ISSUE No. 2 April 2004

The Bridge

Linking the Past and Present of the School of Ocean Sciences with its Future

a production of
the School of Ocean Sciences Association
University of Wales Bangor

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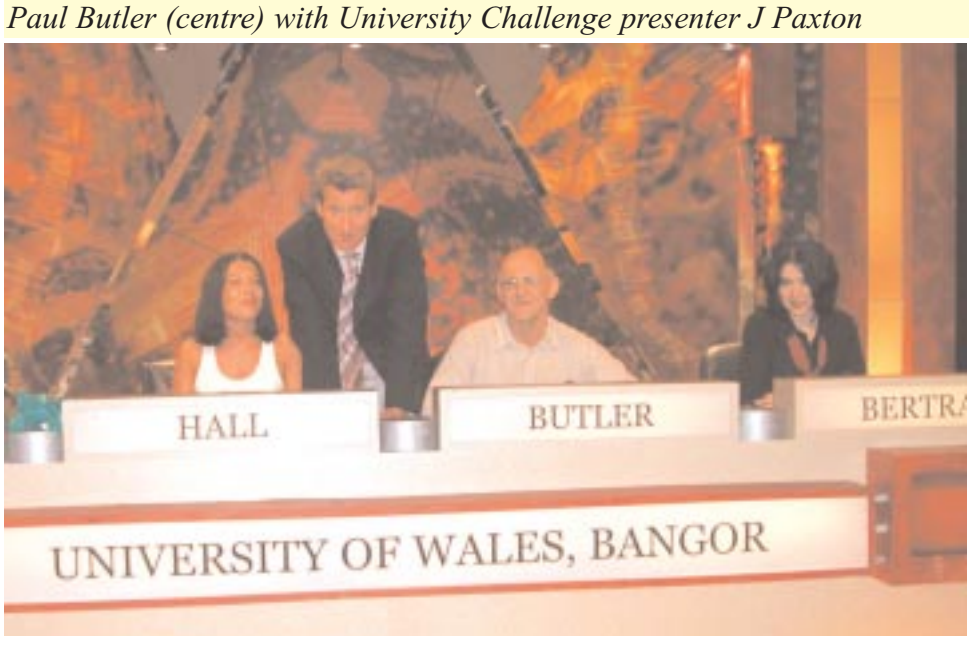
A Captain In TV's Hall Of Fame

Studying for his second year BSc in Ocean Science and running the Endeavour Society this year were not enough for Paul Butler who also competed as the captain for the 5-member Bangor University team in "University Challenge", the BBC2 quiz show in 2003. Another student of the SOS, Tom Harrison (MarBiol/Zoo) also joined the team as the reserve member. Bangor beat Hull 180-160 then lost to Jesus Cambridge by about 100 points. The last time that Bangor's team made it into the semi-finals was in 1998/99.

'Individual' was a good guess for an oceanographer(!) as the answer to what comes after species in the Linnean system of classification of animals and plants (correct answer is sub-species) but Paul's most embarassing moment came when he was asked what was the extrusive equivalent of granite, something which was one of the first things he had learnt on the course. Despite the fact that rhyolite (and correct answer!), was the first thing that popped into his head, Paul started working out all the other possibilities eventually coming up with a really lame answer. He just had to pray that James Scourse was otherwise engaged during the broadcast and does not read this newsletter!

Paul Butler (centre) with University Challenge presenter J Paxton



© Elinor J Elis-Williams

Twelve Brave (Wo)Men

A crew of 12 from the School of Ocean Sciences braved the Strait to compete in the famous Raft Race, revived after an absence of several years on May Bank Holiday 2002. Organised by the Rotary Club, the race has two categories of rafts, the competitive and the non-competitive, and demands that the entering teams not only make their own raft, but that they also paddle it or sink it - whichever comes first - from Port Dinorwic to Menai Bridge.

During a very wet weekend in May, the team of skilled crafts(wo)men - including mostly research officers, the SOS Computer Manager Graham Worley, and Professor Peter Williams - built something that would probably withstand a collision with the Irish Ferry using 200 year old wood, eight barrels and excessive nuts, bolts, rope and glue. Planning took place in pubs with the master design on the back of beermats.

(cont. page 4)

The '12 Brave (Wo)Men' smiling before .... and struggling during!

© Dave Roberts, SOS

Who Wants To Be (Almost) A Millionaire?

Scientists from Menai Bridge have scooped £1 million in research funding by the NERC in June 2003. The awards are for three separate projects which cross the traditional subject boundaries.

John Simpson, Steve Thorpe and Tom Rippeth have been awarded £400k for their studies on turbulence levels and structures in the Irish Sea. The project is in collaboration with John Hopkins University, Baltimore and will deploy the AUTOSUB, an autonomous data-gathering submarine to be launched from the RV *Prince Madog*. (More on the Autosub on p. 3)

© NERC Autosub Under Ice

Autosub

Tom Rippeth is also joining Colin Jago and Sarah Jones in a £300k award to investigate the relationships between turbulence and particle growth and break-up. The importance of the project is immense as suspended particles carry pollutants and control the amount of sunlight available for plant growth in the sea, hence determining the productivity of the ocean.

Another £300k have been awarded to Chris Richardson and James Scourse to further their ground-breaking work on the long-lived bivalve mollusc, *Arctica islandica*, in collaboration with the Climate Research Unit, University of East Anglia and the NERC Radiocarbon Laboratory in Glasgow. (More on this project on p.2)

ALUMNI of the 70's

2-3 October 2004 REUNION BASH

Details on page 8

The Bridge

Designed and Edited by

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Catherine Jones
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Craig Kenslar
Gay Mitchelson-Jacob
Ivor Rees
Graeme Riley
Dave Roberts
Len Tong

for proof-reading
Sinclair Buchan
George Floodgate
Gay Mitchelson Jacob
Dei Huws
Patrick Vernon

for invaluable technical advice
The team at OxUniPrint

The Bridge is an annual publication. It is free to all associated with the School of Ocean Sciences (graduates and staff) and is available to others on registration. If you are associated with the School in anyway and you wish to receive *The Bridge* you need to register with the Membership Secretary (for details see form p 11).

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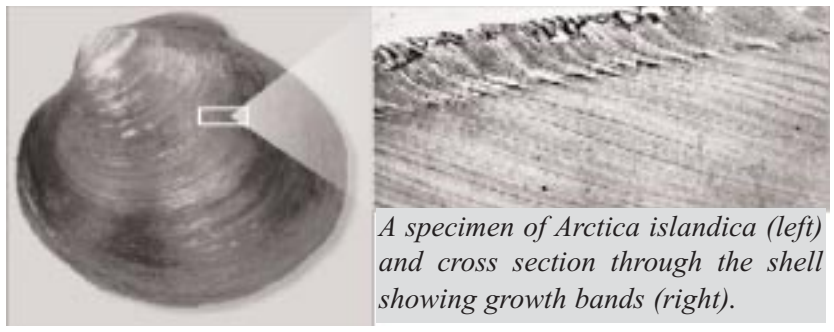
Printed in Great Britain by OxUniPrint, Oxford University Press, Great Clarendon Street, Oxford OX2 6DP

Humble Mollusc Assists SOS To Build A Climate 'Tree'

In the cryosphere, the annually-resolved ice-core record is now established as the prime stratigraphic and global palaeoenvironmental (particularly palaeoatmospheric) template for the last glacial-interglacial cycle. In the lithosphere, annually-banded speleothem from caves provide similar potential for high-resolution palaeoclimatic studies, and laminated, especially varved, sediments from lakes and oceans are key archives of palaeolimnological and palaeoceanographic change. A long-lived (longest record 268 years) humble mollusc, *Arctica islandica* and its growth bands now joins these studies. Annual growth bands are not the sole property of trees, since they are found not only on bivalve molluscs but also on corals, and they are invaluable geochronological tools in the calibration of radiocarbon dating techniques, and in ultra high-resolution investigations of climatic and environmental change such as El Niño-Southern Oscillation (ENSO) events and in novel methods for reconstructing ocean palaeotemperatures in the Atlantic.



A specimen of Arctica islandica (left) and cross section through the shell showing growth bands (right).

©Graham Forsythe

Arctica has not been called the "tree of the sea" for nothing: just like tree-rings, the annual growth bands on its shell can be used to count back in time. Chris Richardson, James Scourse and Graham Forsythe have discovered that some of these animals lived for over 250 years. By matching the patterns from different shells, very long records can be constructed differentiating between 'bad' and 'good' years. A continuous 1000-year record can now be constructed, which is hoped not only to elucidate past patterns of seawater temperature for the North Sea but also to place in historical context the increases in sea temperatures linked to global warming.

Based at the University of Wales (Bangor), a 3-day meeting (7-9 January 2004) is sponsored by the Quaternary Research Association and Marine Studies Group of the Geological Society of London of the UK and organised by Drs James Scourse, Chris Richardson, Leon Clarke, Fabienne Marret and Graham Forsythe. The meeting is to review current advances in annual molluscan growth band studies and to share approaches and techniques applied to the different archives. Both oral and supporting poster sessions will be presented on the development of long chronologies by cross matching, the use of long annually-banded records in calibration and the value of annual records for high-resolution palaeoenvironmental reconstruction, notably including stable isotopic and trace element geochemical proxies. The third day is optional and involves a workshop to include explanations of techniques that can be used to elucidate annually banded records in marine molluscs (schlerochronology). Related topics covered will include sample preparation, image analysis and crossmatching of growth bands. Weather permitting, a mini-cruise aboard the RV Prince Madog is also planned to Red Wharf Bay to demonstrate geophysical and coring methods.

The John Wiley Lecture will be given by Dr Konrad Hughen, Woods Hole USA and the Sir Kirby Laing Lecture by Dr Douglas Jones, Florida Museum of Natural History, USA. Other keynote speakers are Professor Alan Kemp, University of Southampton, Dr Andy Baker, University of Newcastle, Professor Ian Fairchild, Keele University, Professor Mike Baillie, Queen's University Belfast, Dr Keith Briffa, University of East Anglia, Dr JP Steffensen, University of Copenhagen and Dr Sandy Tudhope, University of Edinburgh. The conference proceedings will be published as a Special Issue of Journal of Quaternary Science.

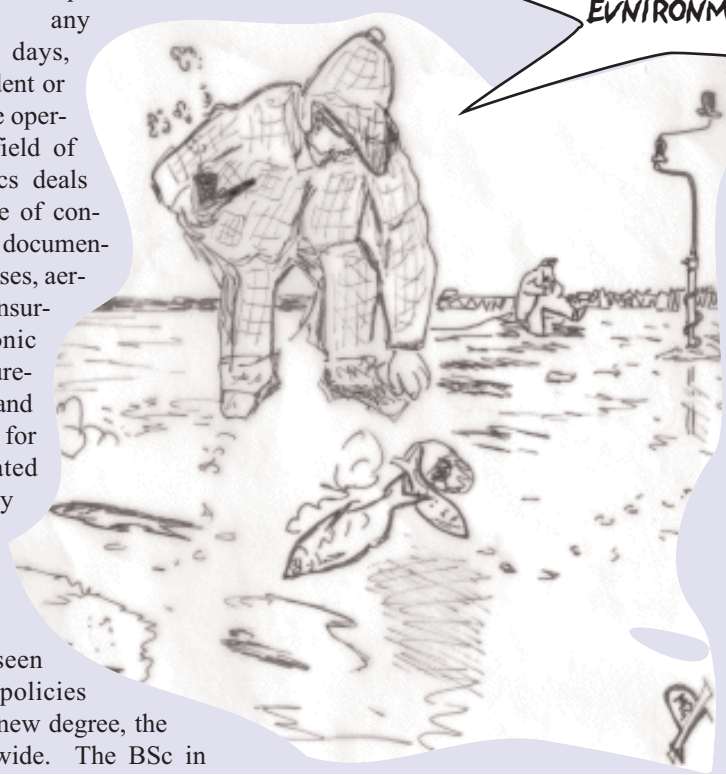
Sherlock Holmes Goes Marine

After 10 years of discussion the European Parliament voted in May 2003 that from now on companies will be responsible for the pollution they cause. There is a bill to be picked up whether accidents of nuclear reactors or disasters with oil tankers. The new regulations are aimed to spur companies to bring in more precautionary measures and tighten their existing policies regarding safety. However it is all very well if one knows the perpetrator. Oil tankers like *Erika* (BP) and *Prestige* are hard to hide, but what if the pollution happens to be spotted well after all trails of the perpetrator have gone?

Just like in any crime scene Who, When, Where and How are the basic questions floating around any contamination these days, whether due to an accident or due to a series of routine operating releases. The field of Environmental Forensics deals with the historic release of contaminants and deployes documentary records (like witnesses, aerial photography, fire insurance maps, electronic information) and measurement or sampling data, and provides the fact basis for mediated or negotiated transactions or for any public inquiry related to environmental matters.

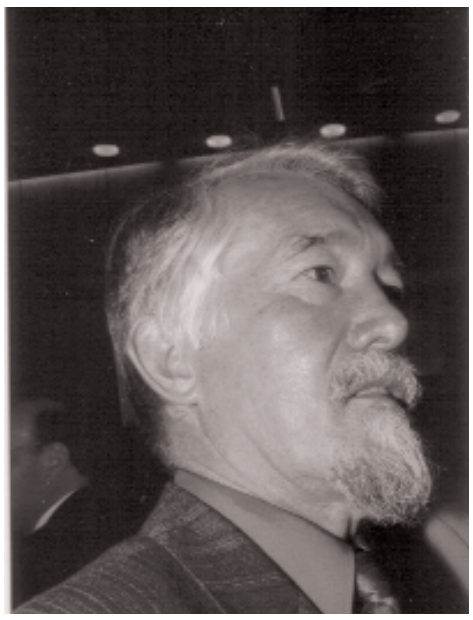
Bangor having foreseen such change in policies launched an altogether new degree, the first of its kind worldwide. The BSc in Environmental Forensics saw its first students in autumn 2003. Suitable for students with an interest in all aspects of environmental science, including geology, physical geography, chemistry and biology, the modular course is taught principally within a marine context, although the processes and skills one learns can be applied to most environments.

During the first year there is a set of compulsory modules in addition to others which are selected from a range offered by other Science departments, some of which are designed to build on 'A' level while others provide the necessary foundation for those without the appropriate 'A' levels. In years two and three lecture material is reinforced with practicals, field work, assessments and a research project.



Coastal waters are most at risk from human activities, whether oil spills or chemicals seeping into the sea from industry or agricultural activities. The degree subject matter covers coastal seas where fresh water mixes with sea water, the processes that happen within these areas, their ecology and their conservation. Besides a broad overview of marine environmental science the course in Bangor provides specialised training in identification of a disturbance of environmental systems (e.g. pollution), detection of the sources of the disturbance, and prediction of its future effects. Land-based and offshore fieldwork involve such items as identifying the source of an oil spill or fish kill, determining the transport path of discharge from a sewage outfall, or assessing the risks of disturbance of sediment deposits contaminated with radionucleides in the Irish Sea. It is all about observing carefully the environment, interpreting what one sees and then passing a judgement. Even Sherlock Holmes could not do any better.

A Letter From The Chairman



©Ioanna SM Psalti

Pat Boaden

Dear SOS Alumni and Friends,

I am writing this not long after the highly successful 50's/60's Reunion – what a joy to meet up with several contemporaries, renew friendships and meet new SOS friends! It was also great to chat to old and present staff. I was much impressed by the accounts of work in progress at the School and with the new Prince Madog. Apart from enjoying ourselves at the excellent dinner and making sure all was going well, those of the committee present fitted in a meeting to review progress of the SOS Alumni and Friends Society.

We seem to be getting up a good head of steam and there's a good array of stokers but we could do with a few more crew. There is a problem with fuel however – i.e. finances are needed for example for the continuing publication of 'The Bridge' which together with postage costs about £3000 per issue. Sponsorship is being sought but help is needed in contacting suitable target individuals and organisations. Any volunteers for gold-digging please?

Among your committee's decisions was a renaming of the Society as the School of Ocean Sciences Association (SOSA) which we thought was a good all inclusive name and less of a mouthful…… no dreadful puns about sausages please! No sign of such at the dinner but I couldn't be restrained from making a brief after dinner speech. Part of this took up from where my previous letter to you left off – namely Dennis Crisp leaving me in the lurch for three months to decide on and read up a research topic. About three months after his return when my research on interstitial fauna (i.e. sand meiofauna) was fairly well underway, it was time for the annual Marine Zoology vacation course in the Zoology Department in Bangor during which I was one of the demonstrators. Dennis invited me and several other Marine Biology Station students around to his house the evening before I was due to show the course meiofaunal extraction techniques and some minute animals from Church Island shell gravel. We were feasted on a cup of tea and digestive biscuits accompanied by some 78 rpm records. In the midst of this Dennis presented me with Adolf Remane's 1933 classic paper Verteilung und Organisation der benthonischen Mikrofauna der Kieler Bucht, Wissenschaftliche Meeresuntersuchungen N.F. Abt. Kiel, 21, 161-222.

"Pat, I'm going to give a talk about interstitial fauna to the course tomorrow before your demonstration. Could you give me a summary translation of this first thing tomorrow?"

"Yes, I'll do my best."

The translation was duly delivered to Dennis in the Zoology Department the following morning. Dennis was ever after convinced that I was a good linguist - having forgotten that I'd already had his three months' absence and longer to translate the little meiofauna literature that existed in the late 1950's.

Those of you who read the first issue of The Bridge may have noted that my response to Dennis had increased by several syllables over my first six months as a research student. Talking of responses – those to the 50's/60's reunion were excellent and I am much looking forward to the Chairman's privilege of attending the 70's reunion where I hope to meet many more Alumni and Friends.

Best wishes to you all,

Pat Boaden

SOSA

What does the new name mean:

Membership to The School of Ocean Sciences Association (SOSA) is free and automatic to all SOS alumni unless they opt out. If you are not an alumnus/a but wish to receive The Bridge, and to be kept informed about the activities of the School, you shall need to register by sending your contact details to Gay Mitchelson-Jacob (see Personal Form on p11)

AUVs: The New Generation

Have you ever dreamed of sitting in your lab while someone (or something) else carries out your field tests? You can concentrate on thinking and designing more experiments as data reach you with precision and without you ever getting sick aboard *Prince Madog*. Well, a new generation of 'submarines' are designed to make your dream come true.

Autonomous Underwater Vehicles* (AUVs) developed by the military and civilian research community, are generally not considered 'ships' in maritime law and their status remains uncertain in many legal aspects regarding public law, related State practice and procedure, private maritime law and the application of specific maritime conventions. However since 1995 their use in marine research has been steadily increasing as a response to the need to obtain data from the water column and the seafloor cheaply and with precision. The effectiveness of AUVs has been repeatedly demonstrated in various missions on the sea surface or subsurface, even under sea ice and in various studies such as in coastal fronts, in magnetic and physical observations, in surveys of fjords, in fisheries research and in turbulence measurements.

Apart from the fact that AUVs augment routine data gathering in coastal zones, their ability to carry water sampling devices as well as real-time instrumentation means that they are not confined to deployment in measuring parameters in situ. AUVs can complement vertical profiles or time-series stations obtained aboard the research ship by covering a wide area and by providing new techniques such as depth control to examine thin layers of zooplankton for example.

By 1999 the Autosub AUV (7 metres long, 0.9m in diameter) built by the Ocean Engineering Division of the Southampton Oceanography Centre had completed over 200 missions, achieving its design range of 250km and design depth of 500m carrying a multitude of instruments such as sidescan and fisheries sonars. It can leave harbour autonomously, operate without an escorting vessel and its launch and recovery from vessels can be carried out in winds of up to Force 6. When on the surface, the Autosub navigation system uses satellite-derived Global Positioning System fixes to update its estimated position. When submerged it uses dead reckoning, from a fibre-optic gyrocompass and an acoustic Doppler velocity sensor. Recent upgrades to the vehicle provide a range of up to 700km and a maximum depth of 1600m. New sensors include swath bathymetry and an acoustic instrument to study the sediments beneath the seabed. Before Autosub travels to the Irish Sea in mid 2005, expeditions will take the vehicle to Greenland in summer 2004 and to the Ronne Ice Shelf in the Weddell Sea, Antarctica in February 2005.

From information kindly provided by Gwyn Griffiths and Jon Copley, Ocean Technology Division, SOC, Southampton.

*AUV is a sub-set of Unmanned Underwater Vehicles (UUV). UUV is a more general term which includes Remotely Operated Vehicles - usually with a cable to a human controller.

The Big Read

The library is still the heart of a University, and books the main repository of learning despite new techniques such as videos now supplementing the studying of a subject. On the initiative of George Floodgate the School's staff is now asked to compile a 'wish-list' **(found on the back of the carrier A4 of this issue)** giving YOU an opportunity to either supply the book directly or send the money for the purchase of a particular volume. Students using the book will be sure to realise that past students wish them well from a plaque with the donor's name on the inside cover.

Are you interested in the "wish-list "? Please contact Gay Mitchelson-Jacob at egm@bangor.ac.uk

SOSA
The Founders (1996)

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The School Reports:

Thank You

The School of Ocean Sciences would like to gratefully acknowledge two kind gifts from the families of George De Bruin (PhD MarBiol 1956) and Ray Delahunty (BSc MarBiol/PhysOcean 1999) who have donated their family member's books to the Wolfson Library.

Staff Changes

David Thomas has been promoted to Reader.
Sarah Jones has been promoted to Senior Lecturer.
Nick Martin has replaced **Ian Piper**, as the Marketing Manager at VT Marine Services
Mike Kaiser has been awarded a DSc from the University of Liverpool.
Alan Davies has been awarded a personal chair.

More Space

The new post-graduate laboratories on the top floor of Craig Mair, funded under SRIF, are to be officially named the Dennis Crisp Laboratories, and the main Craig Mair teaching laboratory as the Cemlyn Jones Laboratory. Formal naming ceremonies will be carried out by Glennys Kinnock and Carwyn Jones respectively, sometime in the beginning of 2004.

Kirby Laing Fellowship

Professor Roger Mann (VIMS) visited Menai Bridge in March 2003 lecturing to the MSc students on aspects of larval biology and transport.

Tele-Lectures

A series of 10 lectures delivered by video link between South Africa and Menai Bridge were the first of its kind for University of Wales, Bangor. The lectures formed a module on "Coastal Zone Law" for the MSc in Marine Environmental Protection offered at SOS. The tele-lecturer was Professor John Gibson of the University of Cape Town, South Africa.

Prince Madog Prize

The *Prince Madog* Prize for the competition for projects promising a significant contribution to the environmental debate, has been awarded to Brett Lyons from Centre for Environment, Fisheries and Aquaculture Science (CEFAS).

Marine Biology vs The Rest Of The World

Tuesday 15th July 2003, one of the hottest days of the year, saw the annual battle between Marine Biology and the Rest of the World on the cricket pitch at Treborth.

The Rest of the World, batting first, posted a defendable score of 115, Horsburgh and Scourse both having to retire after scoring their allotted 20 runs. A mention must also go to Extras who contributed 23 runs. Some tighter bowling from the biologists restricted most of the batsmen and batswomen, setting the game up for a close finish.

The Winners	Marine Biology
The Not Winners	Rest of the World
Marine Biology Player of the Year	Iain Parnum
Rest of World Player of the Year	James Scourse
Best Dressed Player	Graham Worley
Best Acrobatic Catch	James Scourse
Best Acrobatic Miss	Guy Springett
The Geoffrey Boycott Award	Andy Russell
Biggest Hit	Andy Beaumont
Best Novice	Michelle Gwynne
Best Bowler	Ben Powell
The Hypochondriac Award	James Scourse (for catching everything…)

Marine Biology, chasing a run rate of a little under 5 an over started strongly. Beaumont, Parnum and Le Vay retired after hitting their 20 runs in a short time. The middle order was hampered by some of the best fielding seen as Scourse took 4 catches. Needing only 1 run to win, a change of bowling brought up Powell, who rose to the challenge and took 2 wickets without score in his first over of the season. The new batswoman Salmon stepped up, and having survived a run out appeal, hit a massive pull shot on the leg side for 4 to take the Biologists over the winning margin.

Marine Biology won by 3 wickets with 3 (or was it 2 or possibly 1) overs remaining to retake the title after last year's loss. Prizes were given in the Liverpool Arms afterwards. Many thanks must go to the Met Office for arranging the weather, the ground staff at Treborth for a great pitch, and all who came along to play for and to support both teams.

With the sides so evenly matched this sets up a great battle for next year.

Graeme Riley & Matt Doggett

© Matt Doggett

At Treborth

The Endeavour Society

The Endeavour Society was originally established over a cup of coffee by John S. Gray, a postgraduate student, in 1965. Named after Captain James Cook's ship, the Society was intended to "stimulate interest in the science of the sea in all its aspects" and grew over the years, fulfilling the aspirations of its founders. Folded in 2000, it was resurrected a year later by Ray Seed, the current Head of School, and the SOS Alumni Society. Endeavour resumed its famous talks in Menai Bridge where attendants get the chance to chat to the speakers over a pint and enjoy the FREE FOOD afterwards in the Liverpool Arms, a kind offer by the landlady, Mrs Glynwyn Thickett.

Since its resurrection the Endeav-our Society has not stopped re-inventing itself. Its committees are striving to surpass each other in their sterling work. New poster designs have been recently introduced along with a revived logo and a dedicated web site. Audience numbers increased significantly and members are to be kept up to date about activities and presentations by sms in an attempt to further increase presentation awareness and participation.

The highlight this year was again the annual Beach Cleaning, this time at the west Anglesey shore. All sorts of flotsam & jetsam were found, matched in imagination only by Trevor Norton's amusing talk about his marine ecology escapades in Loch Ine, contained in his latest book "Reflections on a Summer Sea".

Another dedicated committee is promising to make this year the best Endeavour ever, increasing bonds to the scientific community around us with a full-to-the-brim schedule for our members.

Rob Ferris

Thursdays Westbury Mount Lecture Theatre at 19.30

For updates log on at www.endeavoursociety.org.uk

ENDEAVOUR SOCIETY COMMITTEE

Chairman	**Rob Ferris**	rob@endeavoursociety.org.uk
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Treasurer	**Rupert Bucknell**	rupert@endeavoursociety.org.uk
Media &PR	**Emma Goff**	emma@endeavoursociety.org.uk
Website Manager	**Chris Wood**	chris@endeavoursociety.org.uk

WANT TO CONTRIBUTE TO OUR TALKS?

Contact Rob Ferris

Intermingled with excursions to scientifically interesting locations, educating and increasing local awareness of real issues here is a taste of what is coming in the new season.

Life in a block of Antarctic Ice	**David Thomas**
A voice for the sea	**Barry Paine**
The Coral Reefs of Mauritius A story of change	**John Turner**
Great White Sharks	**Richard Peirce**
Commercial Oceanography: The Profession	**Jon Upton**
Drugs from the deep	**Marcel Jaspers**

When The Going Gets Tough ...

(**Twelve Brave (Wo)Men** cont. from p1)

Almost grounded twice, the raft was so heavy that it almost sank and took some energy to budge, but it was strong! Although the length of the race was approximately 7 km, it felt more like 20, completed in 45 minutes or 1 hour 13 minutes (here reports are conflicting!).

Receiving a dozen raw eggs half way through the race was not as bad as forgetting the beer cans which a safety boat had to deliver to the aspiring mariners. Trying to swap rowers in the middle of the Swellies without capsizing was quite a feat only to be matched by the fact that paddling like hell gets you nowhere when going backwards in the current. Clutching certificates for having completed the race (3rd place in the non-competitive section) was however not half as rewarding as raising £240 for Ysgol-y-Bont, a school run on charity, and catering for children with special needs for all Anglesey. The raised money went to equip its raised sensory garden, enabling wheel chair access. A sweepstake held within the School to guess the time in which the SOS raft would complete the course, was won by one of the SOS technicians, Gwyn Hughes. Not much faith observed here, as guesses ranged from 8 minutes to 3.5 hours!

Edited from contributions by Caren Binding and Judy Davies

Want To Promote Your Company in the Global Challenge and Help Catherine With Fund Raising?
Contact
catherine.jones@midkent.co.uk

Sailing - both offshore and dinghy - has been Catherine Jones' passion throughout her BSc in Ocean Sciences. For most of the time she has been sailing with the Sea Cadet Corps and more recently with the Royal Naval Reserves, of which she is a member. She now faces the challenge of a lifetime having been offered a berth on the Global Challenge in October 2004, the ultimate sailing experience for a non-professional. Organised by the Challenge Business, the mentally and physically demanding event has deservedly earned the title of "The World's Toughest Yacht Race" as a fleet of identical 72' steel yachts will leave Portsmouth, UK to sail 30,000 miles around the world, against the prevailing winds and currents, returning after a circumnavigation of 10 months.

After Bangor, Catherine did an MSc in Water Science & Technology in Trinity College, Dublin and worked in Ocean Applications at the Meteorological Office, Bracknell, with the Environment Agency and the Water Industry. She is currently a water quality scientist with Mid Kent Water PLC, Snodland, Kent.

© Catherine Jones

Catherine Jones

Challenges And Rewards After SOS: Walking Around The Globe

© Caroline Ingram

Caroline Ingram in Guatemala

Caroline Ingram's story starts just like those of most students of marine science: her General Studies A-level demanded a project topic for which she made the fatal choice: the Great Barrier Reef. Reading about the Reef and environmental issues, Caroline decided that further studies were needed. On her first visit to North Wales on a wet (could it be anything else?!) December day at the age of 16 she fell in love with the mountains and countryside and in 1990 she opted for a BSc in MarBiol/PhysOcean because she "wanted to be different".

In 1997 Caroline left Bangor with a PhD in Geological Oceanography, under James Scourse, having done also some biology (identifying fossil and extant ostracods) and chemistry (shell chemistry and water mass chemistry with Hilary Kennedy). Before even graduating Caroline had already spun out of the Ocean Sciences orbit, a personal choice as she had assessed that an academic career usually leads to teaching, and that was a role she could not see herself fulfilling. Yet it was her PhD experience, working on the EU Environment Project* that led to her understanding of the possibility of a career in programme and project management.

She joined the Engineering and Physical Sciences Research Council managing a research area and distributing research council money.

Eighteen months later, a hop over the fence and back into the university environment found her running an Economic and Social Science Research programme (or in other words, spending research council funds!) investigating the impact of technology on society. After eighteen months Caroline was managing around £10.5M of Comprehensive Spending Review funding, distributed through JISC** to around 60 projects at UK universities, charged with building on-line learning and teaching resources.

Five years after she left Bangor and three quite different programmes of work later, she thought it was time for a break. But "just sitting back and lolling, even for a few days on holiday, let alone a year out" was not her cup of tea. A break to travel should involve work so she answered an advertisement for a Tour Leader in the Guardian one Saturday. And that is how her story becomes different and her career and life took a whole new turn.

The advert read: " ... company called Explore Worldwide ... looking for Tour Leaders ... range of adventure holidays around the world...". Having already requested brochures from a number of different companies like Explore for her planned break, Caroline recognised the kind of group holiday on offer and although she had never thought that she could be working for such a company she applied. What followed was a daunting application form with questions like "who from the whole of history would YOU spend 24 hours with?" or "In 500 words, what makes YOU unique?", a two and a half hour interview, with language testing, and a week's intensive training. Out of the around 2000 applicants only 20 were the 'chosen' ones and much to her surprise, Caroline was offered a contract and her training began. The time for new experiences abroad had finally arrived.

Despite the overlaps with the job of 'tour rep', being a Tour Leader is a different kettle of fish altogether. Not only does one have to manage the tour and any local relationships and to represent the company, but also to impart enthusiasm about the company ethos and the country one operates in. In addition one has to research the target country, its politics, socio-economic considerations, geology, architecture, in fact whatever is relevant, and develop an affinity to the country. The leader's influence on each tour, and the way in which the country is represented to the traveller, is immense as it is the Tour Leader who puts her/his own 'spin' on it. Of all the parts of the job, researching the country, area and writing talks for the groups was probably one that Caroline enjoyed the most, and for which she probably had had good training from her previous jobs.

So, sales pitch for the company out of the way and onto the experiences, which luckily, for the most part, have been really good. Groups are commonly 16 people strong, from a huge variety of backgrounds and professions, enthusiastic travellers interested in learning, and willing supplicants to the sometimes gruelling schedules necessary to pack as much as possible into a two week trip. The tour leader is expected to make everything look as though it is running smoothly, never giving the participants a chance to glance into the churning water beneath the surface even if for the third week running a restaurant is refusing to accept that you faxed a booking, and has no space for 15 people for dinner tonight. Or that at the Mexican/Guatemalan border the guard now requires a form from each person in the group to be completed, which you do not have enough copies of and neither does he. Luckily one can usually pretend that everything is going well by speaking the relevant local language. Picking up enough Portuguese to be able to argue with pugnacious train conductor that the train tickets bought at the main station were valid, even though they looked a bit strange to him, became essential within the first few weeks of a 5 month stint in Portugal last summer. But with such occasions go the good, like the delightful family in a tiny village in the Douro Valley in Portugal, who maintain a 5th century chapel so that it can stay open to the public, whose daughter gave free tours in English so that she could practise her language skills, and who shared their seasonal fruit with the groups. Cherries picked from the tree that morning never tasted so good as after a 12 km uphill walk in 30˚C heat!

Mexico, over the winter, brought with it a new set of challenges, to start with forgetting the Portuguese she had been speaking for a few months and turning it back into intelligible Spanish again. The Mexicans, were, on the whole very welcoming, though some more so than others. For example, getting your bum pinched on the metro in Mexico City is something that even happens to the locals (no special treatment for tourists), hence the need for women only carriages at peak times. Being a target for muggers is something that every foreigner has to watch out for: rucsacs do disappear from buses with half the group standing in it and no one really noticing. On another occassion Caroline and a friend were held captive with a knife at their throat for 30 minutes by two men who jumped into their taxi to rob them. Warnings aside, Mexico is a vast and stunning country, full of contrasts in landscape, politics and people.

Since March this year Caroline has been back in Europe, mostly at home in London, setting up her own project management consultancy through which she is contracting as a programme and project co-ordinator. For the next three years she is planning to work part-time at the London School of Economics co-ordinating a large US and UK collaborative project in anthropology. She has also led a couple of 6-day walking holidays on Malta and Gozo and she has been back to Portugal to set up a city break for Explore, the brief being "learn all you can about Lisbon in two days, then lead two groups of 16 people around it". No-one ever said they were sending her abroad to have a holiday!

*A multinational programme involving the UK, Ireland, Denmark and Norway and examines the Northwest European continental shelf over the past 250,000 years.

**The Joint Information Systems Committee, is an organisation known to most as the developer of JANET, the universities network.

© Caroline Ingram

Palenque, Mexico

Want to share with our readers how your life turned out after Menai Bridge? Contact the Editor

And That's How The Cookie Swims

This year the Careers' Fair* on 29 January was sabotaged by a blast of Arctic weather sweeping across the UK. David Nedwell and Nigel Pontee were weatherbound in the frozen east. Peter Liss and Jonathan Sharples, who braved the trip saved however the day.

Professor Liss, a world expert on biogeochemical air-sea exchanges, began his oceanographic career in Bangor in the pre-Prince Madog days, when he used to collect data in a canoe. After his postdoc at Southampton, he moved on to the University of East Anglia, where he is now Professor of Environmental Science. He has also played a major role in the Surface Ocean-Lower Atmosphere Study (SOLAS) initiative of the International Geosphere Biosphere Programme. After all being a 'world expert' is not as difficult as it sounds in these days of ever greater specialization!

Dr Sharples' career has been slightly more turbulent, both academically and geographically. He started out doing astrophysics at Birmingham but a summer school at Bangor brought him back to earth and he stayed on here for his MSc, PhD and postdoc. He joined the National Institute of Water and Atmospheric Research in New Zealand tackling privatisation and toxic dinoflagellates for three years before he returned to the UK. Besides modelling phytoplankton responses and estuarine turbulence, he discovered an aptitude for teaching and became director of the MSc Oceanography course in Southampton. Jonathan has now moved on to Proudman Oceanographic Laboratories. Finally, Eluned Jones of the University's Centre for Careers and Opportunities gave a more general, careers-oriented talk. She reassured those not taking up a career in marine science that most employers are on the lookout for good graduates from any discipline. She reminded us that the most successful people are those who are prepared to make a bit more effort than the bare minimum, so we patted ourselves on the back just for having turned up. She also stressed how important it was to network whenever possible, particularly in a relatively small field such as marine science. And networking we had in mind when we headed for the Liverpool Arms for beer and sandwiches later that evening!

Paul Butler

*The annual event is a joint production of the Endeavour Society and the SOSA and entails ex-Bangor students presenting their subsequent work experience and the range of possibilities available after university. Previous participants were the shellfish expert Roger Uglow, Alex Souza of Proudman Oceanographic Laboratories who has been modelling shelf sea processes, BBC wildlife cameraman Barry Paine and Jim Pyrah of Thales Geosolutions.

Want to share your work experiences at our next Careers Fair? Contact Gay at egm@bangor.ac.uk

Wish You Were There...

For the second year, SOS supported a group of ten students on a holiday, sorry I mean field trip, at an outpost of the Virginia Institute of Marine Science (VIMS), at Wachapreague, which has been built up over 15 years or so largely through the single-minded determination of its director, Mark Luckenbach.

These field trips are a result of VIMS connection with Chris Richardson who together with Colin Jago - for much needed non-biological academic input - not only organised much of the trip but managed to keep some kind of order in a spirited group.

©Rebecca Cooksley

The 'Chosen Ones' on arrival

The competition for places was high and those selected felt truly privileged: Chloe Arnold, Sam Wilding, Lorraine Holdstock, Sarah Clark, Sarah Hale, Duncan Smallman and Rebecca Cooksley doing marine biological disciplines and Sacha Beard, Lucy Freeman and myself doing other kinds of marine science.

The field trip was an experience of seeing how things are done in a very different kind of ocean science institution mingled with beach visits, shark fishing, seine netting and some interesting, if somewhat excessive, eating experiences.

The lagoon - a stunning layout of channels and unbelievably extensive salt marshes behind a series of barrier islands - was our first call to collect samples and fight with the 'natives', particularly the evil greenhead flies, both activities proving equally unsuccessful: Not even Jungle Formula could come to our rescue and 4 trawls turned up a grand total of two crabs.

Things improved with time. Any charismatic animals like a sting ray and a terrapin were caught only to be later released when they appeared to be under stress - but smaller, more common and less sympathetic creatures just got taken back to the labs and dissected. Or eaten, like clams, which were dug up on the tidal flats for the evening's clam chowder - a soup consisting of clams and pretty much everything that was lying around the kitchen. As an oceanographer unfamiliar with all the biological stuff meant that I had to be warned not to put my hand near the sting ray and seeing things down the microscope was like looking at a horror movie, although everybody else seemed impressively calm about these monsters.

©Rebecca Cooksley

Globenormous!

Playing in the surf on Assateague Beach aboard kiddies' bodyboards or swimming on a sandbank right out in the inlet between barrier islands where the lagoon joins the Atlantic Ocean, and shuffling out to sea in case you tread on a ray were only matched in pleasure by finding the shop that sells the biggest ice creams in the world, globs so enormous that you have to lie the cones on a plate to eat them at all.

©Rebecca Cooksley

Working hard ....

An afternoon's shark fishing was spiced up by turning it into an intergender competition. Within 5 minutes of starting, I'd caught my first ever fish on hook and line - a flounder, an excellent specimen I was told, which we had for dinner in the evening. Collectively, we got 7 sharks - 3 of them caught by Sarah Clark, now known as 'Sharkey'. Boys vs girls score: girls won on sharks, boys won on total fish and biodiversity.

We were hugely impressed by the readiness of boats on call to take one out to research sites and we did actually do some real work, some of which surprised even the local scientists. The last few days of the visit we moved our base to Williamsburg, in the centre of some of the earliest colonial sites in America, and visited historical sites at Williamsburg, Jamestown and Yorktown, as well as having a look around the VIMS main base at Gloucester Point.

©Rebecca Cooksley

Dinner is caught!

Many thanks go to Chris Richardson and Colin Jago for making sure that as a group we got so much out of the experience and to Mark Luckenbach and his team at VIMS, who were always available with advice and practical help.

Paul Butler

CORDAN PARTICIPANTS 2003-2004

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Advice on **Career in Health Services Research, Public Health & Medical Statistics**

Marine History

The Cemlyn Jones Trust has a long-term interest in the local history of the coast and shallow seas. In 1993 it supported the first PhD programme in Marine Archaeology. The successful doctorate candidate, Douglas McElvogue, completed the reconstruction of a 16th century boat as part of his work, and is now Senior Research Officer with the Mary Rose Trust. Subsequently, the marine archaeology programme moved to the SOS under the wider remit of 'Marine Environmental History' under the direction of Colin Jago, James Scourse and Dei Huws.

The current Cemlyn Jones student, Michael Roberts, has just completed field work on the processes involved in the evolution of the north-eastern Menai Strait. Directed by Dr Cecil Jones, the marine archaeology component of the programme is concerned with the changing coastal landscape over the last 4,000 years and the utilization of its resources over the generations, with a particular interest in the study of *goradau,* ancient fish traps, relative to the present coastline and sea level. Support for the programme was made available by the late Miss G. M. Cemlyn Jones.

Graduations, Prizes & Awards

The year 2003 saw 105 students graduating in marine science and some 12 candidates successfully defending their PhD and MPhil theses, while 42 students completed the taught course component of their MSc degrees.

Departmental Prizes	Value	Recipient 2003
Gavin Borthwick Memorial Prize* (best 1st year mature SOS student)	**£100**	Yvonne **Cronin**
Darbyshire Prize (Best finalist in Oceanography)	**£50**	Barbara **Berx**
Darbyshire Prize Postgraduate (Best MSc in Oceanography)	**£50**	Juliet **Gofton**
Jeremy Jones Memorial**	**£150**	Thomas **Galley**
Fishmongers Company Grant***	**£3,000**	Paul Andrew **Tyson**

**Awarded to the most promising first-year mature student in Marine Biology and set up in the memory of Gavin Borthwick. A mature student in MarBiol 1994, Gavin died in April 1994 after a long illness. He was awarded an Aegrotat degree. A tree of remembrance has been planted by his family, friends and staff of the School at Treborth Botanical Gardens.*

***Awarded to a student who has just completed the MSc in Shellfish Biology, Fisheries and Culture and set up in the memory of Jeremy Jones, a mature student in the School of Biological Sciences.*

****Awarded to a promising undergraduate student to enable them to follow the MSc Shellfish Biology, Fisheries and Culture.*

Alive and Kicking

Azad Sadiqua, (MSc Marine Geots 1999), has been accepted to a PhD course in New York.

Barnett Brian, (BSc Zoo / Mar Zoo 1971), is happily settled in Ludford where he works on Estuarine Pollution in the Lincolnshire area.

Barwise Andy, (MSc Mar Geotech 1993), works for Lankelma.

Terence R. Beggs, (M.Sc. Marine Geotechnics, 1975), did the photography for "The Menai Strait" a book written by Gwyn Pari Huws and published by Gomer Press recently.

Brandenburg Leif, (Dip. Mar Geotech 1993), works for Lido GmbH - Lufthansa Aeronautical Services in Frankfurt.

Burton Charlie, (MSc Mar Geotech, 1983), is keeping extremely busy in the Teaching Profession while enjoying life in Heswall (Merseyside) with his wife and three of a family.

Caryl David (B.Sc. MarBiol/Zoology 1972), swapped Prince Madog for the RV Manehine, a 1900 converted North Sea trawler, then the marine research vessel of the East African Marine Fisheries Research Organisation in the Indian Ocean. Subsequently, as a teacher and Head of Biology, he regularly brought 6th formers to camp on Anglesey to study. As a result several went to Bangor!

Chapman Piers, (PhD MarChem 1982) has moved from Texas A&M to Louisiana State University. He is running a consortium of 11 universities in southern Louisiana and Mississippi working on CREST (Coastal Restoration and Enhancement through Science and Technology), a programme on coastal wetland remediation science. This field is of vital importance as the states are losing about 24 square miles of land per year.

Christie Sandy, (ex - Staff, 1960's), is enjoying "almost" full retirement nowdays in Ponteland with only 6 days consultancy work last year(!) and fully occupied with fishing, bowling, playing the church organ and with an increasing number of grandchildren.

Crow Alex, (BSc GeolOcean, 1996), works for Qinetiq in Farnborough.

Coombes Mike, (BSc Mar Biol 1992, MSc 1994), taught biology for three years and in 1997 he set up proporta.com, a business which provides hardware and software accessories for mobile computing devices. He now lives in Brighton with his girlfriend.

Czerewko Moz, (MSc Mar Geotech 1989), works for EDGE Consultants. Congratulations to Moz and his wife, Oksana, on the birth of their daughter, Mara Zoryana in February 2003.

Dodd Leo, (PhD Mar Geotech 1995), is now settled with her husband Nik James in Torphins. Leo is working for Hydrosearch in Aberdeen while bringing up a son and a daughter.

Dunford Paul (MSc 2002), is holding the post of the Scientific Fisheries Observer at the Falkland Islands Government Fisheries Department, Stanley, Falkland Islands.

Fenlon Louise, (BSc Geol Ocean 1998), is rising steadily up the "promotion ladder" with Whitbread. Together with **Tricia Griggs, (BSc Geol Ocean, 1998),** Louise has enjoyed a successful Norwegian cruise in 2003.

Gaiawyn Jenny, (BSc MarBiol 2003), has been involved with a Palestinian Medical Relief Committee and "Project Hope" over the summer of 2003, a scheme to provide classes and recreation for Palestinian children and adults. Unfortunately she has experienced some of the warfare which is prevalent in that part of the world at the present time but thankfully has emerged unscathed. In December 2003 Jenny is off to Ikaria, Greece to work as a marine biology researcher with a grassroots marine conservation group, and has registered for an MSc in Marine Resource Development and Protection in Orkney.

Gelfort Ralf, (MSc Mar Geotech 1998), has resigned from Schlumberger in order to start a PhD at Kiel University on a topic involving thermal conductivity.

Glennie James, (BSc Mar Geotech 1988), has successfully completed the Sloan Masters Degree at the London Business School. James joined the British Wind Energy Association as Head of Offshore Renewals having previously worked as an Analyst and Consultant with Esso Petroleum/EXXON in the UK and with Energy Systems in Russia.

Gray Chris, (BSc Mar Chem 1995), obtained an MSc in Zoology and a PhD in Chemistry from Rhodes University, Grahamstown, South Africa where he is currently a lecturer in Organic Chemistry. His main research interests are in marine natural products, chemistry and marine chemical ecology. He is married to Claire Steiner, a lecturer in the Faculty of Pharmacy, Rhodes University.

Gray David, (BSc MarBiol 1993), obtained a PhD in Zoology from Rhodes University where he lectured at a time and at the University of Cape Town. In 1997 he was awarded the Laurence Caplin Scholarship by the University of Hong Kong and in 1998 he received the Brian Allanson Scholarship by the Zoological Society of Southern Africa. Since 1998 he works at Hartpury College, University of the West of England where he now holds the position of Deputy Principal & Dean. He is married with twin daughters aged 4 (Rebecca and Emma) and Bethan, a recent addition to the family in 2003.

Hamlin James, (BSc MarBiol 1978), revisited North Wales for some "firing" on the steam locomotives on the Welsh Highland Railway in Caernarfon and Dinas in 2002.

Henley Pete, (BSc Mar Physics 1981), continues to work with ROVs in Australia. He is presently studying for a PhD funded by the Australian Defence Department.

Hillier Graham, (MSc MarGeotech 1984), has left Fugro GEOS, Swindon to work with the Environmental Agenc, Cardiff. He lives in Meysey Hampton with his wife and two daughters.

Holland Rob (BSc MarBiol/Zoo 1991), did a PhD joint with Exeter University, Plymouth Marine Laboratory and the MBA. Rob held a post-doc position in Australia and worked for Raleigh International in Belize, Ocean Scientific International Ltd., and British Maritime Technology. He now works for Oil Spill Response Limited in Southampton.

Horn Ian, (MSc Mar Geotech 1975), enjoys a flourishing freelancing career spending some welcome leisure time golfing with his wife, son and daughter in between projects.

Hughes Lawrence (Lorry) Peter (BSc MarBiol/Ocean 1983), is currently working at Griffith University on the Gold Coast.

Hulme John, (BSc Mar Geotech 1988), works as a manager with Santos in Adelaide, Australia. He is married to Jo, and has one daughter, Lauren.

Hurrell (now Tetlow) Judith, (BSc Maths / Phys Oc 1985), manages to combine part-time work in Northampton while bringing up her 8-year old twins (Jonathan & Laura) in Olney. She has begun to playing hockey once again.

Huws Dei, (MSc MarGeotech 1988, PhD Mar Geotech 1993 and present member of staff). Many congratulations to Dei and his wife on the birth of their daughter, Elin Angharad in 2003.

Jones Dave, (ex-staff), who now lives in Spain writes: "As might be expected life is far from retired and I am currently working for UN, UNEP, UNESCO, two American companies and two to three UK companies. Most of the work is in the Arabian Gulf and concerns remediation of oil damaged coastlines. Last year I spent a lot of time flying to and fro from Spain to the Gulf, but this year it is mainly overseeing data collections and reviewing reports. Still I did get to give a speech on behalf of Saudi Arabia at the UN in Geneva in April."

Jones Rob, (MSc Mar Geotech 1976), remains very busy commuting to Bangladesh from his home in Colwall. He is married to Veronica and has two daughters.

Jury Simon, (BSc Geol Ocean, 1997), has successfully completed his MSc in Meteorology at Reading University.

Keirle Rob, (BSc Geol Ocean 1992), has passed the MSc Water Resources course in Bangor in 2002. He joined Metocean for a brief time and he now works for the Environment Agency Wales in Bangor in the Hydrometry Section overseeing the hydrometric network in north west Wales (Gwynedd and Anglesey).

Kemp Gareth, (BSc Geol Ocean 1997), has been promoted to Senior Fishery Officer in Kinlochbervie. Gareth is married with one daughter.

Kratzer Suse, (PhD Phys Ocean, 2002), is working at Stockholm University. Congratulations to Suse and her husband Sanjay Ahuja on the birth of their daughter, Charlotte Kalpana, in April 2003.

Kyaw Shwe, (MSc Mar Geotech 1970), is recovering from a heart attack in Queensland, Australia. We wish him all the best.

Mantoura Fauzi, (B.Sc. PhysOcean/Chemistry 1972), is now the Director of the International Atomic Energy Agency's Marine Environmental Lab in Monaco.

McCann Clive, (PhD Mar Geotech 1968), is "almost" retiring from his Professorship at Reading University.

McDermott Ian (BSc MarPhysics 1982, PhD 1992) left C - CORE in Canada to work for GUIGNE, a company involved in cable and pipeline tracking, integrity monitoring, benthic habitat evaluation, space research, unexploded ordnance clean-up and acoustic levitation.

McIntyre Lee, (BSc Ocean Science, 1998), has been enjoying the golfing climate of Florida where he went in March 2001 working in the field of underwater weapons. He has now returned to the UK and still works for NES.

McKay Alasdair, (MSc Mar Geotech 1968), is still busy with geophysical consultancy work with his company, Haggis Geophysics, in Canada.

Neal Andy (PhD 1995) has a joint faculty position at the University of Georgia and he is currently working in the general field of geomicrobiology - ranging from hot spring organisms to bioremediation of uranium. He has recently chaired a session on Biogeochemistry at the American Chemical Society meeting in New York.

Portet Montse, (MSc Mar Geotech 1996), lives in London and works for Schlumberger. Congratulations on Montse and Sebastian on the birth of their first baby in February 2003.

Prior Sian (nee Pullen, BSc MarBiol/PhysOcean 1984) and her husband Paul are now the proud parents of a baby boy, Dylan Stephen John Prior born on 20th January 2004.

Pyrah Jim, (BSc GeolOcean 1992, PhD Mar Geotech 1996), works for Thales in Aberdeen and has just bought a house in Aboyne. Congratulations on his marriage in April 2003.

Ramskill John, (MSc PhysOcean 1972), has been seconded to the post of Contamination Land Officer in Sheffield. He is frantically giving face-lifts to various rooms in his house in Featherstone as he's heard that "you don't have the time when you're retired"!

Alive and Kicking (continued from p7)

Sayers Les, (BSc Maths/Ocean, 1978), is now back from DownUnder and is the Managing Director of M&J Seafood, Aylesbury.

Schoolmeester Tina, (MSc Mar Geotech 1997), has resigned from Veritas to spend a "year out" travelling around S.E. Asia with her boyfriend.

Sherman Craig (BSc MarBiol 2001), is currently doing his PhD at the University of Wollongong, Australia assessing the relative importance of sexual and asexual reproduction in determining the genetic composition in populations of brooding corals and sea anemones in the New South Wales coast and the Great Barrier Reef.

Simpson Kate, (BSc Geol Ocean, 1993), is married to Colin Hind. Kate was to take the Accountancy Finals sometime in 2003.

Soulsby Richard (MSc Physical Oceanography, 1970) is a Technical Director at HR Wallingford, specialising in the physics of sediment transport in estuaries and the sea, with applications to problems such as beach erosion and siltation of shipping channels. He is the author of *Dynamics of Marine Sands*, now widely used in university teaching of oceanography and civil engineering, and the co-author of a companion volume (*Dynamics of Estuarine Muds*). He was the Visiting Professor to Oxford University in 2003.

Sumner Bob (ex-Technical Staff) and **Sylvia (ex-Secreterial Staff)** are thoroughly enjoying their retirement in Slyne-with-Hest. They are busy with family commitments and with their archaeological interests. While Sylvia retains her interests in writing, Bob is occupied with his model engineering (mainly steam locomotives) and his D.I.Y.

Taokaew Pisit, (MSc Mar Geotech 1998), works in the Family Rice Mill business in Thailand.

Tay Pui (BSc Ocean Sciences 1994) is enjoying life in Holland. She still works for Shell and was transferred from Malaysia to Holland during late 2002.

Walker Tony, (MSc Marine Biol 1970; PhD MarBiol 1976) now grows plants, is in the Linnean Society and has a wife and family from Sichuan.

Whiteside Alan, (BSc Soil Sc/Ocean 1986), is working part-time for a Civil Engineering company in Darwin, Australia. He is now enjoying fishing from his newly-acquired boat.

Yule Andy, (current Academic Staff), and his wife had a son early in 2003. Congratulations to them both.

... And The 60's Were Back In Oswald's

The Alumni event of the first week-end in October 2003 was a very joyous occasion attended by 41 people. Its success provided plenty of stimulus for the preparation of the next one whose venue has already been booked on 2nd October, 2004. We let the pictures speak as to the atmosphere along with some of the comments from past students and we hope that we shall see more of you next year.

George Floodgate

Sinclair Buchan

©John Jones

©John Jones

And the Heads get together!

From left to right: Ray Seed (Current Head of SOS), Ernest Naylor (Head of SOS 1992), Tony Fogg (Head of Marine Biology 1971), John Simpson (Head of SOS 1996), Jack Darbyshire (Head of Physical Oceanography 1963)

"Attention those postgraduate students and staff of the 1960s who were not able to attend the marine science reunion in early October. Over drinks and during the reunion dinner many of you were remembered. We asked about you, told stories and laughed, toasted your health and we shared many fond memories of the 1960s.

You were remembered!"

Craig Kensler (PhD MarBiol 1965)

"Did I travel 1200 miles for a Reunion? Not specifically, but it was a big pull. There was always something special about the Marine Science Labs and there is no doubt that its uniqueness still exists despite the huge growth in size. D.J. Crisp's enthusiasm, drive and commitment (or more appropriately "hyperactivity") has been replaced with passion and that was obvious from the visit. Memories are very precious and I have now added to them and know that the Marine Science Labs or the School of Ocean Sciences will go from strength to strength.

Thank you."

Len Tong (BSc 1963, PhD MarBiol 1967)

©John Jones

CALLING ALL ALUMNI OF THE 70's

Due to the great success of the re-union in October 2003 another event is to be organised

KEEP THESE DATES FREE 2-3 October 2004 REGISTER EARLY AS PLACES ARE LIMITED

PROVISIONAL PROGRAMME Compulsory Pint at the Liverpool Arms Dinner a Visit to the SOS Site and the new Prince Madog

FOR INFORMATION, IDEAS or SPECIAL REQUESTS CONTACT

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Mariners Adrift

The list below is of people who have been lost from our database. If you have any information as to their recent address please let us know. Your help would be much appreciated.

Please take a minute to check the list.
Over 20 lost alumni found since the list was published.
Many thanks to all those who have helped us in our search.

Aiken Morag E
Al-Aradi Jassim Saleh Jassim
Appleyard Paul Julian
Ashworth Simon
Atkinson Guy
Bartlett Rachelle A
Bayne Brian L
Beaver Ruth
Bishop Timothy James
Boscolo Roberta
Brady Amanda
Brenchley Christopher
Bromley Christopher W
Browne Dylan
Bull Chris
Bunt Jamie
Butterworth Matthew
Caine Andrew
Campbell Andrew R
Chadwick Mike
Chalcraft Peter Nichola
Charles Margaret Lucy
Clay Helen
Cloutter Kevin
Coello-Cisneros Segundo M A
Coggan Roger Andrew
Collinson Peter Ronald James
Cooper Jackie
Cooper Keith
Cowley Christine
Davies Carl Gwyn
Davison Andrew P
Diserens Antony Paul
Djama Theodore
Dobbins Christopher Ross
Edwards Andrew J
England Paul John
Etches Simon Robert
Farrington Emma
Ferguson Helen
Ferguson John C
Fern Sophie
Fogwill Christopher J
Foster Andrew Ronald
Freeman Catherine E
Freeman Steven
Frost Nick
Gallagher William
Gardner Harry Fenn
George Christian R
Gibson Lydia
Gillis Lucy G
Gray John R
Green Damian John
Grenon Jean-François
Griffith Lawrence W T
Growns Jane Eleanor
Gwyther David
Haddon Catherine
Halliday Duncan
Hames Christopher Andrew
Hardy Malcolm
Harris Aubrey
Harris Philip Douglas
Hartley John Andrew
Hauksson Hilmar Jon
Hearn Richard Charles
Henson Gareth
Hill Victoria
Hills Andrew
Houlson Matthew
Hovey Stephen J C
Howell Mark Andrew
Humphreys Selina Jane
Hutchins William
Hyder Pat
Ingram James
Ingram Richard
Jackson Simon
Jacobsen Matthew C
James Ben
James Martin L
Jimmy Robert
Jones David J
Jordan Michael Brian
Jury David Spencer
Kenchington Richard A
King Claire Marie
King Michael
Kinglsey David
Knox Alison
Lang Simon Hamilton
Larcombe Piers
Laval Steven
Leslie David James
Lewis Kathryn A
Lwiza Kamazina
Madenlioglu Deborah
Madison J Rachel
Maguire Claire
Malone Nicholas Desmond
Mansfield Stephen Gary
Masson Ann
McGrath Fergal
McLean David A
Mitcham Christopher
Moore Debbie
Moore James Jonathan
Moore Nigel
Morris Alan
Murray Patricia
Nyandwi Ntahondi
O'Grady Jason
O'Kelly Charlotte
Pearks David Allan
Penty Sue
Peters Ian Robert
Pfannukuche Jens
Philips Matthew William
Poat Jason Michael
Potts Anthony E
Pritchard SM
Probert David
Pyne Rebecca S
Radcliffe Adrian
Ramsey Shanti
Roberts Graham Michael
Robertshaw Andrew M
Robertson SJ
Robey Kate Jane
Rutherford Bryan
Salter Sean Andrew
Schuwerack Petra-Manuela
Scotchford Colin Anthony
Scott Alec J
Scott Charles J
Scott Charlotte Fleur
Sharples Paul
Shaw Ruth Elizabeth
Shearing Julian
Shotton Rose
Skov Martin
Smallwood Jonathan
Smith Adrian
Smith Ian Philip
Snyder Ronnie
Stephan Bernd
Stone David M
Swanwick Nicholas J
Tarrach Zoe
Taylor James
Taylor Jessica
Taylor Paul
Taylor Philip G
Taylor Stuart
Thomas Karen
Thomas Nigel Anthony
Thomas Paul
Thompson Andrew M Heaton
Thompson Richard
Thomson Richard
Tootal Drew A C
Trigg Michael John
Trigg Mirna A Moctezuma
Tsontos Vardidi Maximilian
Tyson-Taylor Daisy
Vine Emma
Wallis Selina
Waterton Helen Louise
White Jonathan
White Keith
White Michael
Whittaker Alexandra Jean
Wickham Judith Yvonne
Wood Colin
Wood Susan Clare
Wynter-Dormer Julie Ann

Looking For Memories of Prof. Dennis Crisp

Professor Dennis John Crisp, FRS, was largely responsible for putting "Menai Bridge" on the marine science map. Those who worked with him will remember him as a clever, infuriating, single minded - even bloody minded - champion of marine zoology, especially the biology of barnacles. Such charismatic characters are rare and lend their activities to stories which become legend. On the occasion of the naming of the new facilities in the Craig Mair building as the Dennis Crisp laboratories I thought it would be interesting to make a collection of these stories for posterity.

If you have any DJC stories (however scurrilous) would you please jot them down and send them to me by email (gmfloodgate@tinyworld.co.uk) or by post at the labs c/o Gay Mitchelson-Jacob as soon as possible.

George Floodgate

Journals Are Looking For A Loving Home

A home is needed for an impressive collection of the
JMBA 1977 Vol. 57 No 1 - 2003 Vol. 83 No. 6 inclusive.
Anyone interested please contact
Barry Paine at barry.paine@wildvoice.co.uk

How YOU Can Help SOSA in its activities

the Gift Aid Scheme allows us to claim the tax back from the government to add to donations a £10 gift becomes £12.80
GARRY REID
g.reid@bangor.ac.uk

Purchase Across the Bridge the book on the labs' history All profits go towards helping research and students
GAY MITCHELSON-JACOB
egm@bangor.ac.uk

Opt for the purchase of books or journals for the School library
RAY SEED
r.seed@bangor.ac.uk

Put your work experience at the disposal of CORDAN
DEI HUWS
d.g.huws@bangor.ac.uk

Do not take for granted that others are aware of the School of Ocean Sciences Association. Whenever you hear from, see or talk to any of your university peers PLEASE REMEMBER TO MENTION THE SOS A & ASK THEM IF THEY RECEIVE THE BRIDGE. THANK YOU

SPECIFIC REQUESTS

Bean and **Mo** are trying to re-forge some old links and are looking for **Barbara Hulme (General Degree in Bot/MarBiol 1969)**. Barbara came to Bangor from Port Talbot in 1966. As some sort of pennance she lodged with Mo in some seriously grim digs up on Holyhead Road. Her passion was the Sailing Club and she is remembered dashing off to Beaumaris directly after the Biochemistry lectures, though in those Swinging Sixties days studying seemed to be a secondary activity to wanton hedonism. She carried the burden of an incredibly non-PC nickname "Cripple" for reasons no one ever did know as she was A1 fit!

Anyone knows of Barbara and her whereabouts? Contact Bean and Mo

Andrew and Maureen Broadhead
aka BEAN + MO
80 Woad Farm Road
BOSTON
Lincolnshire PE21 0EF

Beanbroadhead@aol.com

The Menai Strait

Written by Gwyn Pari Huws - Photography by Terence R Beggs
Published by Gomer Press, Llandysul, Ceredigion
A picture-led account from Llanddwyn Island to Puffin Island with reference to the maritime history and navigation in the Strait, and illustrated with 180 colour photographs, charts and sketches.
For orders: ISBN 1 843233339 (Hardback) "The Menai Strait" Price £19.99
ISBN 1 84323 271 5 (Paperback) "The Menai Strait" Price £12.99
ISBN 1 84323 0844 (Paperback) "Y Fenai" Price £10.99 - Welsh version

Take a look, you never know who you may find lurking in here.

Write E-mail Telephone

Want to get in touch with some old pals but lost their address? Allow us to publish your name & address in the WET column.

Coombes Mike, (MarBiol 1992, MSc in 1994), has lost contact with lots of people from Bangor so if anyone remembers him do drop a mail. mike@proporta.com
Gray David, (BSc MarBiol 1993), Hartpury College, University of the West of England, Hartpury, Gloucester, GL19 3BE David.Gray@Hartpury.ac.uk
Meadows Jane, (BSc MarBiol/Ocean 1979), c/o Science Department, Barnsley College, Church Street, Barnsley, South Yorkshire, S70 2YW j.meadows@barnsley.ac.uk
Neal Andy, (PhD MarBiol 1995) Neal@srel.edu
Sherman Craig, (BSc MarBiol 2001) cdhs01@uow.edu.au
Soulsby Richard (MSc Physical Oceanography, 1970) rls@hrwallingford.co.uk
Tobio-Silvestre Adriana, (BSc MarBiol/Ocean 1998), would really like to get in touch with Dominic Koe and Daisy Tyson-Taylor. eat_sleep_ski@hotmail.com

X-FILES

Chris Gray, (BSc in Mar Chem 1995), has found a photo mof the Menai Bridge in a small pub (the Highlander) in Port Alfred, S.A (a tiny sea-side town) and wonders if anyone knows how it got there! Anyone has an answer let Chris know. C.Gray@ru.ac.za

IN MEMORIAM

RAYMOND DELAHUNTY 1963-2003


©Debbie Coates

Ray Delahunty was a conscientious and talented postgraduate at the School of Ocean Sciences, equally popular with staff and his postgraduate colleagues. Everyone who knew him was deeply saddened by his death in July 2003. Ray graduated in 1999 with first class honours in Marine Biology and Oceanography. His enthusiasm for the subject, and his love of the location, persuaded him to remain at Menai Bridge and continue his studies. His PhD research into measurements of primary productivity in shelf seas was at an advanced stage; the quality and completeness of Ray's work was such that the School has recommended the award of a posthumous PhD.

Ray was far more than a competent and budding scientist. A multi-faceted character, he participated with gusto in every aspect of postgraduate life from the annual raft race to the Liverpool Arms pool team. He was also a very good rock climber and his love of the mountains was obvious to all who shared in those adventures. Ray's life prior to his arrival at Bangor as a mature student was no less varied. His CV boasted spells as a building contractor, wine warehouse manager and motorcycle dispatch rider in London (after which climbing must have seemed relatively safe). The same diversity applied to his musical tastes. Anyone sharing a late night shift on a research cruise could look forward to an eclectic mix of Frank Sinatra, seventies disco and African drum music.

A recent memorial evening raised a large sum of money which will enable a Delahunty Prize to be awarded annually to the best first year student of Marine Biology and Oceanography. In addition, a painting has been commissioned that will incorporate all aspects of Ray's life as a student and will hang in the School of Ocean Sciences. Ray will be sorely missed, but fondly remembered by all who knew him.

Kevin Horsburgh

❁

GAYNOR CEMLYN-JONES 1910- 2003

Gaynor Cemlyn-Jones, who died on 26th April 2003, was a generous benefactor to the local community. She had a special interest in marine conservation and the work in the School of Ocean Sciences which promoted research in this sphere.

Through the Pen-y-Clip Trust she promoted work in subjects such as marine archaeology and supported the first PhD programme in this subject. One outcome of this was the conservation and reconstruction of a boat dated at 1547 and now on display at Llanberis.

During the late 1990s, the scope of the marine archaeology programme was extended under the title of "Marine Environmental History" and was based at the School. It is supported by the recently established Cemlyn-Jones Trust, and its remit includes sea level studies and the re-interpretation of ancient coastlines. The Trust supports a PhD student and a Research Fellow. Current research focuses on the evaluation of the Menai Strait, the Archaeology of Fisheries and the ancient sea routes of the Irish Sea.

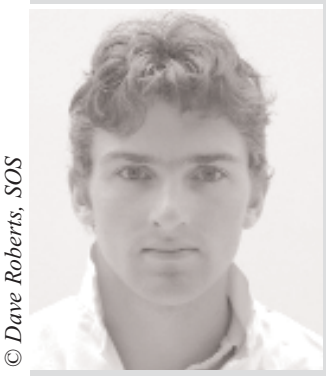
Future research will reflect Miss Cemlyn-Jones' concern for the maritime heritage of North-West Wales, where she lived for most of her life. The mission of the research programme is the science-based investigation of maritime history, a history of human beings controlled and empowered by marine environmental processes.

One of the University's largest and busiest marine teaching laboratories will bear the Cemlyn-Jones name in recognition of her invaluable support.

Cecil Jones

❁

ALASDAIR CRAWFORD 1979-2003


© Dave Roberts, SOS

Alasdair Crawford from Castle Douglas, Dumfriesshire, Scotland came to Bangor to study Marine Biology. He obtained his BSc in summer 2003. An enthusiastic rugby player and an experienced yachtsman with a life-long ambission to skipper sea-going yachts, Alasdair died tragically in a yachting accident just after Christmas 2003 when the 36ft *Reliance AC* capsized in the Bay of Biscay.

Our sympathies go to his family.

❁

STEPHEN J MAY 1953-2003

Steve May came to Menai Bridge to study an MSc in Marine Biology in 1986/87 after a teaching career. He subsequently worked on benthic environmental monitoring round the Morecambe Gas Field with the Benthos Group at Menai Bridge. He joined the Oil Pollution Research Unit in Pembroke and remained with the Unit at the Neyland laboratory after the takeover of OPRU by Cordah.

After Cordah's withdrawal to Aberdeen, Steve left the Unit to do various consultancy work. Most recently he helped work up samples from the first cruise of the new Prince Madog, when the National Museum of Wales surveyed sandbanks all round Wales for Countryside Council for Wales. He was active in local politics in Pembrokeshire and was both a County Councillor and a member of the Pembrokeshire Coast National Park Committee. Steve May died in January 2003 after a long illness.

We send our sympathy to his partner, Christine Gwyther AM, a Minister in the National Assembly for Wales.

Ivor Rees

❁

DAVID DONALSON WYNN-WILLIAMS 1946-2002


©British Antarctic Survey

David Wynn Williams

David Wynn-Williams was born in West Kirby in 1946 and he attended Calday Grange Grammar School and Birkenhead Technical College. His first degree in Botany and Microbiology in Aberystwyth was followed in 1964 by a PhD on the ecology of nitrogen fixing marine bacteria, under Muriel Rhodes jointly with Bangor University. His contemporaries remember him spending hours working off St.George's Pier. His dynamic personality and indestructible character was only matched by his physical robustness and his boundless energy making him a constant source of almost child-like optimism and positive attitudes. David gave innumerable public talks to all age groups, including on radio and television, and not only was he a keen sportsman, having participated in half-marathons and several London Marathons, but David was also a member of Cambridge choral societies - his involvement in the choir at the Investiture of the Prince of Wales at Caernarfon Castle being a particular highlight.

David taught in South London and in Tonbridge, Kent and he led a research expedition to Iceland in 1970. He joined British Antarctic Survey as a soil microbiologist in 1974 and spent two winters at Signy Island. Under primitive conditions - to guarantee that micro-organisms did not experience temperatures above that of their natural environment the lab was unheated with an air hole in the floor to ensure bench temperatures of +2ºC and sub-zero below bench level - he made the first detailed study of Antarctic microbial populations in relation to carbon respiration.

David's love for polar life and its opportunities for adventure – scuba-diving with seals under-ice, scaling ice-covered mountain ridges or ski-walking around the entire Island on broken pack-ice, jumping tide-cracks and climbing over grounded ice bergs was only matched by his passion for photography, the history of Antarctic exploration and particularly of the whaling origins of Signy Island. It was David's persistence that tracked down Signe Sørrle, for whom Signy Island was named by her whaling captain husband when he first encountered it in 1912. David's picture of Signe in her Norwegian home still hangs in Signy Base.

Aside ten scientific visits to Antarctica, to the British bases of Signy Island and Rothera, he was also involved in international collaboration and worked with the Italian Antarctic programme at Terra Nova Bay, the New Zealand programme at Scott Base and at the US base of McMurdo. His research led him to believe that moisture, and not temperature, was the key controlling factor in microbial respiration in the extreme environments of freeze/thaw events. His work was recognized with the award of a Polar Medal in 1980 for outstanding contributions to Antarctic research. He developed image analysis approaches in order to visualize the three-dimensional structure of soil microbial communities and to study the patterns of colonization in harsh environments. He would subsequently use colonization of Antarctica as a central element of BIOTAS - an international research programme on terrestrial polar ecosystems- of which he was a dynamic co-organiser. David became Head of Terrestrial Ecology at BAS in 1993.

With a lifelong interest in astronomy and in the search for life on other planets - a Fellow of the Royal Astronomical Society and the British Interplanetary Society - David promoted Antarctica and its micro-organisms as analogues for extra-terrestial life. He identified that the long-lived UV-protective pigments in Antarctic cyanobacteria could provide biomarkers for life in extreme environments on Earth and on other planetary bodies. The Antarctic Astrobiology Group created around David at BAS, coincided with arguably his most productive period as a scientist. It was through his research collaboration with NASA Ames Research Center, the NASA Johnson Space Center and the European Space Agency that he came to be held in the highest regard by the international space research community. His legendary networking abilities were deployed not only in establishing a UK Astrobiology network but in promoting and developing astrobiology worldwide and in creating the International Journal of Astrobiology. He was involved with the Raman Spectroscopy Group at Bradford University in biomolecule identification whilst his polar background contributed important inputs to major papers on the possibility of water and life on Mars and to the debate on the origins of life. At the height of his research powers and having managed to combine all the areas of science and the environment dearest to his heart, he remarked that he was now living out his life's ambition and could scarcely credit his good fortune.

We are deeply saddened to hear about David Williams' tragic death in a traffic accident whilst he was out jogging on a country road near his Cambridge home.

based on information supplied by the British Antarctic Press and Information Office

❁

*C*areers and *O*pportunities in *R*esearch and *D*evelopment: *A*lumni *N*etwork

Whether you are looking for potential employees in your established field, want to initiate research collaborations or simply you are willing to give careers' advice to current students

Please complete in BLOCK CAPITALS and return to

DEI HUWS
School of Ocean Sciences, Menai Bridge, Anglesey LL59 5AB
d.g.huws@bangor.ac.uk

CORDAN is a scheme designed for mutual benefit of Alumni, SOS staff and current students. It was stablished in 2000 as a response to inquiries by alumni working in various fields and looking for potential employees or wanting to initiate research collaboration. CORDAN is to coordinate and formalise the transfer of information between the School, its current and past students, and interested companies and institutions providing also an insight into careers in ANY FIELD.

Full Name

Job Title

Company/Institution Name

Address

TEL.: **FAX:**

E-mail: **WWW page (if any):**

Please tick if you are interested in:

❒ Professional or subject reunion

❒ Helping in career choices by ❒ personal presentation ❒ telephone ❒ e-mail

Profession/Career you would be willing to advise on

PART I: RESEARCH & DEVELOPMENT INTERESTS

Please give a short description of the field of research and/or development where you may hope for collaboration, any specific geographic area and funding requirements.

Please turn over

PERSONAL INFORMATION FORM

Please complete in BLOCK CAPITALS and return to

GAY MITCHELSON-JACOB
School of Ocean Sciences, Menai Bridge, Anglesey LL59 5AB
egm@bangor.ac.uk

Please take a minute to read the following before you fill this form:

Whilst every effort is made to ensure that the information held by UWB is accurate, we would appreciate your help in informing us of any changes.

UWB Data Protection Notice

Alumni data is held confidentially on the UWB's alumni database in the External Affairs Office and on the data base maintained by the School of Ocean Sciences Alumni Society for the purpose of promoting closer links between the University of Wales, Bangor and its former students. The data is available to the Bangor University Foundation, the University's Development Trust, the International Office, faculty, academic and administrative departments, recognised alumni societies and to agents under contract to the University for particular alumni-related projects such as the allumni affinity card company, the Welsh Development Agency and Ede and Ravenscroft (memorabilia).

Data is used for a full range of alumni activities, including sending of University, departmental and alumni-specific literature; the promotion of benefits and services avalable to alumni; notification of alumni events and of programmes involving academic and administrative departments. The data may be made available to paid staff of the University. Under the terms of the Data Protection Act 1998 you have the right to object to the use of your data for any of the above purposes. For inquiries about the University's data protection policy please contact **Mrs Gwenan Owen**, UWB Records Manager, gwenan.owen@bangor.ac.uk

IF YOU DO NOT WISH TO BE CONTACTED PLEASE COMPLETE THE FOLLOWING SECTION AND SIGN:

❒ I do not wish to receive any further communications concerning alumni activi ties (ie Foundation events, Bangoriad, The Bridge, reunions, affinity scheme)

❒ I do not wish to receive any communications from third parties regarding University approved products or services

NAME (BOLD CAPITALS) **SIGNATURE**

Full Name

Name at Graduation (if different from above)

Degree and Year of Graduation
(Or Name of the Course attended)

Please turn over

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DESCRIPTION	Qty	Unit	Price	TOTAL
Across the Bridge hardback, 273p				
'Offshore' Set of tapes				
Print of the oil painting of the original Prince Madog				
			TOTAL	

All item prices include P&P

Cheques should be made payable to

"The University of Wales, Bangor"

Please send your completed order form and payment to:

Gay Mitchelson-Jacob,
School of Ocean Sciences,
University of Wales-Bangor,
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TOWN **COUNTY**

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Please tick if you want to:

❒ Publish your address in the next issue in the WET column.
Add here any specific names of people you would like to hear from.

❒ To join the Committee. Indicate which post to receive more details.

Please add any other information you would like to share with us and/or your comments on the way the Society is run. If you have not attended any events please let us know why not, and suggest any other functions you would like to see organised. It would be appreciated if any comments concerning the newsletter could be sent directly to the Editor (Contact details on front page).

CORDAN (continued)

PART II: VACATION JOB FORM

Please indicate if you can offer any of the following by completing the form below and ticking where appropriate.

❒ **VACATION WORK**
❒ **WORKSHADOWING**

VACATION WORK

❒ **Easter 2004** ❒ **Summer 2004** ❒ **Christmas 2004**
❒ **Easter 2005** ❒ **Summer 2005** ❒ **Christmas 2005**
❒ **GAP YEAR**

DURATION OF EMPLOYMENT **MIN.** **MAX.**

❒ **PAID** ❒ **UNPAID**

DEADLINE FOR APPLICATIONS (if any)

Preferred method of application

❒ **Telephone** ❒ **CV and letter** ❒ **e-mail** ❒ **Company application form**

Give highlights as to what type of work is or will be available

Candidates should be interested in

and have the following skills/qualifications

WORKSHADOWING

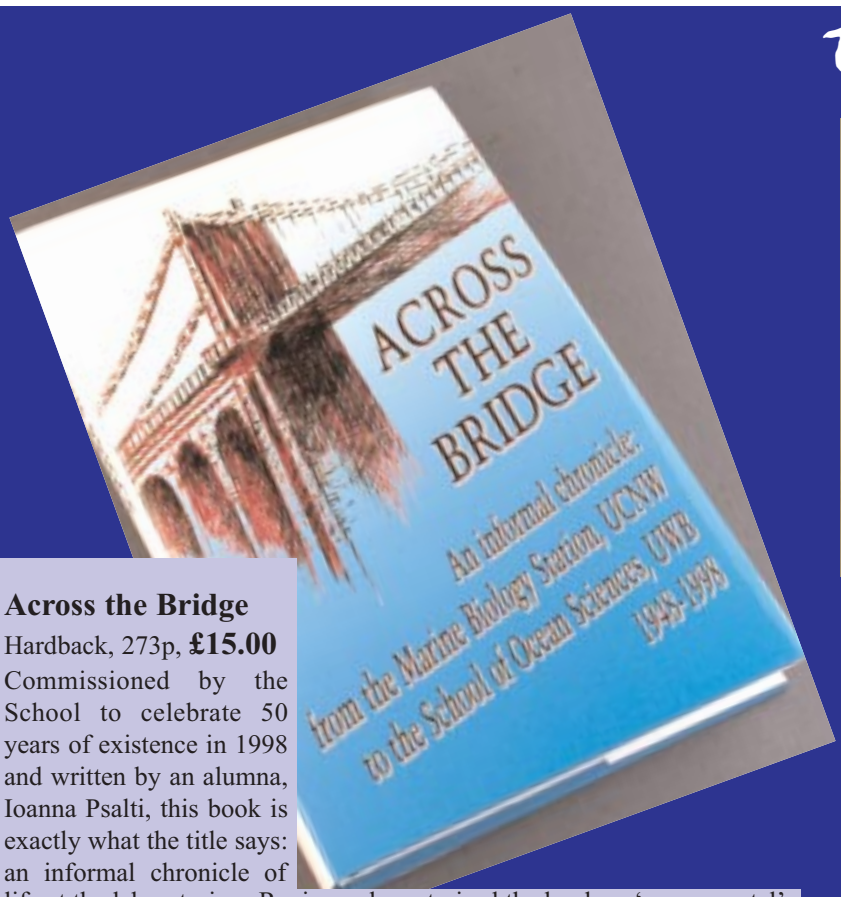
How long and how many students can you accomodate?

ANY OTHER VACATION OPPORTUNITIES
(such as courses, open days, talks, etc)

Please send relevant brochure if available.

PLEASE CUT, PHOTOCOPY OR SCAN AND SEND

The 'Stall'



Across the Bridge
Hardback, 273p, **£15.00**
Commissioned by the School to celebrate 50 years of existence in 1998 and written by an alumna, Ioanna Psalti, this book is exactly what the title says: an informal chronicle of life at the laboratories. Reviews characterised the book as 'monumental', 'scholarly,' 'fascinating' but for most of its readers it shall remain 'an enjoyable walk down memory lane'. All profits go to fund projects within the School.

"Offshore"
Set of two cassettes **price £ 10**
In 2000 "Offshore - A Year in the Life of Ocean Sciences" was broadcast by BBC Radio 4 recording most aspects of the day-to-day dramas of the School's students and staff.
Price covers ONLY reproduction costs.

Reproduced with kind permission by the producers Jeremy Grange and Gwennan Thomas.

TO ORDER ANY OF THE ITEMS SHOWN HERE SEE P. 11

A4 size print of the *Prince Madog*
£ 15.00
In the mess room of the new vessel hangs an oil painting of the original *Prince Madog* painted by Patricia Ballard. You can now own your very own print of the painting which was commissioned with funds donated by the family of Geoff Griffiths, a former MSc Student. Proceeds from the sale of the prints go to the Geoff Griffiths Memorial Travel Scholarship supporting postgraduates to attend conferences.