39 November 1994

The Phycologist

The Newsletter of

The British Phycological Society

THE PHYCOLOGIST

NUMBER 39 - NOVEMBER 1994

CONTENTS:

The British Phycological Society is a registered charity. No. 246707

EDITORIAL

It is time for another issue of the Phycologist and it just seems like yesterday the last one went out. This is really due to the time it takes for the final copy to be printed and then mailed out. I am sorry the last one took such a long time. This issue can be divided into two, details about the winter meeting and reports from the last AGM of the society and two reports on algal collections.

Barry Leadbeater has written a full obituary for Dennis Greenwood on page 3. I only met Dennis twice and I think Barry has confirmed many of the impressions I had of Dennis.

I would like to thank Gavin Hardy for producing such an interesting article on Indonesia. It is sad to hear that exotic places like the spice islands are becoming polluted with untreated refuse. As Gavin says it is nice to get away in the middle of our winter to warmer climes. They seemed to have covered alot of ground in quite a short period. Bill Farnham has sent me the species list of the 1993 Field Meeting. This list has had a hard life as it has been lost to science on a number of occasions for a number of reasons (mainly to do with computers) but has arrived safely. I was interested to see that it contains alot more than species X in location Y as Bill has given detailed description on location and reproductive status.

As you will see later on the last issue contained one or two typos, the number is still growing. I should state that most of these are my own fault. When articles are submitted it is often on a package different to my own. Sometimes the conversion program can throw up small changes that I miss. When plain text is submitted I retype it and typos often appear at this stage. I hope to keep these to a minimum.

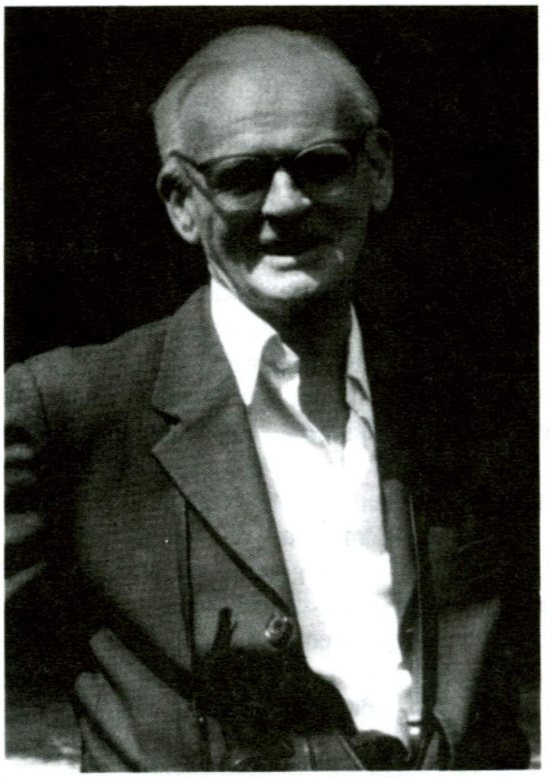
Judith Taylor is planning to organise a workshop at the winter meeting of the BPS in Portsmouth. This is really for the postgraduate members of the society to tap the more experienced members. I think this is a good idea that would do well for our support. More information on this can be found in the Notes and Information section.

I would like to thank all those folks who have taken the time to write to me about the newsletter. All the comments have been favourable and have been a great boost. Thanks.

I hope to see many of you at Portsmouth for the Winter Meeting. Those folks lucky enough to get to go to Chile for the Seaweeds have a great time.

Andrew M. Johnston

Denis Greenwood 1915-1994



Denis Greenwood died suddenly on April 5th 1994 at the age of 78. His work in phycology extended over four decades and being active in ultrastructural research from the time when electron microscopes first became available to biologists he became associated with numerous early ultrastructural discoveries. He was an active member of the British Phycological Society being a familiar face at annual meetings including the 1994 meeting in Liverpool.

Denis Greenwood was born in Birkenhead, Cheshire and brought up in Bury, Lancashire. Following school he enrolled as an undergraduate at Manchester University where he read for an honours degree in Botany, graduating in 1937. It was during his stay in Manchester that he first made contact with the late Professor Irene Manton who at the time was a lecturer in the Department of Cryptogamic Botany. This was the start of a scientific relationship that was to extend in one way or another for the greater part of Denis's life. Whilst still an undergraduate he collaborated with the late Professor Bennet-Clark, who was also a lecturer at Manchester, on a study into the 'water relations and osmotic pressures of plant cells' which resulted in a publication under that title in the New Phytologist in 1936. This paper clearly carries the Greenwood imprint of carefully documented painstaking work. His early scientific promise together with his contact with Irene Manton and others was to have a major effect on the course of his later career. Following graduation, Denis remained at Manchester University to train for the teaching profession. He obtained a Diploma in Education in 1938 and then moved South to take up a teaching post at the Friend's School in Saffron Walden.

At the outset of the Second World War Denis registered as a conscientious objector and joined the Friend's Ambulance Unit. The war years were a demanding and, at times, a dangerous period of his life. After paramedical and bacteriological training at the London Hospital he was posted in 1942, at the height of the Mediterranean War, to Cairo, Egypt. In 1944 he moved to Yugoslavia under the auspices of UNRA (United Nations Relief Agency) and established a bacteriological unit as part of UNRA's rehabilitation efforts. As a result of his wartime experience Denis seriously considered re-training for the medical profession.

On return to Britain at the end of hostilities Denis spent one year (1946) with the Manchester Blood Transfusion Bank before joining the Nottingham Laboratory of the Forensic Science Service in 1947. A year later Denis's life was to take another turn following a chance meeting with Professor Manton, who by this time was head of the Botany Department at Leeds University. Knowing of Denis's scientific and technical abilities from his Manchester days Manton invited Denis to join the Leeds

Botany Department as a Research Assistant in 1948. During his first years in Leeds, Denis worked with Robert Brown on the physiology of seed germination in Lesser Broomrape (Orobanche minor Sm), an achlorophyllous angiosperm parasitic on clover.

It was in the early 1950s that Manton was pursuing her ultrastructural studies on zoospores and gametes of a wide range of cryptogams. Denis, now a lecturer (1950), collaborated with Manton and Clark, and later Ken Oates, in observing the fine structure of brown algal gametes, xanthophycean and chlorophycean zoospores as well as zoospores of fungi such as Saprolegnia and Olpidium. In all cases they were able to demonstrate the substructure of eleven strands (the 9+2 axoneme) within flagella. They also gained much additional information on the arrangement and substructure of heterokont flagellar hairs (flimmer). These observations were so novel and revelatory at the time that the Leeds group, of which Denis was a member, was propelled to the international centre stage in plant ultrastructural studies. Denis's technical skills were also at this time directed towards constructing a ciné apparatus with time lapse facility for filming spore development and release in Saprolegnia.

In 1960 Denis was invited by the late Professor W.O. James to accept a Senior Lectureship at Imperial College, London University. He was given particular responsibility for setting up an EM laboratory in the Botany Department. This post provided Denis with a good opportunity to develop independently his academic and technical talents. A measure of his reputation at this time was that had he not taken the Imperial College post he would have been snapped up elsewhere. This move represented the central high point of his academic career.

Once established in London he continued his ultrastructural work on algae and fungi but also, in collaboration with colleagues at Imperial, he investigated the ultrastructure of chloroplasts. In particular, he became interested in the numbers and arrangement of thylakoids within and between lamellae, the presence or absence of girdle lamellae and the numbers of membranes surrounding a chloroplast. His interest in the variation of algal chloroplast ultrastructure inevitably lead to a wider consideration of an evolutionary series of algal classes leading to other cryptogams and higher plants and of the possible symbiotic origin of chloroplasts. It was as part of this study that Denis and his research students Uwe Santore and Susan Morrall came to recognise, name and describe the 'nucleomorph' in cryptophytes. With his colleague John Gay and a lineage of distinguished research students including Brent Heath, John Williams, Nigel Hardwick and Peter Mercer, Denis pursued his interests in fungal ultrastructure and plant pathology. Denis was eventually promoted to a Readership in Ultrastructural Botany and retired in 1981 at the age of 65.

Whilst his acute scientific curiosity remained active throughout his life Denis found it difficult to commit his findings to paper. He was a perfectionist and, as his colleagues and students were to experience, no work ever reached a sufficient level of completeness or perfection in his mind to warrant publication. Even when invited to write review articles on topics close to his own interests he was still unable to undertake the task. And yet when relaxed and writing to friends and colleagues, when writing for popular scientific journals or when correcting and commenting on others' work he could write with directness and fluency. Regrettably Denis only leaves us with glimpses of his own observations and then they are often hidden away in obscure Symposial Proceedings or Abstracts of Meetings.

In summarising his scientific achievements it is easy to forget the man. Denis was slight in stature but big in humanity. He was widely read. When young he was a keen rock climber and throughout his lecturing career regularly took marine biology field courses to North Wales. Brought up in a Methodist family background in Lancashire he was and remained unspoiled by the trappings of office. He remained throughout his life a tolerant, accessible colleague, friend and mentor. He was a devoted family man. He will be remembered by many for his ever enquiring mind and good sense of humour.

He is survived by his wife Kathleen, three daughters and a son.

Barry Leadbeater

BRITISH PHYCOLOGICAL SOCIETY

Minutes of the 42nd Annual General Meeting of the Society, held at University of Liverpool, at 17.00 on Thursday 6th January 1993. The President, Dr M.J.Dring, was in the chair, 50 members were present.

1. There were no apologies for absence.

2. Minutes of the 41st Annual General Meeting were approved and signed.

3. Matters arising: There were no matters arising.

4. Presidential report: The President began by pointing out that the winter meetings are the main activity of the society, but that it is now necessary to plan these reasonably far in advance to guarantee accomodation and lecture theatres. The next two meetings have therefore been fixed:

1995 - University of Portsmouth (Jan.4th-6th)
1996 - University of Lancaster

Plymouth has been proposed as a venue for 1997, subject to confirmation.
Offers to host future meetings are always welcomed by Council.

The President also pointed out the recent launch of two projects; the transformation of the British Phycological Journal into the European Journal of Phycology, and the production of BPS T-shirts. Approximately 3/4 of the stock have already been sold and thanks were expressed to Mr S.J.M. Droop and Dr L.A. Terry for their work.

5. Reports from Council:
a. Hon. Secretary. Once more there was an extremely good response to the call for contributions, with 27 posters and 69 papers being offered. This exceeded numbers in previous years. It was pleasing that virtually all contributors submitted titles and abstracts on time, so that the programme was compiled by mid October and appeared in the Phycologist in November. As usual the poster session opened the meeting, followed by a series of papers on Eutrophication organised by Prof. B. Moss. While orginally planned to include a session on marine eutrophication, this had to be omitted, so that there were 3 sessions in all: Eutrophication in freshwaters, Eutrophication in estuaries and Eutrophication and Conservation. Nevertheless these provided a good overview of the subject.
Thereafter, with the exception of the 3rd Founders' lecture by Klaus Lüning, parallel sessions were necessary to fit all the contributions into the time available. Special sessions were held on Algae and Conservation (co-ordinated by Dr J. Brodie) and on Measuring the growth of algae in natural populations (co-ordinators: Drs M.J. Dring and E.J. Cox), while other papers were grouped into coherent sessions as far as possible. An encouraging increase in participants for the Manton prize, to 11, was noted. Members are encouraged to remember to enter their students in the future.
A booklet of abstracts was provided for each participant at the meeting. Abstracts of presentations will also appear in the next issue of the Phycologist. Although there was a general improvement in the appearance of the abstracts, authors were encouraged to read and follow the instructions!
Sadly, Mr J.R. Carter who was elected as an Honorary Member of the Society only last year, has died. He suffered a stroke in October 1993 and died in November. His expertise will be much missed by diatomists.
Thanks were expressed the Natural History Museum for supporting the Hon. Secretary in her

duties, and particularly to colleagues who helped to fold and dispatch circulars.

b. Hon. Treasurer. In presenting the accounts the Hon. Treasurer pointed out that there was a slight decrease in membership subscriptions, partly because of good payment last year, but also because more were in arrears this year. Journal profit was marginally up, in spite of a penalty for excess pages. Thanks were expressed to Dr Flynn for obtaining industrial support for the Swansea meeting which produced an unanticipatedly large surplus, including significant compensation for the noise experienced in lecture theatres. The surplus £1800 will go into the Scientific Meetings Fund. Thanks were also expressed to Dr Hardy and others who helped with or contributed to the auction. Monies raised from the sale of Manton items (£85) will go to the Manton fund; £428 to the Scientific Meetings fund.

The amount of interest earned was well down, but anticipated. The effect has been minimized by tranfers to other accounts. The effect will be exacerbated next year and the next Treasurer will need to consider other investment possibilities. Although the credit card service charge is down slightly on last year, charges have been raised again and Council has agreed that these should be passed on to members using credit cards. This is still cheaper than charges on foreign cheques.

An increase in bank charges was experienced in spite of Charitable status but reduced after consultation. A new committee has been created to oversee production of the Journal. Back issues have been moved to the Natural History Museum and can be obtained from Mr D.M. Williams. The Manton prize is a new item (prize + certificate). The data protection register has been renewed this year (fee for 3 years) and new software has been purchased to facilitate handling the membership records.

Thanks were expressed to officers and members of council for keeping their expenses down. Income exceeded expenditure by £3534, but about £2150 is earmarked for particular funds, so the excess is about £1300. The loss of about £1000 profit vindicates the increase in subscriptions this year, but the increase is sufficient to allow subscriptions to remain the same. The membership element should remain constant for several years although the journal part will need reviewing.

The Hon. Treasurer expressed her thanks to Society officers for their help and friendship. Also to the auditors and her husband for their support and expertise. On behalf of the new Treasurer she reminded members that they needed to fill out new banker's order forms and pass them onto their banks as the Society was changing banks.

The President expressed thanks to the Hon. Treasurer for her 3 year stint through difficult times, involving a drop in interest rates, different banks and 3 changes in subscription charges. However, he pointed out, she had left the Society in good shape.

c. Hon. Editor of the Journal. The Hon. Editor reported that this was his first report as editor of the European Journal of Phycology. The first issue of the European Journal, numbered to be sequential with the British Phycological Journal, had appeared slightly late because of format changes. Unfortunately this delay had been carried over to other issues; the last issue of the volume had been published but was in transit at the time of the meeting. The Hon. Editor hoped that the correct publication and distribution schedule can be restored. The number of pages published more or less matched the prediction agreed which should produce an increase in income. Feedback had been generally favourable.

With the new editorial structure it was more difficult to determine the flow of manuscripts at present although the number of submissions seemed to have increased. A journal management committee has been set up and the journal is being offered to members of other European Phycological Societies at the personal subscription rate.

The Hon. Editor pointed out that this was his last report after a long stint of 7 years. He has enjoyed the work and is pleased to see the transfer of the journal. Thanks were expressed to all who have helped, especially the associate editors of the new journal. He was delighted to hand over to Dr C.A. Maggs, both to relinquish responsibility and because Dr Maggs had agreed to take on the journal. The President thanked the Hon. Editor for his report and long service.

d. Hon. Membership Secretary. A summary of the 1993 membership details were presented, broken down by geographical region. The number of new members was slightly up, the recruitment drive was proving successful and thanks were expressed to Dr P.K. Robinson for his marketing efforts. Unfortunately there had been a high number of deaths over the year: Elsie Conway, John Carter, Peter Dixon, Mike Neushel and Peter Kornmann.
The Hon. Membership Secretary wants to produce a membership list for members, probably in the summer issue of the Phycologist. A questionnaire had been sent out. Members were asked to check/fill in details and return to Mr S.J.M. Droop. New information was also requested.
e. Marine Algal Flora Committee. Dr C.A. Maggs presented the report compiled by Dr R.L.Fletcher. The committee had met twice in 1993. Two changes to the membership were noted. Linda Irvine retired after 26 years on the project and Juliet Brodie has been invited onto the committee. It is proposed that she be responsible for the production of the Bangiophycideae volume.
Particularly good progress was reported on the Rhodophyte volumes. The Ceramiales volume (C.A. Maggs and M. Hommersand) was published while the Corallinales, HIldenbrandiales volume (L. Irvine and Y. Chamberlain) is at the galley proof stage and should be published in early 1994.
Work is progressing slowly on the other volumes. Discussion is in progress to place a PhD student onto a study of the microalgae of chalk cliff habitats as a valuable source of base-line data for the flora project.
Work on the seaweed mapping scheme continues steadily. Consideration is being given to the printing of new record cards and a new publicity drive.
f. Freshwater Algal Flora Committee. Dr B.A. Whitton reported that there had been two committee meetings in the last year. Work is now underway and a fairly detailed account is planned for the second 1994 issue of the Phycologist.
The freshwater flora has rather different objectives to the marine flora. This will be a practical project, producing a book by a definite deadline, probably as a 2 volume handbook. It will include all groups although some will be dealt with more critically than others. Publication is aimed for late 1998.
Work on some groups is already well underway (e.g. red algae, R. Sheath) and it is envisaged that detailed accounts will be published in journals and then simplified for the handbook. Most groups are covered but offers of help, e.g. with particular genera or phyla, would be welcomed. The Eustigmatophyceae is a particular problem. Guidelines to authors will be sent out in March. At a later stage it is anticipated that a co-ordinator/editor will be needed and money must be found to support that. Knowledge of any source of financial help would also be welcomed.
g. Conservation Committee. Dr D.M. John reported that the committee had been restructured, although all but one of the previous members was staying on with promises to be more active. Colin Reynolds had resigned because of time pressures. Drs J. Brodie, J. O'Mahoney and G. Hardy were now on the committee.
The first formal meeting had been held, with Juliet Brodie as secretary and 2 observers. A report would be passed to Council. Meanwhile activities over the past year were briefly mentioned, including progress on the red data book, our response to SERCON in which concern was expressed over the lack of consideration of algae. Plantlife are producing a Conservation prospectus and there are issues associated with the EC directive and Biodiversity challenge to be dealt with. Dr John stated that they hope to become an active committee.
Dr Guiry asked Dr Boalch who is now responsible for the list of non-admissible alien introductions? Dr Maggs replied that NCC were responsible. It was asked that any information on the introduction of non-native species be given to the committee who would pass it on to the JNCC.
g. Hon. Editor of Newsletter. Dr Edyvean was not present but Dr A.M. Johnston presented

the report, as he will shortly take over from Dr Edyvean as Hon. Editor. Thanks were expressed to G.Hardy for copy and to D. Williams for help as Associate Editor. Thanks were also expressed to others who had helped, particularly Dr G. Russell in pointing the Editor in the right direction.
Dr Johnston reported that there were ideas for the incorporation of new items in the Phycologist, such as conservation work, and to encourage non-British members to contribute. It was felt that more should be done for European members of the society. Any other ideas were welcomed. It was also likely that another Associate editor would be sought.
It was requested that the issue number and date be printed on the cover. This will be done in future.
Thanks were expressed to Dr Edyvean for his work in the past, and best wishes to Dr Johnston as he takes over.

The adoption of the above reports was proposed by Dr M. Guiry, seconded by Dr C.M. Happey-Wood and carried unanimously.

5. Election of Council for 1994.
The nominations for Hon. Secretary, Hon. Treasurer and Hon. Membership Secretary were unopposed and therefore elected. Thus Dr E.J. Cox remains as Hon. Secretary, Dr L.A. Terry becomes Hon. Treasurer and Mr S.J.M. Droop continues as Hon. Membership Secretary.
2 nominations had been received for Ordinary Members of Council. In the absence of a third nomination, Council had nominated Mrs J. Moore. Thus the new members of council are: Dr S.C. Maberly, Mrs J.A. Moore and Dr J.A. Taylor.
Thanks were expressed to Juliet Brodie, Gavin Hardy and Phil Wright for their work on Council.

6. Constitution. A number of changes to the constitution had been proposed and circulated prior to the meeting. These were that: the Hon. Membership Secretary be an Officer of Council, subject to election and that there were slight changes to the roles of other Officers; the name of the journal be changes; the Hon. Editor of the Newsletter be an ex-officio member of Council and there should be a change to one examiner to meet current legislation. Dr J. Kain proposed acceptance of the changes, seconded by Dr M.E. Callow. The motion was passed unanimously.

A copy of the revised constitution will be circulated.

7. Phycology in Europe. The President reported on the moves towards a European Federation. Five societies have given details of their membership: the Netherlands, Germany, Greece, Spain and Hungary. Personal subscriptions to the journal are available to members of these societies and all have been informed of the offer. Greece has accepted and it is hoped that some of its members will take up the offer. The aim is that this will increase circulation of the journal and encourage others to subscribe.
The possibility of a European Phycological Congress was discussed at the Summer Council meeting. It was recognised that there is a gap in the phycological cycle between the International Phycological Congress and the Seaweed Symposium, falling next in 1996. Prof. Melkonian has agreed to organise the First European Phycological Congress from 11th-18th August 1996 in Cologne (Germany). This will coincide with the International Society for Evolutionary Protistology and the 7th International Congress of Applied Phycology. 600-700 participants are therefore anticipated.

8. Institute of Biology. The Hon. Secretary reminded members that BPS is affiliated to the Institute of Biology and that representatives attend various committee meetings. This offers

an opportunity to have a stronger biological voice on policy issues.
The opportunity for individual BPS members to join IOB at a reduced rate was also pointed out. Information was available at the back of the meeting.

9. Election of independent examiner. The Hon. Treasurer suggested the election of Peter Morrison, senior manager of a firm of accountants, who audit a large number of charities.

10. Any other business. There was no other business.

The meeting ended at 18.26.

British Phycological Society

43rd ANNUAL GENERAL MEETING

Chair: The President, Dr M.J. Dring.

17.00 - 5th January 1995
University of Portsmouth.

AGENDA

1. Minutes of the 42nd Annual General Meeting, held at University of Liverpool on 6th January 1994.

2. Matters arising from the Minutes.

3. Presidential report

4. Reports from Council:
   (a) Report of the Hon. Secretary
   (b) Report of the Hon. Treasurer; presentation of accounts for 1994.
   (c) Report of the Hon. Editor of the European Journal of Phycology.
   (d) Report of the Hon. Membership Secretary.
   (e) Report of the Hon. Editor of the Phycologist.
   (f) Report of the Marine Algal Flora Committee.
   (g) Report of the Freshwater Algal Flora Committee.
   (h) Conservation Committee.

5. Election of Members of Council for 1995.
Council has made the following nominations for Vice-Presidents:

Vice-President (President-elect)	Prof. B. Moss, University of Liverpool
Overseas Vice-President	Dr. W.T. Stam, University of Groningen

There are 3 vacanices for ordinary members of council to serve for 3 years, and for 1 member to serve for 1 year, following the appointment of Dr A.M. Johnston as Hon. Editor of the Phycologist.

6. Phycology in Europe.

7. Biodiversity issues

8. Honorary members.

9. Election of auditor for 1995.

10. Any other business.

Please notify the Hon. Secretary **before 9.00 on the 5th Jan.** of any items for consideration.

BRITISH PHYCOLOGICAL SOCIETY
Winter meeting 1995 - Programme

Tuesday 3th January 1995

Poster session - 18.30 onwards

BALL,S.J. (Lancaster University)
The seasonal distribution of picoplankton in Windermere.

BEAKES,G.W., CLEARY,A.L.* & BOOTH,T.A. (University of Newcastle upon Tyne & *Research School of Biological Sciences, Canberra, Australia)
The application of Laser Confocal Scanning Microscopy (LCSM) to study living cells of freshwater algae.

BUCHHOLZ,C.M. & LÜNING,K. (Biologische Anstalt Helgoland, Germany)
Off-shore mass culture of *Laminaria* spp. near Helgoland.

DOUGLAS,G.E. (The Natural History Museum, London)
The identity of phycobionts from the *Acarosporian sinopicae* alliance lichens.

FARRAR,R. & FLETCHER,R.L. (The Marine Laboratory, University of Portsmouth)
The effect of light, temperature, salinity and nutrient enrichment on the growth rate of *Chaetomorpha linum* (O.F.Müll.) Kütz.

GABRIELSEN,B.O. (Algea A/S, Lier, Norway)
Mechanical harvesting of seaweed in Norway.

GOROSTIAGA,J.M., SANTOLARIA,A., JONES,L. & FARNHAM,W.F. (Universidade Pais. Vasco, Bilbao, Spain & The Marine Laboratory, University of Portsmouth)
A comparative study of *Fucus chalonii* J.Feldm. and *Fucus vesiculosus* (L.) f. *linearis* (Huds.) Powell.

HIGHAM,W. & LEWIS,J. (University of Westminster)
An investigation of the distribution of *Alexandrium* cf. *tamarense* cysts in the sediments of the Firth of Forth.

HILSE,C., WILHELM,C., RAVEN,J.A.[1], JOHNSTON,A.M.[1] & KESSELMEIER,J.[2] (University of Mainz, Germany; [1]University of Dundee; [2]Max-Planck-Institut für Chemie, Mainz, Germany)
DMSP-content of the marine alga *Prymnesium parvum*.

HOOPER,R.G. & CUTHBERT, F.M. (Memorial University of Newfoundland, Canada)
Relative fecundity and gonad quality of green sea urchins, *Strongylocentrotus droebachiensis* feeding on different species of seaweeds.

HOOPER,R.G., FARNHAM,W.F. & WHITTICK,A. (Memorial University of Newfoundland, Canada & The Marine Laboratory, University of Portsmouth)
Seaweed specific geographic limits in the English channel and the northern Gulf of St.Lawrence.

HOOPER,R.G.[1,2], WHITTICK,A.[1] & FARNHAM,W.F.[2] ([1]Memorial Univeristy of Newfoundland, Canada & [2]The Marine Laboratory, University of Portsmouth)

Subtidal zonation of benthic communities in Newfoundland.

HOPLEY,A., LEFTLEY,J.W. & MACKIE,I.M. (Central Science Laboratory, Torry, Aberdeen & Dunstaffnage Marine Laboratory, Oban)
Prorocentrum lima, CCAP 1136/9, a UK DSP toxic alga.

HORI,T. & GREEN,J.C.* (University of Tsukuba, Japan & *Plymouth Marine Laboratory)
The occurrence of MTOCs on mitochondrial surfaces during cell division in a haptophyte.

HUNT,A.P. & ECCLESTON-PARRY,J.D. (Lancaster University)
The colonisation dynamics of a riverine biofilm.

KARPOV,S.A. & TANICHEV,A.I. (St. Petersburg State University & Limnological Institute, Irkutsk, Russia)
Intraspecific differences in the ultrastructure of colourless chrysomonad *Paraphysomonas vestita*.

LEWIS,J., HARRIS,A.S.D., JONES,K.J. & EDMONDS,R. (University of Westminster & Dunstaffnage Marine Laboratory)
Long term survival of marine phytoplankton in stored sediment samples.

MEDINA-RAMIREZ,G.E., ANDRADE,E.D., CARABOT-CUERVO,A., BLUNDEN,G.*, ROGERS,D.J.* & SAMPAIO,A.H.* (University of Los Andes, Mérida, Venezuela; *University of Portsmouth)
Lectins in Venezuelan marine algae.

MURANO,E.[1], RIZZO,R.[1], TOFFANIN,R.[1], NAVARINI,R.[1], PAOLETTI,S.[1], KNUTSEN,S.H.[2], BLUNDEN,G.[3] & CARABOT CUERVO,A.[4] ([1]POLY-tech and POLY-biòs, Trieste, Italy; [2]Agricultural University of Ås, Norway; [3]University of Portsmouth; [4]University of Los Andes, Mérida, Venezuela)
The structure and properties of agar from *Gracilaria bursapastoris* and *G.mammillaris*.

NIMER,N.A., GUAN,Q. & MERRETT,M.J. (University of Wales, Swansea)
The development of extracellular carbonic anhydrase in high-calcifying cells of *Emiliania huxleyi* (Lohmann) Hay & Mohler.

NIMER,N.A. & MERRETT,M.J. (University of Wales, Swansea)
The utilization of dissolved inorganic carbon by the marine microalgae *Phaeodactylum tricornutum* and *Emiliania huxleyi*.

PYE,K., FLETCHER,F.L., FONTANA,D. & LOWTHION,D. (University of Portsmouth & National Rivers Authority, Southern Region.
The effects of eutrophication on the marine benthic flora of Langstone Harbour, south coast of England: a reassessment.

QI,Y., ROGERS,D.J., SWAIN,L.J., NICHOLLS,T.J. & COOK,D.G. (University of Portsmouth)
Biotinylation of the lectin from *Codium fragile* spp. *tomentosiodes* for use as a histochemical reagent.

SAKER-SAMPAIO,S., BARWELL,C.J. & ROGERS,D.J. (University of Portsmouth & Universidade Federal do Ceara, Brazil)
Extraction and analysis of α-carotene and β-carotene from marine macro-algae.

SAMPAIO,A.H.*, ROGERS,D.J. & BARWELL,C.J. (University of Portsmouth & *Federal University of Ceara, Brazil)
Molecular weight of the lectin from the red alga *Ptilota filicina*.

SAMPAIO,A.H.*, ROGERS,D.J. & BARWELL,C.J. (University of Portsmouth & *Federal University of Ceara, Brazil)
Seasonal variation in production of lectins by *Ulva* species.

SMART,J.D. & MORTAZAVI,S.A. (University of Portsmouth)
An evaluation of the mucosal-adhesive properties of sodium alginate.

STEENTOFT,M., IRVINE,L.M. & FARNHAM,W.F. (The Marine Laboratory, University of Portsmouth & The Natural History Museum, London)
Two terete species of *Gracilaria* and *Gracilariopsis* (Rhodophyta) in Britain.

SWAIN,L.J., ROGERS,D.J., CRITCHLEY,A.T. & GEORGAKOPOLOUS,C.O. (University of Portsmouth & University of Witwatersrand, Johannesburg, S.Africa)
New lectins from *Codium* species.

SWAIN,L.J., ROGERS,D.J., GIBBS,R.V. & CARPENTER,B.G. (University of Portsmouth)
The existence of a tetrameric form of the lectin from *Codium fragile* spp. *tomentosiodes*.

TYLOR,T.J.M., LEWIS,J. & HEANEY,S.I. (University of Westminster & Department of Agriculture, N.Ireland)
A study of the vertical distribution of *Alexandrium* sp. hypnocysts in the sediment of Belfast Lough, 1994.

WHITTICK,A. (Memorial University of Newfoundland, Canada)
Nuclear behaviour and development in *Membranoptera* sp. (Delesseriaceae, Rhodophyta).

Those presenting posters should ensure that these are in place before the start of the evening session on Jan.3rd. The posters will be located near the lecture theatres so that it will also be possible to view them during the rest of the meeting.

Wednesday 4th January 1995

Valorisation and utilisation of algae and algal products

9.00 : BARWELL,C.J. & BELLOTA,M. (University of Portsmouth & Centre for Bioactive Marine Substances, Habana, Cuba)
Valorisation of marine algae by evaluation of chemical constituents and biological activities.

9.45 : ROGERS,D.J., SAMPAIO,A.H.*, QI,Y., MILAD,A.M. & SWAIN,L.J. (University of Portsmouth & *Federal University of Ceara, Brazil)
Recent advances in the production and utilisation of algal lectins.

10.15 : GRIFFEN,R.L., ROGERS,D.J.*, MILAD,A.M.* & SPENCER-PHILLIPS,P.T.N. (University of the West of England, Bristol & *University of Portsmouth)
Demonstration of erythrocyte surface structures by gold-labelled lectin from *Codium fragile* spp. *tomentosoides*.

10.45 : Coffee

11.15 : BARWELL,C.J. (University of Portsmouth)
Evaluation of some European marine red algae as sources of biliproteins.

11.45 : BLUNDEN,G., WU,Y., JENKINS,T. & HANKINS,S.D.* (University of Portsmouth; *Maxicrop International Ltd., Corby)
The significance of betaines in the increased resistance to nematode attack of tomato plants treated with extracts of *Ascophyllum nodosum*.

12.15 : NOTODIMEDJO,S. & GABRIELSEN,B.O. (University of Malang, Indonesia & Algea A/S, Lier, Norway)
The effect of seaweed extract on the growth and production of apples in Indonesia.

12.40 : Lunch

Session A - Marine algae

14.00 : TITTLEY,I. (The Natural History Museum, London)
Marine algae of the Azores: biogeography and ecology.

14.20 : NETO,A.I. (Universidade dos Açores)
Structure and seasonal variations of benthic algal communities on the littoral of Sao Miguel (Azores).

14.40 : GROSS,V.A. & CHENEY,D.P. (Northeastern University, USA)

Biological and oceanographic causes of a long-standing algal bloom of *Pilayella littoralis* on Massachusetts beaches.
15.00 : HILL,T.O. & NORTON,T.A. (Port Erin Marine Laboratory)
Holding your zone: growth rates of competing seaweeds on the low shore.
15.20 : SCOTT,C. & FLETCHER,R.L. (The Marine Laboratory, University of Portsmouth)
The seasonal occurrence and succession of fouling blue-green algae in Langstone Harbour, south coast of England.

Session B - Phosphorus and freshwater algae
14.00 : BENNION,J., WUNSAM,S. & SCHMIDT,R. (Institute of Limnology, Mondsee, Austria)
The validation of diatom-phosphorus transfer functions.
14.20 : JONES,R.I. (Lancaster University)
Light, not phosphorus, limits phytoplankton development in oligotrophic Loch Ness.
14.40 : MABERLY,S.C., PLANAS,D.* & PARKER,J.E. (Institute of Freshwater Ecology, Windermere; * Université à Québec à Montreal, Canada)
Phosphorus availability for *Cladophora glomerata* in Windermere.
15.00 : SIGEE,D.C. (University of Manchester)
Electron probe X-ray microanalysis - a technique to determine phosphorus levels within individual algal cells.
15.20 : BELLINGER,E.G., CLAY,S.M. & SIGEE,D.C. (University of Manchester)
Changes in individual cell phosphorus concentrations during phytoplankton population growth in a freshwater lake.

15.40 : Tea

Session A - Miscellany 1
16.10 : CALDWELL,S.B., McLEAN,R.O. & CARDOSI,M.F. (University of Paisley)
Shock proteins in riverian green algae: a possible role in metal tolerance.
16.30 : CALDWELL,S.B., McLEAN,R.O. & HARTE,P.G. (University of Paisley)
Production of monoclonal antibodies to heavy metal induced algal protein.
16.50: GLENN,R.F., EPTON,H.A. & SIGEE,D.C. (University of Manchester)
Laboratory studies on actinomycete antagonists of blue-green algae.
17:10: RAMARURTHY,V., SINGH,G & CHAUHAN,V.S (Thapar Corporate R&D Centre, Patiala, India)
Kraft black liquor improves *Spirulina* biomass in outdoor cultures.

Session B - Ecological studies
16.10 : HAYES,P.K., BARKER,G.L.A. & WALSBY,A.E. (University of Bristol)
The distribution and diversity of gas-vacuolate, filamentous cyanobacteria in the Baltic Sea.
16.30 : HEANEY,S.I. & GIBSON,C.E. (Department of Agriculture, N.Ireland)
Planktonic diatoms under the ice in Lake Baikal.
16.50 : PANKRATZ,B. & SHUBERT,L.E. (University of North Dakota, USA & The Natural History Museum, London)
Periphyton response in a contaminated saline wetland.

18.30 : Dinner

Disco

Thursday 5th January 1995

Session A - Species concept
9.00 : MEDLIN,L.K. (Alfred Wegener Institute, Bremerhaven, Germany)
Can molecular techniques enhance our understanding of a species concept?
9.30 : OLSEN,J.L. & STAM,W.T. (University of Groningen, The Netherlands)
Phylogenetic species concepts, molecular data and taxonomic decision making.
9.50: JOHN,D.M. (The Natural History Museum, London)
Species usage, concepts and problems in green algae.
10.10 : MELKONIAN,M. (Universität zu Köln, Germany)
Current trends in green algal systematics: from species to class level.

Session B - Manton prize presentations
9.00 : Introduction
9.10 : BRENCHLEY,J.L., RAVEN,J.A. & JOHNSTON,A.M. (University of Dundee)
The effect of reproduction on growth and mortality in two fucoid species with contrasting reproductive strategies.
9.30 : STENGEL,D.B. & DRING,M.J. (Queen's University of Belfast)
Seasonal and spatial variation of growth, pigments and photosynthesis in a population of *Ascophyllum nodosum* from Strangford Lough, Northern Ireland.
9.50 : SAVILLE,P.J. & JOHNSTON,A.M. (University of Dundee)
Factors affecting isotopic discrimination of inorganic carbon during photosynthesis in marine phytoplankton.
10.10 : WOOD,G.J., FLYNN,K.J. & HIPKIN,C.R. (University of Wales, Swansea)
Growth of *Heterosigma akashiwo* on nitrate and ammonium at three photon flux densities: evidence for N-stress in nitrate growing cells.

10.30 : Coffee

Session A - Phosphorus and freshwater algae
11.00 : YELLOLY,J.M. & WHITTON,B.A. (University of Durham)
Comparison of phosphatase activities of cyanobacteria and *Ralfsia verrucosa* using different organic phosphate substrates.
11.20 : HERNANDEZ,I. & HEATH,R.T.* (University of Cadiz,Spain & *Kent State University, Ohio, USA)
Phosphatase studies on microalgae.

Session B - Miscellany 2
11.00 : LEADBEATER,B.S.C., KITE,A., KARLEY,A.J.* & WOOD,K.R. (University of Birmingham & *University of Cambridge)
"Bottle brush" development of plurilocular sporangia in *Ectocarpus siliculosus* (Dillw.) Lyngb.
11.20 : FORD,T.W., PAGE,A.M. & STEAD,A.D. (Royal Holloway, University of London)
Effects of UV irradiation on the ultrastructure of the unicellular green alga *Chlorella*.

11.45 : Presidential Lecture
DRING,M.J. (Queen's University of Belfast & Biologische Anstalt Helgoland, Germany)
Untroubled phycology: 25 years of algal research in Northern Ireland.

12.40 : Lunch

Session A - Species concept
14.00 : CHAMBERLAIN,Y.M. (University of Portsmouth)
Taxonomic characters in fossil and present nongeniculate, coralline red algae.

14.20 : BRODIE,J., BARKER,G.L.A. & HAYES,P.K. (Bath College of Higher Education & University of Bristol)
A molecular approach to species differentiation in the genus *Porphyra* (Bangiales, Rhodophyta) from Britain.
14.40 : GUIRY,M.D. & RICO ORDAS,J.M. (University College Galway, Ireland)
Species concepts and breeding patterns in the *Gigartinaceae* and *Gelidiaceae* (Rhodophyta).
15.00 : DROOP,S.J.M. (Royal Botanic Garden Edinburgh)
What does morphology tell us about diatom species?
15.20 : MANN,D.G. (Royal Botanic Garden, Edinburgh)
Gamodemes and genodemes in diatoms: the biological species concept in action.

Session B - Manton prize presentations (2)
14.00 : LANGE,M. & MEDLIN,L.K. (Alfred Wegener Institute, Bremerhaven, Germany)
Genetic diversity in the genus *Phaeocystis*.
14.20 : MARIN,B. (Universität zu Köln, Germany)
Phylogeny of prasinophytes inferred from classical markers and ribosomal RNA sequence comparisons.
14.40 : TAYLOR,R. & FLETCHER,R.L. (The Marine Laboratory, University of Portsmouth)
The effect of nutrients on the growth of some selected "Green Tide" algae.
15.00 : PRICE,R.T., LEADBEATER,B.S.C., BOTT,T.R. & GUBBINS,B.* (University of Birmingham & *Anglian Water Services Ltd.)
Ozonation of *Oocystis* cultures in relation to water treatment processes.
15.20 : HEAD,R.M. (Lancaster University & IFE, Edinburgh)
The use of a trapping technique to assess the recruitment of cyanobacteria from the benthos to the plankton in lake ecosystems.

15.40 - Tea

Session A - Algal systematics
16.00 : STAM,W.T., OLSEN,J.L., VAN OPPEN,M.J.H., KLERK,H. & DE GRAAF,M. (University of Groningen, The Netherlands)
RAPDS and reds: assessing the limits for population level studies.
16.20 : MAGGS,C.A. (The Queen's University of Belfast)
Comparative molecular, morphological and life-history studies of the genus *Pikea* (Dumontiaceae, Rhodophyta) in the Atlantic and Pacific Oceans.
16.40 : MEDLIN,L.K., GERSONDE,R., KOOISTRA,W., SIMS,P.A. & WELLBROCK,U. (Alfred Wegener Institute, Bremerhaven, Germany & The Natural History Museum, London)
The paraphyletic origins of the centric diatoms.

17.00 : British Phycological Society AGM

19.00 for 19.30 : British Phycological Society Dinner
(Announcement of Manton prize winner and Auction)

Friday 6th January 1995

Session A - Algal systematics (2)
9.10 : RUSSELL,G. (University of Liverpool)

Pyrolysis mass spectometry in brown algal systematics.
9.30 : PLUMB.J. & BRODIE,J. (Bath College of Higher Education)
Endophytic flora of the red alga *Chondrus crispus*, from Britain. Some endophytic morphological change with the addition of nutrients.
9.50 : BEAKES,G.W., CANTER,H.M.* & JAWORSKI,G.H.M.* (University of Newcastle upon Tyne & *Freshwater Biological Association, Windermere)
The occurrence of host-specific races (*forma speciales*) amongst chytrid parasites of the freshwater planktonic diatoms *Asterionella*, *Synedra* and *Fragilaria*.

Session B - Algal physiology
9.10 : KORB,R.E., JOHNSTON,A.M., RAVEN,J.A. & LEFTLEY,J.W. (University of Dundee)
Continuous cultures: a tool for investigating $^{12}C/^{13}C$ ratios in marine diatoms.
9.30 : JOHNSTON,A.M. (Unversity of Dundee)
The effect of CO_2 concentration on the growth rate and inorganic carbon discrimation by *Phaeodactylum tricornutum*.
9.50 : KÜBLER,J.E. & RAVEN,J.A. (University of Dundee)
Carbon acquisition of red seaweeds grown under dynamic light regimes.

10.10 : Coffee

Session A - Algal systematics (3)
10.40 : CRAWFORD,R.M. (Alfred Wegener Institute, Bremerhaven, Germany)
The profiles of morphometric data from populations of the planktonic diatom *Corethron criophilum* in the South Atlantic.
11.00 : CARVALHO,L.R., COX,E.J. & SIMS,P.A. (The Natural History Museum, London)
The importance of diatom taxonomy for salinity and climate reconstructions.
11.10 :REID,G., HUXLEY,R. & WILLIAMS,D.M. (The Natural History Museum, London)
Further considerations towards a diatom type catalogue: *Fragilariaforma virescens* and its varieties.

Session B - Algal physiology (2)
10.40 : SCHMID,R.* & DRING,M.J. (*Queen's University of Belfast, *Friedrich-Schiller Universität, Jena & Biologische Anstalt Helgoland, Germany)
Changes in the light-dependence of carbon acquisition in the Fucales after emersion.
11.00 : PEARSON,G. & DAVISON,I.R. (University of Maine, Orono, USA)
Photoinhibition in intertidal brown algae.
11.20 : RAVEN,J.A.[1,2,3], BEARDALL,J.[1], JOHNSTON,A.M.[3], KÜBLER,J.E.[3] & GEOGHEGAN,J.[3] ([1]Monash University, Clayton, Australia, [2]The Australian National University, Canberra, Australia & [3]University of Dundee)
Inorganic carbon acquisition by *Hormosira banksii* (Phaeophyta: Fucales) and its epiphyte *Notheia anomala* (Phaeophyta: Fucales)
11.40 : GEIDER,R.J. (University of Delaware, USA)
A dynamic model of algal photoadaptation.

12.30 - Lunch
<u>N.B.</u> This is your only copy of the programme. Please remember to bring it with you to the meeting.

Registrants will receive an abstract booklet on arrival. Abstracts of all papers and posters presented will be published in the next issue of the Phycologist.

Some notes on collecting sites for marine diatoms and macroalgae in Indonesia.

F. G. Hardy, A. Retraubun and Mulyadi.

Department of Marine Sciences and Coastal Management,
The University, Newcastle upon Tyne, NE1 7RU, U.K.

Abstract

Details are given for sites in Ambon, Jakarta Bay and the Kepulauan Seribu, Indonesia, from which marine diatoms and macroalgae were collected in early 1994.

Introduction

In order to collect specimens for three Indonesian postgraduate research students at the University of Newcastle, a visit was made to Indonesia in late January/early February 1994. We arrived on Ambon on 23rd January, and specimens were collected between the 24th and 28th of that month. We then flew to Jakarta (on Java): specimens were collected from sites in Jakarta Bay on 30th January, and from islands in the Kepulauan Seribu (Thousand Islands) on 31st January and 1st February.

Diatoms were collected from the surface layers of sandy and muddy sediments by making ten scrapings at each location with a spatula. The sediments were collected in 20 ml screw-top "Sterilin" bottles, and fixed with 4% formalin solution. Notes were made of the habitat from which samples originated, each site was scored for pollution on a scale from 1 to 10 (see table 1), and the samples were numbered (see table 2).

Macroalgae were collected from the intertidal zone, and subtidally, from sites on Ambon Island and from Kotok Besar in the Kepulauan Seribu. Collections from Ambon were preserved as pressed herbarium specimens; those from the Kepulauan Seribu were identified in situ (with the aid of Verheij & Prud'homme van Reine, 1993) and were photographed. There is no standard algal flora of Indonesia: the literature is relatively sparse and well dispersed. The most important recent work results from the Snellius-II Expedition (Coppejans & Prud'homme van Reine, 1989a, 1989b, 1992a, 1992b) and the Buginesia-III project (Verkeij & Prud'homme van Reine, 1993).

Details of Sites

AMBON

Ambon Island is one of the "spice islands" in Maluku, East Indonesia. It is composed of two peninsulas - the Hitu Peninsula, to the north, is joined by a narrow isthmus at Paso to the Leitimur Peninsula, which constitutes the southern part of the island.

Ambon Bay runs south east from the isthmus. The inner part of the bay narrows between Poka (on the north shore) and Galela (on the south shore); the outer bay widens as one proceeds seawards.

The sites visited in the bay are listed in order from the west to the east along the north shore, from Airmanis to Paso. The site numbers reflect the order in which the locations were visited. The sites on the north coast of the island, from which both diatoms and macroalgae were collected, are listed from west to east. Some of the sites visited correspond with stations visited by the Snellius-II Expedition in 1984 (Coppejans & Prud'homme van Reine, 1992a). Diatom-containing sediments were collected from both clean and polluted areas (including from under litter, waste food, etc.). Macroalgal specimens from Ambon Island (identified by Mulyadi) are listed in table 3.

Airmanis, outer Ambon Bay (Site 6). Medium energy shore; pebble beach on upper shore, gravel on mid-shore. No litter. Pollution score 1. Visited 26th January, 1994.

Kampund Barru, outer Ambon Bay (Site 5). Medium to low energy shore; pebble beach on upper and middle shore, with bands of sand at the top of the shore. There is a local industry of gravel and pebble extraction. No litter. Pollution score 1. Visited 26th January, 1994.

Laha Harbour, outer Ambon Bay (Site 12). Jetty of small harbour adjacent to a medium energy beach of sand and small pebbles and mangroves on sand. Pollution score 1-2. Visited 24th and 28th January, 1994.

Tauiri, outer Ambon Bay (Site 7). Large, medium energy, pebble beach overlying gravel and sand. No litter pollution on lower shore, but a lot of litter and "smell" of pollution on strand-line adjacent to village. Pollution score 5-6. Visited 26th January, 1994.

Hatiwe, outer Ambon Bay. Medium energy shore with sandy beach on upper shore and pebbles on mid-shore. Not much visible litter, but some human faeces. Pollution score 3-4. Visited 24th January, 1994.

Tamiri, outer Ambon Bay (Site 11). Medium energy sandy shore adjacent to a village. Chaetomorpha crassa common on pebbles in the intertidal zone. Pollution score 4-5. Visited 24th and 28th January, 1994.

Poka, University Guest House, inner Ambon Bay (Site 4). Immediately in front of the guest house is a large, low energy, sandy shore with very little litter. Sea grasses present at low tide level. Pollution score 3. Mangroves are present at east and west edges of the shore. At the west end of the terrace in front of the house there is a rubbish tip composed of food waste, cut down vegetation, and plastic/paper waste. Scattered along the strandline in the mangrove westwards is a considerable amount of plastic litter - bags, sheets, bottles, etc. - together with decaying leaves; cardboard and paper litter present in mid-shore areas of mangrove. The mangroves are also used as a lavatory by locals. Pollution score 7-8. Visited 23rd to 30th January, 1994; samples collected 25th January, 1994.

Poka, Power Station, inner Ambon Bay (Site 3). A large, low energy, muddy shore with thick, sticky, oily sediments. This is the worst area in the bay, with a considerable quantity of litter (composed of plastic bags, fertilizer sacks, rusty cars, cloth, plastic bottles, general domestic waste). Padina boergesenii was found growing attached to stones in the mud at low tide level (and in the drift). Pollution score 8-9. Visited 24th and 27th January, 1994.

Kate Kate, inner Ambon Bay (Site 2). Low energy shore; pebbles and a small amount

of sand on upper and mid shore, muddy low shore. Very clean. Pollution score 2-3. Visited 24th and 27th January, 1994.

Paso, near Lateri, inner Ambon Bay (Site 1). Low energy shore. This is the largest area of sand/mud exposed in the whole bay, and the largest area of mangroves (Avicennia sp.). Fiddler crabs are abundant in the sediments (Uca lactea in the sandy sediments at low tide level, Uca vocans in the muddy sediments higher on the shore). Very clean away from the village of Lateri, with almost no litter. Pollution score 2-3. Visited 24th January, 1994.

Latuhalet, outer Ambon Bay/south coast of island. High energy beach composed of wave-broken corals and shells. Coral reef offshore; dead coral close to shore. Commercial beach, kept very clean and free of litter pollution. Crystal clear water. Pollution score 1. Visited 24th January, 1994.

Toisapu, Baguala Bay, east coast of island. Medium energy beach, but with only a small sandy area at the top of the shore, followed by pebbles which extend through the area uncovered at low tide. Clean, only a small amount of litter, such as old sweet-corn heads. Pollution score 2-3. Visited 24th January, 1994.

Lima, east coat of island. High energy, very clean (commercial) beach. Pollution score 1. Visited 29th January, 1994.

Hila, Pattimura University Field Station, north coast of island between Hila and Waitomu (Site 8). High energy shore, composed of a flat rocky platform covered in pebbles. Chaetomorpha crassa and Mastophora? pacifica collected from pebbles in the mid shore; Padina sp. common on a fallen coconut palm trunk. Sea grasses (Thalassia sp.) frequent towards the upper shore in very shallow rock pools. Vast majority of intertidal zone free of macroalgae. Species collected subtidally included Turbinaria ornata, Codium geppii and Halimeda minima. Large development of mangroves to the west of the site. The shore is generally clean - strandline litter is almost exclusively composed of the remains of durian fruits and drift wood, although there are some plastic bottles in front of the laboratory. Pollution score 3-4. Visited 27th January, 1994.

Manuala Beach, between Hila and Zeith, north coast of island (Site 9). A medium to high energy shore composed of shingle with some sand in the upper littoral. Macroalgae collected subtidally included Halimeda gigas. This is a commercial beach and, as a result, is kept very clean and free from litter. Pollution score 1. Visited 27th January, 1994.

Wakal and Mamua, north coast of island (Site 10). Medium to high energy shore. Very clean mangrove area on sand and pebbles; no macroalgae in intertidal zone. Clean sand at top of beach, backed with coconut palms. Macroalgae collected subtidally included Codium geppii and Halimeda micronesica. Pollution score 1. Visited 27th January, 1994.

JAKARTA BAY, JAVA

Jakarta, with a population of 6 million, is the capital city of Indonesia, and it is well-established that the disposal of industrial and domestic refuse is a major problem. Rivers and streams throughout Indonesia have traditionally been used for the dumping of waste and this ends up in the sea (Willoughby, 1986b).

Three sites were visited to investigate the differences in diatom populations along the pollution gradient from the old harbour at Sunda Kelapa eastwards along the coast to the Hotel Horison.

Sunda Kelapa Harbour, Jakarta (Site 13). Low energy site. Silt collected from harbour wall. Extremely polluted river mouth - water a brown sludge with masses of floating debris; sediment black. Pollution score 10. Visited 30th January, 1994.

Ancol Marina, Jakarta (Site 14). Medium energy shore, marginally better than site 13 - slightly less polluted (water still very brown and "smelly"), not so much obvious litter. Sediment scrapings taken from man-made dock/berth wall. Pollution score 8-9. Visited 30th January, 1994.

Hotel Horison, Jakarta (Site 15). Medium energy; sandy sediment at top of shore (lot of black coloured material), floating litter. Access to the shore is through the Hotel (where, not surprisingly, the guidebooks state that guests use the private swimming pool rather than the beach). Pollution score 6-7. Visited 30th January, 1994.

KEPULAUAN SERIBU

The Kepulauan Seribu (or Thousand Islands Archipelago) form a chain of 108 offshore islands stretching 80 km in a NNW-SSE direction, and 30 km from east to west, from Jakarta (Ongkosongo & Sukarno, 1986).

The disposal of domestic and industrial refuse from Jakarta directly into the sea is producing large quantities of marine litter along the shorelines of the Thousand Islands. The composition, distribution and origin of this litter has been studied by Willoughby (1986a, 1986b).

During the present visit diatom samples were collected from an island close to the mainland (Untung Jawa), from an island further from land (Kotok Besar) and from two of the outermost islands (Kelapa and Panjang). Records of macroalgae were also made from Kotok Besar, and an assessment made of their abundance.

Untung Jawa, Kepulauan Seribu (Site 16). Inhabited island 5 km from mainland (not "tourist" island). High energy shore, with broken pieces of coral in profusion on beach. Some litter and small quantities of human faeces. Pollution score 4. Visited 31st January, 1994.

Kotok Besar, Kepulauan Seribu (Site 17). Tourist island 34 km from the mainland. High energy shore, sandy beach (protected by artificial reef about 20 feet from high tide mark), sublittoral coral with occasional pebbles. Crystal clear water. Unbelievably clean - not only is there no litter on the shore, but staff are employed to sweep the beach and the forest floor outside the holiday cottages every morning. No drift seaweed, or fallen leaf, or twig, remains: very nice if one is going for a swim, but a complete disaster for the carbon, nitrogen, and other mineral cycles. Pollution score 1. Visited 31st January to 2nd February, 1994; sediment samples collected 31st January, 1994; macroalgae from sublittoral recorded 1st February, 1994 (see table 4).

Kelapa, Kepulauan Seribu (Site 18). One of the outermost islands, 39 km from the mainland, with a large fishing village. Low energy shore. Very considerable amount of rubbish and waste material dumped on the shore adjacent to the jetty - rusty metal, plastic wrappings, vegetation. Pollution score 7-8. Visited 1st February, 1994.

Panjang, Kepulauan Seribu (Site 19). One of the outermost islands, 41 km from the mainland, uninhabited now (derelict remains of an air strip). Low energy shore, with clean beach and water. Healthy growths of corals visible from jetty (together with predatory packs of sea urchins). Pollution score 1. Visited 1st February, 1994.

Acknowledgements

We would like to express our appreciation to Stewart Evans for sending us to these equatorial climes in the depths of the British winter, and to thank Eugene Renjaan and Willem Waelaruny for their great assistance in collecting specimens. The collections from Ambon would have been impossible had it not been for the variety of drivers who seemed willing to throw their vehicles at the most appalling terrains without so much as batting an eyelid.

References

Coppejans, E. & Prud'homme van Reine, W. F. (1989a). Seaweeds of the Snellius-II Expedition. Chlorophyta: Dasycladales. Neth. J. Sea Res., 223 (2), 123-129.

Coppejans, E. & Prud'homme van Reine, W. F. (1986b). Seaweeds of the Snellius-II Expedition. Chlorophyta: Caulerpales (except Caulerpa and Halimeda). Blumea, 34, 119-142.

Coppejans, E. & Prud'homme van Reine, W. F. (1992a). The oceanographic Snellius-II Expedition. Botanical results. List of stations and collected plants. Bull. Séanc. Acad. r. Outre - Mer, 37 (1991-2), 153-194.

Coppejans, E. & Prud'homme van Reine, W. F. (1992b). Seaweeds of the Snellius-II Expedition (E. Indonesia): the genus Caulerpa (Chlorophyta - Caulerpales). Bull. Séanc. Acad. r. Outre-Mer, 37 (1992), 667-712.

Ongkosongo, O. S. R. & Sukarno (1986). Background to the study sites in the Bay of Jakarta and Kepulauan Seribu. Chapter 6 (pp. 56-79) in: Human induced damage to coral reefs, ed. B. E. Brown, Unesco reports in marine science, 40.

Verheij, E. & Prud'homme van Reine, W. F. (1993). Seaweeds of the Spermonde Archipelago, SW Sulawesi, Indonesia. Blumea, 37, 385-510.

Willoughby, N. G. (1986a). Man-made flotsam on the strand-lines of the Thousand Islands (Kepulauan Seribu) Jakarta, Java. Chapter 12 (pp 157-163) in: Human induced damage to coral reefs, ed. B. E. Brown, Unesco reports in marine science, 40.

Willoughby, N. G. (1986b). Man-made litter on the shores of the Thousand Island Archipelago, Java. Mar. Poll. Bull., 17, 224-228.

Table 1 - Pollution Scale

1	No litter, very clean shore, clear water.
2	Almost no litter, clean.
3	Some litter (very little), clean.
4	Some litter and other waste (e.g. faeces).
5	Not "seriously" polluted with litter.
6	Strand line covered with litter.
7	Litter, food waste, "smells" clean.
8	Lot of litter - plastic, paper, etc. - food waste, "smells" clean
9	Lot of litter, chemicals, oil, rusty cans, generally very unpleasant
10	Filthy: sewage, lot of litter, turbid water, "smells" dreadful.

Table 2 - Sediment samples collected

Date	Number	Site	Details
24.1.94	FGH/1-3	1	Paso: lower, mid, upper shore
24.1.94	FGH/4-5	2	Kate Kate: mid, upper shore
24.1.94	FGH/6-7	3	Poka Power Station: mid, upper shore
25.1.94	FGH/8-15	4	Poka Guest House: lower (1), mid (2), upper (5) shore (including under litter)
25.1.94	FGH/16-17	4	Poka Guest House: concrete blocks and steps at top of shore
26.1.94	FGH/18-19	5	Kampund Barra: upper, mid shore
26.1.94	FGH/20-21	6	Airmanis: upper, mid shore
26.1.94	FGH/22-24	7	Tauiri: lower, mid, upper shore
27.1.94	FGH/25	3	Poka Power Station: lower shore
27.1.94	FGH/26	2	Kate Kate: lower shore
27.1.94	FGH/27-28	8	Hila: mid, upper shore
27.1.94	FGH/29	9	Manuala Beach: upper shore
27.1.94	FGH/30-31	10	Wakal-Mamua: mid, upper shore
28.1.94	FGH/32-33	11	Tamiri: mid, upper shore
28.1.94	FGH/34-35	12	Laha Harbour: mid, upper shore
30.1.94	FGH/36-37	13	Sunda Kelapa Harbour: upper shore
30.1.94	FGH/38	14	Ancol Marina: upper shore
30.1.94	FGH/39	15	Hotel Horison, Jakarta: upper shore
31.1.94	FGH/40-41	16	Untung Jawa: mid, upper shore
31.1.94	FGH/42-47	17	Kotok Besar: lower (2), mid (2), upper (2) shore
1.2.94	FGH/48-49	18	Kelapa: mid, upper shore
1.2.94	FGH/50-52	19	Panjang: lower, mid, upper shore

Table 3 - Specimens collected from Ambon Island

Date	**Number**	**Site**	**Species**
Rhodophyta			
27.1.94	FGH/MA/6	8	*Actinotrichia fragilis*
27.1.94	FGH/MA/5	8	*Gelidium pusillum*
27.1.94	FGH/MA/11	8	*Gelidium pusillum*
27.1.94	FGH/MA/10	8	*Jania* sp.
27.1.94	FGH/MA/7	8	*Mastophora pacifica*
27.1.94	FGH/MA/18	10	*Pterocladia caloglossoides*
27.1.94	FGH/MA/12	8	indet. rhodophyta
Phaeophyta			
27.1.94	FGH/MA/9	8	*Padina* sp.
27.1.94	FGH/MA/3	8	*Padina australis*
27.1.94	FGH/MA/16	10	*Padina australis*
27.1.94	FGH/MA/1	3	*Padina boergesenii*
27.1.94	FGH/MA/4	8	*Turbinaria ornata*

Table 3 - Specimens collected from Ambon Island (cont)

Date	Number	Site	Species
Chlorophyta			
27.1.94	FGH/MA/8	8	*Chaetomorpha crassa*
28.1.94	FGH/MA/19	11	*Chaetomorpha crassa*
27.1.94	FGH/MA/14	9	*Codium geppii*
27.1.94	FGH/MA/15	10	*Codium geppii*
27.1.94	FGH/MA/13	9	*Halimeda gigas*
27.1.94	FGH/MA/17	10	*Halimeda micronesica*
27.1.94	FGH/MA/2	8	*Halimeda minima*
Spermatophyta			
27.1.94	FGH/SG/1	8	*Thalassia* sp.

Table 4 - Macroalgae from Kotok Besar

Ceramium sp. (on *Halimeda gigas*)	Rare
Mastophora? pacifica	Occasional
Dictyota dichotoma ssp. *dichotoma*	Frequent
Hormophysa cuneiformis	Drift
Padina australis	Common
Sargassum ilicifolium	Common
Sargassum pallidum	Frequent
Turbinaria ornata	Drift
Caulerpa opposita	Common
Caulerpa racemosa ecad *corynephora*	Occasional
Enteromorpha intestinalis	Frequent
Halimeda gigas	Common
Halimeda micronesica	Common
Ulva reticulata	Frequent
plus	
Unidentified crustose coralline spp. on jetty	Common
Enhalus sp. (Sea Grass)	Common

SPECIES LIST

BANGIOPYCEAE (see Christensen, 1994)

Aglaothamnion byssoides: t; on *Zostera*; LLP; 3
Ahnfeltia plicata: LLP; 1, 3
Antithamnionella spirographidis: on shells, stones & *Styela clava*; 2
Apoglossum ruscifolium: LL, SL; 1, 7
Audouinella endophytica: in *Heterosiphonia*; LLP; 3
A. floridula: sand-binding; ML; 1, 3, 5
Bostrychia scorpioides: associated with *Pucciniella maritima*; SM; 2
Calliblepharis ciliata: LL, SL; 1, 3, 5, 7
Callithamnion tetragonum: t; on *L. digitata*; LLP; 1, 3
Callophyllis flabellata (see Hiscock, 1986): LLP; 6
Catenella caespitosa: SM, UL; 2, 5, 6
Ceramium diaphanum: LLP; 3
C. flaccidum: MLP; 5
C. nodulosum: ULP; 3, 5, 6
C. pallidum: ULP; 3
C. secundatum: t; LL; 1, 6
Chondria dasyphylla: on *Ostrea*; LLP; 5
Chondrus crispus: c, t: LL, LLP; 1, 3, 5
Choreocolax polysiphoniae: parasitic on *P. lanosa*; ML; 5
Chylocladia verticillata: on *Zostera*; LLP; 3, 5
Corallina officinalis: LL; 3
Cryptopleura ramosa: c, t; LLP, SL; 1, 3, 5, 7
Cystoclonium purpureum: c, t; LLP; 3, 5, 6(D)
Delesseria sanguinea: SL; 7
Dilsea carnosa: infected by the fungus *Mycaureola dilseae* (see Porter & Farnham, 1986); LLP; 1, 3, 5
Erythrotrichia carnea: epiphytic; LL; 2
Falkenbergia rufolanosa-phase of *Asparagopsis*: LLP, SL; 5, 7
Furcellaria lumbricalis: LL, LLP; 3, 5
Gelidium latifolium: LL; 3
G. pusillum: LL; 1, 3, 5
Gracilaria bursa-pastoris: c; LLP; 3, 5
G. gracilis comb. nov. (Steentoft, Irvine & Farnham., in press.): on stones & shells; c; LLP, SL; 1, 3, 6, 7
Gracilariopsis longissima comb. nov. (Steentoft *et al.*, in press.): c; LLP, SL; 1, 3, 5, 6, ?7
Grateloupia doryphora: LLP; 3, 6(D); sporelings, not previously found at Bembridge
G. filicina var. *luxurians*: c, t; LLP; 3
Griffithsia corallinoides: c; LLP, SL; 3, 5-7
Gymnogongrus crenulatus: f; LLP; 1, 3
G. devoniensis: c; LLP; 3
G. griffithsiae: LLP; 3
Halopitys incurvus: LLP; 3
Halurus equisetifolius: SL; 3(D), 7
H. (= *Griffithsia*) *flosculosus*: c, t; LLP, SL; 1, 3,5-7
Heterosiphonia plumosa: t; LLP; 1, 3, 5, 6(D)
Hildenbrandia rubra: t; LL, LLP; 1, 3, 5
Hypoglossum hypoglossoides: t; LLP, SL; 5, 7

Jania rubens: epiphytic; LL; 3
Laurencia pinnatifida: LL; 1, 3?, 4
Lithophyllum incrustans: LL; 3
Lomentaria articulata: LL; 1, 3
L. clavellosa: SL; 7
Mastocarpus stellatus: c; LL; 3
Nitophyllum punctatum: on *Sabella* tubes & *Zostera*; m,t; LLP; 5
Palmaria palmata: LL; 3, 6
Peyssonnelia sp.: LL; 3
Phycodrys rubens: SL; 7
Phyllophora crispa: LLP; 3
P. pseudoceranoides: LL,SL; 3, 7
P. sicula: LLP; 1
Phymatolithon lenormandii: on stones & wood; LL; 1, 3, 5
P. purpureum (= *polymorphum*): LL; 3
Plocamium cartilagineum: LLP; 1, 5, 6(D)
Plumaria plumosa (= *elegans*): epilithic & on kelp stipes; LL, SL; 1, 7
Pneophyllum lejolisii: on *Zostera*: LLP; 3, 5
Polyides rotundus: LL; 1, 3, 5
Polysiphonia denudata: LLP; 2
P. elongata: epilithic & on *Styela*; LLP, SL; 2, 5, 6(D), 7
P. harveyi: c, m; on *Zostera*; LLP; 3, 5, 6(D), 7
P. lanosa: epiphytic on *Ascophyllum*; 5, 6
P. fucoides (= *nigrescens*): LL, LLP; 1, 2, 5
P. stricta (= *urceolata*): LLP; 2
Porphyra purpurea: LL; 1-3, 6
Pterosiphonia complanata: SL; 7
Rhodomela confervoides: D; 6
Rhodophyllis sp. (see Hiscock, 1986): D; 5
R. divaricata: c; LLP; 1, 5
Schitziella endophloea: in *C.pellucida*: LL, SL; 3, 7
Scinaia forcellata: on shells; LLP; 5
Sphaerococcus coronopifolius: D; 3
Spondylothamnion multifidum : SL; 7: var. *distichus*: D; 3, 5

CHLOROPHYCEAE

Blidingia minima: UL; 2
Bryopsis hypnoides: LLP; 3, 5
Chaetomorpha linum: L, SM, ULP; 4, 6
Cladophora sp.: L; 4
C. ?hutchinsiae: LLP; 3
C. pellucida: LLP, SL; 3, 7
C. rupestris: LL; 1, 3
C. ?sericea: LLP; 1, 3
Codium fragile ssp. *tomentosoides*: LLP, ULP; 3, 6
Enteromorpha compressa: LL; 3
E. intestinalis: f;LL, LLP; 1-6
E. prolifera: LLP: 6
Monostroma sp.: SLP; 6
"*Pleurococcus*" spp. (see Christensen,1994): on pilings; SLF; 2
Pseudendoclonium submarinum: on pilings; SLF; 2

Rhizoclonium tortuosum (= *riparium*, see Burrows, 1991): SLF; 2
Spirogyra sp.: L; 4
Trentepohlia jolithus (L.) Wittr.: in Queen Victoria's bathing hut; SLF; 5; det. T. Christensen
Ulva lactuca: f; LL, LLP, SL, SM; 1-3, 5-7
U. ?rigida: LL; 1

CHAROPHYCEAE

Lamprothamnium papulosum (Wallr.) J.Gr.: f; L; 4, maybe outcompeted by *Cladophora* sp., 6 (old record for this site but not refound in recent years).

TRIBOPHYCEAE

Vaucheria spp.: mud-binding; SM, UL; 2, 6. At site 5 we did not find any *V. velutina*, identified by T. Christensen, (see Herbert, 1991).

FUCOPHYCEAE

Ascophyllum nodosum: ML; 2, 5, 6
Chorda filum: LLP, SL; 1, 7
Cladostephus spongiosus: MLP; 1, 3, 5
Colpomenia peregrina: on *Palmaria*; LL; 3
Cystoseira foeniculacea: SL; 7
C. nodicaulis: LLP; 3
Desmarestia aculeata: D; 1
Dictyopteris membranacea: SL; 7
Dictyota dichotoma: LLP, SL; on stones & *Sabella* tubes; 3, 5-7
Ectocarpus siliculosus: epiphytic on *F.serratus*; p; L, LL; 3, ?4
Elachista fucicola: epiphytic on *F.vesiculosus*; ML; 3, 6
Fucus serratus: f; LL; 1, 3, 5
F. spiralis: f; UL; 1-3, 5, 6
F. vesiculosus: f; ML; 1-3, 5, 6
Giffordia sandriana: p; LLP; 1
Halidrys siliquosa: LLP; 1, 4
Halopteris scoparia: LLP; 3
Laminaria digitata: LLP; 1, 3
L. hyperborea: SL; 7
L. saccharina: LLP, SL; 1, 3, 5, 7
Myriactula rivulariae; epiphytic on *Sargassum*; LLP; 3
Myrionema strangulans: epiphytic on *Ulva*; LLP; 1, 3, 5
Pelvetia canaliculata: UL; 6
Pseudolithoderma extensum: LLP; 3
Ralfsia verrucosa: ML; 3
Sargassum muticum: LLP, MLP; 1, 2(D), 3, 5, 6
Scytosiphon lomentaria: LLP; 3
Sphacelaria cirrosa: epiphytic on *Halidrys*; LLP; 1
Taonia atomaria: LLP; 5

NOSTOCOPHYCEAE

Amphithrix sp.: on *P. harveyi*; LLP; 3

Calothrix sp.: on *P. harveyi*; LLP; 3
Lyngbya sp.: L; 4

LICHENES

Verrucaria maura: SLF; 5

ANGIOSPERMAE

Ruppia maritima L.:L; 4
Zostera marina L.: LLP: 3, 5
Z. noltii Hornem.: ML; 3

ACKNOWLEDGMENTS

I should like to thank the participants for their help in compiling this list and also Dr C. Maggs for some identifications. The staff at the Medina Valley Centre were most helpful in looking after us. Col. K. Hicks kindly allowed us access to site 4.

REFERENCES

Burrows, E.M. 1991. Seaweeds of the British Isles. Vol. 2 Chlorophyta. BM(NH).
Christensen, T. (1994). Algae, a taxonomic survey. Univ. Copenhagen.
Collins, K.J. Herbert, R.J.H. & Mallinson, J.J. 1990. The marine flora and fauna of Bembridge and St. Helens, Isle of Wight. Proc. Isle Wight nat. Hist. archaeol. Soc., 9, 41-85.
Dixon,P.S., Irvine,D.E.G. & Price,J.H. 1966. The distribution of benthic marine algae. A bibliography for the British Isles. Br. phycol. Bull., 3, 87-142.
Farnham,W. 1982. Species list of the benthic algae of the Isle of Wight. Portsmouth Poly.
Foslie,M. 1893. List of the marine algae of the Isle of Wight. K. norske Vidensk. Selsk. Skr., 1891, 267-282.
Gabriel,G. 1989. Der Algenbewuchs auf Kreidesubstrat an der Kuste der Insel Wight (Grossbritannien). Diplomarbeit thesis, Justus-Liebig Universitat, Giessen.
Herbert,R. 1991. Autumn field meeting at Osborne Bay, Isle of Wight, 8 September 1991. Porcupine News, 5, 53-8.
Hiscock,S. 1986. A field key to the British red seaweeds. Field Studies Council Occ. Publ. No. 13 (AIDGAP).
Maggs, C.A. & Hommersand, M.H. 1993. Seaweeds of the British Isles. Vol. 1 Rhodophyta, Pt 3A Ceramiales. HMSO.
Porter,D. & Farnham,W.F. 1986. *Mycaureola dilseae*, a marine basidiomycete parasite of the red alga, *Dilsea carnosa*. Trans. Br. myc. Soc., 87, 575-83.
Steentoft, M. Irvine, L.M. & Farnham, W.F. In press. Two terete species of gracilarioid algae (Rhodophyta: Gracilariales) in the British Isles. Phycologia.
South, G.R. & Tittley,I. 1986. A checklist and distributional index of the benthic marine algae of the North Atlantic Ocean. Huntsman Marine Lab. & BM(NH).
Ward.B. 1994. BPS field meeting, Isle of Wight, 1993. The Phycologist, 37, 8-9.

NOTES AND INFORMATION.

Change of Address: The Hon. Treasurer, Dr Lynne Terry, has spent a large proportion of the summer preparing to move house. As of December her new address will be: 13 Harbour Street, Cruden Bay, Peterhead. Aberdeenshire. AB423 7NB. Tel: 0779 812279.

Good News: I am really happy to be able to pass on two bits of news concerning Chris Maggs (Queens, Belfast). Chris and her husband are expecting the arrival of their first bundle of joy in November, so as you read this the event will likely have happened. I would like to wish Chris all the very best to her and the wee one. The other bit of news is that Chris has been offered and accepted a lectureship in Belfast. This must surely round off quite a year! She tells me she plans to be at the Winter meeting so I am sure we will be able to congratulate her all over again!

Book Review: In the last issue of the Phycologist there was an book review which contained a number of important typos.

(i) The correct title was "An illustrated atlas of the life history of algae (Vol 3)."
(ii) The author of the book is Terumitsu Hori.
(iii) p 22, para 3, line 2: induced should be **included**.
(iv) The author of the review was John Green (PML).

I am most sorry for these errors and apologize for any harm they may have caused.

BPS students workshop: call for ideas. Winter Meeting, January 1995.

At the last meeting of the BPS council it was suggested that students and members of the society might benefit from and enjoy an opportunity to meet together in an informal manner. This could take place during the winter meeting in January and provide a forum for the exchange of information and techniques. It is unsure what form this might take, perhaps informal bar discussions based loosely on a subject area, or structured tutorials on a given topics and skills, e.g. "Guides-lines on how to give a good presentation" (with guest speakers). If there is support for these ideas, volunteers for speakers or any suggestions, we should be grateful to receive feedback as soon as possible.

Please contact Judith A. Taylor at The Institute of Freshwater Ecology, The Ferry House, Far Sawrey, Ambleside, Cumbria LA22 0LP. E-mail: J.Taylor@IFE.AC.UK

Auction: We need your help.

In the past the auction run at the conference dinner has done a great deal to support the attendance of post-graduate students to the Winter meetings. It is hoped that this will continue but it will only do so if members support it. I know it is often difficult to think of suitable objects that will generate interest/cash but the society would be really grateful if you could come up with something. Anyone with items for sale is asked to **notify IN ADVANCE** Dr FG Hardy, 42 Harley Terrace, Gosforth, Newcastle upon Tyne. NE3 1UL, Tel. 091 222 6661, Fax 091 222 7891

FORTHCOMING MEETINGS.

BPS WINTER MEETING, 1995.
University of Portsmouth, 4-6th January 1995.

***Emiliania huxleyi* AND THE OCEANIC CARBON CYCLE.**
An International Conference presenting results of the multidisciplinary EC (MAST II) funded programme "Coccolithophorid Dynamics: The European *Emiliania huxleyi* Programme (EHUX)".

See The Phycologist **38**.

Date: Weds 5th-Sat 8th APRIL 1995 (Scientific sessions Thurs 6th & Friday 7th).

Venue: The Natural History Museum, Cromwell Road, London, UK. Accommodation will be available in Imperial College halls of residence. Cost ca. £25/day B&B.

Organisers Convenor: Jeremy R. Young (Palaeontology Dept., The Natural History Museum, London). Organising Committee: Roger Harris (Plymouth Marine Laboratory, UK), Peter Westbroek (Dept.of Chemistry, Leiden University, The Netherlands), Berit Heimdal (Dept. of Fisheries and Marine Biology, University of Bergen, Norway).

Registration: Full registration about £50, to include coffee, abstract volume etc., with reduced day rates and student rates.

TO BE INCLUDED IN THE CIRCULATION LIST PLEASE CONTACT

JEREMY YOUNG, Palaeontology Dept., The Natural History Museum, London SW7 5BD, UK. Tel. 071-938-8996; Fax 071-938-9277; E-Mail jy@nhm.ac.uk

---

CHRYS 95

The Fourth International Chrysophyte Symposium will take place in Denmark (Hosterkob, north of Copenhagen) 22-27 May 1995, followed by an optional four day excursion to Sweden (Aneboda). The programme will include invited lectures, contributed papers and posters. Manuscripts will be published in the Proceedings of the Symposium. Organizers: Gertrud Cronberg (Lund, Sweden) and Jorgen Kristiansen (Copenhagen, Denmark).

For further information contact Jorgen Kristiansen, Botanical Institute, Dept of Phycology, Oster Farimagsgade 2 D, 1353 Copenhagen K, Denmark. Tel: 45 3532 2320, Fax: 45 3532 2321 Email: sporol@vm.uni-c.dk.

First International Congress on Toxic Cyanobacteria (Blue-green Algae) 1995

Since 1986 Nordic Symposia on toxin producing algae have been held every second year. Due to the increased interest from other countries in these meetings and the majority of the topics relating to toxic cyanobacteria not being covered by other international

Further information may be obtained on request by fax to Donato Marino, IPC, Stazione Zoologica Naples +39 81 764 1355.

Application should reach Donato Marino, Marine Biology Lab, Stazione Zoologica "A. Dohrn", Villa Comunale, I-80121 Naples, Italy, not later than 28th February 1995.

BPS WINTER MEETING, January 1996.
University of Lancaster.

ISEP 11 - AUGUST 1996

The 11th biennial meeting of the International Society for Evolutionary Protistology (ISEP) will convene at the University of Cologne (Cologne, Germany) from August 9-13, 1996. The meeting will be held in conjunction with the 1st European Phycological Congress (August 11-18, 1996).

The primary purpose of ISEP is to provide an exchange of scientific knowledge between protistologists who work in the fields traditionally known as protozoology, phycology and mycology. The scientific program will include general lectures, several symposia, contributed papers and workshops.

For further information, please contact:

Prof Michael Melkonian, Universität zu Köln, Botanisches Institut, Gyrhosfstaße 15, D-50931. Köln. Fax: 0049 221 470 5181. E.Mail: MMELKON@BIOLAN.UNI-KOELN.DE

1ST EUROPEAN PHYCOLOGICAL CONGRESS.

This international meeting will be held in Cologne, Germany from 11-18 August 1996. It will provide a forum for phycologists (young and established) from all over Europe and overseas for communication and discussion on all aspects of phycology: basic and applied; freshwater and marine; organismic and molecular.

The scientific program will include several plenary and special lectures, symposia, contributed papers, posters, workshops and excursions.

For further information, please contact:

Prof Michael Melkonian, Universität zu Köln, Botanisches Institut, Gyrhosfstaße 15, D-50931. Köln. Fax: 0049 221 470 5181. E.Mail: MMELKON@BIOLAN.UNI-KOELN.DE

E-mail info.

I hope some of you have joined one or both of the Email discussion lists I mentioned in the last issue. If you tried joining the Diatom list and received a bundle of error messages I am sorry. The reason for this is that the list name is **Diatom-L** and not **Diatoms-L**. Those computers are unforgiving!

I have been making inquiries of the Computing department at the University of Dundee about getting some space to set up a FTP site for members of the society. At any one time members of the society may have some information that they may feel the rest of the society maybe interested in. Such items could include abstracts of small meetings, E.mail address lists, timetables of winter meetings. It would be possible to send them to Algae-L but as there are a large number of non-BPS members on that list this may not go down too well. I could set up a distribution list on my email node. This would cause a problem if the mail I sent out was not read as this would count against my space on the Dundee network and bring the server to its knees, again! A FTP would get around this by making files available to those who wanted to look them up. Dundee has yet to get a fully open Gopher (our library runs it) so it looks like an FTP. I hope to have something firm for the next issue. If anyone has some comments on this please write to me.

Changes in Botanical Nomenclature.
The Society has received a letter from Prof. F. di Castri concerning changes in Botanical Nomenclature. One of the things to come out of the XVth International Botanical Congress in August 1993 was a restructuring of the International Code of Botanical Nomenclature and important improvements have made to reduce name changes. A resolution (see below) was past urging taxonomists concerned with the various groups of organisms covered by the Code to avoid making name changes for purely nomenclatural reasons, while further progress towards a more stable system was made. The published version of the new Code will not be available for some months. In the interim, details may be found in *Taxon* **42**: 907-922 (1993), and selected highlights are included in *Taxon* **42**: 925-927 (1993), *Systema Ascomycetum* **12**: 1-6 (1993) and *The Linnean* **10**: 12-15 (1994).

Text of resolution submitted to the Final Plenary Session of the XVth International Botanical Congress.

> Considering the great importance of a stable system of scientific names of plants for use in the pure and applied sciences and in many other domains of public life and economy;
>
> noting with satisfaction recent important improvements of the International Code of Botanical Nomenclature and ongoing efforts to explore new avenues for increased stability and security in the application of plant names;
>
> the XVth International Botanical Congress urges plant taxonomists, while such work continues, to avoid displacing well established names for purely nomenclatural reasons, whether by change in their application or by resurrection of long-forgotten names;
>
> resolves that the decisions of the Nomenclature Section with respect to the International Code of Botanical Nomenclature, as well as the appointment of officers and members of the nomenclature committees, made by that section during its meeting, 22-27 August, be accepted.

meetings, the organizing committee has decided to make the 1995 meeting the 1st International Congress on Toxic Cyanobacteria (Blue-green Algae).

The Congress will be held on the Danish island of Bornholm in the Baltic on 20-24 August 1995. It will be held in English. We plan to publish the proceedings from the Congress.

Scientific communications to be presented orally or as posters are invited on any aspect of toxic cyanobacteria. Subjects such as ecology, physiology, factors affecting toxin production, management, health hazards, and general aspects of toxic cyanobacteria may serve as a tentative guideline to the scientific sessions intended.

To receive the first circular which included preliminary registration form, please contact:

Prof. Ø. Moestrup or Cand. scient. Peter Henriksen. Dept Phycology, Botanical Institute, Ø. Farimagsgade 2 D. DK-1353 Copenhagen K. Denmark.
Phone: +45 35 32 22 90 or +45 35 32 22 99
Fax: +45 35 32 23 21
E.mail: moestrup@bot.ku.dk or phenriks@bot.ku.dk

or

Dr. Hanne Kaas, National Environmental Research Institute, Frederiksborgvej 399, P.O. Box 358, DK-4000 Roskilde. Denmark.
Phone: +45 46 30 12 00
Fax: +45 46 30 11 14
E.mail: hmhka@wpgate.dmu.min.dk

Information on sessions, registration fee, accommodation etc, will be announced in the second circular which will be distributed to those who return the pre-registration form.

ADVANCED PHYTOPLANKTON COURSE
25 September 14 October 1995 Ischia (Naples), Italy.

A phytoplankton course is being organized by the Stazione Zoologica 'Anton Dohrn', Naples, Italy, in conjunction with faculty members of the universities of Oslo (Norway), Copenhagen, (Denmark), and Banyuls-sur-mer (France), and the Florida Department of Natural Resources (USA). The course will be supported by the European Union MAST Programme.

The course will be held at Ischia (Naples) will last for three weeks (25.09-14.10.95). Participation is limited to 20 candidates with a PhD, MSc, or Bsc degree of equivalent, and with experience in phytoplankton species identification by microscopy. The program will consist of training in identification of marine planktonic algae, with emphasis on the use of identification literature and light microscopy.

Applications must include the following: 1) Name, nationality, date of birth, mailing address, telephone and fax number; 2) affiliation; 3) present position and duties; 4) education and training; 5) employment; 6) proficiency in English; 7) name and address of two referees; 8) experience relevant to the course and your research interest (half page); 9) documents, copies of exam records or diplomas, list of publications.

Accommodation and sustenance will be covered. A participation fee of ITL 400,000 is required. The course will also be sponsored by IOC-UNESCO, ONR, and ZEISS, and some funds will probably be available to support travel costs for some participants. Please enclose motivated requests for funding, if required.

Editor

Andrew M. Johnston, Department of Biological Sciences,
University of dundee, Dundee DD1 4HN
Telephone: 0382 344282, Fax: 0382 22318
E. Mail: AJ@BIOLSCI.DUNDEE.AC.UK

Associate Editors

David M. Williams, Department of Botany, The Natural History Museum,
Cromwell Road, London SW7 5BD
Telephone: 071 938 8819, Fax: 071 938 9260
E.Mail: D.M.WILLIAMS@NMH.IC.AC.UK

Robert G.J. Edyvean, Department of Chemical Engineering,
The University of Leeds, Leeds LS2 9JT
Telephone: 0532 332424, Fax: 0532 332405
E. Mail: CHE6RGJE@UK.AC.LEEDS.UCS.CSM1

Judith A. Taylor, Institute of Freshwater Ecology, Windermere Laboratory,
Far Sawrey, Ambleside, Cumbria LA22 0LP
Telephone: 05394 42468, Fax: 05394 46914
E. Mail: J.TAYLOR@IFE.AC.UK

All articles, reports, notes etc for THE PHYCOLOGIST, can be submitted on computer floppy disk and by electronic mail. Our publishing system is IBM compatible MS-DOS Wordperfect 5.1. Both 5.25 and 3.5 inch floppy disks can be handled and it is probable that most common word processing languages are acceptable, but please always include an ASCII file of your article on the disk as well. It would be best if the original is as simple as possible in layout (i.e. avoid justification etc). This reduces the amounts of editing. Electronic mail can be sent to the following address: AJ@BIOLSCI.DUNDEE.AC.UK

Copy deadlines:

January 31st
May 31st
September 30th

ISSN 0965-5301

THE PHYCOLOGIST (Previously the British Phycological Society Newsletter - ISSN 0267 - 1662) is published by the British Phycological Society, Honorary Editor: Dr. Andrew M. Johnston. The views expressed in THE PHYCOLOGIST are not necessarily those of the Society.