

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



Could you put it better than Paul?

Dear Gay,

Many thanks for organising the SOS reunion last weekend. It was really good to have an excuse to visit Bangor and Menai Bridge and to see how things have changed. I was particularly impressed with the new teaching facilities as we are currently at an early stage of planning for a new biology building.

Could you pass on my thanks to all of the staff who gave up their Sunday morning to talk to us - I don't know what sort of hold you have over them, but I would find it very difficult to persuade people here to do that.

Best wishes

Paul Prof Paul K Hayes, Head of School of Biological Sciences, Bristol

(published with kind permission of Professor Hayes)

SOS First UK Mentor of AFS

ike Kaiser's group at SOS is the first from the UK to be added to the mentor list of The Hutton Junior Fisheries Biology programme. Run by the American Fisheries Society (AFS) the scheme offers students aged 16 onwards a summer-long, hands-on experience in fisheries science under a professional mentor. Since the Hutton Program began in 2001, it has grown from 23 students in 2001 to 65 in 2004 with over 200 enthusiastic and dedicated mentors taking part. Increased funding made possible an expansion of the mentor list until recently comprising university, private, and non-governmental facilities in all states, commonwealths, and territories of the U.S., Canada, and Mexico. (cont. p2).

SOS Alumnus The New Director of NOC

d Hill has been Professor of the University of Southampton and the Director of the National Oceanography Centre (NOC)* replacing Professor Howard Roe this spring. Ed Hill (MSc PhysOcean 1983, PhD 1987) was a lecturer in the School before he became the Director of NERC's Proudman Oceanographic



Ed will be responsible for ensuring marine sciences research and education into marine and earth sciences continues at the Centre within the University's Faculty of Engineering, Science and Mathematics. Ed sees this as a great opportunity in developing further the partnership between the University and the Natural Environment Research Council .(NERC).

Ed Hill

*National Oceanography Centre Southampton, is jointly owned by the University of Southampton and the NERC.

Laboratory. His research work has centred around the dynamics of continental shelf sea circulation in European waters.

World's most prestigious marine award to Sarah Fowler

The Pew Fellowship* in Marine Conservation worth \$150,000 was awarded to Sarah Fowler, a shark specialist and a fierce advocate for threatened shark species with 20 years of experience in conservation.

Sarah obtained a BSc in Zoo/MarZoo from Bangor and an MSc in Conservation from University College London. Having established two European associations for the conservation of sharks and rays amongst other work she was awarded an OBE for services to marine conservation in 2004.

Sarah is the Director of Marine and Coastal Services for NatureBureau International, an ethical environmental consultancy based in the United Kingdom.

Sarah intends to use the funding to improve marine species governance and advocate for bridging the artificial divide between species preservation and fisheries management.

*In its 15-year life the Pew Fellows Program in Marine Conservation has supported 89 Pew Fellows, each chosen on the basis of his/her potential to protect ocean environments.

A Room With A View

hat does it feel like to be at the end of the Earth surrounded by huge expanses of ice floes drenched in a magical silence, having amazing wildlife encounters, experiencing sun at midnight, and being together with old and new friends on a ship for three months? All that (not to forget some research too!) was recorded by David Thomas in his last expedition to Antarctica. An edited version from the original (http://www.nhm.ac.uk/news/items/2004/Nov/frozen_oceans_journal.html) is on page 2 to be shared with our readers.

Paddling To 7th Place in the World





Robiel Cripps, a 2nd year Mar Biol/PhysOcean student, took everyone by surprise including herself when she was ranked 7th in the World in the Free Style Kayak Championships, Penrith, Australia in January 2005. It was her first international event. What comes next? Two awards from the University's Athletics Union (Blues and sportswoman of the year) and an expedition to Northern Norway to explore some remote rivers (some never paddled before) with huge raging rapids and waterfalls to negotiate. All you need, Rosie says, is a small enclosed kayak, light paddle, a standing wave or re-circulating 'stopper' on a river and 45 seconds to do as many tricks as possible: huge aerial moves (with the boat and person totally airborne), forward and backward somersaults, and of course spinning and carving around on the wave in the boat. Simple, eh? I think personally I shall leave it to Rosie!!! (cont. p3)

ALUMNI of the 80's REUNION BASH 15-16 October 2005 Details on p11 What happened at the last reunion p12



The Bridge -----

The Bridge

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After two intensive years of planning, on Saturday 6th November 2004, 50 scientists from Germany, Australia, Belgium, Brazil, Canada, Finland, Holland, Russia, the UK and the USA left Cape Town, South Africa, aboard the German RV Polarstern. For the following 75 days this boat became their home for an expedition to the central Weddell Sea, Antarctica. Amongst them Stathis Papadimitriou and David Thomas from Bangor. For David it was the 6th time aboard Polarstern. For Stathis, from Greece, the first.

While unpacking of sophisticated scientific equipment was in progress, the ship's doctor was kept busy: seasickness did hit hard soon after Table Mountain and the lights of Cape Town disappeared in the distance. Yet as the air and water temperatures began to plummet down to 0°C, all the heartache and stress evaporated: petrels, huge wandering albatrosses, the occasional whale and majestic intricately sculptured icebergs, some as large as cathedrals became part of the everyday landscape under a bright sun. Soon Polarstern would spend her first week running to hide from storms as the wind increased: every last item aboard was lashed down ready for the David Thomas

"rock and roll" while the cranes, railings and deck surfaces looked as if dipped in a layer of thick cream as the spray from the waves froze.

Their journey took them via Bouvet Island, one of the world's most isolated islands with its giant cliffs, sweeping glaciers and its iceberg graveyard where icebergs grounded on the sea floor below are wrought slowly into weird and wonderful shapes by the waves. Then came the entry into pack ice, a frozen skin of the ocean, a few centimetres to 3 or 4 metres thick. The rolling motion of the ship stopped, the speed decreased down to 4 or 5 knots and the sound of waves was replaced by the haunting sound of ice scraping along the hull. The ship frequently stopped, went into reverse and then rammed the ice at full speed forwards.

Their destination ISPOL ice floe (Ice Station POLarstern) seemed to be constantly receding as sampling for temperature and salinity required a route as far west as possible. The search for a good floe became as challenging as looking for gold given the different requirements of the participants: for heavy sampling devices and weather stations a thick, old floe (more than 2m thick) was required in contrast with a thin floe (about 1m thick) for under-ice equipment. All frustration however was more than counterbalanced by the ship's cook and his Thanksgiving Dinner American-style with turkeys and all the trimmings.

On Saturday 27 November the ship finally docked at the edge of the ISPOL ice floe. An ice floe several kilometres in diameter and just a few kilometres away received a seven-man "International Ice Floe Reconnaissance Team"

A Room With A View (cont. from p1)

bright sunshine and clear, often cloudless, blue skies, the weather was perfect. Chainsaws, corers, drills, crowbars, ice saws and a lot of muscle power were deployed for cutting holes of more than 1m in diameter through the ice. Two weather stations were rigged up and sediment traps were hung 50m below the ice while ice cores and water samples were collected for biological studies and for chemical investigations of the structure and chemistry of the ice itself. Changes* in the ice and its biology over several weeks were monitored alongside the transition from winter to summer and to such purpose hitech sampling equipment was deployed: a humble soup ladle from the kitchen at home and a plastic kitchen sieve! Most samples were processed and ready for the freezer but some analysis such as the concentrations of nutrients, oxygen, pH and carbon dioxide were carried out on board.

Sampling during the day and analysing of the samples at night made a polar day feel perhaps longer than a normal working day. An unpredictable place, the pack ice is one of the most



A young Weddell seal posing through the hole for sediment traps leaving the scientists in agony as to the content of their sampling.

hostile places on earth and research success is at the mercy of the weather and ice conditions requiring a great deal of caution, patience and particularly stamina. Diving became a wary business with leopard seals nearby and those atop the ice had to be covered with litres of sunblock each day attaining the most "ghostly" look while trying to keep some experiments cold enough under the "midnight sun". After only a few days large cracks appeared on the ice floe. Within hours half of the floe was lost requiring one researcher to be rescued by helicopter and the swift reassembling of equipment and field stations. Not all were so lucky: groups using instruments and nets deployed from the starboard side of ship to sample the water (floe being on the port side) had to wait when the place became solid with ice. Nonetheless life had some funny moments like the sight of the Belgian team clothed in special clean suits and plastic bags over their boots and gloves to avoid contamination while measuring the iron content of ice; or some surreal feeling when David had to cross a 10m wide stretch of water paddling on a half-inflated** rubber boat between ice floes. Life even retained some normality with a wedding on board! Some legal wrangling permits long-distance marriages and so one of us married his bride who was in Brazil having her brother to sign the marriage certificate! After the customary wedding cake the bridegroom spent some quiet moments on his wedding night alone at the Honeymoon Suite of the Antarctic Hotel - a decorated tent on the ice. Christmas was celebrated with real Christmas trees kept in cold storage since Cape Town, and 'Silent Night' was sung in Dutch, German, English, Finnish, Portuguese, Greek, French and Latin! Plans for working half day on 25 December did not materialise when huge cracks developed in the early hours of the morning. The floe had to be abandoned and a major salvage job began. New Year's Eve was celebrated with a BBQ and a midnight champagne reception with the sounding of the ship's horn and fireworks: the out-of-date distress flares.

At 12.00pm on the 2nd January and after 35 days of drifting for 146 nautical miles with the floe - a small distance compared to the 7500 miles of the return trip from and to Cape Town - Polarstern broke off the floe. All was left behind were footprints, skiddoo tracks and a buoy which would transmit the position of the floe to Finnish researchers (via satellite), until the floe breaks up and the buoy sinks..... (It was

still transmitting data on 06/04/05 from 64.6° S, 53.5° W). The return journey began with a slow passage to open waters requiring heavy ramming and considerable deviations from the planned route. Soon rough seas brought back the nauseating feelings. The packing up began and the last nine days were spent working up the collected data and writing up cruise reports.

On the 9th of January, the journey broke for a short visit to Grytviken, South Georgia, an old whaling station complete with wrecked whaling ships, warehouses, boilers and the

huge vats that the whale and seal oil used to be stored in. Now a scientific base, Grytviken is the final resting place of Ernest Shackleton who died there on 5th January 1922. It was a poignant moment to visit his grave and consider how 90 years ago he and his crew made their famous journey by a combination of walking, small boat and of course, ice drift after their ship was crushed by the pack ice in the western Weddell Sea. It was a strange but welcoming feeling to walk once more on solid ground seeing green again, even flowers. Large numbers of elephant and fur seals as well as king penguins were scattered throughout the tussock grass, and it was a delight to watch the young seals playing in the kelp beds that filled the bay.

Once back home the ISPOL ice floe and the penguins became a distant memory almost never real. Yet ideas were tested for the viability and the collected data will busy teams all around the world for the next 2-3 years hoping that with time the jigsaw pieces will be pieced together to elucidate more of the secrets of the ice.

*Increase in temperature makes ice more porous

on skiddoos and sledges and suitable working areas were located under the eyes of a group of curious emperor penguins. Marked out by black flags, a series of 'roads' was set up between six or seven large patches (100-300 m²) of level ice for the different working groups. Cold but with

while the biological assemblages within and around the floes become more prolific. A rich coffee colour at places is indicative of microscopic algae and full of tiny crustaceans (about a millimetre long) that graze on the algal accumulations.

**To prevent ripping when in contact with ice.

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Hutton Fisheries Program (cont. from p1)

The goal of the Hutton Program is to stimulate interest in careers in fisheries science and management among groups underrepresented in the fisheries professions, including minorities and women. Selection is competitive and is dependent upon the quality of the candidate based on their school reports. Successful candidates are eligible for the \$3000 award to work alongside scientists studying an area of fisheries science with prospects for further funding in the following years.

Beal and Gene Fritz, who were honoured at the 134th AFS Annual Meeting with the Society's Distinguished Service Award for their contributions in establishing the scheme. The Program was approved by the AFS Governing Board in 2000. The Robert F. Hutton Endowment Fund - named after Dr. Robert F. Hutton, the first AFS Executive Director, serving from 1965 to 1972, and the AFS President from 1976 to 1977 - was established to receive contributions to support the program.

dents until now mainly in the USA. For most students, the Hutton Program is their first exposure to a professional work setting and all gain an understanding of what is involved in being a fisheries biologist, what qualities are necessary to be successful in this environment, the importance of being able to be part of a team effort and of the career opportunities available in the field while learning. In addition they gain an awareness of conservation issues by being involved in projects that benefit habitat restoration, protection, and management.

It was first developed by AFS members Ken Since its inception the program trained 160 stu-

SOS investigates: The Day After Tomorrow

n June 2004 a group of ten staff, postgraduate and undergraduate students from the SOS embarked on the R.V. Marion Dufresne, one of the largest research vessels in the world. Their envious task with Dr James Scourse as Co-Chief Scientist was the SEQUOIA cruise, part of the European Floating University in conjunction with marine science students from all over Europe. The cruise started in Lisbon, progressed northwards up the Rockall Trough to the west of Ireland, passed through the Outer Hebrides into Loch Sunart and

then down the Irish Sea, ending in Cardiff. Giant piston cores were taken which will help address the issue of the stability of the North Atlantic thermohaline circulation over the past 50,000 years. Such activities hardly remain unnoticed by the media and James Scourse was

quizzed live on BBC Wales about the film "The Day After Tomorrow" which had just been released. This was the first occasion that the ship had berthed in the UK and as such the event demanded celebrations with a reception held on board, attended by

Scourse



On the bow of the R.V. Marion Dufresne

the then Vice Chancellor of the UWB, Roy Evans and the Head of the French Polar Institute, Dr Gerard Jugie.

James Scourse

Paula Radcliffe Be Aware! Oceanographers on the loose...

o old oceanographers still bloom in the spring? Two Menai Bridge physical oceanographers from the 70s (Norman and Brenda) tested that biological hypothesis. In the spring of 2004, after over-wintering on carbo-loading and increasing levels of running, they ran in the Flora London Marathon. As well as being a sought after marathon event by both national and international runners, the London marathon is one of the largest single-event charity fundraisers with ordinary and celebrity runners collecting for their favourite charity. Thousands also chose to run in costume, anything goes, from ballerinas to phone boxes, cakes, Elvis, even lobsters.

Norman Babbedge, with the Environment Agency in Exeter, ran for Water-Aid, a charity supporting access to clean water in developing countries. Brenda Topliss, then at the end of her sabbatical at the Southampton Oceanographic Centre, used up any "surplus" energy to run for Breast Cancer research in memory of several

women scientists including two Menai Bridge physical oceanographers, Catherine Allen and Daphne Coombs (nee Winterburn).

No single London street can handle a mass start of over 33,000 runners. So the nonelite runners were split into two groups, a red start for the charity places (Norman) and a blue start for members of running clubs (Brenda). After 3 miles, runners in the two stream-flows had dispersed enough to merge into the same course over Tower Bridge, passing the Cutty Sark, the Tower of London and Buckingham Palace finishing in the Mall. A small chip attached to all runners' shoes, clocked their times as they ran over pads located along the route. For the first time, real-time access to runner's timings was expected via observer's mobiles. However like many first-time field programs, system glitches prevented that happening.

The spring weather on marathon day was cold, wet and windy eliminating any

Acknowledging A Legacy

official he opening of the Dennis Crisp Laboratories was performed by Glenys Kinnock MEP on 25th March 2004, at which a plaque in memory of Professor Crisp was unveiled at the entrance to the impressive new suite of laboratories and research seminar facilities. It is now over ten years since Professor Crisp passed away, and many members of the School of Ocean Sciences had long felt that his outstanding achievements in establishing a world-renowned centre for marine sciences at Bangor had not hitherto been appropriately acknowledged. Sadly, Mrs Ella Crisp was unable to attend the opening ceremony due to failing health,



chance of new world records for the international elite runners (the two lead Kenyan men were disadvantaged by the local conditions and fell on the wet cobbles around the Tower of London). For the Menai Bridge samples, the wet conditions provided the blue sample (Brenda) with beneficial heat loss control, but produced a nutrientmuscle deficiency for the red sample (Norman) resulting in a slightly later blooming. However, despite the working hypothesis that the physical should preceed the biological, the lobster "bloomed" before either of the physical oceanographers. Clearly further sampling is indicated.

Interim conclusions however say, "old oceanographers do bloom in the spring". So increase the sampling and give it a go people, but just watch out for those crustaceans!

Brenda Topliss & Norman Babbedge

N.B. Paula Radcliffe did not compete in the London Marathon in 2004.

Paddling To 7th Place in the World (cont. from p1)

Rosie started kayaking when she was 12 at a local canoe club and took a year out prior to studying to kayak in New Zealand. Bangor was the perfect place to learn and play: with an excellent reputation for marine sciences and with a university canoe club of a very good reputation. In the summer of 2004, after 8 years of kayaking and 3 days of intense competition Rosie's dream came true: she qualified for the Great Britain freestyle team. Balancing university work and kayaking was quite challenging to start with, especially with lack of daylight in winter, and none of her own transport - team training sessions were held at Nottingham every month running up to the main event. So Menai Strait provided enough water for freezing cold 6am training sessions during the week or a quick paddle between lectures. After her last exam Rosie set off to Sydney, Australia. The journey took almost 3 days on public transport and with kayak, paddle and kit it was quite an adventure.

SOSA The Founders (1996)

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The School Reports:

Appointments

Ray Seed has been appointed as a Trustee of the Development Trust the duties of which are to help oversee/protect the assets (>£3 million) of the endowment fund within the Trust.

Staff Changes

Des Barton (Senior Lecturer) is now Professor in Vigo, Spain, Kevin Horsburgh (Lecturer) has joined the Proudman Oceanographic Laboratory and Geraint Wyn Williams (Technician), is now the Web Site Manager with the North Wales Police, Llandudno.

The following members of staff have taken early retirement Malcolm Budd (Technician), Angie Davis (Senior Lecturer), Mike Jones (Technician), Alan Nield (Technician), and Graham Walker (Senior Lecturer).

Our best wishes to all of them in their new endeavours.

The SOSA Committee Reports

The committee met on 2nd October 2004 where final plans for the reunion were made. ideas for recruiting new committee members were voiced and a general review of the SOSA was done. The newsletter is in urgent need of sponsorship as it becomes more expensive every year -an alternative of producing an electronic version housed on the SOS website was discussed.

Glenys Kinnock at the opening ceremony

but the family were represented by son Graeme and his daughter Mrs Mary Wheater. Following the ceremony, Mrs Kinnock was taken on a tour of the new facilities. The visit was followed by a buffet lunch attended by various members of staff and postgraduate students.

The competition was held at Penrith Olympic Whitewater Stadium, Sydney. The qualification rounds where the top 10 women would progress into the semi finals saw Rosie pulling off the biggest air loop of the day getting her through in 9th place. Concentrating on linking moves together and getting enough air to breathe was hard with huge crowds watching and the commentator talking about her.

Bad bits? Oh, yes! Being terrified of the water snakes seen basking in the lake at the bottom of the whitewater course, and the presence of deadly spiders...

----- The Bridge -----

The Big Read

A BIG THANK YOU TO ALL THOSE WHO HAVE SO FAR PARTICIPATED IN THIS INITIATIVE BY GEORGE FLOODGATE

If you are interested in contributing take a minute to look at the list below and contact Gay Mitchelson-Jacob at egm@bangor.ac.uk

Send us a book of your choice directly or together with your friends contribute towards to the purchase of the more expensive volumes. A plaque with the donor's name will be inserted on the inside cover as a reminder to the reader that the past students care.

TITLE	AUTHOR(S)	PUBLISHER	ISBN	PRICE (£)
Hydraulics of open channel flow	H.Chanson 1999	Butterworth Heinemann	0340740671	38.99
Meteorology: Understanding the atmosphere	S.A. Ackerman & J A Knox (2003)	Wadsworth (Thompson Books)	053437199x	31.00
Invitation to Oceanography	P R Pinet (2003)	Jones & Bartlett Publishers	0763721360	24.99
The Oceans and Climate, 2nd Ed	Grant Bigg 2003	Cambridge U.P.	0521016347	27.95
Changing Sea Levels	David Pugh (March 2004)	Cambridge U.P.	0521532183	27.95
Conservation of exploited species	J.D. Reynolds, G.M. Mace, K.H. Redford, J.G. Robinson (eds) 2001	CUP	0521787335	30.95
The Ecological Detective: confronting models with data	R. Hilborn and M. Mange	Princeton University Press	0691034974	19.95
Benthic Suspension Feeders and Flow	D. Wildish and D. Kristmansen 1988	CUP	052144523x	65
The Two-Mile Time Machine: ice cores, abrupt climate change and our future	Richard B Alley	Princeton paperbacks	0691102961	11.95
Light and water	Curtis D Mobley (1994)	Academic Press	0125027508	82.95
Experiments in ecology	Underwood 1996	CUP	0521556961	27.95
Matrix Population Models	H. Caswell 2001	Sinauer	0878930965	52.99
Introduction to geophysical exploration	Kearey, Philip et al	Blackwell Science (UK)	0-632-04929-4	29.99
Vortex dynamics Series:Cambridge monographs on mechanics and applied mathematics	Saffman, P. G.	CUP 1995	0521477395	23.95
Natural enemies: the population biology of predators, parasites and diseases	Crawley 1992	Blackwell	0632026987	49.99

A LIST OF DONORS IS APPEARING IN THE NEXT ISSUE. Please let us know if you do not wish for your name to be published

Marine Scientist and NO Sea

In 2000 Jenny Gaiawyn signed up for a BSc in MarBiol/PhysOcean as a mature student aged 21 - the "gap year" she took in 1997 had turned into three years of full-time peace and environmental activism up trees, down tunnels and in prison. Unwilling to leave behind her beliefs she studied while continuing protesting, to the chagrin of some of the marine biology staff. She left Bangor with a first in 2003 to join a number of projects in the Middle East, the most recent one being Circus2Iraq, teaching circus skills to children using easily transportable entertainment equipment in Basra and Nasariya. Her Children's Art Project in Palestine and Iraq offered the children the chance to express themselves and to share their experiences by working around themes such as "future", "hopes", "fears", "dreams", "family life" etc. An exhibition from the collected pieces was shown at several venues around the UK during summer 2004. Jenny is now in Edinburgh doing an MSc in marine resource development and protection.



on my experiences that my acquired skills from the university were fully deployed. The delivery of oral presentations, even when it was only in front of friends seemed to turn most students into absolute wrecks but having good communication skills becomes essential, in both scientific and humanitarian work, whether defending a hypothesis, negotiating with soldiers, or relating events.

Another aspect of university life which benefited me greatly was volunteering with Student Volunteering Bangor, which should be morally compulsory. Not only does the work make a valuable contribution to the local community, I made friends, had fun, increased my confidence, and learnt new skills adding also a positive attribute to my C.V. A DATE FOR YOUR DIARY Bangor 22-24 July 2005 Reunion for Single Honours Marine Biology of 1995 For more information contact pickeringdiane@hotmail.com

Graduations, Prizes & Awards

The year 2004 saw 103 students completing their undergraduate studies in marine science and some 6 candidates successfully defending their PhD and MPhil theses, while 61 students completed the taught course component of their MSc degrees. Mr Ray Delahunty was posthumously awarded a PhD. Jennifer Mary Brown, BSc PhysOcean/Maths was nominated for the University's Dr John Robert Jones Prize.

Departmental Prizes	Value	Recipient 2004
Gavin Borthwick Memorial Prize*	£100	Paul Ivor Thomas

Generation First time I arrived in Nablus was in April 2002, answering a call for international observers to assist in the safe transport of medical teams. Having finished my degree I returned to the area in 2003 and apart from working with the youth medical teams, the equivalent of the St John Ambulance, I also joined Project Hope, a scheme to provide education and recreation services to youths and adults within Nablus and surrounding refugee camps.

At first I did wonder whether my degree in Marine Biology would be of any use in the dusty refugee camp at Balata where I began the classes in English amidst not the usual school conditions. However it was upon returning to the UK and having to give many presentations It is possible to find ways of using the knowledge beyond the letters after one's name gained from university. Many skills are transferable to different vocations, from reports - adjusting the content of articles, or presentations, to the audience and their background knowledge and interests, to debating - where the tools of scientific debate such as keeping an open mind and looking at both sides of the story come in to play. Any employer is looking out for people who are inventive in their application of the knowledge and understanding three years of study give".

Jenny Gaiawyn

Darbyshire Prize	£50	Jennifer Mary Brown
(Best finalist in Oceanography)		Jemmer Wary Drown
Darbyshire Prize Postgraduate (Best MSc in Oceanography)	£50	Nicola Jane Coulter
Ray Delahunty Memorial Prize**	Book Tokens	Rosemary Cripps
Jeremy Jones Memorial Prize***	£150	Christopher Pham
Fishmongers Company Grant****	£3,000	Isobel Poultney

*Set up in the memory of Gavin Borthwick and awarded to the most promising first-year mature student in Marine Biology. 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.

**Set up in 2003 in memory of Ray Delahunty and awarded to the best 1st year student of Joint Honours MarBiol/PhysOcean. Ray died in 2003 while studying and was awarded posthumous-ly a PhD.

***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.

Challenges And Rewards After SOS: Reporting From Malaysia



Teong-Jin Tan

Teong-Jin Tan, known to his contemporaries as TJ Tan, came to Bangor from Malaysia in the early 80's and graduated in Marine Biology/Physical Oceanography in 1983. He returned to his country where he dreamed of a secure future in the oil industry only to find out that this was not going to be the case.

returned to Malaysia in the mid-" 1980s when the country was in the grip of a severe economic recession. It was the nastiest economic downturn in living memory. I had hoped to work in marine pollution control in the oil industry with its potential exciting prospects and secure future. Oil had been discovered in Malaysian waters about 10 years earlier but although oil was a "growth industry" - oil is today's Malaysia's biggest export - at the time oil companies were tightening their belts hiring only "essential" staff. This didn't include people in pollution control in a young, developing country where environmental issues didn't feature very highly on many people's agenda. Agriculture was the economic mainstay and the poverty rate was still high. The country's leaders* were fond of saying that environmental conservation "is for the rich" and that "when we become rich we will also do conservation." The newspapers were among the few industries that were hiring. Having trouble finding a job in marine science, I decided to try journalism.

I ended up as a feature writer, doing stories on anything and everything in a local Englishlanguage daily, The Star, in Kuala Lumpur. Today The Star is the country's biggest selling English-language daily but at the time it was a young and still unprofitable paper. It was however a good place to work: its small size meant opportunities to work at different desks. I even did a stint as a crime reporter – to toughen me up, said my editors - with visits to the morgue at the General Hospital, interviews of policemen at crime scenes, and doing the "graveyard shift" - only going home at three in the morning after the paper had been put to bed.

It was a truly challenging time and I even got hit by a burly construction worker once for asking too many questions about a crack in the wall of a hospital that his company was renovating! The following day my paper carried the story about its "reporter being attacked"!

It wasn't easy writing newspaper stories at first. I remember my editor saying to me that I wrote as though I was writing an academic research paper, beginning with an "introduction" and ending with the "results and conclusion". What's news or important should come first, she said, explaining the "inverted pyramid" style to me: the least important at the bottom for easy cutting by the sub-editors if lack of space while the first few paragraphs should contain the five "Ws" – what, why, where, when, who – and one "H" – how – of the story.

One of my first and very memorable assignments was writing about the berok ((aka the pig-tailed Macaque or Macaca nemestrina), a moderate-sized monkey with a very short stumpy tail. Wearing a collar to which a long piece of strong cord is attached, beroks climb the tall and slippery coconut palms to pick the nuts directed by their owner who stands at the bottom of the coconut palm. An extremely intelligent animal, beroks are trained to understand at least a dozen words in the Malay language, essential if it is to pick the right nut amongst 30 coconuts on one tree : climb, pick, that, yes, no, large, small, green, yellow, hurry, don't, come down are all in the vocabulary of a good monkey.

I happened to be one of only two science graduates in the paper, the other holding a degree in chemistry. Deeming my degree as more relevant in demystifying science to the paper's readers, my editors sent me to cover the first-ever scientific expedition to the Endau-Rompin rainforest** in southern Peninsular Malaysia. The journey became an unforgettable experience and gave me the chance to see the daun payong*** (literally umbrella leaf) in its natural habitat and to cross an area of jungle-clad ranges of hills, set closely together, separated only by narrow ravines. The Endau, the main river flowing through the area, was in big flood, and the rapids were full of great boulders, against which the river dashed itself. It required all energy and wits to get to the campsite. Having just shot a rapid, and beginning to take things easy after our exertions, our attention was drawn by the thunderous noise of a large animal crashing through the bamboo jungle between the hill and the river: a great male elephant, 30 metres behind us, plunged into the river and made for the other side. Glad to leave him behind, we turned the next bend when we heard him trumpeting and he instantly appeared on the bank opposite us, plunging into the river while we screamed and yelled as loud as we could, hoping to scare him and avert an attack. Luckily he had not the slightest intention of molesting us but he had to cross and recross to get along the narrow bank.

I was ambitious. To get ahead in Malaysian papers then, you had to be a business or political reporter. From feature writing I moved to business reporting. Writing about business and finance and the commodities markets is a lot tougher than writing general stories. Financial reporting can be tricky. In the early days, it was not unusual for me to receive calls from, say, foreign exchange dealers to inform me that I had made glaring mistakes in my stories on the swap market. There were also threatening phone calls from irate palm oil traders who had disagreed with my analysis of the market and where it was headed. It takes years to develop the knowledge and to cultivate contacts. I had to learn a lot of things on my own. This is where my training at Bangor helped tremendously: learning discipline, how to carry out thorough research, how to be analytical and how to organise your own studying are essential for a good degree. While you develop an eye for detail, you learn to think for yourself and to be adaptable. And in the process you develop a love for learning.

In 1989, my experience in writing about business and finance enabled me to secure a job with Knight-Ridder, the US newspaper chain, which was setting up its very first bureau in Malaysia. The country, apart from being among the world's largest producers of primary commodities such as palm oil, rubber and tin, was becoming a magnet for foreign investment and an important financial centre**** in Southeast Asia. I reported for Knight-Ridder's international newswire, focusing on business, banking, economy, the financial and commodities markets, as well as political developments. I was now an international journalist, a "foreign correspondent" and a proud member of the exclusive Foreign Correspondents Club in Kuala Lumpur!

The 1990s was a period of tremendous development in the Malaysian economy and the Want to share with our readers how your life turned out after Menai Bridge? Contact the Editor

financial sector. The economy expanded at breakneck speed, with GDP growth reaching over 9% in the middle of the decade. The bond market took off. Islamic banking and finance were launched. A derivatives market was started. The first made-in-Malaysia car rolled off the assembly line. The Multimedia Super Corridor - the multi-million-dollar info-tech centre designed to propel Malaysia into the information age - was launched.

In 1995 I joined Asia Times, a new regional and global paper started by a Thai billionaire to rival the US-owned Asian Wall Street Journal. Investments were pouring in from Japan, Europe and the US and the stock market staged a dizzying once-in-a-lifetime super bull-run in 1993-1994, creating many millionaires. Malaysia was making great strides towards becoming a first-world country. The old Chinese adage – "May you live in interesting times" – was rarely as apt as in the Malaysian financial sector then for a financial journalist.

Then came the Asian currency crisis in 1998 and the financial meltdown in the region. Asia Times shut down in 1998 and I began to write for the Financial Times of London (based in Kuala Lumpur). Malaysia staged a remarkable recovery from the economic crisis in 2000 and the economy has been expanding steadily since. I left journalism in 2000 to seek new fields as a freelance writer specialising in finance and the environment – and as an investor in the stock and palm oil futures markets."

Teong-Jin Tan

*Now an "almost developed country" Malaysia is an environmentally aware land.

**Threatened by logging at the time the lowland rainforest was being studied by local scientists aiming for its protection. The 130-million-yearold jungle is now one of Peninsular Malaysia's premier national parks.

***This palm grows well in just two places in Malaysia – Endau-Rompin and in Kelantan in northern Peninsular Malaysia. It is prized for its value as thatching material - a thatch from it can last for more than 4 years, and revered by botanists as one of flora's wonders.

****Malaysia boasted the largest stock exchange in the region prior to the financial crisis in 1998.

Looking After World Heritage

Born and raised in British Columbia, Norm Sloan received his BSc Zoo/Mar Zoo in 1971 in Bangor and completed his studies in Southampton and London. He returned to his native land where he became the first marine ecologist at Gwaii Haanas in 1998. His extra duties today include overall science management for Gwaii Haanas National Park Reserve on Moresby Island and Haida Heritage Site, Haida Gwaii (Queen Charlotte Islands), off northern British Columbia, Canada. While enjoying the island life with his wife Lois and their two sons, Norm has the greatest challenge yet to come: getting the marine area declared after public consultation to include new relationships with commercial fisheries and greater federal agency cooperation.

Accessible only by boat or aircraft, Gwaii Haanas stretches over 1,470 km² of land and 3,394 km² of sea space with 1,700 km of shoreline. Its west coast is highly exposed to the open North Pacific and has a narrow shelf descending rapidly to >2000 m depth within 20 km off-shore. The east coast faces the Hecate Strait. Two warden stations and four Haida Gwaii Watchmen basecamps operate within the Park Reserve, the latter for the protection and interpretation of specific Haida cultural sites during the peak visitation season (May-September). An area of temperate coniferous forests on mountainous terrain along a mostly rocky shore-line, relies on a shared management between the Government of Canada (Parks Canada) and the Council of the Haida Nation (the local indigenous people).



Nan Sdins, Haida village, UNESCO WorldHeritage Site

From Receiver To Donor: How Cordan Makes A Difference

tephane Theurich graduated with a BSc in MarBiol/PhysOcean Colin replied to all questions even though he was busy offshore on a in 2003 and he shall be awarded his MSc in Marine Geotechnics be an advantage for the offshore industry and full of questions as to the real world of a marine geophysicist, Stephane contacted Colin Poat from the Cordan scheme, via email, to bombard him with his queries.

~~~~~~

cable route survey between Dubai and Singapore. Stephane was this summer. Undecided during his studies whether a PhD would impressed and while in his second day at work with Gardline Geosurvey ploughing through the quality procedure manual he sent an email asking to join the scheme which helped him sometime ago.

## WE DO NOT ASK FOR YOUR KIDNEY



Or

Share your work experiences at our Careers Fair Contact GAY MITCHELSON-JACOB egm@bangor.ac.uk

## SOSA

Please remember: since last year your Society's name is The School of Ocean Sciences Association

### What does the new name mean:

Membership to SOSA is free and automatic to all SOS alumni and staff unless they opt out. If you are neither staff or alumnus/a but wish to receive The Bridge you need to register with Gay Mitchelson-Jacob (see Personal Form on p9)

## Help SOSA In Its Aims

Contacts for individual projects as below

Choose a book from The Big Read List (p4) or contribute to the purchase of books or journals for the School library

> RAY SEED r.seed@bangor.ac.uk

Donations always welcome the Gift Aid Scheme allows us to claim the tax back from the government a £10 gift becomes £12.80

### CORDAN PARTICIPANTS 2005-2006

**Michael Cook RPS** Hydrosearch Goldsworth House Denton Way **Goldsworth Park** WOKING, SURREY GU21 3LG Tel: 01483 746502 Fax: 01483 746505 e-mail: mcook@hydrosearch.co.uk Advice on Geophysical and Geotechnical Site Investigation, Careers in the SI Business and **Development of Small/Medium Company Business** 

### **Nick Emerson**

Department of Land Surveying and Geo-Informatics The Hong Kong Polytechnic University Hung Hom, Hong Kong, CHINA Tel. (852) 2766 5961 Fax: (852) 2330 2994 e-mail: lsnick@polyu.edu.hk Advice on Hydrography and Applied Oceanography

### **RA Ford**

38 Grove Road Portland DORSET DT5 1DA Tel: 01305 822347 e-mail: bobford@avnet.co.uk Advice on Career in Teaching in Further Education

### **Colin Poat CP GeoServices** 1 Woodland Close Denbury Newton Abbot Devon TQ12 6DZ Tel and Fax: 01803 812977 e-mail: cpoat@aol.com Advice on Marine Geophysics as a Career Who, What, Where, When and Why?

#### Endeavour Society



| Established:       | over a cup of coffee by John Gray,     |
|--------------------|----------------------------------------|
|                    | a postgraduate student, in 1965.       |
| Named:             | after Captain James Cook's ship.       |
| <b>Objectives:</b> | to "stimulate interest in the science  |
| U                  | of the sea in all its aspects"         |
| Biographical:      | it grew over the years, fulfilling the |
|                    | aspirations of its founders;           |
|                    | folded in 2000; resurrected a year     |
|                    | later by Ray Seed, and                 |
|                    | the SOS Association.                   |
| Other:             | 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 landlord, Jonathan Thickett.    |

### ENDEAVOUR SOCIETY COMM/TTEE

| Chairwoman      | Lora Hassen-Hicks      |  |  |
|-----------------|------------------------|--|--|
| Secretary       | <b>Claire Davies</b>   |  |  |
| Treasurer       | <b>Rupert Bucknell</b> |  |  |
| Media           | Emma Goff              |  |  |
| Website Manager | Tonya O'Donnell        |  |  |

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

**Stephane Theurich** Gardline Geosurvey Limited Admiralty Road, Great Yarmouth, Norfolk NR30 3NG Tel: 01493 845600 Fax: 01493 852106 e-mail: stephane.theurich@gardline.co.uk Advice on Marine Geophysics as a career and generally working offshore.

**Ann Truesdale** Trials Co-ordination, Medical Statistics Unit, London School of Hygiene Keppel St London WC1E 7HT Tel: 020 7927 2376 Fax: 020 76372853 e-mail: ann.truesdale@lshtm.ac.uk Advice on Career in Health Services Research, **Public Health & Medical Statistics** 

### Thursdays at 19.30 Westbury Mount Lecture Theatre

For contacts, contributions to our talks or updates on our program www.endeavoursociety.org.uk

## Mariners Adrift

Do you have any information as to the people who have been lost from our database? Please let us know. 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 Beaver Ruth Beeching John Rutland Bishop Timothy James Block Martin Bowker Catherine Brady Amanda Brenchley Christopher Bromley Christopher W Browne Dylan Bull Chris Bunt Jamie Butterworth Kevin Butterworth Matthew Caine Andrew Campbell Andrew R Chadwick Mike Chalcraft Peter Nichola Charles Margaret Lucy Chatzifotis Stavros 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 Diserens Antony Paul Djama Theodore Dobbins Christopher Ross Doyle Joana Isabella 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 Graham Meriel Gray John R Green Damian John Grenon Jean-François Griffith Lawrence W T Growns Jane Eleanor Gwyther David Haddon Catherine Hall Stephen John Hames Christopher Andrew Hardy Malcolm Harris Aubrey Harris Philip Douglas Hartley John Andrew Hauksson Hilmar Jon Hearn Richard Charles Henson Gareth Hicks Robert F Hilliard Robert William Hills Andrew Hornung Andrew George Houlson Matthew Hovey Stephen J C

Howell Mark Andrew Humphreys Selina Jane Hutchins William Ingram James Ingram Richard Jackson Simon Jacobsen Matthew C James Ben James Martin L Jimmy Robert Iones David I Jordan Michael Brian Jury David Spencer King Claire Marie King Michael Kinglsey David Lang Simon Hamilton Larcombe Piers Laval Steven Leah Nicola Leslie David James Lewin David Lewis Kathryn A Lwiza Kamazina Madenlioglu Deborah Madison J Rachel Maguire Claire Malone Nicholas Desmond Mansfield Stephen Gary Masson Ann McConney Patrick Adrian McIntyre Lee McLean David A Misciatelli Natalie Mitcham Christopher Moore Debbie Moore James Jonathan Moore Nigel Morris Alan

Murray Patricia Nyandwi Ntahondi O'Grady Jason Owen Richard Pearks David Allan Peet Andrew Herbert Penty Sue Peters Ian Robert Pfannukuche Jens Philips Matthew William Poat Jason Michael Potts Anthony E Price Gareth Pritchard SM Probert David Pyne Rebecca S Ramsey Shanti Rees David W Roberts Graham Michael Robertshaw Andrew M Robertson SJ Robey Kate Jane Rutherford Bryan Salter Sean Andrew Sambul Dibba Scotchford Colin Anthony Scott Alec J Scott Charles J Scott Charlotte Fleur Sharples Paul Sharrocks Alexandra Mary Shaw Ruth Elizabeth Shearing Julian Shotton Ross Skov Martin Slater Julie Smallwood Jonathan Smith Adrian Smith Ian Philip

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 Thursfield Matthew Tootal Drew A C Trigg Michael John Trigg Mirna A Moctezuma Tsontos Vardidi Maximilian Vine Emma Wallis Selina Warnes Joanne Waterton Helen Louise Wells Rob White Jonathan White Keith White Michael Whittaker Alexandra Jean Williams Paul Robert Wynter-Dormer Julie Ann

Write E-mail Telephone

Keep in touch with old pals! Publish your name & address in the WET column.

Len Evans (PhD MarBiol 1965) lve@buckingham.ac.uk

Norm Sloan (BSc Zoo/Mar Zoo 1971) Norm.Sloan@pc.gc.ca

Tim Harvey (BSc MarBio/PhysOcean 1998) tim.harvey@crcreef.com

Teong-Jin Tan (Tan TJ) BSc MarBiol/PhysOcean 1983) jtjt@pd.jaring.my

Walter Hubbard (MSc FishMan&Ecol 1984) walter.hubbard@lycos.com

Adrian Spencer Smith (BSc Oceanography 1968) Komplek Mitra dago, Pearahyangean, Jl. Agave Blok M-17, Antapani, Bandung, Indonesia

Liam McGreevy (BSc MarBiol/PhysOcean 2002) 25 Byland Close, Bromsgrove, B61 7PL lpmacg@yahoo.co.uk

Martin Terence Gibson (BSc MarBiol/PhysOcean 1982) 6 Manor Green, Harwell, Didcot, OX11 0DQ

Richard Charles Hearn (BSc Applied Maths/PhysOcean 1976) would like to hear from Malcolm Cooper. 23 Thompson Hill Road, Canton, 06019 CT, USA

Alive and Kicking

Bairstow Joanna (BSc Zoo/MarZoo 1991, MSc MEP 1994) married fellow MEP student Hulme John (BSc MarGeotech 1988) is a Production Manager with Santos Ltd in Adelaide, Guy Clegg in 2000. They have a daughter born in 2001 and live in Cornwall.

Brandenburg Leif (MarGeotech 1993) has left Lufthansa and is now responsible for "Oil and Gelfort Ralf (MSc MarGeotech 1998) continues to work for his PhD at Kiel University. Gas" within the Federal Ministry for Economics in Germany.

Cave Rachel (BSc GeolOcean 1996) is now a lecturer at Galway University.

Crow Alex (BSc GeolOcean 1996) continues to work with Qinetiq in Farnborough.

Wells Rob (BSc GeolOcean 1996) runs Java Industries in Bangor.

Drake Francis (BSc MarBiol / BSS 1978) is travelling all over the Highlands and Islands of Scotland in his position with the Scottish & Northern Ireland Plumbing Employers Federation.

Evans Len (PhD MarBiol 1965) formerly Professor and Head of the Life Sciences Department, has been appointed Registrar of the University of Buckingham.

Finlayson Karen (BSc GeolOcean 1992, PhD MarGeotech 1998) works for RPS Energy (formerly Hydrosearch Associates) in Woking.

Garrett Justin (BSc OceanSci 1997) works for the Severn Trent Water Authority and he is married with one daughter Rebekah.

George Jackie (BSc OceanSci 1998) joined the Royal Navy where she has now completed her term of service and has returned to her native Cornwall. She maintains her interests in rowing, runs the local Guide Pack in Falmouth and keeps a wary eye out for emmets.

Australia and has been transferred to Houston, USA. He has recently married Jo.

Klein Gerald (MSc MarGeotech 1998) completed his PhD work during August 2003.

Fulop Anna (MSc Mar Geotech 1998) works for Fugro in France and/or Aberdeen.

Taokaew Pisit (MSc MarGeotech 1998) is in the rice family business in Thailand.

Schoolmeester Tina (MSc MarGeotech 1998) is working for a Bank in Barcelona.

Narayanaswamy Bhavani (BSc MarBiol /PhysOcean 1997) has successfully completed her PhD in Oban. Bhavani has married Keith in Scotland in 2002.

Poley (now Bolitho) Siân (BSc MarBiol/PhysOcean 1998) has successful completed her PhD and she is working as Product Specialist with Stratech Scientific.

Pyrah Jim (BSc GeolOcean 1992, PhD MarGeotech 1996) has now left Thales and works for The Engineering Business, Newcastle largely involved with renewable energy.

Robjant Mary (BSc MarBiol/PhysOcean 1997) is in Aberdeen.

Simpson (now Hind), Kate (BSc GeolOcean 1993) has successfully achieved the ACCA

Glennie James (BSc MarGeotech 1988) is a Chief Executive with New Zealand Wind Energy Association.

Gloth Stefan (MSc MarGeotech 1996) is with Schlumberger.

Griffiths Colin (BSc PhysOcean/ Maths 1978) is married to Mo and has two children, Bruce and Shona. He works for the Scottish Association for Marine Science in Oban and, despite the occasional "objection" from his knees, still maintains an active interest on the football field.

Halcrow Willie (MSc MarBiol 1970) has taken early retirement.

Harvey, John (Oceanography Lecturer until 1969) successfully climbed all of the 284 Scottish Munros. He has now moved from Helensburgh to Brooke, near Norwich.

Hayles Phil (MSc MarGeotech 1989) and North, Debbie (MSc MarGeotech 2000) have a son, Rowan.

Hillier Graham (MSc MarGeotech 1984) has moved to Monkswood, Monmouthshire in August 2004. He works with the Environmental Agency in Cardiff.

qualification and gave birth to Nathaniel, in May 2004

Syvret Martin (BSc MarBiol 1995) is the Seafish Aquaculture Development Representative for England and Wales.

Tipton Dan (BSc MarBiol 1995) is working for the Gwynedd Constabulary.

Wellman Sam (BSc MarBiol/PhysOcean 1997) had a daughter, Darcy, in April 2004.

Yuan Fajin (PhD MarGeotech 1996) works for Diamond Light Source Ltd.

Czerewko Moz (MSc MarGeotech 1989) and his wife had a son on 31st December, the last recorded "arrival" in Sheffield for 2004. Moz now works for Scott Wilson Kirkpatrick.

Ingram Caroline (BSc MarBiol/PhysOcean, PhD 1997) has been successfully running her own consultancy business for 2 years, managing research projects.

Marko Melendy (M.Sc. Shellfish biology, fisheries and aquaculture 1995), worked at the Aquarium of Genoa, Italy, the California Academy of Sciences, San Francisco, the University of New England and is now at MariCal, an aquaculture biotechnology company in Maine.

IN MEMORIAM

JACK DARBYSHIRE 1919-2004



ack Darbyshire was born into Welsh-speaking family in Blaenau Ffestiniog at a time of severe hardship in the slate quarrying communities. His father supplemented the family income by making wooden cartwheels in their kitchen. Jack attended the grammar school in Blaenau and obtained a First Class Honours in Physics at the then University College of North Wales in 1940. After a short period in industry he joined a group at the Admiralty Research Laboratory, Teddington studying the detection of submarines and other objects from their electromagnetic signatures as observed in large loops of cable on the seabed. With the impending prospect of the Allied beach landing in Europe during the

Jack Darbyshire World War II, this work gave way to wave studies essential in improving the forecasting of wave conditions and Jack made important contributions to such research. The most important characteristic in the wave studies was the realisation that waves in the ocean typically consist of the random superposition of waves of many different wavelengths and best represented in the form of an energy spectrum. To determine the wave spectrum from the raw wave data the group developed an ingenious analogue computer. The device - the subject of a paper in Nature in 1946 - was the first practical system for the rapid analysis of wave records and it enabled Darbyshire to demonstrate the frequency drift of swell from distant storms and thus locate the storm centres which, in some cases, were as much as 10,000 miles from Cornwall.

After the war Jack moved to the newly established " National Institute of Oceanography" at Wormley and he determined the effects of wind fetch and duration as well as windspeed on the wave spectrum. The outcome was the "Darbyshire" spectrum which is still used in the forecasting of wave conditions in many parts of the world. It was during this period at NIO that Jack met and married his wife Mollie, another Oceanographer involved in wave studies.

Jack's other major contribution was the pioneering measurements of the background vibrations of the Earth's crust, called microseisms. Using the seismograph records from Kew, Jack Darbyshire was able to confirm that the microseism signal could provide advance warning of approaching storms since the seismic waves travel much faster than sea waves. With satellite surveillance, such warnings from microseisms spectra became redundant but Jack continued an interest in the subject until late in his career.

After a decade at the NIO and a spell in Capetown as visiting Professor of Oceanography, he moved in 1963 to the newly established Chair of Physical Oceanography at UCNW Bangor, a position he held until the assimilation of the department with that of Marine Biology into the School of Ocean Sciences in 1986. Following his retirement Jack maintained an active presence in the School for many years. Although his lectures were not always the easiest to follow, Jack became an enduring favourite with students, not least for his ready laughter and sense of mischief. He was also an active Reader of the Church in Wales and, for many years, took services in Welsh in some of the parishes of southern Anglesey. He had an impressively detailed knowledge of biblical and historical matters and enjoyed arguing as much about such matters as about ideas in Oceanography.

Jack was an ebullient, larger than life character renowned throughout the world of Oceanography. He will be sadly missed.

Adapted from the obituary by John Simpson in THE GUARDIAN, 8 December 2004

GORDON ELLIOT FOGG 1919-2005



ordon Elliot Fogg, known as Tony to family and friends, was born in Langar, Nottinghamshire. He was the son of a

The Metabolism of the Algae (1953). His finding that microalgae released much of their photosynthate as extracellular material, available for growth of other organisms, was factored into estimates of global primary production.

In 1960 Fogg was appointed Professor of Botany at Westfield College London, a women's college expanding with the addition of a science faculty and, shortly after, the admission of men. Aware of the limitations of a small department, Fogg opted for specialisation: of the first eight academics recruited, four were cyanobacteriologists. In what Fogg would later himself describe as the happiest period in his academic life, he championed investigations of microalgae in cultures for understanding their contribution to the ecology of lakes and oceans and wrote short textbooks, The Growth of Plants (1963) and Photosynthesis (1968).

Fogg was smitten by Antarctica where he showed that colourful patches of snow algae resulted from growth within the snow pack followed by accumulation at the melting surface. He chaired the scientific advisory committee of the British Antarctic Survey for 13 years (1971-84) and he wrote The Exploration of Antarctica (1990), with paintings by David Smith, and the scholarly A History of Antarctic Science (1992). His son Timothy also worked in the Antarctic and the father/son contributions are commemorated in the naming of the Fogg Highlands.

In 1971, Tony Fogg moved to the Chair of Marine Biology at the University College of North Wales, at Bangor. After his retirement Tony Fogg remained active to the end, producing articles on science and his writing lost none of its wonderful, inimitable style. He was elected FRS in 1965 and appointed CBE in 1985. Tony was a formal but highly approachable Englishman, unruffled, never cross with people, kind with everyone. A gifted speaker, he delivered his lectures without notes sitting on the lecture bench, legs swinging. On committees he was valued for his succinct observations, often sorting out the unresolvable points behind the scenes. His diplomatic skills lead to chairmanships of the Council of the Freshwater Biological Association (1974-85) and the scientific advisory bodies of the Royal Botanic Gardens, Kew (1974-1982) and the Culture Centre for Algae and Protozoa. Tony also served as President of the Institute of Biology (1976-77) and of the British Phycological Society (1961-62).

Tony will be greatly missed by his students who often referred to him as "the last of the gentlemen".

Adapted from the obituary by Anthony Walsby in THE INDEPENDENT, 14 February 2005

ALAN GREIG 1947-2004

lan Greig was generally believed to be the UK's first ever "commercial oceanographer". After gaining a physics degree at the University of Lancaster he studied oceanography at the University of Wales, Bangor. His availability to the job market coincided with the explosion of interest in all aspects of physical oceanography brought about by the discovery and development of North Sea oil and gas. He joined Imcos Marine Ltd, London where he provided early evidence of his ability to handle unusual and stressful situations. His move to Hunting Surveys, Borehamwood, resulted in his exposure to the international market place and he continued gathering the wealth of experience which he was always willing to share with others. Upon closure of the oceanographic division at Huntings, Alan took

Alan Greig

© Carole Graig

his leadership of the group to Space Technology Systems Ltd in Alton, Hants. However, relishing a challenge he formed InstallOcean Ltd in 1989 in partnership with Roger Scrivens. This infant organisation initially provided specialist support field services to several major survey companies but soon developed a niche expertise within the developing market for met-ocean system installations aboard offshore platforms. Having acquired a 90% majority shareholding in the company in 1996 he subsequently sold the business to Fugro GEOS in 2002.



SOS

Tony Fogg

Methodist minister and his interests in plants began as a boy when he spent summers collecting herbarium specimens on his grandparents' farm. He was educated at Dulwich College and in 1937 obtained a scholarship to Queen Mary College London to read Botany. It was Fogg's pioneering studies on the cyanobacterium Anabaena cylindrica that established the organism's global importance in sustaining life on Earth. During the Second World War Fogg assisted V.J. Chapman in a national survey of seaweed resources for the Ministry of Supply. Years later Fogg discussed the survey's consequences in a

lecture entitled A Scientist Examines his Conscience: red algae were harvested for medicinal culture media; but kelps were gathered to make water-soluble silk for parachutes to drop mines at sea. A Wodehousian account of the survey entitled Strictly Marginal, by the three assistants, Dick Richens, Tony Fogg and Ralph Lewin, was published years later in 1995. In the closing years of the war, Fogg worked for Pest Control Ltd at Harston where he met Beryl Llechid-Jones who was investigating antimalarial drugs: they married in Colwyn Bay in July 1945. That same year Fogg was appointed Lecturer in Botany at University College London. He resumed work on cyanobacteria and microalgae and wrote a masterly monograph,

All who knew Alan had tremendous respect for his calmness, generosity and straightforwardness. He was also a brave man as demonstrated by the fact that, despite a fear of water and being a non swimmer, he subjected himself to having to escape from a submerged helicopter to gain his offshore certification.

Alan Greig passed away on 25 August 2004 following a short but typically brave fight against cancer. Alan leaves a widow, Carole, children Nicky, Amy and Ross plus grandchildren Kellie, Lauran, Jessica and Olivia.

He will be greatly missed by all whose lives he touched.



om Revell, a second-year Marine Biology student died in a climbing accident late May in 2004. Our sympathies go to his family.

P

Careers and Opportunities in Research and Development: Alumni Network

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 established 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	
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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.

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.

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The 'Stall'

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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 incl. Anyone interested please contact Barry Paine at barry.paine@wildvoice.co.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 SOSA & ASK THEM IF THEY RECEIVE THE BRIDGE.

THANK YOU

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 by Patricia Ballard. The painting 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.

Across the Bridge (Hardback, 273pp) £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.

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FOR YOUR ORDER THANK YOU



A gradient of the summer of 1998. I was disappointed that the University had not seen fit to reward my brilliance with anything less than a dynamic 'First' but

relieved that I had survived. To ease my anguish I sought an escape. The Foreign Legion was not an option as I was too old. This left only the tried and tested avenue that British had followed for centuries: an outpost of the empire, preferably the Antipodes. I left the green shores of the N Wales for the sunburnt coast of Australia where I owned 150 acres of 'bush' complete with 600 metres of river with a detour of 2,000 kilometres north to tropical Queensland to undertake a PhD at James Cook University; an anticipated stay of about four years before turning into a real working scientist.

Two friends from the Bangor cohort also washed up on these southern shores. The speaker of decent English and collector of beautiful girlfriends, Tim Langlois, unfortunately didn't quite swim far enough ending up in New Zealand. The other, the mangler of the English language and all-round fashion disaster, Oli Floerl, sadly, became my house mate. I learned enough German to order a beer, and Oli got a doctorate at James Cook Uni. I like to think it was partly because of the brilliant coaching in English he received from me (Repeat after me Oli 'This is a flower and this is a warthog'). The truth is that he was extremely intelligent and VERY industrious, now carrying out invasive species surveys along the coast of New Zealand.

On my arrival here I couldn't get any funds to support me: here I was, Australian-born and able to recite the names of the whole of the Australian Rugby League team plus sing all of Waltzing Matilda and I couldn't get a bean. I dallied with destitution, and eventually had to get a job helped out by a fellow ex-SOS refugee, Piers Larcombe. Although I had some interesting experiences (like trying to drag a 12 ft rubber dinghy off a sandbar in the middle of a murky river with VERY large crocodiles 20 metres away) it was largely a vagabond existence.

So, fearing debtors prison, I somehow talked my way into a job with the University as the Funding Officer: I chased money for research and became very good at writing funding proposals, but I hated the job. So I moved to CRC Reef which oversees research on the Great Barrier Reef (www.reef.crc.org.au). I am now the Project Manager and responsible for our 90 postgraduate researchers.

Distressingly, distracting pastimes such sailing here are just so easy. Gone are those wonderful days of peering with teeth clenched into a howling SW gale and slowly going numb while thinking about insurance and life boats. It's a doddle here. My ex- partner and I handcrafted a Polynesian sailing canoe although the picture of a sleek craft parting the azure waters of the Pacific Ocean is still some way off and we lost all credibility a couple of years ago, when having just been part of the crew of a yacht that, quite by accident, won the Townsville to Dunk Island Blue Water Classic (an obscure Antipodean sailing competition) we were overtaken by a tropical storm on our way back: the boat sunk leaving us shipwrecked on Hinchinbrook Island. The resulting airlift off the island was somewhat embarrassing. Heroes to zeroes in 48 hours.

Sadly I am still working and studying in the tropics and I can assure you that it is hell. The thought of diving in water at 28° C (hitting 30° C in the height of summer, and plummeting to about 23° C in the dark days of winter) is enough to make a grown man weep. I yearn for the days of braving ice and early emasculation in the Menai Strait, and donning enough neoprene

to pass as a Michelin Man. Diving in the tropics has become fraught with indecision. Shall I put on a T-shirt or will I be too hot? Not a decision to be taken lightly I can assure you.

It is hard to juggle a full-time job and studies, particularly as a tangential turn saw me become heavily involved with sea turtles and I have been President of the Indo-Pacific Sea Turtle Conservation Group since 2002. It has absolutely nothing to do with my PhD but it is far more interesting chasing turtles in the Coral Sea on some of the most spectacular cays you can imagine, than digging in mud. It also strokes my ego and appeals to the performer in me: interviews on the radio and TV as the Conservation Group has featured on the Discovery Channel, on the ABC (the Australian equivalent of the BBC) and on a Blue Peter Special about the Great Barrier Reef. I now have a Blue Peter badge. All I had to do was swan about driving a high powered speed boat looking vaguely intelligent and keen (actually not that easy.......'Tim darling, could we just do that shot again, the one where the turtle drags you underwater, I know we have shot it three times already but the cameraman would just like to get a close-up of the turtle's head as it dives for the bottom, so could you make sure that your hands are behind its neck and try not to look as if your lungs are bursting'. TV crews are not the easiest people to please.

I give regular talks to schoolchildren and the general public about sea turtles and I am currently developing a series of environmental programs for a local radio station, where I already host a regular music program. The challenge is to keep the programs interesting for the lay person without venting my frustration and anger at the wrecking of the natural world by humans. I also spend many weeks working on remote islands monitoring sea turtle populations, which despite the idyllic image it conjures up is actually very hard physical work.

Although I still stumble along with my PhD it is hard to juggle a full-time job and studies. In addition my conservation work is a passion and seems to be taking over my life. Perhaps I should chop my PhD and write it up as a Masters degree to get the whole thing out of the way. At my age I am not going to carve a meteoric career in the scientific firmament, particularly with diminishing energy levels: I sometimes feel like disappearing into the bush or retiring and bouncing grandchildren on my knee instead of thrashing about in the sea trying to hang on to some irritated turtle.

We only get 2 seasons down here: a 'wet' one (our summer) and a 'dry' one (our winter). In the 'wet' (November-April) cyclones and monsoons hammer down with rain: dramatic floods and destruction ... bridges disappear and boats end up in peoples' back yards; temperatures reach about 37° C and the humidity is unbelievable.....The 'dry' season is the best time to be here: we get a sky as clear as a bell, no rain whatsoever with temperatures around 26-28° C and no humidity. The rather unbelievable thing here is that there is not really a beach culture. During the 'wet' season the sea is full of jellyfish which can be a bit on the terminal side if you brush against them, and crocodiles (there are signs all over warning of cautious swimming). During the 'dry' season the average N Queenslander wouldn't go near the sea because it gets as cold as a tepid bath! With the exception of sailing and fishing, divers are the only people who regularly get IN the water. By the way our local bay is a nursery for tiger sharks, large, with a lot of teeth. Come to think of it maybe the Menai Strait did have its plus points.

So what of the future? I'd like to finish my studies and then build a cabin on my bit of land. Among other things I'd like to be self sufficient, spend more time writing, painting and designing sustainable systems, design and build a live-aboard catamaran and spend more time at sea, visit Antarctica, and learn to fly a micro-light. Above all I would like to reach 90 years of age and still be asked when I intend to grow up. To be able at the end to still have intense curiosity and a staggering wonder at how truly amazing everything is.

> **Tim Harvey (1998 BSc MarBiol/PhysOcean)** May 2005 Townsville, Australia

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66 A s an ordinary guy, "bloke", and what the UK really was; I certainly knew the geo-political difference but not the historical one!						

experience, the UK was an "2000 miles" by Pretenders was in the charts and that, if not more, was the distance between



Walter Hubbard

unfamiliar term. I was keener to the American way since my family and I, as Mexican citizens, living "next" to the American Border, Tijuana or Nogales, always tried to get or jump onto the American novelties.

When luck got me a grant from the British Council, I never thought it was going to be my pass to know and live the "love of the common people".... remember that song played by Paul Young which was an appealing way to get to know how ordinary British families

lived...?? Suddenly, Dr. Marten's Shoes were not part of a fashion but real life. Those who are "young at heart" but old in age, just like me, are going to evocate and eventually recapture the essence of those 83/84 years with the help of that music played by the scarce radio channels on the air in the U.K., or seen at "Top of the Pops" on the telly when TV areas were luckily available at the dorms, since Bangladeshis and some other ethnics groups including Latinos were catching up with the English language using the TV News. Those people never understood that Coronation Street and stuff like that was good enough to solve the mystery of Welsh accent...!! Took me a while to understand the difference between England and Wales

our new home and the real one. Certainly we were anxious to see the snow but not ready to feel the loneliness in it. I still recall staring at that little cartoon on the Student's Union wall saying: "Here I am as a new student, thinking what others had thought before me about choosing Bangor....If only I had had better grades...." Certainly that was a joke but it made me shiver, was I going to live in that "world distant to London" village...? Well, fortunately, I did. Took me a couple of years to understand how good the education received was but I certainly realize that is more important than the experience of being British, at least for a while. Bangor was the perfect town, the people and the place were exactly what I did not know and expected. Nothing like the US, only friendly people... I say, there was racism but it was mainly against the English.... after a failed soccer match! Immediately I was part of the town, became a regular attendant at local pubs, the White Lion, the Menai Arms, and the King's Head, arm in arm with the milkman, the postman, and the rest of the UB40 fans; it is then when I learned that UB40 was more* than a reggae group but a criticism against that almost perfect establishment perceived by me.

Had the chance to return once, took my wife and the kids, the eldest was surprised at how "big" my room was but he loved what he saw and now we all expect he is big enough to return to that special and unique home.

Walter Hubbard

*The Unemployment Benefit form 40 was a Government form to be filled when applying for unemployment benefit, hence the immediate acceptance of the musical group.

The Bridge



I certainly enjoyed myself. It was worth coming all the way from Kuwait. Thanks for all your hard work, Gay.

12



Well, Prof, I actually agree with the lads. If I knew I would have removed them myself!... but next year....



CONTACT THE EDITOR ioanna.psalti@scarlet.be

Although all dialogues are purely fictitious, there is a moral to the story: Wear something blue next time it is your reunion. At least you will be colour-coordinated. Alternatively come and help our Committee by inserting much needed new blood.

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