cardiff. Wales.

NEW MEMBERS Contd

Takahashi, Mr. Eiji	Dept. of Biology, Faculty of Science, Kobe University, Nada, Kobe 657. Japan.
Tropper Mrs. Caroline B. M.A.B.S.	Biology Dept., 3, Cummington St. Boston Univ., Boston. Mass. 02215 USA.
Thompson, Roy S., B.Sc.,	Dept. of Botony, Univ. of Liverpool, P.O.Box 147, Liverpool L69 3BX.
Tundisi, Jose G., M.Sc., Ph.D. Professor.	Dpt. of Biological Sciences, Universida Der Federal Des Carlos, S-Carlos. Brazil.
Wanders, Dr. J.B.W.,	Lab. of Plant Systematics, Biological Centre, Haren, (Gr). The Netherlands.
West, Larry K.	Dept. of Botany, University of Tennessee, Knoxville, Tennessee 37916. USA.

ADDENDUM

Hughes, D.I.	5, Doctor Street, Llanllechid, Bangor. Carns.
Terumitsu Hori, Dr.,	Dept. of Biology, Toho University, Narashino, Chiba, 275, Japan.

CHANGES OF ADDRESS. APRIL 1974

Brickley, M.J.	Dept. of Botany, University of Rhode Is. Kingston, Rhode Island 02881 USA.
Brown, D.J. of Waterloo, Ont.)	Dept. of Biology, University of Winnipeg, Winnipeg, Manitoba, R3B 2E9 Canada.
Butler, Dr. Gary L.	Life Science Div., Syracuse Univ. Res. Corp. Syracuse, N.Y. 13210.
Burrows, Dr. Elsie M.	Box Cottage, 4, Main St., Broadmayne, Nr. Dorchester. Dorset. DT2 8EB.
Clayton., M.N.	Botany Dept., Monash University, Clayton, Victoria 3168, Australia.
Dawson, P.A.	129, Harrowdene Gardens, Teddington, Middx.
Dizerbo, Dr., A.H.	80 Rue Jean Jaures, Brest 29200 France.
Eaton, Dr.J.W.	Dept. of Botany, University of Liverpool, P.O.Box 147, Liverpool L69 3BX.
Jephson, M.A.,	Dept. of Biological Sciences, Portsmouth Polytechnic, Portsmouth Park Rd. Hants.
Lincoln Mrs. Anna (nee Houghton)	Ministry of Agriculture, Fisheries & Food, Fisheries Laboratory, Lowestoft. Suffolk.
King, Joe M.	Dept. of Environmental Sciences & Engineering, Rice, University, Houston. Texas.
Mitchell Catherine (nee Goss)	17, Meadow Way, Didcot, OX11 0AU.
Morton, O.	Doncaster Museum & Art Gallery, Chequer, Doncaster, Yorks DN1 2AE.
Olrik, Kirsten,	Cand. Scient., Vandkvalitets Inst. A.T.V., Pomolgardvez 10-12, 2860 Søborg Denmark.
Ott, D.W.	Dept., of Molecular, Cellular & Developmental Biology, University of Colorado, Boulder, Colorado 80302 USA.
Roberts, Dr. Margaret	Nether Glen, Chapel-le-Dale, via Carnforth. Lancs. LA6 3NR.
Spearing, Dr. J.K.	Shepherds Fold, Applethwaite, Keswick, Cumberland CA12 4PN.
Sousa e Silva, Dr.E.	Laboratoria de Microbiologia Experimental Av.de Telheiras, Lisbon. Portugal.
Tiffany, Mrs. M.N.E.,	84, Old High St. Headington.Oxon.
Tupa, D.D.	831-B North Meadows Drive, Austin, Texas 78758,USA.
Witchell, Miss J.S.	c/o Mrs. W.A.Brooks, 10 Elgar Walk, Purbrook, Portsmouth.Hants.
Yocie Yoneshigue - Braga, Instituto de Pesquisas da Marinha,	28.910 Arrairl do Cabo (RJ) Brazil.

SUPPLEMENT TO NEWSLETTER NUMBER 7

THE BRITISH PHYCOLOGICAL SOCIETY
CONSTITUTION AND RULES

GENERAL

1. The name of the Society shall be "The British Phycological Society".
2. The aims of the Society shall be to advance education by the encouragement and pursuit of all aspects of the study of algae and to publish the results of this in a journal, and also in other publications which shall from time to time appear desirable, provided that all publications of the Society shall be available to the general public.

   All funds acquired by the Society shall be devoted to the aims detailed in paragraph 2 above or to such charitable projects as may from time to time further these aims.

MEMBERSHIP

3. Membership of the Society shall be open to anyone interested in any aspect of the study of algae: application should be made to the Hon. Secretary, who will supply a form to be completed, signed and returned by the applicant. Applications shall be considered by the Council, and the Secretary shall send a copy of the Constitution and Rules of the Society to all members.
4. Members shall have the following privileges:-
   a. To receive all notices pertaining to the activities of the Society, and to attend all Meetings and Excursions.
   b. To receive all literature issued by the Society, free or at reduced rate as the Council may from time to time determine.
   c. To vote in the election of the members of the Council, and to vote in the conduct of the affairs of the Society at any meeting of the Society,
   d. To be eligible for service on the Council and its committees, or as Officers.
   e. To introduce visitors at any meeting of the Society (with the exception of the Annual General Meeting), unless the Council suspends this privilege for any particular meeting.
5. Every person on election shall pay to the Hon. Treasurer, within one month, the annual subscription for the current year, such payment to entitle the member to all the privileges of a member for that year. The first subscription payed by any member joining the Society within the last two months of the calendar year shall also cover the succeeding year.
6. Resignation of membership shall be signified in writing to the Secretary, but the member resigning shall be liable for payment of the annual subscription for the current year, together with arrears due.

ANNUAL SUBSCRIPTION

7. Subscriptions shall be payable in advance and shall be due on the 1st January each year. With effect from the first of January 1973, the Annual Membership Subscription shall be £3.00. The subscription of student members (undergraduate and full-time research students) and others may be reduced to £2.00 at the discretion of the Council, or to £1.00 for those who do not wish to receive copies of the Journal as laid down in clause 4b of this Constitution. The subscription for members retired from full-time employment shall be £1.00 with all the privilieges of membership as laid down in Clause 4 (a - e) of this Constitution.
8. If any members shall be in arrears of his/her subscription for six months the Treasurer shall advise the member of the fact and, if payment is not made before the end of the subsequent period of six months, the member's name may be removed from the list of members.

COUNCIL OF THE SOCIETY

9. The business of the Society shall be conducted by a Council of members consisting of the five officers of the Society, namely: The President, and two vice Presidents, the honorary Secretary and the honorary Treasurer, together with the immediate past-President, the honorary Editor of the "Phycological Bulletin" (ex-officio), and not more than nine Ordinary members of Council; seven to constitute a quorum. All members of the Council, except the immediate past-President and the Hon. Editor, shall be elected by postal ballot, the result of the ballot being declared at the Annual General Meeting (see clause 14).

10. (a). The President and the two vice-Presidents shall be elected annually, and shall be eligible for re-election for a second consecutive year of the same office. The retiring President and vice President shall not be eligible for re-election for the same office until an interval of three years from the expiry of the term of office. The immediate past-President shall continue to serve on Council (ex-officio) until succeeded by the next retiring President.

(b). The Hon. Secretary and the Hon. Treasurer shall be elected for a period of three years, and on retiring shall be eligible for re-election for a further three year period up to a maximum of three consecutive three year periods (with effect from January 1964 in the case of the Hon. Treasurer, and from January 1965 in the case of the Hon. Secretary).

(c). In the case of the first Council to be elected in accordance with these rules, three Ordinary Members of Council shall be elected for a period of one year, and three for two years. Thereafter, Ordinary Members of Council shall be elected, normally in groups of three, for a period of three years. Retiring Ordinary Members elected in this way shall not be eligible for re-election to the same office until after an interval of two years from the expiry of the term of office. An Ordinary Member of Council, if elected to any other office on the Council, shall cease to be an Ordinary Member of Council. Ordinary Members elected for one year to fill a vacancy shall be eligible at the end of the year for immediate renomination as an Ordinary Member (for the usual three year period).

(d). The Honorary Editor of the "Phycological Bulletin" shall be elected annually by the Council.

11. The Council shall have power to co-opt any Member of the Society to fill vacancies occurring during the year in Council, the tenure of such co-opted members to terminate at the next Annual General Meeting.

12. The Council shall have power to appoint for any special purposes sub-committees consisting either wholly or in part of Council Members.

13. At the request of any three members of the Council, the Secretary shall convene a meeting of the Council, stating the nature of the business to be discussed.

14. Election of Council: Any Member of the Society may nominate candidates, who shall be Members of the Society, for the election as President, Vice-President, Hon. Secretary, Hon. Treasurer, or Ordinary Members of Council. All such nominations, with the name of a seconder, and with written consent of the nominee to act if elected, shall be forwarded to the Secretary not later than two months before the Annual General Meeting. If no nominations are received for any of the offices becoming vacant on the Council, it shall be the duty of the Council to make such nominations. Voting shall be by postal ballot and for this purpose the Secretary shall circulate to all members of the Society, one month before the Annual General Meeting, a ballot form listing all nominations for vacant offices of the Council. The completed ballot form shall be returned to the Secretary in a sealed envelope bearing the signature of the member on the outside, before the Annual General Meeting; at that meeting the ballot forms shall be opened and the count made by scrutineers appointed by the Council, and the results of the ballot declared. Any problems arising through nominees for Council receiving the same number of votes will be resolved by a further vote of the members present at the Annual General Meeting.

MEETINGS

15. The Society shall hold one or more meetings each year, and one of these meetings shall be the Annual General Meeting. Twenty members shall constitute a quorum for an Annual General Meeting.

16. Notices of all general meetings shall be sent to each member by the Secretary at the earliest possible date, and the agenda of the meetings shall be sent out at least two weeks before each meeting.

17. At the Annual General Meeting members of the Society shall consider any business brought before them by the Council, or by any member (of which four weeks' notice in writing has been given to the Secretary).

18. The President, or in his/her absence one of the vice-Presidents, shall be Chairman at all the meetings of the Society; in the absence of any of these officers another officer or member of the Council. At any meeting of the Society the chairman shall decide as to prodedure and the order of the business. It shall be within the chairman's discretion to admit communications or other business, other than alterations to the rules, not included in the programme.

In the case of equality in votes at any meeting of the Society or of the Council, the chairman may exercise a second or casting vote.

19. Finances. It shall be the duty of the Hon. Treasurer to prepare a balance sheet for the past financial year, which shall be duly signed by two Auditors, and copies circulated to Members together with the agenda for the Annual General Meeting. The Treasurer shall present a financial statement, and two Auditors shall be elected for the ensuing year, at the Annual General Meeting.
20. Minutes: The Council shall cause Minutes to be duly entered in the books for the purpose of recording :- all the appointments to the Council; the names of the members present at each meeting of the Council; and the proceedings of these meetings, the proceedings of the Annual General Meeting and any other special meeting.

HONORARY MEMBERSHIP

21. At any general meeting of the Society, after nomination by the Council, persons who have rendered conspicuous service to the subject of Phycology or to the Society may be elected Honorary Members of the Society. Honorary Members may have all the privileges of Ordinary Members.

ALTERATIONS TO THE CONSTITUTION AND RULES

22. No alterations to the Constitution and Rules shall be made except at the Annual General Meeting, or at a special meeting of the Society called by the Council for that purpose. Notice in writing of any proposed alterations shall be given to the Secretary at least six weeks before any such meeting, and the proposed alterations shall be circulated to members with the agenda for that meeting. No alteration shall be made unless twp-thirds of the members voting at the meeting are in favour of it.
Notwithstanding the foregoing, no alterations may be made to clauses 2, 3 and 23 of this constitution.

DISSOLUTION OF THE SOCIETY

23. The Society may be dissolved after one year's notice in writing to all members, by a postal ballot in which the majority of all paid up members who vote will be required to confirm the motion to dissolve the Society. The funds remaining to the credit of the Society at the time of dissolution shall be distributed to societies of similar object which are constituted as charities; the selection of these societies to be at the discretion of the Council of the British Phycological Society at the time of its dissolution.

Adopted at the inaugural General Meeting of the Society held in Edingburgh, 12th July 1952.
Clause 21 added at the first Annual General Meeting, 2nd January 1953.
Clauses 9, 10a and 18 amended at the third A.G.M., 4th January 1955.
Clause 10d added and clauses 5, 9 and 14 amended at the fourth A.G.M., 4th January 1956.
Clause 7 amended at the eleventh A.G.M., 4th January, 1963, and at the fourteenth A.G.M., 6th January 1966.
General section and Clause 22 amended and clause 23 added at the fifteenth A.G.M., 4th January, 1967.
Clause 9 and clause 10c amended at the sixteenth A.G.M., 5th January, 1968.
Clause 7 amended at an Extra-ordinary General Meeting held on 28th March, 1968.
Clause 7 amended at the twenty-first A.G.M. held on 5th January, 1973.