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The Newsletter of the British Phycological Society

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2013
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1. Dr Jane Pottas

Natural History Museum
Department of Life Sciences
Cromwell Road
London SW7 5BD
UK

J.Pottas@nhm.ac.uk
Tel: +44 (0)2079425271

2. Dr Michelle L Tobin

Abrigado
160 New Ridley Road
Stocksfield
Northumberland
NE43 7EH
UK

bpstreasurer@btinternet.com
Tel: +44 (0)1661844027

3. Dr Sara Marsham

Dove Marine Laboratory School of
Marine Science and Technology
Newcastle University
Cullercoats, North Shields
Tyne and Wear
NE30 4PZ , UK

sara.marsham@ncl.ac.uk
Tel: +44 (0)191 2223056

4. Dr Jan Krokowski

Scottish Environment Protection Agency
(SEPA),
Redwood Crescent,
Peel Park,
East Kilbride G74 5PP

jan.krokowski@sepa.org.uk
Tel: +44 (0)1355 574200

5. Helen Rosenkranz

School of Biological Sciences
University of Bristol
Woodland Road
Bristol
BS8 1UG

helen.rosenkranz@bristol.ac.uk
Tel: +44 90)1179 287592

6. Prof Michael D Guiry

Martin Ryan Institute
National University of Ireland
Galway
Ireland

michael.guiry@nuigalway.ie
Tel: +353 91 492339

Editorial

Welcome to the spring edition of *The Phycologist*.

We start off the year with corrections and additions to the second edition of the Freshwater Algal Flora of the British Isles. Please note that if you do come across any others and indeed come across new taxa, to notify the editors. You will also notice the sad news that one of the editors of the Flora – Prof Alan Brook - passed away.

We also have a plethora of announcements, not least that our next Annual Meeting will be held from 8-10 July, 2013 at The Queen's University Belfast.

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

CONTENTS

Freshwater Algal Flora of the British Isles
CORRECTIONS AND ADDITIONS 2013

Listed below are errors drawn to our attention in the second edition of *The Freshwater Algal Flora of the British Isles* (D.M. John, B.A. Whitton & A.J. Brook, eds) including the accompanying DVD. Information overlooked or published subsequently is also mentioned, together with references. Anyone requiring a PDF with the present and earlier published list of errors and additions should contact the editors. We can also send a file listing the new records along with nomenclatural and Coded Number changes yet to be included in the file that can be downloaded from the Centre for Ecology and Hydrology website

http://science.ceh.ac.uk/data/dict/algae/

Text

Apodochloris dinobryonis: p. 411, column 2, line 17. 'Pl. 112J (p. 495)'. Plate number should read '118J'.

Spermatozopsis: p. 406, column 1, line 8. The genus is mentioned as monospecific, whereas two species are recognized in the Flora.

Spermatozopsis exsultans: p. 394, Plate 99L. Cross-reference to description should be changed to p. 324.

Chaetophora incrassata Hazen: p. 528. Change to *Chaetophora lobata* Schranke (new Coded Number 24070050).

Scotinosphaera paradoxa G.A. Klebs (new Coded Number 30010030).

According to Wujek & R.H. Thompson (2005), the following *Chlorochytium* species are reduced to its synonomy: *Chlorochytrium bristolae* (G.M. Smith) D.M. John & Tsarenko, *C. facciolae* (Borzi) Bristol and *C. paradoxum* (G.A. Klebs) G.S. West.

Chlorochytrium grande Bristol: p. 477. Place in the synonymy of *Scotinosphaera grande* (Bristol) Wujek & Thompson (new Coded Number 30010010).

A morphological and phylogenetic investigation by Skaloud et al. (2012) has shown that *Scotinosphaera* and *Chlorochytrium* belong to different classes, with *Chlorochytrium* in the Chlorophyceae and *Scotinosphaera* in the Ulvophyceae and the later placed in the newly created order, the Scotinosphaerales (new Coded Number 30000000).

DVD

Gloeothece palea: change to *Gloeothece linearis* Nägeli; the photomicrograph in the DVD is also shown as Pl. 6E in volume.

Balbiania investiens: for 'tetrasporangia' read 'monosporangia'.

Chlorotetraedron incus: change *Tetraedron incus* to *Chlorotetraedron incus* (Teiling) Komárek et Kováčik

Cosmarium hornavanense var. *dubovianum* (Lütkemüller) Růžička: listed on p. 674, but not in Index or the three photomicrographs in DVD.

Scenedesmus obtusus var. *apiculatus*: change *Desmodesmus obtusus* var. *apiculatus* to *Scenedesmus obtusus* var. *apiculatus* (West et G.S. West) Tsarenko

Additional Taxa

Batrachospermum anatinum Sirodot
New Coded Number 03040090
Identified by J. Kwandrans, who collected it in September 2010 from a stream running from the spring known as Giant's Grave at Cherry Hinton, near Cambridge (GR TL485562). Similar to *B. gelatinosum* but differs by having an irregular cortication and stalked carposporophytes which project from surface of the whorls of branchlets. According to J. Kwandrans (pers. comm.), recent molecular and morphological studies have shown that *B. anatinum* is not conspecific with *B. confusum*.

Cosmarium raciborskii (Raciborski) Lagerheim
New Coded Number 27052760
Identified by D. B. Williamson in a sample collected by Ian Evans from a roadside mire pool near Foindle Sutherland, Scotland (GR NC18784781) on 19 November 2011 (see Williamson, 2012). Semi-cells faintly granulate, sinus deep and widely open, with each broadly fusiform in outline.

Heimansia tumida (L.N.Johnson) Coesel
New Coded Number 27470020
The '*Cosmocladium* sp.' on the DVD has been identified by P.F.M. Coesel (pers. comm. to C.F. Carter) as *Heimansia tumida* (L.N. Johnson) Coesel, a new record for the British Isles. It was collected by D.B. Williamson in October 2009 from Kelly Hall Tarn, Cumbria (GR SD288933).
Differs from *H. pusilla* by the semicells each possessing a distinct central tubercle.

Scotinosphaera lemnae (Puncochárová) Wujek & Thompson
(synonym *Keratosphaera lemnae* Puncochárová)
Coded Number 30010020
Isolated by R.C. Starr in 1951 from dead Lemna in a pond near Glasgow, Scotland; only known from this strain deposited in the Culture Collection of Algae at Göttingen University (SAG 240-I). Diagnostic features include having a slightly undulate outline to the generally elongated cells and a row of the pyrenoids lying parallel to the long axis of the cell (see Puncochárová, 1992, p. 234, figs 5, 6).

New record

Phycopeltis arundinacea (Montagne) De Toni

First record for the Gower Peninsula in South Wales, where collected in October 2012 by one of the authors (DMJ) on the leaves of ivy growing alongside a path in Nicholaston Woods, Oxwich Bay, West Glamorgan (GR SS514879).

Thorea hispida (Thore) Desvaux
Collected in November 2011 by T.J. Entwistle from just below Teddington Weir (GR TQ165716) where attached to 'a long-submerged stick jammed against an old retaining wall'. First record from the freshwater tidal River Thames since not recorded previously from downriver of Kingston-upon-Thames (see John et al. 1989).

Editor's note: In addition, there are recent new records for *Desmatractum spryii*, *Pseudostaurastrum limneticum* and *Ollicola vangoorii* from Scotland awaiting verification (P. Lang pers. comm.)

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Acknowledgements

We thank the following for drawing our attention to this information: Dr Pauline Lang (SEPA, Scotland), Dr Chris Carter (Wootton, Northampton, England), Dr Peter Coesel (University of Amsterdam, The Netherlands), David B. Williamson (Oadby, Buckingham, England), Dr Hilary Belcher (Cambridge, England), Professor Tim Entwistle (Royal Botanic Gardens Melbourne, Australia) and Dr Janina Kwandrans (Institute of Nature Conservation, Kraków, Poland).

David M. John and Brian A. Whitton

Department of Life Sciences, The Natural History Museum, Cromwell Road, London SW7 5BD, UK d.john@nhm.ac.uk; School of Biological and Biomedical Sciences, Durham University, Durham DH1 3LE, UK b.a.whitton@durham.ac.uk

Of Microscopes and Monsters

You may not have noticed, but a public consultation on revised phosphorus standards for rivers has just taken place (http://www.wfduk.org/stakeholders/stakeholder-review-phosphorus-and-biological-standards). The new numbers got a thorough scrutiny from the water industry during this consultation because these standards will, in turn, determine how they are regulated and the prices they charge to their customers. For 'customer', read everyone, save a very few in remote areas dependent upon springs and septic tanks. The sorry news is that price rises are coming to a utility bill near you in the very near future.

An interesting dilemma arises from this: these standards help to focus attention on the problems caused by excessive algal growth in freshwaters yet the water industry is worried that the public knows so little about algae that it will be very hard to persuade their customers that investment in phosphorus reduction technologies is a price worth paying. Or, to put it another way, the freshwater algal community have not done a very good job communicating the importance of algae to the wider world.

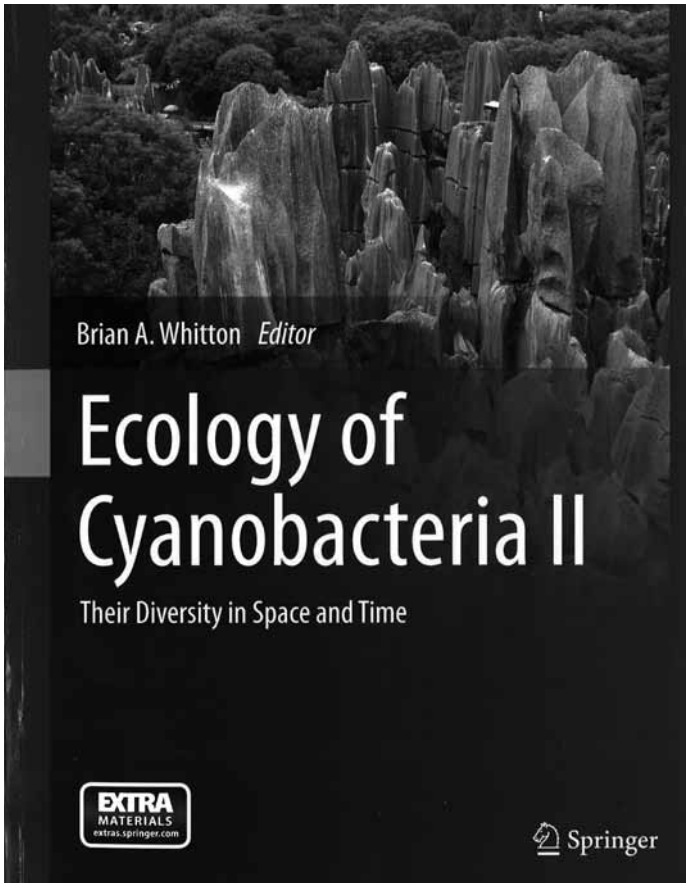
Of Microscopes And Monsters is a small step to rectify this problem: an occasional blog about the unfashionable end of UK biodiversity. You can find it at www.microscopesandmonsters.wordpress.com. It is mostly, and unashamedly, natural history, rather than hard science, although I do try to provide links to relevant papers and other websites. My rationale is that natural history is the bridge between the science of ecology and the public that we need to present algae using the same language of awe and wonder that peppers a David Attenborough documentary in order to create awareness and understanding. These are themes that I explore in greater detail in my recent paper The Semiotics of Slime in Freshwater Reviews (2012, vol. 5, pp. 105-119).

Starting the blog was also a discipline to myself to get out to the field more and to observe and describe instead of just sampling and measuring. And, finally, the joy of the Internet is that all is interactive: you all have the right to disagree with me. And to tell me that you disagree. Bring it on ...

Martyn Kelly

Book review

Ecology of Cyanobacteria II. (2012) Edited by B.A. Whitton. Springer, The Netherlands. ASIN: B00A9YGR22. ISBN: 9789400738546 and 9400738544. Kindle edition £77.30, Hardback £171.00, Paperback £99.00



In the Dark Ages, great books were stored in the libraries of monasteries. The tomes were very large, and expensively produced by hand. Only a few men were able to read them; they were treasures to be cared for. In the subsequent Renaissance there were more books, but printing remained expensive, and the libraries of the Universities took over the curation. Books remained the purview of a narrow circle of cognoscenti. Following the Industrial Revolution, printing became cheaper, books much more widespread, smaller, more accessible, and easily readable. Now we are in a fourth phase. Books are still popular, not least when they come in fifty shades of one thing or another, but scientific books, namely the journals that have proliferated, are vapourising rapidly into electronic form. A few years from now, the printed journal will have disappeared altogether. But what of the textbooks, and the compendia of individually-authored chapters that are still published. Paper textbooks might still have a role; the small textbook is a great invention: portable and annotable; you can take it anywhere you like, can scribble on it and sell it when you have finished the course. The future of the compendium, essentially a one-off journal of linked reviews, is perhaps not so clear. We may be looking here at one of the last of a genre that will soon go the way of the journals. It is huge (755 pages in double-column printed A4 format), expensive, and more likely therefore, to be curated in the libraries than read in bed. Things have come full circle. It has all the hallmarks of one of the treasures guarded in the mediaeval monasteries and libraries: authority, ample colour illustration, weight, but it contains within itself hints of its own demise. There are 26 printed Chapters but a further 12, including the text of its first edition, published in 2000, available on the web, free at the click of a mouse. If twelve Chapters can be placed on the web, why not 38? Indeed there is an affordable Kindle version. If someone gives you a hard cover copy, treasure it, for you will see few of its like in the future.

Brian Whitton, with customary thoroughness, enthusiasm and eye for detail has assembled an account of the ecology of Cyanobacteria from some 53 contributors, with Chapters grouped around the environments where Cyanobacteria are found, physiological ecology, molecular ecology, the organisms themselves, and applied aspects. The content ranges from marine plankton, the cryosphere and carbon acquisition, to cyanophages, Arthrospira and biotechnology. Probably no one, bar the editor, has read, or will read every one of something well over a million words. Some of the chapters are esoteric, quite detailed and specialist, essentially reference works; others can be read with pleasure. Some have very general relevance; others will have local appeal. Particularly useful, therefore, is the introduction given by Whitton and Potts, which summarises some of the main trends and themes in cyanobacterial research in the twenty-first century. I think it is fair to say that in the twelve years since the first edition, there has been no great shift of paradigm. My overall views of the Cyanobacteria, their place in the biosphere, their history and functioning remain much the same. There has, of course, been a vast increase in the detail. Most Chapters include some reference to molecular work and this has confirmed the near ubiquity of Cyanobacteria, even if many entities, as with the other prokaryotes, are known largely from their nucleic acid sequences. What now constitutes a species in the prokaryotes has become judgemental.

The Cyanobacteria curiously have much more distinctive and varied structures than the other prokaryotes, and in that they resemble eukaryotes. That remains of considerable interest. Many ecologists still think of them functionally as the blue-green algae and treat them in the same way that they view microscopic eukaryotes. The microbiological thought-police still have a guerrilla resistance with which to contend. This book is strongly sympathetic to retaining a morphological classification in tandem with molecular analyses. The coupling of these approaches in the single-celled eukaryotes has led, in recent years, to quite revolutionary findings. Who would have thought that the malarial parasite is closely linked to the dinoflagellates, with both having red algal symbionts among their forbears? I would not be surprised therefore, to be told of some new cyanobacterial paradigm just around the corner, but the nature of such is that it is not readily foreseeable.

There is a revealing statement in the book about the use of Cyanobacteria in biotechnology to the effect that it has not become so prominent by the time of the second edition as had been predicted in the first. It is revealing in that it carries the unspoken message that here are organisms to be pressed into our service. In turn it says something about what the contributors mean by 'ecology': an extension of physiology and a property of the group. I don't think that 'ecology' can any longer be seen as a property of individual groups. It is an emergent property of communities in an environment that the communities collectively have a continuing hand in shaping. To claim an 'ecology of Cyanobacteria' (or of any particular group of organisms) is perhaps to see groups of organisms as separable and by doing that perhaps we fail to emphasise concepts that might be the key to the overall survival of all groups, not least ourselves. But that is to raise a philosophical point, though a crucial one in getting over to policy-makers the nature of our future plight. It does not detract from a very valuable compendium of information, extremely well-illustrated, comprehensive, and worthy of its place on the shelves of the most distinguished libraries. We echo the Renaissance. When such material as this is published only as separate electronic files, we will have lost as much as we have gained.

Brian Moss

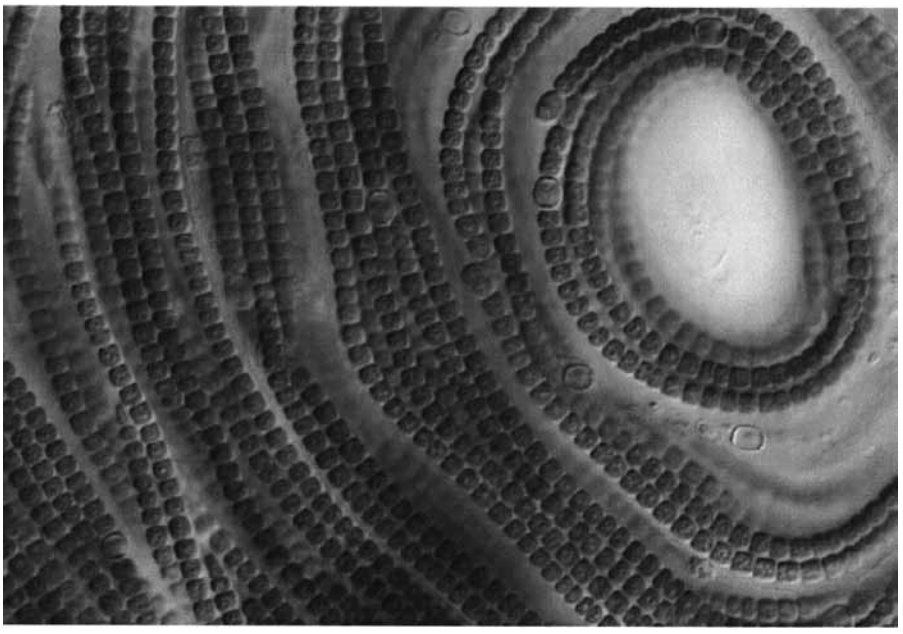
Hilda Canter-Lund photography competition

Over the previous three years, the competition has been arranged so that the winner can be announced at the British Phycological Society's meeting in January. However, the BPS has now moved its annual meeting from January to June and, as a result, we will adjust the timings of the Hilda Canter-Lund prize to fit this new schedule.

If you are looking for inspiration, previous shortlists and winners are on display at

http://www.brphycsoc.org/Hilda_Canter-Lund_Prize.lasso

Martyn Kelly



FRESHWATER ALGAE COURSE 2013

Where and when?
Kindrogan Field Centre, Enochdhu, Blairgowrie, Perthshire, Scotland (near the tourist area of Pitlochry),
Friday, 7 June – Friday, 14 June, 2013. This is the 18th 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 Ardle 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 relThe 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 17 years and they have a wide-ranging expertise on freshwater algae. Eileen and Elliot specialise in diatoms and green algae respectively. Eileen is Head of Post Graduate Studies at The Natural History Museum, London. She has published a key to live diatoms. Eileen is currently an Associate Editor for *Diatom Research* and on the Editorial Board of *Fottea*. Elliot is Editor-in-Chief of *Systematics and Biodiversity* at The Natural History Museum. He has published a key to the non-motile coccoid and colonial green algae and is an Associate Editor for the *European Journal of Phycology*. 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 £420 per person (approx. 520€ or $670), which includes shared occupancy accommodation (sole occupancy accommodation is £490) + 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 are 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: Amy Carlile (acarlile@newhaven.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 2013:
http://www.field-studies-council.org/individuals-and-families/courses/2013/kd/freshwater-algae-40578.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/521020/freshwater_algae.pdf

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

Prof Elliot Shubert
The Natural History Museum
Cromwell Road
London SW7 5BD
United Kingdom
Tel 020 7942-5606 (UK)
Tel +44 207 942-5606 (International)
Fax 020 7942-5529 (UK)
Fax +44 207 942-5229 (International)

INTRODUCTION TO FRESHWATER ALGAL IDENTIFICATION

PROF. BRIAN WHITTON (DURHAM)
and
PROF. DAVID JOHN (LONDON)

.

HILD-BEDE COLLEGE AND SCHOOL OF EDUCATION, UNIVERSITY OF DURHAM

Sunday 30 June – Friday 5 July 2013

AIM To train staff from Environment Agency, SEPA, water plcs, consultancies, research students and overseas visitors in the identification of the more widespread and environmentally important microscopic and macroscopic freshwater algae. Topics introduced include monitoring, harmful and nuisance algae and implications of the European Water Framework Directive.

COURSE LEADERS Prof. David John and Prof. Brian Whitton. Dr Gordon Beakes (University of Newcastle), Dr Alan Donaldson (consultant) and Dr Martyn Kelly (Bowburn Consultancy) also contribute.

WHERE Hild-Bede College and School of Education, University of Durham (the two buildings are on adjacent sites).

RESIDENCE and meals are in Hild-Bede College. The College is on a hill above the River Wear and has a fine view over the river and city; it also has an excellent reputation for food and drink. Arrangements can be made for special diet requirements. Parking is available inside the college.

LECTURES and/or practicals run until 2120 each evening, including the Sunday. Most study is in the laboratory, but there is at one field visit.

COSTS The inclusive cost for all participants other than full-time research students is £950 (no VAT charge) for those making a firm reservation by 1 April. The discounted price for full-time students is £800. Participants from overseas (whether or not a student) may stay one night in advance of the course free of charge. Students who have been members of the British Phycological Society for at least three months (essential!) may apply directly to the Society for some support, but any decision rests with the Society. Details are on BPS website, but it is recommended that any application is submitted as early as possible.

Participants who also attend the Advanced Course in the following week (Sunday 7th - Thursday 11th) may stay (bed and breakfast only) for the two intermediate days free of charge.

Hild-Bede College can also provide accommodation for people anyone else wanting to stay an extra night at the beginning or end of the course (cost £32.50 for B & B). Payment can be included in the main invoice, provided organizers know well in advance, but otherwise it paid directly to the college after arrival. Dinner on Friday (but not B & B) will be provided free to those wanting to stay the night.

BOOKING Provisional and firm reservations for one of 15 places should be made by email to b.a.whitton@durham.ac.uk, to be followed by an official order OR a deposit of £50 to B.A.Whitton Algal Training, 74 Archery Rise, Durham DH1 4LA, UK. (This deposit need not be paid by overseas people.) Payment is required by 15 May. A full refund (excluding deposit) will be made to anyone cancelling before 15 May, while 50% refund will be made to anyone cancelling by 17 June.

WHAT TO BRING Members are encouraged to bring boots for a short field visit and (preferably) fresh samples from their local waters. A few laboratory coats are available to be borrowed, but anyone from an organization where their own regulations require use of a coat for routine microscopy is advized to bring their own coat. Everything else is provided, including access to the new edition of the Freshwater Algal Flora of the British Isles, associated DVD and several identification CDs. Some people may find it useful to bring their own portable computer, but the risk of loss must be covered by their own insurance. The training manual will be distributed in advance; if you have booked, but not received a copy by 1 May, please inform the organisers. Overseas members need not bring a laboratory coat or clothes for the field visit - these will be loaned.

TRAVEL Durham is on the main rail line between London King's Cross and Edinburgh. Trains are about once an hour and the journey from London (260 miles) takes three hours (sometimes longer on a Sunday). Overseas members should contact the organizers for advice on buying their ticket. (Advance booking is essential to get the cheapest.) A taxi from the station to Hild-Bede College (about 1.5 miles, but a long hill for walkers) costs about £3.50 The nearest airport is Newcastle-upon-Tyne. Avoid Teesside and Durham airport, unless this provides the only suitable flight. There is a rail route from Newcastle airport to Durham, though this involves changing at Newcastle main rail station and the overall journey can take anything from one to two hours, depending on the connection at Newcastle. A taxi from Newcastle airport to Durham (26 miles) takes 35-45 minutes and costs about £46. The organizers can almost always collect members at the airport, but it may not be possible to help with the return journey.

PROGRAMME

All participants are expected to have read the Manual before joining the course !

The course (which has run since 1992) is a mixture of lectures and practicals, together with an afternoon field trip. Members should arrive by 1700 on the Sunday (though they can take

their room earlier in the day), while the daily programme runs from 0900 to 2120. It ends formally after lunch on Friday, though there is an optional trip to sites along the River Wear in the afternoon. There is no formal test, but the course ends with a slide-show quiz and a prize for the winner.

David John and Brian Whitton give the majority of lectures. Gordon Beakes helps on the Tuesday; Alan Donaldson (special expertise blue-green algae/cyanobacteria) helps on several days; Martyn Kelly gives lectures and practicals on the Tuesday evening and Wednesday morning and afternoon.

Provisional Schedule

Sunday
- Introduction to freshwater algae
- Optimizing your skills at identifying algae

Monday
- Cyanobacteria 1 and 2
- Use of interactive identification CDs
- Overview of other algae
- Practicals: Range of cyanobacteria; mixed samples

Tuesday
- Microscopy techniques
- Green algae 1 and 2
- Practicals Range of green algae
- Field visit to Cassop Vale National Nature Reserve, followed by microscopy of samples
- Diatoms 1

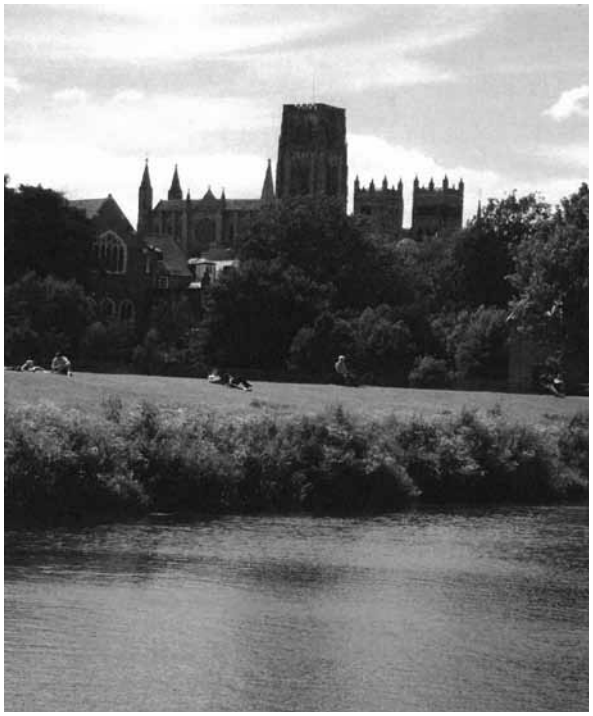
Wednesday
- Diatoms (mixed lectures and practical, including use of diatom CD)
- Diatoms: taxonomy and techniques
- Other phyla 2

Thursday
- Red algae, flagellates and charophytes
- Cyanobacterial blooms
- Ecology of river algae
- Practicals Reds, flagellates and charophytes

Friday
- Preservation methods
- Algal nuisances and their control
- Class revision
- Slide-show quiz
- General discussion, followed (after lunch) by optional tour to River Wear sites

FURTHER INFORMATION

Anyone wanting further information is welcome to contact Brian Whitton: b.a.whitton@durham.ac.uk phone 0191-386-7504.
or David John: d.john@nhm.ac.uk or d_m_john@ntlworld.com 0208-464-6367



ADVANCED COURSE ON BLUE-GREEN AND GREEN ALGAE

PROF. BRIAN WHITTON (DURHAM) and PROF. DAVID JOHN (LONDON)

HILD-BEDE COLLEGE AND SCHOOL OF EDUCATION, UNIVERSITY OF DURHAM
Sunday 7 – Thursday 11 July 2013

AIM To provide training on identification of freshwater blue-green algae (cyanobacteria) and green algae at a more advanced level than in the Introductory Course. This course is planned especially for those who have attended one of the introductory courses, but also for others with considerable experience of field material or who would benefit from refreshing their knowledge.

COURSE LEADERS Prof. David John and Prof. Brian Whitton, with contributions from Dr Alan Donaldson (consultant) during part of the course.

WHERE AND WHEN Hild-Bede College and School of Education, University of Durham (the two buildings are on adjacent sites.) The course runs from late afternoon on the Sunday to 1600 on the Thursday, but accommodation (free of charge) will be provided for anyone wanting to stay overnight on the Thursday.

RESIDENCE and meals are in Hild-Bede College. The College is on a hill above the River Wear and has a fine view over the river and city; it also has an excellent reputation for food and drink. Arrangements can be made for special diet requirements. Parking is available inside the college.

LECTURES and/or practicals run until 2120 each evening, including the Sunday. Most study is in the laboratory, but there will be a field visit on part of Tuesday.

COSTS The inclusive cost is £660 (no VAT charge). Full-time students who are members (essential to have been members for 3 months by the time committee meets!) of the British Phycological Society may apply directly to the Society for some support, but the decision rests with the Society. Details are on the BPS website, but it is recommended that any application is submitted as soon as possible.

Hild-Bede College can provide accommodation for anyone wanting to stay an extra night at the beginning or end of the course (£32.50 for B & B). Payment can be included in the main invoice, provided organizers are told well in advance; otherwise it should be paid directly to the college after arrival.

The combined costs for the Introductory and Advanced courses is £1480, including bed and breakfast accommodation for the two intermediate days and also (if required) one night in advance and one night at the end.

BOOKING Provisional and firm reservations for one of 12 places should be made by email to b.a.whitton@durham.ac.uk, to be followed by an official order OR a deposit of £50 to B.A.Whitton Algal Training, 74 Archery Rise, Durham DH1 4LA, UK. (This deposit need not be paid by overseas people.) Payment is required by 15 May. A full refund (excluding any deposit) will be made to anyone paying and cancelling before 15 May, while 50% refund will be made to anyone cancelling by 21 June.

WHAT TO BRING Members should bring boots for the field visit and (preferably) fresh samples from their local waters. All else is provided, though some people may find it useful to bring their own portable computer, if it can be used for CDs or (even better) DVDs and the risk of loss is covered by their own insurance. The 2008 advanced training manual will be distributed in advance; if you have booked, but not received a copy by 1 June, please inform the organisers.

TRAVEL Durham is on the main rail line between London King's Cross and Edinburgh. Trains are about once every hour and the journey from London (260 miles) takes three hours (sometimes slightly more on a Sunday). Overseas members should contact the organizers for advice on buying their ticket. (Advance booking is essential to get the cheapest.) A taxi from the station to Hild-Bede College (about 1.5 miles, but a long hill for walkers) costs about £3.50 The nearest airport is Newcastle-upon-Tyne. Avoid Teesside and Durham airport, unless this provides the only suitable flight. There is a rail route from Newcastle airport to Durham, though this involves changing at Newcastle main rail station and the overall journey can take anything from one to two hours, depending on the connection at Newcastle. A taxi from Newcastle airport to Durham (26 miles) takes 35-45 minutes and costs about £46. The organizers almost always collect members at the airport, but it may not be possible to help with the return journey.

PROGRAMME The course focusses on blue-green (cyanobacteria) and green algae; other groups are mentioned only if important in field samples. Representative material from a wide range of environments will be included in practicals, though particular attention is given to organisms likely to cause identification problems during monitoring and survey programmes. Information on environmental aspects are included, especially those related to nitrogen and phosphorus sources, together with the use of taxonomy, morphology and staining to assess these.

The field visit includes the Sunbiggin Tarn region (Cumbria), which has a range of wetland areas, and a main river site (provisionally R. Eden).

All participants are expected to have read the Manual before joining the course !

FURTHER INFORMATION

Anyone wanting further information is welcome to contact Brian Whitton: b.a.whitton@durham.ac.uk
phone 0191-386-7504.
or David John: d.john@nhm.ac.uk or
d_m_john@ntlworld.com 0208-464-6367

48th European Marine Biology Symposium

Ryan Institute, National University of Ireland, Galway, Ireland.

19-23/08/2013

Biodiversity in a Changing Ocean

http://www.conference.ie/

Dear friends and colleagues,

With great pleasure we invite you to Galway for the 48th EMBS which will be held at Ryan Institute, NUI, Galway on the west coast of Ireland.

More information is available from the conference web site.
We look forward to seeing you in the summer
The local organising committee

IPC 10

It is with great pleasure we announce that the IPC 10 Second Circular for this year's PSA Annual Meeting is now available via the PSA website! The overarching theme of IPC 10, Algae in a Changing World, recognizes the important roles of algae in a world where environmental changes are rapidly accelerating. A bounty of excellent symposia are on tap this year, including the PSA Presidential Symposium Algal Causes of and Cures for Coastal Dead Zones (Chaired by Linda Graham) and the PSA sponsored symposium Into the Future: Going Where No Phycologist Has Gone Before (Chaired by Juliet Brodie and Debashish Bhattacharya).

A bevvy of fantastic phycological symposia are planned, while some great field trips to explore the natural splendor of Florida (fear not, it's not all alligators and wicker furniture) and outstanding workshops will be a part of the meeting.

Early registration is open from March 15-April 30, and will be available at www.sgmeet.com/ipc/ipc2013

While it may still be in the future, we also draw your attention to our 2014 Annual Meeting. This will be a truly epic event in which PSA will be meeting jointly with ASLO (Association for the Sciences of Limnology and Oceanography), SFS (the Society for Freshwater Science) and SWS (Society of Wetland Scientists) under the umbrella of a Joint Aquatic Science Meeting (Portland, OR, May 18-22). This will be the first time that these societies have met jointly, with a meeting theme of Bridging Genes to Ecosystems: Aquatic Science at a Time of Rapid Change.

On behalf PSA, we are looking forward to seeing everyone in Orlando this year!

Dale Casamatta
PSA Program Director

2013 BPS Annual Meeting

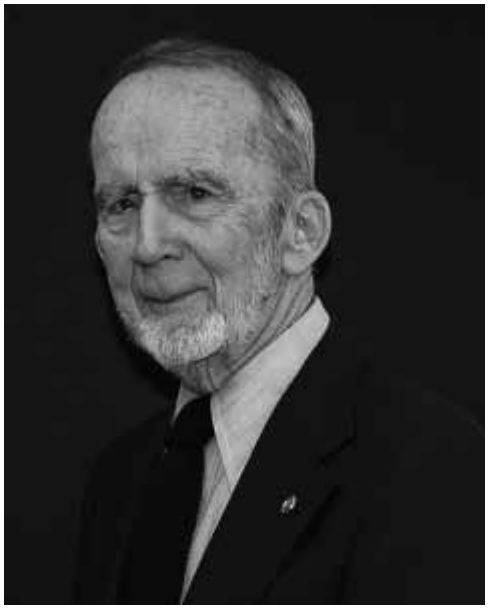
The 2013 Annual Meeting will be held from 8-10 July, 2013 at The Queen's University Belfast. Further details will be posted on the BPS website, so stay tuned.

Contact: Prof. Christine Maggs.

Students may apply for funding to attend the meeting. Please visit the Funding Opportunities page on our website.

Obituary

Francis (Frank) Rice Trainor



In sadness we report that Francis (Frank) Rice Trainor, Professor Emeritus of Ecology and Evolutionary Biology, University of Connecticut, died on February 12, 2013 in Storrs, Connecticut, after a short period of declining health. He was 84. Frank's supreme optimism, kindness, and generosity endeared him to his family and friends, the town of Mansfield, CT, and colleagues around the globe.

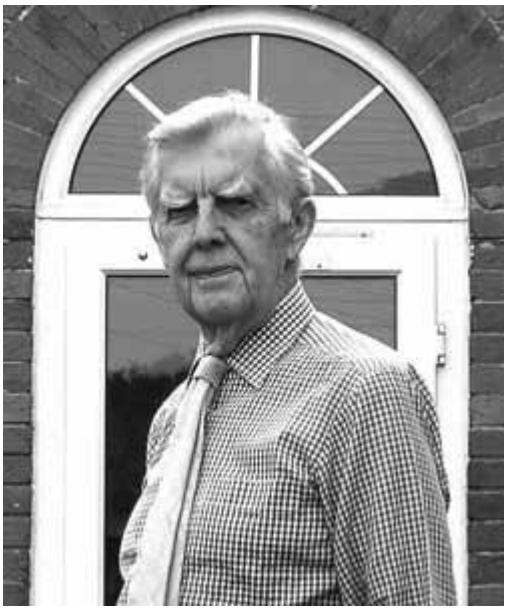
His research on algae covered an extensive range of topics, including phenotypic plasticity, growth, and sexual reproduction in green micro-algae.

To express condolences, please visit: http://www.potterfuneralhome.com for the online memorial guestbook. In lieu of flowers, the family requests donations to a fund for graduate student research named in Frank's honour. To do so, please make checks payable to: The UConn Foundation, Inc. to the Francis Rice Trainor Endowment Fund #30244. Send to the following address: 2390 Alumni Drive Unit 3206, Storrs, CT 06269 USA.

A full obituary will be published in an upcoming issue of *Phycologia*.

Louise A. Lewis, Peter Siver and Elliot Shubert

Alan Brook



In sadness report that Emeritus professor of Buckingham University's school of science and medicine, Alan Brook, passed away peacefully on 5th March, 10 minutes into his 90th birthday.

Prof Brook played a very active role in the community, particularly in the musical arena. As well as co-founding the Buckingham Summer Festival, he was chairman of the Buckingham Festival of Music and Drama and president of the Buckingham branch of the University of the Third Age.

In 2003 he was awarded the MBE for his services to the community.

Born in Newcastle upon Tyne in 1923, Prof Brook spent his research career studying freshwater algae and particularly desmids. A botany graduate of Kings College, Newcastle, after war service in the RAF, he gained his PhD in 1949 and took up a lecturership at the University of Khartoum, Sudan. He was later appointed botanist at the Freshwater Fisheries Laboratory, in Pitlochry, Perthshire.

A move to the University of Edinburgh and a lecturership in botany enabled him to continue his interest in desmids. He was awarded a DSc by the University Edinburgh in 1962 and elected a Fellow of the Royal Society of Edinburgh in the following year. In 1964, he moved to the US to become professor of botany at the University of Minnesota. In 1973 he became reader in freshwater biology at the University of Reading. He moved to the University of Buckingham in 1978 to become professor of life sciences, dean of science and later pro vice-chancellor.

He was the author of 90 scientific publications and a number of books, including his final work which was a 600 page/1500 illustrations monograph on British desmids. He also co-edited The Freshwater Algal Flora of the British Isles: an identification guide to Freshwater and Terrestrial Algae, which is the definitive flora on algae.

Source: http://www.buckinghamtoday.co.uk/

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:

Dr Jan Krokowski,
Scottish Environment Protection Agency,
Redwood Crescent, Peel Park, East Kilbride
Glasgow G74 5PP
Tel. +44 (0)1355 574200
Fax. +44 (0)1355 574688,
E-mail: jan.krokowski@sepa.org.uk

Deadlines are **March 1st** for the April issue, **September 1st** for the October issue.

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