

Newsletter No 23

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Emeritus Faculty Australian National University



The ANU Emeritus Faculty,
Fellows Lane Cottage - Building 3T. [See www.anu.edu.au/emeritus for location map]
Postal address PO Box 6050, O'Connor, ACT 2602. Phone: 02 6125 5309 Fax: 02 6125 5262

Climate Change debate opens up

A Conversation engages Emeritus Faculty

The Emeritus Faculty Newsletter continues its series of contributions aimed at provoking discussion on climate change. You are invited to contribute – as individuals or as groups, by way of short or extended statements. Nothing will be excluded, but may be edited for length (with the approval of the authors).

Are you a climate change believer or are you a sceptic about any part of the idea? Are you not sure, but would like to ask questions? Do you have suggestions for our government or for the international community? Please join in the conversation by emailing observations and arguments to the Editor of The Emeritus Faculty Newsletter (published quarterly).

Peter Stewart responds to Professor Barry Ninham's article in Newsletter No, 22 on the Ross Garnaut lecture

Ross Garnaut's advice to government for economic action in response to global warming has been rejected, for the most part. Sceptics abound – those who see the economic actions proposed by Garnaut as too draconian (eg the Rudd government), those who see them as too weak (eg the

Greens), and those who see their scientific basis as unsound (eg Ian Plimer and Barry Ninham).

Kevin Rudd's recent diatribes against sceptics and 'deniers' identified a new group – those who don't like Rudd's CPRS/ETS scheme - National and Liberal Party non-believers. It's all becoming very complicated – sceptics of all sorts, as far as the eye can see.

I'm a sceptic too, but not a denier. I'm a biologist, not a climatologist or chemist like Plimer and Ninham. However, as a scientist, I believe that if a bunch of expert scientists get together and say the earth is warming and it's due to CO₂ produced by humans, then the facts demonstrating those simple ideas should be available to me in the form of evidential measures of temperatures and CO₂ concentrations over extended periods of time.

I should then be able to apply logic and rules of evidence of the sort that I might encounter in my work, or on a jury, with complex evidence reduced to understandable words and simple ideas.

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I've attempted this recently, and I set out below what I've learnt – for the consideration of you, my reader and non-expert co-juror, as it were. I'll list later where I got the evidence and the basic understanding needed – anybody on our jury should be able to do the same and figure the basic observations out for themselves. Who knows, you may come up with a different answer! We can sort that out in the jury room later.

Both climate change and global warming and cooling have occurred over the past million years, and will continue to occur, human activity or not. The Sun is a huge heater pouring energy onto and into Earth (sustaining its current surface average of 15 degrees) as it has for about four billion years (or longer) and will do for another four billion (or longer). Small variations in Earth's orbit around the sun and in Earth's axis of rotation, plus other variations less well understood in the Sun's chemistry, plus even less understood tectonic (Earth-centred) effects, generate ice ages (about 90,000 years long) and short interglacial (warm) ages (about 10,000 years long). The temperature difference between these cold and warm periods is 8-12 degrees. These alternating periods have occurred sequentially each 100,000 years or so, over the past million or two years. It is reckoned that *Homo sapiens* has experienced two of these cold/warm cycles.

Earth has been in a warm period (the Holocene epoch) for about 11,000 years. It is probably no coincidence that this warm period encompasses the development of agriculture and human civilization. Small variations in global temperature (about a 2 degree range) have continued during the Holocene, warm periods interspersed with cool, roughly 500-600 years apart. We are now about 2 degrees warmer than in the last cool period (the Little Ice Age, at its coldest ~ 400 years ago) and ~600 years before that the Medieval Warm Period with similar temperatures to those today. Within the next thousand years or two, Earth should start cooling again, moving back into an ice

age when global temperature will drop about 10 degrees based on the evidence of previous cycles.

Global warming as such is not the issue in climate change debate, though the popular media (and assorted shysters) make it seem so. We are in a warming period, little different quantitatively to that which preceded the rise in temperature to the Medieval Warm Period. A decline of Arctic, Greenland and Antarctic ice would have happened in that warming, but nobody had the technology a 1,000 years ago to record it.

The central issue in the climate change debate is not whether global warming is happening (it is); the issue is the extent to which present and near-future warming may be due to human activity – so-called anthropogenic climate change (ACC).

And, if ACC occurs, the next question is: is it possible to counter or avoid such change? Barry Ninham (and Ian Plimer) emphasise temperature changing processes on Earth which are extra-terrestrial in nature (usually solar or extra-solar in origin, directly or otherwise) and therefore beyond any countering by humans, now or ever. The forces are too great, and their origins far remote from Earth.

The greenhouse believers (Ross Garnaut's scientific advisers), by contrast, see global warming as due to increases in CO₂ and CH₄ (both major greenhouse gases, but not the most important ones, as we'll see) generated by industrial, agricultural, and other human activities. Hence these scientists argue for a considerable human input. The scientific model for the greenhouse effect of these gases appears to be sound, and as Barry Ninham tells was first proposed by Arrhenius late in the 19th century. But does the evidence of temperature and CO₂ concentration over time fit what the believers are predicting?

Unfortunately for the believers – no. But this has not stopped them rushing ahead with complex models describing an overheating Earth which will become socially and economically, if not biologically, uninhabitable within the next few centuries.

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Unfortunately, too many of the believers and their lay followers think that science is some sort of democratic process – if enough scientists believe/vote that the world works in such-and-such a way, then that must be how it is. This is not so for *any* new hypothesis in science. As Albert Einstein once famously observed – “what will change my mind is not 100 scientists disagreeing with me, but one new fact contrary to my hypothesis”.

The recent (Holocene) climatic evidence suggests that the greenhouse model, despite its soundness in principle, is not doing what it should. Though in one millennium it might. There is simply too much noise and variability in climate to be able to predict the sort of future temperatures now being touted by the believers. Hence, the sceptics ask – are the dramatic economic and social engineering proposals, nationwide and worldwide, aimed at countering increases in global CO₂ worth the risk of the huge social and economic disruption that will inevitably result?

Most greenhouse believers offer recent short intervals – 30 to 150 years typically – of temperature rise (typically about one degree or less) as evidence for the validity of their model; 1850 is supposed by believers to have been the beginning of ACC, coinciding with the onset of CO₂ rise due to burning of fossil fuels by industrialising nations). But while the past 40 years have indeed seen a significant rise of about a half a degree in both global temperature and atmospheric CO₂, the correlation is not steady. Moreover, the 30 years prior to that saw little change in temperature accompanying an *equal* rise in CO₂. But such short periods should be avoided when considering variable and slow moving parameters such as global temperature, and then extrapolating them for extended periods ahead.

Let's take a longer period, a couple of millennia, the Common Era. The Medieval Warming (about 1000 years ago) and the subsequent Little Ice Age (about 600 years later, and ending about 150 years ago) are included in this period. Written historical

accounts are available to confirm qualitatively the different temperature regimes. For example there was farming in Greenland, viticulture in England and Newfoundland, and freezing of the Thames.

Now, we don't have direct measures of temperature this far back in history. The modern thermometer appeared in 1742, and systematic measurement of ocean and air temperatures started about 1850. Instead we use 'proxy' temperatures such as indirect physical-chemical measures made on cores extracted from ocean and lake sediments, or from ice packs, which are generally accepted as valid by both sides of the argument.

Temperatures over the 2,000 year CE period have fluctuated, both warmer and cooler than today (about a 2 degree range), although there is wide disparity for data series generated at different places, by different research teams. But against this variation in temperature, CO₂ concentration from the same cores has remained remarkably constant (280-290 ppm) for the first 1,800 years, then rising by ~ 40% to the current 390 ppm in the last 200 years.

This lack of consistent relationship between CO₂ and temperature over long periods is not supportive of the greenhouse model.

We can extend the observations back through the 11,000 years of the Holocene epoch, and the pattern is the same – remarkably constant atmospheric CO₂ concentrations against fluctuating global temperature, both significantly warmer and colder.

The most recent 200 years is the only period in which there has been a significant rise in atmospheric CO₂. Why should the greenhouse model not have applied in those millennia before this recent period?

What is the cause of Earth's temperature variation in the face of steady atmospheric CO₂ concentration back through these older periods? Is it not possible that the temperature rise in modern times is due to whatever caused such a temperature rise (in the absence of rising CO₂) on a number of occasions in the past two millennia, and many times during the 11 millennia of the Holocene?

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And thus are modern temperature rises and CO₂ increases simply coincidental and not causally related?

Is it possible that other factor(s) determined global temperature during the Holocene? Perhaps CO₂ concentrations are simply not high enough to produce the effects predicted by the greenhouse model (after all, CO₂ is a trace gas in the atmosphere, present at well below one part per thousand of the nitrogen, oxygen, and argon that are the major and non-greenhouse gases in air).

Barry Ninham mentions Freeman Dyson, another eminent sceptic. Dyson believes that not enough account has yet been taken of water, the most prominent greenhouse gas in the air. The problem with water is not a conceptual one, but a practical one. Water exists in the atmosphere in three different physical states – as gas, as liquid (rain, mist, cloud), and as solid (ice/snow), each interconvertible into the other. Its average total concentration is 20 times or more that of CO₂, but the concentration fluctuates greatly (eg as humidity varies) in some complex way determined by the temperature and dust content of the air, and by fluxes of particles generated by the sun.

Water in its various forms in the atmosphere may thus be too hard to model, and therefore to understand as a greenhouse gas. Nevertheless, rough approximations have been made – water accounts for 36-66% of the greenhouse effect, and 66-85% of the effect when clouds are factored in (clouds reflect heat back onto Earth, as well as blocking and reflecting incoming solar radiation). Interestingly, total water concentration in the lower atmosphere has been increasing at a trend rate of ~ 1% pa since satellite measurements of it began in 1980, and the increase is highly variable year by year. Over the same period, CO₂ concentration has increased at a trend rate of ~ 0.4% pa, at a remarkably smooth rate year by year.

If modelers are seeking a greenhouse factor which shows short term variability consistent

with short and long term temperature variability, water may well be it.

And finally, what's to be done? As I noted earlier, climate change is happening, and the present expression of this is global warming. Whether humans are causing or contributing to this is what our jury is to decide. In Scotland, I'm told, there are three options for a jury – guilty, not guilty, and not proven. I will vote for the last of these, for the moment, which is why I count myself as a sceptic but not a denier. While the greenhouse model is sound, the evidence adduced for CO₂ as the cause of present or near-future global warming is not. But it could yet convince. In the meantime, action to counter any anthropogenic input to global warming would have to be taken on non-scientific grounds – guesswork in other words.

However, if we could agree meantime on *non-anthropogenic* global warming, then there are useful actions for humanity to take.

- Global warming, I'm told, will result in melting of massive amounts of Greenland and Antarctica ice, and thus lead to serious ocean rise. There are practical measures we could take to counter this, such as moving populations and relocating infrastructure.
- Global warming will decrease rainfall in temperate zones, such as those that support the sheep, cattle, cereal, and horticultural production areas of the southern half of Australia. Again there are practical steps that could be taken (as is happening now, in parts of Australia) to mitigate drought and desertification.
- Global warming may increase storm events and rainfall in tropical areas, meaning agricultural production may improve in these regions though human security may be threatened. We could take measures which would counter the security threats, and take advantage of the greater amounts of rainfall and runoff that may occur.

Each of these possibilities suggests practical, if expensive actions, for Australian and foreign governments, communities, and individuals to take.

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We should consider these instead of CPRS and ETS schemes, and the folly of seeking international agreement on decarbonising industry, agriculture, transport, and domestic heating and cooling. Even so, on other ideological or philosophical grounds there may be benefit in looking at reducing the energy content of many human activities and products over the longer term.

Where do my data and explanations come from? I've used Morgan and McCrystal's interestingly 'objective' analysis – *Poles Apart: Beyond the Shouting, Who's Right About Climate Change?* These authors enlisted and paid two (named) panels of international experts, one of 'alarmists' (as the authors call ACC 'believers'), the other of 'sceptics'. The authors asked the panels to persuade readers (and document their arguments), concerning the anthropogenic component of climate change. Morgan and McCrystal then invite readers to draw their own conclusions. I recommend the book, whichever camp you follow, for its succinct summary of what is agreed and what is not by the two camps, using language (and with explanations) accessible to non-scientists.

www.wikipedia.com/greenhousegases is an excellent internet site for basic information; it is more convenient and focused than Google searching, and does not throw up the fringe crazies (from both camps) who beset the Google site.

www.csiro.org is also a good internet site, even if biased somewhat by its 'believer' contributors and sponsors.

On a final note, I believe the issue of anthropogenic climate change is causing damage to the general cause of science in the Australian community. And maybe to the causes of respectable economics and politics, too. There is a whiff of McCarthyism about – Kevin Rudd's increasingly shrill attacks on deniers, George Monbiot's "*climate change denial now looks as stupid and unacceptable as Holocaust denial*" in *The Guardian* (UK), Guy Rundle likening sceptics to "*Lysenkoists*

of the Right" in the *Australian Literary Review*, and John Gray's "*a lunatic fringe that questions*" in *The Monthly*. Do I detect similar sentiments among some of my own colleagues? Somehow, it doesn't feel right amongst scientists.

And is the increasing stridency in public discussion a reason for the drift away of Australian public interest in this issue, as detected in recent newspaper polling?

Will Emeritus Faculty's invitation to debate help head off stupidity and intolerance?

Summary

Present day global warming may simply be part of the Holocene epoch (past 11,000 years) 1-2 deg temperature 'noise', or natural variation; atmospheric CO₂ concentration has remained remarkably constant over the greater part of this period. The short recent period (<200 year) in which CO₂ has been rising must be demonstrated to be other than coincidental with the concurrent irregular rise in global temperature to provide a sound scientific basis for the profound economic and social engineering mitigations now widely proposed.

Peter Stewart

1 December 2009

Letter to the Editor

ANU Emeritus Faculty Newsletter

Reflections on Barry Ninham's views in Newsletter 22 about climate change.

It seems to me that both sides of the anthropogenic climate change debate, though hyper-informed and well intentioned, are getting it tactically wrong.

As Barry Ninham's reflections summarised, the sceptical or outright denial side is not convinced "that anthropogenic CO₂ is a climate change gas.". This view, as presented at greater length by Ian Plimer might be more persuasive if, instead of diverting us with the many non-contentious factors that may have caused climate change in the past, he'd simply cut to the chase. **Continued next page**

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Does atmospheric CO₂, whether anthropogenic or not, have an over-all climate warming effect? For depending upon the answer to that single question many national and international policy decisions should logically follow.

The above question also exposes what I think is a tactical error being made by the side now pressing for urgent action to reduce anthropogenic CO₂ in the atmosphere. Instead of making pronouncements only the *cognoscenti* can assess about the imminent dangers of irreversible climate change due to rising atmospheric CO₂ levels it should be a simple matter for present day physicists to explain in simple basic terms most of the general public and their politicians can understand just how CO₂ produces climate warming. Because the socially and economically disruptive measures now being proposed to limit anthropogenic CO₂ will not succeed unless the general public understands enough to judge between the inevitably continuing rival claims.

And for myself? I find the physics about the climate warming effects of atmospheric CO₂ compelling, and for that matter also of water vapour, methane and nitrous oxide. So whatever political compromises may emerge from Copenhagen, my scepticism centres on whether sufficient ill informed and thus inadequately motivated populations will actually implement them. One can take a horse to water..

Ron Wells, AM, MD.,
ronwells@pcug.org.au
Submitted on 23rd Nov 2009

More research into climate adaptation required

The Australian Institute of Agricultural Science and Technology (AIAST) has shared its concerns about research funding with the House Primary Industries and Resources Committee.

AIAST notes in its submission to the inquiry into Australian farmers and climate change (Submission no. 63) that: "Australia has for many years boxed well above its weight in the area of research and extension. Until a few years ago our agricultural productivity was growing at more than 2 per cent per annum, despite difficult seasons. That has now changed and our performance has plateaued. One of the main reasons for that has been the large reduction in research and extension which has meant that we have been living off of our intellectual feedstock... This situation needs to be reversed immediately if we are to provide the technologies and extension services to farmers as an essential part of them adjusting to climate change."

AIAST is also concerned about the potential impacts of policy responses to climate change, stating in its submission that "What we do need to ensure is that government policy responses to climate change do not exacerbate the impact of the change itself on agriculture!" AIAST notes that: "Given that the impacts of climate change will be gradual, we are confident that farmers will adapt to the on-farm issues into the future. Just how readily they will be able to do that depends not just on their own capacity but on off-farm influences including the impacts of government policies."

Further information: contact the Inquiry Secretary (02) 6277 4500, email pir.reps@aph.gov.au or visit the Committee's webpage at <http://www.aph.gov.au/pir>

Australian coastal report released

The House of Representatives Climate Change, Water, Environment and the Arts Committee has released its inquiry report, *Managing our Coastal Zone in a Changing Climate: the Time to Act is Now*.

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The report calls for new governance arrangements for Australia's coastal zone and makes recommendations to improve management of climate change and environmental impacts on the coast.

The inquiry generated a high level of interest from the Australian community, with over 100 written submissions and 180 exhibits. The Committee heard from over 170 witnesses at 28 public hearings held around Australia. The report's 47 recommendations include:

Copies of the report can be obtained from the Committee's website at:
<http://www.aph.gov.au/house/committee/ccwea/coastalzone/report.htm>

For **background information**, call the Committee Secretariat on (02) 6277 4580 or by email at ccwea.reps@aph.gov.au.

AGM and party

The ANUEF's Annual General Meeting was held in Fellows Lane Cottage at 5 pm on Wednesday 16 December. The meeting was followed by our Christmas Party.

The Minutes of the AGM, and the composition of the Committee for 2010, can be seen at this part of our web site:

<http://www.anu.edu.au/emeritus/committee.html>

Evans replaces Beazley

Professor Kim Beazley, the newly appointed Australian Ambassador to the US, will be standing down as Chancellor of the ANU from early next year.

The Council meeting appointed Gareth Evans AO QC as his successor.

In a statement announcing his decision, Kim Beazley said, "I have enjoyed being your Chancellor. It is a great University to have been part of and I wish all of you, staff and students alike, well for the future. I am

confident that your new Chancellor will be a great asset for the University. He is a truly outstanding Australian with a global reputation for innovative and constructive thinking. The University is lucky to have him and he is fortunate to be associated with us".

Mr Evans, President Emeritus of the International Crisis Group, Co-Chair of the International Commission on Nuclear Non-Proliferation and Disarmament and Honorary Professorial Fellow at Melbourne University, will take up the appointment early in the New Year. Mr Evans has had a long career in public life, including 21 years in the Australian Parliament and 13 years as a Cabinet Minister. A Rhodes Scholar, Mr Evans was academic lawyer and barrister before entering parliament.

A full CV of Mr Evans can be found at <http://www.gevans.org/biography.html>

ANU Academic Calendar revised

A revision of the ANU Academic Calendar for 2011 and later years has been published at the Principal Dates webpage. The link to Semester and Term dates for the years 2011 - 2014 is:

<http://quicklink.anu.edu.au/13md>

The revision follows much discussion about the best way to achieve the impossible by balancing ANU's academic imperatives and dates established by other parties (ACT school holidays and University Common Weeks). A summary of the issues, Academic Terms from 2011, is published at <http://quicklink.anu.edu.au/uq26>

The Future of Higher Education

Professor Paul Ramsden of the Higher Education Academy of the UK and formerly Pro-Vice-Chancellor (Teaching and Learning) at the University of Sydney gave a public address earlier this month on "The Future of Higher Education - Teaching and the Student Experience".

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His talk examined the quality of teaching and learning in UK higher education in the light of recent critical comment in the media and parliament, and considered the kinds of experiences that would enable graduates in the UK and Australia to contribute to the world of the future. He identified some key drivers in the process, including recognition of teaching, curriculum change, and the need for a different relationship between students and universities.

Human rights of international students an issue

Commissioners at the annual Australia and New Zealand Race Relations Roundtable, held in Sydney recently, view instances of racial harassment, abuse and violence directed at international students as symptoms of a whole range of human rights issues that need to be addressed. Commissioners were told that while student safety has received the most attention, it is a symptom of other issues including racism and discrimination, the lack of accessible and affordable accommodation, poor employment conditions, transport costs, lack of student support services, variable quality of education, and social isolation and exclusion. They were also made aware of the importance of seeing the students not as cash cows, but as global citizens and Australian residents. Up to 40 % of students are engaged in the workforce and around 20 % go on to become permanent residents with a wide range of skills and qualifications. Among other recommendations the Commissioners resolved to:

- Highlight the treatment of international students as a major current human rights and race relations issue;
- Note that the harassment and abuse of international students cannot be adequately addressed if the existence of racism as a significant factor is denied;
- Call for more research into the actual experience of discrimination and harassment of international students;

- Call on the police to record complaints and incidences of racially motivated crime, and for education providers, local government and other stakeholders to provide accessible reporting systems for racial harassment and discrimination, including web-based systems;
- Increase public awareness of the rights of international students, their contribution to the Australian and New Zealand economies and societies, and the importance of speaking out when they witness instances of harassment, discrimination and abuse.

National youth violence survey seeks answers

More than 600 young Australians have already responded to a recently launched national survey on youth violence. Targeted at 12 to 24-year-olds, the survey seeks young people's views on and experiences with youth violence to help find solutions to the problem.

Being conducted by the House of Representatives Family and Youth Committee, the online survey makes it easier for young people to have their say on the committee's public inquiry into youth violence. It is a new way for federal parliament to tap into the views of young Australians.

With more than 7,000 young people hospitalised because of violence each year, survey participants have been expressing concerns about their own personal safety and the impact that violence is having on their friends, families and their communities.

Step Back Think, a strategic plan and framework for tackling the problem, was formed after the brutal bashing of a 20-year old man in Melbourne that left him incapacitated with a severe brain injury.

The **survey** and **a video** can be accessed from the committee's inquiry website, <http://www.aph.gov.au/house/committee/fchy/youthviolence/index.htm>

ADFA and University of NSW extend agreement

The Australian Defence Force Academy (ADFA) and the University of New South Wales (UNSW) have extending the current Agreement for the provision of academic services at ADFA from January 1, 2010.

Defence's relationship with UNSW dates back to 1967 and for ADFA since 1981,

The extension of the Agreement until 2023 ensures Defence personnel; both military and civilian, have access to high-quality academic services that will enhance their knowledge and understanding in addition to aiding their careers.

Obituary

DAVID ALEXANDER BROWN (1916 — 2009)

David Brown was born in Scotland, and he and his mother migrated to New Zealand when he was only four years old. His father died in the Great War as a result of active service at Gallipoli. David was very proud that he was a New Zealander, but he always kept his Scottish ancestry foremost in his mind.

His university was in Auckland, and he graduated from the University of New Zealand with an MSc in 1937, having previously begun work as a Field Geologist in the New Zealand Geological Survey in 1936. In 1938 he joined the New Zealand Petroleum Exploration group. On the outbreak of war he enlisted in the New Zealand Expeditionary Force, but after a short time decided to go to Britain and join the Royal Navy.

His interest was in the Fleet Air Arm, obviously not a career leading to a long life. He flew from aircraft carriers, largely in the North and Barents Seas. One of his main exploits was to navigate a Barracuda dive bomber into a Norwegian fiord to attack the German battleship Tirpitz. This took place in March 1944, at a time when convoys were trying to take supplies to Murmansk. This attack was successful in destroying the capacity of Tirpitz to sail again into the Barents Sea. I recall David saying that

letting off a bomb on the Tirpitz was a very trying exercise, though not as trying as finding the carrier in the Arctic Ocean and landing the aircraft on the mobile deck.

He married his wife Patricia, who also was in the Royal Navy as an officer in the WRNS. Before the war she had been a student at Oxford where she graduated in 1941 in Politics, Philosophy and Economics. On David's discharge from the Navy, they set up home in London. He was awarded a post-graduate scholarship to study tertiary Polyzoa (Bryozoa) from New Zealand. He worked at the Imperial College of Science and Technology, and the British Museum of Natural History. After such a career in the Navy, this must have been a real psychological difficulty. However, he graduated in 1948 with a PhD and DIC and was awarded a moiety of the Lyell Fund of the London Geological Society for his work. In doing this, he became a very skilled taxonomist, and it set him on a course to study polyzoans from around the world, including southern Australia. He published several large monographs on this topic. On reading these, one could see the meticulous care he took in investigating the detail of these complex animals and in recording data. I think the experiences in the Fleet Air Arm and the settling down to serious study after the war were two of the aspects of his career that moulded him for the rest of his life.

After completing his degree, he returned to the New Zealand Geological Survey, but in 1950 was appointed Senior Lecturer at Otago University, Dunedin, where he stayed till the end of 1958.

One still meets distinguished students, now retired, who studied under him in those years.

Then the Canberra University College advertised the Chair of Geology and he applied for it. And so in February 1959 he became one of the first Science Professors at the CUC, which at that stage was still a branch of the University of Melbourne, subsequently becoming part of the Australian National University.

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David's qualities as a person as well as a scientist became apparent as he began organising the Department of Geology. He wanted to cover a wide range of geological studies, rather than follow a pattern of concentrating on one particular topic. To do this he chose staff who came from a variety of post-graduate areas and geographical areas, and so the graduates from the Department were versatile in their approaches.

On the research front he had people with the capacity to study ore deposits, mineral structure, geochemistry, fossils and tectonics. He also worked with Irving from the Research School of Earth Sciences on the distribution of cold-blooded vertebrates in relation to the distribution of continents as interpreted from the palaeomagnetic studies. The staff he appointed worked well together because he chose well, and because he and his wife provided charming hospitality for all comers. It was a pleasure to work in the departmental environment.

In addition, David Brown served the University well. He took his part as Dean of Science, Dean of Students, Member of the Board of Studies, and also was a member of several small committees. In particular he was very keen on building up the departmental library and although this is now housed in the University Library, it contains large numbers of journals that cannot be found elsewhere in Canberra. The Department was first housed in temporary buildings, then in the present Physics Building, and finally in a building that the architects designed in conjunction with David. This was a purpose-built structure and was excellent to work in. Later, due to an administrative bungle, the department was removed from the building, and rehoused in the old Botany Building. This is now designated as the D. A. Brown Building. David's memory is endorsed in the Department by the D. A. Brown Award, given to our graduates who have shown professional distinction in their field.

Outside the University, David took a leading part in the development of the Geological Society of Australia. He was

President from 1970-73, and also took on the task of editing the Journal of the Society from 1964-69. For him this was not a task that he undertook lightly, and he worked through each accepted article making sure that it followed the whole pattern for the Journal. He joined with Campbell and Crook in writing *The Geological Evolution of Australia and New Zealand*. He became President of Section C of ANZAAS in 1963.

David and Pat had three children who had most of their secondary education in the ACT and subsequently graduated in three faculties, Science, Law and Medicine. All three lead active lives in their respective fields. David is survived by his wife, his three children, nine grandchildren and two great grandchildren.

It was not surprising that, after a long period as Head of Department, he felt he should have a break, and in 1983 he requested support with the administration. His object was to return to his polyzoan research. The subject had moved rapidly while he was doing the administration of the Department, and he found it difficult to break into the field again. But he was skilled with languages, particularly Russian. This was at a time when the Russians were at the forefront of certain fields, and so he began to prepare translations of major Russian studies into English. This work introduced students from around the world into some distinctive aspects of Russian geology. David also spent many years preparing a Russian-English Geological Dictionary, and one hopes that it will appear as a hard copy in the near future.

We remember David for his quality as a person, a leader, an educator, an investigator and friend, and for the hospitality he and his wife showed to us all in our association with him. We remember him with the greatest affection.

He died on 3 November 2009. A memorial service was held at St Andrews Presbyterian Church, Forrest, Canberra, on **18 December**.

Ken Campbell

Noel Butlin Archive

If you are interested in the deep and rich collections of the Noel Butlin Archive, go to: <http://information.anu.edu.au/daisy/infoervices/2157.html>

Summer Seminar on Population

Applications close on December 31 for the East-West Centre's 2010 Summer Seminar on Population. Held annually since 1970, the Summer Seminar provides a forum for learning and discussion on a wide range of population and health issues. Three independent workshops will focus on population aging, health-care financing and communicating with policymakers

Full information on the Summer Seminar workshops, instructions for applicants, and application forms can be obtained from the Summer Seminar website at <http://www.eastwestcenter.org/summerseminar>.

International research collaboration

The House of Representatives Industry, Science and Innovation Committee is to conduct an inquiry into Australia's international research engagement.

The Minister for Innovation, Industry, Science and Research requested that the Committee inquire into and report on

- Australia's international research engagement, with particular reference to:
- The nature and extent of existing international research collaborations;
- The benefits to Australia from engaging in international research collaborations;
- The key drivers of international research collaboration at the government, institutional and researcher levels;
- The impediments faced by Australian researchers when initiating and participating in international research collaborations and practical measures for addressing these; and
- Principles and strategies for supporting international research engagement.

Interested persons and organisations are invited to make written submissions to the inquiry by **Friday 29 January 2010**. Contact the Committee Secretary if an extension is required. Further details, including the full terms of reference, membership of the Committee and advice on making submissions can be obtained on the Committee's website at www.aph.gov.au/isi.

National Capital Authority reports to parliamentary Committee

Federal Parliament's National Capital Committee scrutinised the National Capital Authority (NCA) at a public hearing on December 3. In July 2008 the committee released its report entitled, *The Way Forward – Inquiry into the role of the National Capital Authority*. As part of that report, the committee made a series of recommendations which sought to enhance the governance and accountability of the National Capital Authority.

In particular, recommendation 3 proposed that representatives of the NCA appear regularly at public hearings before the committee to account for its performance. The NCA previously appeared before the committee in June 2009.

For background information: contact the committee secretariat: (02) 6277 4564
Email: jscncet@aph.gov.au Website: www.aph.gov.au/house/committee/ncet/index.htm

Committee to examine NSW proposal for automatic electoral enrolment

Federal parliament's Electoral Matters Committee will examine a proposed new law recently introduced into the New South Wales Parliament for its potential impact on enrolment processes for Commonwealth elections.

The Parliamentary Electorates and Elections Amendment (Automatic Enrolment) Bill 2009, introduced on 12 November 2009, proposes significant amendments to the processes surrounding, and requirements for, enrolment for NSW elections. All States and Territories currently have joint roll agreements with the Australian Electoral Commission and electors only need to complete one form to enrol for Federal, State and local government elections.

Further information, including a copy of the Parliamentary Electorates and Elections Amendment (Automatic Enrolment) Bill

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2009, are available from the Committee's webpage at <http://www.aph.gov.au/house/committee/em/autobill2009/index.htm>.

The Committee is expected to report by 25 February 2010 and will accept submissions, preferably by email to jscem@aph.gov.au, until Friday, **22 January 2010**.

Adolescent Overload? : report for school and work inquiry

The House of Representatives Standing Committee on Education and Training has tabled its report *Adolescent Overload?* on its inquiry into combining school and work: supporting successful youth transitions. The inquiry looked at the impact of the potentially competing demands of study and part-time or casual employment on youth.

An electronic version of the report can be obtained from the Committee's website at <http://www.aph.gov.au/edt> or directly at:

<http://www.aph.gov.au/house/committee/edt/schoolandwork/report.htm>

Further information: contact the Inquiry Secretary on (02) 6277 4578, email edt.reps@aph.gov.au or visit the Committee's webpage at <http://www.aph.gov.au/edt/>

Treaties Committee to examine five new treaties

Federal Parliament's Treaties Committee is inquiring into five treaties covering: the conservation of migratory species, a social security agreement with Poland, cooperation with Lebanon on the protection of children, a taxation agreement with Singapore, and a treaty with India on mutual legal assistance in criminal matters.

Organisations and members of the public with an interest in these treaties are encouraged to make a submission to the Committee. Submissions are requested by 15 January 2010.

The Committee will conduct public hearings into these treaties in early 2010. Copies of the National Interest Analysis and treaty text for each treaty are available at www.aph.gov.au/jsct. Alternatively, email jsct@aph.gov.au or phone (02) 6277 4002.

The Treaties Committee has released a report recommending that Australia support efforts to reform the accountability of the International Monetary Fund (IMF) and the World Bank. Report 107 is available on the Committee's website: <http://www.aph.gov.au/house/committee/jsct/20august2009/report2.htm> or by contacting the Committee Secretariat on (02) 6277 4002.

Your benefits

- 1. Library borrowing rights (including access to e-journals)** for financial members with a membership card. Also **access to e-journals** in the ANU Library System is available through the computers in the Molony Room, Fellows Lane Cottage, Fellows Lane, ANU.
- 2.** The right to buy a staff parking permit at the student rate, or packs of one-day parking scratchies which entitle members to park all day in **Permit Parking** spots at ANU for a few dollars a day, and the right to park in the designated parking areas in the Fellows Lane Cottage car park, and in adjacent car parking spots if the membership card is displayed on the dash board. Also, the right to apply for free parking for special events such as Conferring of Degrees Ceremonies and other high days.
- 3.** The right to be posted **ANU Reporter** if the member wishes.
- 4.** An ability to get staff discounts from **PCTech** and purchase certain products (eg. software) at Academic/Education pricing from appropriate outlets.
- 5.** The right to use **University House Library** facilities.
- 6.** \$2 tickets many concerts given by the **Canberra School of Music**.

ANUEF Newsletter out again in March