

BRITISH PHYCOLOGICAL SOCIETY NEWSLETTER

December 1973

Number 6.

1973/74 Winter Meeting.

The next winter meeting will be held at University College (University of London), from Wednesday, January 2 until Friday January 4, 1974. Lectures will be held in the Botany Department lecture theatre.

Subscriptions for 1974.

These are due on January 1st and the Hon. Treasurer will be pleased to receive them as soon as possible.

The 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.

Payment by Bankers order saves time and effort.

Payment by National Giro.

Should there be sufficient demand, the Treasurer would be willing to open a Giro account for the Society, enabling members holding Giro accounts to pay subscription by transfer or yearly standing order. Members wishing to pay through National Giro are requested to inform the Treasurer, Dr A Marker, F B A, River Laboratory, East Stoke, Wareham, Dorset. BH20 6BB.

Newsletter.

The editor will be pleased to receive articles, and other material for publication in future numbers of the Newsletter. Particularly requested are reports of conferences and symposia, field meetings and expeditions. Phycologists are also requested to write about the phycological activities in their particular countries, institutions, or business concerns.

Response to previous requests has unfortunately been rather poor.

Articles for inclusion in the next issue of the Newsletter should be sent to the editor of the Newsletter (Ian Tittley, Dept. of Botany, British Museum (Natural History) Cromwell Road, London, SW7 5BD, not later than April 30th 1974. The next issue will be produced and circulated during May and June 1974.

Contents.

Summer (1973) field meeting	P.2.
Shetland Isles Expedition	P.3.
Crustose Corallines.	P.4.
Phycological research in Ghana.	P.4.
Phycology in Tasmania.	P.5.
Stream and River algal week.	P.5.
Adelaide appointment.	P.6.
Handbook of phycological methods.	P.6.
Symposium on Phycology.	P.7.
News of Phycologists.	P.8.
Requests.	P.8.

Membership list.

A new membership list is being circulated with this Newsletter. The addresses and changes of address are correct to December 1st 1973.

Any subsequent corrections, omissions or change of address should be communicated to the Hon. Membership Secretary, Mr W D Richardson, Goldsmiths College, London S E 14, U K.

The editor wishes to apologise for the reversal of page 14 in some copies of the membership list.

The small size of this issue of the Newsletter is unfortunately due to the current world shortage of paper. Many of London's

On arrival at Kirkwall, and with time to spare, I decided to forget phycology and indulge in a little sight-seeing. My first stop was the magnificent St. Magnus Cathedral. Having penetrated a few yards into this splendid building I soon realised that phycology would not allow me to 'turn off'. The Traill family memorial plaque reminded me of this eminent Orcadian phycologist who not only contributed so much to British phycology, but together with another Orcadian phycologist, Pollexfen, in a sense perhaps prepared the ground for our summer field meeting in Orkney.

The meeting was centered at Kirkwall on Orkney Mainland, a truly cosmopolitan group of members from U.K., France, Holland, Denmark and Canada set about recording benthic marine algae, dinoflagellates and diatoms. Collecting forays were undertaken at a number of localities on Orkney Mainland, Barra and South Ronaldsay. The sites selected for investigation presented a diverse range of habitats; for example, the open and very exposed shore at Nebbi Geo on the west coast with abundant populations of Fucus distichus ssp anceps. By contrast Loch Stennes an almost totally enclosed loch with a reduced tidal regime was an interesting brackish habitat. The narrow channel connecting Loch Stennes with the sea (The Bush) was seen to have a saltmarsh flora which included extensive Bostrychia, Sphacelaria britannica, and Vaucheria mats between phanerogam growths, as well as an abundance of Fucus ceranoides. Other sites visited included Brough Head, Kirkwall on Mainland, Sandwick on South Ronaldsay and Burray Ness on Burray. The absence of divers restricted the group's activities to the littoral and sublittoral fringe; thus a number of the deeper water species were unfortunately missed. I am certain that a number of the hardier littoral phycologists would have taken the plunge had it not been for the continual wet weather which plagued us for the week.

Excellent facilities at the brand-new, not officially opened, Kirkwall High School were placed at our disposal, and the collections were worked up in the biology laboratory.

As is the custom at these meetings, opportunities were taken to visit places of historical interest. The extensive iron-age settlement at Scurra Brae and the megalithic tomb of Maes Howe are two worth mentioning.

The evenings were pleasantly spent, discussing the days activities, and exchanging news and views between the members of this multi-national party. One evening in particular was certainly most pleasurable; This was when the Buffet prepared to celebrate the annual Shetland - Orkney hockey and football matches was placed at our disposal, the unfortunate Shetland teams had not been able to reach Orkney due to bad weather conditions!

I. TITTLE.

Phyco-etymological studies.

Acute readers of the B P S Newsletter No 5 (June 1973) who noted several references to a little-known group of plants, the Phodophyta (pp 4,5) or Phodophyceae (p 9), evidently occurring in such diverse places as Britain and Borneo, may have wondered about the nature of these organisms, and therefore be interested in my preliminary etymological studies on the subject. Apparently their name does not derive from an American pronunciation of a Greek root (cf 'phodosynthesis', in current U S parlance), but from "phodes" (= blisters), indicating that phodophytes are probably blister-plants in the genus Ranunculus. If so, their relevance to phycologists is marginal; but we should perhaps not dismiss them altogether until we have further information on their taxonomic position. Can B P S members offer enlightenment on the subject?

R.A.Lewin.

Ed: Acute readers will have noticed also the new title to be applied to the person

SHETLAND ISLES EXPEDITION.

Between July 7 and August 19 of this year (1973) what was probably the largest phycological expedition to any part of the British Isles was organised and lead by Dr David Irvine (Polytechnic of North London). The total personnel numbered 35, and these included phycologists from various institutions including British Museum (Nat Hist), Portsmouth Polytechnic, University of Liverpool, Port Erin Marine Biological Station, U C N W Menai Bridge marine laboratories and the Polytechnic of North London. Non-phycological personnel included a zoologist from the British Museum, divers from the Polytechnic of North London subaqua club, and Southampton B S A C. Lastly, but not least, Mrs P. Jephson the expedition's full-time cook, should not go without mention.

The major finance was provided by a N E R C grant, however, scientists from the B M N H were financed by that institution. The main aim of the expedition was to investigate those lengths of Shetland coastline projected as sites of development necessary to the oil industry in the course of exploiting the offshore oilfields close by Shetland. In addition, data gained from collections made in other areas was collated for inclusion in a forthcoming 'Marine algal flora of Shetland'. Individual scientists also pursued tasks relevant to their own research projects.

The expedition was divided into two groups. A larger group lived and worked at the Anderson High School, which formed the main expedition land base; a smaller group were accommodated aboard and largely worked from the M V Ice King, a converted fishing vessel hired by the expedition, owned and skippered by Mr. M Tuson of the Polytechnic of North London, who also handled most of the complex logistics problems of the expedition. A short range radio station was installed in the biology laboratory of the school, and thus brought about shore to ship co-ordination. The facilities in the biology laboratory were placed at the disposal of the expedition, as were classrooms (for bedrooms) and the domestic science laboratory (for kitchen, dining and laundry use). A minibus and a motorboat based at the school enabled the land party to operate independently, or conversely enabled the easy organisation of joint operations with the ship-based party.

The area most likely to suffer as a result of oil-plant installations is Sullom Voe. This is the longest voe in Shetland, penetrating many miles inland; very deep, sheltered, and in places bordered by land extremely suitable for industrial development. Not only are refineries, deep water berthages and storage installations planned, but also a sea level canal connecting Sullom Voe on the North Sea side with Busta Voe on the Atlantic side of mainland Shetland, thus, reducing a potential several-hour sea journey from the Atlantic to Sullom.

The first few weeks were spent mainly in developing, surveying and sampling techniques. This initial period of operating in Dales Voe and Clift Sound, enabled the phycologists to come to terms with species present in the Voe plant communities, also enabled the divers to practice sublittoral sampling techniques. Sullom Voe was then investigated both from a littoral and sublittoral points of view. Transects were established at a number of sites, and metre quadrats were cleared along the transect lines. The vegetation was determined, listed, and assessed for biomass and abundance. Supplementing the data gained from the belt transects, spot dives at predetermined depths were undertaken at sites between the main transect lines. From the results of this field work a preliminary pattern of plant distribution, and of plant associations is to be constructed.

Aside from the work in Sullom Voe, the collections made elsewhere (including the most northern tip of Britain, 'Out Stack' beyond Muckle Flugga) have thus far revealed two possible new marine algal records for Britain, and certainly many new records for Shetland.

In retrospect it is safe to say that all of the expeditions' scientific aims were achieved. This was in part due to the 'reasonable' weather - by no means perfect - in fact for several periods lasting days on end Shetland was cut off from the outside by fog. Six weeks of fairly calm weather is something of a record for Shetland where howling gales spring up from nowhere at almost any time.

The stay on Shetland was thoroughly enjoyed by Scientists and non-Scientists alike, all of whom were grateful for the opportunity to visit a part of the U K somewhat off the beaten track.

I. TITTLE. Y.

CRUSTOSE CORALLINES

A paper entitled 'Studies on the biosystematics and ecology of the epilithic crustose Corallinaceae of the British Isles' by Dr. W.H. and Mrs. P.J. Adey (Smithsonian Institution, Washington, D.C., U.S.A.) will appear in Vol 8, No.4. (December 1973) of the British Phycological Journal. Dr and Mrs Adey have studied encrusting corallines for a number of years and have carried out extensive fieldwork over the whole of the North Atlantic coastline from Labrador to the Caribbean and from Norway and Iceland to Spain. They are, therefore, able to discuss the relationship of the British coralline flora to that of the northern North Atlantic as a whole. Their account is based primarily on the qualitative and quantitative study of collections made in 1967, 1968 and 1970 from Shetland, Orkney, NW and NE Scotland, Ireland, Isle of Man, SW Wales and the English Chennel coast. The British Corallinaceae have not previously been the subject of intensive study by a specialist; lists compiled by British workers (except for those based on Foslie's or Lemoine's identifications) contain indentifications of doubtful validity. As an aid to future identifications, Dr and Mrs Adey's paper contains artificial keys based on the external morphology of the vegetative thallus and the conceptacles as well as an anatomical key. As well as having the paper available in the Journal, some members of the Society have expressed an interest in having extra copies for fieldwork. The Society is therefore purchasing a limited number of reprints for sale to members at a price of 75p. post free for the 70-page paper.

Orders (pre-publication if desired) should be placed with Dr. G. Russell, Hartley Botanical Laboratories, The University, Liverpool. L69 3BX.

L.M.IRVINE.

PHYCOLOGICAL RESEARCH IN GHANA.

The number of persons involved in phycological activities in Ghana, or indeed in West Africa as a whole, are very few and the large majority of these are working on phytoplankton. Those in Ghana are given below, together with their research interests and in some cases details of the institutions to which they are attached.

University of Ghana, Department of Botany, Legon.

This is the only establishment in West Africa where research on the larger marine algae has been conducted without interruption for the past 20 years. For marine research the Department has a 30ft. cabin cruiser and posses facilities for SCUBA diving. It also has a phycological herbarium containing almost 5,000 specimens from many parts of Africa largely collected by Dr. G.W. Lawson

The recent creation of the Volta Lake has given rise to what is termed the Volta Basin Research Project (VBRP). Some of the personnel involved with this project have been associated with the Botany Department. Dr. S. Biswas, who has been studying hydrobiological aspects of the Volta Lake, has recently moved to Zambia (Present address: National Council for Scientific Research, P.O. CH 158, Chelston, Lusaka.

Dr. David M. John - Ecology and taxonomy of marine algae in the Gulf of Guinea.

Dr. E.K. Obeng-Asamoah (VBRP) - Algological aspects of the Volta Lake.

University of Cape Coast, Department of Botany.

Mr. S.O. Asare - Ecology of larger benthic marine algae and the extraction and properties of phycocolloids from selected species.

Fishery Research Unit, Tema.

Miss E.R. Anang - Primary production and systematics of phytoplankton.

Institute of Aquatic Biology (CSIR), Achimota.

Mr. J. Asamman - Compilation of lists of algae found in ponds and rivers on the Accra Plains.

DAVID M. JOHN

PHYCOLOGY IN TASMANIA

Tasmania, which is not part of New Zealand, and is not in east Africa, is well off the beaten migration route of well-known phycologists and their propagules. The freshwater environment is richly diverse, ranging from hundreds of oligotrophic glacial lakes through highly humic waters to hypersaline lagoons. Until recently, three fragmentary papers were all that was published on the freshwater flora. A minimal framework of physicochemical limnology now exists and various projects in algal taxonomy and ecology are in progress.

The marine littoral algae have been studied a little more than the freshwater ones but exploration of coastal beds is still meagre. Macrocystis pyrifera is harvested for alginate production and there is interest in possible commercial exploitation of other species, particularly by the Japanese with their highly-tuned palates. No research on seaweeds is being undertaken at present. Marine plankton is almost completely unstudied. Taxonomy will be a major problem.

Though geographically far-flung, Tasmania is a bountiful land for the phycologist. With a gentle life pace, winters like languid springs and large tracts of virgin wilderness, it is also a place to live. The writer of this note will be pleased to hear from anyone who fancies a southern hemisphere break as a sabbaticand.

P.A. TYLER.
University of Tasmania.

STREAM AND RIVER ALGAL WEEK IN DURHAM 4 - 11 July 1973.

Thirtyseven people spent a very busy week in Durham dealing with problems of taxonomy and ecology of algae in flowing waters. The programme combined informal lectures, wading up and down streams, work at the microscope and much conversation, both in and out of the pub. Ten of the party came from abroad - Two Austrians, Two Danes, Three German, One Irish and Two Americans. Their presence was a tremendous asset, and it is to be hoped that the Phycological Society treasurer will keep up the pressure on all the European contingent to become members of our Society.

ADVERTISEMENT UNIVERSITY APPOINTMENTS.

THE UNIVERSITY OF ADELAIDE.

Applications are invited for appointment as a

POSTDOCTORAL FELLOW IN MARINE PLANT BIOLOGY

in the Department of Botany, to undertake a study of the effect of sewage effluent outfalls on marine plants (seagrasses and marine algae) within St. Vincent Gulf, near Adelaide, South Australia. The appointment which is financed by a grant from the Australian Grants Committee, is available for a period of two years from 1 January 1974, with possible extensions for a third year.

Applicants should have completed a doctorate degree in some aspect of marine ecology, and should be familiar with marine plants and their reproduction as well as instruments used in environmental assessment. SCUBA experience is essential.

SALARY SCALE: \$A 6,967-353(4)-8,379.

APPLICATIONS, in duplicate, giving particulars of age, qualifications (including dates obtained) and the names and addresses of two referees, should be sent to the Registrar, The University of Adelaide, as soon as possible, and no later than 31 December 1973.

Further enquiries should be addressed to Dr. H.B.S. Womersley, Department of Botany, The University of Adelaide.

LITERATURE OF INTEREST TO PHYCOLOGISTS.

HANDBOOK OF PHYCOLOGICAL METHODS.

Culture Methods and Growth Measurements.

The purpose of the HANDBOOK OF PHYCOLOGICAL METHODS is to present a compendium of techniques for culturing and measuring growth of those organisms collectively termed 'algae'. The audience for whom it is intended is diverse and includes experienced researchers, novices, phycologists, and/or non-phycologists. In general, each chapter is concerned primarily with the method rather than theories behind the method. Whenever possible methods based on original research are given. The methods are presented so they can be followed easily, although not necessarily in stepwise fashion. Minor variations are possible depending upon a variety of factors, local circumstances and training of those using the techniques.

Editorial revisions have attempted to present the methods in a consistent fashion. However, as the subject is not uniform, this has not always been possible.

The materials and equipment listed serve only for reference, and are not necessarily endorsements of given products or manufacturers. United States and Canadian suppliers are mentioned only as guidelines, but unfortunately these change. Sources of equipment are published annually in the United States in Science (American Association for the Advancement of Science, 1515, Massachusetts Ave., N.W., Washington D.C. 20005) and in Canada in Research and Development (Maclean Hunter, 418 University Ave., Toronto 101, Ontario) and Laboratory Product News (Southam Business Publications Ltd., 1450 Don Mills Rd, Don Mills, Ontario). These publications should be consulted for up to date addresses of suppliers.

In many chapters, specific test organisms have been designated so that a 'known' taxon is available upon which to try the method.

HANDBOOK OF PHYCOLOGICAL METHODS - Contd.

Sources for these organisms are given in the individual chapters and in the general listing on Culture Collections at the end of this Introduction. Other methods and technique books pertinent to the algae are also listed and should be consulted for additional information.

- Separates of individual chapters will NOT be available for distribution.

Published by: Cambridge University Press. Cost U.K. £8.
New York and London U.S.A. \$ 19.50
1973. Canada \$ 21.50
(Through MacMillan Company)

Second International Symposium on Phycology 1974 - 75.

TAXONOMY OF ALGAE

to be held at

THE CENTRE OF ADVANCED STUDY IN BOTANY
UNIVERSITY BOTANY LABORATORY
UNIVERSITY OF MADRAS
MADRAS-600005

It is only recently that phycologists have begun to feel the need for separate meetings to discuss, progress, problems and future perspectives in Phycology. This Centre for Advanced Studies in Botany held its first Symposium on Taxonomy and Biology of Blue-green Algae in 1970 and a volume containing the contributions has been issued in December, 1972. Many phycologists from India and abroad gathered at Madras for that Symposium. It served a very useful role in fostering national and International co-operation and co-ordination in phycological research. A great deal of information has accrued in recent times in many fields of phycology and it would be, therefore, a great advantage if a meeting of phycologists specializing in the different groups is held to discuss and assess our progress and project outstanding problems needing our urgent attention. Many delegates felt it would be a good idea to call for such a meeting in 1974 - 75. The present symposium is, therefore, being called in 1974 (probably in the first half of December 1974) as there are other inter-national conferences in allied fields in 1975.

It is proposed to cover at this projected symposium all aspects of phycology and will particularly cover structure (including ultra structure), reproduction and life-history, principles of phycological taxonomy, systems of classification, phylogeny, cytogenetics, numerical taxonomy etc.

It is earnestly hoped that the holding of this Symposium will help in furthering co-operation and co-ordination of research interests and activities between phycologists.

Those interested in receiving invitations for this meeting may kindly write to:

Prof. T.V. Desikachary,
Centre of Advanced Study in Botany
University Botany Laboratory
University of Madras
Chepauk, MADRAS-600005 (India).

NEWS OF PHYCOLOGISTS.

Prof. L. Newton: Prof. Newton was earlier this year awarded the L.D. We offer our sincere congratulations.

Prof. I. Manton: Prof. Manton has been elected president of the Linnean Society.

Dr. M. Knight: It is with deep regret that we announce the death, earlier this year, of Dr. Knight.

Holland: Dr. C. den Hartog has been appointed full-professor in Hydrobiology at the Catholic University in Nijmegen. He will officially leave the Rijks herbarium at the end of September. He will be appointed also extra-ordinary professor (in Hydrobiology) in Wagening (Agricultural College) and thus will be resigning his (extra-ordinary) professorship of the Free Flemish University at Brussels. Dr. P.J.G. Polderman will join Prof. den Hartog at Nijmegen. Dr Polderman will continue with his work on salt marsh algae.

REQUESTS.

Mrs. A. Davies, Metropolitan Police Forensic Science Laboratory, 2, Richbell Place, Holborn, London. WC1 3LA, would like to make contact with phycologists working on algae inhabiting habitats such as soil, trees and walls, with a view to establishing literature and other sources of data on this topic.

ERGEX LIMITED.

We have received a letter from a Greek firm of seaweed merchants 'ERGEX LTD' of 35 Beligiorgi St., Athens 107. We would be grateful if any member who can help them would communicate directly with the firm.

"Our Company has been occupied for over ten years in importing and selling in our market Seaweed Meal for animal-feeding purposes and as a fertilizer. Our Company is the main one in Greece in this line of business.

In a very short time we shall introduce the seaweed into the Greek market for human use and we cherish every hope to have very good results to this end.

In view of our long experience which we acquired in the uses of seaweed meal, such as tests made with it, successful results obtained from it, etc., and as we are most interested in acquiring further knowledge on anything that has to do with the seaweed meal, we shall be much obliged if you will send us booklets, research work made with it, scientific studies, etc. etc.

You will also oblige us by giving us the names and addresses of producers and exporters of seaweed meal in order to write direct to them in the matter".

Dino Salatas, Manager.

(P.S. Perhaps we should start a group for members interested in the utilisation of algae?).