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The closing date for the next Newsletter is 31st January 1982 for publication in twelve months' time. An extra number will be published before that date if the number of contributions warrants it. Please send contributions to the editor:

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Please feel free to use the enclosed reply form to make any contribution whatsoever.

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SOCIETY ANNOUNCEMENTS

Membership Secretary

Chris Wood is away on sabbatical until September 1981. Until then membership queries and corrections will be dealt with by the Treasurer, Barry Leadbeater.

FORTHCOMING MEETINGS

Course on Macromolecular Separation Techniques

Leeds - 6 - 10 July 1981
(see BPS Newsletter no. 13, page 5).

There are still four places available on this course, to be held at the Department of Plant Sciences, Leeds University. Course fee £35. Anyone interested should contact Maureen Callow immediately (Leeds 31751, ext. 6576).

British Diatomist's Meeting November 1981

It is hoped to hold a meeting of British diatomists in late 1981. Details of a successful meeting of this type held in 1980 are given in the "Reports of Past Meetings" section of this Newsletter. Please write to Dick Crawford, Dept. of Botany, University of Bristol, Bristol, BS8 1UG.

1st International Phycological Congress

August 8 - 14 1982 - Memorial University of Newfoundland, St. John's, Canada.

The International Phycological Society is pleased to announce its sponsorship of the First International Phycological Congress, to be held August 8-14 1982, on the campus of Memorial University of Newfoundland. It is also anticipated that the Phycological Society of America will join with the International Phycological Society in what promises to be a major gathering of phycologists from around the world.

Please plan to attend the Congress. In addition to paper sessions, those attending will have opportunities to see first-hand the transitional sub-arctic marine flora of Newfoundland and Labrador, and to explore the multitude of lakes, rivers and bogs of the Newfoundland taiga wilderness.

If you wish to be placed on the mailing list for the first circular, planned for February 1981, please write as soon as possible to:

The Secretariat,
1st International Phycological Congress,
Department of Biology,
Memorial University of Newfoundland,
St. John's, Newfoundland, Canada A1B 3X9.

Vith Diatom Symposium

In accord with the preference expressed by attendees of the Vth Diatom Symposium held at the University of Michigan Biological Station, the Vith Diatom Symposium will be held on September 9-12 1981 at the Central

Michigan University Biological Station, St. James (Beaver Island), Michigan.

The symposium is intended to provide a relatively informal forum for exchange of information on all aspects of research on diatoms. We hope to be able to structure the meeting to accommodate both reports and poster sessions of work in progress and discussion of unresolved problems of general interest as well as conventional research papers. Younger investigators and individuals working in nontraditional areas of research are especially encouraged to attend and participate.

Central Michigan University's Biological Station is located on Beaver Island in northern Lake Michigan. The station is situated on 45 acres of land on Sand Bay. The diverse island habitats offer excellent opportunities for collecting diatoms and other algae. It is convenient to air travel (Pellston, Michigan via Republic Airlines with shuttle service by charter airlines to Beaver Island) or via ferry service from Charlevoix, Michigan. Air travel by charter flight is available from Charlevoix and also Manistique in the upper peninsula. The air service from Manistique will be of advantage to persons coming by car from points west of Lake Michigan. Transportation will be provided to and from the island airport or the boatdock in St. James. Accommodations and food service will be provided at the station. Modern motels are available in St. James about five miles from the station. For further information please contact:

Dr Daniel E. Wujek
Dept. of Biology,
Central Michigan University,
Mount Pleasant, Michigan 48859,
U.S.A.

Field Trip to Arran

The British Phycological Society is organising a field trip to the Isle of Arran on the west coast of Scotland.

Arran is a large island in the Firth of Clyde and offers much of phycological interest in addition to its scenic beauty.

The object of the trip is to collect and identify seaweeds, but those with other interests and tryos as well as experts are welcome. We should also find time to examine some of the neolithic remains which abound on the island.

The trip will be centred at Lamlash and the projected dates are June 27-July 4.

Anyone interested in participating are invited to contact:

Dr. Trevor Norton
Dept. of Botany,
University of Glasgow G12 8QQ.

Phytoplankton Course for Experienced Participants

Offered by: Department of Marine Biology and Limnology,
Section of Marine Botany, University of Oslo.

Place: Biological Station, Drøbak, Oslofjord.

Duration: 3 weeks (22 August - 10 September 1983)

Participants: Candidates with a Ph.D., M.Sc. or B.Sc. degree or equivalent, and with experience from phytoplankton work (species identification, cell enumeration by microscopy)

Number of participants: 14

Programme: Training in identification of marine planktonic algae with emphasis on use of identification literature and light microscopy.

Course leaders: Grethe Rytter Hasle, Jahn Thronsen

Further information and an application form may be obtained until 1 May 1982 by writing to:

Professor G.R. Hasle
Dept. of Marine Biology and Limnology,
Section of Marine Botany,
University of Oslo,
P.O. Box 1069 Blindern,
Oslo 3, Norway.

Applications should be submitted by 1 December 1982

Fifth International IUPAC Symposium on Mycotoxins and Phycotoxins

September 1-3 1982 Vienna, Austria.

Sponsored by the World Health Organization

Topical areas will include:-

- Chemical and biological properties of newly discovered mycotoxins and phycotoxins.
- Screening programs for mycotoxins in foods and feeds.
- Phycotoxins in drinking water and marine foods.
- Epidemiology of human and animal diseases associated with mycotoxins/phycotoxins.
- Diagnostic procedures in mycotoxin/phycotoxin-associated diseases.

For further information write:

Professor Palle Krogh, Chairman
IUPAC Symposium Scientific Committee
c/o Verein Österreichischer Chemiker
Eschenbachgasse 9, A-1010 Vienna, Austria.

Blue-green algal weekend

Place: Department of Botany, University of Durham

Dates: evening of Friday 25 September - evening of Sunday 27 September 1981

Number of places: 14

Costs and booking: Accommodation costs plus £3 for travel, coffee etc. Please let us know as early as possible if you want to come and if you would like us to arrange accommodation in a college or boarding house.

This will be a relatively informal meeting on descriptive ecology and taxonomy of blue-greens. It is intended especially for people who already have an interest in these algae and want to get down to detailed problems of naming their materials. There will be a few short lectures, slide shows, field trip to shallow pools and stream sites; about half the time will be spent on microscopy.

The organisers are Brian Whitton and David Livingstone. Please write to:

Dr B.A. Whitton,
Dept. of Botany,
University of Durham,
Science Laboratories,
South Road,
Durham, U.K.

Symposium/Workshop on Aspects of Algal Ecology

Dr Xavier Niell is intending to hold a mini-symposium and workshop on some topics in algal ecology. This will take place in Vigo in Northern Spain at Easter 1982. It is intended to lay emphasis on the combination of presentation of scientific papers with field and laboratory workshop sessions. Topics might include primary productivity and its estimation. Suggestions for other appropriate themes are invited. Anyone with such suggestions, wishing to attend or wishing to contribute should write to one of the following:

Dr X. Niell,
Instituto de Investigaciones
Pesqueras,
Muelle de Bolzas Avda.,
Orillamar,
47 (Berbes) Vigo,
Spain

Dr W.F. Farnham,
Portsmouth Polytechnic
Marine Laboratory,
Ferry Road,
Hayling Island,
Hants., PO11 0DG,
U.K.

XIII International Botanical Congress, Sydney, August 1981

The Second Circular was issued in September 1980, with details of enrollment, accommodation, programs and field trips. If you have not registered previously and received the Circular, please write to Dr W.J. Cram, Executive Secretary, XIII I.B.C., c/o Dept. of Botany, University of Sydney, Sydney, N.S.W. 2006, Australia.

Section 10 is concerned with Marine and Freshwater Botany.

Intending contributors of papers are advised to write directly to the Convener of the session, Professor H.B.S. Womersley, Dept. of Botany, University of Adelaide, Adelaide, Australia.

The following field trips are of particular interest to Section 10 participants.

- Pre-Congress No. 31 Heron I., Great Barrier Reef (Marine Botany),
15 - 20 August.
- Post Congress No. 32 Marine Botany of the S.E. Australian Coasts,
29 August - 7 September.
- No. 33 Freshwater Botany,
29 August - 4 September.

REPORTS OF PAST MEETINGS

British Diatomist's Meeting 1980

During the weekend November 7-9 1980 a meeting of British diatomists was held at the Preston Montford Field Centre near Shrewsbury. This meeting was arranged by Dr Elizabeth Haworth of the Freshwater Biological Association and Dr Richard Crawford of Bristol University. Following the first meeting in 1979 at Brathay Field Centre near Ambleside, it attracted some 40 workers, a few of them accompanied by their wives.

The object of the meetings was to enable those attending to get to know each other and to exchange ideas on an informal basis - the programme being planned to allow for this.

At Preston Montford nine more or less formal talks were given on a wide range of subjects extending from the fine structural consideration of the genus Eunotia to the use of diatoms in London's Archaeology. The role of the amateur in modern diatom study was assessed and justified (as if justification were necessary) and we were encouraged to be more comprehensive in our approach to classification.

It was suggested that a good deal of information might be retrieved by palaeolimnologists from algal records and it was proposed that information accruing from collections of diatoms in the future could be stored on computer files. We heard reports on work in two lakes - Rostherne Mere and Lough Neagh. The former study was now concentrating on the paleolimnology and in Lough Neagh a comprehensive study of the phytoplankton linked well with the first lecture of the meeting in which Dr Colin Reynolds introduced the Cheshire Meres. This nicely set the scene for a very interesting visit to some of the meres and mosses near Ellesmere on the Sunday morning and we are grateful to Dr Reynolds for his time and trouble.

Saturday evening and the first part of Sunday morning were devoted to discussion of some of the points raised by the speakers and to examination of demonstrations and microscope slides. These periods were of particular benefit and the extent to which we all valued and enjoyed both weekends is evident from the fact that the meeting promises to become an annual event.

Anyone interested in attending this year's (1981) meeting which will probably be held at the same time, please contact Dr R.M. Crawford, Department of Botany, Bristol University, Bristol BS8 1UG.

27 April - 6 May 1980 - 3rd Workshop of I.A.P. (International Association for Phytoplankton taxonomy and - ecology) at Seon, Bavaria, Germany.

Cooperation in the optimization of phytoplankton counting and identification initiated by a German speaking group of limnologists (1st meeting at Scharfling, Austria) was opened to a more international basis during the 2nd meeting held at Jastanienbaum, Switzerland. The main objectives of I.A.P.: cooperation of ecologists and taxonomists in identification and counting of freshwater phytoplankton.

For the 3rd Workshop a total of 25 scientists (for practical reasons not more) came from 7 European countries (Austria, Czechoslovakia,

Germany, Denmark, Finland, Norway, Sweden) and Israel. The scientific leader (Dr J. Kristiansen, Copenhagen) presented an introduction into the problems of Chrysophyceae taxonomy, and showed the limitations and possibilities of Chrysophyceae determination by light microscopy for lake water samples collected in the region. Lectures on this and other taxonomic groups (Cryptophyceae, Chlorococcales) were given by several participants, but there remained still enough time for microscopy. The results of 2 phytoplankton counting intercalibrations (Utermohl's method) as well as special topics for further common work (e.g. comparison of volume estimations for specific species, counting of problematic species) were discussed.

Details of the Workshop's programmes, lists of participants and most of the papers of the 2nd and the 3rd Workshop are published in Schweiz. Z. Hydrol. (40/2, 1978; 43/1, 1981). For further information on I.A.P. activities contact the secretary (Dr Eugen Rott, Institute of Botany, Sternwartestr. 15, A-6020 Innsbruck, Austria).

Recent Studies on the Ecology of Marine Algae in the Firth of Clyde: Work Carried out in the Department of Botany, University of Glasgow.
T.A. Norton and A.D. Boney.

The ecology of macro algae

A review of all the studies carried out on seaweeds in the Clyde Sea area revealed a dearth of ecological knowledge (Norton, 1974). This realization stimulated a great deal of ecological work. Studies on the physiological ecology of furoid algae have explored the effects of prolonged desiccation under a variety of conditions both in culture and in nature, (Schonbeck, 1976; Schonbeck and Norton, 1978, 1980a). The results have clearly shown that the upper limits of high-shore species are controlled by desiccation during tidal exposure. The plants have no drought avoidance mechanisms except for the reduction in surface area resulting from shrinkage during drying (Jones and Norton, 1979, 1980), and the mutual protection afforded by dense stands (Schonbeck and Norton, 1979a). Desiccation tolerance varies not only with species but also seasonally, as sub-critical exposure to drying drought-hardens the plants (Schonbeck and Norton, 1979b). The effects of reduced salinity, rain, toxic substances and nutrient shortage induced by brief periodic submergence were also investigated (Khfaji and Norton, 1979; Schonbeck and Norton, 1978, 1979a and c, 1980c). The lower limits of furoids on local shores were found to be controlled by interspecific competition. Selective weeding out of a competitively superior species (Fucus spiralis) allowed the slower growing Pelvetia canaliculata to colonise levels well below its normal limits, (Schonbeck and Norton 1980b).

The dynamics of shore colonization were studied on the north of the Isle of Cumbrae, where colonization patterns were related to the spore inocula available in the water and their settlement and survival on both artificial substrata and denuded natural rock (Hruby and Norton, 1976, 1979). The results cast doubt on the validity of some of the descriptive terminology often applied to the shore (Hruby, 1976). Competitive interplay both within a species and between species was found to greatly influence the colonization sequence and the resulting vegetation patterns (Hruby and Norton, 1979). The dense canopy or turf formed by some species can act as a barrier and prevent propagules from settling on the rock beneath (Hruby and Norton, 1979). Propagules that do succeed in reaching the underlying rock are afforded protection from desiccation by overlying thalli, but their growth can be inhibited

by the dense shade cast by the canopy (Hruby and Norton, 1979; Schonbeck and Norton, 1980b).

At the microscopic germling stage Fucus spiralis can be inhibited by an abundance of some species of diatoms (Schonbeck and Norton, 1979d) whereas the microscopic germling crusts of Chondrus crispus secrete an anti-diatom material which clears the substratum around them - in marked contrast to germlings of Gigartina stellata of the same age, (Khfaji and Boney, 1979). Various other diatom - germling interactions are currently under investigation.

Other biotic interactions have also been explored, including epiphytism and grazing. The relationship between the brown epiphyte Elachista fucicola and its 'host' supports has been investigated in detail (Filion, 1976). The surprising absence of this epiphyte from Ascophyllum nodosum in British waters was attributed to the remarkable ability of Ascophyllum to regularly shed its outer meristoderm layer and with it the settled spores of most potential epiphytes (Filion-Myklebust and Norton, 1980). Grazing by invertebrates, particularly Acmaea virginea, have been found to significantly influence communities of crustose algae inhabiting pebbles (Clokier and Norton, 1974) and is also a major factor in shell fragmentation, the formation of carbonate mud and the recycling of the shell carbonate (Farrow and Clokier, 1979). The herbivorous snails Littorina spp. have been found to exhibit dietary preferences for different species of seaweed (Schonbeck and Norton, 1980b). Present investigations are concerned with the effects that variations in salinity have on the grazing pressures exerted by estuarine invertebrates in the Clyde and the mechanisms of selective grazing.

An ecological and experimental study of Gigartina stellata in the Firth of Clyde (Khfaji 1978) has described three morphologically distinct populations in very sheltered, moderately exposed and more severely exposed habitats. Transplant experiments showed that the plants from the very sheltered habitats were unable to withstand conditions on the more wave-beaten shores. Reciprocal transplants between the other habitats brought about little early changes in growth forms, and up to two years elapsed before noticeable changes took place with new frondage. Regeneration studies on cut frondage showed that this was a slow process and frequently involved proliferative growth at the frond margins. The exposed shore plants had higher carrageenan contents but of lower gel strength than that of plants from very sheltered shores.

Industrialisation of the shore line of the Firth of Clyde is a continuing process, and the effects on the algal communities have been the subject of research for some years now. Particular attention has been focussed on the Hunterston shoreline where construction on an iron ore-unloading terminal is one of the major developments. The first phase of the environment impact study was associated with the effects of reclamation work and construction of the terminal. This has presented new surfaces for colonization and raised many problems of beach management on adjacent shores (Clokier and Boney, 1980). In order to establish some base-line for comparative studies, and to assess the overall impact of these new features in the Firth, a revision of existing marine algal flora records has been made (Clokier and Boney, 1979). Earlier fears of a significant decline in the total algal population proved unfounded, (Norton, 1974; Clokier and Boney, 1979), but changes have taken place, particularly in the Saltcoats area (Clokier and Boney, 1980). Our detailed records of the seaweed flora of the region and our increasing knowledge of the ecology of many of the dominant communities give confidence to our ability

to recognise and to predict changes that ensue from environmental perturbations, whether natural or induced by man (Clokie and Norton, 1975; Clokie and Boney, 1979, 1980 a and b).

With the ore-unloading terminal now operational, research has turned to consideration of the effects of dust spillage, or the wind-winning of dust from stockpiles, as possible environmental factors leading to increased silt-loading of the sea and associated effects on marine algae. Extensively branched algae entrap appreciable quantities of suspended ore dust and retain these dust loads after shaking in dust-free water (Boney, 1978, 1979). Use of marine algae as monitoring agents in the neighbourhood of ore loading and unloading terminals has been proposed. The effects of ore-dust loading on *Fucus* eggs has also been studied (Boney 1980). The possible influence of protracted dust-loading of the sea on the depth of the photic zone has also been under consideration. The deepest growing alga in the Firth is the filamentous *Conchoceleis* phase in mollusc shells and shell fragments on the sea bed. Examination of shells from some 40 stations in the inner and outer Firths has allowed some definition to be made of the lower limits of the photic zone as indicated by a living red alga (Clokie, Boney and Farrow, 1979; Clokie and Boney, 1980). Work is in progress on the links between these sublittoral *Conchoceleis* growths and *Prophyra* spp. in intertidal habitats, plant 'performance' over its depth range, the relative abundance of conchospore production with increasing depth, interactions with grazing molluscs, and the problem of shell colours, which, on casual observation, simulate patches of *Conchoceleis* growth (Clokie and Boney, 1980) and which may thus give erroneous values to photic limits as defined by this organism.

The ecology of microbial algae

In a recent review of plankton in the Firth of Clyde it was shown that extensive work over the 1920-1940 period had established the principal features of the seasonal abundance of phytoplankton populations and their interactions with zooplankton (Marshall and Boney, 1974). Silicoflagellates are present in small numbers at most times of the year, but are noticeably more abundant in the autumnal period. The morphological variations in skeletal structure have been studied (Boney, 1973, 1976). A detailed study of the phytoplankton populations in the Fairley Channel was carried out by Hinton (1974). Twice daily pumped samples from 3m depth were used (Hinton and Boney 1975). The dynamics of the spring outburst were examined in detail and indicated some competitive interplay between *Skeletonema* and *Thalassiosira*, with the fast growing *Skeletonema* rapidly overtaking the *Thalassiosira* growth and dominating the spring outburst over the course of a few days. Thence *Thalassiosira* became the dominant partner. These periodic phases of waxing and waning of both diatoms through March and April often occupied but a few days, and certain of the peaks of abundance would have been missed with sampling intervals of 7-14 days. Other fluctuations in populations of a few days duration were recorded in summer and autumn, with the expected decline in winter. The sequence of events of the annual growth cycles, and the population sizes appeared little changed from those described in the 1920-1930 period. *Kephyrion* loricae were often observed, peaking in early summer, (Hinton and Boney 1979). A surface water sampler based on the 'skimmer' method was developed in the course of these studies (Hinton and Boney, 1979). References to the possible significance of microbial flagellated algae

in the Firth of Clyde and Loch Striven were made in the plankton survey report (Marshall and Boney 1974), and reference was also made to the dearth of studies on primary production. A two year study of the nanophytoplankton (less than 20 μm fraction), measuring their carbon fixation (using *in situ* incubation with ^{14}C) and total phytoplankton biomass (estimated as chlorophyll *a*) has shown that the flagellates made the major contribution to the primary productivity (50%) and biomass (60%) in the Fairly channel, mostly during autumn, winter and early spring. At other times of the year the microbial flagellates form a background to pulses of large diatoms dinoflagellates (Hannah 1979). Representatives of the classes Prasinophyceae, Haptophyceae, Cryptophyceae, Chrysophyceae, Chlorophyceae and Euglenophyceae constituted the nanophytoplankton populations, with species of *Pyramimonas* being especially common throughout the year. This general pattern of events was confirmed in grid surveys and in stations at several points in the region of the inner Firth. In high level rock pools on the short phytoflagellate populations were noticeably abundant during winter months, with rates of carbon being appreciably greater than that in the neighbouring sea (Hannah and Boney, 1980). In two sea lochs, the nanophytoplankton contributions to both total chlorophyll and to fixed carbon was lower in the more polluted Gairloch both when the water was stratified and unstratified than in the permanently stratified Loch Long (Hannah and Boney, 1980).

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WILDLIFE AND COUNTRYSIDE BILL, 1980

The Bill replaces, with considerable additions and amendments, the Protection of Birds Acts 1954 to 1967 and the Conservation of Wild Creatures and Wild Plants Act 1975. It is divided into four parts, dealing respectively with protection of animals (including invertebrates) and plant (including cryptogams), conservation of environments, preservation and clarification of rights of ways, and a number of miscellaneous and general matters. It is the first two parts which primarily affect members of our Society.

The first eleven clauses of Part I deal solely with animals. Clause 12 prohibits intentional picking, removal or destruction of any of the wild plants listed (Schedule 7) as being rare or endangered in this country, and trafficking in these in any form is banned: no nonvascular plants are on this list. Intentional uprooting of any wild plants, other than as an incidental consequence of some lawful operations (such as, presumably, cultivation) is banned for unauthorised persons. Deliberate introduction of plants into the wild which are not ordinarily found in the wild state in Great Britain or which, although already occurring in the wild are considered undesirable, is banned. Here we meet the only mention of algae in the whole Bill - the notorious Sargassum muticum is the sole inhabitant of this latter category. There is provision for additions to or deletions from these schedules.

Authority to by-pass these restrictions for scientific and educational reasons may be obtained from the Nature Conservancy Council, and may be general or specific, for individuals or groups, for a limited or extended period. There may be a charge for this licence.

Penalties for offences can be severe - up to £500 and/or three months imprisonment per item, with forfeiture of collecting apparatus, and offenders would not have to be caught flagrante delicto but could be charged at any time after the commission of the offence.

It is probable that the term 'wholly remove' will be added to 'uproot' to cover non-vascular plants, which do not have true roots, that introducing alien plants into the wild will not be deemed an offence under the Act because of the difficulties in controlling horticultural material, and that trafficking in scheduled plants will be less rigorously controlled, since sources of plant material are not so easily traced as with corresponding animal material.

Part II provides for designation of sites of special scientific interest for biotic or other reasons, which are then protected against operations which may damage their special features. Owners or occupiers who wish to carry out such an operation must obtain the written permission of the Nature Conservancy Council. If no agreement can be reached between Council and would-be developer, and no order for compulsory acquisition by the Council is served, then the developer may proceed.

Provisions for setting up and managing National Nature Reserves, for special protection of limestone pavements in general and of moor and heathland in National Parks are included, but at no point is there any mention of aquatic habitats, marine or freshwater, nor the special problems of conservation which beset them. There is no mention of the coastal limits within which these apply, nor any indication whether there are any regulations particularly applying to SCUBA divers. One may assume that amateurs co-operating in the Society's mapping scheme will be able to get permits to continue to collect voucher specimens, but if the strict letter of the law is observed, the need for licences will be a deterrent to all but the keenest amateurs.

It is unfortunate that so few algae can be reliably identified in the field without removal, and that legislation designed to conserve wildlife will militate against its study without really aiding algal conservation, for there is no evidence that any algal species in the British Isles is seriously threatened through the activities of collectors, while habitat destruction is a very real threat against which this Bill offers little defence as far as aquatic habitats, particularly marine and maritime ones, are concerned. However, the Department of the Environment in a consultative paper published recently has proposed that marine nature reserves covering both intertidal and subtidal habitats be set up, within which activities prejudicial to wild life would be firmly banned, and we must hope that these praiseworthy intentions will be implemented without delay.

David E.G. Irvine

SOLUTION TO CROSSWORD IN NEWSLETTER 13

1	C	E	2	R	A	3	M	I	4	A	L	5	E	S	/	6	A	7	L	G	8	A
E	/	E	/	A	/	L	/	Q	/	/	/	/	/	/	/	/	O	/	T	/	/	/
9	L	I	S	T	S	/	10	A	C	U	T	11	L	E	R	I	A	/	/	/	/	/
L	/	T	/	T	/	R	/	A	/	O	/	I	/	L	/	/	/	/	/	/	/	/
/	/	12	I	N	I	T	I	A	L	A	P	I	C	A	L	/	/	/	/	/	/	/
13	S	/	N	/	G	/	E	/	/	/	/	H	/	A	/	O	/	/	/	/	/	/
14	T	O	G	R	O	W	A	N	/	15	T	O	B	E	A	R	/	/	/	/	/	/
E	/	/	/	C	/	E	/	16	A	/	S	/	/	/	/	/	/	/	/	/	/	/
17	P	H	18	O	T	O	N	/	19	A	L	G	I	N	20	A	T	E	/	/	/	/
H	/	V	/	L	/	/	/	/	/	L	/	P	/	M	/	R	/	/	/	/	/	/
21	A	R	E	S	E	A	22	R	C	H	S	H	I	P	/	/	/	/	/	/	/	/
N	/	R	/	U	/	I	/	A	/	O	/	H	/	23	R	/	/	/	/	/	/	/
24	O	L	D	A	S	H	P	A	N	/	25	N	O	O	N	E	/	/	/	/	/	/
O	/	U	/	/	/	E	/	D	/	I	/	R	/	N	/	/	/	/	/	/	/	/
26	N	E	E	D	/	27	P	R	I	S	E	A	P	A	R	T	/	/	/	/	/	/

REQUESTS AND ANNOUNCEMENTS

The distribution of Vaucheria (Xanthophyceae) species in the British Isles.

Following my studies on brackish and fresh water species of Vaucheria in the Severn Estuary, I am now working on certain aspects of the distribution of Vaucheria species in Britain. If anyone is prepared to send me specimens to help me in my survey, I would be very pleased to receive them. Typical habitats of Vaucheria, in which I am interested, include estuarine regions, salt marshes, river banks, streams, ponds and pastureland.

Suitable specimens would be small tufts (about the size of a 2p piece) cut out of the Vaucheria 'turf' and sent fresh please in, preferably, a plastic tube for protection or otherwise a polythene bag. Specimens are of real value, however, only if they are accompanied by full details of the habitat (including other vegetation in the vicinity of the collection site) and, in the case of salt marsh specimens, the level on the marsh (with reference to Chart Datum or Ordnance Datum if possible) at which the collection was made. A grid reference for the collection site would be particularly valuable.

Specimens do not have to be fertile as I am culturing all samples to fruition in the laboratory. I should also mention that I am fully aware of the Vaucheria survey of Prof. T. Christensen (Copenhagen); my work is intended to complement his and to expand on certain aspects of the distribution of Vaucheria in the British Isles.

Dr Lynda P. Smith
Dept. of Botany,
The University,
Liverpool L69 3BX.

Acid environment newsletter

As a result of discussion on highly acidic environments at the 1980 S.I.L. congress at Kyoto, a newsletter on this topic will be distributed at occasional intervals until the time of next congress in Lyons. The first letter deals almost entirely with algae and any phycologist is welcome to a copy. Anyone who wants to be added to the regular mailing list must contribute the occasional note about his/her own research or particular interest in the topic. Please write to:

Dr Brian Whitton
Dept. of Botany,
University of Durham,
Science Laboratories,
South Road,
Durham U.K.

Request from Chile for algal collections

Maria Eliana Ramirez C. of Laboratorio de Cryptogamia, Museo Nacional de Historia Natural, Casilla 787, Santiago, Chile, is working on taxonomy of benthic algae in Northern Chile. She would like to receive collections of algae from other countries and will send collections from Chile in exchange.

Announcement from the Company of Biologists

The Company of Biologists Limited is pleased to announce to students from British Universities and Polytechnics, that they have limited funds available, from their Scientific and Educational Fund, to make small grants for the following purposes:

1. Grants for research students in the fields of biology covered by the Company's journals, to help them to travel in connection with their research.
2. Grants to organisers of conferences in the fields covered by the Company's journals to help them assist junior scientists to attend.

Since funds are strictly limited, grants to individuals will rarely exceed £100. Priority will be given to travel in connection with research. Applications from research students should be supported by a letter from the Head of Department. Applications will be assessed for their scientific merit but a summary of the finances available to the applicant will also be needed.

The Board regrets that funds are not available for undergraduate expeditions or for removal expenses of research workers.

The Company of Biologists Limited is an independent organisation (registered as a charity) whose members are active professional biologists. The Company, which was founded in 1925, is the owner of Journal of Experimental Biology, Journal of Cell Science and Journal of Embryology and Experimental Morphology, which are printed and published by the Cambridge University Press.

Application forms for the Fund can be obtained from the Company Secretary, Company of Biologists Ltd., Department of Zoology, Downing Street, Cambridge, CB2 3EJ.

NEWS FROM MEMBERS

Sabbaticals

Dr Betty Moss of Newcastle-upon-Tyne University, U.K. will visit Monash University, Australia from July to December 1981 to work with Dr Margaret Clayton who has just spent a sabbatical period at Newcastle.

Dr Chris Haphey-Wood of the University College of North Wales is visiting CSIRO Division of Irrigation Research, Griffith, N.S.W. 2680, Australia until September 1981.

Jobs Wanted

Dr J.D. Box (Botany Dept., Sydney University, Sydney, N.S.W. 2006, Australia). is returning to U.K. in Autumn 1981. Would prefer a job in trace-metals/dissolved organics and phytoplankton. Experience of cyanobacteria, bioassays, algal culture methods, iron and D.O.M. analysis in fresh-waters.

Alan Critchley writing up Ph.D. thesis on ecology of Sargassum miticum in England. Fellowship or lectureship in marine phycology desired. Contact at Portsmouth Polytechnic Marine Laboratory, Ferry Road, Hayling Island, Hants., PO9 0DG, U.K.

P.A.J. Audiffred, Drs biology, available now, marine or salt-marsh algae (ecology, systematics).
F.C.M. Weisscher, Drs biology, July 1981, marine algae (ecology, systematics).
G.C.A. Duineveld, Drs biology, October 1981, marine algae (ecology, systematics)

The three above can be contacted at:
Rijksherbarium, Schelpenkade 6, P.O. Box 9514, 2300 RA Leiden,
The Netherlands.

Dr Domenico Voltolina (at present at Fundacion La Salle de Ciencias Naturales, Punta de Piedras, Venezuela) available immediately, marine phytoplankton taxonomy.

Recent Theses

University College of North Wales

S.P. Bajpai, Ph.D., Studies on the relation between photosynthetic rate and chlorophyll content in plankton algae.

Katherine Richardson, Ph.D., The role of dissolved organic material in the nutrition and survival of marine phytoplankton.

D. Voltolina, Ph.D., The phytoplankton of Liverpool Bay: its taxonomy and quantitative distribution.

Portsmouth Polytechnic

Mr M.M. El Barouni, M.Phil, Studies on dragendorff-positive compounds and haemagglutinins in British marine algae.

Reports/Trial Keys etc

1. A Catalogue and Atlas of the Benthic Marine Algae of the Island of Newfoundland. By G. Robin South and Robert G. Hooper. Memorial University of Newfoundland Occasional Papers in Biology No. 3 136pp.

Available at \$6.00 Canadian from the editor:

Dr Gordon F. Bennett
Dept. of Biology,
Memorial University of Newfoundland,
St. John's,
Newfoundland, Canada A1B 3X9.

2. I have just completed my dissertation on gametogenesis in Hesperiphycus and Cystosena. As a by-product of my research I have prepared an extensive bibliography of fucoi^d reproduction. I will be willing to send copies of this to interested phycologists.

From: Robert B. Setzer

Allan Hancock Foundation,
University of Southern California,
Los Angeles,
California 90007, U.S.A.

3. P.H.M. Huwae, 1980, Sphacelaria britannica in Nederland, cyclostyled report, written in Dutch, Rijksherbarium, Leiden.
G.C.A. Duineveld, 1980, Algenzelekschappen van Playa de las Canteras (Bahia del Confital), Gran Canaria, Canerische eilanden (Marine algal communities), typewritten report in Dutch, Rijksherbarium, Leiden.

4. "Artificial Key to the Common Marine Algae of New England North of Cape Cod". by I.M. Lamb, M.H. Zimmerman and E.E. Webber, 1977. Obtained from-
Farlow Herbarium,
Harvard University,
Cambridge, Mass. 02138, U.S.A.
53 pages - well illustrated
(Generally useful for Northeastern N.A. - for the commonest algal taxa).
5. Sixth Report of the Coastal Surveillance Unit. By W.E. Jones, S.J. Bennell, B.J. McConnell and S. Mack Smith. Dept. of Marine Biology, University College of North Wales, 1980.

Members prepared to give lectures

1. Dr Philip C. Reid
Institute for Marine Environmental Research, Prospect Place,
The Hoe, Plymouth PL1 3DH.

The Continuous Plankton Recorder Survey of the North Atlantic and North Sea. Phytoplankton and environment in the North Sea. 1948-1979. Encyrtment in dinoflagellates, mechanisms and ecology.
2. Yvonne Butler
Marine Laboratory, Portsmouth Polytechnic, Ferry Road, Hayling Island, PO11 0DG.

Coralline algae - their structure, taxonomy etc. - but with particular reference to the simple crustose forms.
3. A.J. Peabody
Home Office Central Research Establishment
Aldermaston Berks RG7 4PN

Diatoms in Forensic Science.
4. Dr W.F. Farnham
Portsmouth Polytechnic Marine Laboratory
Ferry Road, Hayling Island, Hants., PO11 0DG.

Sargassum and other introduced algae in the British Isles.
5. W.F. Prud'homme van Reine
Rijksherbarium, Schelpenkade 6, P.O. Box 9514, 2300 RA Leiden, The Netherlands.

Sphacelariales
Red salt-marsh Algae
Marine Algae from Madein and/or the Canary Islands

MEMBERSHIP LIST

It had been intended to issue the membership list every 5 years or so and to update it in the intervening Newsletters. However, Council has decided that a revised list should be issued with the 1982 Newsletter. In view of this and of the expense of including the large number of changes since the last Newsletter the amendments have not been included in this issue.

BRITISH PHYCOLOGICAL SOCIETY

for inclusion in Newsletter no. 15. March 1982
Closing date 31 January 1982. Please mail to
the editor, Dr Martin Wilkinson, Department of
Brewing & Biological Sciences, Heriot-Watt
University, Chambers Street, Edinburgh EH1 1HX.

NAME _____

ADDRESS _____

LECTURES

I am willing to give a talk(s) to other institutions (subject to
suitable expense arrangements) on _____

SABBATICALS

I will be going on sabbatical to _____

from _____ to _____

The following sabbatical visitors will be staying in my department

from _____ to _____

THESIS TITLES

The following higher degree thesis have been presented this year in
this department

Student	Degree	Title
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

JOBS VACANT

Give title, date available, qualifications sought and details of person to contact.

JOBS WANTED

Give name of person, qualifications, date available, and field preferred.

REPORTS/TRIAL KEYS ETC.

Give details of any keys, reports etc of psychological interest not published in normal scientific literature.

Thank you for your help. If this form is not suitable please just send your information or comments to me in any manner you please.

Martin Wilkinson