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60



**60 Years of the
British Psychological Society**

2012 British Phycological Society

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Welcome to this edition of *The Phycologist* celebrating 60 years of the British Phycological Society. We continue, and are inundated with articles from past Presidents reflecting on the last 60 years of the Society and we are very fortunate to include an extremely detailed account from Mr Harry Powell (first Treasurer of the Society and later President 1971-1972), reflecting on the origins of the Society. We are also privileged to have an account from Dr J.W.G. Lund (President 1957-1958) who is also celebrating 99 years! This Jubilee edition also includes articles from many other eminent past Presidents and overseas past Presidents, and I would like to thank all those who have, and those who still are to contribute! Let's hope that the next 60 years will be as rich and exciting as the ones gone by. Happy birthday BPS.

This edition also provides some entertaining accounts of our (very?) last winter meeting, the annual accounts, details of student bursary awards, a Student Newsletter from the student representative on Council – Helen Rosenkranz, and importantly accounts from the Manton and Poster prize winners from the winter meeting. There are also details of the winner of the 2011 Hilda Canter-Lund Photography award, Dr. Lira Gaysina, and an important Membership Update within the Announcements.

However I must apologise, but the abstracts of talks and posters and AGM minutes will be published in the autumn edition of the newsletter, as will a number of other articles submitted by other BPS members. There is just too much for this spring edition to cope with.

And should my Dad be reading this, which I very much doubt, he would I'm sure have found the article on Phyco-Philately most interesting (but he will as I'll be sending him a link to the newsletter).

Remember - do keep sending in your contributions. Write to us with your phycological views, news, work events, or any matter you wish to share with readers of *The Phycologist*. YOUR input is required; all relevant material will be considered (job adverts, science reports, book reviews, news items of topical interest, meeting announcements, research news, and suggestions for future articles are always welcome). Without YOU the newsletter would not exist.

As a reminder, previous issues of *The Phycologist* can be downloaded at <http://www.brphycsoc.org/phycologist.lasso>

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Some facts and reflections on t



Photo of Harry Powell taken at BPS Conference dinner, Oban, January 2010 (with current BPS Secretary Jane Pottas). Broken arm in plaster and sling is the result from a recent fall on ice!

It gives me great pleasure in my 87th year to recall some of the details concerning the founding of the British Phycological Society 60 years ago in 1952.

I am sure the Society came into being because of the strong feeling of about 20 or so dedicated marine phycologists several years after the Second World War ended that holding regular meetings together, after the relative academic isolation of the war years, was the best way to nurture and promote all branches of phycological research in Britain.

Getting to know each other and sharing our interests was greatly facilitated when many of us managed to attend the first major international meeting of botanists held after the War. This was the 7th International Botanical Congress, hosted by neutral Sweden in the summer of 1950; the previous 6th Congress had been held in Amsterdam in 1935. As well as some sessions of phycological papers read in Stockholm, there were excellent field excursions (each lasting five days) to the Swedish west coast (leader Prof. Tore Levring) and to the Baltic coast (Dr Mats Waern) attended by at least 20 British phycologists, which provided an ideal opportunity to get to know each other and many other phycologists from many parts of the world and to share our knowledge of seaweeds. We Brits started to think about the practicalities of holding similar regular meetings at our own home universities and marine laboratories.

This led to an informal 7-day meeting in September 1951 at Bangor University, initiated and arranged by Dr Kathleen Drew Baker (Manchester University) and her friend Dr Margaret Martin (Bangor University / Local Secretary), to which were invited everyone we could think of who might be interested. The meeting was attended by 28 people and included shore excursions to parts of the Menai Straits and the coast of Anglesey, and boat trips for dredging and a visit to Puffin Island.

Before the meeting, all people known to be interested had been sent a circular listing a number of proposals for similar future meetings and new collaborative studies, which were then discussed at a business meeting in Bangor and some decisions and plans were made for the future.

These included: that we continue to hold informal meetings for an experimental period; that the same 9 phycologists most involved so far continue to act as a committee for the group with Chairman Dr Kathleen Drew Baker, Secretary Mr Harry Powell and Treasurer Dr Margaret Martin; and that a News Bulletin be prepared and distributed regularly. My report on the Bangor meeting is the first article in *British Phycological Bulletin*, No.1, March 1952.

This was quickly followed by a one-day meeting of the group held on 3 January 1952 at the British Museum (Natural History), London and attended by 45 people. Young Linda Newton served as our Local Secretary. The main scientific sessions were devoted to papers given by members of the British Museum staff on problems in algal taxonomy (Dr W.B. Turrill) and nomenclature (Mr Bob Ross). Then followed a seminal business meeting of the group at which we learned that the Institute of Seaweed Research (ISR) in Edinburgh were sponsoring and actively planning a major International Seaweed Symposium in Edinburgh for 14-17 July 1952 and suggesting that our group might consider holding our summer meeting in Edinburgh immediately before the Symposium, so that British phycologists might attend both meetings. Dr Mary Parke readily agreed to postpone our proposed summer field meeting at Plymouth to September 1953 instead; and so it was agreed that we would accept the ISR invitation and plan for a 3-day meeting at Edinburgh, 10-13 July 1952, with an open invitation to all visitors to the Symposium to attend our meeting as well. Dr Baker proposed that the main scientific themes of our meeting would be demonstrations of modern techniques employed in algal research with special emphasis on the anatomy, cytology and culture of algae; and the Secretary would make arrangements for this meeting in collaboration with the organising committee of the ISR Symposium. (This duly became known as the 'First International Seaweed Symposium' and followed at 3-yr intervals by the 2nd at Trondheim, Norway, the 3rd in Galway, Ireland, and continued since).

At the British Museum meeting also the Secretary reported receiving letters from Dr G.W. Prescott (Secretary, Phycological Society of America) and Dr M.S. Doty, suggesting future collaborations; and the Secretary now suggested that, since an ever-increasing number of phycologists were becoming interested in the activities of our group, it would be reasonable to consider establishing a formal British Phycological Society very soon, with defined aims, a formal constitution and a fixed annual subscription fee. It was agreed to investigate the procedure involved in forming a scientific Society and to pursue the matter further at the July meeting. My report on the British Museum meeting is also included in *British Phycological Bulletin*, No.1, 1952, pp. 2-4.

The Inaugural Meeting of the British Phycological Society was duly held in Edinburgh University from 8-13 July 1952 and attended by 80 British and overseas

The origins of the British Phycological Society

phycologists, most of whom also participated in the following ISR Symposium, July 14-17. Twelve papers were read on Dr Baker's chosen themes – 'modern techniques in cytology and culture of algae', plus shore excursions to North Berwick, Dunbar and St Andrews (the Gatty Marine Laboratory, arranged by Dr Helen Blackler).

At a business meeting, the Group became formally established as the British Phycological Society and adopted a provisional Constitution; the same Committee to remain until a postal ballot election by all members could be arranged and the results declared at the next meeting, which would include the First AGM of the Society – at Queen Mary College, London on 2 January 1953. It was hoped to attract all scientists with an interest in algae – freshwater as well as marine, physiologists, biochemists, industrial users of algae, etc.

Thus the next meeting was held at QMC London on 2 January 1953, with Dr Maud Godward acting as Local Secretary. The programme consisted of a symposium on 'Marine Algal Ecology', followed by the first AGM of BPS, and about 40 members attended the meeting. Papers to the symposium were given by Dr Elsie Conway, Dr Elsie Burrows, Dr Sheila Lodge, Mr Harry Powell and invited speaker Dr Jack Lewis (Leeds University).

At the AGM, Harry Powell reported that there were now 76 members of the Society, and 54 completed ballot forms had been returned for the election of the first Council. The meeting adopted the following resolution from the informal group:

1. to hold regular future scientific meetings at academic centres; also regular field meetings as the best way for members to socialise and to get to know the algal flora.
2. prepare a revised Check-list of British Marine Algae and work towards producing a new Flora of British Marine Algae – this project to be entrusted to a subcommittee.
3. arrange for a periodic News Bulletin to all members.

A proposed addition to the Constitution, to enable Honorary Membership of BPS to be offered to deserving individuals, was agreed. (The first 3 Honorary Members – Mr A.D. Cotton, Dr E. Marion Delf and Prof. F.E. Fritsch FRS, were subsequently elected at the 2nd AGM, held at University College, London on 1st January 1954. Sadly, Prof. Fritsch, the outstanding doyen of our subject, died in May 1954, at age 75).

The results of the postal ballot having been worked out, the Secretary announced that the following Officers and Members had been elected to serve on Council for the year 1953:

President: Dr. K.M. Drew Baker

Vice-Presidents: Dr. M. Knight, Professor L. Newton; Hon. Treasurer: Dr M.T. Martin; Hon. Secretary: Mr H.T. Powell. To retire December 1953: Dr H. Blackler, Dr E. Conway, Dr M.F.E. Nicolai. To retire December 1954: Dr M.B.E. Godward, Dr S.M. Lodge, Dr J.W.G. Lund

This several leading freshwater phycologists now joined the Council team and Dr John Lund (FBA, Ambleside) went on to be elected the third President of BPS for 1957 and 1958.

Dr Gordon Leedale (Leeds University) succeeded me as Hon. Secretary in 1965, so I had the job for the first formative 14 years. This gave me (the youngest member of the committee) a lot of pleasure and satisfaction. Most of all I appreciated the opportunity to get to know personally so many professional colleagues of both the older and rising generations in both marine and freshwater disciplines. By January 1965 there were 205 members of the Society. I later served as Vice-President in 1970 and as President, 1971 and 1972.

The early history and activities of the BPS is recorded in the *British Phycological Bulletin* series that were issued to all members and held as sets by many University and other scientific libraries:

Vol. 1, Nos. 1-7, 1952-1959. Dr Sheila Lodge edited Nos. 1 & 2, Dr Elsie Conway Nos. 3-7. Vol. 1 can be regarded as the archive of the BPS for that formative period. *Vol. 2, Nos. 1-6, 1960-1965* (521 pp + Index). All edited by Dr Conway. Vol. 2 has professional printing and includes mostly original papers but also still the reports of meetings and minutes of the AGMs.

Vol. 3, Nos. 1-3, 1966-1968, Editors: No. 1, Dr Mary Parke & Dr Peter Dixon; Nos. 2 & 3, Dr Parke & Dr Gordon Leedale. This Vol. had grown to 614 pages of mainly original publications, plus Reviews and short accounts of meetings.

The *British Phycological Bulletin* evolved into the *British Phycological Journal* in 1969 and finally into the prestigious *European Journal of Phycology* in 1993 – but this is recent history!

I would like to conclude with a tribute to our founder Chairman and first President of BPS, Dr Kathleen Drew Baker, DSc. She was truly our academic and practical leader in those exciting early years and inspired the rest of us to work together towards setting up our cherished Phycological Society. Her guidance of the Society culminated in her inspirational Presidential Address, 'Phycology and the British Phycological Society' delivered at Bedford College, London, in January 1955 (in *British Phycological Bulletin*, Vol. 1, No. 3, pp. 1-10). The Address reflects remarkably clearly Dr Baker's critical approach to her own work and that of others, re-emphasises the principal aims of our Society and suggests ways in which all members might most usefully participate in its activities.

To our great grief and loss, Kathleen died so soon after, in September 1957, after a short illness, only 56 years old. Many moving written tributes (10) to her life were received by BPS from British and overseas phycologists and other friends and were published as an Appreciation of her life in *British Phycological Bulletin*, Vol. 1, No. 6, 1958, pp iv, 1-13, together with a frontispiece photo-portrait of Kathleen and a list of her 50 scientific publications.

My very best wishes to all members and for the continuing success of the British Phycological Society.

Mr Harry Powell, Scottish Association for Marine Science, Oban

BPS - 60 years

One day in 1951 Dr Drew Baker and I were travelling in a coach. Why, and where to, I forget. She said that she and Dr Martin were proposing the foundation of a British Phycological Society (BPS). She said that they had got considerable support for the idea and intended to have a meeting to make a formal proposal. If this was carried, then they could form a provisional committee and plan for a first meeting of the society. I gave her my enthusiastic support.

By this time I knew her well. She had done me a great kindness when I was an undergraduate. As Miss Drew she had been an assistant lecturer in the botany department at the University of Manchester, but on her marriage in 1928 to Wright Baker, a professor of engineering, her contract had been terminated. Married women were not allowed to be members of the academic staff. When I arrived in 1931 she was working in a small room high up in the museum, and there were two assistant lecturers in the botany department, Miss B. Colson and Miss I. Manton. Someone, I suspect it was Manton (by this time probably Dr Manton), told her that there was an undergraduate who was keenly interested in algae. She expressed a wish to meet me. She told me that she and her husband were going to Anglesey for their Easter seaweeding excursion, and invited me to join them. In my mind's eye I can still see them setting off, Professor Baker driving the motorcycle and Dr Drew Baker in the sidecar with botanical and other luggage. I followed by train. We had good weather. In the evening we examined our collections and mounted specimens. I still have my herbarium sheets. On my last day I was standing near the edge of a cliff when it suddenly collapsed and precipitated me on to the stony beach some 20 feet below. This must have been a shock for them but they needn't have worried. No bones were broken, although of course I was badly bruised. I have very good bones which continue to refuse to break in my unsteady old age. The next day I was taken to Holyhead to catch the train home, with Dr Baker on the pillion seat. This was the beginning of a lasting friendship, cut short by her untimely death in 1957.

However, this is pre-BPS history.

At a meeting in Bangor, with Dr Baker in the chair, the BPS was founded and a provisional committee of

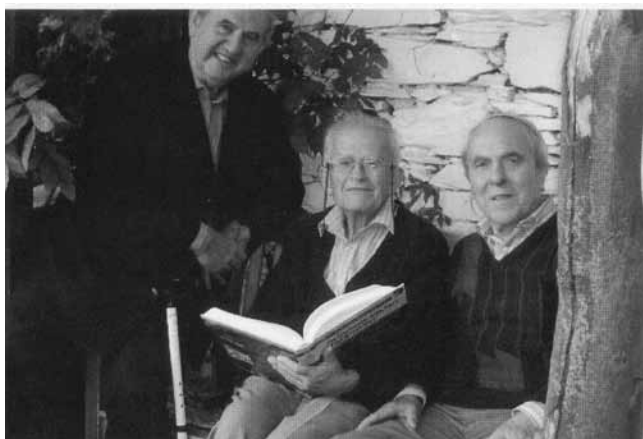
7 women and 2 men formed. All were marine phycologists, though Dr Baker also worked on freshwater Rhodophyta. They considered the constitution and aims of the society, as well as organising the first meeting which was held in Edinburgh in 1952. At that meeting Dr Baker was elected President for two years, starting in 1953.

I think that the BPS was and probably still is unique among British scientific societies in being founded by women, having women as its first, second and fourth president, and in its first years being mainly influenced by its female members. Indeed, Dr Margaret Martin was treasurer for the first 11 years. The editors of the Bulletin (later the Journal) for the first 12 years were women. Dr Elsie Conway only asked to be relieved of this task after 10 years, when she was about to become President. The founding group of women included a number of strong-minded and strong-willed scientists, useful characteristics in women in those days, but they were united in their determination to make their infant society a success. We owe a lot to them. I got to know them all, some of course better than others. I remember them all with affection.

Harry Powell was our first secretary. He was an excellent choice: able, full of common sense and had just the right personality for the job. He was secretary for 14 years, the first two for the provisional committee. He was a great help to the young society. My memory of the early days is a happy one. If there were serious problems or disagreements, I have no memory of them. In addition, I think that anyone who went on the field meetings will also have happy memories. These gave us a chance to get to know each other better, and the informality probably helped the younger members to appreciate the human qualities of their more senior colleagues, as well as enjoying their oddities. I am only sorry that so many of them are not here to enjoy this year's celebration.

At the end of her Presidential Address on January 4th, 1955, Dr Baker expressed the wish that the Society would justify its existence and flourish. It has done so. In my opinion the venture has been a great success. May it continue to flourish.

John W.G. Lund



Presentation to John Lund

The second edition of 'The Freshwater Algal Flora of the British Isles' is dedicated to John W.G. Lund FRS 'in thanks for his outstanding contribution to the knowledge of British freshwater algae and his continuing help and encouragement to phycologists throughout the world'. Two of the editors (David John and Brian Whitton) visited John at his home in Ambleside in the English Lake District on 13 November, just two weeks before his 99th birthday, to present a signed copy of the book and enjoy a very lively conversation lasting almost three hours.

An inspiration to us all

As I write, the snowdrops are out, the blackbird, song thrush and robin sing, the laughing call of the green woodpecker fills the air and as dusk approaches the tawny owl sends out a mellow spring call, and I am reminded that I hadn't intended to become phycologist. I started life after University working as a terrestrial botanist in the mountains but the call of the sea was strong so I made my way down, took up the study of seaweeds, joined the British Phycological Society and my life changed forever.

I joined the BPS in 1985 when I began my postgraduate studies under the tuition of Professor Michael D. Guiry in Galway. Recollections of my first winter meeting include listening to my knees knocking together as I waited to give my first ever scientific presentation. That intense juxtaposition of trepidation and dread coupled with excitement and wanting to tell everyone what I was doing (even if the practice run had sent the parents to sleep late one Christmas evening) has never left me. At first I didn't know anyone. There were a lot of people who seemed ever so old and who I presumed must be very eminent. Indeed many were, but unfortunately I was just too late to meet the formidable women who were the founder members of the society.

In this 60th year of the British Phycological Society, I have been thinking about Dr Kathleen Drew Baker who founded the society. Revisiting the origins of the society, I am reminded that the first meeting of phycologists was proposed by Kathleen Drew and her friend Dr Margaret Martin and held in Bangor in September 1951. At this meeting plans were agreed for the future, which included the proposal to form a British Phycological Society. It was decided that there would be a short meeting in January 1952 (which became the start of the annual winter meetings) at which algal taxonomy and nomenclature would be the main subjects. An annual News Bulletin was proposed which began as the *Phycological Bulletin*, evolved to become the *British Phycological Bu-*

lletin in 1959, the *British Phycological Journal* in 1969 and the *European Phycological Journal* in 1993. The newsletter, as *The British Phycological Society Newsletter*, was a new venture in 1971, becoming *The Phycologist* in 1992. Another of the original aims of the society was that there would be a Check-list of the British Marine Algae, and we have to thank Mike Guiry for maintaining an up to date list of seaweeds for Britain and Ireland. The final aim I will mention is that a 'comprehensive new British marine algal flora' should be produced.

The BPS has always been a professional organization and as such it has served the phycological community well, not only in the UK but in many other parts of the world. Over the 27 years I've been a member of the society there have been many changes and developments. There were travel awards for students and bursaries for summer projects when I became a member but no prizes until the Irene Manton Prize was created. The society has been able to increase considerably the amount of money that can be awarded for travel and projects in recent years. It has also seen a number of initiatives come to fruition under the Biodiversity and Conservation Committee. The comprehensive new British marine algal flora became the scholarly *Seaweed Floras of the British Isles* series which have provided a firm basis for additional, dare I say more 'friendly' floras to be produced for those starting out. For a long time I have personally been keen to see people becoming involved from the wider public. There is no doubt that there is a growing interest in learning to identify seaweeds and to contribute to recording. We are now working to include the 'citizen scientists' into the world of algae in many ways from the scientific through the culinary to art and beyond, and it is something we need to continue to embrace and enable. There is no doubt that the seaweeds are much more firmly on the map in the UK at the government level and for 'citizen science' as a result of the visions of those founders of the society.



Juliet Brodie

Since I have been a member of Council moving the winter meeting to a different time of year has been a constant topic for discussion. I will probably go down in the history of the society as the President who failed to make it to the 2010 meeting in Oban because of exceptional snow at Bristol airport. So during my Presidency I decided to bite the bullet. I reckoned it would be a good idea to have a 60th anniversary celebration in the summer this year and that this would give us the psychological impetus to move the winter meeting to the summer in 2013. This also gives us the opportunity to add field meetings as well. I am confident it will work but no doubt there will be occasions when some year for the return of the good old days when getting to winter meetings meant the travel challenge of gales, snow, ice and flood.

Phycologists who end up with permanent positions are very quickly persuaded (coerced?) to serve on Council, so take care, all you students if you are contemplating a career in phycology, it won't be long before it is your time to serve! But for me it has been an amazing experience to work on the Council over many years, to see ideas shape up into reality, arguments fought (sometimes almost literally) and resolved, and to learn and contribute to how it all works.

Returning to Kathleen Drew and her friend Margaret Martin, what were these two ladies like? I did meet Dr Margaret Martin in 1997 when she was quite elderly. She spoke of how hard it was working through the depression years in the 1930s and just how difficult it was with no money and no equipment. She also talked about how she and Kathleen had set up field experiments to study the life cycle of the red alga *Porphyra*. The experiments seemed to consist largely of taking limpet shells into the field and sticking them down with glue but this was the path to Kathleen Drew's discovery of the life cycle of *Porphyra* and to her famous paper to Nature in 1949, aptly described as "100 lines that should change

the world" (Michanek 1996). Kathleen Drew founded the British Phycological Society in Edinburgh in January 1952, and, albeit reluctantly, she became the first President of the British Phycological Society and the first Council was elected in January 1953. A couple of years ago I wrote her entry for the Oxford Biographical Dictionary and in the process I tried to find out what she was like. This proved to be no easy task because she burnt all her papers and letters before she died. However, what I did learn about her sets a standard. From what had been written and from the people who had known her, I gleaned that she had a clear and acute mind. She was forthright, generous, sincere and devoted to her friends.

She was dignified and very formal, a colleague of integrity with high standards in everything she did. If I stand back and visualize the Society, I get a sense of something solid, forthright, generous and sincere, much as its founder. Surely this remains an inspiration to us all. And if I am still around in another 27 years, like the phycologists I first met, I will also be very old.

Michanek, G. (1996). Kathleen M. Drew Baker (1901-1957). In: Prominent Phycologists of the 20th Century (D.J. Garbary & M.J. Wynne, eds). Lancelot Press, Nova Scotia.

How things have changed

I joined the society in 1968 while doing a Masters degree at Menai Bridge with Eifion Jones. He introduced Bill Farnham and myself to the Winter Meeting at Queen Elizabeth College. In those days the meeting was always at one of the colleges of the University of London which were usually cold but always well-attended by a good many of the founder members, all of them interesting character. There were a smattering of us young bloods, all of us in awe of the experience and knowledge of the senior members of the society.

I think it is fair to say that, at this time, the seaweed groups had received more attention than the groups of microscopic unicells and flagellates and Bill went in the direction of *Gracillaria* etc which was to be expected after his first degree at Liverpool which was churning out zealots for the macroalgae seemingly by the score! However I joined the small number who had already started to use transmission electron microscopes to explore new avenues, especially with the smaller algae. I joined them in 1969 when John Dodge invited me to explore dinoflagellates with the TEM at Birkbeck College.

At this time preparation was a very time-consuming business. Even after the search for a fixation schedule that worked for the alga of interest (and luckily Barry Leadbeater had done much of the spade work for me in the year before), hours and hours had to be spent sitting at the manual microtome, trying not to breathe too heavily; hoping that the glass knife would be sharp and do a good job and that the wax seal for the water supporting the sections did not spring a leak. We had to coat the grids with the plastic supporting film ourselves before stabilising it with cold/palladium and none of that was always either easy or successful. Barry and I spent hours and hours in the dark on the microscope, which we had more or less to ourselves. For myself this was as exciting as science gets. Exploring the wonders of the insides of the cells of this marvelous group of organisms where evolutionary experiment has produced such a diversity of structure in their organelles and general morphology was a privilege. Knowing for certain that no other being had ever set eyes on, for example, the pusule of *Glenodinium foliaceum* or discovering a section that one knew was going to be

a certainty for a paper on, say, *Amphidinium carteri*, was made the sweeter because of all the hours of frustration.

Before my three years as a research associate at Birkbeck were over, my good luck continued when Frank Round appeared looking for someone to work with him on the diatoms in Bristol where I would be able to study for a PhD. I was reluctant to leave the Dinoflagellates, fascinating as they were but also because my acquaintance with the diatoms had been limited to trying to make some headway with the freshwater diatoms using Baxter's translation of Van Heurk's Treatise on the Diatomaceae as an undergraduate with Kathryn Benson-Evans in Cardiff. I had little idea where to start. Now in Bristol, Frank gave me Melosira to get to grips with. Modern light microscopes showed this was clearly a mixed bag of diverse genera so there was much to get to grips with. More or less immediately I was able to use a Cambridge Stereoscan, one of the first scanning EMs to come on the market. Preparation of material for the SEM was much easier than for the TEM unless one wanted to see the intact cells rather than cleaned up frag-

ments. Probably as a consequence we saw less and less information deriving from sectioned cells and despite the beautiful results of a few remarkable figures such as Gene Steormer, Anne-Marie Schmid, Ben Volcani Jeremy Pickett-Heaps and Lesley Edgar, we still don't really know how the diatom cell wall functions even if great strides have been made in understanding its formation. I will certainly have missed some out of this short list and Bob Anderson spent a very productive few weeks with us in Bristol and sectioned beautifully several marine diatoms. Among them was *Actinocyclus subtilis* and some of his breathtaking images are still among my favourites; and Bob was supposed to be a flagellate man!

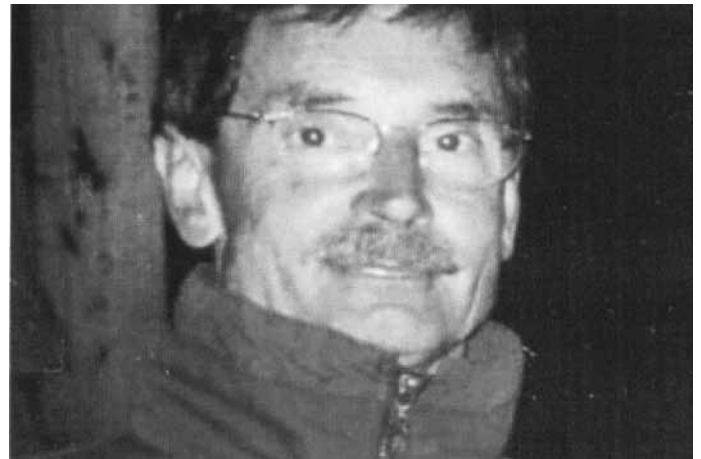
I never did get to the end of *Melosira*, chiefly because I lost confidence in being able to decide the boundaries between species of *Aulacoseira* with

any certainty. How many of the diatom genera turn out to be cans of worms?

How things have changed during the last 50 to 60 years. The 1960-1990 period surely was a great time for an individual to be exploring the algae as a diverse group of wonderful evolution but how things have changed and how much more effective in

answering altogether more complicated questions are the collaborative projects we read about today? One thing has not changed though and that is the high level of interesting science to be found at the annual meeting and that is a great cause for celebration.

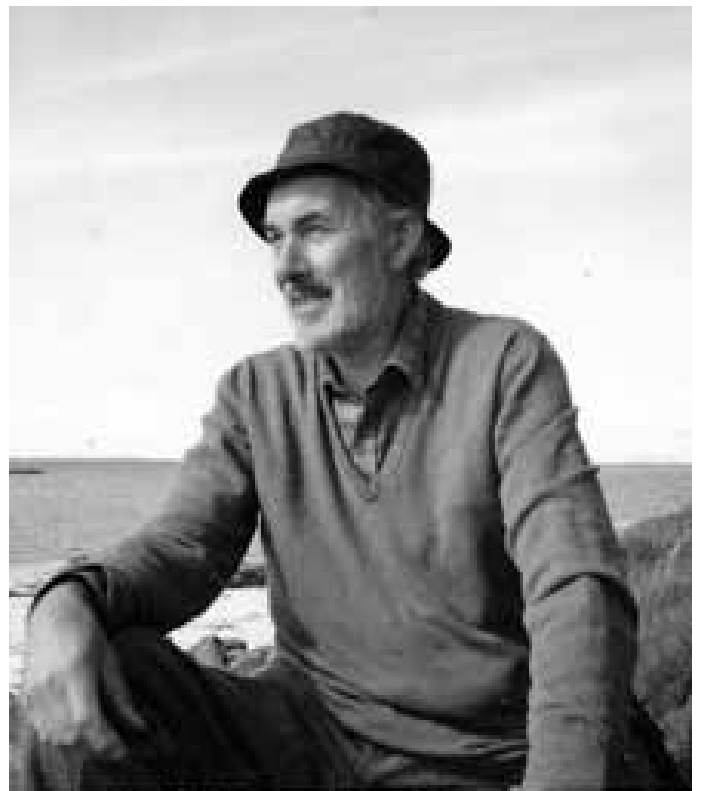
Dr Richard M Crawford



Reflections on 60 years

Looking back over almost 60 years it is interesting to reflect on the people who influenced the direction of my botanical interests and who helped along the way. For me, starting at Queen Mary College in 1954, there was surely an influence from the great F. E. Fritsch who had taught there for 40 years and had died a few months earlier. His legacy was kept alive by Dr. Maud Godward who was extremely keen, helpful, and always up to date with recent developments. Also influential were the postgrad demonstrators, especially Gordon Leedale, who was researching Euglenids. Three years later, when I started to work for my PhD, I took over Gordon's place in Maud's busy research lab. It was suggested that I go to some experts to learn about culturing algae and also to look for suitable organisms for my research into the effects of irradiation on their cytology.

The first of the labs that I visited was the Algal Culture Collection in the Botany School at Cambridge. Here Eric George taught me all about soil/water tube cultures but thought I might work on ciliates. Next, off to Millport where Michael Droop introduced me to the curious phagotrophic dinoflagellate *Oxyrrhis marina* but suggested that I could work on a pet green flagellate of his. Lastly, to the MBA at Plymouth and Dr. Mary (Mamie) Parke, which turned out to be the most important pointer to my future direction. After a tour of the lab with its sacrosanct culture room, Dr Parke sat me down at a microscope with a tray of beautiful cultures of dinoflagellates which she had isolated. She said



that as no one was working on them I could have them if I wished. I did wish! This was at the time when Prof. Irene Manton was already into her hugely profitable collaboration with Mamie on the structure of scaly microflagellates. Back at QMC with this collection of dinos I soon discovered that they also had lovely chromosomes, and I was hooked!

Two years later, in 1959, I was fortunate to get the post of Assistant Lecturer in Cryptogamic Botany at Birkbeck College. The Head of Department, Prof. C. T. Ingold, was an eminent mycologist, but he had a soft spot both for microscopy and for interesting and unusual plants. He gave great support to my proposal to set up an electron microscopy lab and helped in gathering funds for all the equipment. More hands were needed and a keen research student named Barry Leadbeater came on the scene. Using one of the Plymouth cultures, Barry unlocked the secrets of some of the unusual organelles found in dinoflagellates before moving on to Leeds to work on other flagellates. Meanwhile, at Birkbeck, Dick Crawford had got down to a serious examination of the comparative ultrastructure of as many different dinos as we could obtain. They turned out to most unusual organisms. After three years, Dick went off to Bristol where he converted to Diatoms and became an expert in that group. Progress on unusual nuclear division mechanisms, such as those found in dinoflagellates, was aided by the arrival from the USA of Berl Oakley. Back home he became an expert on microtubules, which he had first encountered as mitotic spindle fibres.

Whilst all this exciting exploration of the fine structure was going on, a public health scare occurred in NE England from an occurrence of Paralytic Shellfish Poisoning. Min. of Ag. and Fisheries people thought it was most likely caused by a dinoflagellate, but had no one to identify the same. They asked if I could help, and also produce a taxonomic handbook for the dinos in the seas around the British Isles. Thus began the second branch of my research interests as we collected or obtained plankton samples from lots of places around the UK. My main helper in all this, and in compiling the taxonomic information essential for the handbook, was Barbara Hart-Jones. Whilst this work was in progress I moved from Central London to the rural delights of the Chair of Botany at Royal Holloway College near Egham, Surrey. The dino taxonomy work now required easy access to scanning electron microscopy. Funds were put together to obtain the equipment and we took on Richard Saunders to help. He became a real expert both at picking out and preparing individual cells (c20-50 μ diameter) and he took super micrographs of their elaborate armour plating. Things advanced both on the taxonomic and artistic fronts.

In 1978 a joint meeting was set up for some of us studying living/modern dinos with workers on the cysts of fossil dinoflagellates, then being much used by paleontologists as indicators in oil exploration. This led me to take an interest in the resistant stages or cysts of our plankton organisms. We were joined by Jane Lewis who worked jointly at RHC, and at SMBA at Oban where sampling facilities and a sea loch with a population of an attractive cyst-forming dinoflagellate were available. Jane has carried on working on cysts and toxic dinoflagellates to this day. As a throw back to the earlier studies on cell division, Gao Xiaoping, from China, was able to link cyst formation of a small dinoflagellate to both detailed light microscopical observations and the ultrastructural changes during the various stages of the life cycle.

The last few years of regular employment at Royal Holloway as Head of the Biology Department were very much taken up with administrative duties, mostly involved with mergers and reorganisation. Dinoflagellate work continued but mainly due to several visitors from abroad who came to use our literature collection and facilities, but usually gave much in return in enthusiasm and encouragement.

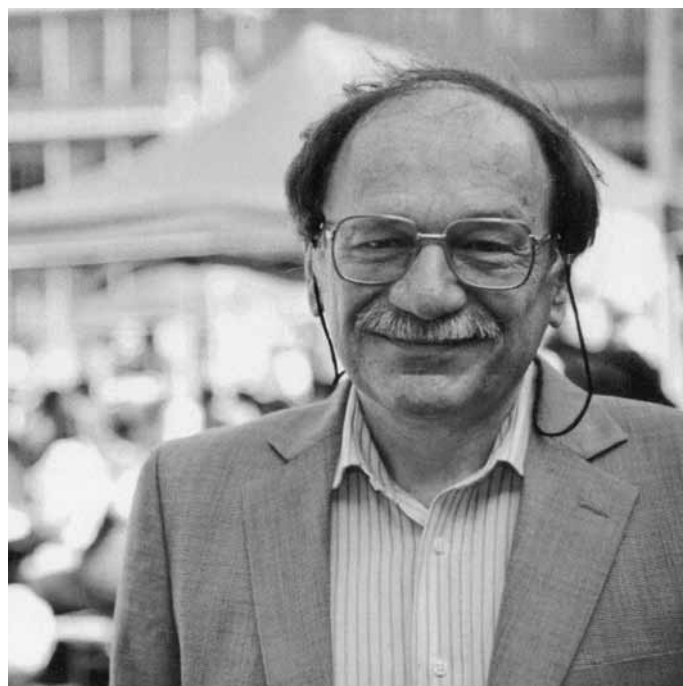
So, very many thanks to all those mentioned above, and also to the lots of other students, colleagues and visitors who enabled me to have a great time over 40 odd years, delving into the magical world of these fascinating microscopical organisms. I cannot end this story without a word of thanks for the BPS, which I first encountered in the late 1950s on their only visit to Queen Mary College for the Annual Meeting. What a great time we had at these meetings, getting to know the phycollogical greats and reporting our new discoveries before a critical, but mostly helpful, audience. It was a privilege to have been able to serve the Society both as Secretary and President.

PS. On retirement I moved to an old house in a village in rural Worcestershire. In the garden was an overgrown pond which I cleaned out and refilled with tap-water. Imagine my surprise when, in the following February, I spotted that the water had turned brown. The microscope revealed that the brown water was caused by a delightful cyst-forming freshwater dinoflagellate. I still look out for dinos when I get the chance!

**John Dodge, (johndodge@waitrose.com)
President 1981-82.**

Britain, my Life and the British Psychological Society

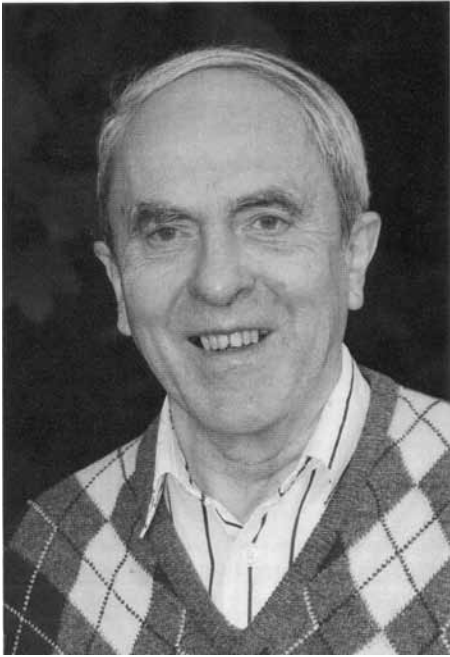
People beyond the age of sixty tend to look back and reminisce. Unlike societies, this is understandable as most of their life has passed. On reflection, my involvement with BPS or, more generally, with British psychologists and with the country is much older than my membership, which began in 1979. With Alzheimer perhaps looming around the corner, my memories of old times also seem to be much fresher than those of the more recent past. Born into a family of mixed Armenian/German origin, I grew up in post-war Germany without nationality and without role models outside my family. My first exposure to Britain dates to the year 1963. My uncle, who was shot from the sky over England during the war, took residence in Britain, changed his first name from Harald to Harold and became a true Englishman, invited me to England (a camping holiday in Cornwall). This was a new world for me: London, the imperial city, Victorian buildings and museums, freedom of speech (Hyde Park), the popular music. Everything was different, the coins, the units of measurement, driving on the left, the type of cars, the food, queuing up patiently, even the street lighting (yellow!). Sometimes I couldn't understand questions such as "Do they now teach good manners in Germany?" but otherwise I was all fired up. Since that year, I returned to Britain every year during my school holidays and virtually fell in love with the country. I attended language schools in London and Bournemouth, and spent days in the museums in Kensington, the zoo in Regent's Park and in concerts and record shops. At home, listening to British pop music on BFN (the British Forces Network, later BFBS) sometimes saved my day. Later, when I took up the study of biology at the University of Hamburg (in 1968), I used this experience to rebel against the silence of the past and false authorities, and thus helped to change German Society. After all, I even became a German citizen (and much later a civil servant). When I took up research and was told that a PhD student would not be allowed to publish a scientific paper under his own name without his supervisor, I took advice from visiting British psychologists, namely Frank Round, who assured me that "there is no such rule". Early encouragement for my research mainly came from foreign scientists, notably British psychologists. Some like Brian Whitton and Dick Crawford were visiting, others I met during my frequent visits to Britain. Although trained as a plant (algal) physiologist, I became fascinated by electron microscopy through the work of Jeremy Pickett-Heaps and Irene Manton. Because I was only allowed to take a maximum of 10 photographs per week, I sat at the TEM with pencil, paper and Irene Manton's classical work on the zoospore of *Stigeoclonium*. 6 weeks and 60 micrographs later, I submitted my first manuscript for publication. To enhance my theoretical knowledge of electron microscopy, I attended meetings of the Royal Microscopical Society. During one such meeting in Leeds, I learned that Irene Manton would likely join the tea break. I introduced myself and to my surprise she invited me to



her basement in the Physics building the next day. When I entered the room, I saw a huge table with many different piles of photographs and Irene Manton sitting on two telephone books at a small table typing on an old Smith & Corona typewriter (I was fortunate to acquire the typewriter during a BPS auction, years later). I felt a mutual sympathy and scientific understanding, and every time on our way to the English Lake District, my wife and I stopped by in Leeds to meet Irene Manton exchanging flowers and chocolate. Those were the personalities who shaped my scientific development and I met all of them again during my first BPS Winter Meeting (in Bristol, January 1980), where I gave two oral presentations. This was followed (thanks to Dennis Greenwood) in 1981 by an invitation to a conference of the "9+2 Club" in Cambridge, during which Peter Satir encouraged me to become a cell biologist. It was thus only natural that the British Psychological Society was the first foreign learned society that I joined as a member. The rest is history. Long may you prosper, BPS!

**Michael Melkonian, University of
Cologne, Germany
Overseas Vice President BPS 1993-1994
President of the International
Psychological Society 2002-2004**

What's in a name?



The initial suggestion for this article came from the editor of *The Phycologist* less than a week after I made a decision ever since regretted. Following several moves between rooms in Biological and Biomedical Sciences at Durham University, it was clear that the key to a very old and hefty filing cabinet had been lost. Technicians suggested the lock was so strong it would take a pneumatic drill or a bank robber to deal with it; so were the contents really important? The files were all very old and I answered "No". Unfortunately they included all my dealings with the British Phycological Society.

Some past events do not need anything in writing for me to remember.

Readers of *The Phycologist* have already been told by other past presidents of the years when electron microscopy talks at annual meetings fell into three categories: those where the impressive Professor Mary Parke stood up to clap part way through, if an especially fine flagellate micrograph was on the screen, those where she stood up and clapped strongly at the end and those where there were just a few weak claps. Here are two other events which are just as clear in my memory.

The first was in January 1962 at the annual BPS meeting. It was at a time when banks seemed to find it especially hard to distinguish between Phycological and Psychological when making payments and I had found out that my problem with Lloyds Bank was shared by many others, whatever their bank. I therefore proposed that the Society change its name from British Phycological to British Algological and, somewhat to my surprise, found the majority of speakers agreeing with me; the name change seemed likely to win. However, Roger (W.) Butcher then spoke and told everyone that no academic society could have a name which mixed Latin and Greek roots. His words sounded scholarly, the suggested change faded away and, fifty years on, we are still The British Phycological Society.

Some years later I asked Pierre Bourelly of the Musée d'Histoire Naturelle in Paris why the French had no worry about the name of their journal, at that time known as *Revue Algologi-*

que. He shrugged his hands and pointed out that many words in French and English combine two different languages. Then, last year, the new editors of *Journal of Phycology* made clear they would like the name of their journal to be changed. Worries about confusion between Phycology and Psychology were mentioned as one of the reasons, this time because of Google searches. A vote by the members of the Phycological Society of America rejected the change, but a further message from the Society indicated that the editors would still welcome a title change.

My other memory about names is from 1988, when Ivan Heaney from the Freshwater Biological Association and I were at a reception during the International Phycological Congress in Melbourne. We had been chatting about the need to enliven the British Phycological Society, when each said to the other at the identical moment that the name of the journal should be changed from *British Phycological Journal* to *European Journal of Phycology*. The possibility of starting a new European journal had been mentioned by members of several other European phycological societies during the Congress. Perhaps reprehensible, but Ivan Heaney and I thought the best way to avoid our own journal being weakened was to adopt the European name before anyone else did. It took a few years to achieve, but that is how the *European Journal of Phycology* got its name.

Brian Whitton

From Wilson to Woronichinia

Congratulations to the BPS on its 60th anniversary. In the 1960s I was largely unaware of the world of phycology. I have to acknowledge the key role of Harold Wilson, the (to me then) dynamic and inspirational Prime Minister, in influencing my decision to move from an offer to read veterinary medicine, to study microbiology. Harold's slogan, "the white heat of technology", caught my imagination: I wanted to be part of the action. The world of microbes, with their unifying principles, but diverse metabolic complexities, astounding adaptive capacities and practical applications, seemed to be the right way forward.

The photosynthetic microbes in particular, much more appealing in those pre-PCR days than drab coliforms, fired my enthusiasm. Staying loyal to Harold, I was pleased to be able to work for my PhD under the supervision of Mike Merrett at Bradford on pathways of carbon dioxide fixation in division-synchronised cultures of *Euglena gracilis*. The ability in those days to determine metabolic pathways using state-of-the-art rapid radio-labelling methods, with all-revealing 2-dimensional paper chromatography and X-ray film autoradiography, was heady stuff. It is safe to say that Melvin Calvin had never heard of Bradford, but it felt

as if he could be in the next lab. A subsequent postdoctoral fellowship at the Max Planck Institute in Cologne, (Profs. Georg Schmid, Wilhem Menke et al.) confirmed the key place of algal research in unravelling the light reactions of photosynthesis. After all, Menke had actually devised the name “thylakoids” for the photosynthetic membranes of blue-green algal cells and of algal and plant chloroplasts.

Still oblivious of the maturing BPS, a chance reading in the Max Planck library of a paper by W.D.P. Stewart et al. on photorespiration in blue-green algae prompted my interest in returning to the UK and initiated my curiosity about cyanobacteria. The opportunities and encouragement provided to lecturers in Professor Bill Stewart’s, then, very new Department of Biological Sciences at Dundee, to pursue their research interests were excellent. Collaborations developed, funding streams were established and phycology, not least cyanobacteriology, flourished in Dundee. In joining the BPS in 1975, I quickly realised that this society was the forum in which the breadth and depth of phycological interest, expertise and exchange, throughout the British Isles and to some extent beyond, was gathered and sustained. After a decade of highly radiolabelled, but largely lab-bound research, my interest in the massive cyanobacterial blooms occurring annually in many Scottish freshwaters was stimulated at BPS meetings through the infectious enthusiasm of what seemed to me to be a smart group. Tony Walsby, Colin Reynolds, Ivan Heaney, Brian Moss, Chris Gibson and their colleagues had cracked it: doing exciting research on cyanobacteria and microalgae out there in the natural environment. Heaney, Reynolds, Gibson, Roger Smith and colleagues had already indicated that cyanobacterial blooms in UK waterbodies could be toxic, although these pointers did not seem to be being pursued. The Annual Meetings of the BPS indulged my developing interests in cyanobacterial bloom ecotoxicology throughout the 80s. This research literally came down-to-earth in 1989 when 20 sheep and 16 dogs died and recreational waterbody-users became ill at Rutland Water in Leicestershire, the largest man-made reservoir in Europe, then beset with a massive hepatotoxic bloom of *Microcystis*. Thanks to the expertise that we had built up, and following urgent questions in the British Parliament, we were able at Dundee to identify and quantify the cyanobacterial toxins involved within 24 hours; a testimony to the value of enabling researchers to do curiosity-driven research in our universities. Research funding over the ensuing 20 years, from the UK’s NERC and environment agencies, industry, UNESCO and EU Programme projects, helped to build a body of UK expertise in cyanotoxins and their risk management and to contribute to these aims in over 30 countries. These efforts were aided not least by the multi- and interdisciplinary opportunities for communication, exchange and collaboration arising through the activities of the BPS.

Thinking back over the 31 Annual Meetings of the BPS which I have attended (and of the 100 or so full-



fried breakfasts somehow consumed in the early days of our Annual Meetings in the halls of residence of the UK’s universities), it is plain to see that the Society has moved on. It has become increasingly international in terms of: its membership; the global subscriptions to its journal; attendance and contributions at the Annual Meetings; the usage of its website (closely monitored in Galway); and the provision of support through the various BPS Awards and Training schemes. As a member of Europe’s largest and oldest phycological society, it seems fitting to have witnessed the role which the BPS has played in the foundation (in 2007) and early development of the Federation of European Phycological Societies (FEPS). As one of the 12 national society members of FEPS, which currently includes phycologists in at least 14 European countries, the BPS now has a considerable potential role in promoting phycology at European level, and beyond, in solving emerging issues affecting the environment and human welfare.

Geoffrey Codd was President of the BPS from 2007-2009, and first President of FEPS from 2007-2010.

Hilda Canter-Lund Photography Award 2011

The 2011 Hilda Canter-Lund prize was won by Lyra Gaysina for her photograph “blue-green necklace: *Trichormus variabilis*”. *Trichormus variabilis* (syn: *Anabaena variabilis*) is a blue-green alga (Cyanobacteria) commonly found on moist soil in the forest-steppes of central Russia. This alga has a “rosary” structure with smaller bead-like cells interspersed with larger cells called “heterocysts” which help the alga obtain nitrogen from the atmosphere. The photograph was taken with an AxioCam MRc camera on an Axio Imager A2 light microscope at $\times 400$ magnification using differential interference contrast (DIC) optics.

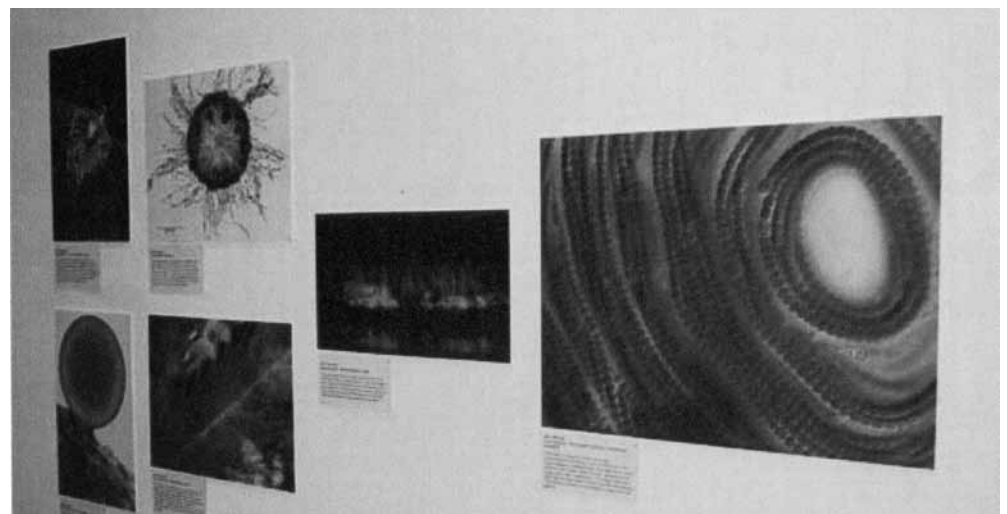
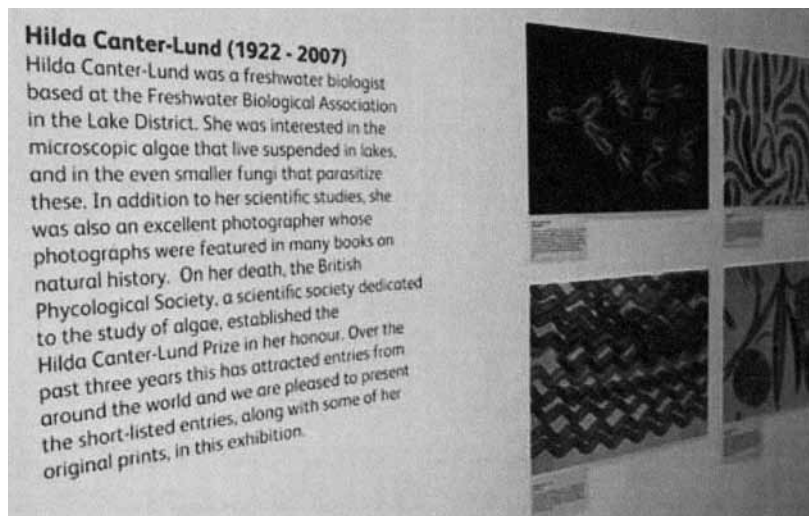
Dr. Lira Gaysina is Associate Professor in Botany, Bioecology and Landscape Design at the Bashkir State Pedagogical University in Russia. She started studying algae in 1993, as an undergraduate, and completed her PhD thesis “Biology and ecology of *Xanthonema exile* (Klebs) Silva (Xanthophyceae)” in 2000. She has also worked in Jeff Johansen’s laboratory at John Carroll University (USA) and with Marek Eliáš at Charles University in Prague. She is interested in taxonomy, biology, ecology, and biogeography of terrestrial algae. Lira’s image, along with the other shortlisted images, joined the winners and shortlists from 2009 and 2010 plus four original prints by Hilda Canter-Lund in an exhibition, “The Hidden World of Algae”, at

the Great North Museum in Newcastle. There was a private view of the exhibition before the banquet at the end of the Winter Meeting in January, after which the exhibition stayed on display throughout January and February. In addition to coverage in the local press, the exhibition (and Lira’s image) also merited a short piece in The Times.

The Great North Museum also organised an “algae fun day” during the school half term holiday, featuring a range of activities featuring both seaweeds and microalgae. Over 350 people visited over the course of a busy four hours, placing this event in the top ten most well attended family events in the museum’s history. In May, the exhibition moves to Oban, as part of the Festival of the Sea, and will be the focus of a “World of Algae Day” on Friday 18 May. We hope that the exhibition will tour to at least two other venues before the end of the Diamond Jubilee year.

All the shortlisted images can be seen at (http://www.brphycsoc.org/Hilda_Canter-Lund_Prize.lasso) and more details of the Festival of the Sea can be found at <http://www.obanseafestival.org/events/world-of-algae-day/view>

Martyn Kelly



Review of the BPS Winter Meeting, Newcastle 2012



The British are a funny lot when it comes to weather forecasting, relying as they do on unusual methods with varying degrees of success. Dr Merryweather's tempest prognosticator, for instance, employed leeches to predict storms and it is traditional to hang a piece of seaweed outside the door as a weather forecasting tool, a practice some regard as risible although I've always found it to be entirely reliable. If the seaweed is wet, it's raining. However, a new and far more dependable weather indicator is available - just check the dates of the BPS Winter Meeting and it seems you can be assured of bad weather. Remember Oban in 2010 when heavy snow caused disruption and prevented some people from getting there at all? This year high winds in Scotland and the North of England affected road and rail travel and delayed the arrival of many delegates. Despite the weather, the meeting ran like clockwork and we were well looked after in the Research Beehive of Newcastle University where we gathered to hear thought provoking talks on a wide range of subjects, saw interesting posters and engaged in stimulating discussion whilst at the same time maintaining our calorie intake with delicious lunches and scrumptious scones in the tea and coffee breaks.

I'm told that there were so many offers of talks that it was difficult to fit them all in to the programme which is heartening, even if it did give the organisers something of a headache. The meeting began with a Special Session entitled *The Role of Phycology in Education and Outreach* which inclu-

ded talks about *The Big Seaweed Search*, a public outreach project to raise awareness of seaweeds; *Seaweed East '11*, a Seasearch project using amateur divers to record seaweeds; *The Big Sea Survey* – a volunteer led project organised and run by Newcastle University to record rocky shore species on the north-east coast of England; a collaborative project between the University of Cardiff and the Archipelagos Institute of Marine Conservation in which local communities in Greece have been involved in coastal survey work using macroalgae; and an open learning course in diatom analysis as an example of applied phycology. There was also a talk about a novel cross-disciplinary teaching activity at Manchester Metropolitan University linking microbiology and art. The common themes of this session were engagement and support of anyone with an interest in algae, at whatever level, to help them to learn more and to give them confidence to carry on.

Other Special Sessions on Algal Biotechnology, Algal impact on Environment and Human Health, Applied Algal Monitoring and the address by the Overseas Vice President on the algal industry in Malaysia continued the theme of the appliance of science. (Brits of a certain age may remember the famous advertising slogan by Zanussi in the early 1980s.) Underpinning all of these aspects of phycology is an understanding of the algae and the session on Ecology and Distribution of Rhodophyta and the one on Evolution and Phylogeny brought us up to date with some of the current research in phycology.

The full programme was varied and covered all areas of phycology – freshwater and marine, macro and microalgae and this year I was very pleased to see a good selection of talks and posters on marine macroalgae. Not that I'm biased, you understand. The Poster Prize and the Manton Prize went to students working on macroalgae - Sabrina Heisner for her poster on The spread of *Undaria pinnatifida* in Plymouth Sound Special Area of Conservation, and Alexander Jueterbock for his talk entitled Responses of the macroalgal key species *Fucus serratus*: Driving the impact of climate change on North Atlantic rocky shores. I did hear Paul Hayes muttering darkly something about the undue prominence of macroalgae at this year's meeting which just goes to show that you can please some of the peopleAnyway, it's not all about cyanobacteria (some, like me may beg to differ! – ed.)

The many posters attracted a lot of interest and discussion. I hope everyone managed to see Chris Carter's wonderful poster: Anaglyphs as a tool for algal identification and appreciation. It was the phycological answer to Avatar. If you didn't realise that 3D spectacles (supplied) were needed to fully appreciate the images you may have thought someone had slipped something into your tea.

Helen Rosenkranz has been doing a great job as student rep on Council and this year there was a student get together and also a special student lecture given by Steve Juggins on multivariate statistics. This was also attended by many who were not students but who were keen to learn about ordination methods, multidimensional scaling and variance partitioning. They were probably hoping to stay in step with the students, ahead being one step too far.

The Conference Dinner was held at As You Like It – an ideal venue which gave everyone chance to mingle as we enjoyed a lovely buffet before Elliot Shubert wielded his gavel once again to relieve several members of tidy sums of money in exchange for tee shirts and photomicrographs and books in the auction which raised a sizeable sum. Then Michelle had us foxed with the quiz with questions designed to expose our ignorance of all manner of topics including the Olympics. Maybe next year the quiz questions should be issued in advance so we can have a chance of raising our scores in to double figures and we can feel better about ourselves. Just a thought.

The week ended with the Conference Banquet held at the Great North Museum followed by a ceilidh. Great fun and

I'm glad I brought my dancing shoes but sorry that John Raven turned me down for the first time in many years when I asked "Are you dancing?". Unfortunately he wasn't because of knee trouble which I hope will be better by next year.

The theme of this year's meeting seemed to mark a return to the spirit of the first meeting of the BPS in 1952 which was described in the initial notification as being "for phycologists and seaweed technologists". Although this probably meant the academics (the phycologists) and their technical assistants (the technologists) it seems that both were welcome. Perhaps this is something the BPS should embrace? Other societies such as the British Bryological Society, the British Lichen Society and the British Pteridological Society have a knowledgeable amateur as well as professional/academic membership and their brochures give details of many benefits of membership. Take a look at their websites but be warned – you may be tempted to join. Maybe it's time to widen our appeal. The first forays into the wonderful world of phycology may be the spark which ignites a life long love of the subject and possibly the first step along the road to becoming the next Irene Manton or Mike Guiry. Whatever it was that first turned us on to algae should make us want to be proselytisers of phycology otherwise our society's days may be numbered. This point was made during the course of the winter meeting. A point I found quite depressing and one which I hope does not arise, having only been fully turned on to seaweed relatively recently. I do hope that the 60th Anniversary Meeting (to be held at the NHM, London on 12th September 2012) marks the beginning of the next 60 years and not the beginning of the end. There were positive signs that integration and outreach are on the agenda. Michele Stanley talked about Knowledge Transfer Networks, and not just those within the academic community. Philippe Potin emphasised the need for collaboration between research groups and Gary Caldwell described the multidisciplinary approach in a project involving foam fractionation where biologists worked with physicists! How crazy is that?

Congratulations and thanks to Sara Marsham, Michelle Tobin and Martyn Kelly for organising the meeting. The annual meeting in 2013 is to be held in the summer. Watch out for typhoons over Leicester.

Jane Pottas, BPS Secretary

BPS Winter Meeting: A student's perspective

Being an undergraduate student in Marine Biology (Plymouth University), I am only at the very beginning of my career. The topic of my dissertation project and my overall interest in algae drove my decision to join the British Phycological Society (BPS), soon after the 2012 annual BPS meeting was announced. Although this was only the second conference I had ever attended, I decided to present a poster about the data I have been gathering for my Honours Project regarding the distribution of an invasive species of kelp called *Undaria pinnatifida* (Harvey) Suringar that has started to spread rapidly in Plymouth Sound Special Area of Conservation, UK. Unfortunately, no one else from my university was able to attend this meeting which left me hardly knowing anyone.

Despite strong storms and several delayed flights, I managed to make it to Newcastle from my winter vacation in Germany. Slightly scared by all the new faces, I soon discovered that phycologists are a very friendly bunch and happy to talk to me. However, I often had to disappoint people: "No, I am not a PhD student, I am just an undergraduate student!". But, everyone was very friendly and open to meet me, which made it much easier to successfully attend this conference and make it a worthwhile experience.

One of the highlights for me was to present my own research outside university surroundings to a specialist audience who did not only show interest for my research but also engaged in it by discussing it with me and giving me new ideas. This was rewarding in regards to my project, but also personally as it showed me that my research is not only important in order for me to pass my degree, but also in a wider scientific context.

Overall, this conference has given me confidence and reassured me that my main focus in future research will be within macroalgae and their ecology. I was pleased to meet so many new people and to put faces to names I had only seen in the published literature. I think it is a very valuable experience for a student (especially an undergraduate student)



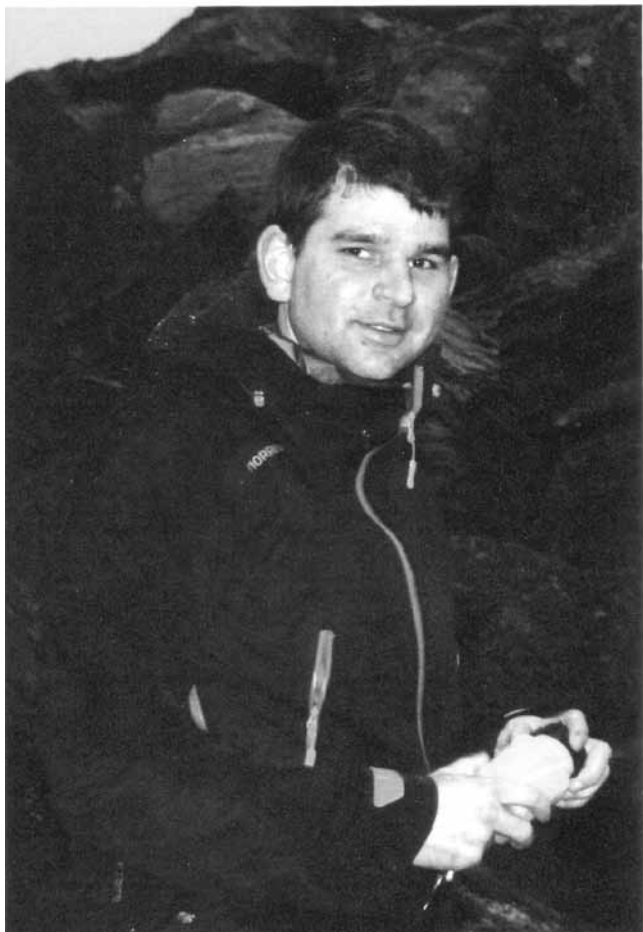
to attend the BPS conference. Since returning to Plymouth University I have already been able to encourage another student who is working on *Undaria pinnatifida* to join BPS and maybe to come along to the next annual meeting!

Sabrina Heiser



Manton Prize Winner

Responses of the macroalgal key species *Fucus serratus*: Driving the impact of climate change on North Atlantic rocky shores



Interestingly, a unifying characteristic of the previous Irene Manton Prize winners is their profound interest in and fascination for nature. This complies well with my own background. I have always been interested in the marine environment. After finishing high-school in 2002, I chose to do ornithological field work during my one-year civilian service on the island Spiekeroog in Northern Germany. Subsequent to this remarkable experience, I got in first touch with marine biological research during three-month internships at the biological institute for polar and marine research on Helgoland (AWI: Alfred Wegener Institut, Germany) and at a seal station in Friedrichskoog (Germany).

With the aim to specialize in the field of marine science, I started studying biology in 2004 at the University of Oldenburg (Germany), where I wrote my Diploma thesis in the research group of Gabriele Gerlach "Biodiversity and Evolution of Animals". The aim of my investigation was to uncover the role of spatial geographic distance, hydrodynamics and behavior for the connectivity between populations of the marine intertidal snail *Littorina litorea*. During these investigations, I developed a strong interest for programming and compiled the statistical package 'DEMEtics' for the software R within the group of Gabriele Gerlach. It allows to measure genetic differentiation between popu-

lations, based on two measurement indices, of which one was suggested to overestimate population connectivity.

After graduating in 2010, I started a Ph.D. position at the University of Nordland (UiN) in Northern Norway. Affiliated with the "Marine Ecology Research Group", I now investigate responses of the marine brown alga *Fucus serratus* to climate change under supervision of Galice Hoarau (UiN), Jorge Fernandes (UiN) and Jeanine L. Olsen (University of Groningen, The Netherlands). Early results of these investigations were the topic of my presentation at the BPS winter meeting in Newcastle. Specifically, I aim to predict distributional changes of *F. serratus* under simulated climate change with an Ecological Niche Model and to uncover genetic changes (at microsatellite loci) that have occurred over the past decade. The niche model is based on collaboration with the Phycology Research group of the University of Ghent (Belgium) and predicts a drastic northward shift of the southern distribution limit of *F. serratus* until 2200. Our finding of a significant decrease in genetic diversity at its southern edge of distribution in northern Spain, suggests that it might soon be too warm for this species. Due to its key role for the intertidal ecosystem, disappearance of *F. serratus* can have far reaching consequences for the entire North Atlantic intertidal ecosystem with unforeseen impact on human society and economy being linked to this coast.

Thanks to the investigations in my Diploma and PhD thesis, I learned a variety of investigative approaches in marine evolutionary biology, ranging from molecular genetic analyses in the lab, to in vivo experiments, bioinformatics programming and computer modelling of larval dispersal and of species distribution. Based on these previous scientific experiences, I am keen on further investigating evolutionary implications of environmental changes on marine ecosystems. Species' responses to such changes are driving adaptation, extinction and speciation and ultimately set the level of biodiversity.

I would like to thank all the persons that are involved in and contribute to my PhD investigations, those who helped and guided me through the early stages of my biological career, especially the supervisors of my Diploma and PhD thesis, and finally the BPS for awarding me the Irene Manton prize. The winter meeting in Newcastle was a very interesting and inspiring conference.

Alexander Jüterbock

Poster Prize Winner

The spread of *Undaria pinnatifida* (Harvey) Suringar in Plymouth Sound Special Area of Conservation, UK



I am a third year BSc (Hons) Marine Biology student from Plymouth University. I have wanted to become a marine biologist since I was 12 years old and now it has already been two and a half years since I came over from Germany to pursue a career in this field. As a child my dad always took me scuba diving in Norway. Back then (to the annoyance of my dad) my main interest was observing starfish and their ability to (very) slowly turn around once you turned them on their back. Diving has continued to be a main hobby of mine and at university I was able to convert my experience into the HSE Professional Diving Qualification and I am now able to work as a scientific diver. This allows me to combine my passion with work.

Since I came to university my interests have shifted towards more serious subjects, but I still found it incredibly difficult to decide which area I wanted to specialise in for my future career. Hence, I decided to take part in a seven-week long Coral Reef Monitoring Project in Dahab (Egypt) in summer 2010. It was very interesting but the warm climate was something I had to get used to, especially as it was my first time in a tropical country. When it came to choosing my dissertation

topic, I was still struggling to focus on something in particular as everything seemed so interesting! My dilemma was worse as now I realised how diverse the work of a marine biologist can be. My original idea was to investigate the effects of ocean acidification on non-native crustacean species within the British Isles. My advisor kindly pointed out that even less research had been conducted on non-native algae. After some investigations I decided to assess the spread of *Undaria pinnatifida* in Plymouth Sound.

I investigated how well it had established and soon realised how much I enjoyed reading around the topic so thought it timely to deepen my knowledge of algae and join BPS. I attended the winter meeting to present my work at the conference and make connections outside the university environment. As well as learning a lot, the winter meeting allowed me to practice for the dissertation presentation that I will have to give in front of Professors and fellow students.

Now I am hooked and aim to further my phycological research by investigating the ecological impacts of invasive algae, but no one knows what the future will bring.

I would like to thank my advisor Jason Hall-Spencer for his guidance and Keith Hiscock for his support.

I was very honoured to win the BPS poster award.

Sabrina Heiser





Stamps from Dr David Irvine's collection and Hilda Canter-Lund Award - Dr Lyra Gaysina "Blue-green necklace: *Trichomus variabilis*"

The British Phycological Society
Registered Charity No. 246707
Annual Report for the year ended 30 September 2011

The Society is an unincorporated association governed by its constitution and administered by its Council (trustees). The addresses of the current office bearers are set out in the *European Journal of Phycology*.

Membership of the Council of the Society:

Executive Members

President:	Prof. P. Hayes	Treasurer:	Dr M. Tobin
Vice President:	Prof. C. Maggs	Ed. (<i>EJP</i>):	Prof. D. Mann
Overseas Vice President:	Prof. Phang Siew Moi	Ed. (<i>Phycologist</i>):	Dr J. Krokowski
Immediate Past President:	Prof. J. Brodie	Webmaster:	Prof. M.D. Guiry
Secretary:	Dr J. Pottas	Mem. Secretary:	Dr S. Marsham

Ordinary Members

Prof. M. Wilkinson	Dr J. Metcalfe	Dr Marian Yallop	Dr G. Malin
Dr J. Bothwell	Ms. H. Rosenkranz	Dr M. Edwards	Prof. E. Shubert
Meetings Secretary:	Dr R. Perkins	FEPS Representative:	Prof. G. Codd

Principal bankers:	Bank of Scotland, 39 Albyn Place, Aberdeen
Solicitors:	Wolferstans, 60/64 North Hill, Plymouth
Independent Examiner:	Flannigan, Edmonds and Bannon, 2 Donegal Square East, Belfast

This is the eighth Annual Report presented by the current Treasurer. It is made in this form to meet the requirements of the Statements of Recommended Practice (SORP), issued by the Charity Commission and serves as an annual record of the resources entrusted to the Society and the activities it has undertaken.

The Society has continued to give financial support to activities that promote phycological research, disseminate phycological knowledge and assist young phycologists to present their findings at scientific meetings. The 2011 annual winter meeting and AGM were hosted by Cardiff University and thanks go to Dr Rupert Perkins and his team for organising a successful meeting. Congratulations go to Sebastien Hess and Jan Grueneberg whose excellent presentations earned them the Manton Prize and Poster Prize respectively. Twelve students received support to attend this meeting from the Scientific Meetings Fund (SMF) (nine in 2010). The auction, quiz and sales raised £322, with thanks going to Elliot Shubert for his continued enthusiasm and hard work. No surplus was returned from the meeting.

The Society supported nine students to attend identification courses, workshops and conferences. Two summer studentships were awarded in 2011 (one in 2010). The Hilda Canter Lund award for photography was presented to E.C. Macaya. The Society continued to receive an encouraging number of applications for funding in this financial year and was able to support a good number of student members to develop and present their phycological knowledge both in the UK and abroad. The small grant/project award received a high number of applications and eleven awards were made including sponsorship of meetings, research project grants and publications.

During 2011 honoraria were awarded to the following council members: the Membership Secretary, Secretary and the Editor of *The Phycologist* each received £750, the Treasurer received £1000. An honorarium of £10,000 was awarded to the Editor in Chief of *EJP*. In addition Taylor and Francis provided £2,604.22 to support the work of the editorial assistant.

The Journal performed very well financially and the final profit share from Volume 45 was £47,930.13 (an increase of approximately £5000 from volume 44). In addition the Society has received an advance of £30,000 guaranteed income for Volume 46. Production costs of the Journal remain low at £6108.75 for Volume 45 (£6,615 for Volume 44).

The Society's financial situation remains good and this has allowed the continued support of a wider range of projects and awards. The Scientific Meetings Fund was topped up to a total of £25000 to allow the Society to support students with bursaries from the interest it receives. Finally, I would like to thank all Council and Society members for their co-operation and support during this financial year.

The British Psychological Society
Statement of Financial Activities for the Year ended
30th September 2011

	Unrestricted General	Designated S.M.F.	Restricted Manton	Total 2011	Total 2010
Note	£	£	£	£	£
Income and Expenditure					
Incoming Resources					
Subscriptions 2009	0.00	0.00	0.00	0.00	723.00
Subscriptions 2010	2,785.50	0.00	0.00	2,785.50	4,212.00
Subscriptions 2011	9,121.73	0.00	0.00	9,121.73	0.00
Journal profit share 2009	0.00	0.00	0.00	0.00	12,094.23
Journal profit share 2010	17,930.13	0.00	0.00	17,930.13	30,000.00
Journal profit share 2011	30,000.00	0.00	0.00	30,000.00	0.00
Auction/quiz/sales proceeds	0.00	322.00	0.00	322.00	143.00
FW Atlas	0.00	0.00	0.00	0.00	472.62
Interest	488.36	0.00	0.00	488.36	(1,305.94)
Winter Meeting 2011	11,450.00	0.00	0.00	11,450.00	0.00
EJPMC	2,604.22	0.00	0.00	2,604.22	2,528.37
Total Incoming Resources	74,379.94	322.00	0.00	74,701.94	48,867.28
Resources Expended					
Grants, studentships & awards	2	19,660.00	4,095.60	250.00	24,005.60
Publications expenditure	3	21,393.48	0.00	0.00	21,393.48
Meetings & Committee Expenses	4	23,532.64	0.00	0.00	23,532.64
Administration Costs	5	9,091.51	0.00	0.00	9,091.51
		73,677.63	4,095.60	250.00	78,023.23
Net Incoming (Outgoing) Resources for the Year		702.31	(3,773.60)	(250.00)	(3,321.29)
Fund at 1st October 2010		107,521.37	25,000.00	4,194.09	136,715.46
Transfer (General to SMF)		(3,773.60)	3,773.60	0.00	0.00
Fund at 30th September 2011		104,450.08	25,000.00	3,944.09	133,394.17

Balance Sheet as at 30th September 2011

	2011	2010
	£	£
Current Assets		
Debtors	7	1,777.34
Short term deposits		138,251.99
Cash at bank		8,710.86
		148,740.19
Liabilities: amounts falling due within one year	8	15,346.02
		15,346.02
Net Assets		133,394.17
Funds	9	136,715.46
Unrestricted		104,450.08
Restricted		3,944.09
Designated		25,000.00
		133,394.17

Signed on behalf of the British Psychological Society
Dr Michelle Tobin
Treasurer

The British Psychological Society

Notes to the Accounts for the Year ended 30th September 2011

1 Accounting Policies

The accounts have been prepared in accordance with applicable Accounting Standards and the SORP - Accounting and Reporting by Charities issued in March 2005. A summary of the more important policies, which have been applied consistently, is set out below:

Basis of Accounting

The Accounts are prepared in accordance with the historic cost basis of accounting.

Subscriptions

Subscriptions include amounts received from members during the year. No amount is included in respect of subscriptions outstanding at the year end. Subscriptions received in advance for future years are included in deferred income.h

Funds

Restricted funds comprise unexpended balances of donations and interest to be applied for specific purposes. At 30th September 2011, the Society's only restricted fund was the Manton Fund.

Designated funds are those set aside out of unrestricted funds for specific purposes. At 30th September 2011, the designated fund of the Society was the Scientific Meetings Fund ("S.M.F.").

Cash Flow Statement

The Society has taken advantage of the exemptions provided in FRS 1 "Cash Flow Statements" for small entities and has not prepared a cash flow statement.

	Unrestricted General £	Designated S.M.F. £	Restricted Manton £	Total 2011 £	Total 2010 £
2 Grants, Studentships & Awards					
Travel awards for Winter Meeting	0.00	4,095.60	0.00	4,095.60	2,870.38
Awards for courses, travel, Summer Bursary	6,480.00	0.00	0.00	6,480.00	5,716.05
Manton Prize	0.00	0.00	250.00	250.00	250.00
Poster prize at Winter Meeting	150.00	0.00	0.00	150.00	150.00
Special Project Grants	12,880.00	0.00	0.00	12,880.00	4,283.06
Hilda Canter-Lund award	150.00	0.00	0.00	150.00	150.00
	19,660.00	4,095.60	250.00	24,005.60	13,419.49
3 Publications expenditure					
Journal	6,108.75	0.00	0.00	6,108.75	6,615.00
Editor's Stipend	10,000.00	0.00	0.00	10,000.00	10,000.00
E.J.P.Management Committee	0.00	0.00	0.00	0.00	398.73
<i>The Psychologist</i>	4,884.83	0.00	0.00	4,884.83	3,491.00
<i>EJP</i> Editorial Assistant Expenses	249.90	0.00	0.00	249.90	551.32
BPS Brochure promotion	150.00	0.00	0.00	150.00	0.00
	21,393.48	0.00	0.00	21,393.48	21,056.05
4 Meetings & Committee Expenses					
Council Meeting 2009	0.00	0.00	0.00	0.00	213.21
Council Meeting 2010	0.00	0.00	0.00	0.00	3,406.08
Council Meeting 2011	3,591.30	0.00	0.00	3,591.30	0.00
Biodiversity Committee Expenses	564.82	0.00	0.00	564.82	1,491.71
Awards & Training Committee Expenses	217.20	0.00	0.00	217.20	0.00
Winter Meeting 2010	0.00	0.00	0.00	0.00	3,492.19
Winter meeting 2011	18,760.55	0.00	0.00	18,760.55	0.00
Federation of European Psychologists	0.00	0.00	0.00	0.00	945.64
FEMS Meetings	398.77	0.00	0.00	398.77	0.00
	23,532.64	0.00	0.00	23,532.64	9,548.83
5 Administration Costs					
Public liability insurance	435.56	0.00	0.00	435.56	414.82
Independent Examiner's Fee	1,380.00	0.00	0.00	1,380.00	1,408.75
Credit Card Charges	740.87	0.00	0.00	740.87	554.47
Bank charges	436.28	0.00	0.00	436.28	640.58
Executive Honoraria (2010)	0.00	0.00	0.00	0.00	3,250.00
Executive Honoraria (2011)	3,250.00	0.00	0.00	3,250.00	0.00

The British Psychological Society

Notes to the Accounts for the Year ended 30th September 2011 (cont.)

	Unrestricted General £	Designated S.M.F. £	Restricted Manton £	Total 2011 £	Total 2010 £
5 Administration Costs (cont.)					
Society of Biology Subscription	594.86	0.00	0.00	594.86	534.60
General Expenses (Sec/Treas)	32.99	0.00	0.00	32.99	0.00
FEMS subscription	453.53	0.00	0.00	453.53	427.24
FEPS subscription	273.33	0.00	0.00	273.33	289.45
Website Maintenance	1,457.59	0.00	0.00	1,457.59	1,000.00
Miscellaneous	36.50	0.00	0.00	36.50	0.00
	<u>9,091.51</u>	<u>0.00</u>	<u>0.00</u>	<u>9,091.51</u>	<u>8,519.91</u>
	<u>73,677.63</u>	<u>4,095.60</u>	<u>250.00</u>	<u>78,023.23</u>	<u>52,544.28</u>

6 Reimbursement of Council members' expenses

Fourteen (2010: Sixteen) Council members received £3,990.07 (2010: £4,700.45) as reimbursement of travel and overnight accommodation for expenditures incurred during the year on Society business. No monies were paid to any Council member in respect of subsistence.

7 Debtors

	2011 £	2010 £
Interest receivable	275.14	429.48
Prepayments & accrued income	1,502.20	3,475.81
	<u>1,777.34</u>	<u>3,905.29</u>

8 Liabilities: Amounts falling due within one year

Accruals & deferred income	4,846.02	4,385.95
Provisions for the <i>Journal</i> and the <i>Psychologist</i>	10,500.00	10,500.00
	<u>15,346.02</u>	<u>14,885.95</u>

9 Analysis of Net Assets between Funds

	Unrestricted Funds £	Designated Funds £	Restricted Funds £	Total Funds £
Fund balances as at 30th September 2011 are represented by				
Current assets	119,546.10	25,000.00	4,194.09	148,740.19
Current liabilities	(15,096.02)	0.00	(250.00)	(15,346.02)
Total Net Assets	<u>104,450.08</u>	<u>25,000.00</u>	<u>3,944.09</u>	<u>133,394.17</u>

Report of the Independent Examiner to the Members of the British Psychological Society

We report on the accounts of the Society for the year ended 30th September 2011, which are set out on pages 22 to 25.

Respective responsibilities of trustees and examiner:

The Council Members are responsible for the preparation of the accounts. The Council Members consider that an audit is not required for this year (under section 43 (2) of the Charities Act 1993 (the 1993 Act)) and that an independent examination is needed.

It is our responsibility to:

* examine the accounts (under section 43 (3) (a) of the 1993 Act):

* to follow the procedures laid down in the General Directions given by the Charity Commissioners (under section 43 (7) (b) of the 1993 Act); and

* to state whether particular matters have come to our attention.

Basis of independent examiner's report:

Our examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the charity and a comparison of the accounts presented with those records. It also includes consideration of any unusual items or disclosures in the accounts, and seeking explanations from the Council Members concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit, and consequently we do not express an audit opinion on the view given by the accounts.

Independent examiner's statement:

In connection with our examination no matter has come to our attention which gives us reasonable cause to believe that in any material respect the requirement:

* to keep accounting records in accordance with section 41 of the 1993 Act and;

* to prepare accounts which accord with the accounting records and comply with the accounting requirements of the 1993 Act;

have not been met.

Flannigan Edmonds Bannon

Chartered Accountants and Registered Auditors

Belfast, Northern Ireland

Student Newsletter 2012

Dear student members,

I would like to start the 2012 by giving you an update on what happened last year and what is coming up this year.

We started the year, very early in January, with the BPS Winter Meeting, which I really enjoyed. An interesting schedule of talks, poster sessions and evening events accompanied by vivid discussions in between sessions, kept us all busy and made it an enriching event for me. This year's Winter Meeting also included two special sessions for us student members, the student lecture on multivariate statistics by Steve Juggins and an informal meeting for student members hosted by me. I would like to thank Steve again for his very interesting lecture, in which he managed to give us a useful insight into the world of multivariate statistics in just over half an hour, which was valued by students and academics alike. He also kindly provided his lecture material; please contact me if you would like a copy.

The informal meeting of the student members was very exciting for me, as it was my first chance to seek your direct opinion on how you would like the student representative to engage, and give your own comments and ideas. The main outcomes of the meeting were:

Researchgate

As agreed on the Council Summer Meeting, I set up a Researchgate group, a social networking site for scientists, called "BPS Students" (http://www.researchgate.net/topic/BPS_Students/). By now, the group has got 65 followers/members. Since setting up the group, Researchgate changed its design and especially the group layout has changed, making it complicated to read and the calendar function has unfortunately been dropped. To replace the calendar, I set up an open Google calendar (<https://www.google.com/calendar/embed?src=mulemer%40gmx.de&ctz=Europe/London>) which I constantly update with phycology related workshop and conference dates for you. The main topics in the research gate group are "Open PostDocs, studentships and projects" and "Conference room and car share", but the engagement of mem-



bers is very low. Therefore I asked the student members, how the group could be improved and what they would like to get out of a group like this. A possible move of the group to a different provider can be considered too. I got some suggestions and will be in contact with some of you shortly. I will keep you updated on this topic, but if you have any further ideas, or would be happy to help me with maintaining the page and the calendar, please contact me.

Algae Directory

Based on my proposal, about an up to date list of people working in phycology including contact details and their area of expertise, I did some further investigations and found an Algae Directory from 1997 (COST-49, EUR 17568 en, ISBN/ISSN: 92-828-0024-5). This directory compiles the names and addresses of algologists, companies, culture collections and herbaria in European countries, but is unfortunately not available for free and all information is 15 years out of date. Student members expressed a great interest and stressed the demand of a directory of phycologists, especially for early career researchers. The set up of a directory like this is unfortunately not straight forward, as many copy and privacy rights need to be considered. Comments were made about an exciting directory in France and an algal technology orientated one in the UK, and I will try to get in touch with the according people. Again, please feel free to contact me if you have any further ideas or if you can offer help with this task.

BPS 60th Anniversary

As you probably all know, the society is celebrating its 60th anniversary this year, and a day full of algae-related events is planned at the Natural History Museum in London in September. The organiser committee would like to especially get the new generation phycologists (that's us!) involved in running the event. I do not want to give anything away, but please, if you would like to contribute to the event contact me or Juliet Brodie (j.brodie@nhm.ac.uk).

Student lecture

The student lecture was again a success, and we agreed on including a new lecture into next year's meeting. The idea of the topic of this year's lecture was proposed by students last year, and for the coming year topics like "How to get into employment" and "Successful Grant Writing" were suggested. I will look into suitable speakers for next year's meeting.

I would like to thank the organiser committee for a great BPS Winter Meeting 2012 and all students who gave up one precious hour of free time after a long day of conference talks, to attend the student meeting. Special thanks go to Sara Marsham for helping me during the conference and also throughout the year.

Any further questions and comments, please feel free to drop me an e-mail.

Helen Rosenkranz (HeLen_R@lavabit.com)

EPC V in Rhodes, Greece: the student's perspective

Attending the 5th European Phycological Congress, which brings together experts in algal research from across Europe, and giving a talk was one of my big aims for the final year of my PhD, especially as the conference only happens every four years. The congress sessions included aspects of research conducted on algae from both freshwater and marine ecosystems. Many topics of the wide field of phycology were covered. About 400 delegates attended and it was a welcoming and inspiring atmosphere. As the topics were so widespread, I learned a lot about fields of research I never had the time to look into before.

The one week long conference was situated on the island of Rhodes, Greece, which turned the lunch breaks into short breaks in the sun together with colleagues from around the world, which I haven't seen in a while. Nevertheless we worked a lot and I made an effort to get to know new people, also with the objective to get to know new labs and possible collaborators for future projects.

Giving a 15min talk in front of such a specialist audience was a great opportunity for me to get feedback on my project. Many questions and fruitful discussions gave me additional directions for my thesis write up. Overall I really enjoyed the conference. But, when I was asked to write an article about the EPC V from the student's perspective, I thought it would also be interesting and more representative to get feedback from more students, than only me. So I sent a questionnaire to all student attendee. The feedback was very positive and nearly everybody enjoyed the conference a lot. I would like to share some answers with you:

Did you like the conference overall, and did it meet your expectations?

- Perfectly organised and it was over my expectations.
- I was overall very pleased with the arrangement.
- Yes, the conference was great.

What did you get out of the conference?

- Definitely contacts and many friends.
- I really enjoyed standing in front of my poster and trying to elaborate my thoughts in front of a distinguished audience.
- Nice feedback to my poster and a lot of inspiring talking with exciting scientists.
- The meeting was useful, as it forced me to move my work forward to it.
- I think this congress was a huge classroom for me and at the end I found that now I am really aware of all that is going on in modern phycologist's minds.
- The opportunity to meet people of other countries and phycological groups was for me very useful.
- I got contacts and maybe I can even do a visit in another lab after I finished my thesis.
- Although most of the talks and researches were unrelated to my study, the amount of knowledge I gained and the people I met was priceless. For sure I got new inspirations,

contacts, posters, and of course sunburns.

- I also love the student poster competition, which "forced" me to read almost every student poster.

Did you feel included and your interests taken care of at the conference?

- Yes, was the general answer I received and people also felt taken care of as students presenting talks.

Any other feedback (location, funding, etc.)?

- Besides helping my work, the participation to the congress gave me the chance to visit a beautiful island full of history and natural wonders as Rhodes is.
- I went to the gala dinner and it was really nice; people were in a good mood and the food was very good.
- All in all I enjoyed the EPC 5.

Despite the overall positive view of the conference there were some small aspects that students think could be improved:

- The conference location was excellent but a little bit too expensive.
- Students were not invited to the gala, although gala dinners are usually a good opportunity to talk to experienced scientists in relaxed atmosphere.
- Poster sessions were too late, so poster presenters (mostly students) could not get enough of attention.
- I think that at least lunch should be included because most of the times I ate alone and I would have enjoyed chatting informally during lunch (a good sandwich would be enough!).
- The accommodation was too expensive for students.

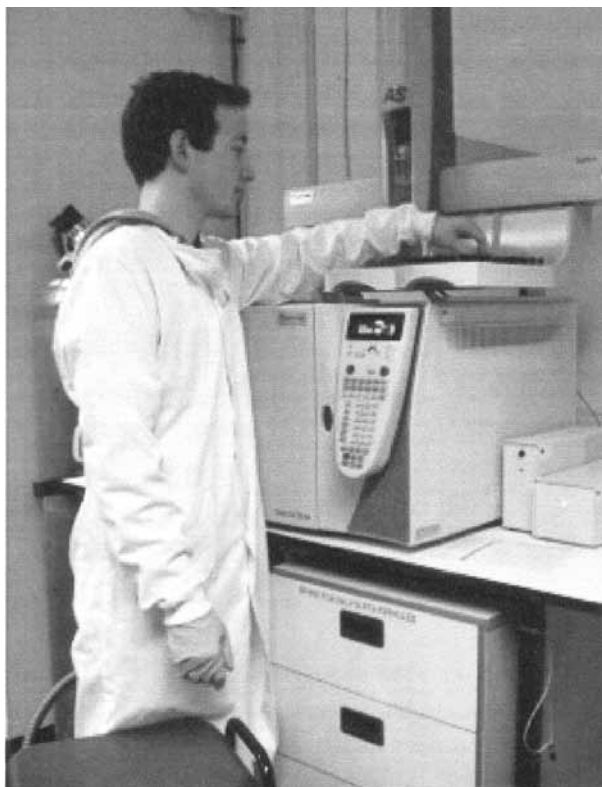
Would you recommend future students to attend?

- I would totally recommend to students, even the undergraduates with passion in phycology to attend, as these conferences are very useful.
- It was one of the best conferences I've ever attended. So, YES!!!
- In overall, the participation to the conference was positive experience and I would recommend it to everybody
- I think that it is very important to visit meetings to get information about current research topics (which will be published in 1-2-3 years) as well as to get outside feedback on my current work.
- Definitely!
- The opportunity to meet other phycological groups may increase exchange of knowledge to solve or avoid problems on the ongoing thesis, etc. Very recommended!
- The hotel was really nice; in front of such sea it was really easy to be relaxed before the talk!

I would like to thank the BES and the University of Bristol Alumni Foundation for making my attendance at this international conference possible and of course all the organisers who made this nice conference possible.

**Helen Rosenkranz (Helen_R@lavabit.com),
BPS – Student representative**

Alkanes from Algae - A summer project



I am currently a third year undergraduate Natural Scientist at Selwyn College Cambridge, and last year I received funding from the British Phycological Society for an eight week summer project in algal bioenergy with Professor Alison Smith's research group in the Department of Plant Sciences in Cambridge.

The prospects of peak oil, growing energy demand and global warming, as well as issues with energy security, have prompted the development of alternative energy sources to traditional fossil fuel reserves. Developing an alternative liquid fuel will be important in reducing our reliance on fossil fuels. There are a number of different types of biofuels, but the most feasible will probably be those similar to current fuels.

Alkanes make up a large proportion of crude oil, but are also known to be produced in nature. Various algal species are thought to produce these compounds, which if combined with the potentially high productivity of algae and the fact that production of these organisms would not compete with arable land, could allow the development of a replacement for mineral diesel as both a fuel and petrochemical feedstocks. In this project I attempted to investigate putative genes and enzymes involved in alkane synthesis in algae while culturing algal strains to analyse alkane composition.

The processes of producing alkanes are known to varying degrees in different species. I attempted to find from literature what enzymes carrying out these tasks had been identified, and which of these had had either their gene or amino acid sequences determined. With this in-

formation, I was able to undertake further investigation using bioinformatic tools. I used the available sequences in BLAST searches, which look for similar sequences using the online databases. The results of these could be compared using sequence comparison tools, such as ClustalW2, which allowed those BLAST matches obtained to be further analysed for validity by looking for stretches of similarity, proposed conserved amino acid motifs that may be mechanistically relevant, and the range and coverage of similarity. Becoming familiar with these bioinformatics tools was both interesting for me and will be useful in my future work, given the increasing use of sequence data, as more and more genome sequencing projects are completed on increasingly varied organisms.

I also attempted to find specific DNA sequences in the algae I was cultivating using the technique of Polymerase Chain Reaction (PCR). Given its commonplace use in research, learning how to carry out a PCR reaction and becoming familiar with troubleshooting the difficulties, was valuable experience for me for future research work. I learnt how to work out the source of problems such as determining whether DNA had been successfully obtained, if the reaction master mix had been produced properly, if primers were annealing successfully, etc. Despite the many glitches, some of reactions were successful, and the products were sent for sequencing, which allowed me to familiarise myself with analysing modern sequencing outputs.

Meanwhile, I cultured algal species in media over the course of several weeks for use in metabolite extractions. I attempted several extraction methods in an attempt to find one that could extract alkanes. I tried to identify if particular metabolites were present in these cells using analysis on a GC-MS machine. This runs the extraction sample through a gas chromatography machine, separating the mixture of various molecules in the sample, and then introduces them into a mass spectrometer allowing identification of the compounds. This gave me experience of culturing cells and the use of modern machinery capable of analysing their contents.

Overall the project was a very interesting and rewarding experience for me, I got to experience a range of wet and dry aspects of research, using various computer tools and several pieces of equipment and experimental protocols in the laboratory. The project taught me about the timescales of research, gave me experience of the practical aspects, and provided me with skills that will be beneficial in my research work as part of my undergraduate degree and in future. The social experience deserves a mention and it was interesting to get to know researchers and hear their opinion of their worklife. And of course our lab outings, such as a bonding day trip to Wimpole Hall, evening barbecues and playing croquet in the dark! I would like to thank Professor Alison Smith, Dr Matt Davey and The British Phycological Society for making this possible for me.

Callum Campbell

World Conference on Marine Biodiversity, 26-30 September 2011, Aberdeen, Scotland



The World Conference on Marine Biodiversity in Aberdeen was an excellent opportunity in which to present aspects of my dissertation research under the co-direction of Myriam Valero at the Station Biologique de Roscoff and Juan Correa at Pontificia Universidad Católica de Chile. The conference occurred shortly before my viva in October enabling a dry-run, albeit a truncated one, of some of my results, but also a brief respite in Scotland before the final hurdle of my dissertation.

I gave an oral presentation describing the mating system and population structure of the ecologically and economically important red seaweed, *Chondrus crispus*, in Brittany,

France. In a previous study, we found that the populations studied were reproducing sexually, but exhibited very high levels of *F_{is}* (the inbreeding coefficient: the probability that a zygote obtains copies of the same ancestral gene from both its parents because they are related; Krueger-Hadfield *et al.* 2011). Either the sampled populations were subdivided or high levels of inbreeding were occurring. By combining both direct (paternity analyses) and indirect (*F*-statistics) methods, the high levels of *F_{is}* were due intergametophytic selfing (mating between related gametophytes).

Not only was it a rewarding experience to finally present some long-awaited results, but I was able to meet and catch-up with colleagues working on a vast array of questions and organisms, from abroad as well as in Europe. The conference began with an opening ceremony, including a presentation by Jean-Michel Cousteau. Plenary speakers and parallel sessions followed. In addition to attending presentations on all things seaweeds, I was able to attend multiple of presentations on non-native species, particularly ascidians with which I am currently working with John Bishop at the Marine Biological Association of the United Kingdom.

I sincerely wish to express my gratitude for the funding provided by BPS which enabled me to attend this conference.

Stacy A. Krueger-Hadfield

British Phycological Society Annual Meeting in January 2012



I have held an interest in flora and fauna for years; as a child (and still as an adult) looking for everything possible in rock pools, to speculating what occupies holes in forests. It is only since starting university that I fully began to understand the importance of the things you often can't easily see. My studies have lead me to undertake a PhD examining the impact micro-algae has on freshwater lake systems, particularly that of the relatively newly formed Cardiff Bay. An important part of this understanding was attending the British Phycological Society Annual Meeting in January 2012.

This was the first BPS meeting I have attended and to say I wasn't apprehensive would be untruthful; but I was pleasantly surprised! If you haven't attended one of these meetings before I would strongly recommend you do. The welcome, hospitality and organization was brilliant (well done Sara and the team), and everyone was so friendly. Not once, as a relatively new convert to the world of phycology, did I feel out of place or insufficient. The dedication and value the society provides its student members is inspirational, and in this respect the special session on education was extremely relevant; once interested in this world the opportunities are endless, it's recognising this interest and taking part that is the most important and challenging aspect!

I learnt a lot during the short time I was in Newcastle and felt that my New Year had been kick-started with enthusiasm; in fact I couldn't wait to get back to the office and put all of the ideas and recommendations provided by the meeting to good use! I would like to thank the BPS for funding my attendance at this meeting, and I am looking forward to next year when I can present my research to you all. The meeting was definitely another circumstance where the things you don't easily see are often the most important.

Sarah Moore

The Development and Launch of a school laboratory activity resource about algae

Despite the clear need for hands-on practical science in schools, there is a notable decrease in these activities. Microbiology in particular suffers from perceived hazards of handling microorganisms, and difficulties in culturing and visualising. Nevertheless, microbiology figures large in the school science curriculum, so attempts should be made to provide useful, interesting and relatively simple exercises that staff and technicians can prepare and lead with confidence. The Society for General Microbiology (SGM) (www.sgm.ac.uk) provides a range of educational resources for schools, but has not disseminated any practical activities for some years, primarily due to the difficulties of development without ready access to a laboratory. At Manchester Metropolitan University (MMU), we had worked previously with SGM on a range of educational materials, so we devised a 3 year project that would result in the development of new laboratory-based activities for schools. In order to do this, a full-time postgraduate student, James Redfern, was recruited to the task.

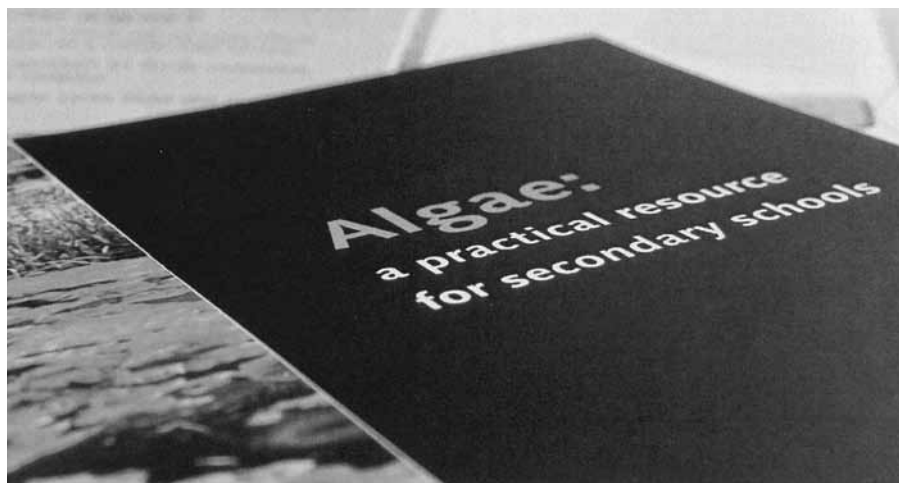
Algae provide an excellent microbiological tool for illustrating a range of phenomena that are noted in the school science curriculum at stage 3 and 4 (aged 11-16 including GCSE). Algae are relatively large microorganisms, thus easy to see; attractive, morphologically diverse, thus interesting to look at; cheap and relatively easy to acquire, culture and maintain, and safe to handle. They can also replace plants as examples of photosynthetic organisms, thus increasing access to microbiology in the school environment! James began his project by scrutinising both the National Curriculum and the science specifications, identifying principles or concepts that could be illustrated by algae. These were: using a key/microscope for identification, phototaxis, bioluminescence, eutrophication and biofuels.

James then scoured all available material to identify whether any successful activities were already available: these would then be referenced in the final resource. We also had to identify a couple of 'experts' in the algal world, preferably those who were already involved with education and public engagement activities, who

would advise on the accuracy and relevance of content of our final resource. Many thanks to Gary Caldwell at Newcastle! Starting from scratch, James learnt about algae, and wrote the background material to the resource. In the final 5 exercises, instead of biofuels (which has a burgeoning interest via Research Councils, and thence a range of educational support), he developed a system for cycling gas, whereby carbon dioxide produced by yeast was used to increase biomass in algae and in turn the yeast used the oxygen produced by the yeast as a by-product of photosynthesis. Laboratory activities were trialled with a range of audiences: undergraduate students, the general public ('The good, the bad and the algae' session was held at MMU during National Science and Engineering Week 2011) and two groups of teachers, who subsequently tried out the activities with their students. Their feedback informed on the design, clarity and content of the resource.

The final resource was launched in January 2012 at the BPS meeting, and at the ASE (Association of Science Education) conference, attended by hundreds of teachers. The pack, *Algae: a practical resource for secondary schools*, contains a 72-page full colour book, accompanied by 5 copies of a poster guiding students through the principles of identification using a key, one copy of an attractive poster outlining 'fascinating facts about algae', a CD containing video clip of bioluminescent algae, Power-Point presentations introducing the activities, and pdfs of the laboratory exercises. The book provides background information about algae, and describes the practical activities for teachers, students and school technicians. Information on suppliers, culture and handling and health and safety are also provided. The resource was provided to all of SGM's 750 school members, and we will contact them in 12 months time to find out what they thought of it.

We are really pleased with our resource, and welcome any feedback. However, James cannot rest on his laurels – we are now focusing our attention on bacteriophage, to illustrate principles of virology to level A level students!



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To purchase, go to http://www.sgm.ac.uk/education_careers/EdBooks.cfm

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General Microbiology

Capturing the aliens. Using herbarium specimens to track the arrival and spread of non-native seaweeds in the UK and Ireland

We estimate that c. 6% of the seaweed flora of the UK and Ireland is made up of alien species, also sometimes referred to as non-natives or exotic species, which have been introduced through human activity mainly associated with aquaculture and shipping, whether intentionally or accidentally. The trend globally shows an increase in the rate at which alien seaweeds are being added to floras and the arrival of alien species to the UK and Ireland from warmer waters, e.g. the Mediterranean, is anticipated.

Determining the presence of non-native seaweed species can be problematic if their arrival has not been witnessed. However, historical records can be used to distinguish between introduced and native species in conjunction with knowledge of species distributions and natural dispersal of populations. Natural history collections are an important source of long term data sets and thus represent a potentially valuable tool in documenting changes in biodiversity. Herbarium specimens are verifiable records which can be used to describe temporal and spatial distributions and provide biological material that can be used for morphological, genetic and environmental (e.g. heavy metal content) analysis. The Natural History Museum (NHM) herbarium (BM) holds c. 250,000 seaweed specimens including 70,000 specimens from the UK and Ireland dating back to the 17th century.

This project aims to capture collections data for non-native seaweed specimens in the BM herbarium. These data will be used to create temporal and spatial historical maps and also live maps where new records can be added in real time to document the arrival and spread of non-natives. Other aspects of the project include determining the identity of taxonomically unresolved alien seaweed specimens in the BM herbarium, collecting herbarium and silica gel material for morphological and genetic analysis, liaising with other herbaria to augment NHM data and delivering training on the identification of alien seaweeds. We will also explore the possibility of organising a systematic collecting programme to develop a long term data set. The specimen data generated by this project will be made available via the Marine Biological Association for the GB Non-Native Species Information Portal.

A necessary prerequisite is a list of non-native seaweeds. Several lists exist but they are problematic for several reasons, including taxonomic and nomenclatural inconsistencies. Therefore an aim of the project is to produce a 'working list' of alien seaweed species for the UK that is as accurate and up to date as possible.

Table 1 is an annotated list of alien seaweed species that we have compiled from a number of sources, including the Marine Biological Association, DAISIE (Delivering Alien Invasive Species Inventories for Europe), English Nature, Marine non native species in Welsh waters (Countryside Council for Wales, 2012), Scottish Natural Heritage, Wildlife and Countryside Act Schedule 9 (1981), Eno et al. (1997), Quercus Report Invasive Species in Ireland (2004), Hardy & Guiry (2006). This list also includes species whose status is uncertain as well as those which are not recorded for the UK or Ireland but are recognised aliens in nearby regions, e.g. other parts of the north-east Atlantic or Mediterranean. The species names in this list are those currently accepted taxonomically according to Guiry & Guiry (2012).

We would like to hear your views on the species in the list – or indeed any aliens not on the list. Please send your information to Jane Pottas by email: jpo512@nhm.ac.uk or post: Natural History Museum, Department of Botany, Cromwell Road, London SW7 5BD, UK.

Acknowledgments

This work is supported by funding from the Natural History Museum and the Marine Biological Association (MBA) for the GB Non-Native Species Information Portal. We are grateful to Bill Farnham (University of Portsmouth), Jack Sewell (MBA) and Sabrina Heiser (University of Plymouth), Jeanine Olsen (University of Groningen) and Ester Serrao (Universidade do Algarve).

**Juliet Brodie, Linda M. Irvine,
Jane Pottas, Jo Wilbraham,
Natural History Museum, Cromwell Road,
London SW7 5BD, UK**

Table 1. List of alien seaweed species. Nomenclature follows Guiry & Guiry 2012.

RED ALGAE

Aglaothamnion feldmanniae Halos
Anotrichium furcellatum (J.Agardh) Baldock
Antithamnion densum (Suhr) M.A.Howe
Antithamnionella spirographidis (Schiffner) E.M.Wollaston
Antithamnionella ternifolia (J.D.Hooker & Harvey) Lyle
Asparagopsis armata Harvey
Bonnemaisonia hamifera Hariot
Caulacanthus ustulatus *¹
Ceramium circinatum (Kützing) J.Agardh
Cryptonemia hibernica Guiry & L.M.Irvine
Cryptonemia lomation (Bertoloni) J.Agardh
Gracilaria multipartita (Clemente) Harvey
Gracilaria vermiculophylla (Ohmi) Papenfuss *²
Grateloupia subpectinata Holmes
Grateloupia turuturu Yamada*³
Heterosiphonia japonica Yendo
Laurencia brongniartii J.Agardh
Neosiphonia harveyi (J.W.Bailey) M.-S.Kim, H.-G.Choi, Guiry & G.W.Saunders
Neosiphonia japonica (Harvey) M.S.Kim & I.K.Lee
Pikea californica Harvey
Polysiphonia subtilissima Montagne
Porphyra drachii Feldmann
Pyropia (Porphyra) leucosticta (Thuret) Neefus & J.Brodie
Pyropia (Porphyra) yezoensis (Ueda) M.S.Hwang & H.G.Choi
Pterosiphonia pinnulata (Kützing) Maggs & Hommersand *²
Sarcodiotheca gaudichaudii (Montagne) P.W.Gabrielson
Schottera nicaeensis (J.V.Lamouroux ex Duby) Guiry & Hollenberg *⁴
Solieria chordalis (C.Agardh) J.Agardh
Solieria filiformis (Kützing) P.W.Gabrielson
Sphaerococcus coronopifolius Stackhouse
Stenogramma interruptum (C.Agardh) Montagne ex Harvey *⁴

BROWN ALGAE

Colpomenia peregrina Sauvageau
Corynophlaea umbellata (C.Agardh) Kützing
Fucus evanescens C.Agardh *⁵
Litosiphon laminariae (Lyngbye) Harvey *⁴
Macrocystis pyrifera (Linnaeus) C.Agardh *²
Pseudolithoderma roscoffense Loiseaux *⁴
Saccharina japonica (Areschoug) C.E.Lane, C.Mayes, Druehl & G.W.Saunders *²
Sargassum muticum (Yendo) Fensholt
Scytosiphon dotyi M.J.Wynne *⁶
Undaria pinnatifida (Harvey) Suringar
Zanardinia typus (Nardo) P.C.Silva

GREEN ALGAE

Caulerpa racemosa (Forsskål) J.Agardh *²
Caulerpa taxifolia (M.Vahl) C.Agardh *²
Codium fragile subsp. *fragile* (Suringar) Hariot
Rhizoclonium tortuosum (Dillwyn) Kützing
Ulva californica Wille
Umbraulva olivascens (P.J.L.Dangeard) G.Furnari

Explanatory notes

¹ Awaiting publication. *Caulacanthus ustulatus* will be *Caulacanthus okamurae*, not *Feldmannophycus*

² Potential arrival

³ *Grateloupia turuturu* was originally incorrectly identified as *Grateloupia doryphora* in the Atlantic

⁴ Uncertain

⁵ The *Fucus distichus* complex, which includes *F. evanescens*, is currently being re-evaluated.

⁶ *Scytosiphon dotyi* has a limited distribution in England and may be conspecific with *Scytosiphon lomentaria* (Lyngbye) Link (Fletcher, 1987)

Blue-green and green algae unveiled in Durham's summer

The Advanced Freshwater Course on Blue-Green (Cyanobacteria) and Green Algal Identification is targeted to train staff from environmental agencies, consultancies, research students and overseas visitors. During a fantastic week in July 2011 (Sunday 10th - Thursday 14th) the organisers, Professors Brian A. Whitton (Durham University) and David M. John (Natural History Museum London) shared with a passionate group of attendees their vast knowledge about a wide variety of algae. The nationalities represented were Qatar, Singapore, Canada and Italy and we all had the opportunity to present our work in different natural environments, from coasts to inland deltas, in Asia, America and Africa.

The venue, the University of Durham Bede College and School of Education, could not have been more suitable, close to the River Wear, with very scenic views of the city and its stunning cathedral on the hill. Each lecture gave us excellent insight into a particular group or subgroup of algae and into the taxonomic keys and informatic tools available to identify them. One day, after a nice morning drive to Cumbria, we walked around small streams in the area of Sunbiggin Tarn observing and sampling periphytic mats and open water. Being eager to discover what specimens our hunt had produced we went back to the lab by mid-afternoon; Brian helped us identify the blue-green algae and assess their environmental status and David advised us on troublesome identifications of Chlorococcales and desmids alike. We had a very rich literature available; a world of pictures, drawings and species descriptions in which to get happily lost during the various practical sessions. It is such a challenge to delve into distinguishing

taxa so similar to one another, such as small *Cosmarium* or *Euastrum*, but "giving a name" to living organisms is indeed a privilege. When frustration leaves space to patient acceptance of the startling biodiversity on Earth you can indeed feel close to the great scientists who unveiled the mysteries of nature, from Fritsch back to Ralfs and Darwin himself, and thank them for their amazing work.

This year marks the centenary of the Fritsch collection which I recently visited for the first time; it is a unique piece of science and art, just like David Williamson's drawings of desmids. After the course, David John allowed me to start collaborating with Mr. Williamson; his terrific drawings of the algae I am studying for my Ph.D. on the Okavango Delta are an incredible gift.

The days in Durham were busy and well organized and we had a great time during the reception and lunch breaks when interesting conversations on algae and geography entertained us - sometimes I wish that courses like these, summer schools and conferences lasted longer. I very much encourage everyone interested in algae, professionally or not, to attend this course; it gave me confidence and a further boost in enthusiasm, as well as being such a pleasant experience in a beautiful region. A big thank you to Brian and David for a special experience and for the material provided - CD, DVD and the updated coded list of algae of the British Isles. We can continue our journey into nature's secret highly enriched!

**Luca Marazzi, Department of Geography,
University College London
l.marazzi@ucl.ac.uk**



Phyco-Philately

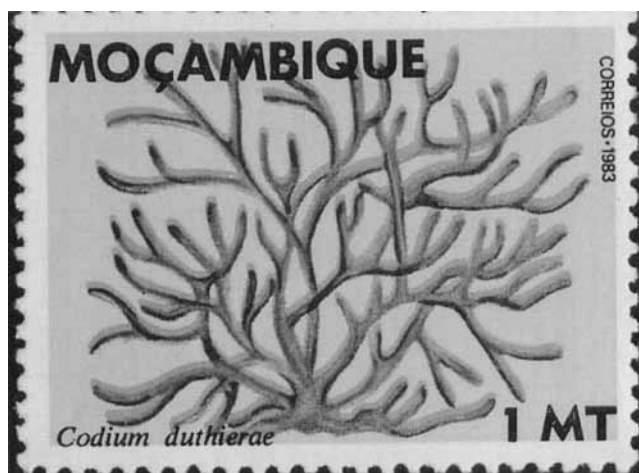
My father, Dr David Irvine, was best known for two things - collecting and studying seaweeds and studying and writing about stamps. What most people don't know is that he also combined the two. David was a founder member of the BPS and was involved in phycology for most of his life. His PhD thesis was about a rock pool in St. Andrews; he then studied seaweeds at the Natural History Museum, where he met my mother, Mrs Linda Irvine, who as you all know, is still there. He became a demonstrator at Cambridge and then spent the rest of his career lecturing in the North London Polytechnic. He was involved in symposia, papers and books until he retired at 60.

He had been a stamp collector since his childhood, taking the collection with him when my parents went to live in the U.S.A. for a few years. By the time he gave up collecting he had won awards for his displays in exhibitions around the world and had written an award-winning book about design errors on stamps. Inspired originally by various stamps depicting seaweeds, he set about collecting philatelic material for a display on Phycology. He put aside this and that for years until finally he submitted a display to the big UK philatelic exhibition - Stampex 1988.

I have the display in front of me; it includes a varied selection of seaweeds on stamps, together with an 1893 seaweed advert on the back of a stamp. The other sheets display postal material relating to phycology over 29 years, with letters, specimen packages, letterheads and reprint cards from around the world- from Colorado to Trondheim to Kyoto and across the Iron Curtain. Together, the display represents most of the connections that phycology has with philately and it is also a record of all kinds of names, places and organisations, some of which are no longer with us.

My father died in 1995 and our family has decided to find a new home for the collection. The collection may be auctioned to raise funds for the BPS to support student projects or it may be given to the BPS archives where it will be available to anyone who wishes to see it. This is under discussion. It will be on display at the BPS 60th Anniversary Meeting to be held at the Natural History Museum, London on Wednesday 12th September 2012. I am sure my father would be pleased to know that his collection of phycological philately is still being appreciated.

Andrew Irvine



Cosmarium raciborskii (Racib.) Lagerheim. A new desmid record for the British Isles

At the end of 2011 I received a sample collected on the 19th Nov. by Ian Evan, a locally resident botanist, from a roadside mire pool near Foindle, Sutherland, (GR NC 18784781). From a desmid point of view the sample was excellent, inasmuch as it contained a minimum of 42 different species amongst which *Cosmarium raciborskii* was present in small numbers. Having looked at hundreds of samples from Sutherland over some 40 years this is the first time the species has been found, so an illustration and brief description is probably worthwhile.

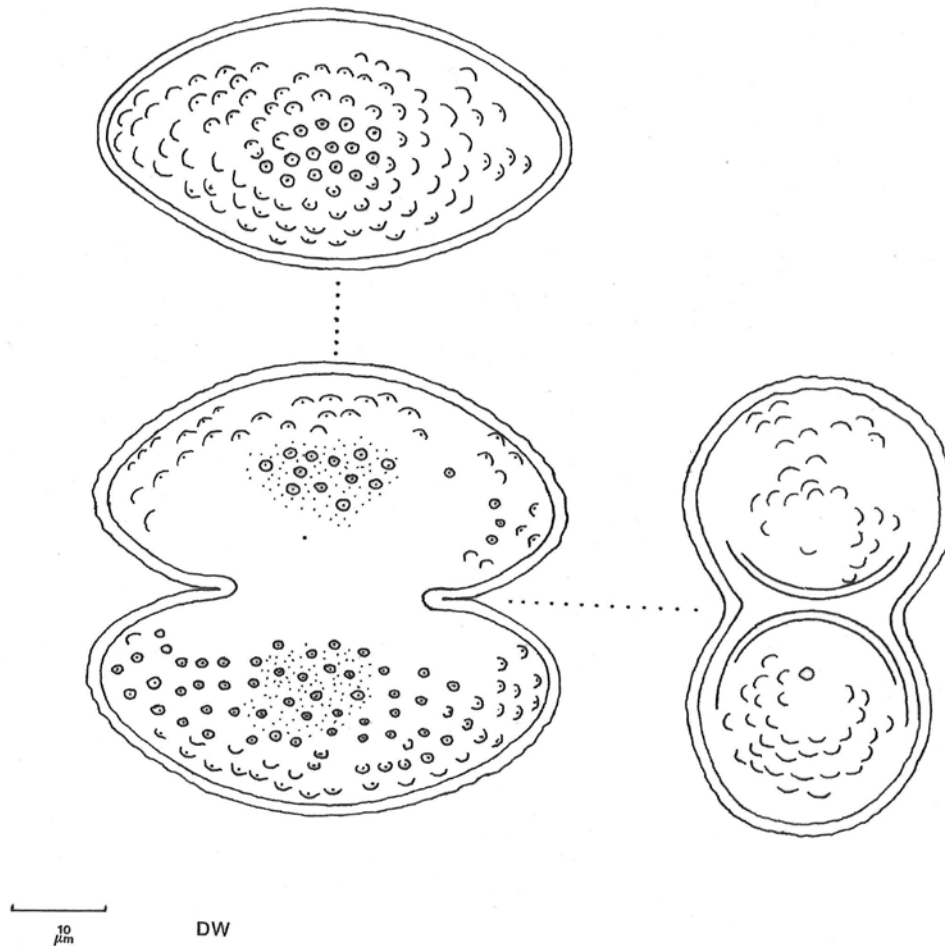
In frontal view the cells are more or less circular in general outline, the margins being minutely crenate. The semicells are transversely elliptic with broadly- rounded or occasionally narrowly- rounded angles. The sinus opens widely from an almost closed interior. In vertical view the semicells are elliptic and in side view globular.

The cell wall is covered with what appear to be minute depressions (pits) although these more resemble low rounded granules nearer the cell margins. It is interesting that publishes descriptions and illustrations variously describe the cell wall as irregularly punctuate or with rounded pores, which unlike my specimens are sometimes depicted as regular horizontal or vertical rows.

Clearly there is some confusion as to the exact nature of the pores which may be a reflection of the occasional inadequacy of light microscopes!

Range of dimensions of the cells – length 49.0–54.0 μm , breadth 51.0–55.0 μm , isthmus 23.0–24.0 μm , thickness 26.0–28.0 μm .

David B. Williamson



DURHAM FRESHWATER ALGAL IDENTIFICATION COURSES

Venue:

Hild-Bede College and School of Education, Durham University, UK Organizers: Professors Brian A Whitton (Durham) and David M John (NHM, London)

Introduction to Freshwater Algae

1 - 6 July 2012

Cost £900 with discounted price of £750 for students

Advanced Course on Blue-Green (Cyanobacteria) and Green

8 - 12 July 2012

Cost £620

Inclusive price for combined Introductory and Advanced Courses is £1420.

The aim of these courses is to train water management staff and researchers in the identification of freshwater algae. Ecological information on nuisance and more widespread species is also included, together with some aspects of monitoring and how to deal with problem algae. The Durham training courses have been run every year since 1992 and more than 350 persons from more than 20 countries have attended them.

The book for the courses will be the second edition of 'The Freshwater Algal Flora of the British Isles' (published October 2011, see CUP website - http://www.cambridge.org/gb/knowledge/isbn/item5860004/?site_locale=en_GB) which is edited by the course organizers who are also major contributors.

Course members will have access to a wide range of algal literature, the new edition of the British freshwater algal flora and each will receive a copy of the DVD accompanying the second edition, a course manual and a CD containing an interactive identification key. The organizers will be assisted by Drs Gordon Beakes (Newcastle University), Martyn Kelly (diatoms, Bowburn Consultancy) and Alan Donaldson (Cyanobacteria, consultant).

The BPS may be able to contribute towards the costs of full-time students who have also been members for at least three months before submitting an application for support (relevant deadlines 1 March, 1 June 2012), see BPS website: <http://www.brphycsoc.org>

For further information, see link to courses on the British Phycological Society website (<http://www.brphycsoc.org/courses.lasso>) and in the Newsletter of the Phycological Society of America (http://psaalgae.org/docs/newsletters/vol48_no1_2012_lowres.pdf), or contact the organizers: b.a.whitton@durham.ac.uk phone +44(0)191-386-7504 or d.john@nhm.ac.uk or d_m_john@ntlworld.com phone +44(0)208-464-6367 or +44(0)7920124825 (mobile)

See YouTube (Durham Training Course Algae) for a video showing projection microscopy of a living plankton algae during the 2010 introductory course

FRESHWATER ALGAE COURSE 2012

Where and when?

Kindrogan Field Centre, Enochdhu, Blairgowrie, Perthshire, Scotland (near the tourist area of Pitlochry), Friday, 8 June – Friday, 15 June, 2012. This is the 17th year that the course has been offered.

Kindrogan Field Centre

The Kindrogan Field Centre is a self-contained and fully equipped field station set in wooded grounds on the banks of the River Ardlie in the picturesque Scottish Highlands. It lies within easy reach of some of the remotest areas of the UK with inspiring landforms and a rich range of wildlife habitats. There is accommodation for 113 persons. The Centre has been modernized and has a common room, library, dining room, drying room, five classrooms / laboratories, conference room and bar. Take a virtual tour inside the centre and the surrounding area at: <http://www.field-studies-council.org/kindrogan/>

What is the course about?

The course takes full advantage of the excellent range of relatively unspoiled aquatic and terrestrial habitats in this beautiful area of Highland Perthshire to provide a sound introduction to the recognition, identification and ecology of freshwater algae. Emphasis will be placed on the use of the microscope and taxonomic keys (print and electronic) for identification to generic and species level, but also broader aspects of algal morphology, structure, reproduction, and classification (morphological and molecular). We normally see live examples of all major algal groups, including freshwater reds and browns.

For those with some prior knowledge of the algae, we hope that the opportunity to study samples from a range of habitats will broaden their knowledge and/or allow them to focus on particular groups.

Field trips, on foot or by vehicle, will be varied, but not strenuous and will be complemented by laboratory work, illustrated talks and class discussion. An all-day field trip

will sample numerous lochs, streams, rivers and marshes, including a whisky distillery tour.

The last evening we assemble in the bar for our world-famous "algal charades".

Who are the course tutors?

The Course Tutors, Dr Eileen Cox and Prof Elliot Shubert, have taught this course for the past 16 years and they have a wide-ranging expertise on freshwater algae. Eileen and Elliot conduct research at The Natural History Museum, London, specialising in diatoms and green algae respectively. Eileen has published a key to live diatoms. Elliot has published a key to the non-motile coccoid and colonial green algae and is Associate Editor for the European Journal of Phycology and Editor-in-Chief of Systematics and Biodiversity.

We will be joined for part of the course by Guest Tutor, Dr Laurence Carvalho, Centre for Ecology and Hydrology, who will give a presentation on the EU Water Framework Directive with special reference to lakes and will describe their counting methods, and Guest Lecturer, Prof Emeritus Geoff Codd, University of Dundee, who will give a presentation on cyanobacterial toxins.

Who are the participants?

The course is open to individuals with different backgrounds ranging from beginners to those who would like to refresh their knowledge of particular groups of algae or experience collecting in a different region of the world. Previous participants have come from over 30 different countries.

What is the full cost of the course?

The course costs £475 per person (approx. 550€ or \$745), which includes sole occupancy accommodation (shared accommodation is £405) + all meals (please notify the Centre if you have any special dietary needs) + transport from/to Pitlochry and to field sites + use of the library and internet + tuition. This is excellent value for money and costs significantly less than other freshwater algal courses on offer.

Is there support for students? Yes, support for a student stipend is available. Do not delay, apply today!

1. The British Phycological Society:
<http://www.brphycdoc.org>

The deadlines for applications are: 1 March, 1 June, 1 October, & 1 December. The sooner you apply, the better are your chances of receiving a stipend. Please note that you have to be a bona fide student member of BPS for at least three-months prior to making an application for financial support. http://www.brphycsoc.org/documents/BPS_A&TForm_%20Student_Bursary_2011.doc

2. Phycological Society of America:
<http://www.psaalgae.org>

Graduate students who are members of the are eligible for financial support to attend a phycology course at a field

station from the Hannah T. Croasdale Fellowship. <http://www.psaalgae.org/website/opportunities/grants/croasdale.html>

The Hannah T. Croasdale Fellowships are designed to encourage graduate students to broaden their phycological training by defraying the costs of attending phycology courses at biological field stations. The purpose of the award is to broaden phycological training and not necessarily to further research goals. Proposals to study at field stations associated with universities other than the student's own are especially encouraged. Awards are made directly to the student in amounts up to \$1000 each. Completed application should be sent to: Eric Linton (linto1ew@cmich.edu) by March 1st.

3. The British Ecological Society:

<http://www.britishecologicalsociety.org>

Specialist Course Grants available for BES members only (undergraduate and graduate) allocated on a first-come-first-served basis. The grant covers the course fee, which includes accommodation but not travel. Application is by form, available from the BES office and downloadable from this webpage. <http://www.britishecologicalsociety.org/grants/education/scg.php>

How do you get to Kindrogan?

Edinburgh and Glasgow have international airports. The airports have a coach connection to the main railway station in the respective cities.

The nearest mainline railway station is Pitlochry, which is on the London Kings Cross-Edinburgh-Inverness route. Participants will be met at Pitlochry by Kindrogan staff.

Where can I find more information?

- For detailed information about the Kindrogan Field Centre:

<http://www.field-studies-council.org/centres/kindrogan.aspx>

- For information on the Field Studies Council:
<http://www.field-studies-council.org/>

- Course information for 2012:
<http://www.field-studies-council.org/individuals-and-families/courses/2012/kd/freshwater-algae-34798.aspx>

- Booking information and form:
<http://www.field-studies-council.org/individuals-and-families/booking-information.aspx>

- Detailed information about the course, including the daily schedule:

http://www.field-studies-council.org/media/196182/freshwater_algae.pdf

If you have any other queries, please contact:
e.shubert@nhm.ac.uk

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Obituary

Patrizia Albertano

It is with great regret that I report the unexpected death of Prof. Patrizia Albertano (1952-2012), University of Roma (Tor Vergata), former overseas Vice President of BPS. She was a highly respected phycologist, who specialized in cyanobacteria and was very personable and well liked by all that knew here. A full obituary will be published in the autumn issue of *The Phycologist*.

Elliot Shubert

Hans Rudolf Preisig

Hans Rudolf Preisig passed away the 2 December 2011. As some of you might know, Hans suffered from ALS. Hans learned about his illness about 3 years ago and stopped working last year. He and his wife Mariann suffered their fate very courageously and Hans did not lose his sense of humour until the very last day. We lose a good colleague, scientist and friend. Hans is survived by his wife Mariann Müggler and three sons Tobias, Daniel and Stefan

Craig D. Sandgren

With great sadness we must tell you that Craig D. Sandgren died on December 24 at age 60 after a battle with pancreatic cancer. Craig was a professor of biology at the University of Wisconsin-Milwaukee for over 25 years, including a five year term as department chair. A Minneapolis native, Craig received his bachelor's and master's degrees from the University of Minnesota, and his PhD from the University of Washington, working at Friday Harbor Laboratories.

Craig's research embraced all aspects of marine and freshwater algal biology, from taxonomy and physiology to ecology and paleolimnology. He summarized his approach perfectly in the opening chapter of his highly-cited 1988 book *Growth and Reproductive Strategies of Freshwater Phytoplankton*: "There are...clear advantages to integrating phycological and limnological

as well as proximate and ultimate perspectives into our view of phytoplankton ecology". Craig's enduring love was the chrysophyte algae. His seminal work on them remains a mainstay of textbooks and lectures, and his isolates populate culture collections around the world.

An educator devoted to his undergraduate and graduate students, Craig was especially inspirational on field courses, whether on Lake Michigan, in the Midwestern northern lakes or on the seashore in the Pacific Northwest. He also expressed his infectious love of the outdoors through fishing, hunting, and rambles through the woods.

Craig is survived by his wife Maria and his daughter Kirsten.

The 27th Congress of PSSA

The 27th Congress of PSSA will be held from 17-22 June 2012, at Qologha on the “Wild Coast” of the Eastern Cape, South Africa. The meeting will comprise 3-4 days of oral and poster presentations interspersed with field excursions and collecting opportunities on the shore and in nearby estuaries. Qologha is about 70 km east of the nearest airport, which is in the city of East London.

The venue will be at Seagulls Hotel, which lies on the shore of this beautiful and almost undeveloped coast, in the warm temperate Agulhas Marine Province.

For further details see the attached pdf of the First Announcement. For enquiries contact Rob Anderson (**Robert.Anderson@uct.ac.za**) or Mark Rothman (**Mark.Rothman@uct.ac.za**).

Can you help?

The BPS archive will be discussed at the next Council meeting so it would be useful to know if any of you have in your possession or know the whereabouts of any documents, photographs, correspondence etc that could or should be part of the archive of the BPS. Please get in touch if you have any views on what should be in the archive or information that might be added to the archive.

Membership update

Dear BPS Members,

Thank you to those of you who were able to attend the Annual Winter Meeting in Newcastle. It was great to see so many of you there and I hoped you all enjoyed your trip to the Toon. The local organising committee felt the meeting was a huge success and we would just like to take the opportunity to thank all of the presenters for their contributions. As always there was an excellent range of topics covered and some lively discussions. In conjunction with the Annual Meeting we have had several follow on projects, which Martyn Kelly covers in his article in this issue of *The Phycologist*, so please have a read and see what we've been up to, to promote algae and the Society since the Meeting. The informal student session hosted by Helen Rosenkranz, our Student Representative, was really useful and it was very encouraging to see so many new faces at the Meeting.

Thank you to those of you who have renewed for 2012; renewals are still being taken so if you have yet to do so, please renew as soon as possible. You can check your current membership status at any time by accessing your record in the BPS database via our webpage at <http://www.brphycsoc.org/membership/>

As I reported at the AGM, the implementation of PayPal as the principle online payment method has been very successful over the last year and it has improved the way in which we process your membership payments. Recently, we have been experiencing a few problems with the system, which are caused by the PayPal system; in response to this we have updated the information on the payment pages of our website, and we hope that this will resolve the problem. If any of you do have problems paying via PayPal please do not hesitate to get in touch with me and we can hopefully resolve any issue.

If you wish to renew online, you do not need a PayPal account – you can simply go through the online process and enter the details of your credit/debit card rather than logging into PayPal. For those of you who do not wish to use PayPal you can still enter your credit/debit card details on the postal application/renewal form or simply send a cheque payable to the British Phycological Society to me at the address below.

When you renew your membership, can I please ask that all members check their contact details and ensure they are up-to-date – this can be easily done by logging into your membership record in the database.

Finally, we have now set up a BPS page on Facebook – once you have logged into your Facebook account please search for “British Phycological Society” and our official page will come up. You can then ‘Like’ the page to allow you to post items on the page, add photos and receive online updates from the BPS.

If anyone has any questions or queries relating to their membership please do not hesitate to contact me.

Dr. Sara Marsham,
sara.marsham@ncl.ac.uk
BPS Membership Secretary

INSTRUCTIONS FOR CONTRIBUTORS

Copy which is submitted for publication in *The Phycologist* should be concise and informative. Articles should be scientifically sound, as jargon free as possible and written in a readable scientific magazine style. Unless absolutely essential references should not be included. All types of relevant material will be considered, these include job advertisements, scientific reports, book reviews, news items of topical interest, meeting announcements, grant awards, promotions, appointments, profiles of eminent phycologists and obituaries. If you are interested in submitting material that does not fall within any of these broad categories, or you are unsure of the appropriateness of a potential article, then contact the editor. Suggestions for future articles or a series of articles are welcomed.

Copy should be submitted, preferably as attachments to email or on disc (MS Word for Windows or Rich Text Format). **Illustrations and photos to accompany copy are welcomed and should be supplied as JPEG or TIFF file-format no less than 600 dpi resolution.** The editor reserves the right to edit the material before final publication.

Submission of Copy and Deadlines

Copy should be submitted to:

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