

# The Phycologist

The Newsletter of

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The British Phycological Society

# The Phycologist

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## EDITORIAL

The most important point of this issue is the notification of the Winter meeting at Sheffield, 2-5 January 1997, and the call for abstracts. The society has found it quite tricky to find a suitable venue as New Year falls at an awkward time and as many universities start their Spring terms in the second week. Fortunately Jim Gilmour came to the rescue. You will notice that the days include a weekend. The society has been wondering for sometime as to whether we should try to include a Saturday night in a meeting as this makes it considerably cheaper for our European members to attend. We have never actively agreed to this change but it has been rather forced on us this year. So I hope we will be able to attract a number of continentals.

The way in which abstracts are submitted has been changed, no struggling to get the words to fit into the box! The abstracts are to be scanned and then uniformly formatted for the abstract booklet. Just please ensure that the word limit (250) is observed. Some how an abstract (Robin Price *et al.*) from the winter meeting at Lancaster did not make it into the January issue and so appears in this issue. Sorry Robin.

Some readers may have noticed that I have been trying to update my Web page. I intend to put *The Phycologist* on the Net. I would be grateful if those members that use the Internet and read *The Phycologist*, write and tell me. I would like to estimate how many members are using this medium.

I have had some requests that a listing of the Council members and their contact addresses be published in *The Phycologist*. This has been initiated in this issue and will be continued in future issues. Updates will also appear on the Internet.

Eileen Cox and Lynn Terry will soon be retiring from Council. Anyone who has been on Council will tell you that two of the hardest working members are the Honory Secretary and the Honory Treasurer. I would like to thank Eileen and Lynn for all their time and help.

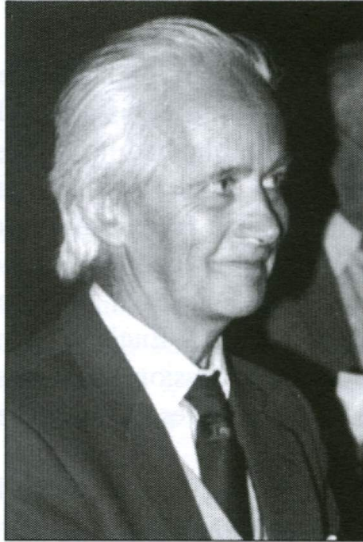
In this issue is an obituary to David Irvine, a founder member of the British Phycological Society. David died in early 1995 and it is with considerable regret on my part that it has taken so long for this obituary to appear in *The Phycologist*.

Hope see lots of you at EPC Köln.

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## DAVID E.G. IRVINE (1924 -1995)

### OBITUARY



David Edward Guthrie Irvine died on 17 January 1995 at the age of 70 after a long illness. An accomplished botanist with a wide-ranging knowledge of virtually all groups of plants, he will be remembered with particular respect by his many colleagues in the British Phycological Society.

David Irvine was born in Hankow, China, on March 4, 1924 and was brought to the family home in the Shetland Isles off the north coast of Scotland by his mother in the following year. Educated at the Anderson Educational Institute in Lerwick, the principal town of Shetland, he served in the Royal Air Force during World War II as a teleprinter operator, based at Sullom Voe. It was an extraordinary twist of fate that brought him back to Sullom Voe as the leader of two phycological expeditions in 1973 and 1983. After the war, he resumed his education and entered St Andrew's University in 1947 to read for an Honours degree in Botany. On graduating in 1951, he was awarded a University Scholarship to do research for a PhD under the direction of Dr Helen Blackler at St Andrews. The research subject was a study of the ecology of a single rock pool and the detailed and painstaking research he carried out was an early indication of his phycological character. During this period, David became a founder member of the British Phycological Society at a preliminary meeting in Bangor, Wales, in September 1951. It was as an undergraduate Vacation Student at the Natural History Museum, in 1950, that David met Linda (née Newton) and they were married in 1954.

David's first appointment was as a University Demonstrator in Agricultural Botany at the School of Agriculture, Cambridge. He spent four years at the School (1954-58), undertaking a study of a group of plants near to any Scotsman's heart - thistles - particularly on aspects of seed production of the creeping kinds. This was followed by

two years as a Research Assistant in the Department of Botany, University of Illinois in the United States. With the assistance of a grant from the United State's National Science Foundation, he undertook a pilot study, in collaboration with Dr Paul C. Silva, for the *Index Nominum Algarum*, an index of the published names of algae, which suited greatly his talent for accuracy and his love of books. In 1961, he obtained a post as Senior Lecturer in the Department of Biology and Geology at the Polytechnic of North London, which he held until his retirement in 1984.

Although David dedicated the greater part of his professional life to the study of seaweeds, he was a very accomplished natural historian. His knowledge of the British flowering plants was encyclopaedic, and he had no difficulty in delivering lectures on this material entirely from memory. Whilst in the United States, he seized every opportunity to travel and participated in many student expeditions to places as far afield as Hudson Bay, Mount Washington, and the Smokey Mountains. David was a field botanist *par excellence* and was equally at home on a rocky shore, in an oak forest, or on the chalk downs of southern England as he was on a piece of waste ground in central London. He was a professional naturalist of a kind that flourished in the Victorian era but which now only survives amongst the amateur population.

David's interest in seaweeds was multifaceted, although he could be said to be most concerned with floristics and biogeography of the north-eastern Atlantic, notably Britain and Ireland. He was so meticulous in his detailed collections and identifications that he frequently was given responsibility for the compilation of species lists at field meetings of the British Phycological Society and on several seaweed expeditions. His study of the British Isles species of the then notoriously difficult brown algal genus *Sphacelaria* (Irvine 1956) was a particularly useful contribution. He made strenuous efforts to obtain funding for studies of areas of Britain that he considered to be particularly critical floristically, notably Lundy Island off the coast of North Devon (and now one of Europe's first marine nature reserves) and his own Shetland Isles. His interest in the Shetlands was partially to obtain base-line information prior to the completion of the Sullom Voe oil terminal, but he also hoped to publish a complete flora of the Shetland Isles, an ambition that was sadly not realised. In the 1980's, one of us (MDG) somewhat boorishly asked why he had not published the Shetland flora to which he replied that he had studied the seaweeds of the islands for nearly 35 years and that a few more would not matter much. David also took a particular interest in the marine algae of the Faroes and he organised a very successful expedition to this group of islands in 1980. Ourselves and many colleagues benefited greatly from these expeditions and David's incredible knowledge of the British seaweed flora.

David was a marvellous organiser and these expeditions were quietly efficient affairs during which he cajoled the maximum effort from the participants. Additionally, he organised three international symposia in collaboration with various colleagues. In each case, the proceedings were published as special volumes of the Systematics Association (see Bibliography) which are widely cited.

As befits an old-style naturalist, David was an avid collector. His library of phycological literature, accumulated over many years contained just about every book published on the British flora since the mid-18th century. His herbarium is

considerable and we both remember his tireless collecting in the intertidal and his restless waits for the divers to deliver their phycological spoils. His herbarium and reprint collection he bequeathed to the Royal Botanic Garden, Edinburgh, and his transparency collection to the Natural History Museum Adult Education Centre in London. Much of his spare time and energy, however, was taken up by philately. He had a special interest in design errors in postage stamps and he developed a second career as an acknowledged expert in this area, in which he exhibited and published widely.

David will be remembered by friends, colleagues and students as a quiet, kind, unassuming man who seemed never to raise his voice or be really very angry. He was always available to listen, advise and guide, and he was very sympathetic in his treatment of troubled students. Never openly forceful, always calmly rational and logical in his approach, one could not but agree with his conclusions. He instilled an interest in natural history in all manner of people and was most knowledgeable in academic matters. He will be especially and fondly remembered by his three remaining PhD students (the present authors and Dr Rob Huxley; unfortunately, the first, Dr Steve Goodband, died in a sailing accident in Trinidad shortly after he graduated) with great affection and gratitude.

He is survived by his wife Linda, three sons and five grandchildren.

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### BPS Council News.

At the summer council meeting of the society the following were nominated for council. If you can think of anyone else who attends the winter meetings and would like to visit some part of Britain during the summer for two days, usually Edinburgh,

unrealistic to hope for an absolutely complete and definitive picture for small/difficult/rare species, but we should try as hard as possible to achieve this - and there appears to be considerable potential for study in some of these groups. It is, needless to say, essential that we are sure of the accuracy of all records.

I would be very interested in incorporating blue-green algae into the scheme if we can sort out the nomenclatural problems that would be entailed.

There is a steady flow of requests for information about marine algae - the preparation of red data books is very much in the minds of the county Wildlife Trusts, and biodiversity audits are the topic of the year as we approach the millennium. These enquiries can only be dealt with satisfactorily if we can assemble our knowledge on algal distribution as comprehensively and as quickly as possible. It's time to get your wellies on again.

Gavin Hardy.

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**Abstracts for the Winter Meeting, Sheffield 1997.**  
**(2<sup>nd</sup> - 5<sup>th</sup> January 1997)**

E.J. COX. (Department of Botany, The Natural History Museum, Cromwell Road,  
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**Instructions for abstracts.**

Two copies of your abstract are required. Please type the summary of your paper, incorporating the major results and conclusions using an upper limit of 250 words. Ensure the names and institutions are clearly given. Indicate whether you wish to give an oral presentation or a poster and if wish to be considered for the Manton prize or the student poster award.

Please send your abstract to Dr Eileen Cox at the address above by **7<sup>th</sup> October 1996.**

You will have noticed that this year you are not required to fill in box as we plan to scan the abstracts and produce a more formatted book of abstracts.

**This means that FAXS will not be accepted.**

President's address:  
"Putting the C into Phycology."

Update lecture:  
To be announced.

Special topics:  
Size and shape - Prof. C.E. Gibson (organiser)  
Photosynthesis and light - Dr R. Geider (organiser)

Applied topic:  
Ecotoxicology - Dr Gilmour (organiser)

If you wish to give a paper in any of the special topics sessions please indicate this on your abstract.

### Auction.

The amazing event of the auction at the Winter Meeting at Lancaster, raised over 900 pounds and was a considerable increase on the previous years. This was entirely down to the great efforts of Dr L.E. Shubert, Dr M. Callow and Mrs J.A. Moore. As the auction is an annual event the society would be truly grateful if members would see if they have any phycological bits and bobs that they feel they no longer want and they think some else might be able to have some use for. If you have something please contact Dr M. Callow at The School of Biological Sciences, University of Birmingham. B15 2TT Tel: 44 121 414 5579 Fax: 44 121 414 5925.

### The abstract that got away.

R.T. Price<sup>1,2</sup>, T.R. Bott<sup>1</sup>, B.S.C. Leadbeater<sup>2</sup>, B. Holden<sup>3</sup> and B. Gubbins<sup>4</sup>. (Schools of <sup>1</sup>Chemical Engineering and <sup>2</sup>Biological Sciences, University of Birmingham, <sup>3</sup>Anglian Water Services, Cambridge, <sup>4</sup>Private Consultant, Bedford). **The effect of ozone on the viability and ultrastructure of natural algal population during water treatment.**

Ozone is frequently applied to water at a treatment works to disinfect the water and partially oxidise organic material prior to further treatment. Ozone is effective at destroying bacteria and viruses, but little information is available concerning the effects of ozone on algal cells during water treatment.

Phytoplankton was concentrated from reservoir and pre-oxinised water taken from two water treatment works between May and September 1995. The mixed populations of cells were treated with ozone in a specially designed laboratory apparatus. The effect

of ozone on cell viability was assessed using fluorescein diacetate. The effects of ozone on cell ultrastructure were determined using light microscopy, along with scanning and transmission electron microscopy.

A number of species of algae and cyanobacteria were studied. Following ozonation the majority cells remained intact, but various degrees of external and intracellular damage were observed, dependent on the species of alga. The frustule of diatoms such as *Stephanodiscus* sp. appeared unchanged, but internally chloroplasts were damaged and other organelles destroyed. Ozone appeared to damage the cell walls of green algae such as *Oocystis* sp. and *Pediastrum duplex* and again destruction of internal structures was evident. The viability of diatoms and green algae decreased significantly following ozonation. The cyanobacterium *Microcystis aeruginosa* remained viable and relatively undamaged following ozonation.

## **Seaweeds of The British Isles.**

(HMSO Books)

Members may be interested to know that the Seaweed Floras of the British Isles are still available

### **VOLUME 1**

#### **Rhodophyta**

##### **Part 1 Introduction, Nemaliales, Gigartinales**

P.S. Dixon and L.M. Irvine. Paperback, 210 x 148mm, 263pp, 1977, 90 Figures. 0 11 310000 0 £30:00.

##### **Part 2A Cryptonemiales, (*sensu stricto*), Palmariales, Rhodomeniales.**

Linda M. Irvine. paperback, 210 x 148mm, 228pp. 1983, reprinted 1995, 28 Figures 0 11 310001 9 £30:00

##### **Part 2B Corallinales, Hildenbrandiales.**

L.M. Irvine and Y.M. Chamberlain. Paperback, 210 x 148mm, 276 pp, 1994, 118 figures, 0 11 310016 7 £30:00

##### **Part 3A Cermiales.**

C. Maggs and M. Hommersand, Paperback, 210 x 148mm, 464pp, 1993, illustrated, 011 310045 0, £30:00

##### **\*Part 3B Bangiophyceae.**

### **Volume 2**

#### **Chlorophyta.**

E.M. Burrows, Paperback, 210 x 148mm, 256pp, 1991, illustrated, 0 11 310002 7, £27:00.

### **Volume 3**

#### **Part 1 Fucophyceae (Phaeophyceae).**

R.L. Fletcher, Paperback, 210 x 148mm, 360pp, 1987, 90 figures, 15 plates, 011310003 5, £35:00.

#### **\*Part 2 Fucophyceae (Phaeophyceae).**

### **Volume 4**

#### **Tribophyceae (Xanthophyceae).**

T. Christensen, Paperback, 210 x 148mm, 36pp, 1987, 8 figures, 0 11 310004 3, £10:00.

\* currently being prepared.

All volumes can be ordered from HMSO Books, PO Box 276, London, SW8 5DT.  
Dr David John, Natural History Museum, London.

## **SPECIES 2000**

### **Indexing the world's known species**

This is a programme launched by the International Union of Biological Sciences at its General Assembly in September 1994. Initial planning of the programme was carried out in co-operation with the Committee of Data for Science and Technology (CODATA) and the International Union of Microbiological Societies (IUMS).

*Species 2000* has the objective of enumerating all known species of plants, animals, fungi and microbes on Earth as the baseline dataset for studies of global biodiversity. The names of these species provide the crucial link both in communication of biodiversity information, and in accessing the data of pure and applied biological disciplines. The *Species 2000* Programme will enable users world-wide to verify the scientific name, status and classification of any known species. The service will be made available as part of the Clearing House Mechanism under the United Nations Convention on Biological Diversity. The thrust of the *Species 2000* plan is to create an array of global species databases covering each of the major groups of organisms. Access to the databases will be by on-line Internet links and CD-ROMs.

For further information please contact:

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